Central Banks
and International Monetary Arrangements

The Experience of the Post

The comparatively short history of central banking in modern times, dating from Bagehot and Lombard Street’s times, has been marked by a widespread recognition of the importance of international cooperation. Among early examples, the most significant may perhaps be traced to the time of the Baring’s crisis, when without the formality of a written contract (and in apparent disregard for formal law’s limitations), the Bank of France extended its assistance to the Bank of England by assuming “a moral responsibility from which it will not recede” to discount Baring’s bills.

Central banks’ cooperation acquired new significance in the decade after the First World War, when under the auspices of the League of Nations and at their own initiative the Federal Reserve Bank of New York and other central banks undertook to extend and participate in stabilization credits, for the purpose of re-establishing a world-wide monetary order based on stability and convertibility. Cooperation among central banks found a strong expression of approval and encouragement in the Report of the MacMillan Committee (1931), which recommended that central banks be given greater flexibility in their domestic and international operations, on the premise that “the main objective of central banks, acting in cooperation in the management of the international gold standard, should be to maintain the stability of international prices both over long periods and over short periods”. The culminating manifestation of this cooperative attitude was the establishment of the Bank for International Settlements, which soon outgrew the important but limited scope of handling German reparations’ accounts to become the central organ for exchange of information and consultation among European and certain other central banks. Although the
Federal Reserve Bank of New York, a scheduled original member of the institution, refrained from accepting membership, it did nevertheless establish correspondent relations and close contacts between the two banks from the beginning.

As the fulcrum of monetary authority passed in the thirties from central banks to Treasuries, so did cooperation on an international plane. The Tripartite Agreement, in 1936, provided an arrangement (originally between United States, United Kingdom and France, later extended to Belgium, Switzerland and Holland), under which participants agreed to support the exchange rates of their respective currencies by day-to-day advances against forward purchases of gold. Although the Agreement itself was apparently never formally terminated, the introduction of exchange controls and the outbreak of war suspended its operations, and it is assumed to have been allowed to lapse since then.

The establishment of the I.M.F. toward the end of World War II marked the heyday of Treasuries’ supremacy in domestic and international monetary policies, with central banks relegated to operating functions. The declining importance of central banks at that time was also reflected in the resolution, advanced and approved at Bretton Woods, that the Bank for International Settlements be liquidated, a resolution that was never implemented and definitely lapsed when the Bank was entrusted with the operating functions of the European Payments Union. As central banks resumed in the fifties their traditional initiative in domestic policies, relying again on flexible market mechanisms and managing money and credit with a view to the re-establishment of a freer world trade system, there ensued a closer rapprochement with the International Monetary Fund, as they all came to recognize the basic identity of their interests and objectives.

Financial and Monetary Coordination in the Post-war Period

Even in earlier post-war years, however, the need and scope of coordination between monetary policies and the objectives of the International Monetary Fund were felt in various quarters. There was a growing view that international action could strengthen the efforts of individual countries pursuing courses of internal and external stabilization and conversely, such international action could be complemented by additional contributions from the stronger countries. The first report of the Organization for European Economic Cooperation, in 1947, estimated that Western Europe was in need of stabilization credits or additional reserves of $3 billion, to support a movement toward restoration of stability and convertibility of currencies. Views in this direction were expressed by the Report on Foreign Economic Policy of the Randall Commission (released in January 1954), which came to the conclusion that progress toward currency convertibility required a two-fold approach, by the International Monetary Fund and by the Federal Reserve System jointly with other central banks:

“For the purpose of a gradual and controlled approach to full convertibility”, the Commission favored in the first place “a much more active utilization than heretofore of the International Monetary Fund’s holdings of gold and convertible currencies” and “to this end... also any reasonable relaxation... that might be required, such as a relaxation of the time schedule for utilization of quotas and the provision for maintaining fixed parities”.

“As a second means of strengthening foreign reserves” the Commission went on to recommend... “that the Federal Reserve System explore with foreign central banks the possibility of stand-by credits or line of credit arrangements. There is ample precedent for such arrangements in the interwar period; and the Commission believes that this method is superior to any other which might be devised to provide for additional possible calls on dollars, both because it would avoid an increase in the public debt, and because it would be handled more flexibly and informally, and therefore more effectively, than a formal grant of credit by our Treasury”.

The conclusions of the Randall Commission were, in a way, signs of the times. There was, on the part of the International Monetary Fund (I.M.F.), a shift from fixed rules toward greater flexibility in policies and operations. This found evidence in its participation in and support to programs for internal financial stabilization and external currency convertibility, as well as in the strengthening of the automatic repurchase clause of the Articles of Agreement with voluntary repayment agreements to be underwritten by countries drawing on its resources. On the part of the Federal Reserve System, there was in those years a systematic review of the “ample precedents” mentioned in the Randall Report — namely, the powers and procedures followed in stabilization credits and related operations in the twenties and the thirties. Consideration
was given to the possibility of the System's participating, jointly with other central banks and the International Monetary Fund, in any new international monetary program designed to alleviate the dollar shortage and support moves of European monetary authorities toward elimination of exchange and trade restrictions. The general improvement in the economic and financial positions of European countries and their rapid progress toward convertibility obviated the need for such program, until at least the reversal in capital movements and balance of payments trends revived the problem in a new aspect, unforeseen by many, of abundant dollars and scarce European currencies.

The emergence of a persistent imbalance in the foreign payments of the United States and of gold outflows, related to a culmination of capital movements and foreign aid and defense outlays in excess of current account surpluses, has brought about a growing need for closer cooperation between the United States and its Western Allies. In the past months, since the inauguration of a new Administration in Washington, consultation and coordination on financial and monetary policies have been conducted through three principal channels:

1) At the governmental level, the new Organization for Economic Cooperation and Development provides the channel through which member countries exchange views and coordinate policies involving budgetary appropriations and allocation of funds, legislative actions, and other governmental decisions for internal and external purposes. Two committees of this organization deal with economic growth and with financial and monetary policies, indicative of the importance attached to such aspects as defense costs, foreign aid, and general economic cooperation. Responsibility for participation in the work of this organization rests primarily with officials at the ministerial level of Treasuries and Economics Departments of the member governments, and on their chief assistants, with participation for other organs - such as central banks - on a case by case and technical basis.

2) Discussions on monetary policies have found a proper forum in the monthly meetings at the Bank for International Settlements, which are attended regularly by the Governors or Presidents of the respective central banks and their chief officials, with representation from Treasuries or other organs on an occasional and "observer" basis. It is noteworthy that the Federal Reserve System has extended

since the end of 1960 its usual attendance to annual meetings to a regular participation in monthly meetings, with representation by the highest officials of the Federal Reserve Bank of New York and the Board of Governors. This practice has already contributed to exchange of information and the shaping of policies of mutual interest across the Atlantic, in an atmosphere of mutual confidence and cooperation. As for the European central banks, these meetings have provided the opportunity for the decision last March to cooperate "closely in the exchange markets" - including holding of reciprocal balances in mutual support of their currencies.

3) The coordination of financial and monetary policies, arrived at governmental and central banking levels by European and North American countries through the O.E.C.D. and the B.I.S., is effected in the framework of the interests and objectives of the world at large through the I.M.F. This institution, which elaborated in recent years comprehensive programs for combining the tasks of monetary stability, liberalization of exchange policies and economic development in other parts of the world, is now engaged in the elaboration of a new program for a broader and lasting improvement of the international reserve and payments system.

This approach to current problems, through different institutions and at different levels of policy, finds its origin and justification in three principal elements. First, the emergence in the United States (and in other countries) of divergent tendencies between internal economic and external financial conditions has brought home a fact, which had been largely forgotten since the early thirties, that monetary policy has become again and is likely to remain for the indefinite future the art of balancing and compensating contrasting forces with a view to attain an optimum combination of objectives. In the second place, the experience of recent years has indicated in a pragmatic way that the pattern of a free world and a market economy is subject to unforeseen changes and not easily responsive to a rigid system of preordained measures, but more susceptible to the influence of instruments applied in flexible ways and on a case by case basis. In the third place, the approach reflects a philosophy that changing conditions determine objectives and policies, and that the pursuance of policies requires in turn a combination of specialized institutions, each conditioned by tradition and organization to deal with some particular aspect of the general problem. This mixture of factual, pragmatic and philosophical considerations may explain the new
approach emerging in international financial and monetary relations, and it may also provide a basis for a coordinated action, between the Federal Reserve and other central banks and the I.M.F., to broaden the basis of operations and add to the flexibility of policies designed to meet new and shifting objectives.

The International Monetary Fund (I.M.F.) in a World of Convertibility

Whether gold or currencies have been used in settlement of international transactions, the world has always been beset with the problem of too much or too little — and since last war’s end, this problem has assumed the form of dollar shortage, liquidity crisis, and movements of funds and gold between reserve centers and the rest of the world. So long as war and inflation caused one-way movements of funds from the world at large to isolated havens (United States, Switzerland), general reliance for control was placed on direct restrictions, but the reestablishment of convertibility in leading countries has brought about a return of refugee funds and multi-way shifts of new funds in response to interest rate differentials and speculative expectations. In these conditions, national and international authorities are reviewing and adapting their instruments of operation with a view to regulate the flow of funds in open markets and to stabilize the economies internally and externally.

In this framework, the I.M.F. has been considering for some time its powers, resources and operations in relation to the potential exercise of drawing rights by some of its largest individual members, or a combination of them, in order to sustain their reserve position in the face of payments’ fluctuations and capital movements. The magnitude and concentration of such drawings could cause, in turn, a scarcity of other currencies in the resources of the Fund. In fact, while the United States and the United Kingdom, the two central reserve holders for and debtors on short term accounts to the rest of the world, have potential drawing rights of over six billion dollars on the basis of their quotas (and of about eight billion on the basis of dollar and sterling holdings adjusted by outstanding drawings), the I.M.F. could only count on some $2.5 billion in an assortment of various currencies it holds from creditors members (Germany, France, Netherlands, Italy, and possibly Canada and Japan) to meet such drawing. Under its Articles of Agreement, the I.M.F. could cover its need for such scarce currencies through sales of gold or, alternatively, by borrowing such currencies from members or from some other sources “on terms and conditions agreed between the Fund and the Member” (Article VII, Section 2). It is to this alternative procedure — the borrowing of potentially scarce currencies — that the attention of the Managing and Executive Directors has been addressed in recent months.

In this respect, three plans have been put forward, by Professor Robert Triffin (of Yale University), Mr. Edward Bernstein (formerly Director of the Research Department of the I.M.F.), and Mr. Maxwell Stamp (formerly Executive Director of the I.M.F. for the United Kingdom), which in substance may be summarized as follows:

(a) The Triffin plan is presented in two versions, or stages. The more advanced would call for the transfer by members to the International Monetary Fund of their holdings of reserve currencies (i.e., dollars and sterling); as a central depository, the I.M.F. would hold these reserves in Treasury bills or other obligations of the debtor countries’ governments (United States, United Kingdom) or invest them in other securities (such as obligations of the International Bank and the Inter-American Bank) and pay a commensurate interest to the creditors on their balances. Debtor countries would agree to extend a gold guarantee on their currencies balances held by the I.M.F., which in turn would extend the same guarantee to the creditor countries; and would also agree to amortize their balances in gold, or to permit a switching from investments in their own into other obligations, at a maximum rate of, say, 5 per cent a year (that is, during a twenty-years period), subject to balance of payments considerations.

In a modified version, or the initial stage of the plan, Professor Triffin would provide for the voluntary deposit with the I.M.F. of, say, 20 per cent only of dollar and sterling balances by all or at least the largest holders. This would have the effect of limiting their withdrawals or conversion into gold and of lessening the pressure on reserve currencies and, in turn, the pressure that would be exercised on the I.M.F. by potential drawings from the United States and the United Kingdom. Both in its initial and advanced form, the ultimate purpose would be to make the I.M.F. a supranational monetary authority, endowed with broad powers to shift funds and engage in operations in various markets, influence the flow of money and credit among countries, and thus affect the levels of national and international liquidity.
An indication of the recurrence of problems and of the solutions that are advanced to meet them, is the fact that this plan has similarities with one advanced in November 1931 by Mr. Maurice Frére (later Governor of the Bank of Belgium and Chairman of the Bank for International Settlements), at a time when a liquidity crisis had engulfed the major European banks, had led to the abandonment of the gold standard by the United Kingdom, and had turned a recession in the United States into the Great World Depression (1).

(b) Mr. Bernstein addresses himself to the specific and immediate problem, namely the need of the I.M.F. for greater resources in certain currencies. In substance, he proposes that the I.M.F. borrow, by the issuance of certificates of indebtedness, currencies of the creditor countries, so that it may in turn be able to use them in meeting requests for drawing by debtor countries — with a view to offset by the movement of official balances any shift in private or banking funds. The proceeds of the borrowing would not, according to Mr. Bernstein, become part of the I.M.F. resources, and the operations of borrowing from creditors and lending to debtors would be exercised by the I.M.F. through a separate account, as trustee and intermediary. One may see, however, advantages in

(1) In substance, this would have involved a commitment, by the banks of issue of European countries and the Federal Reserve banks, to maintain in deposit with it the Gold for International Settlements a minimum percentage of their gold reserves — any increase in such reserves to be accompanied by an increase in the deposits, and a decrease by a correspondent release of funds.

Although from the point of view of the B.I.S. the deposit would be on a long term or permanent basis, from the point of view of the banks it would be a demand account available for current operations on a revolving basis. Mr. Frére estimated that, on the basis of a ten-per-cent deposit of their gold reserves, the European and American banks would have contributed an aggregate fund of $4 billion (one billion francs). Some of the deposits could have been held either in gold (to be freely disposable by the B.I.S.) or in any currency, including the currency of the depositing bank, and would have carried a gold guarantee by the B.I.S. which in turn would have covered the additional risks by special terms on its operations or by a general agreement among the participating banks. The B.I.S. would have used these funds for placements at terms longer than normally eligible for central banks, subject to certain limitations as to distribution by maturity (to maintain liquidity of the account) and distribution by countries (to minimize investment risk). The B.I.S. would have invested the funds at the prevailing market rates and paid an interest on deposits based on the lowest discount rate prevailing, setting aside any additional profits in a special reserve separately from its general profit and reserve account. From the economic point of view, Mr. Frére noted that, under such an arrangement, the central banks would have an effective increase in their gold reserves and a certain amount of stabilization of their gold demands. Moreover, the central banks would not have to face the risk of a decline in the gold value of their currency, which could be translated into a depreciation of the currency, and the risk of a loss of reserves, which could be translated into a decline in the gold value of the currency.

The I.M.F. integrating the currencies obtained through borrowing with its own resources, for use in the course of its regular operations with drawing members, irrespective of whether these operations would be resolved on legal and political grounds, the Bernstein proposal has recommended itself because of its concrete and specific aspects and of its consistency within the existing framework of the I.M.F. itself.

(c) A more recent proposal has been advanced by Mr. Stamp, which combines some of the concepts and purposes of the other two plans, with emphasis on direction of reserves toward economic development. In brief, the idea would be to authorize the issuance by the I.M.F. of special certificates expressed in, but not convertible into gold, which member countries would agree to accept in exchange for their own national currencies and could hold as part of their own monetary reserves. The I.M.F. would give these certificates to an international agency, which, in turn, would allocate them to underdeveloped countries, for use in financing imports from industrial countries. To the extent that such certificates would flow back to creditor countries, they would reduce the amount of their surpluses in foreign currencies and gold, and to the extent that such certificates were accepted by debtor countries in exchange for their own exports they could in turn be used by them in settling their accounts with their own creditors.

Of the three plans, the one advanced by Mr. Bernstein has come under active discussion on the two principal grounds that, in concentrating its attention on a specific problem, it is not directed to broader scopes of reorganizing the reserve and payments systems of the world, and also that it is presented within the framework of the I.M.F. and is supported by a specific legal provision of the Articles of Agreement. This approach, which comes closer to another plan described in a paper by the Governor of the Bank of Greece, Mr. Xenophon Zolotas, and to the solution to which the Managing Director of the I.M.F., Mr. Per Jacobson, has directed his attention. In its general outline, this would involve a series of stand-by arrangements, under which creditor countries would agree to make additional funds available to the I.M.F. in their own currencies, in cases where the I.M.F. would require such currencies to meet requests for drawing in amounts exceeding its own holdings.

A number of separate questions have been raised, however, which relate not only to this particular arrangement, but to any broad-
of the scope and policies of the I.M.F. to meet current problems. There is, for instance, the question how to apply the concept of "currency needs" under Article V-2 and the direct or indirect effects of the sale or conversion of alternative currencies used in lieu of the currencies more directly needed in the practices of trade and finance (such as the drawing of, say, Deutsche Marks of Italian Lire by a country effecting its transactions in dollars or sterling), and a need to reconsider the provision of Article VI-1, to the effect that "a member may not make net use of I.M.F.'s resources to meet a large and sustained outflow of capital" (originally interpreted in 1946 as limiting the use of I.M.F.'s resources to the meeting of current account deficits only). Other questions include whether stand-by commitments by members to lend additional currencies to the I.M.F. should be fixed in some uniform ratios (for instance, to quotas) for all or agreed upon on a country by country basis, and what kinds of gold and other guarantees would be required by the I.M.F. and its members with respect to operations not clearly contemplated by the Articles of Agreement. Last but not least, a political question has been raised of the relative voting power of countries providing and countries making use of additional I.M.F.'s resources, and some creditor country may find preferable to increase its quota (with a correspondent increase of its voting power) rather than lending additional resources to the I.M.F. (which would leave its voting power unchanged). Some of these questions may be passed upon administratively by interpretations or otherwise within the I.M.F. itself, others may involve legislative aspects and possible amendments to the Articles of Agreement, and the implementation of any overall program will in any event require the allocation of additional funds and, therefore, decisions by member countries at governmental levels. None of these technical and procedural questions, however, appear sufficiently strong to stand in the way of the implementation of new I.M.F. policies, once these can be worked out among its most directly interested members.

A Program for I.M.F. and Central Banks' Cooperation

Three significant events have taken place in recent months, which may provide a lead for new important roles that central banks could play in international monetary arrangements, jointly with the I.M.F. The first of these events is the understanding reached by European central banks after the revaluation of the Deutsche mark, on the basis of which they have been acquiring balances in each other currencies for the purpose of offsetting private and speculative movements of funds and mitigating the effects on their internal credit and external reserve positions. The second has been the announcement by the U.S. Treasury that it is holding a substantial balance in Deutsche marks (obtained from a prepayment by Germany of its postwar debt) and small balances in other currencies, which are subject to repurchase for dollars by their respective authorities; and the disclosure that the Federal Reserve Bank of New York — in cooperation with the Deutsche Bundesbank — has intervened since early in the year in the forward exchange market to ward off speculative movements and a rise in the dollar-mark rate. Thirdly, in view of the mutual interest in international stability (and perhaps also of the sustained rate of return obtainable on short-term dollar assets), the monetary authorities of certain European (and some other) countries have refrained, on their own accord, from converting dollars into gold, while the United States have been initiating actions to bring their foreign payment and transfer positions into balance. The extent of these three developments are obviously limited in scope, time, and amounts, but they represent, from a general point of view, attitudes on the part of monetary authorities and procedures in financial relations, that may provide the basis for an approach open to individual countries and complementary to any that the I.M.F. may devise on an international basis.

Any arrangement among central banks for mutual cooperation — to offset movements of private funds and support each other's currencies — should provide a combination of continuity in basic policies and flexibility in terms and conditions. Such an arrangement could have the advantage of flexible conditions to meet unforeseen circumstances, avoidance of solution requiring intergovernments agreements, and reliance on the traditional cooperation and confidence that central banks hold for each other. To be effective and lasting, the arrangement should require the participation of the central banks of those countries providing "reserve currencies" to the rest of the world, such as the United States, the United Kingdom and perhaps Switzerland, as well as of those of other leading countries in world trade and finance — such as Germany, Netherlands, Belgium, France, Italy, and perhaps, outside of Europe,
Canada and Japan — that is, in general, the "creditor countries" — which rely on dollars and sterling for their foreign payment, international settlements and monetary reserves. Two basic considerations may be set forth to guide any arrangements for cooperation among central banks, namely:

(a) The general principles should be flexible so as to be applicable to changing conditions on a continuing basis, and also open to different central banks which, meeting the conditions and pursuing the objectives, might come under the arrangement;

(b) Any understanding as to particular facilities and limits should be reached on the basis of mutual advantages, and consistent with the powers, practices, and policies of each central bank.

The basic argument for central bank-to-central bank arrangements rather than inter-government accords, is their complete adaptability: there need not be a general agreement, nay, there need not be any formal agreement at all, once an understanding has been reached as to the principles and purposes underlying relations among central banks. The initiative for reciprocal cooperation could be taken informally by individual central banks or discussed in a group by those principally interested; separate arrangements could be built upon existing correspondent relationships and developed gradually on the basis of mutual interests. This system of arrangements should be looked upon as a continuing one, but each one may or may not carry a specific termination date, as it could be for an indefinite period subject to termination upon agreed notice, or for definite periods with agreed-upon renewal clauses. This would not impede in any way the possibility of setting definite terms for the repurchase of accumulated balances by debtor from creditor central banks — either on a time limit or a ceiling basis. In each case the conditions could be adapted to the powers and practices of each particular central bank, and various types of arrangements could coexist and operate to the same effect. The important point is that whatever the form of the arrangements, they should be such as to operate in interrelated ways and provide common binding links among the participating central banks.

As general conditions, it would be necessary that the central banks participating in such arrangements open and maintain reciprocal accounts — which is the practice in most cases. It may also be assumed that such accounts would remain free from any restrictions that might be imposed upon the currency, and that balances therein would be protected against changes in the currency value. Irrespective of these and other conditions, that may be deemed appropriate in each particular case, there should be among all banks participating in such arrangements continuing contacts and exchange of information about their practices, intentions and positions, and the right on the part of each to make observations to others. Along these general lines, a system of reciprocal arrangements among central banks could be outlined as follows:

A) The United States would join other countries, tied by mutual economic and financial interests, in arrangements under which their respective central banks and the Federal Reserve would undertake to operate in each other's currencies, in order to provide support in temporary payment imbalances and to offset, by the movement of their own funds, short-term movements of private funds affecting the exchange markets of their currencies and their international reserve position.

B) To this end, the various central banks would undertake to acquire, hold and sell each other's currencies in domestic and foreign markets and to extend to each other certain credit facilities, as may be agreed upon among themselves. Each central bank would operate in accordance with its own reserve and exchange powers, which it would autonomously determine on the basis of its own law, government regulations and policies. It would be understood that a central bank could undertake exchange transactions in spot and forward markets in currencies of other countries at their request and in consultation with all parties concerned. The aggregate amount of foreign currencies a central bank would be prepared to acquire and hold, and the correspondent credit facilities it would be prepared to extend thereby to other central banks, could be a matter for confidential and ad hoc negotiations; only the amount actually held, in the aggregate and not by currencies, would presumably be disclosed.

C) The operation of these arrangements would be automatic, in the sense that support by the central banks of creditor countries would be granted as a regular matter to currencies of debtor countries, within the limits, of course, of the credit facilities extended. The operation would be reversible, in the sense that the central bank of a country shifting from balance of payments surpluses to deficits
could dispose of the currencies acquired, and reciprocal, in the sense that balances might be held simultaneously by two central banks in each other's currencies in accordance with back-and-forth capital transfers and current payments.

D) The central bank of a creditor country, accumulating the currency of a debtor country, would retain the right to request its conversion at the expiration of an agreement, or in maturities according to agreed time schedule or upon reaching the limit of the credit facility, whichever earlier. The debtor country, on its side, would have the option in meeting its obligation to convert by tendering either gold or the currency of the creditor country, at its own discretion. The currency tendered by the debtor country could be drawn from balances it holds, or acquired by drawing on I.M.F. resources. (This option would not exclude, of course, other methods of settlement that may be agreed upon a case-by-case basis, such as compensation through a third currency or refinancing through a market issue).

E) With respect to the maintenance of value, there are strong doubts as to whether the Federal Reserve could give a valid and binding gold guarantee on dollar balances, and also whether such guarantee would be desirable on policy grounds. A clause could be adopted for this purpose, based on that used by the United States Stabilization Fund, namely the obligation of the debtor to repurchase its currency at the same rate at which it had been originally acquired by the creditor. Such clause would protect the creditor in case of a devaluation of the debtor's currency; on the other hand, should the debtor's currency strengthen and be revalued, the creditor central bank would find advantageous to dispose of its holdings in the market at the new rate, consistently with the spirit and purpose of the arrangement; and, finally, should both currencies be devalued (or revalued) against gold by equivalent percentages, their exchange rate would remain unchanged and so would the rate at which the debtor would be required to repurchase its currency from the creditor.

F) These arrangements would be reviewed in the process of regular consultations maintained by the central banks through their monthly meetings at the Bank for International Settlements. In addition, there would be a continuing exchange of information among participants, with reference, for instance, to the reciprocal support of their currencies, acquisition and holdings of each other's currencies, and the reciprocal extension of line of credit facilities.

Such arrangements among central banks would not involve any change in the obligations of participating countries as members of the I.M.F., nor would they be part of or require any change in the I.M.F.'s Articles of Agreement and operating procedures. They would, in fact, find a basis in the general framework of policies and consultations of this international institution. Access to I.M.F. resources by debtor members would require a satisfactory understanding on conditions and purposes, and among other matters for consultation with the I.M.F. would be, for instance, terms of exchange operations carried out by the central banks. It may be well to subject such arrangements to two conditions, namely, first that the currency of any participating country be convertible under Article VIII of the Agreement, and second, such currency be acceptable as eligible for reserve in settlement purposes by other central banks; conversely, any member restricting the convertibility of its currency, under I.M.F. procedures, could be automatically suspended from the privileges of the arrangement, and any holding of its currency by others would then become automatically subject to conversion or repurchase.

It may be assumed that the flexibility provided so far by the I.M.F., and some further liberalization with respect to the limits on the use of its resources, would adequately cover drawings (say, up to half or over of the quota) that any participant might request in order to repurchase its currency from the creditor's central bank, in lieu of its conversion into gold. In view of the fact that such drawing might nevertheless exceed the amount of the creditor's currency available to the I.M.F., these arrangements would not exclude — and may prove to be depended upon — the proposals under current discussion for special borrowing operations by the I.M.F. Finally, in the application of these arrangements, the option given to debtors to repurchase their own with the creditors' currencies would probably depend on a favorable review of Article VI, to allow member countries to draw on I.M.F. resources to cover imbalances arising from short-term capital movements of its members.

The effect of these arrangements, in conclusion, would be to provide a primary and flexible line of operations at central banks' level, which would absorb the first and immediate impact of movements of funds and balance of payments' shifts. This would
also increase available exchange resources and the overall liquidity of the monetary areas of the group, and reduce the use of gold in international transactions, both through the retention by creditors' central banks of debtors' currencies, and also by the option granted to debtors to repurchase their own currencies with creditors' currencies drawn from the I.M.F. The arrangements would be, in various ways, complementary to any proposal to expand resources and uses of the I.M.F.; they would, on the one hand, alleviate its need for borrowing additional currencies from creditor countries, and postpone, on the other hand, drawings by debtor countries on its own or on borrowed resources. In line with the approach of relying on a combination of organs and functions, the arrangements would provide a three-layers settlement, by reciprocal balances of central banks, by the use of I.M.F.'s resources, and by gold.

The Role of the Federal Reserve System in Central Banking Arrangements

Because of the role of the dollar and other obvious reasons, the success of any program of central banking cooperation in the international field will depend on the participation of the United States. While foreign exchange holdings and practices of other central banks, and more particularly those of European countries leave little doubt as to their powers and experience, the long absence of the Federal Reserve from this field may have raised some question as to whether its participation in international monetary arrangements could be supported on the basis of precedents and legal powers.

The "ample precedent" referred to in this respect by the Randall Report relates to a series of formal stabilization agreements, special operations, and deposit arrangements entered into by the Federal Reserve Bank of New York with foreign central banks during the years between 1924 and 1932. The initiative and role of this Reserve Bank in the international field were the product of the energy of its Governor, Benjamin Strong, and of his intimate relationship with Governor Montague Norman of the Bank of England. Both placed their confidence in a close collaboration between their banks and in the belief that monetary cooperation should not be handled by governments nor could be decided in international conferences, but would be best entrusted to central banks and worked out on a case by case basis through personal and informal contacts. Consistently with this attitude, Governor Strong took the position that the return to the gold standard by any country required the institution of a comprehensive stabilization program, but that the type of the program was to be adapted to each particular case, and did not hesitate to participate in the formulation of such programs and to support them with the credit of his Bank — singly or jointly with other central banks.

Operating on this basis, Governor Strong concluded, with the approval of the Federal Reserve Board, formal stabilization agreements with the Banking Office of the Ministry of Finance of Czechoslovakia in 1924, with the Bank of England in 1925, with the National Bank of Belgium in 1925 (which remained ineffective) and an effective one in 1926, with the Bank of Poland in 1925 and 1927, with the Bank of Italy in 1927, and with the National Bank of Rumania in 1929. These agreements were for a period of one to two years and for amount of between $10 million and $200 million; the Federal Reserve Bank of New York assumed the entire commitment in three cases [Czechoslovakia, England and Poland (1925)] and in other cases took the initiative jointly with the Bank of England. These two banks shared participation with other central banks (between 9 and 14, normally 12) in loans ranging each between $20 and $75 million, the Federal Reserve contribution amounting to between $5 and $75 million (normally, one-fifth of the total loan commitment). In the cases of England and Italy, the Federal Reserve agreements were accompanied by private loans extended by J. P. Morgan and Company to their respective governments. On the whole, the commitments assumed by the Federal Reserve Bank aggregated $265 million, of which the highest amount ($230 million) was outstanding between 1925 and 1926. Two of the loans (to Czechoslovakia and Poland - 1929) were on gold collateral, the agreements with Belgium, Poland (1927), Italy and Rumania provided for the purchases of commercial bills in the markets of the borrowers; and the agreement with England, by far the most important, represented a combination of transactions.

This agreement provided for a stand-by commitment by the Federal Reserve Bank of New York to the Bank of England in three interrelated transactions:
(a) The Reserve Bank agreed to sell gold on credit to the Bank of England from time to time, over a period of two years, not to exceed $300 million at any one time;

(b) Upon the purchase of gold, the Bank of England agreed to place on its books to the credit of the Reserve Bank an equivalent amount of pounds sterling;

(c) This deposit could be used from time to time by arrangement with the Bank of England in the purchase by the Reserve Bank of sterling bills guaranteed by the Bank of England.

The operations under this agreement were guaranteed by the British Government, the purpose of such guarantee being an assurance from Parliament that no legal obstacles would be interposed to the repayment "such as would be the case if a gold embargo had to be reimposed". Any balance outstanding at the termination of the agreement was to be payable at the Reserve Bank in gold or its dollar equivalent. Similar guarantee and commitment were also included in other agreements, such as the one with Italy. Finally, no commitment charge was levied on this loan and the interest rate was fixed at one per cent above the Reserve Bank rediscount rate, with a range of between 4 and 6 per cent; any interest obtained on sterling bills was to be applied against the payment of interest.

This agreement played a decisive role in England's return to the gold standard; nevertheless, like most other agreements, was not utilized and was terminated without renewal on expiration date. Significantly perhaps, the success of these agreements in the twenties was measured by the support given to stabilization by their negative use: as an indication of the soundness of the program and the degree of confidence generated by the existence of additional resources on a stand-by basis.

Perhaps more important from the standpoint of current possibilities are the special operations in which the Federal Reserve Bank of New York engaged, by extending credits through purchases of commercial paper from the central banks of Hungary (1929, 1931) and Austria, Germany, and England (all in 1931). These credits were extended as a rule in participation with other central banks, and the Bank for International Settlements became a regular participant from the beginning. The aggregate amount involved is estimated at $259 million, of which $175 million to England and

$100 million to Germany, and the Federal Reserve participation amounted to $154 million. The credit to the Bank of England was extended on August 1, 1931, in addition to a separate and equivalent credit from the Bank of France. Both credits were used by the Bank of England during the crisis which led to the abandonment of the gold parity for the pound sterling on September 21, and were repaid on maturity after three months. In connection with the conduct of operations in foreign currencies, the Federal Reserve Bank of New York established in 1931 a $10 million deposit account with the Bank for International Settlements, part of which was invested from time to time in commercial paper, but whose purpose was to provide participation in credits extended to central banks. This account was gradually drawn after 1932, and liquidated in 1935.

The discussion of these stabilization or special foreign operations does not, of course, include short-term loans on gold which have been traditionally made available to foreign central banks on a three month basis (with renewals usually up to one year) to provide dollar exchange for seasonal or other short-term needs. The Federal Reserve Bank of New York continues nowadays the practice of extending such loans, in participation with other Reserve Banks, in the regular course of the System's foreign operations.

The Legal Basis for Federal Reserve Operations

From a legal point of view, it may be noted that while stabilization and special foreign operations of the Federal Reserve Bank of New York were all concluded by 1935, when the Federal Reserve Act underwent its major revision, the powers under which these operations were carried out remain substantially unchanged nowadays in the Act itself. Of political significance, on the other hand, is that the process of policy formulation has been largely shifted from New York to Washington. Foreign operations in the twenties and early thirties were conducted under three main powers vested by the Federal Reserve Act in the Federal Reserve Banks, which may be summarized as follows:

aa. The authority "to deal in gold bullion at home and abroad, to make loans thereon" (Section 14-2-a) was the basis for the agreements with Czechoslovakia and Poland (1925) and was
also used jointly with other provisions in the agreement with England. The same paragraph of the section gives the Reserve Bank authority "to contract for loans of gold coins and bullion, giving therefore, when necessary, acceptable security, including the hypothecation of United States bonds or other securities ".

bb. The authority "to buy and sell with or without its endorsement, bills of exchange (or acceptances) arising out of actual commercial transactions" (Section 14-9-c) provided the basis for the agreements with Belgium, Poland, Italy and Rumania, as well for the special operations with Hungary, Austria, Germany and England (1921), and was also used jointly with other provisions in the agreement with England (1925). This authority may be related to another provision contained in Section 14-1, to the effect that Reserve Banks may "purchase and sell in the open market, at home and abroad... cable transfers and bankers' acceptances and bills of exchange... eligible for rediscount, with or without the endorsement of a member bank ".

c. The authority "to open and maintain accounts in foreign countries, appoint correspondents and establish agencies in such countries wherever it may be deemed best for the purpose of purchasing, selling and collecting bills of exchange" (Section 14-6-c) was used jointly with other provisions in the agreement with England and in the deposit arrangement with the Bank for International Settlements (and in a special instance, by itself without reference to "purchasing, selling and collecting bills of exchange ").

dd. The authority "to buy and sell, at home and abroad" obligations of the United States Government has never been used presumably because in the twenties (when securities operations in the domestic market were beginning to develop) the other powers appeared both adequate and practical from the standpoint of transactions in foreign markets and with foreign central banks.

The existence of these powers in the Federal Reserve Act and their use in the past provide a legal basis for possible international monetary operations at this time. For instance, under present circumstances the Federal Reserve could acquire balances in foreign currencies to be used in support of the dollar in exchange markets (in the United States or abroad) by crediting dollars on its own books against being credited local currencies on the books of correspondent banks, or by selling for foreign currencies (to banks or in various markets) bills of exchange, acceptances, and United States securities; or it could intervene in gold and exchange markets abroad by purchasing dollars against sales of gold, not drawn from the stock of the United States Treasury but obtained on loan from foreign monetary authorities, with or without the collateral of United States securities. Two minor points may be noted, however.

In the first place there has been considerable variance, in legal opinion, as to whether the power to open accounts abroad could be used independently of, or only in combination with, the purpose of dealing in bills — a question resolved in different ways at different times and places, and presumptively subject to broader policy considerations. In the second place, dependent upon such determination and in view also of the change in practices and structures of money markets throughout the world, it might prove advisable (but by no means necessary) to amend the Federal Reserve Act in so as to provide authority for Reserve Banks to deal in Treasury bills of foreign governments, of types and maturities equivalent to those of the United States Government, as part of deposit accounts or other special arrangements entered into with foreign central banks.

Apart from these points, there are three more significant changes which have taken place in the policy-formulating process and should be noted:

(a) An amendment of 1933 to the Federal Reserve Act provides that the Board of Governors "shall exercise special supervision over all relationships and transactions of any kind entered by any Federal Reserve bank with any foreign bank or banker... and all such relationships and transactions shall be subject to such regulations, conditions, and limitations as the Board may prescribe" (Section 14-8-g). Although it may be noted that representatives from the Board participated in Governor Strong's negotiations with the Bank of England, and the agreement itself — like any other agreement, operation and account — was subject to Board's approval in 1925, as required under the Act that time, this amendment was intended to stress the role of the Board in a spirit which has been interpreted in certain quarters as restrictive of the foreign activities of the Federal Reserve Bank of New York in particular, and of the international role of the Federal Reserve System in general.
(b) Under the Gold Reserve Act of 1934, all right of the Federal Reserve System to "any and all gold coin and gold bullion" was transferred and vested in the United States, and "the conditions under which gold may be acquired and held, transported, melted or treated, imported, exported, or earmarked... (b) by the Federal Reserve Banks for the purposes of settling international balances." (Section 3) are prescribed by regulations of the Secretary of the Treasury, with the approval of the President. In this respect, therefore, the Federal Reserve may no longer enter directly into agreements involving in any way transactions in gold, except under general regulation or special license issued by the U.S. Treasury, or in operations conducted in participation with or on behalf of the U.S. Treasury.

(c) The policies and operations of all agencies of the United States Government, including the Federal Reserve, "which make or participate in making foreign loans or which engage in foreign financial, exchange or monetary transactions" were made subject by the Bretton Woods Agreement Act of 1945 (Section 4) to coordination by the National Advisory Council on International Monetary and Financial Problems — an organ presided by the Secretary of the Treasury and of which the Chairman of the Board of Governors has been a statutory member since the beginning. The participation of the Federal Reserve System in inter-central bank arrangements of any kind would, therefore, require advance consultation with, and in practice assent from, the Council.

Apart from the powers vested in Federal Reserve organs, the Federal Reserve Bank of New York could participate in any international financial or monetary arrangements as fiscal agent of the U.S. Treasury either on behalf of the United States Stabilization Fund under its legislation, or under other existing legislation, such as Civil War legislation authorizing issuance of securities in foreign markets, or under new special legislation. However, any substantial expansion of activities by the Stabilization Fund would require the authorization by Congress of additional funds, and it is doubtful whether any operations for the U.S. Treasury, under existing legislation, could be as adequate and flexible, in amounts, timing, extent, and negotiations, as the operations and arrangements that could be undertaken by the Federal Reserve under its own powers.

It should be recognized that, irrespective of whether the Federal Reserve would operate on its own account, or conduct operations jointly with the U.S. Treasury, or act as fiscal agent on behalf of the U.S. Treasury, a policy decision to enter in any international monetary arrangement involving a substantial change in its foreign operations (such the decision to hold foreign balances, extend or obtain foreign credit facilities, and assume open or implied commitments with foreign central banks or governments), could not be reached outside, but only within the U.S. Government, in a process of full consultation and with the assent of all directly-interest organs. On the other hand, as is the practice for other organs of the United States Government, the implementation of the policy would be the principal responsibility of the Federal Reserve (or Treasury) and the day to day operations would be carried out by the Federal Reserve Bank of New York, in accordance with current practices and relations. All in all, therefore, while it is important and significant in many ways to determine the organ that would initiate and conduct particular operations, policy decision would be vested in the entire United States Government, and not in any particular part of it.

The Opportunity of the Present

The lesson of the post-war years shows that no country can be immune from shifts in international payments: while the United States had become in war and post war an haven for refugee money and an arsenal for defense and reconstruction, the expanding economic recovery abroad has brought money back to and moved goods out of the industrial centers of Europe and Asia. Even in a more normal pattern of economic trends, the rise and fall of income and activity, through their effects on marginal profits and money yields, is inducing capital movements which may at times compensate, at times aggravate deficits or surplus on current accounts. The renewed mobility of private investments and the growth of foreign government expenditures, whether for aid or defense, are characterized by long leads and lags, which make for difficult adjustments in fluid, short-run situations.

Under these conditions, it becomes of great importance and urgency to devise equilibrating instruments, responsive to trade and
market forces and adjustable in accordance with financial and monetary policies. A central bank arrangement, because of its quasi-automaticity and flexibility, could absorb an initial flow of private capital as it occurs and alleviate adverse trade pressures on a currency as they appear. On the other hand, a prolonged or acute payments' deficit would bring the debtor country into the I.M.F. for drawing and consultation, and the persistence of imbalance would impose upon it the discipline of a gold outflow. Thus, the sequence of flexibility, consultation, and discipline would combine facilities for adjustment of temporary or cyclical shifts, with increasing restraint for longer or fundamental maladjustments.

From this overall point of view, and taking into account the role the I.M.F. would play in extending drawings with its own and borrowed resources, the amount of credit facilities that would be needed by central banks for the successful operation of a reciprocal arrangement may well be kept within proportion of their overall resources. Using the Federal Reserve as an example, and the amount of commitments extended in the twenties, a comparable amount would now be between one and four billion dollars, in line with changes in certain indicators, such as the gold stock (1:45), the Reserve credit outstanding (1:19-0), the money supply (1:6), and the national income (1:5). Such amounts, covering all facilities with respect to all currencies, represents a range of upper figures that would not be reached except under circumstances of persistent, general, and overall surpluses. The actual amount outstanding at any given time would be normally lower than the aggregate commitment, and subject to swings in payments and transfers both in the overall and with respect to individual countries.

Irrespective of any amount that might be allocated, the Federal Reserve (or any other central bank) might find it preferable if its exchange operations were carried out in line with but outside of the management of domestic monetary policy. From this point of view, central banks could rely upon a special fund, drawn from their capital account surplus and current excess earnings, for the purchase of foreign currencies. They could operate, on the whole, like stabilization funds operated in the past, which offset exchange operations with securities transactions in line with the requirements of their domestic monetary policy: that is, when selling foreign exchange, they used the local currency proceeds to purchase Treasury bills from the market, and when buying foreign exchange they raised the local currency needed by selling Treasury bills in the market — without any net change in central bank credit or the overall level, in domestic and foreign currencies, of the fund itself.

In the case of the Federal Reserve, the existence of a capital account surplus close to one billion dollars ($817 billion as of the end of 1950 as compared with $221 million at the end of 1925) could provide an adequate basis for any need that might arise in the foreseeable future to acquire foreign currencies. This amount could be expanded in line with trends in international payments and reciprocal balances by the allocation of some part of the annual net profits (amounting, after dividends, but before franchise tax or transfer to the Treasury, to an annual average of $18 million in 1921-1925 and $60 million in 1936-60). The magnitude of the resources that the Federal Reserve could reasonably make available, in proportion to these various factors, appear to be also in general line with gold movements, inflows or outflows of short term capital, and net deficits or credits on balance of payments accounts in the recent years — the most critical so far encountered by the United States.

At this time, such central banks' arrangement for the reciprocal holding of each other's balances would work out in favour of the United States and the United Kingdom. Their currencies are already held in large amounts by foreign central banks, and the reciprocity aspects of the arrangement would probably strengthen their willingness to continue to hold such currencies among their reserves. The fundamental strength of the American economy and the experienced monocurability of British policies should, however, induce other countries to look forward to the possibility, or rather the time when their creditor position might turn into a debtor position: when the Federal Reserve and the Bank of England would in turn be expected to acquire and hold balances in their own currencies. In the case of the United States, as net debtor on short-term accounts, its authorities would continue to convert dollar balances on demand, but they could meet any request for conversion by tendering gold (as in the past and now) or, at their option, by tendering the currency of the creditor country — whether drawn from its own balances or from the International Monetary Fund.

In conclusion, given the present practices already prevailing in the world at large, the United States and the Federal Reserve could inaugurate a new tradition by deciding, on their own accord and as part of their own policies, to join the rest of the world by adding
to their international gold reserves other monetary holdings in some foreign currencies. This new tradition would be characterized by continuing cooperation among central banks in offsetting sudden and temporary shifts of funds and payments, in providing a greater flow of available exchange, and in reducing the use of gold in international settlements; and would result in a more intimate relation between the central banks, as the national guardians of monetary policy, and the International Monetary Fund, as the trustee of interests and objectives for the world at large.

The American University.
Washington, D. C.

FRANK M. TAMAGNA

Inventory Investment and the Rate of Interest

One of the most powerful factors in the business cycle is business investment in inventory. Although the annual amount of inventory investment is normally a small fraction of fixed investment, it is so volatile that changes from one year to the next in the rate of investment in inventory tend to be as great as changes in the rate of fixed investment. Over shorter time periods, inventory investment has much greater variability than fixed investment and in fact is considered the major factor in the short business cycle.

Although there has been some support for the idea that inventory investment is highly sensitive to interest rates, most observers have held that speculative and other factors are dominant and that the interest rate is ignored. It is also argued that large firms rely little on short-term bank credit and therefore tend to escape the influence of credit tightness, leaving the smaller firms to suffer the effects — cost or availability — of tight money.

This article will show, following a resume of findings on fixed investment, that some of the assumptions underlying economists’ skepticism of the existence of appreciable interest elasticity of demand for inventories are not justified. It will be shown that some businessmen do take interest rate levels into consideration when fixing inventory targets, so that the idea of such behavior cannot any longer be considered farfetched. Finally, some evidence that high interest rates did restrain inventory investment in Great Britain and in the United States in the late 1950’s when rates finally got back to their pre-great depression levels is presented. That evidence is not conclusive — especially in view of the coincidence with high rates in 1957 of growing excess capacity and declining new orders — but it does seem sufficient to justify the recall of economists’ serious attention to investigation of the possibilities for valuable anti-inflationary contributions from short-term interest rate policy.