



SPECIAL PAPERS IN INTERNATIONAL ECONOMICS

No. 3, AUGUST 1962

PLANS FOR
REFORM OF THE
INTERNATIONAL
MONETARY
SYSTEM

FRITZ MACHLUP

INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY • 1962

This is the third number in the series SPECIAL PAPERS IN INTERNATIONAL ECONOMICS.

The author is Walker Professor of Economics and International Finance at Princeton University and also Director of the International Finance Section. Thus, the usual disclaimer of responsibility for the opinions expressed cannot be invoked so far as the Director is concerned. He still may say that his ideas may or may not be shared by his colleagues on the Editorial Committee of the Section or in the Department of Economics.

The submission of manuscripts for this series is welcome.

FRITZ MACHLUP, *Director*
International Finance Section

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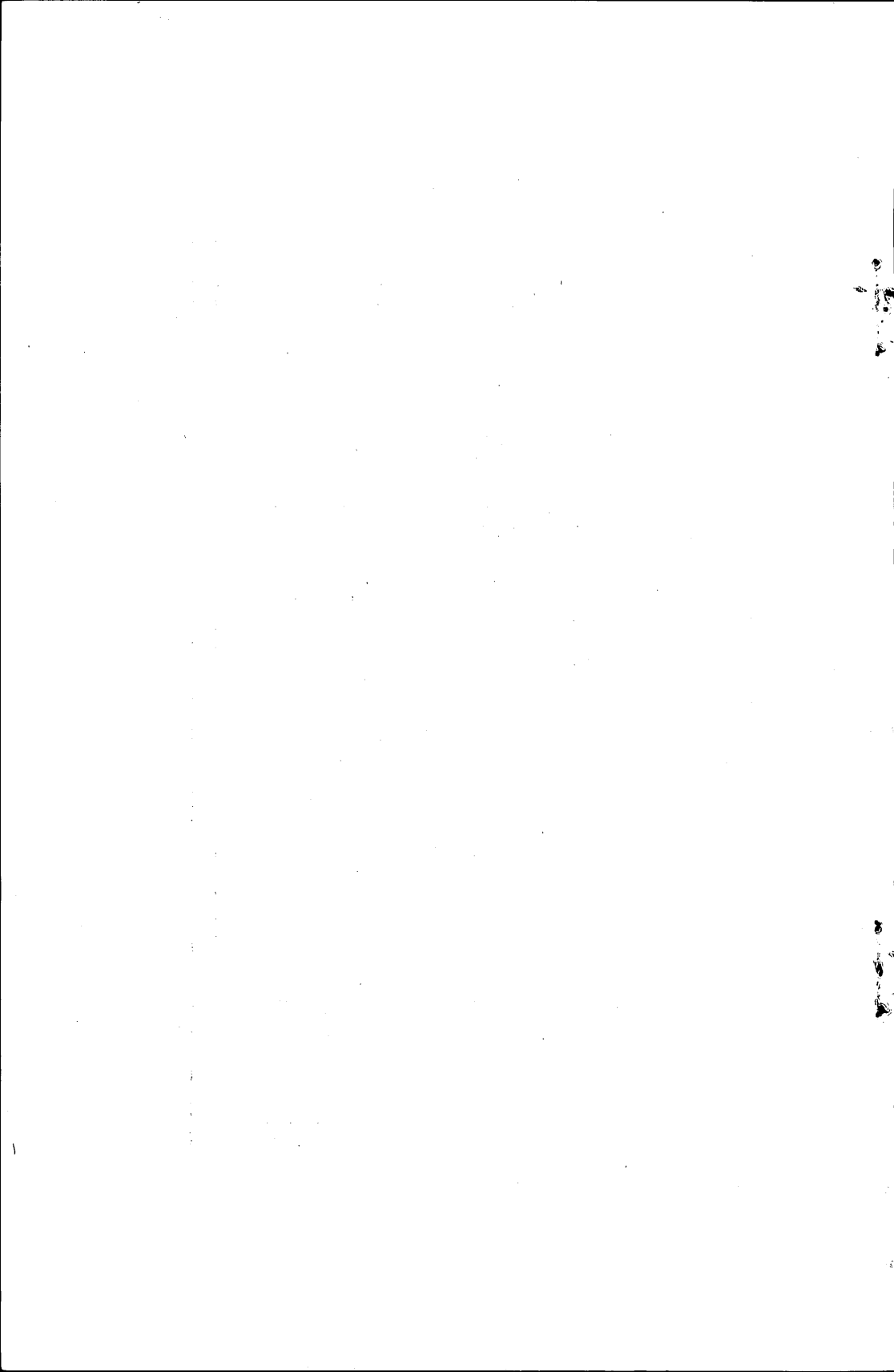
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PREFACE

Perhaps it should be explained why this paper is published not as one of the *Essays in International Finance* but rather as one of the *Special Papers in International Economics*. One reason is its length: it is longer than any of the numbers in the Essay series. Another reason is its tone: it is largely written with pedagogic purposes in mind and thus lacks some of the grace that an essay should have; in some places the exposition is exceedingly patient, or even repetitive, because it was thought that this would make it more helpful to the student. A third reason is multiple publication: the paper is appearing elsewhere, something which the Section strives to avoid for issues of the other two series. A German version has been published by the Institut für Weltwirtschaft of the University of Kiel, and an abbreviated Italian version will be published in *Bancaria*, Rome. In addition, a reproduction of this paper is planned as part of the author's *Essays in International Economics*, a volume being prepared for early publication by Charles Scribner's Sons.

FRITZ MACHLUP

Princeton, New Jersey
May 1962

STATE OF CALIFORNIA

IN SENATE
January 15, 1913.

REPORT
OF THE
COMMISSIONERS OF THE LAND OFFICE
FOR THE YEAR 1912.

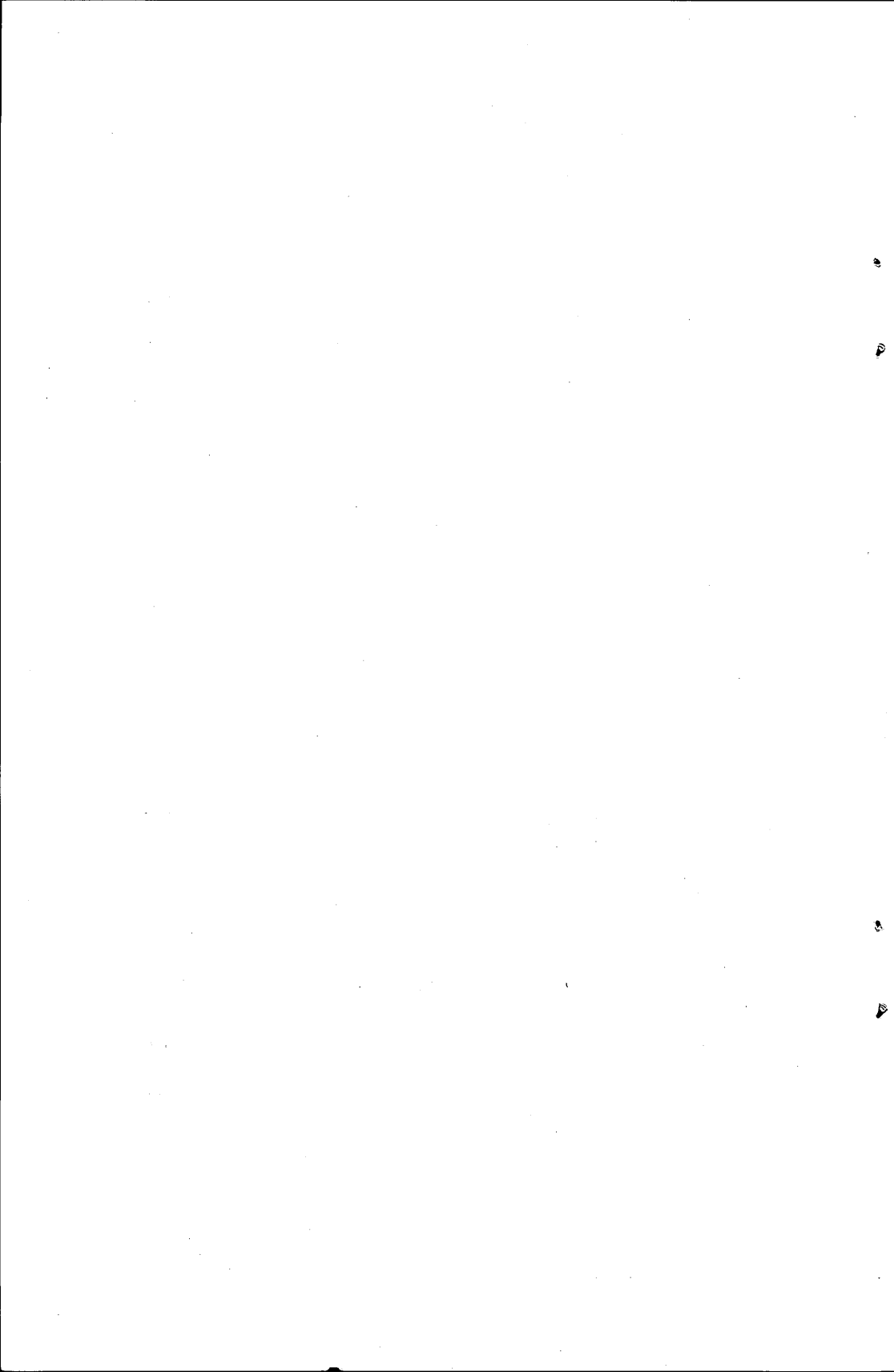
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CALIFORNIA, 1913.

PLANS FOR REFORM OF THE INTERNATIONAL MONETARY SYSTEM

	PAGE
I. The Present System	1
II. Charges against the System	5
A. Difficulties with the Balance of Payments	5
B. Inadequacy of International Reserves	7
C. Danger of Collapse	10
III. A Selection of Plans	12
A. Extension of the Gold Exchange Standard	13
B. Mutual Assistance among Central Banks	17
C. Centralization of Monetary Reserves	25
D. Increase in the Price of Gold	42
E. Freely Flexible Exchange Rates	51
IV. Concluding Remarks	66

TABLE AND T-ACCOUNTS

	PAGE
Table 1. Reserves of Central Banks and Other National Monetary Authorities of the Free World	3
T-Account	
Set 1. International Payments in a Multiple-Currency- Reserve System	14
Set 2. Alternative Forms of Support of One Central Bank by Another	18
Set 3. Short-Term Capital Movement and Compensating Support Action	21
Set 4. Keynes Plan: Reserve Creation through Loans to Central Banks	28
Set 5. Triffin Plan: Reserve Creation through Purchase of Securities	31
Set 6. Stamp Plan: Reserve Creation through Aid of Development	33
Set 7. Credit Transfer versus Credit Creation by the Fund	40
Set 8. Reserve Creation through Revaluation of Gold Stocks	43
Set 9. Gold Revaluation: Capital Gains and Composition of Reserves	45



Plans for Reform of the International Monetary System

THERE has been growing dissatisfaction with the present international monetary order or disorder. Some experts have come to regard reforms as desirable, necessary, or even urgent, and several plans for reform have been submitted. Some of these plans are radical, evidently because their proponents consider the defects and dangers of the present system too fundamental for mere patchwork to remove them. Other plans are less ambitious, probably because their proponents regard radical reforms as unnecessary or believe they are unacceptable given the conservatism of the practitioners and their qualms about political feasibility. It goes without saying that there must be essential differences between plans that are designed to serve different objectives, to correct different defects, or to avert different dangers.

I. The Present System

The present monetary system in most countries of the free world is the gold-exchange standard.¹ Under this system, the foreign reserves of central banks consist not only of gold but also of liquid claims against certain countries, called the key-currency or reserve-currency countries. At present these claims consist partly of deposits in American and British banks and chiefly of American and British short-term government obligations.² Since neither dollar deposits nor sterling deposits are legally redeemable in gold, some writers prefer to speak of a "currency-reserve standard" rather than "gold-exchange standard."³ The difference, however, is not very great, inasmuch as the U.S. Treasury does in fact sell gold at the official parity rate to foreign governments and central banks holding dollar deposits. (Dollar securities can of course be readily sold and thus transformed into dollar deposits. Dollar balances of private holders can at any time be sold to their respective

¹ It happens that my first two books dealt with the gold-exchange standard: *Die Goldkernwahrung* (Halberstadt: Meyer, 1925); and *Die neuen Wahrungen in Europa* (Stuttgart: Enke, 1927).

² A few countries hold French Francs and West German D-Marks as parts of their official reserves.

³ J. Herbert Furth, "Professor Triffin on the Problem of International Monetary Reform," *Zeitschrift fur Nationalonomie* (Winter 1961), pp. 140-147.

central banks and thus be readily transformed into "official" balances. In monetary statistics, official and private dollar holdings are nevertheless stated separately. After all, only the official holdings are included in the "foreign reserve" of the countries concerned.)

Table 1 gives the foreign reserves held by the monetary authorities of the nations of the free world from 1949 to 1960. There is first the time series of their gold holdings, then of their holdings of foreign exchange, and finally of their "gross position"⁴ with the International Monetary Fund (I.M.F.). The last item has not been included in the monetary reserves until very recently, so that in most discussions only the gold and exchange reserves have been counted.⁵

The increase from 1949 to 1960 in the gold holdings amounted to \$4,900 million, or 14.8 per cent. This corresponds to an annual rate of increase of 1.3 per cent. The increase in foreign-exchange holdings amounted to \$11,145 million, or 106.1 per cent over the eleven years, which corresponds to an annual rate of increase of 6.8 per cent. Gold and exchange holdings together increased by \$16,045 million, or 36.8 per cent, an annual rate of increase of 2.9 per cent. If we now add the gross I.M.F. position of the national monetary authorities, we find that their foreign reserves increased by \$25,378 million, or 49.2 per cent over the eleven years, an annual rate of increase of 3.7 per cent.

Thus, the composition of the monetary reserves has undergone considerable change, especially notable in the relative shrinkage of the metallic nucleus of the currencies. At the end of 1949, the monetary gold stocks of the nations included in Table 1 had been 75.9 per cent of their reserves; at the end of 1960 they were only 63.8 per cent. Correspondingly, the portion of foreign-exchange holdings in the total reserves, not counting the I.M.F. positions, increased from 24.1 per cent

⁴ This term is explained in the notes to Table 1.

⁵ What assets are included in the "monetary reserves" is to some extent arbitrary; and the practice of including holdings of foreign balances and securities without deducting current liabilities to foreign nationals is somewhat questionable. Several experts object to the customary statistical routine of adding the *gross* reserves of the various countries. They hold that statistics of *net* reserves, where gold and foreign assets are reduced by current foreign liabilities, would give a more accurate, or more relevant, picture of the reserve position of the countries. Others are satisfied with the more common usage because the statistics of gross reserves, supplemented by statistics of liabilities, furnishes more information than the net figures alone would. Some experts prefer to use gross figures for gold and foreign-exchange reserves, but net figures for the positions with the I.M.F. (The I.M.F. defines the "Net Position" as "a measure of the resources the member has provided to the Fund." This is of course much less than the member's drawing potential.) In any case, most discussions of the international monetary system have been in terms of the gross foreign reserves, and this is what is displayed in Table 1.

TABLE 1
RESERVES OF CENTRAL BANKS AND OTHER NATIONAL MONETARY AUTHORITIES OF THE FREE WORLD
(Millions of Dollars, End of Year)

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Increase 1949-60
1. <i>Gold reserves</i>	33,150	33,830	33,935	33,920	34,360	34,970	35,445	36,095	37,360	38,075	37,870	38,050	4,900
2. <i>Exchange reserves</i>													
a. U.S. Dollar	3,071	4,440	4,014	5,254	6,016	7,067	7,878	8,612	8,231	8,516	9,419	10,484	7,413
b. U.K. Pound													
Sterling	7,856	7,775	8,694	7,596	8,148	8,157	8,095	7,807	7,222	6,955	7,448	7,563	-293
c. B.I.S. and E.P.U.	100	541	794	1,286	1,485	1,432	1,258	1,352	1,541	1,877	378	477	377
d. Others, minus adjustments	-527	1,939	1,583	1,474	1,491	1,589	1,529	1,964	1,921	1,962	1,925	3,121	3,648
<i>Together</i>	10,500	14,695	15,085	15,610	17,140	18,245	18,760	19,735	18,915	19,310	19,170	21,645	11,145
<i>Gold and exchange</i>	43,650	48,525	49,020	49,530	51,500	53,215	54,205	55,830	56,275	57,385	57,040	59,695	16,045
3. <i>Gross I.M.F. position</i>	7,891	7,905	8,183	8,265	9,028	9,690	9,757	9,813	9,491	9,849	16,148	17,224	9,333
<i>Total</i>	51,541	56,430	57,203	57,795	60,528	62,905	63,962	65,643	65,766	67,234	73,188	76,919	25,378

¹ The *gold reserves* are only those of the national monetary authorities, and therefore exclusive of the gold stocks of the international monetary institutions.

² The *exchange reserves* are the foreign-exchange holdings of national monetary authorities, i.e., their deposits in the U.S.A., U.K., and a few other countries, plus credit balances with the Bank for International Settlements (B.I.S.) and the European Payments Union (E.P.U.).

a. The holdings of U.S. dollars by the national monetary author-

ities equal the liabilities of the banks and the U.S. Government, to wit, (1) liabilities of the Federal Reserve Banks and other American banks to foreign monetary authorities, (2) official foreign holdings of short-term government securities and other short-term liabilities, (3) official holdings of U.S. securities with original maturities greater than one year; all these minus the U.S. liabilities to international organizations.

b. The holdings of pounds sterling by the national monetary authorities equal the liabilities of the U.K., to wit, (1) net

to 36.2 per cent. Most drastic was the increase in the claims against the United States: from \$3,071 million at the end of 1949 to \$10,484 million at the end of 1960. Claims against the United Kingdom remained almost unchanged—\$7,856 million in 1949 and \$7,563 million in 1960—and thus become a smaller part of total foreign-exchange holdings. The increase in the I.M.F. position goes back chiefly to the increase in the quotas in 1958.

This brief description of the situation may be sufficient for an understanding of the anxieties and warnings with regard to deficiencies and dangers of the present international monetary system.

holdings in sterling or Sterling Area currencies by foreign monetary authorities with banks in the U.K., (2) their holdings of British government securities, (3) funds held with the Crown Agents and Currency Boards, (4) certain intergovernment loans, (5) sterling securities issued by Commonwealth countries that are included in holders' Foreign Assets; all these minus U.K. liabilities to international organizations. (The net total includes some holdings by foreign individuals and corporations.)

- c. Balances with the B.I.S. are the B.I.S. liabilities that are counted as monetary reserves by the creditor countries. The E.P.U. liabilities reflect accumulated balances of E.P.U.-members acquired in the course of financing trade surpluses with other members. When the E.P.U. was liquidated in 1953, remaining debtor and creditor positions were converted into bilateral claims and debts, which are not included among the monetary reserves.
- d. Other foreign-exchange holdings are deposits in other countries with convertible currencies. Certain divergences between claims reported by creditors and liabilities reported by debtors were deducted from this item.

³ The "Gross I.M.F. Position" of a national monetary authority is calculated by doubling that member's quota and subtracting the I.M.F.'s holding of its currency. The result is a measure of the member's drawing potential. The Fund began publishing this series in August 1961 in *International Financial Statistics*.

Source: International Monetary Fund.

II. Charges against the System

SEVERAL experts, among them Per Jacobsson and Robert Triffin, have been careful to distinguish three different problems connected with the present system. To treat these problems separately is important not only for the sake of clarity but also because not all the experts share all the misgivings concerning the operation of the present system. Each of the three problems has at least two aspects calling for our attention.

- A. Difficulties with the balance of payments of individual countries
 - 1. because of excessive deficits or insufficient surpluses¹ in the balance on current account;
 - 2. because of massive international movements of speculative funds.
- B. Inadequacy of the growth of monetary reserves
 - 1. relative to the demand for "domestic liquidity" or to the "desirable" supply of domestic money;
 - 2. relative to the growth of foreign trade.
- C. Fragility of the gold-exchange standard
 - 1. dangerous to key-currency countries;
 - 2. dangerous to countries holding large exchange reserves.

A. Difficulties with the Balance of Payments

Problem A-1 should perhaps be stricken from the agenda since it cannot be regarded as a defect of the present system and since the balance-of-payments problem of particular countries could not be solved or eliminated by means of any of the reform plans. Yet, some of the plans are designed to institute a system of international payments that gives countries in difficulties much more time to wait for an improvement in their balance on current account without resort to the orthodox treatment with painful contractions of credit and effective demand. This tough remedy has become rather unpopular in a world more sensitive and less capable of adjusting to change. If the "old-

¹ Surpluses on current account are regarded as "insufficient" when they fail to offset completely deficits in the balance of long-term capital movements and unilateral transfers. In this formulation the concept of "balance-of-payments difficulties" is confined to cases of gold and exchange *outflows*; some writers may prefer to extend the concept to include cases of heavy *inflows* of gold and foreign exchange.

fashioned" cure is at all accepted nowadays, one tries to postpone it as long as possible in the hope that things will get better without treatment.

There are, of course, other currency doctors, who find that such soft-heartedness toward patients suffering from current-account troubles is out of place and that postponement of the one reliable cure could only be harmful. As a matter of fact, some of the critics of the gold-exchange standard have stated, with a serious frown, that the acceptance of ever-increasing amounts of demand liabilities of the United States as parts of the monetary reserves of other countries postponed for almost eight years substantial gold outflows from the United States and thus postponed the warning signals which such outflows would have implied. Hence, the present system is blamed for having enabled the United States to continue a credit and fiscal policy that was basically incompatible with an appropriate balance on current account.

There is obviously a serious ambivalence in the views about this problem. Some find the present system deficient because it gives countries in difficulties with their balance of payments too much time, and others because it gives them too little time, to get over their troubles.²

No such ambivalence exists regarding problem A-2, that is, regarding difficulties with the balance of payments on capital account because of hot-money movements. There is agreement on the desirability or need to improve present institutions to cope with speculative capital movements.³ Massive movements of hot money are brought about either by sudden changes in international interest-rate differentials or by rumors of imminent changes in official exchange rates. The return to convertibility and the abolition of restrictions on capital transactions have undoubtedly increased the dimensions of international hot-money movements and have thereby created difficulties with the balances of payments which perhaps cannot be managed with foreign reserves of the size now at the disposal of the monetary authorities in the countries concerned.

² There can be a third point of view: that the present system operates unequally relative to different countries, particularly in that it provides inadequate discipline on key-currency countries but rather harsh discipline on other countries. Hence, it gives too much time for adjustment to some countries and too little to others. This seems to be Triffin's judgment.

³ This should not be confused with problems of long-term capital movements—portfolio investment, direct investment, and foreign aid—that is, outflows of investable funds that should be reflected in the balance on current account of the investing, lending, or aiding country. (This would be part of problem A-1, that is, difficulties due to a balance on current account that does not fully reflect the movements of long-term capital, including foreign aid.)

One may ask why the gold standard before 1914 was not exposed to shocks of this sort and could work without any special shock absorbers. The answer is simple. In the old times there never were any rumors about impending devaluations, since no country ever seriously contemplated changing the gold par of its currency. In the old times, moreover, there were no disequilibrating differentials in interest rates or, at least, they were not allowed to last long, since the central banks were always trying to adjust their bank rates to the balance-of-payments situation. Under the rules of the gold-standard game, interest policy had to serve the equilibration of the balance of payments, and was not, as nowadays, subservient to employment and growth policies. Consequently, interest-rate differentials did not disturb but, on the contrary, helped maintain or restore international payments equilibrium.

This is in sharp contrast to present-day practice of some central banks, which insist on maintaining low interest rates (in order to fight unemployment) even if this leads to heavy outflows of funds.⁴ A credit policy with so little regard for its external consequences is apt to aggravate widespread fears of devaluation. After all, so the apprehensive ones reason, a country which cares so little about a loss of reserves that it would not even put up with higher interest rates apparently does not care much about the maintenance of its gold parity. Under such circumstances, massive international movements of speculative funds must be expected. It may take special institutions to cope with them, chiefly by providing the means for "compensatory official financing," that is, the foreign funds needed to meet the speculative demand, without recourse to payments restrictions and without peril to the maintenance of the fixed foreign-exchange rates.

B. Inadequacy of International Reserves

The question of the adequacy, or supposed inadequacy, of the growth of monetary reserves is controversial. It has been contended, for example by Sir Roy Harrod, that reserves have grown too slowly during the last ten or twelve years. Even as early as 1952 a group of experts appointed by the United Nations reported that the total stocks of international reserves were inadequate.⁵ This view is opposed by Per Jacobs-

⁴ The Federal Reserve Banks, in the summer of 1960, lowered discount rates in the face of payments deficits. The reverse side of the same practice is for a central bank to insist on high interest rates (in order to fight price inflation) even if this aggravates a heavy inflow of foreign funds. The German Bundesbank did precisely this until it learned the lesson.

⁵ "Our examination of existing reserves has convinced us that they are not in

son, M. W. Holtrop, Karl Blessing, and several others, who deny that either the size of reserves or their rate of increase has been inadequate. Indeed, they hold that reserves have been excessive. Both factions seem willing to accept as a criterion of adequacy the influence which the reserves and their changes have upon the supply of money in the countries concerned. We have called this our problem B-1: the question of the adequacy of reserves relative to the needs of "domestic liquidity." According to Harrod this influence was deflationary and responsible for an unsatisfactory rate of economic growth. Jacobsson and the central bankers, on the other hand, regard the influence as inflationary since it permitted a general rise in the price levels of practically all countries. In view of these differences in judging the consequences of the operation of the international monetary system in the past, one cannot be very hopeful about reaching an agreement regarding the principles to be applied to the reform of the system.

The size and growth of foreign reserves relative to the needs of domestic liquidity and to the size and growth of the domestic money supply is only one of the possible criteria for judging the adequacy of the growth of gold and exchange reserves. Many experts prefer to rely on an indicator which "measures" the reserve position of the world as a whole, to wit, the numerical ratio between aggregate reserves and imports. This we have called our problem B-2. However, the difference between the two measures of adequacy is not simply one of statistical convenience, but reflects two separate functions of monetary reserves. They are used, on the one hand, as institutional determinants of the domestic money supply and, on the other hand, as international means of payments to finance temporary deficits in the balance of payments. Hence it is quite in line with this double function of international reserves that their adequacy is judged with reference to both national circulation and international payments.

Any reduction in the ratio between international reserves and total imports indicates to some observers that the growth of gold and exchange reserves has been inadequate. This, however, presupposes, even if it is not explicitly stated, that the ratio was "just right" at the outset, or was perhaps a barely tolerable minimum. Surely, if the reserves relative to foreign trade, or total imports, had been more than adequate

general adequate." Economic and Social Commission, United Nations, *Measures for International Economic Stability*, 1952. Members of the group of experts were Angell, MacDougall, Marquez, Myint, and Swan.

in the beginning,⁶ a decline in this numerical ratio need not imply that the reserves have become inadequate. The total value of imports of the countries of the free world did in fact increase from \$59.6 billion in 1950 to \$119.1 billion in 1960. Thus, the ratio of reserves to imports fell from 81 to 50 per cent. But who can say that the 81 per cent had been just right, or the bare minimum? Let us not forget that back in 1913 the ratio was only 21 per cent.

Apart from the question whether or not the ratio of reserves to imports was just right in the base year, and not unnecessarily high, there is absolutely no evidence for the contention that the need for reserves rises proportionately with foreign trade. It is true that in domestic circulation the need for cash balances on the part of householders is likely to increase approximately in proportion with consumption expenditures. On the other hand, the need for cash balances on the part of existing business firms does not usually increase proportionately with turnover. In all probability, the demand for cash balances in the economy as a whole will rise with the national product but the increase may be smaller if the share of investment in the income increase is greater. Even within the industrial circulation of money we may expect differences in the ratio of cash to turnover, depending on the different degrees of vertical integration of industries. Besides, one may say that with an increase in the volume of transactions the demand for cash balances will increase least in those sectors of the economy in which clearing systems have developed requiring only the payment of clearing balances. It seems to me that foreign trade falls into this group and that consequently there is no theoretical support for the assertion that the need for international reserves rises in proportion with imports.⁷

Even if, on this or other grounds, one refuses to admit that the growth of international reserves relative to the growth of international trade has been inadequate during the last ten or twelve years, one might still side with the inadequacy-theorists in their pessimism for the future. The prospects for the future growth of reserves would indeed be rather dim if one could not expect the pool of reserves to be fed during the next ten years or so through continuing increases in dollar claims; and

⁶ "Total international reserves immediately before the war were abnormally high in relation to the value of world trade." [Radcliffe] *Committee on the Working of the Monetary System* (London: H.M.'s Stationery Office, Cmnd. 827, 1959), p. 244, §871. The ratio of reserves to imports in 1938 was 117 per cent.

⁷ Cf. the comments on this point in my article, "Liquidité internationale et nationale," *Bulletin d'Information et de Documentation*, Banque Nationale de Belgique, Vol. XXXVII (Febr. 1962), pp. 105-116.

indeed further increases in the demand liabilities of the United States at the fast rate of the past years might well be unacceptable to all parties concerned. If it is agreed that the short-term indebtedness of the two key-currency countries, the United States and the United Kingdom, must not be increased substantially in the coming years and if, as a result, international reserves can grow only by means of increased supplies of monetary gold, then it is quite plausible that a real, generally recognized scarcity of reserves will develop in the course of time. To prevent such a calamity, changes in the present system are favored even by some of those experts who do not consider the past growth of reserves inadequate.

C. Danger of Collapse

The consideration that the fast increase of the share of dollar claims in the total reserves of the world may be deemed unbearable for the system has brought us to the third set of problems—the fragility of the gold-exchange standard. Ever since 1950, the United States, through its purchases, investments, loans, and aid, has put at the disposal of foreign countries more dollars than these countries have used for their purchases in the United States. In this fashion, foreign dollar claims, both of private holders and of central banks and other national monetary authorities, have increased at a fast rate. During the first seven or eight years this accumulation of the foreign-exchange reserves of various countries was welcomed by all; the demand for dollar balances was eager and the supply of dollars was therefore received with open arms. Later on, however, the accumulation of exchange reserves was continued only with formal politeness; the supply of dollars was received and added to currency reserves without great enthusiasm and merely in accordance with the customary etiquette practiced by central banks. (In other words, the same phenomenon from the point of view of the United States was elsewhere seen first as a symptom of “dollar shortage” and later as a symptom of “dollar glut.”)

As the share of foreign exchange in the official reserves of the free world increased, more and more people began to doubt whether this steady excess supply of dollar liabilities could be absorbed without limit. With such doubts becoming more widespread, the willingness to accept further dollar supplies is further reduced and fears regarding the future value of dollar exchange become increasingly serious. If then, in addition, some experts raise their voices advancing—in support of the aims of gold producers and speculators—proposals for an increase

in the price of gold, the position of the dollar and the preservation of the gold-exchange standard become precarious.

The strong demand for gold for speculative purposes and hedging, especially the impatience of holders of dollar deposits and other dollar claims to exchange them into gold, then leads to a further increase in the supply of dollars in the foreign-exchange markets. Since not all central banks stand ready to increase their exchange reserves at the expense of their gold stocks, it becomes necessary for the American monetary authorities to sell gold in order to safeguard the position of the dollar. Yet, these gold losses in turn aggravate the doubts concerning the ability of the United States to defend the gold parity of the dollar in the long run, and these doubts cause private banks and public authorities to be even less willing to offer shelter to increasing amounts of dollar exchange. Hence, the more serious the fears that the gold-exchange standard will break down once again (as it did in 1931, when great Britain went off gold), the more real becomes the danger of its actual collapse.

The consequences of such a collapse may be manifold, but most probably they would include some of the following measures and repercussions: restrictions on or termination of all sales of gold by the monetary authorities of the United States; restrictions on international payments through the introduction of foreign-exchange controls and prohibitions of capital transfers; import restrictions of all sorts; blocking of deposits of foreign nationals; the end of convertibility of most currencies, including the present key-currencies; elimination of these key-currencies from the official reserves of central banks and consequently a drastic reduction in "liquidity" everywhere; severe losses incurred by those central banks which did not match the depreciation of the key-currencies with equal devaluations of their own currencies;⁸ reductions in production and employment resulting from import restrictions and export reductions. It may, of course, be possible through skillful improvisations to avoid or mitigate some of the worst consequences of the collapse of the international payments system, but it would surely be wiser not to rely on improvisations and to avert a collapse of the system through appropriate reforms. It is on the basis of this kind of argument that monetary experts have offered their plans and urge their adoption.

⁸ The losses which The Netherlands Bank suffered as a result of the depreciation of the pound sterling in 1931 exceeded the Bank's entire capital.

III. A Selection of Plans

A VARIETY of plans have been proposed and the world will have to make a difficult choice. However, that any of the more radical innovations in the world monetary system will be adopted is far less probable than that the decision will be in favor of a policy of "muddling through," with only small repairs to the worst cracks and breaks in the old structure. One must not hold it against the practitioners and politicians if they resist more ambitious innovations since, after all, the arguments and favorite notions of the scholars diverge so widely. To help us survey the plans proposed, we shall begin with a simple classification which includes also alternatives that represent more nearly a continuation than a reform of the present system. Our classification distinguishes five types of different solutions, but the possibility of combining any two, despite all their differences, yields a considerably larger number of choices.

- A. Extension of the gold-exchange standard
 - 1. with continuing increase of dollar and sterling reserves;
 - 2. with adoption of additional key-currencies.
- B. Mutual assistance among central banks
 - 1. with safeguards against expansive credit and fiscal policy;
 - 2. with extension of domestic credit and expenditures.
- C. Centralization of monetary reserves and reserve creation
 - 1. with overdraft facilities available to deficit countries;
 - 2. with autonomous reserve creation by the world central bank;
 - 3. with finance of aid to underdeveloped countries.
- D. Increase in the price of gold
 - 1. with the gold-exchange standard continued;
 - 2. with the gold-exchange standard abolished.
- E. Freely flexible exchange rates
 - 1. in order to make internal monetary policies more independent;
 - 2. because internal monetary policies are too independent.

A. Extension of the Gold Exchange Standard

It may be doubtful that, in view of all its defects and deficiencies, imaginary or real, the present system can long endure in its present form—but it is not impossible. The system may prove to be viable even without special measures for its reinforcement. If the “practical people” continue to resist all more extensive plans for reform, muddling through will be the only practical possibility. This may lead to an unhappy ending but, again, with some luck things may come out all right. It is conceivable that confidence in the dollar and in the pound sterling is fully restored; that the constant predictions of an increase in the price of gold will no longer be taken seriously; that the further increase in demand liabilities of the United States will not exceed the willingness of other central banks to accept them as part of their reserves; that the monetary authorities of countries still suffering from an excess demand for dollars for foreign payments will at last become healthy enough to afford the acquisition of dollar balances for purposes of accumulating a foreign reserve; and, finally, that the growth of the foreign reserves of the free world through new gold production, gold dishoarding, and through the said increase in dollar balances will be fully adequate to meet the world’s need for reserves. It takes some optimism, however, for one to count on all these conditions of a happy ending actually to materialize.

Alternative A-2 would put the gold-exchange standard on a broader base. Some of the strong currencies—for example, the German mark, French franc, and Swiss franc—might be recognized and adopted as additional key-currencies, in that other monetary authorities would get used to holding demand deposits in the new key-currency countries. To be sure, it would be rather anomalous for reserves to be held in currencies that are only rarely needed for current transactions. If, however, trade or capital transactions with countries with convertible currencies are sufficiently frequent so that good use can be found for balances in these currencies for transactions purposes, there should be no obstacle to the inclusion of such deposits in the official monetary reserves. Just as a large firm may have accounts with several banks or in several cities, so the central bank of a country may hold in its official reserve the currencies of several other countries. Of course, a necessary condition for this extension of the reserve portfolio is that none of the four or five potential key-currencies is regarded as weak or soft.

The recognition of additional key-currencies means not only that the monetary authorities of third countries hold reserves in the form of four or five foreign currencies, but also that the present two key-currency countries hold some of their reserves in currencies of the new key-currency countries. It may seem odd that the Federal Reserve Bank of New York should hold balances in Frankfurt while at the same time the German Bundesbank holds balances in New York. This looks almost like financial kite-flying, since the mutual establishment of credit balances by way of mutual lending creates assets in the form of official reserves without any effort, expense, abstinence, or saving on the part of any of the countries concerned.

It is important to understand how, under such a "multiple-currency-reserve system," official reserves will be affected by international payments. (T-Account Set 1 may be helpful in clarifying the effects of payments upon reserves under various circumstances.) If payments are made from one country to another in the currency of a third country, then, and only then, the effect will be precisely as under the full gold standard: the paying country will lose reserves and the receiving coun-

T-ACCOUNT SET 1

INTERNATIONAL PAYMENTS IN A MULTIPLE-CURRENCY-RESERVE SYSTEM

Assumptions:

- (1) There are four reserve currencies, the U.S. dollar (\$), the pound sterling (£), the French franc (Fr), and the West German mark (DM).
- (2) The central banks, executing and receiving payments, do not pursue any particular portfolio policy regarding their foreign-exchange holdings but leave the composition of their reserves to the accident of the individual choices made by the payers when they decide what form their payments are to take. That is to say, the central banks accumulate the currencies which they receive in payment, and pay out the currencies which the clients order.
- (3) All exchange rates equal 100, so that in converting one currency into another we are spared the effort of calculating the equivalent.

First Example: Payments from the United States to Brazil, in U.S. Dollars

United States				Brazil			
Foreign exchange	Domestic deposits	-100		Foreign exchange		Domestic deposits	+100
£	Foreigners' deposits			\$	+100		
Fr.	United Kingdom			£			
DM	France			Fr			
	Germany			DM			
	Other (Brazil)	+100					

Result: The monetary reserve in the United States is unchanged, the monetary reserve in Brazil is increased.

Second Example: Payments from the United States to Brazil, in DM

United States				Germany			
Foreign exchange		Domestic deposits	-100	Foreign exchange		Domestic deposits	
£		Foreigners' deposits		\$		Foreigners' deposits	
Fr		United Kingdom		£		United States	-100
DM	-100	France		Fr		United Kingdom	
		Germany				France	
		Other				Other (Brazil)	+100
Brazil							
		Foreign exchange		Domestic deposits	+100		
		\$					
		£					
		Fr					
		DM	+100				

Result: The monetary reserve in the United States is decreased, the monetary reserve in Brazil is increased.

Third Example: Payments from the United States to Germany, in U.S. Dollars

United States				Germany			
Foreign exchange		Domestic deposits	-100	Foreign exchange		Domestic deposits	+100
£		Foreigners' deposits		\$	+100	Foreigners' deposits	
Fr		United Kingdom		£		United States	
DM		France		Fr		United Kingdom	
		Germany	+100			France	
		Other				Other	

Result: The monetary reserve in the United States is unchanged, the monetary reserve in Germany is increased.

Fourth Example: Payments from the United States to Germany, in DM

United States				Germany			
Foreign exchange		Domestic deposits	-100	Foreign exchange		Domestic deposits	+100
£		Foreigners' deposits		\$		Foreigners' deposits	
Fr		United Kingdom		£		United States	-100
DM	-100	France		Fr		United Kingdom	
		Germany				France	
		Other				Other	

Result: The monetary reserve in the United States is decreased, the monetary reserve in Germany is unchanged.

try will gain reserves, total monetary reserves remaining unchanged. In a key-currency country the monetary reserve will not change when payments are made or received in its own currency. Hence, total reserves of all countries combined will increase when payments are made from a key-currency country in its own currency; conversely, total reserves will decrease when payments are received in a key-currency country in its own currency.

Of course, the monetary authority of a key-currency country will hardly leave it entirely to the whims or habits of bank clients to determine how the amount or composition of its foreign-exchange reserve are to change. Convertible currencies can be exchanged one against the other, and key-currency countries may use their deposits in other key-currency countries at any time to reduce their own obligations. Any such compensation of claims against liabilities destroys monetary reserves in the same way that the establishment of credit balances in key-currency countries creates monetary reserves. It would be quite likely that the central banks of key-currency countries would, in close cooperation, take advantage of these possibilities to create and destroy monetary reserves.

There is one necessary condition for things to develop along these lines: there must be a large measure of confidence in the credit and fiscal policies of the key-currency countries. After all, the willingness of a central bank to allow its monetary reserves to grow by accumulation of claims against a particular country implies its willingness to grant increasing amounts of "credit" to the central bank of that country. A central bank that increases its holdings of a foreign currency is in effect making a loan to the central bank issuing that currency. This could not be expected if there were serious misgivings about the policies pursued by the "borrowing" central bank, especially if there were fears that it intended to continue an "unsound" policy despite ever-mounting indebtedness. Thus, in the last analysis, a development of type A-2 converges upon the basic idea of the alternatives of type B. The reverse need not be true. Although the extension of the gold-exchange standard in the manner just described would involve mutual assistance by central banks, most of the plans for mutual assistance among central banks are entirely independent of any recognition of additional key-currencies. Indeed, the most widely discussed plans of type B take it for granted that the dollar and the pound sterling remain the only reserve currencies.^o

^o In May 1962, while this paper was at the printer, announcements by Robert V. Roosa, Undersecretary of the Treasury, and by the Federal Reserve Bank of New York, indicated that steps in the direction of the multiple-reserve-currency system had been taken by the United States, France, and the United Kingdom. In connection with certain forward exchange transactions the United States had started to hold various foreign currencies as part of its foreign reserve. For example, the Federal Reserve Bank of New York paid \$50 million to the dollar account of the Bank of England in New York against a corresponding payment by the Bank of England of nearly £18 million to the sterling account of the New York Bank in London. A similar arrangement was made with the Banque de France. These

B. Mutual Assistance among Central Banks.

The simplest and most common way in which one central bank may extend credit to another would be for the helping bank to purchase the currency of the bank in need of help and to continue to hold the acquired foreign exchange for the time being. This can be done either without any previous arrangements or on the basis of stand-by agreements. The transaction itself is not one between the "lender" and the "borrower," since the obligations of the borrower are offered for sale by third persons, and since the bank which acquires these obligations makes its payment to the seller rather than to the implicit borrower, the obligated bank.

Other kinds of assistance do involve direct transactions between the lending and the borrowing central banks. For example, the lending bank may put at the disposal of the borrowing bank gold or claims against (i.e., currencies of) third countries and thereby reduce its own assets; or, alternatively, it may supply claims against itself, and thereby increase its liabilities. Finally, there is the possibility for an intermediary, such as the International Monetary Fund, to step in between the lending and the borrowing central bank. All of this may be on the basis of *ad hoc* agreement or of stand-by agreements, providing for credits or drawing rights upon demand.

Of the many forms which the support action may take—ten alternative forms are shown in T-Account Set 2—the most favored at the present time calls for loans to the I.M.F. by central banks of surplus countries in their own currency, enabling the Fund to sell these currencies to the monetary authority of the deficit country, which pays with its own liabilities (and a promise to repurchase these liabilities as soon as possible). The purpose of this support action is to provide compensatory finance to a country suffering from a massive outflow of

reciprocal arrangements are designed to provide "forward cover" to both parties.

In addition, Roosa announced that during any temporary or persistent surpluses in the overall balance of payments, the United States would not reduce its liabilities to foreign monetary authorities—which would lower the total of international reserves—but would instead acquire foreign currencies. These currencies would be added to the reserves of the United States, so that total reserves would increase. Thus it would be possible, in principle, to make world reserves increase both as a result of a U.S. deficit and as a result of a U.S. surplus. Payments *from* the United States, in the case of a deficit, could increase the dollar holdings of the recipient countries; payments *to* the United States, in the case of a surplus, could increase the foreign-currency holdings of the United States. Alternatively, the United States, after having accumulated sufficient exchange reserves, could decide to meet temporary deficits by using some of these holdings, avoiding an increase in liabilities or an outflow of gold.

T-ACCOUNT SET 2

ALTERNATIVE FORMS OF SUPPORT OF ONE CENTRAL BANK BY ANOTHER

Assumptions:

- (1) The Deutsche Bundesbank (D.B.B.) is to act in support of the pound sterling.
- (2) In examples 1 and 2, the D.B.B. purchases pounds sterling offered in the market; in examples 3 to 6, it makes a loan to the United Kingdom (U.K.); and in examples 7 to 10, it makes a loan to the International Monetary Fund (I.M.F.) to supply the funds to the U.K.
- (3) In examples 6 and 10, the U.K. uses the new funds to reduce its demand liabilities to (or its short-term debt held by) the D.B.B.

Example 1. The D.B.B. purchases pounds sterling from German nationals.

D.B.B.			
Foreign exchange £	+100	Domestic deposits	+100

Example 2. The D.B.B. purchases pounds sterling from foreign nationals.

D.B.B.			
Foreign exchange £	+100	Foreigners' deposits	+100

Example 3. The D.B.B. makes a loan of gold to the U.K.

D.B.B.			
Gold	-100		
Loan to U.K.	+100		

Example 4. The D.B.B. makes a loan of dollars to the U.K.

D.B.B.			
Foreign exchange \$	-100		
Loan to U.K.	+100		

Example 5. The D.B.B. makes a loan of D-Mark to the U.K.

D.B.B.			
Loan to U.K.	+100	Foreigners' deposits	+100

Example 6. The D.B.B. makes a loan of D-Mark to the U.K., which the U.K. immediately uses to repay some of its demand liabilities held by the D.B.B.

D.B.B.			
Foreign exchange £	-100		
Loan to U.K.	+100		

Example 7. The D.B.B. makes a loan of gold to the I.M.F., and the I.M.F. sells the gold to the U.K. against pounds sterling.

D.B.B.			
Gold	-100		
Loan to I.M.F.	+100		

Example 8. The D.B.B. makes a loan of dollars to the I.M.F., and the I.M.F. sells the dollars to the U.K. against pounds sterling.

D.B.B.

Foreign exchange			
\$	-100		
Loan to I.M.F.	+100		

Example 9. The D.B.B. makes a loan of D-Mark to the I.M.F., and the I.M.F. sells the D-Mark to the U.K. against pounds sterling.

D.B.B.

Loan to I.M.F.	+100	Foreigners' deposits	
		U.K.	+100

Example 10. The D.B.B. makes a loan of D-Mark to the I.M.F.; the I.M.F. sells the D-Mark to the U.K. against pounds sterling; and the U.K. uses the D-Mark immediately to repay some of its demand liabilities held by the D.B.B.

D.B.B.

Foreign exchange			
£	-100		
Loan to I.M.F.	+100		

short-term capital. (Examples 9 and 10 in T-Account Set 2 illustrate this case.)

This is the kind of action recommended in the proposals made by Xenophon Zolotas, president of the Bank of Greece,¹ Edward M. Bernstein, former director of the Research Division of the I.M.F.,² and Per Jacobsson, managing director of the I.M.F.³ All these proposals provide

¹ Xenophon Zolotas, in International Monetary Fund, *Summary Proceedings of the Twelfth Annual Meeting of the Board of Governors*, 1957, p. 42; *idem*, in International Monetary Fund, *Summary Proceedings of the Thirteenth Annual Meeting of the Board of Governors*, 1958, p. 91; *idem*, "A Proposal for Expanding the Role of the International Monetary Fund" (mimeographed, February 24, 1961); *idem*, *The Problem of the International Monetary Liquidity* (Bank of Greece, Papers and Lectures, No. 6, Athens: 1961); *idem*, *Towards a Reinforced Gold Exchange Standard* (Bank of Greece, Papers and Lectures, No. 7, Athens: 1961).

² Edward M. Bernstein, *International Effects of U.S. Economic Policy*, Joint Economic Committee, United States Congress, 86th Congress, 2nd Session, Study Paper No. 16 (Washington: 1960), pp. 85-86; *idem*, "The Adequacy of United States Gold Reserves," *American Economic Review*, Papers and Proceedings, Vol. LI (1961), pp. 439-446; *idem*, "The Problem of International Monetary Reserves," Statement in *International Payments Imbalances and Need for Strengthening International Financial Arrangements*, Hearings before the Subcommittee on International Exchange and Payments, Joint Economic Committee, United States Congress [87th Congress, 1st Session] (Washington: May 1961), pp. 107-137.

³ Per Jacobsson, quoted in "Fund Report at ECOSOC," *International Financial News Survey*, International Monetary Fund, Vol. XIII, No. 16 (April 28, 1961), pp. 124-126; *idem*, in International Monetary Fund, *Summary Proceedings of the Sixteenth Annual Meeting of the Board of Governors*, 1961, pp. 27-29, 157-158.

that the most important industrial nations with balance-of-payments surpluses make loans to the I.M.F., enabling it to place the acquired funds at the disposal of the monetary authorities of important industrial nations suffering from outflows of short-term capital. These plans differ from one another merely in technical details. (This is not to say that technical details may not be important.) For example, under the Bernstein plan the central banks in trouble could with relative certainty count on the availability of I.M.F. support, whereas under the Jacobsson plan—which represents a compromise with the more orthodox points of view of central bankers in continental Europe—the lending banks would have to approve of the intended I.M.F. action in each case.⁴ All these plans are designed to reinforce the gold-exchange standard against the onslaught of hot-money movements. Their common feature is that the I.M.F. would borrow from the central banks in the countries receiving capital inflows and would make the borrowed funds available to the central banks suffering from the capital outflows.

The role of the I.M.F. in these interventions is that of an intermediary and guarantor, not that of a bank of issue or of a commercial bank engaged in the creation of credit. A real bank (in the economic sense of the word) would not have to start looking for lenders; it would purchase long-term obligations in the open market or acquire short-term obligations by granting loans, and in the process would create its own deposit liabilities which serve their holders as means of payment and transactions-cash balances. Under the proposed arrangements, however, the I.M.F. is to borrow liquid international means of payment in the form of demand liabilities of central banks in strong positions and pass them on to the central banks battered by the hot-money storm.⁵

The way in which the support action proposed in the Zolotas, Bernstein, and Jacobsson Plans compensate for the results of a short-term capital movement is demonstrated in T-Account Set 3. First the results of an assumed outflow of funds from the United States to Germany are shown: A flight from the dollar on the part of private holders of American balances forces the Deutsche Bundesbank (D.B.B.) to purchase all dollars offered for sale. Then it is shown how the actions under the loan arrangement with the I.M.F. undo most of what the capital outflow has done: The dollar holdings of the D.B.B., accumulated as a

⁴ See "General Arrangements to Borrow," Paragraph 7, and "Letter from Mr. Baumgartner, Minister of Finance, France, to Mr. Dillon, Secretary of the Treasury, United States," points C and D, reproduced in *International Financial News Survey*, International Monetary Fund, Supplement, Vol. XIV (January 12, 1962).

⁵ The difference between credit creation and credit transfer is demonstrated in T-Account Set 7 on page 40.

result of the hot-money movement, are gone, replaced by a nonnegotiable claim against the I.M.F., and the demand liabilities of the United States to the D.B.B. are replaced by a U.S. debt to the I.M.F. Both the lending and the borrowing countries may be satisfied with these trans-

T-ACCOUNT SET 3

SHORT-TERM CAPITAL MOVEMENT AND COMPENSATING SUPPORT ACTION

Assumptions:

- (1) An outflow of short-term capital occurs from the United States; one-half of the funds withdrawn are owned by U.S. nationals, one-fourth by German nationals, one-fourth by other foreigners.
- (2) All these dollars are offered to German banks; the Deutsche Bundesbank (D.B.B.), intent upon maintaining the fixed exchange rate, purchases the dollars.
- (3) The United States wishes to draw German mark (DM) from the International Monetary Fund (I.M.F.) in order to reduce its demand liabilities to the D.B.B.
- (4) The I.M.F. calls on the D.B.B. for a loan under the credit arrangement; the D.B.B. lends DM to the I.M.F. and receives a nonnegotiable instrument evidencing the Fund's indebtedness.
- (5) The I.M.F. sells (read: lends) the DM to the United States.
- (6) The United States uses the acquired DM to reduce (buy back) its liabilities to the D.B.B.

Results of Assumptions (1) and (2): Hot-money movement from United States to Germany.

United States				Germany			
		Domestic deposits	-50	Foreign exchange \$	+100	Domestic deposits	+25
		Foreigners' deposits, private	-50			Foreigners' deposits, private (U.S.)	+50
		Foreigners' deposits, official (D.B.B.)	+100			private (others)	+25

Results of Assumptions (4) to (6): D.B.B. loan to I.M.F. in order to support U.S. position.

I.M.F.							
Claim against U.S.		+100		Debt to D.B.B.		+100	
United States				Germany			
		Foreigners' deposits, official (D.B.B.)	-100	Foreign exchange \$	-100		
		Debt to I.M.F.	+100	Claim against I.M.F.	+100		

Combined Results: The U.S. official liabilities to Germany (i.e., the D.B.B.'s holdings of dollars) are unchanged, because the increase resulting from the capital movement was compensated for by the support action.

formations of assets and liabilities. The lending country will have secured a gold guaranty for a part of its excessive holdings of foreign exchange, and the borrowing country will have a part of its excessive sight liabilities funded, that is, replaced by a debt of deferred maturity.

The purposes for which, and the conditions on which, the loans under the "arrangements to borrow" are to be made invite comment of a more general nature. For they reflect a remarkable change in official thinking from the time of Bretton Woods to the present. International loans, then, were designed to help countries in balance-of-payments difficulties *not* caused by capital movements, let alone short-term capital movements. And the main idea, then, was that central banks assisted by international loans might be spared painful adjustments through "deflationary" methods. Under the present plans, the international loans are specifically designed to help countries in difficulties arising from short-term capital outflows. And the main idea is to keep an eye on the aided countries to see that they do not pursue "unsound" policies, which evidently means that they do not indulge in policies of undue monetary expansion. What are the theoretical considerations behind these changes? Can a strong case be made for international loans designed to compensate for the results of hot-money movements?

The chief argument is that international support to monetary authorities suffering an outflow of short-term capital is likely to achieve its purpose, whereas similar support in the case of balance-of-payments difficulties due to an unsatisfactory state of the balance of goods and services is often doomed to failure. The better prospects of success with the hot-money trouble than with the "basic-balance" trouble lie in the different sources of funds going abroad and the different urge to domestic credit expansion in the two situations.

Domestic funds seeking foreign exchange to pay for purchases and investments abroad come out of transactions cash balances, that is, balances actively engaged in the industrial circulation and the domestic income flow. Any net outflow of funds from this "circuit flow" reduces the effective demand for domestic products and services, and the monetary authorities take it to be their duty to replace the leaked-out funds through newly created ones. As the importers buy foreign exchange and pay the banks for it, domestic deposits in active circulation are destroyed; only an expansion of credit, through loans or open-market purchases, can make up for the contraction, and the pressures in favor of a credit expansion are hard to resist. However, by maintaining effective

demand at the level at which domestic prices and incomes produce an excess demand for imports and investments abroad, the monetary authorities perpetuate the deficit in the market balance of payments at the given exchange rate. They continually feed, through their credit expansion, the excess demand for foreign currencies and must then satisfy this demand out of their monetary reserves. Assistance by foreign or international institutions can replace losses of monetary reserves. But as this is apt to encourage the monetary authorities to continue their policy of "offsetting"⁶ the effects which the balance-of-payments mechanism has upon domestic circulation, the deficit is likely to become "fundamental"—that is, curable only through devaluation of the currency.

This is not so when the deficit in the foreign-exchange market is due to a speculative outflow of short-term capital. Domestic funds seeking foreign exchange for speculative purposes come, initially at least, out of cash balances held for precautionary and speculative motives. These balances are not actively engaged in the industrial circulation and in the domestic income flow. Their use for purchases of foreign exchange does not reduce the effective demand for domestic products and services, and hence the pressures upon the monetary authorities to replace the diminished stock of money will be less powerful. Of course, there will be repercussions upon the active circulation of money and upon aggre-

⁶ In a way, the practice of recreating through credit expansion the domestic money destroyed through official sales of gold or foreign money upsets an almost axiomatic truth: that he who spends some of his money has less of it left. If Mr. A. buys something from Mr. B. and pays for it, A's money balance is reduced; and if a large group of A's buys from a large group of B's, paying them in money, the amount of money held by the A's should be expected to be down from what it was before. Yet, if a nation A buys from a nation B and pays for its purchases, complaints are raised about any reduction in the money stocks available in A and claims are made to bring them up to the former level, so that effective demand in A be maintained. This is evidently a case of "eating one's cake and having it too." Should now the national policy of maintaining effective demand in the face of a deficit in foreign payments, known as "offsetting," be systematically matched by an international policy of maintaining the deficit country's monetary reserves by replacing the outflows through international support action? To do this would no doubt be possible. Just as a central bank in a country that consumes and invests more than its national income can, with a policy of maintaining effective demand, always recreate the domestic cash balances that are destroyed by payments abroad, so the foreign central banks could always, with a policy of international assistance, recreate the net reserves of the troubled central bank that were depleted by its foreign payments. (This suggests a touching fairy tale in which a warmhearted shopkeeper visits his customers every night to return to them the money he had taken in during the day from their purchases, and to make sure that next morning they would have enough money for new purchases.)

gate demand. One of these repercussions may be through interest rates and the availability of credit. Speculative buyers of foreign exchange will use other funds than their own speculative cash balances. They will sell government securities and they will use all the bank credit they can get. Still, the initial impact upon effective demand will be smaller than in the case of "basic-balance" trouble. Thus the monetary authorities may show greater resistance to the demand for easier money. As they refuse to feed the excess demand for foreign exchange with expanded credit, and as the speculative cash balances become depleted, the deficit in the foreign-exchange market is likely to decline. It may still last longer than the monetary authorities can stand; the size of the inactive cash balances, reinforced by some switches from transactions cash and by some help from commercial banks, may overtax the gold and exchange reserves of the authorities and their ability to stand further increases in demand liabilities to foreign holders. Yet, it is precisely this situation for which the international arrangements to borrow are designed. As the drain on the monetary reserves is alleviated by the international support action, and as the increase in demand liabilities to foreign banks is transformed into deferred liabilities to the I.M.F., the speculators' nerves are calmed. With the return of confidence in the authorities' capacity to maintain the stability of the currency, and with the progressive depletion of speculative cash balances, the outflow of short-term capital comes to an end, and may be succeeded by a reverse flow.

It may be helpful to summarize the argument. The danger that a central bank in trouble will use international assistance for an extension of its credit will be much smaller if only hot-money movements are the cause of its difficulties. This is so because the outflow of speculative funds need not be associated with a reduction in effective demand for goods and services and consequently the monetary authorities may not feel compelled to act in support of effective demand. On the other hand, payments for imports or for long-term investment abroad are financed from cash balances held for transactions purposes and hence from funds taking part in the normal circuit flow. One must expect, therefore, that monetary authorities intent upon maintaining effective demand would be pressured or feel duty-bound to embark on a compensatory expansion of credit. This difference is a sufficient explanation for the fact that foreign central banks are willing to offer their loans only to compensate for speculative hot-money movements, and even in these cases wish to

insist that their support actions are not made ineffective through "unsound" policies in the deficit countries.

C. Centralization of Monetary Reserves

Just as the establishment of a national central bank can multiply the capacity of a country's banking system to create domestic money, so the establishment of a world central bank could multiply the capacity of the world monetary system to create international reserves and to make the individual central banks shock-proof. No wonder, then, that the centralization of central-bank reserves appear to many as the best solution of the monetary problems of our time, and to some as an inevitable development in the course of time.

The Keynes Plan⁷ for the establishment of an international Clearing Union and the Triffin Plan⁸ for the extension of the I.M.F. into an international central-reserve bank⁹ are the best known of the proposals along such lines. Practitioners and politicians are usually averse to plans of this sort, but there have been remarkable exceptions. Thus, in 1957 Sir Oliver Franks, President of the Board of Lloyds Bank, recommended that the I.M.F. be gradually transformed into a super-central bank.¹⁰ It was almost sensational when, in 1961, Harold Macmillan, the British Prime Minister, declared himself a supporter of this idea.¹¹ (Oddly

⁷ *Proposals for an International Clearing Union*. Presented by the Chancellor of the Exchequer to Parliament by Command of His Majesty, April 1943. (London: H.M.'s Stationery Office, Cmd. 6437.)

⁸ Robert Triffin, "Tomorrow's Convertibility: Aims and Means of International Policy," *Banca Nazionale del Lavoro Quarterly Review*, No. 49 (June 1959), pp. 131-200; *idem*, "Statement," in *Employment, Growth, and Price Levels*, Hearings before the Joint Economic Committee, Congress of the United States, 86th Congress, First Session, Part 9A (Washington: 1959), pp. 2905-2954; *idem*, *Gold and the Dollar Crisis* (New Haven: Yale University Press, 1960); *idem*, "Le Crépuscule de l'Etalon de Change-Or," in *Comptes Rendus des Travaux de la Société Royale d'Economie Politique de Belgique*, No. 272 (1960); *idem*, "After the Gold Exchange Standard," *Weltwirtschaftliches Archiv*, Band 87 (1961), pp. 188-207.

⁹ Triffin himself denies that his plan would establish a super-central bank or world-central bank. He argues that the I.M.F., though with new functions under his plan, would still lack control over and responsibility for "national monetary issue functions." (*Weltwirtschaftliches Archiv*, *op. cit.*, p. 200.) Triffin to the contrary, the criteria of a central bank should be found in the centralization of reserves and of the creation of reserves.

¹⁰ "At present, the credit-creating powers of that institution [the I.M.F.] are rigidly limited by the size of quotas; nor would an all-round increase in quotas be a suitable remedy for the situation we have in mind. There might be general advantage for the world, however, if the Fund could move in the direction of becoming a super-central bank." Sir Oliver Franks, "Statement by the Chairman," in *Report and Accounts 1957*, Lloyds Bank Limited, January 1958, p. 20.

¹¹ "Just as each individual country painfully acquired a central banking system,

enough, a few months later, at the annual meeting of the I.M.F., the representatives of the United Kingdom failed to give even the slightest support to developments in this direction.) Among economists there are many who regard these proposals as premature but certain of eventual acceptance. A few economists go so far as to regard them as the only real solution.¹²

We shall describe here only those parts of the Keynes Plan which we regard as particularly important for purposes of comparison with several other plans of this type. Under the Keynes Plan, the deposit liabilities of the Clearing Union are expressed in terms of a new international currency unit, called Bancor, with a fixed (though not inalterably fixed) equivalent in gold. Redemption of the deposits in gold is not obligatory and the depositors—the central banks of the member countries—can use their balances only for transfers to the accounts of other central banks. With the exception of some foreign-currency holdings of members of a “currency group” (for example, the Sterling Area), central banks should not be permitted to hold foreign currencies as part of their reserves. Thus, monetary reserves should consist only of gold and bancor. Bancor deposits with the Clearing Union can be established or increased in two ways: first, through sale of gold to the Clearing Union and, secondly, through the use of overdraft facilities by central banks that suffer a deficit in their international balance of payments in excess of the credit balances on their bancor accounts. Since a credit of the Clearing Union to a central bank overdrawing its account can be used only for payments to other central banks, it creates new bancor credit balances.

so there ought—ideally—to be a central banking system for all the countries of the Free World.

“All sort of remedies are being suggested. The main difficulty about many of them is what I might call the mental hurdles which they present. It is normal to think of money as something painfully acquired; a dollar represents so many drops of sweat or so many ulcers. There seems to be something immoral in increasing the credit base by mutual agreement. It is done often enough in our internal economies; but the extension to the international field is hard to swallow. All the same, I repeat, expanding trade needs expanding money.

“The needs of our time demand a new attitude . . . An old fashioned or doctrinaire approach is not good enough. We must use the energy and abundance of our free enterprise system to transform our economic life. Above all, we must try to jump—even the older ones among us—the mental hurdles.” Sir Harold Macmillan, Address at the Massachusetts Institute of Technology, April 7, 1961.

¹² “It is clear that a solution of the international payments problem by the introduction of a common currency, or by some sort of advanced clearing system, is the only real and final answer.” Erik Ambjörn, “International Payments and the I.M.F.,” *Skandinaviska Banken Quarterly Review*, Vol. 42 (July 1961), p. 72.

The par values of all currencies are fixed, but can be altered when surpluses or deficits in the balance of payments become chronic. Each country is assigned a quota which determines the upper limits for its debit balances with the Clearing Union. The quotas are fixed by reference to the sum of each country's exports and imports (on the average of the last three to five years). A charge of one per cent per annum shall be paid by a member if its debit balance exceeds one-fourth of its quota and a charge of two per cent if its debit balance exceeds one-half of its quota. But not only bancor borrowers, but also creditors, are subject to charges. For a credit balance in excess of one-half of its quota an overly liquid central bank must pay a charge of one per cent.

Central banks can escape these charges not only by pursuing domestic credit policies designed to reverse the balance in its international payments and thus to reduce their credit or debit balances on their bancor accounts—the debtor banks by contracting credit, the creditor banks by expanding—but they can also escape the charges by mutual bancor loans. Central banks with excessive credit balances on their bancor accounts can lend some of their bancor reserves to central banks with debit balances. A brisk credit market in bancor reserves would be likely to develop, a market limited to central banks lending and borrowing from one another. (Such a market for central-bank reserves would have its prototype in the “federal-funds market” of New York, in which American commercial banks lend and borrow legal reserves in the form of deposits with the Federal Reserve Banks.) This particular feature of the Keynes Plan really belongs to our category B, the plans for mutual assistance among central banks. There are, however, important differences between Keynes' credit market for international reserves, on the one hand, and the stand-by credits under the Bernstein Plan or under the Jacobsson arrangements. In the first place, these stand-by arrangements provide only for assistance in emergency situations (such as speculative capital flows), whereas the credit market for international reserves would be an institution functioning day after day. Secondly, the loans under the I.M.F. arrangements are in the currencies of the lending countries, whereas they are in bancor deposits under the Keynes Plan. Thirdly, the debts of the central banks that arise from I.M.F. loans are medium-term obligations, in contrast with the day-to-day loans in the market for borrowed reserves under the Keynes Plan.¹³ Fourthly,

¹³ The idea of a regular international credit market for monetary reserves deserves more attention than it has been given thus far, entirely apart from any plan for the centralization of reserves. Just as business firms can operate with much more modest cash balances if they are always able to borrow on short term, and just as commercial banks can operate with much lower reserves if they have ready access

the loans under the I.M.F. arrangements are a last resort of the central banks in trouble (apart from the introduction of payments restrictions or the abandonment of fixed exchange rates), whereas the credit market for bancor deposits would be merely a small portion of a rich program of provisions liberally bestowing upon central banks munificent drawing rights upon the Clearing Union.

What distinguishes the Keynes Plan most significantly from later proposals for centralization of monetary reserves is that it provides for only two means of asset acquisition and deposit creation by the Clearing Union, namely, gold and overdrafts. Each overdraft by a central bank creates bancor deposits for other central banks and thus creates new monetary reserves. (This is demonstrated in T-Account Set 4.) How-

T-ACCOUNT SET 4

KEYNES PLAN: RESERVE CREATION THROUGH LOANS TO CENTRAL BANKS

Assumptions:

- (1) Some countries with deficits in their balances of payments but insufficient credit balances with the Clearing Union make use of the overdraft facilities.
- (2) In overdrawing their accounts with the Clearing Union through making transfers to other countries, the drawing (borrowing) central banks will have created debit balances on their accounts and additional credit balances on the accounts of the receiving countries.
- (3) The credit balances with the Clearing Union constitute monetary reserves of the member countries.

Clearing Union			
Overdrafts by central banks	+100	Deposits of central banks	+100

ever, as soon as the central banks in debt to the Clearing Union succeed in removing their payments deficits and in reversing the flows of foreign payments, the overdrafts will be paid off and the central-bank reserves that had been created by their use will be destroyed in the process. Since the rules of the Clearing Union are supposed to induce the monetary authorities of all countries to avoid both excessive indebtedness and excessive credit balances, and since it is in the members' interest to be neither in debt nor overly liquid, nothing would be more natural than that all would do their best to see that overdrafts be paid off as soon as possible. It follows from this that one could not count on a steady growth of bancor deposits from year to year.¹⁴

to a lively money market, so central banks could work with smaller monetary reserves if they could at any time turn to an international credit market and secure the needed international means of payment. The velocity of circulation of the monetary reserves would be larger; that is to say, the ratio of needed reserves to the value of foreign trade would be smaller.

¹⁴ Sir Dennis Robertson realized this long ago, when he wrote: "It is arguable

There is, thus, no active policy of reserve creation on the part of the Clearing Union. Whatever fiduciary bancor creation there is would result from clearing balances in international payments that are in excess of a member's bancor balance. Payments which a country with a credit balance on its bancor account makes to another country with a credit balance would give rise merely to transfers from one account to another with no change in the sum total of reserves. Payments which a country without a credit balance—or even with a debit balance—would make to a country with a credit balance—or at least without a debit balance—would create new reserves as a credit entry is made on the account of the receiving country. Conversely, total reserves would be reduced whenever payments were made from a country with a deposit to a country with a debit balance. Payments between countries with debit balances on their bancor accounts would have no effect upon the size of total indebtedness and total reserves.

There is one provision in the Keynes Plan which could contribute to a secular growth of monetary reserves. It calls for periodic increases in the quotas of the member countries as their foreign trade increases. These quotas, it will be remembered, determine the drawing rights of the member countries. The fact, however, that a central bank has access to overdraft facilities that increase from year to year does not mean that the bank will actually take advantage of such facilities. Just as some of the largest business firms never borrow from the banks, no matter how cordially the banks invite them to use their credit facilities, and just as some commercial banks consistently refrain from making use of discount facilities extended by their central banks, so it is to be expected that some of the central banks will always be so conservative and restrained in their credit policy that they would never—at least never for long—have to overdraw their accounts with the Clearing Union. It may not matter to them how high the limits are for their purely hypothetical drawing rights. Raising the lines of credit for someone who does not wish to borrow has no effect. To be sure, there are, and will always be, some less conservative monetary authorities which—driven by political pressures or by their own convictions—pursue decisively expansive credit policies and thereby cause their bal-

that the proudest day in the life of the Manager of the Clearing Union would be that on which, as a result of the smooth functioning of the correctives set in motion by the Plan, there were *no* holders of international money—on which he was able to show a balance sheet with zero on both sides of the account." D. H. Robertson, "The Post-war Monetary Plans," *Economic Journal*, Vol. LIII (1943), p. 359.

ances of payments to show chronic deficits. Only insofar as these countries would be prepared to see their indebtedness to the Clearing Union increase year after year could one, as a result of such prodigality, expect the monetary reserves of the world to increase in the long run.

This last remark may call for a qualification, for there is an important interdependence between internal and international money creation. Domestic credit expansion would, under the Keynes Plan, lead to international credit expansion inasmuch as the domestic credits would give rise to deficits in the balance of payments and, eventually, to the use of the overdraft facilities of the Clearing Union. This international credit expansion in turn would give rise to further internal credit expansions inasmuch as the increase in monetary reserves would automatically increase the domestic reserve positions of commercial banks and would also reduce the reticence of the central banks whose monetary reserves have increased. Thus there are, after all, some forces of long-term expansion in operation and one cannot deny that the Keynes Plan makes it possible for monetary reserves to undergo a secular growth. It remains true, nevertheless, that such growth would not be guaranteed under the plan. The plan does not even give the management of the Clearing Union any prerogative or any instrument to achieve the formation of monetary reserves in case all central bank managers are conservative and prevent balance-of-payments deficits and debts to the Clearing Union—in ever-increasing amounts—from arising or from lasting any length of time.

The Triffin Plan would work in a very different manner in this respect. It, too, provides for overdraft facilities for central banks, but in addition it gives the management of the expanded International Monetary Fund (X.I.M.F.¹⁵) a prerogative to initiate the creation of monetary reserves by means of an aggressive credit and open-market policy. Triffin provides for these open-market transactions by the expanded I.M.F. probably because he has concluded that one may not count on the central banks' demand for I.M.F. loans being of just the right magnitude to bring about the "optimal" supply of monetary reserves. Hence, the Triffin Plan enables the management of the I.M.F. to take the initiative and increase or reduce the deposits of the central banks with the I.M.F. through purchases and sales of securities in the open market. If the I.M.F. recognizes a need for secular growth of monetary re-

¹⁵ The abbreviation X.I.M.F., meaning not "ex-I.M.F." but "expanded I.M.F.," was introduced by Altman. See Oscar L. Altman, "Professor Triffin on International Liquidity and the Role of the Fund," *International Monetary Fund, Staff Papers*, Vol. VIII (May 1961), p. 156.

serves, its open-market purchases will exceed its open-market sales; and with the increasing securities portfolio of the X.I.M.F. the reserves of the central banks held at this "central bank of central banks" will increase. (The creation of reserves by the X.I.M.F. is pictured in T-Account Set 5.)

T-ACCOUNT SET 5

TRIFFIN PLAN: RESERVE CREATION THROUGH PURCHASE OF SECURITIES

Assumptions:

- (1) An expanded International Monetary Fund (X.I.M.F.), whose deposit liabilities are parts of the member countries' monetary reserves, purchases securities in the open market.
- (2) The seller of the securities deposits the X.I.M.F.-cashier's check with his bank; this bank deposits it with its central bank; and this central bank deposits it on its account with the X.I.M.F.
- (3) The increased credit balances with the X.I.M.F. constitute increased monetary reserves of the member countries.

X.I.M.F.

Securities purchased in open market	+100	Deposits of central banks	+100
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In order to appease those of his critics who fear his plan to be inflationary, Triffin is ready to propose an upper limit for the annual rate of increase of monetary reserves, something like 3, 4, or 5 per cent per year. Unwilling to accept an annual rate of growth mechanically fixed at a particular percentage, he thinks of the mentioned numbers merely as an upper limit, and not a minimum, of annual reserve creation. In any case, the Triffin Plan rests on the conviction that the world's need for monetary reserves rises, over the decades, faster than the gold stocks of the monetary authorities can increase. The centralization of reserves which Triffin recommends is designed to secure an adequate rate of growth of monetary reserves without exposing the nations to the dangers inherent in the maintenance and expansion of the gold-exchange standard.

In its original version the Triffin Plan requires each member country to hold at least one-fifth of its monetary reserves in the form of deposits with the I.M.F. These balances would bear interest. The central banks would acquire I.M.F.-balances initially by depositing gold or foreign exchange. They would receive a guaranty for the value of foreign currencies deposited, and any balances acquired through the deposit of gold or dollars should be redeemable in gold (provided the balances that a central bank would retain after any conversion into gold would

still be at least 20 per cent of its entire monetary reserve). The fragility of the present gold-exchange standard is overcome in that the holders of dollars and pounds sterling will—when the reform becomes effective—exchange these currencies against convertible I.M.F.-deposits and in that the I.M.F. will treat the claims it thereby acquires against the U.S. and U.K. governments as long-term debts repayable in small annual installments, rather than as sight liabilities of these two countries.

Implied in this and similar plans is the fact that the centralization of monetary reserves permits a gradual reduction of the part which gold plays in the growing monetary reserves of the world without exposing the system to the danger of collapse. If the monetary reserves of the world are to grow faster than the monetary gold stocks, evidently the share of gold in these reserves must become smaller and smaller. So long as a few key-currencies are used as a substitute for gold reserves, as is the case under the gold-exchange standard, there will be the danger of a speculative run on the banks of the key-currency countries. This danger is eliminated if deposits with the super-central bank serve as monetary reserves. On this score, the Triffin Plan is only a variant of the Keynes Plan. It is the difference in the methods of reserve creation which, as we have indicated, distinguishes the two plans, despite their superficial or fundamental similarities in other respects.

Many who have compared the two plans have regarded the Keynes Plan as more inflationary than the Triffin Plan. At best, this is correct only in the short run: if, for example,—as immediately after the world war—many countries in desperate need of capital pursue domestic credit policies that compel them to make full use of all overdraft facilities afforded by the Keynes Plan. In the long run, however, the Keynes Plan provides less possibilities of expansion than the Triffin Plan. Keynes, apparently, was more oriented toward the short run than the long—a bent of mind which he explicitly admitted in other connections. Probably he was not greatly impressed with the “danger” of too slow a long-term growth of monetary reserves.

A different method of expanding the I.M.F. was proposed by Maxwell Stamp.¹⁶ His plan does not really provide for a centralization of monetary reserves but it does expand the I.M.F. into an institution

¹⁶ Maxwell Stamp, “The Fund and the Future,” *Lloyds Bank Review* (1958), pp. 1-20; *idem*, “Changes in the World’s Payments System,” *Moorgate and Wall Street* (Spring 1961), pp. 3-22. In his second article, the author describes two plans which he calls Plan A and Plan B. The latter recommends a system of stand-by credits rather similar to the arrangements proposed by Bernstein and Jacobsson. We shall discuss here only Plan A, and this only will be meant when we refer to the “Stamp Plan.”

creating international reserves. Consequently, the Stamp Plan had best be discussed together with the plans of type C. Stamp proposes that the I.M.F. should issue, within a year, certificates in the amount of \$3,000 million for distribution to the governments of less developed countries. The central banks of countries willing to accept these certificates in payment for exports and to use them as monetary reserves will actually receive them when the underdeveloped countries make their purchases. There would be no need to make the certificates redeemable in gold if only they were accepted in payment by all or most member countries of the I.M.F. and could be used for payments to other member countries.

From the point of view of the I.M.F., the issuance of certificates constitutes a creation of money different from that provided under the Triffin Plan in two respects: first, regarding the speed of the reserve creation, and, secondly, regarding the quality of the assets acquired. The securities which the X.I.M.F., under the Triffin Plan, is to acquire in the open market would be highly saleable obligations of financially strong governments or international organizations, such as the International Bank for Reconstruction and Development. The assets which the X.I.M.F. would acquire under the Stamp Plan through the certificates issued to underdeveloped countries would be obligations of financially weak governments which probably would not be saleable and possibly would never be paid off. (A transaction under the Stamp Plan is pictured in T-Account Set 6.)

T-ACCOUNT SET 6

STAMP PLAN: RESERVE CREATION THROUGH AID OF DEVELOPMENT

Assumptions:

- (1) An expanded International Monetary Fund (X.I.M.F.) is authorized to issue Certificates which are accepted in payment by member countries and form part of their monetary reserves.
- (2) These transferable Certificates are distributed, through an international agency, to governments of underdeveloped countries.
- (3) These governments purchase imports from other countries and pay for them with the X.I.M.F. Certificates.
- (4) The Certificates, received in payment for the exports, are now additional monetary reserves of member countries.

X.I.M.F.

Debts of underdeveloped countries	+	100		Certificates (reserves of central banks)	+	100
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Whereas the open-market purchases of the X.I.M.F. under the Triffin Plan could always be reversed by subsequent open-market sales, there is no reversibility in the case of development loans. Gilt-edged securities can always be sold if it turns out that reserves have been created at too fast a pace or that loans to particular central banks ought to take the place of securities holdings in the portfolio of the X.I.M.F. No such flexibility exists under the Stamp Plan. On the other hand, under this plan the creation of reserves would not only contribute to the "liquidity" of the central banks of the free world but would also be part of a scheme to aid poor countries. The weight of this argument can perhaps be tested by applying it to the principles of national credit creation. How would we react to the proposal that our central banks, instead of creating money through discounts and advances to commercial banks in good standing or through purchases of shiftable government securities, should give their newly issued money to the poor widows and orphans in the land?

The methods of reserve creation under the three plans thus far discussed are sufficiently far apart in the spectrum of alternatives to show some essential contrasts. The chief difference lies in the "ideal type" of assets which the international credit institution—whether Clearing Union, Fund, or World Central Bank—acquires in the process of creating additional reserves. Under the Keynes Plan, it acquires *debts from overdrafts by central banks* whose balances have been depleted and whose deficits in the international balance of payments forced them to make use of their drawing rights. Under the Triffin Plan, it acquires *negotiable securities traded on the largest exchanges* and easily disposable without loss. And under the Stamp Plan, it acquires *nonsaleable obligations of poor governments* of underdeveloped countries. The reserves created (à la Keynes) through overdrafts may not prove to be durable, since they might disappear as soon as the debtor countries pay off their debit balances. The reserves created (à la Triffin) through open-market purchases are as durable as the management desires, but it is not certain that they will always increase effective demand to the full extent; the sellers of the securities may choose to keep their proceeds idle instead of spending them, and the central banks of the countries in which the sellers reside may choose to sterilize the increased reserves instead of using them to expand credit. The reserves created (à la Stamp) through the finance of aid to underdeveloped countries are both durable and certain to cause an increase in the demand for goods and services, since the underdeveloped countries are likely to spend every cent they

can get and are unlikely to repay the loans soon, if at all. (Stamp explicitly mentioned the possibility of nonrepayable aid, that is, donations.)

These strong contrasts show up only because, in our construction of models for purposes of analysis, we have singled out for emphasis particular characteristics of the three plans. This probably exaggerates the differences that would emerge if the plans were carried out in practice. After all, the Triffin Plan does include the possibility of overdrafts by the central banks of deficit countries and thus it includes the *modus operandi* of the Keynes Plan; similarly, the Triffin Plan could be used for the finance of development aid, just as the Stamp Plan, by the simple means of concentrating the open-market purchases of the X.I.M.F. upon obligations of the I.B.R.D. Exaggeration of differences, however, is usually a better device than minimization of differences if one attempts to understand the possible and the most probable effects of measures or institutions.

There are other plans for reserve creation through an international institution—such as the X.I.M.F.—but most of them can be treated as variants of the three plans discussed. The Day Plan¹⁷ which was submitted to and endorsed by the Radcliffe Committee,¹⁸ is a direct descendant of the Keynes Plan. It differs from the original Triffin Plan chiefly in that it eschews a provision which has been most offensive to many bankers and politicians, namely the requirement for central banks to hold one-fifth of their reserves in the form of balances with the X.I.M.F. If these deposits carry interest and are freely transferable, one may count on the central banks being willing to hold balances on their X.I.M.F. accounts for transactions purposes and as part of their monetary reserves. Triffin has accepted this modification of his plan,¹⁹ though he would prefer the reserve requirement until the central banks have become used to holding X.I.M.F. balances.

Voluntary rather than required reserves in the form of X.I.M.F.

¹⁷ A. C. L. Day, "Memorandum of Evidence," [Radcliffe] *Committee on the Working of the Monetary System*, Principal Memoranda of Evidence, Vol. 3 (London: H.M.'s Stationery Office, 1960), p. 75.

¹⁸ *Committee on the Working of the Monetary System*, Report (London: H.M.'s Stationery Office, Cmnd. 827, 1959), Chapter VIII, p. 241, §660, and pp. 247-248, §678.—The report contains the following statement: "We see great merit as a long-term objective in Mr. Day's . . . proposal for a transformation of the International Monetary Fund . . . into an international central bank, with its own unit of account, free to accept deposit liabilities or extend overdraft facilities to the central banks of member countries" (p. 248).

¹⁹ Robert Triffin, "The International Monetary Crisis: Diagnosis, Palliatives, and Solutions" in *Quarterly Review and Investment Survey*, Model, Roland and Stone (New York), First Quarter 1961, p. 6.

deposits are also provided for in the Angell Plan.²⁰ Of course, the member countries would have to commit themselves to accept X.I.M.F. deposits in payment from other member countries. Such a requirement to accept these deposits would suffice to make them into international means of payment and to induce the central banks to hold a part of their reserves in this form. According to the Angell Plan—which, incidentally, explicitly recognizes the X.I.M.F. as the central bank of central banks—the role of gold in the international monetary system would be fundamentally changed. No longer should central banks be required to pay one another or the X.I.M.F. in gold, no longer should they demand payments in gold, and no longer should they be permitted to sell gold to private parties or to central banks not members of the Fund. Deposits with the X.I.M.F. would have a fixed equivalent in gold but would not be redeemable in gold. The X.I.M.F. and the member countries could sell gold to one another, but only at their mutual convenience.

The creation of monetary reserves by means of creation of new deposits with the X.I.M.F. takes place, under the Angell Plan, through the acquisition by the Fund of two types of assets: (1) gold, especially when it is offered for sale by a member country, and (2) demand liabilities of the member central banks (that is, national currencies). These demand liabilities may be acquired by the Fund (a) directly from the central banks owing them or (b) indirectly from other central banks owning them. Purchase of such national currencies and payment for them in deposit liabilities of the X.I.M.F. represents, of course, loans to central banks. In this respect, the Angell Plan is a variant of the Keynes Plan. It differs from the Keynes Plan by providing for much narrower limits both for credit expansion by the Fund and for debt expansion by the individual central banks. Angell proposes three limitations to expansion: first, a limit on the increments to total currency holdings by the Fund (for example, 10 per cent during the first two years); second, a limit on increments in the Fund's holdings of a particular currency (perhaps 20 per cent); and, third, a limit on a country's liabilities *vis-à-vis* the Fund relative to the reserve ratio of its central bank (for example, it might be provided that a central bank whose X.I.M.F. balance exceeds 30 per cent of its total demand liabilities should use this excess to reduce by repurchase the Fund's holdings of its currency). The X.I.M.F. would have at its disposal several instru-

²⁰ James W. Angell, "The Reorganization of the International Monetary System: An Alternative Proposal," *The Economic Journal*, Vol. LXXI (December 1961), pp. 691-708.

ments by which it could compel the monetary authorities of member countries to reduce excessive debts to the Fund.

Let us note three other provisions of the Angell Plan which differentiate it from the Keynes, Triffin, and Stamp Plans. First, it contains special provisions concerning balance-of-payments difficulties of countries exporting primary products if and insofar as these difficulties are caused by fluctuations in their export prices. Secondly, the Angell Plan, in sharp contrast with the Stamp Plan, prohibits long-term loans to underdeveloped countries. Thirdly, in contrast with the Triffin Plan, it includes no provision for secular growth of monetary reserves. According to Angell, there is no evidence that an increase in the volume of foreign trade would cause increasing clearing balances and thus require increasing foreign reserves.

Four more plans in category C should be mentioned here—all four presented by Sir Roy Harrod. What we really call the Harrod Plan, the only one he supports with full conviction, involves an increase in the price of gold and will be discussed in the next section. However, faced with great resistance to this, his favorite plan, Harrod made several proposals for centralized creation of international money.²¹ All four proposals, designated by Harrod as Plans A, B, C, and D, aim at the same objective: to supply the monetary authorities of all countries so adequately with reserves that they would be relieved of their constant worries about the maintenance of a balanced payments position and would not be restrained in realizing their goals of national credit creation.

The central banks would be able to sit back and calmly watch their reserves run down over the years and not feel compelled to raise interest rates or impose import controls or devalue the currency. Of course, they would need massive reserves if they are to be able to sit it out until the balance of payments reverses itself, apparently by some lucky accident. Harrod holds that, in view of the unequal distribution of world monetary reserves, the total reserves should be approximately equal to the total annual imports of the world, or approximately \$120 billion at the present time. Since the gold and foreign-exchange reserves of the monetary authorities of the free world (not counting their I.M.F. drawing rights) amount to approximately \$60 billion, Harrod proposes that another \$60 billion of reserves be newly created.

²¹ Sir Roy Harrod, *Alternative Methods for Increasing International Liquidity* (Brussels: European League for Economic Cooperation, 1961). An abbreviated German version was published as an article, "Möglichkeiten zur Erhöhung der Liquidität," *Aussenwirtschaft*, 16. Jahrgang (June 1961), pp. 155-172.

Under Harrod Plan A, the I.M.F.—or should we again say X.I.M.F.?—would create a new international means of payment, the I.M.F. unit. Initially, a total of \$60 billion in these I.M.F. units would be credited to the accounts of the member countries, apportioned in relation to their share in total imports. Their present claims or drawing rights *vis-à-vis* the I.M.F. would be added and their present debts deducted. Additional credits would be entered on the I.M.F. accounts of the member countries to the extent of some \$3 billion a year. None of these credits—neither the initial nor the subsequent ones—needs ever be repaid: they represent grants rather than loans. (Perhaps we should designate them one-time dowries plus permanent alimonies.) The I.M.F. deposits would not be redeemable in gold but could be freely used in payment among the central banks of all member countries and converted into other currencies at fixed exchange rates.

Harrod Plan B does not create I.M.F. units but assigns to all member banks drawing rights expressed in terms of national currencies. The drawings, however, are to be made by checks in terms of other currencies, the conversions made at fixed exchange rates. (The drawing rights assigned to the countries would correspond in amount to those provided for the grants under Plan A.) Each central bank can draw checks on the I.M.F. and use them to pay its debts in any currency or to buy the currency of any member country. The central banks of member countries deposit the checks received on their I.M.F. accounts. The I.M.F. balances would not be redeemable in gold, nor would they carry interest. Nor would there be any interest charges on debit balances with the Fund, because obligations to pay interest and/or to repay overdrafts might restrain members from using their drawing rights freely. The I.M.F. would cover its expenses out of modest spreads between exchange rates in converting currencies.

Harrod Plan C would create new monetary reserves, not through grants to members of the I.M.F. nor through nonrepayable overdrafts, but rather through the Fund's open-market purchases of government obligations. Plan C differs from the Triffin Plan—which also creates reserves through open-market purchases—in several details (for example, in that I.M.F. balances would carry no interest and would not be redeemable in gold, regardless of the origin of the balances) but the chief difference is the magnitude of the proposed operations. Harrod's estimates of the liquidity requirements of the world are very much higher than Triffin's.

Under Harrod Plan D, the I.M.F. would create monetary reserves

in the process of financing buffer stocks of primary commodities. An International Buffer Stock Authority would purchase primary commodities at support prices and would pay for them with checks on the I.M.F. Should the financial needs for the acquisition of these buffer stocks not be sufficient to create enough monetary reserves to meet the needs for international liquidity, then the I.M.F. would have to use additional methods of reserve creation, for example open-market purchases of securities as under Plan C. All of Harrod's proposals are marked by largesse which goes back to his views regarding the needs and supply of money.

We have mentioned several times how far apart are the different views regarding the need for secular growth of monetary reserves. The extremes are represented by Harrod and Angell: the former wants to manufacture \$3 billion a year, whereas the latter does not think any annual increase would be needed. In this respect a proposal by A. C. L. Day is interesting.²² He proposes that each central bank be asked every year "whether it regarded any net change in its reserves over the year as permanent, or as merely temporary and therefore to be corrected subsequently." The algebraic sum of all increases in reserves that are regarded as permanent, minus the year's gold production, "would be the amount of the net new international creation of money that would be regarded as justifiable in the following year." The I.M.F. is to put this amount of international reserves at the disposal of the central banks by making loans to poor countries, possibly by purchasing long-term bonds of the World Bank. In this fashion, according to Day, "the supply of international money would be determined by the amount which countries wished voluntarily to hold."

What all these plans, beginning with the Keynes Plan and including all other prototypes and variants, have in common is that an international financial institution is charged with the function of creating—through the acquisition of claims or other assets (or fictitious assets)—additional deposit liabilities that would be accepted by the central banks as part of their monetary reserves. This is the criterion by which all these plans can be distinguished from the plans of type B—mutual assistance among central banks—which provide for reserves to be borrowed or transformed, but not newly created. To the extent that an

²² A. C. L. Day, "The World's Payments System," in *International Payments Imbalances and Need for Strengthening International Financial Arrangements*, Hearings before the Subcommittee on International Exchange and Payments, Joint Economic Committee, Congress of the United States, 87th Congress, 1st Session (Washington: 1961), pp. 325-330, especially p. 330.

international organization, such as the I.M.F., is to play a role under plans of type B, it would be the role of an intermediary and guarantor.

Those familiar with the theory of money and banking know of the fundamental distinction commonly made between the creation of additional credits and the process of merely passing credit on from lender to borrower. The outward appearances of the two kinds of transaction are often so similar that many observers, looking chiefly at the legal, accounting, or statistical effects, overlook the economic difference. Only in extreme cases are the outward appearances different enough to impress themselves upon the less theoretically inclined observer. In the strict model of *credit transfer*, the I.M.F. *sells* its long-term or medium-term obligations and acquires in exchange "liquid" funds in the form of deposit liabilities of the central banks of surplus countries, funds which it then proceeds to lend (or sell) to the central banks of the deficit countries. In the strict model of *credit creation*, the X.I.M.F. *purchases* long-term or medium-term obligations and gives in exchange "liquid" funds in the form of its own additional deposit liabilities, which become additional monetary reserves of the countries whose residents sold the obligations. (A schematic presentation of the difference is given in T-Account Set 7.)

T-ACCOUNT SET 7

CREDIT TRANSFER VERSUS CREDIT CREATION BY THE FUND

Assumptions:

- (1) In order to contrast credit transfer and credit creation most sharply, two strict models will be constructed, one of the International Monetary Fund (I.M.F.) incapable of providing funds beyond the amounts of national currencies put at its disposal, the other of an expanded International Monetary Fund (X.I.M.F.) capable of creating funds through the purchase of assets with its own deposit liabilities which are accepted by member countries as part of their monetary reserves.
- (2) In each model the sequence of actions will be described and the results, depending on the probable use of the funds, indicated.

STRICT MODEL OF CREDIT TRANSFER BY THE I.M.F.

First Act: The I.M.F. issues (or sells) its medium-term instruments of indebtedness to the central bank of a surplus country. The I.M.F. is now equipped with (borrowed or acquired) liquid funds (foreign currency) to be passed on to a client in need.

Surplus Country			
I.M.F. securities	+100	Deposit liabilities	+100
I.M.F.			
Deposit in surplus country	+100	Debt to surplus country	+100

Second Act: The I.M.F. lends (or sells) the liquid funds (foreign currency) to the central bank of a deficit country, in exchange for a medium-term promise to repay (or repurchase its domestic currency).

I.M.F.			
Deposit in surplus country	-100		
Loan to deficit country	+100		
Deficit Country			
Deposit in surplus country	+100	Debt to I.M.F.	+100

Third Act: What happens afterwards depends on the use the deficit country makes of the foreign funds put at its disposal. (a) If it uses them to buy imports from the surplus country, then the new deposit liabilities created by the surplus country during the first act will enter the active money flows in the surplus country. (b) If the deficit country uses the funds for paying for imports from third countries, then the deposit liabilities of the surplus country become part of the monetary reserves of the third countries (at least temporarily). (c) If the deficit country uses the funds to repay existing demand liabilities to the surplus country, then the deposit liabilities of the surplus country created during the first act disappear, together with its existing claims against the deficit country. This is the result which, as a rule, is intended by the entire scheme.

STRICT MODEL OF CREDIT CREATION BY THE X.I.M.F.

First Act: The X.I.M.F. purchases medium-term obligations and pays for them with its own newly created deposit liabilities. We assume, for the purpose of this illustration, that half of the debts acquired by the X.I.M.F. consist of securities sold by private banks in the surplus country, the other half of securities sold by the central bank of the deficit country. (Regardless of this assumption, the reserves of the central banks are increased by the full value of securities purchased by the X.I.M.F.)

X.I.M.F.			
Securities	+100	Deposit liabilities	+100
Surplus Country			
Deposit with X.I.M.F.	+50	Deposit liabilities (domestic)	+50
Deficit Country			
Deposit with X.I.M.F.	+50		
Securities	-50		

Second Act: What happens afterwards depends on what the sellers of the securities will do with the proceeds and what use the central banks will make of their increased reserves.

It can be demonstrated that under certain conditions credit transfer and credit creation have the same effects. Such conditions, however, are not very likely to be present in the world of today, and it would serve little purpose to consider them here. By and large, an increase in

the liquidity position through easier access to, or availability of, credit is not as effective as an increase in the liquidity position through actual possession of surplus cash balances; in their effects upon credit and fiscal policy, borrowed reserves are not quite the same as fully disposable reserves.²³

D. Increase in the Price of Gold

The fourth method of augmenting international "liquidity" is fundamentally different from the first three, all of which are somehow connected with borrowing and debt. In the case of the continuation and extension of the gold-exchange standard, additional debts of key-currency countries are to become new monetary reserves for other countries. In the case of mutual assistance among central banks, the central banks of surplus countries are willing to accept increasing debts of deficit countries and, if the I.M.F. acts as an intermediary, an exchange of roles takes place whereby the Fund assumes the part of creditor of the deficit countries and of debtor to the surplus countries. The same is true in the case of the centralization of monetary reserves, but in addition new reserves are produced through credit expansion creating deposit liabilities of the international central credit institution.

All this is different in the case of reserve creation through an increase in the price of gold. If, for example, the price of gold is doubled, an ounce of gold will be worth \$70 rather than only \$35 and, as long as money supply, commodity prices, and trade volume have not yet increased, the ratio between the monetary gold stock and all those magnitudes with which it is usually compared will be doubled too. There may also be an increase in the annual increments to the gold stocks of the free world through new gold production (and perhaps also through sales from the stocks of the U.S.S.R. and other holders of gold). Without any physical increase in the annual supply of gold, the annual increase in terms of dollar or other currencies would be twice as high as now; with a physical increase in gold production, its money value would be higher still (and the same is true for sales from Russia

²³ Dr. Sterie T. Beza suggests to me that the difference in effectiveness of available credit, on the one hand, and actual credit balances, on the other, could be compensated for by adjusting the dosage accordingly. Thus, if the former is only half as effective as the latter, one could still achieve the same results by making the line of credit twice as high as the amount of newly created balances would be. I accept this suggestion, but submit that, in actual fact, the availability of credit through credit transfer has much narrower limits than the possibility of credit creation. In other words, while it would take more, one could get only less, of transferred reserves; and while it would take less, one could get unlimited amounts, of created reserves.

and from non-monetary gold stocks). Assuming, for example (though it is not likely), that a doubling of the price were to cause a 50 per cent increase in the physical quantity of gold supplied, the money value of the quantity annually supplied would increase by 200 per cent, which would mean a tripling of the value of the annual increment to the gold reserves of the free world.

The two effects of an increase in the price of gold—the up-valuing of the existing gold stocks in the monetary reserves and the increase in the annual additions to these gold stocks—should be kept apart in theory as well as policy. For it would be possible, in principle, to refrain from using the up-valuation of the existing gold reserves as the basis for an increase in the supply of money and credit, whereas the purchase of new gold at an increased price would automatically result in a faster increase in the supply of money. The “capital gain” through the revaluation of the existing gold stocks can be sterilized. It can be blocked, or declared a profit not subject to distribution, so that the higher valuation of the monetary gold stocks would not necessarily lead to an increase in the issue of banknotes or in the amounts of deposit liabilities. (How the balance sheet of a typical central bank would be affected by a revaluation of its gold reserve is shown in T-Account Set 8.)

T-ACCOUNT SET 8

RESERVE CREATION THROUGH REVALUATION OF GOLD STOCKS

Assumptions:

- (1) A central bank holds one-half of its monetary reserve in the form of gold, the other half in the form of foreign exchange.
- (2) The price of gold is doubled.
- (3) The book value of the gold reserve is written up accordingly and the capital accounts are credited with the amount of the gain.
- (4) No distribution of the capital gain is contemplated.
- (5) The balance sheet of the bank with its main items is shown before and after the revaluation of the gold.

Before the Revaluation of Gold
Central Bank

Gold	100	Notes	100
Foreign exchange	100	Deposits	300
Loans and securities	200		
	—		
	400		400

After the Revaluation of Gold
Central Bank

Gold	200	Notes	100
Foreign exchange	100	Deposits	300
Loans and securities	200	Capital gain	100
	—		
	500		500

Different techniques may be used to prevent the distribution of the capital gain. The statute or decree increasing the price of gold may provide, for example, that the capital gain has to be turned over to the Treasury in the form of one-half of the physical gold stock and that the Treasurer will not be permitted to sell this gold. (In this case, the balance sheet of the central bank would look the same before and after, except that in terms of physical weight half the quantity of gold would have the value of 100 monetary units.) The technique used by the United States in 1934 to sterilize its gold profits was slightly different. The Federal Reserve Banks (as also all private holders of gold) were required to sell their gold stocks to the Treasury at the old price, and the Treasury paid for them with gold certificates, which took the place of the previous gold stocks among the assets of the Federal Reserve Banks. The Treasury now owned all the gold, and its value at the increased price exceeded the value of the gold certificates by the percentage of the revaluation. (The largest part of the free gold—not needed to cover the gold certificates—was later used by the U.S. Treasury to pay its first subscription to the I.M.F.)

The proposals advanced in recent years for an increase in the price of gold have not been specific and have been more or less silent on the use or sterilization of the gains from revaluation. To be sure, it is one of the chief arguments in favor of an increase in the price of gold that a doubling in the money value of the gold stocks would allow the key-currency countries to repay, in part or in full, their demand liabilities to the countries holding foreign-exchange reserves. The "net liquidity" of all central banks concerned would be increased as a result, either through the elimination or reduction of foreign liabilities or through the substitution of "honest" gold for the supposedly dubious foreign-exchange reserves or, in some instances, through a net increase in total reserves. (The effects of the revaluation upon different central banks holding reserves of different composition are shown in T-Account Set 9.)

If the United States were to use the entire appreciation of its monetary gold stocks to repay foreign obligations, the amount of its monetary reserve would remain unchanged; its "net position," of course, would be enormously improved. (Incidentally, its balance of payments on current account would also be somewhat improved, inasmuch as the interest payments on the repaid foreign debts would be saved.) In a country that has held its monetary reserve entirely in the form of

foreign exchange, the total value of the reserve, net as well as gross, would remain unchanged despite the doubling in the price of gold, the only difference being that its foreign-exchange holdings would have

T-ACCOUNT SET 9

GOLD REVALUATION: CAPITAL GAINS AND COMPOSITION OF RESERVES

Assumptions:

- (1) In order to show the effects of a world-wide increase in the price of gold, the "typical" movements on the accounts of four different countries, holding reserves of different composition, will be shown.
- (2) Before the revaluation of gold the United States has a reserve of 100 monetary units, and the other three countries have each a reserve of 10 monetary units.
- (3) The monetary reserves of the United States and of Country A consist entirely of gold; the reserve of Country B, entirely of dollars; and the reserve of Country C, half of gold and half of dollars.
- (4) The price of gold is doubled everywhere.
- (5) The United States uses the increment in the value of its gold stock to repay its foreign obligations to central banks, that is, to redeem their dollar holdings in gold.

Results of Revaluation of Gold

United States				A			
Gold	+100	Gain	+100	Gold	+10	Gain	+10
B				C			
				Gold	+5	Gain	+5

Results of Redemption of Dollars in Gold

United States				A			
Gold	-100	Foreign deposits	-100				
B				C			
Gold	+10			Gold	+5		
Dollars	-10			Dollars	-5		

Combined Results: No capital gain accrues to Country B, and only a moderate gain to Country C. The United States, with the largest gain, has its foreign liabilities paid off. Country A has the largest increase in gross reserves.

been transformed into gold (not earning any interest). In a country that has held its reserve entirely in gold, the monetary reserve would be exactly twice what it was before. A country that has held one-half of its reserve in gold and the other half in foreign exchange would come out with a net gain of 50 per cent and a corresponding increase

in its monetary reserve. (In view of this unequal distribution of gains one cannot suppress a comment on the central banks' attitudes in this respect: If central banks had taken the repeated forecasts of an increase in the price of gold seriously, and were selfish enough to have their reserve position improved in the process, they would have tried to convert all their foreign-exchange holdings into gold and the present international monetary system would have long since collapsed.)

Even if, after an increase in the price of gold, none of the countries were to pay out in money the capital gains made through the appreciation of gold reserves (and if, therefore, the flow of funds and expenditures were nowhere directly increased as a result of the appreciation), one could hardly count on all central banks leaving their improved liquidity and increased reserve ratios completely unused. To some protagonists of the increase in the price of gold, for example for Sir Roy Harrod,²⁴ the improvement in the reserve position of the various nations appears desirable precisely for the reason that their monetary authorities would be more readily inclined to resort to credit expansions in pursuance of full-employment and growth policies. Advocates of the increase in the price of gold whose attitude in this respect is quite different would have to propose sterilization measures designed to prevent such credit expansions. Oddly enough, neither Jacques Rueff²⁵

²⁴ Sir Roy F. Harrod, "Imbalance of International Payments," *International Monetary Fund Staff Papers*, Vol. III (April 1953), pp. 1-46, esp. pp. 1-5; *idem*; "Plan for Restoration of Full Gold Convertibility of the Dollar Together with a Revision of the Gold Content of the Dollar," Hearings before a Subcommittee of the Committee on Banking and Currency, *Gold Reserve Act Amendments*, U.S. Senate, 83rd Cong., 2d Sess. (Washington, March 30, 1954), pp. 129-138; *idem*, "The Role of Gold Today," *The South African Journal of Economics*, Vol. XXVI (March 1958), pp. 3-13; *idem*, "Europe and the Money Muddle," *Economic Journal*, Vol. LXVIII (September 1958), p. 538; *idem*, "Why the Dollar Price of Gold Must Rise," *Optima*, Vol. 8 (September 1958), pp. 120-127; *idem*, "World Recession and the United States," *International Affairs*, Vol. XXXIV (London, October 1958), pp. 452-453; *idem*, "A Rejoinder to Mr. Katzen," *The South African Journal of Economics*, Vol. XXVII (March 1959), pp. 16-22; *idem*, "World Monetary Liquidity," *The Irish Banking Review* (March 1959), pp. 20-25; *idem*, "Memorandum of Evidence," [Radcliffe] *Committee on the Working of the Monetary System*, Principal Memoranda of Evidence, Vol. 3 (London: H.M.'s Stationery Office, 1960), pp. 115-116; *idem*, "Gold: The American Dilemma," *The Director* (London), Vol. XIII (December 1960), pp. 486-487; *idem*, "Postwar Maladjustments," *Topical Comment* (London, 1961), pp. 13-16 and 56-60; *idem*, "A Plan for Increasing Liquidity: A Critique," *Economica*, New Ser. Vol. XXVIII, (May 1961), pp. 195-202.

²⁵ Jacques Rueff, "The West is Risking a Credit Collapse," *Fortune*, Vol. LXIV (July 1961), pp. 126-127, 262, 267-268. See also a series of articles in the *Neue Zürcher Zeitung*, June 26, 27, and 28, 1961 and in *Le Monde* (Paris) and *The Times* (London), June 27, 28, and 29, 1961. Rueff is not very explicit regarding the need for the increase in the price of gold, probably because he does not want

nor Michael Heilperin,²⁶ two anti-inflationist advocates of an increase in the price of gold, has hinted at, let alone described, any provisions on the strength of which monetary authorities could effectively resist the strong pressures and temptations to pursue easy-money policies after their gold reserves have all of a sudden jumped to twice their former size.

The increase in the annual accretion to the monetary gold stocks due to an increase in the price of gold is what all advocates of these plans regard as a most desirable effect of the measure. In particular, they expect this increased annual accretion to take the place of the present annual increase in American demand liabilities, which during the past ten years has been the source of supply of "needed" monetary reserves to the free world. The gold stock of the national monetary authorities has increased by \$600 million a year on the average and the dollar-exchange reserves have increased by approximately the same amount. If now the annual increment through new gold were to double in value, a further increase in dollar holdings could be done without. If the accretion of new gold should increase also in physical quantity and therefore be more than doubled, perhaps even tripled, in terms of money, then no one would have to worry any longer about the adequacy of the growth of monetary reserves.

The future supply of monetary reserves would no longer depend on additional dollar debts, and the existing dollar and pound sterling liabilities could be eliminated from the monetary reserves at a single stroke—these are the chief advantages Rueff and Heilperin expect from an increase in the price of gold. Their objective, in other words, is the abolition of the gold-exchange standard and a return to the full gold standard in the sense that gold alone would serve the central banks as cover and reserve. The revaluation of the old gold would enable the key-currency countries to repurchase the present foreign-exchange holdings of the other countries, and the increase in the annual supply

to disturb the lay reader and does not wish to incite another rush of gold speculation. He leaves it to the informed reader to infer from the arguments presented that the proposal for an increase in the price of gold is a logical necessity.

²⁶ Michael A. Heilperin, "Monetary Reform in an Atlantic Setting," *International Payments Imbalances and Need for Strengthening International Payments Arrangements*, Hearings before the Subcommittee on International Exchange and Payments, Joint Economic Committee, U.S. Congress, 87th Congress, 1st Session, Washington: 1961, pp. 331-340; *idem*, "L'aube d'un nouvel étalon-or," *Comptes rendus des travaux de la Société Royale d'Economie Politique de Belgique*, No. 277, (February 1961); *idem*, "Pläne für eine Reform des Internationalen Währungsfonds," *Wirtschaftsberichte der Creditanstalt-Bankverein*, Vienna, 13. Jahrg. (September 1961), pp. 38-43.

of new gold would enable the world to do without future accumulations of foreign exchange as monetary reserves. The immediate goal of abolishing the gold-exchange standard would be to avert the danger of its collapse; Heilperin's ultimate aim is "the full rehabilitation of gold in the international monetary system."

In this regard one may recognize a parallelism between the Triffin and Angell plans, on the one hand, and the Rueff and Heilperin plans, on the other: All four are based on serious doubts regarding the viability of the gold-exchange standard and on the consequent desire to eliminate foreign exchange from the monetary reserves as quickly as possible. According to Triffin and Angell, the foreign-exchange holdings would be converted into I.M.F. deposits; according to Rueff and Heilperin, they would be converted into gold obtained through the revaluation of the gold stocks.

Abolition of the gold-exchange standard is no part of the Harrod Plan. To give up the use of sterling deposits as monetary reserve of other countries would be an unnecessary sacrifice, according to Harrod. (A sacrifice for the United Kingdom or for the other countries? Probably for both.) Harrod, therefore, recommends that the gold-exchange standard be preserved. Under his plan, the increase in the price of gold should not serve to replace foreign-exchange holdings by increased gold holdings but rather to supplement them. This is in conformance with Harrod's conviction that under the present system the world would suffer in the future and has suffered in the past from a serious lack of liquidity and that the long-existing scarcity in the supply of money and credit could and should be relieved by the up-valuation of gold.

What kind of assumptions are made by the advocates of an increase in the gold price concerning the demand for gold for purposes of private hoarding and speculation? We know Harrod's views on this point. He expects that, after the increase in the price, gold will flow out of private hoards into official reserves. This expectation seems perfectly justified. The question is, however, how long one could expect such flows to continue. Can one reasonably assume that the hoarders, the speculators, and their wise advisors will believe this up-valuation of gold to be the definitive one, the ultimate one? Would such a belief not contradict all experience? The proposed official increase in the price of gold would be only the second such step for the United States—the first since 1934; for Great Britain, however, this would be the third revaluation—the first since 1949; and for France, the seventh—the first

since 1958. For some countries it would be the tenth or twelfth official increase in the price of gold within the memory of its older people.²⁷ If, now, a worldwide increase in the price of gold were to be effected for the sake of an improvement in international "liquidity," would it then not be all too probable that all the smart people—as well as the outsmarted ones—would expect a repetition of this measure every few years? In view of the speed in which these days, with the interdependence between wage-push and demand-pull, any inflationary potential actually materializes, one can hardly doubt that in due course voices would be raised to claim that the gold reserves, though increased through the revaluation, have again become inadequate relative to inflated trade figures. Such claims would be made at least by some of the adherents of a policy of permanent stimulation of effective demand (and probably also by those who savor capital gains on gold-mine shares). It goes without saying that discussions of this sort would give rise to renewed speculation and hoarding of gold.²⁸

Under these circumstances, one must seriously question whether an increase in the price of gold would result in a reduction in the long-run demand for gold by private hoarders. The opposite is more likely. What is more important, however, is that the short-run demand for gold by private hoarders would probably be subject to substantial fluctuations and might lead to the type of massive movements of hot money experienced during the second half of 1960. Since anyone who speculates for a rise in the gold price can always gain but never lose (apart from interest and other carrying charges), this onesided speculation may assume ever larger dimensions. To change this situation, the present writer, at the end of 1960, presented the Machlup plan for gradual and periodic reductions in the official gold price.²⁹ If the leading monetary authorities of the free world were to reduce, over a period of several years, the price of gold by, say, $\frac{1}{2}$ or 1 per cent every three months, one could expect that several billion dollars' worth of gold would be dehoarded and offered for sale to the monetary authorities.

²⁷ Cf. Franz Pick, *Gold: How and Where to Buy and Hold It* (New York: Pick's World Currency Report, 1961). Dr. Pick's "Currency Cemetery" contains a list of more than 200 devaluations in the period 1949-1961. Within these thirteen years there were eight devaluations in Argentina, nine each in Chile and Indonesia, and fourteen each in Brazil and South Korea.

²⁸ Compare the comments of the *Radcliffe Report* on the undesirable consequences of an increase in the price of gold. *Committee on the Working of the Monetary System, Report* (London: H.M.'s Stationery Office, Cmnd. 827, 1959), p. 246, §674.

²⁹ Fritz Machlup, "Comments on the Balance of Payments and a Proposal to Reduce the Price of Gold," *The Journal of Finance*, Vol. XVI (1961), pp. 186-193.

In order to secure "credibility" for such a program, it would of course be necessary for the monetary authorities to be prepared at all times to sell gold out of their reserves in unlimited quantities at the reduced prices. As soon as the speculators are convinced that they could buy all the gold they wanted, and at a reduced price if they waited a while, they would be transformed from buyers into sellers. After all, any amount of gold they sold they could buy back within a few weeks at a lower price; and, undoubtedly, they would want to postpone such repurchase if they knew that another reduction was imminent.

It would not be necessary to continue the periodic reductions in the price of gold year-in, year-out (except if the monetary authorities were to decide upon a demonetization of gold). The chief objective would be to make it perfectly clear all around that gold hoarders could lose money. If capital losses were just as likely as capital gains, then gold would no longer be the object of hoarding and speculation for a rise. In particular, it would always be possible to avert a run on the reserves of the present key-currency countries and to force a retreat of the speculative forces if the monetary authorities were prepared cold-bloodedly to announce another reduction of the gold price. If there should be another crisis of confidence about the future of the dollar, before the gold-exchange standard is either reinforced or abolished by adoption of one of the other plans, the Machlup plan may yet prove to be an expedient makeshift.

A plan for the reduction of the price of gold can always be made the subject of public discussion without harm of any kind, since such discussion could only calm the speculative fever. This is very different in the case of plans for an increase in the price of gold. Their public discussion is always likely to incite speculation and possible runs on the banks, causing serious injury to the credit market and the monetary system. *Discussion* of plans for an increase in the price of gold may generate the danger of a bad *deflation*, with banks closing their windows, or altogether collapsing, and restrictions imposed on national and international payments. The actual *execution* of plans for the up-valuation of gold reserves may generate the danger of a bad *inflation* with lavish extensions of credit. In addition to all this, the up-valuation would have various highly undesirable effects. For example, there would be unjust rewards for speculators and embarrassing penalties for those who have given credence to the assurances about the stability of the dollar and the pound sterling and who by their trust have several times averted the collapse of the present system. Finally, the up-valuation of

gold would cause completely arbitrary international transfers of income in favor of gold-producing countries, such as South Africa and Soviet Russia. These aspects may be largely political, but they make the plans for gold revaluation still less palatable than they would be solely on account of their economic consequences.

E. Freely Flexible Exchange Rates

We now come to the fifth method for "solving" the problems of the present international monetary system. Just as the fourth method was seen in sharp contrast with the first three, the fifth is fundamentally different from the other four. The extension of the gold-exchange standard, mutual assistance among central banks, centralization of reserves and of reserve creation, and finally the increase in the price of gold—all these plans were designed to serve the same objective, namely, to increase "international liquidity" so-called. The introduction of freely flexible exchange rates, on the other hand, would relieve the central banks once and for all of any functions in the international payments system and would remove any requirement to hold reserves for foreign payments. This is so because equality of receipts and disbursements would be secured through the free adjustment of foreign-exchange rates to the supply-and-demand situation of the moment.

Gold and exchange reserves are needed only if the exchange rates are not permitted to move to the level that would equilibrate the market at the moment. There is always a price at which the quantities supplied and demanded are equal, though this price may be subject to fluctuations from day to day. If exchange rates have to be maintained at fixed levels, then surpluses and deficits will necessarily occur and must be compensated for by the monetary authorities through their purchases or sales of gold or foreign exchange at the fixed prices. In order to be able to meet more enduring deficits (that is, in order to meet a prolonged excess demand for foreign exchange) at fixed exchange rates, the monetary authorities need gold or exchange reserves. Deficits in the balance of payments would usually be short-lived if the central bank were to permit a reduction in the country's effective demand, that is to say, if it did not allow credit expansion to replace that part of the domestic money that had disappeared from circulation when it was paid to the banks by the purchasers of foreign exchange. If, however, effective demand is maintained at its level in spite of the payments to foreign countries, then the deficit (that is, the excess demand) in the foreign-exchange market can be of long, or indeed indefinite, duration.

Without fortuitous change or deliberate adjustment, even the largest monetary reserves would eventually be exhausted.

Under such circumstances it is questionable whether a system of fixed exchange rates is at all tenable and, if not, which system is to be preferred, eventually adjustable rates or freely flexible rates. Strictly speaking, this does not exhaust all possibilities: free flexibility can, for example, be confined to a predetermined spread; or it may be restrained by official compensatory transactions in the foreign-exchange market if the monetary authorities believe they should avoid "unnecessary" or "excessive" fluctuations in the rates. Such systems of "freely flexible exchange rates with reservations" are widely regarded as more practical and more acceptable than perfectly free rates. For one can hardly expect monetary authorities to abstain under all circumstances from interfering in the market through their own sales or purchases. Yet, the differences between entirely free and predominantly free exchange rates may be disregarded in the present discussion.³⁰ We shall confine ourselves here to a comparison between the three main types: fixed, occasionally adjustable, and freely flexible exchange rates.

Fixed, non-adjustable exchange rates are possible only if the following prerequisites are met: 1. *Pegging operations*.—The monetary authorities have to sell and to buy foreign exchange in any quantity at the fixed prices, that is, they must be prepared to see their exchange holdings grow without limit when there is an excess supply, and to see them dwindle without restraint when there is an excess demand. 2. *Domestic circulation*.—The monetary authorities have to expand or contract domestic circulation according to the balance-of-payments situation, that is, they must be prepared to eliminate an excess supply of foreign exchange by creation of domestic money and through the associated increase in domestic prices and incomes, and to eliminate an excess demand for foreign exchange by destruction of domestic money and through the associated reduction in domestic prices and incomes. 3. *Foreign-payments restrictions*.—The monetary authorities may for a limited period compensate for some omissions or imperfections in the first two requirements by imposing restrictions on interna-

³⁰ Probably the most important difference is that even moderate purchases and sales of foreign exchange by independently acting monetary authorities of different countries are apt to lead to mutually incompatible exchange rates between the same currencies. Unless the monetary authorities are in continuous accord with one another—agreeing on the supposedly free market rate, which they must act in concert to obtain or maintain—their interventions in the foreign-exchange markets will result in inconsistent rates, providing juicy profits to exchange arbitrageurs.

tional payments, that is, by prohibiting or restricting certain international transactions that contribute to an excess supply or excess demand in the foreign-exchange market.

These prerequisites are usually not fulfilled nowadays. Especially the second requirement—the preparedness to inflate or deflate for the sake of exchange stability—is rarely satisfied. Most monetary authorities refuse to match an inflation that is going on abroad; they prefer to stem the inflow of foreign exchange by an up-valuation of their currency. Likewise, they refuse to submit to a deflation that might be prescribed by the state of the balance of payments; they prefer to cope with a continuing outflow of foreign exchange by resorting to a devaluation of their currency. Thus, it appears that foreign-exchange rates “fixed until further notice” are the closest approximation to the former ideal of irrevocably fixed exchange rates.

For an evaluation of the system of occasionally adjustable exchange rates—the system with adjustable peg, as it is sometimes called—it will be necessary to find out just what the conditions are under which monetary authorities decide that an alteration in exchange rates would be appropriate. Under the provisions of the I.M.F., exchange rates should be adjusted only in the case of “fundamental disequilibrium.” The diagnosis of fundamental disequilibrium is, however, largely a matter of judgment, and ordinarily the views of experts in this regard are rather divergent.³¹ By and large, a disequilibrium is regarded as fundamental if in the country concerned the prices of goods and services relative to the prices prevailing in the countries with which it trades are out of line with the fixed exchange rates between the particular currencies. The trouble is that this condition cannot be ascertained through statistical observation of relative prices and that the actual existence of substantial excess supply or excess demand in the exchange market appears to be the ultimate criterion of disequilibrium. If such a disequilibrium has existed for a very long time and the diagnostician

³¹ I have argued elsewhere—“Equilibrium and Disequilibrium: Misplaced Concreteness and Disguised Politics,” *Economic Journal*, Vol. LXVIII (1958), pp. 1-24—that we ought to avoid designating a concrete historical situation as one of “equilibrium” or “disequilibrium,” and should confine the use of these concepts to theoretical analysis, where all the variables can be fully specified in regard to which a certain position is or is not liable to undergo an adjusting change. I am violating this sound rule in this paper (1) in order to save the space that would be needed for a more satisfactory formulation and (2) because the frame of reference is relatively clear, since I speak of disequilibrium only in the sense of an excess demand (or excess supply) for foreign exchange at a given exchange rate at given prices, incomes, interest rates, money supply, and employment.

has little hope that it can be removed without inflation or deflation of price and income levels, then he decides to call it "fundamental."

The comparative advantages or costs of the system of occasionally adjustable exchange rates—of exchange rates fixed until further notice—can be judged only after a few questions are raised and answered. (1) How probable is it that a "fundamental disequilibrium" in the balance of payments emerges in a country that pursues conservative credit and fiscal policies, that is, how probable that there occur lasting changes—to which the external value of the currency must be adjusted—in the net commodity-terms of trade, originating either from non-monetary changes within the country or from any changes abroad? (2) How probable is it that a "fundamental disequilibrium" in the balance of payments emerges in a country that pursues credit and fiscal policies subservient to full-employment and growth policies? (3) What are the most probable reactions of speculative capital to disturbances in the balance of payments in a country where there is a regular practice of adjusting exchange rates that are regarded to be out of line?

In answering the first question, let us first take into account those disturbances of equilibrium which originate from non-monetary changes within the country, that is to say, alterations in the supply-and-demand situation that stem from technical progress, from changes in tastes, from shifts in the supply of labor or capital, or from any other changes of non-monetary character. (Many authors speak in this connection of "structural"³² changes and risk thereby awkward misunderstandings.) This sort of disturbances of equilibrium—or, more correctly, changes to which in a theoretical model we assign the role of "cause" of other changes—are surely not infrequent, but their effects upon the balance of payments probably go in different directions and largely neutralize each other. Fixed exchange rates are almost never "equilibrium exchange rates" either in the sense of the momentary situation or in the sense of short-term supply and demand in the foreign exchange market; the "deviations from equilibrium," however, are usually not too large and are likely to offset each other in the long run. Even those changes that can be attributed to economic growth are no more likely to go one way than another in their effects upon the balance of payments. There is no truth in the notion that an economy with a fast growth of productivity will tend to have surpluses in its balance of payments, and that a more slowly growing economy will tend to have

³² See my article "Structure and Structural Change: Weaselwords and Jargon," *Zeitschrift für Nationalökonomie*, Vol. XVIII (1958), pp. 280-298.

deficits.³³ The exact opposites, that is, deficits for the faster growing economy and surpluses for the slow one, are equally probable, because the effects of differential rates of growth depend on several factors; in conjunction with all other influences, one may expect that the effects upon the balance of payments will by and large be neutral. In short, there is no great likelihood that changes in the "real" economic magnitudes, in the non-monetary data of the economy, will cause large fundamental disequilibria in the balance of payments. (To mention one exception, however, the drastic changes associated with reconstruction after a war, resulting in an exceedingly fast increase in the industrial capacity of a country, may have caused a fundamental disequilibrium. I am thinking of the case of Western Germany.)

The danger of a fundamental disequilibrium originating abroad from the monetary policy of other countries is quite serious. If the countries most important in world trade indulge in continuing price inflation, a nation attempting to avoid inflation, or at least not matching the rate of foreign inflation, will be exposed to a continuing flood of foreign exchange. Such a disequilibrium—in the form of a permanent excess supply of foreign exchange—is fundamental inasmuch as it can be removed ultimately only through domestic inflation at a rate approximately matching the foreign one or through an up-valuation of the currency.

The second question refers to countries pursuing full-employment and growth objectives by means of expansionary credit and fiscal policies. If the monetary authorities of these countries attribute every lapse from full employment and every retardation of economic growth to an inadequacy of effective demand, and accordingly proceed to treat the supposed deficiency with injections of new money, then the additional buying power created in this fashion will cause a chronic ebb of foreign exchange. To remove this fundamental disequilibrium—in the form of a permanent excess demand for foreign exchange—devaluation will be the ultimate prescription.

The third question suggests a rather obvious answer. If it is generally known that the official exchange rates will be adjusted whenever a fundamental disequilibrium has developed, speculative capital will move from countries where foreign exchange is scarce to countries where foreign exchange is in plentiful supply. This must be expected since owners of liquid funds will wish to avoid the capital losses from

³³ See my article "Dollar Shortage and Disparities in the Growth of Productivity," *Scottish Journal of Political Economy*, Vol. I (1954), pp. 250-267.

holding a currency likely to be devalued and will not want to pass up opportunities for capital gains from holding a currency likely to be up-valued. The longer the time for which the adjustment of "unrealistic" exchange rates is postponed the greater will be the nervousness of hedgers and speculators; and, since the short-run gains from the expected changes in exchange rates will look far more attractive than the returns on productive investment, ever-increasing amounts of investable funds will be transformed into speculative funds. Inventory policies of industrial firms, especially stocks of imported or exportable materials and products, as well as production and shipping schedules will be increasingly affected by anticipations of the official changes in exchange rates. In short, exchange speculation will no longer be confined to liquid funds but will spill over to all economic decision-making in production and trade.

That all this is apt to cause damage to the economy can hardly be doubted. The only open questions concern the size of the damage attributable to the postponement of the exchange-rate adjustment and the length of the "optimal" period of putting off the decision to adjust the peg. Once it has become clear that a "disequilibrium" in a definite direction is developing and that an adjustment of the exchange rate may eventually prove inevitable, what advantage can be seen in postponing the adjustment for a long time, or indeed what sense can there be in postponing it at all, even for a brief period? Why should occasional or periodic adjustments be better than daily adjustments, that is, freely flexible exchange rates?

These more or less rhetorical questions reflect the ways of reasoning by some of the economists who in recent years have become advocates of freely flexible exchange rates. It would not be appropriate to speak in this connection of definite plans named after their authors, inasmuch as most of the writers in this group have only dealt with the major principles involved and not with the practical aspects of a system of freely flexible exchange rates. Perhaps they have thought it unnecessary to go into any details since the system was so very simple—no more being involved than that monetary authorities stay out of the foreign-exchange market, neither selling nor buying nor interfering through direct controls. Alternatively, the supporters of free exchanges may have been thinking that it is still too early to discuss details, that the basic principles should first be clarified.

In an enumeration of the best-known economists who have declared themselves as favoring freely flexible exchange rates, in principle or

under certain conditions, the following names should not be missing: Frank D. Graham,³⁴ Charles R. Whittlesey,³⁵ Lloyd W. Mints,³⁶ Roger Dehem,³⁷ Milton Friedman,³⁸ Alfred Bosshardt,³⁹ Hans Bachmann,⁴⁰ John Burr Williams,⁴¹ Erik Lundberg,⁴² Friedrich A. Lutz,⁴³ Gottfried Haberler,⁴⁴ Emil Korner,⁴⁵ James E. Meade,⁴⁶ W. M. Scammell,⁴⁷ Alfred Amonn,⁴⁸ L. Albert Hahn,⁴⁹ Emil Küng,⁵⁰ Hanns-Joachim

³⁴ Frank D. Graham and Charles R. Whittlesey, "Fluctuating Exchange Rates, Foreign Trade, and the Price Level," *American Economic Review*, Vol. XXIV (1934), pp. 401-416; Frank D. Graham, *The Cause and Cure of "Dollar Shortage,"* Essays in International Finance, No. 10 (Princeton: International Finance Section, 1949), reprinted in part in William L. Allen and Clark L. Allen (Editors), *Foreign Trade and Finance* (New York: Macmillan, 1959), pp. 124-133.

³⁵ Charles R. Whittlesey, *International Monetary Issues* (New York: McGraw-Hill, 1937).

³⁶ Lloyd W. Mints, *Monetary Policy for a Competitive Society* (New York: Macmillan, 1950), esp. Chapter 5.

³⁷ Roger Dehem, "Exchange Rate Policy: Experience and Theory Reconsidered," *Economia Internazionale*, Vol. V (August 1952), pp. 559-578.

³⁸ Milton Friedman, "The Case for Flexible Exchange Rates," *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), pp. 157-201. Reprinted in part in William R. Allen and Clark L. Allen (Editors), *Foreign Trade and Finance* (New York: Macmillan, 1959), pp. 313-347.

³⁹ Alfred Bosshardt, "Von der Stabilität zur Flexibilität der Wechselkurse," in V. Wagner and F. Marbach (Editors), *Wirtschaftstheorie und Wirtschaftspolitik*. Festschrift für Alfred Amonn (Bern, 1953), pp. 201-223.

⁴⁰ Hans Bachmann, "Das Postulat flexibler Wechselkurse," *Aussenwirtschaft*, Vol. 8 (Dec. 1953), p. 258ff.

⁴¹ John Burr Williams, *International Trade under Flexible Exchange Rates* (Amsterdam: North-Holland Publ. Comp., 1954).

⁴² Erik Lundberg, "The Dilemma of Exchange Rate Policy," *Skandinaviska Banken Quarterly Review*, Vol. XXXV (1954), pp. 90-96.

⁴³ Friedrich A. Lutz, "The Case for Flexible Exchange Rates," *Banca Nazionale del Lavoro Quarterly Review*, Vol. 7, No. 31 (December 1954), pp. 175-185; *idem*, "Das Problem der Konvertibilität europäischer Währungen," *Ordo*, Bd. 6 (1954), pp. 79-131; *idem*, "Das Problem der internationalen Währungsordnung," *Ordo*, Bd. 10 (1958), pp. 133-147; *idem*, *International Payments and Monetary Policy in the World Today*. Wicksell Lectures 1961 (Stockholm: Almqvist & Wiksell, 1961), p. 23; *idem*, *The Problem of International Economic Equilibrium*. De Vries Lectures (Amsterdam: North-Holland Publ. Comp., 1961).

⁴⁴ Gottfried Haberler, *Currency Convertibility* (Washington: American Enterprise Association, 1954); *idem*, "Konvertibilität der Währungen," in *Die Konvertibilität der europäischen Währungen* (Erlenbach-Zürich u Stuttgart, 1954), pp. 15-59.

⁴⁵ Emil Korner, "Freier Wechselkurs und richtiges Geld, die Heilmittel für jedes Aussenhandelsdefizit," *Schmollers Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft*, Vol. LXXV (1955), pp. 303-322.

⁴⁶ James E. Meade, "The Case for Variable Exchange Rates," *Three Banks Review*, No. 27 (September 1955), pp. 3-27; *idem*, "The Future of International Trade and Payments," *Three Banks Review*, No. 50 (June 1961), pp. 15-38.

⁴⁷ W. M. Scammell, *International Monetary Policy* (London: Macmillan, 1957), esp. pp. 82-108.

⁴⁸ Alfred Amonn, "Abwertung und Aufwertung oder freie Wechselkursbildung?" in: Erwin v. Beckerath, Fritz W. Meyer and Alfred Müller-Armack (Editors),

Rüstow,⁵¹ Egon Sohmen,⁵² Fritz W. Meyer.⁵³ But these are by no means all the advocates of the system and their arguments in its support are not the same. Some of them, for example, do not question the superiority of fixed over fluctuating exchange rates provided that absence of direct controls in foreign-exchange dealings, foreign trade, and foreign payments is guaranteed unconditionally. If, however, fixed (or temporarily fixed) exchange rates are secured by restrictions and direct controls, and if monetary authorities are inclined or induced to stick to official exchange rates that have become quite unrealistic and can be maintained only with foreign-exchange controls, then the ranking of systems is reversed and freely flexible exchange rates are given preference over fixed ones.

Almost all representatives of this way of thinking recognize that a fully autonomous monetary policy is incompatible with the maintenance of fixed exchange rates. But we must distinguish those who *recommend* an autonomous monetary policy—a credit policy independent of the balance of payments—from those who do *not* recommend it but regard it as a given and unalterable fact with which realistic observers should reckon. Members of the first group are convinced that the rate of employment and the rate of growth can be increased or supported by expansionary credit and fiscal policies. This is why they favor an autonomous monetary policy with freely flexible exchange rates. Members of the other group question the theory that injections of additional purchasing power can secure higher rates of employment and faster rates of growth in the long run, but they know that the most influential men in charge of the economic policies of certain nations believe in this theory and will not refrain from applying it. Application of this theory,

Wirtschaftsfragen der freien Welt. Festschrift für Ludwig Erhard. (Frankfurt a.M.: Knapp, 1957), pp. 568ff.

⁴⁹ L. Albert Hahn, *Autonome Konjunktur-Politik und Wechselkurs-Stabilität* (Frankfurt a.M.: Knapp, 1957). Reprinted in L. Albert Hahn, *Geld und Kredit* (Frankfurt a.M.: Knapp 1960), pp. 93-130; *idem*, "Monetäre Integration—Illusion oder Realität," in Wilhelm Meinhold (Editor), *Internationale Währungs- und Finanzpolitik* (Berlin: Duncker & Humblot, 1961), pp. 99-123.

⁵⁰ Emil Küng, *Zahlungsbilanzpolitik* (Zürich: Polygraphischer Verlag, und Tübingen: Mohr-Siebeck, 1959), esp. pp. 532-594.—Küng recommends freely flexible exchange rates only under certain conditions, which however are presently to be found in most countries.

⁵¹ Hanns-Joachim Rüstow, "Die Problematik stabiler Wechselkurse," in *Probleme des Zahlungsbilanz-Ausgleichs* (Beihefte der Konjunkturpolitik, Berlin, 1959).

⁵² Egon Sohmen, *Flexible Exchange Rates* (Chicago: University of Chicago Press, 1961).

⁵³ Fritz W. Meyer, "Wechselkurse," *Handwörterbuch der Sozialwissenschaften*, Bd. 11 (Stuttgart, Tübingen and Göttingen, 1961), pp. 571-585.

however, implies autonomy of monetary policy—a policy supposedly in the service of “internal balance”—and therefore long-run incompatibility of fixed exchange rates. Hence, even nonbelievers in the blessings of independent monetary policies regard freely flexible exchange rates as the best way out of the dilemma.⁵⁴

A strong argument in opposition to flexible exchange rates is based on the fear that the resistance to credit inflation may be weakened under such a system. This possibility should certainly be taken into account. The most essential and most difficult task of a central banker is to prevent inflation. Overindulgence in easy-money policies is apt to lead to a loss of reserves if exchange rates are pegged, and to a loss in the foreign market value of the currency if exchange rates are free to move. Which of the two is the greater embarrassment to the central banker and, thus, will stiffen his backbone in resisting the incessant political pressures for maintaining easy money?

Some economists hold that, once flexible exchange rates become the accepted practice or institution, currency depreciation will lose most of its terror, and all bars to inflation will be down. Other economists are convinced that, if fixed exchange rates are held sacrosanct, the fear of continuing or complete depletion of foreign reserves induces, not abstinence from easy-money policies, but adoption of exchange restrictions. And there is widespread agreement that, if inflation is bad and restrictions are evil, the combination of the two is cancerous. Is it likely, however, that economists will agree on an “indifference curve” between rates of inflation and degrees of direct controls; that they will agree on, for example, just what degree of inflation might be acceptable as a price to pay for complete absence of direct restrictions of imports and payments? Assume our judgment of the heads, the hearts, the backbones and the guts of the monetary managers of a country leads us to expect that under a regime of fixed exchange rates they would hold the rate of price inflation down to 3 per cent a year and would check the resulting drain on gold and exchange reserves by prohibiting certain capital outflows and adopting certain quantitative restrictions on imports; whereas the same managers under a regime of perfectly free exchanges would allow the rate of inflation to rise to 6 per cent a year. Which outcome would be preferable? It would be hard to obtain agreement on the *value judgment* on the basis of which this question could be

⁵⁴ Besides the two groups mentioned, there is a third one, consisting of those economists who believe neither in “accelerated growth through money creation” nor in “international coordination of monetary policies,” but have different reasons for advocating freely flexible exchange rates.

answered. And of course even the question presupposes that there can be agreement on the *probability judgment* concerning the central bankers' differential propensities to inflate under various conditions.⁵⁵

If *all* central bankers were determined and strong enough to avoid inflation under any circumstances, the difference between fixed and floating exchange rates would not be too great. For, in the absence of inflation, floating rates would be fairly stable. "Exchange-rate stability without pegging" might become the major policy objective of the monetary authorities. But if some of the central bankers were less determined and permitted monetary expansion at a faster rate than others, a stabilization policy would run into difficulties. A country adhering to a policy of exchange-rate stability would then have to match the credit expansion of the major trading countries, just as in a system of pegged exchange rates foreign inflations would be imported through balance-of-payments surpluses. Even the advocates of pegged rates must call for periodic adjustments of the peg if they wish to hold the line against inflation while foreign nations indulge in satisfying their people's chronic preference for ever-more liquidity through easy money.

The chief and most frequently mentioned argument of the opponents of exchange-rate flexibility concerns the risks of foreign trade under fluctuating exchange rates. Reference to the possibility of hedging on better-developed forward markets does not completely answer this objection; more telling is the reference to the probability that the risks of exchange *restrictions* imposed to "protect" fixed exchange rates may be greater than the risks of exchange *fluctuations* in free markets, and that the effects of restrictions may weigh more heavily than the cost of hedging against the risk of fluctuations.

The advocate of fixed exchange rates points to the great benefits which domestic trade derives from the national unity of the currency, from its universal acceptability at par, the par-collection of bank checks in all cities and different parts of the country, and the certainty that this will not be changed in the future. Then he infers that fixed exchange rates confer similar benefits to international trade. A correct reply would not deny this inference, but would point to an essential difference

⁵⁵ The judgments in question are even more complicated, because the attitudes of the central bankers and treasury officials who run the show at the time being may be less important than the attitudes of those who are likely to replace them when they are dismissed. Convinced and consistent anti-inflationists may possibly be kicked out precisely because of their conservatism, and be succeeded by men more willing to compromise. This probability must be taken into account when the "differential propensities to inflate" under various conditions are judged.

between intranational and international monetary arrangements,—the same difference, incidentally, which prevents those economists who unconditionally advocate adoption of freely flexible exchange rates among different countries from advocating flexible exchange rates also among the different districts or provinces within a country. The difference is that nations claim, and districts or provinces do not claim, “sovereignty” in credit policy.

A uniform currency in a country is possible only as long as no part of the country has autonomy in the creation of money. If particular provinces or districts undertook to support regional growth or full employment by enlarging effective demand through regional credit creation, the national unity of the currency could not long be maintained. There could not be a uniform D-mark for Western Germany if, say, Schleswig-Holstein claimed the prerogative of printing D-mark to finance public-works projects. The United States could not for long keep a uniform dollar if, say, Mississippi and Kentucky started autonomous credit and fiscal policies to accelerate their economic growth by printing greenbacks and creating bank credit. The preconditions for the maintenance of fixed exchange rates among different countries and for the maintenance of a uniform currency for the different parts of one country are essentially the same, to wit, that no country and no part of a country is independent in the manufacture of money.

It is really not necessary to take a firm position in the controversy and come out either on the side of fixed exchange rates or on the side of freely flexible exchange rates. It may suffice to insist on consistency and to have it understood that fixed exchange rates can be maintained only among countries which pursue monetary policies coordinated with one another, rather than policies independently designed to obtain “internal balance” regardless of external effects. This means that countries which are not prepared to subordinate their monetary policy to the requirements of external balance should accept flexible exchange rates.

The incompatibility of expansionary full-employment and growth policies with fixed exchange rates is recognized by several central bankers. They stress that economic growth and full employment can be obtained better, if not only, by other means than expansion of bank credit and budgets. They are tactful enough not always to repudiate the politicians’ commitments to monetary and fiscal measures for full employment and accelerated growth; but they are forthright in giving priority to the task of safeguarding the stability of the currency and in accepting the balance of payments rather than the employment rate

and growth rate as ultimate guide to their credit policies. From such a position one may consistently take a firm stand against the unpegging of exchange rates and in favor of the maintenance of the fixed-exchange standard. Those, however, who are prepared to put the money-creating power of the banking system at the disposal of full-employment and growth policies regardless of the state of the balance of payments cannot in all consistency oppose exchange-rate flexibility.

Yet, it may be too narrow to trust nothing but logical consistency and well-thought-out economic programs; there may be some sense in placing confidence in the outcome of a series of inconsistent pragmatic improvisations. It is possible, for example, that monetary authorities, despite repeated declarations and assurances to the effect that their policy shall first and foremost serve the full-employment and faster-growth objectives proclaimed in political platforms, will cast aside these goals in the interest of external stability of their currencies when, after serious losses of monetary reserves, it becomes manifest "what's up." In other words, independence and autonomy of monetary policy are sometimes unceremoniously dispensed with when things get really hot. This is why some economists who admit that independent credit policies are incompatible with fixed exchange rates, and who know the strength of the nations' propensity to be independent, have nevertheless remained faithful advocates of fixed exchange rates. Such faith—resting on the hope that the independence of monetary policy will be given up eventually—perhaps reflects less realism than it is credited with, considering the large number of devaluations in the last 15 years.

It is neither necessary nor probable that there will be in the foreseeable future a formal decision to adopt an international monetary order for the entire free world. There are, however, regional groups of countries that are linked also through a common monetary ideology; these countries may well agree on certain monetary arrangements. If, for example, the members of the European Economic Community are agreed on the principle that their credit and fiscal policies should be coordinated so that through concerted central-bank action a high degree of conformity can be achieved in the supply of money, then stability of exchange rates among these countries can be secured without serious trouble. On the other hand, if no such parallelism in monetary policy can be achieved between a conformist group of countries and countries that refuse to conform, it would be unreasonable to count on fixed exchange rates being maintained in the long run between the conformist

countries and those that "go it alone." Rather than wait until a fundamental disequilibrium emerges and forces countries into delayed adjustments of their exchange rates, it might be better for all parties concerned if the external values of the autonomously managed currencies could remain flexible. Fixed exchange rates among countries with coordinated monetary policies, and freely flexible rates among countries pursuing autonomous policies—this appears to be the maxim consistent with the theorems of monetary economics.

Theorists often complain about the conservatism of practitioners who are quick to reject the theorists' proposals as impractical. Sometimes these proposals are impractical only because the "practical" men are unwilling to consider them seriously. Sometimes however the theorists overlook or disregard circumstances, customs, practices, or incidental problems, which seem to be important to the practical man. In the case of the proposal for unpegged exchange rates several unsolved questions must be expected to arouse misgivings on the part of the practical banker; they will have to be dealt with and shown to have satisfactory answers before one may hope to see the objections withdrawn.

Whereas central banks with very small foreign reserves may find it relatively easy to remove the peg holding their exchange rates, especially when faced with balance-of-payments difficulties at the exchange rates hitherto fixed, a central bank possessing a large reserve—be it in the form of gold or foreign exchange—may find it very hard to justify a decision to unpeg the exchange rate. The decision would be difficult both in a surplus and in a deficit position of the market balance of payments.

In a *deficit* position, why should the monetary authorities refuse to sell from their abundant reserves? Why should they remove the peg and let the prices of foreign currencies and of gold rise to the levels at which current demand is reduced to the flow of current supply? Why should they allow their large reserves to remain unused, locked up, and unavailable to those who have an effective demand for them? In a *surplus* position the authorities may have a somewhat better case for the removal of the peg. For they may argue against a further accumulation of foreign reserves with its normally inflationary effects upon the economy. On the other hand, will not the refusal to purchase any more gold or foreign exchange depress drastically the prices of foreign currencies and produce cries of anguish on the part of exporters receiving smaller proceeds and of producers competing with cheaper imports? And how should the central bank justify the write-down of the book

value of its foreign reserve and how can it account for this severe capital loss?

One possible answer to these questions is that the possession of large gold and foreign-exchange holdings is not an appropriate position for a country to start a system of exchange-rate flexibility. If this really is the answer, the proponents of the system will have to furnish prescriptions for central banks concerning the best methods of reducing their foreign reserves in preparation for U-day, the day of unpegging. The key-currency countries are special cases calling for special prescriptions. Let us assume, contrary to fact and only for the sake of the argument, that the monetary authorities in the reserve-currency countries would like to get rid of their heavy responsibilities and that they have decided that the abolition of fixed exchange rates would be a good way of doing so. Could they as honest bankers disappoint the confidence of their depositors, refuse to sell gold and allow the foreign values of their currencies to drop? Could they ever take the initiative in a drive to exchange flexibility if this were taken as a breach of explicit or implied promises?

To raise these questions is not necessarily to doubt that they permit of reasonable answers, but only to draw attention to the need for discussion. Speculating about the possible lines which one of the answers could take, one might suggest that the legal and moral obligations of reserve-currency countries could be fulfilled out of their existing gold holdings if all foreign creditors were given an option to receive gold at the present gold parity. Indeed, such a procedure, to the extent that the option would be exercised, could relieve the reserve-currency countries of sterile gold hoards as well as of interest-bearing foreign debt. After all, after a general unpegging of the gold price and of the exchange rates, there would be no special reason for any of the monetary authorities to hold on to gold stocks.

This realization raises another question which demands study, namely, the question of the future of gold under a system of freely flexible exchange rates. The refusal of monetary authorities to purchase gold, and their unrestrained desire to sell off all their gold holdings, could easily destroy the value of gold over night. Only their concerted effort to support the price of gold by holding on to it, by refraining from throwing it onto the market for whatever price it may fetch, can avoid transforming—for some time—the “precious metal” into a virtual “non-valeur.” For there simply would not be enough private buyers

and enough liquid funds to absorb within a short time all the gold now used as monetary reserves.

These remarks may sound strange to ears used to continual whispers that the price of gold *may* be raised and to periodic shouts that it *ought* to be raised. Bankers, inclined to regard as practical only what is not too much in contradiction with political interests, may find it ridiculous to have gold referred to as a potential non-valeur. Whether it will ever come to the demonetization of gold depends on which ideology will win. In a world in which the discipline of the gold standard is felt chiefly as a nuisance, and monetary management is regarded primarily as an instrument of national growth-and-employment policy, not even the most inventive representatives of vested interests will be able to maintain the myth that the demonetization of gold is "impractical."⁵⁶

At the moment, however, the verdict of "impracticality" cannot be appealed to a higher court of political judgment. If it is suspected that a system of flexible exchange rates may weaken or subvert the people's faith in the monetary role of gold, the system will be opposed with fanatic fervor. This places its advocates on the horns of a dilemma. Either they must build into their plans a solid program to safeguard the value of gold or they must resign themselves to the fate that their plans will continue to be scorned as the utterly impractical notions of inexperienced theorists not taken seriously by "anybody."

⁵⁶ Perhaps the present author can reassure the friends of gold that he himself has been an old and faithful advocate of the orthodox gold standard in the purity described by the most obsolete textbook. He would still vote for a 100 per cent pure gold standard, where gold is really a "standard," not merely a price-supported commodity.

IV. Concluding Remarks

We have reached the end of our survey. If it perhaps has failed to describe and discuss *all* of the plans for reform of the international monetary system which have been presented in recent years, at least the most widely discussed plans have been included in our review. In addition, in exploring the preconditions of adopting these plans, the ways in which they might work if adopted, and the most probable consequences to be expected from their operation, we have made enough general statements applicable to the explanation and evaluation of other plans not treated here.

The author has abstained—or at least tried to restrain himself—from making blunt value judgments. If nothing else, he has avoided calling any of the plans impossible, absurd, or foolish. On the other hand, he has not concealed either his acceptance or his rejection of certain theories and presuppositions. Some readers may be disappointed that the author has not come out in favor of any one particular plan. There is, however, a good reason for such reticence or caution. An intelligent choice would have to depend on many conditions, and one cannot ascertain whether and to what extent they are fulfilled. What under certain circumstances would appear as the best solution may under other circumstances be hopelessly wrong. In economic policy decisions much depends on how they fit in with other measures adopted and objectives accepted. Monetary policy, credit and fiscal policy, commercial policy, wage policy, investment policy, growth policy, employment policy, counter-cyclical policy, etc., etc., are so closely related to one another that it would not be possible to formulate a rational policy concerning the international monetary system irrespective of all other areas of economic policy.

Policies regarding the international monetary system must take account of the measures and intentions of the governments of a multitude of nations. The theories entertained by influential monetary experts will, of course, be important, but what is really decisive in the relevant considerations are the notions, the beliefs, the courage, and the powers of persuasion of central bankers, ministers of finance, and other leaders of economic policy in the major countries. Consequently, one cannot possibly expect that there will be one particular among all

plans for the international monetary system that may be singled out and proclaimed as "the best" under any set of conditions.

To say this is not to make a virtue of indecision. Sooner or later, and more likely sooner than later, the reform of the present system will have to be taken up seriously. The stop-gap solution initiated at the Vienna meeting of the I.M.F. and formalized in the "General Arrangements to Borrow" may tide us over the worst difficulties for some time, possibly even for several years. To be sure, we should never expect a solution that is really definitive, but perhaps we may hope for one that can dispel for a longer time the apprehensions, nervousness, and fears of collapse.

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