THE FEDERAL RESERVE SYSTEM AND THE FOREIGN EXCHANGES.

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Circumstances did not permit the Federal Reserve System to develop gradually. The System was carefully planned; it was based on a painstaking study of similar institutions in all parts of the world, but fate decreed that it should be put into operation at the very instant when through the outbreak of the European War all precedents were thrown to the wind and when, everywhere, new methods to meet new emergencies had to be hurriedly devised. As a result, the System has not yet had an opportunity to function in accordance with the plan of its founders. It passed an uneventful childhood and, without any intervening period of adolescence, had thrust upon it the full responsibilities of strenuous manhood. This abnormal development has not been without its advantages. It was inevitable that any new system would in practice from time to time require changes to meet developments which its founders could not have foreseen. The System, developing as it did, at first under the threat and later under the stress of war, was able promptly to secure the legislation necessary to its development, which, under normal conditions of peace would have involved great effort and considerable delay.

No system of banking—in fact no institution—operates rigidly in accordance with the theory of its constitution. The temperament of the people whom it serves and of the people who work its machinery is an important element in operation. The theoretically autonomous operation of the British banking system is modified by the personality of the officers of the Bank of England who, for the purpose of controlling credit, do not rely entirely on the discount rates of the Bank, but who use their influence in contact with bankers whom they meet, either to moderate or, to accelerate the tendencies that the Bank wishes to control or to promote. The exercise of such personal influence is a comparativly simple matter in a compact banking community like England. It is obvious that its application will be of an entirely different character in England, a small, homogeneous country with one financial center where five or six large banks with thousands of branches are the dominating factors, from what it must be with us, confronted by a vast country with thirty thousand independent banks organized under the laws of almost fifty separate jurisdictions. Then, too, account must be taken of the temperament of the people whom it serves. Methods of control suited to an old community with traditions built up through hundreds of years of gradual development, are not suited to a new community filled with the spirit of speculation and adventure and whose people regard each development and expansion as merely the threshold for further development.

The theory and normal practice of the operation of central reserve banks in the countries in which those banks have long existed, require the re-discount rates of the central bank to be above the market rate in order that resort may be had to the central bank only to meet seasonal or unusual requirements and that such resort shall always entail to the borrower a higher rate of interest than he has taken into account in connection with his normal transactions.

During the war it was naturally impossible for a central bank to operate on this basis. War financing inevitably entails inflation. It is obvious that if, during the war, the community had restricted its consumption to correspond to the expanding needs of the Government, we should have had no undue competition in the purchase of commodities, and hence no abnormal prices.

The restriction of individual consumption would have put the individual in possession of surplus purchasing power which he would have transferred to the Government either through payment of taxes or through the purchase of Government bonds, and the exercise by the Government of the purchasing power so transferred would have met with no competition from the individual. On the commodity side, there would have been no rise of prices. On the investment side there would have been money saved by the individual, available for the payment of taxes or for investment in Government bonds. On the banking side there would, therefore, have been no consequent expansion of loans. As a matter of fact, such ideal conditions can never be found in practice. Our organization for war purposes, on the financial side as on the military side, was necessarily a growth. At the time of the armistice, both Army and Navy had reached a point where they were well prepared to do their part and they had begun effectively to aid our Associates, and on the financial side, through Government control and through voluntary co-operation, consumption had been marvelously cut down, prices had been fixed and adjusted, imports had been restricted and we had probably reached a condition of commercial and industrial equilbrium, where through the restriction of consumption and the fixing of prices, further competitive buying between the Government and its citizens would have been avoided. To the extent to which the individual who bought Liberty Bonds did not reduce his consumption and save, to that extent when he purchased Government securities, he was compelled to borrow from banks. He did indeed transfer purchasing power to the Government, but at the same time he replaced that purchasing power by borrowing from the banks and then with that newly created purchasing power he entered the commodity market as a competitor with the Government. Thus did the causes operate that advanced prices after our entry into the war; before that time, prices were put up by the purchases here of the Entente Powers, who bought freely in our commodity markets. They made payment in part by the shipment of gold and in part by placing here loans whose marketing was facilitated by the improved reserve position of our banks which, in turn, was the result of the gold these Powers had themselves sent into this country in payment of commodities.

This brief outline contains for you nothing new. The position is summarized here only to emphasize the fact that a certain amount of expansion or inflation was, as a consequence of the war, inevitable. This inevitable expansion necessarily involved re-discounts with the Federal Reserve Banks, which were not seasonal or extraordinary, but which were for the time a necessary reliance on which the banks had to depend to permit the people of this country to assist the Government in raising the funds necessary for the prosecution of the war. In those circumstances to have raised the Federal Reserve re-discount rates above the rates borne by Government securities would have involved continuous and heavy interest losses to all banks and to all borrowers from banks, *without in any degree checking the expansion which, in the circumstances of the case, was not only unavoidable but necessary.* There was no question, therefore, of using rates to control the expansion of credit. The expansion of credit was necessary and to have checked it would have been to check our ability to place Liberty Bonds.

During the earlier portion of the post-armistice period, expenditures continued practically on a war basis. Troops had to be maintained until they could be brought home; the expenses of bringing the troops back had to be met; contracts theretofore entered into for arms and munitions had to be settled or compromised; expenditures in connection with the Navy, Shipping Board, Railroads, etc., continued.

When these expenditures finally began to fall off and the expansion of Government debt ceased, a different situation confronted us. In a mood of reaction from wartime restrictions, and with wages on a level never theretofore reached, the community indulged itself in a wild burst of extravagant buying. Price advances during this period were accentuated by the fact that advances to European countries stimulated our exports, which rose to unprecedented heights; the purchase of commodities for export to meet the undoubted needs of Europe and to replace the depleted commodity stocks of South America and the Orient, competed with the wild purchasing by our own people. During this period the holder of commodities could exact any price he chose; all elements of cost, including the cost of money, had only to be added to the selling price, which was cheerfully paid by the buyer. A glance at the causes in operation, make it obvious that during this period it was impossible, through any change in discount rates, to check the excesses of the community. As a matter of fact, our return to a rational frame of mind was finally brought about and a definite check to expansion was finally given, not through changes in discount rates, but through the realization by the community that we were approaching the point where, through the decline in our reserve percentage, credit might soon be unobtainable at any price. It so happened that the increase by the Federal Reserve Banks of their discount rates, coincided in point of time with the decline in our reserve percentage, and it was natural that this should be so. The check to our expansion, however, it is clear to me, resulted from the decline in the reserve percentage, with its implication of a complete failure of new supplies of credit, and not from the costliness of the comparatively moderate increase in re-discount rates. This falling reserve, it will be remembered, was the result of a considerable export of gold principally to Japan, China, India and South America, following the removal of the embargo on the export of the precious metals in June, 1919. Undoubtedly the increase in the re-discount rates served to emphasize the warning given by the falling reserves but, in my judgment, that increase was not the cause that turned our faces toward sanity.

The re-discount rates of the Federal Reserve Banks are not yet above the market rates for money, but the time is now approaching when for the first time since the System became a factor in the money market, a normal relation between re-discount rates and market rates may gradually be established.

As in the case of discount rates, so also in regard to the exchanges. The Federal Reserve System has never assumed its normal relation to the foreign exchanges. This does not mean that the Federal Reserve Board has not been active in the control of the foreign exchanges. Proceeding in conjunction with the Treasury and at times also with the War Trade Board, the Federal Reserve Board was an active factor in dealing with the foreign exchange difficulties that arose during the war and during the armistice period. It will perhaps be of interest to deal in outline with some of these relations, which, it should be remembered, were the joint product of the activity and ingenuity of the Treasury and of the Federal Reserve Board, but before doing so it may be well to spend a moment on the normal functioning of the foreign exchanges and on the relations to the foreign exchanges which the Federal Reserve Board and Banks may normally be expected to bear.

The normal relation between the currencies of gold standard countries is based on the relative amount of fine gold in the standard coin of the respective currencies. A British sovereign contains 4.8665 times as much gold as a United States gold dollar, and hence the par of exchange between the dollar and the sovereign is 4.8665 dollars to the sovereign. When the free movement of gold between the two countries is unimpeded, it is evident that $4,866.50 of United States gold coin laid down in England will produce £1,000 Sterling. To this must be *added* the cost of freight, insurance, loss of interest, abrasion on the coin and mint charges. It is obvious that the quotation for Sterling in the United States cannot under those circumstances ever rise above $4.8665, *plus* the above charges and *plus* a small margin of profit on the transaction; that it cannot rise above say 4.89. Reversing the process, it is evident that a thousand gold sovereigns sent from England to the United States will produce $4,866.50 of United States money *less* the cost of freight, insurance, loss of interest, abrasion and mint charges, as well as a small margin of profit; that it cannot fall below say $4.83. The limit of fluctuation between gold currencies in free gold markets is, therefore, well defined and the range of fluctuation would ordinarily between markets not too remote from each other, be well under 2%. With these maximum and minimum points definitely established, the losses and profits of dealings in foreign exchange are fixed between narrow limits and thus permit transactions of large volume to be undertaken without risk of serious loss. This is an important consideration as it tends to broaden the market in foreign exchange and to permit trading transactions on a large scale. The tendency of these transactions is to keep exchange on a level within the extreme limits of the "gold points." The foreign exchange market is the medium through which not only international purchases and sales of commodities are settled, but as well international investments, remittances of interest, payment of freights, etc. Apart from such transactions, the consummation of which influence the exchange market but are, broadly speaking, not influenced by it, there is a class of strictly financial transactions called into being by and based purely upon fluctuations in the exchange market, and which act as automatic equalizers or cushions in that market. To illustrate by means of what is perhaps the simplest instance of such transactions: the summer period is ordinarily the time when the demand here for remittance abroad is at its maximum. At that time comparatively little exchange is offered for sale as the agricultural products that we export have not yet been harvested, while the demand for exchange to meet the expenditures of travelers, etc., are apt to reach important totals. Exchange is, therefore, normally high at that time. It is well known that early in the fall large shipments of cotton and grain will go abroad and the exchange to pay for those shipments will then come on the market. We encounter, therefore, high exchange rates in the summer with the chances strongly in favor of lower rates two or three months later. Taking advantage of these circumstances, it has for years been the practice for bankers during the summer to draw upon their correspondents abroad, ninety-day bills which they sell upon the New York market. To the banker the transaction is a simple one. He draws his ninety-day bill because exchange is high and because he expects to be able ninety days later, at the time of its maturity, to cover his bill by the purchase of exchange at a lower price. The proceeds of his bill he lends in the American market. If he wishes to limit his risk beyond the safety afforded by the gold points, it is possible for him at the time of drawing his bill to purchase for future delivery, and at lower rates, cotton export or grain export bills, and also to lend the proceeds of his drawings at fixed rates for ninety days. The transaction, therefore, so far as he is concerned, can be made a closed transaction on which the margin of profit is actually fixed. Such a transaction viewed from the broader aspect of the community in general, means the use by the banker of his credit for the purpose of creating exchange when exchange is in demand, and the corresponding absorption by him of exchange ninety days later when it is in oversupply, and in the meantime the availability in the American market of sums which would otherwise have gone abroad in the summer and been returned later. Other similar transactions are constantly entered into by bankers under the actuating impulse of an expected profit. Their tendency always is to cushion the fluctuations of exchange and an intelligent use of these trading devices by dealers redounds to the benefit of the whole community. Another instance of the manner in which profit-seeking operations of bankers, result in economy to the business community, is afforded by exchange arbitrage transactions. Such a transaction, for instance, is the purchase in the London market of exchange on Paris, the remittance of that exchange to Paris, the drawing of a draft from New York on the French balance thus created and the use of the proceeds of that draft in New York in the purchase of exchange on London, which exchange is then applied in

London to pay for the original purchase of French exchange. What this amounts to is a remittance of money through the exchange market from New York to London, thence to Paris, where it is in turn remitted back to New York. Such a transaction must, of course, be entered into by cable and with practical simultaneity in the different markets and will not be attempted unless it promises a margin of profit. Such an operation is not limited to three markets; nimble operators can spread their transactions over four or five different markets. The effect of such operations is the same as is the compensation of transactions involving a chain of people, where the ultimate settlement takes places only between the end parties. Let us assume that on balance of payments the Paris market is indebted to the New York market, and the New York market is in turn indebted to the London market. The balances could, of course, be settled by shipment of gold from Paris to New York and from New York to London. When the accounts are in this condition there is an upward tendency in the price of New York exchange in Paris and at the same time the pressure for remittance from New York to London tends to raise the price of London exchange in New York. The exchange operator, therefore, would see a margin of profit by selling in Paris, exchange on New York, which is high and investing the proceeds in Paris, in exchange on London. At the same time he would in New York sell London exchange, which is high in New York and use the proceeds to meet the draft on New York drawn and sold by him in Paris. As the last step, the draft drawn by him in New York will be met in London, through the remittance to London of the bills which he originally purchased in Paris. Thus the principal of his transactions cancels out. It will be observed that these transactions have a tendency through reducing the rate on New York in Paris, to prevent the shipment of gold from Paris to New York; through lowering the rate in New York on London, to prevent the shipment of gold from New York to London; and by raising the rate on London in Paris to cause the shipment of gold from Paris to London. In other words, a position which might have led to the shipment of gold from Paris to New York and thence to London, will be liquidated through the shipment of gold from Paris direct to London. This, it is clear, involves considerable economic saving, which is brought about by no planning, but by the trader's instinctive pursuit of a profit.

In these international financial transactions, the current rate for money in different markets is an important factor in determining the flow of credit. A high money rate in New York, with a low money rate in Lon-London, will cause an immediate advance in New York exchange rates in London, or, which is the same thing, an immediate decline of London exchange rates in New York, with the resulting tendency to keep down money rates in New York and to advance them in London. This has a tendency to bring about an equalization of interest rates between different money markets and the exchange rate between the markets is an important element in determining these movements. In transmitting credit in this way from a low money center to a high money center the banker undertaking the transaction must have in mind not only the advantage in the rate of interest that he can obtain in the higher money markets, but also the possibility of a loss in exchange when the time comes for calling his money home. No purpose is served by multiplying these instances.

The relation of the Federal Reserve System under normal circumstances to the exchange market arises, therefore, in two ways,—either through the relation of the Federal Reserve Bank to interest rates or through direct transactions by the Federal Reserve Banks in the exchange market. The influence which it is possible to exert through interest rates has been roughly indicated above. The Federal Reserve Bank in raising its rates, will, under normal circumstances, be an important influence in raising the rate of interest in the money market and the tendency of such action will be to draw funds from foreign centres to the United States, or, which is the same thing, to depress the rates of these foreign exchanges in the American market. On the other hand, through a more liberal discount rate, the reverse result can be accomplished. Under the Federal Reserve Act the Federal Reserve Banks have ample power to enter the foreign exchange market direct as purchasers and sellers and it is, therefore, in their power to influence rates by direct action in the market. I should expect that under normal conditions, the power of the Federal Reserve Banks would rather be exerted indirectly through their influence on the money market, than directly in the foreign exchange market itself, except, indeed, on occasions when the Federal Reserve Banks as Fiscal Agents for the Treasury may have remittances or collections to make abroad on account of transactions for the United States Treasury.

The competition of commercial banks in foreign exchange is so keen that the margin of profit is reduced to a minimum and the occasion, therefore, for direct action by the Federal Reserve Banks is not likely to be frequent.

The above general outline is based on conditions as they existed prior to the war. At the present time few countries are on a gold basis, but the same considerations apply equally to markets not on a gold basis, with the important difference, however, that the absolute limit of fluctuations set by the "gold points" is removed and the risk of operation is thus vastly increased. This tends to create a wider margin of profit, commensurate with the greater risk, but in essence the transactions and the motives that underlike them are not different.

The war brought new problems in connection with the foreign exchanges. Those problems had their origin in the imposition of the embargo on the export of gold. By stopping the free flow of gold, the limits imposed by "gold points" were removed and the problems that arose, had their root in the resulting difficulty of our Government or our citizens, or of both, in making payment for purchases abroad. By 1917, when we entered the war, practically all other countries had placed an embargo on the export of gold, or if they had not formally placed an embargo on its export, they had so hedged about transactions in gold, that exports thereof were as a matter of practice impossible. Therefore, when gold was required by any country, its natural course was to secure a balance in dollars and to procure gold here. That, of course, is only another way of saying that we maintained a free gold market. But a free gold market under natural conditions, is quite another thing from a free gold market when heavy foreign loans are being continuously placed on that market and when a large part of the proceeds of those loans is exported to pay the borrowers' bills in other countries.

The loans raised in this country by the Entente prior to April, 1917, were used, among other things, to peg their exchanges,—in other words, to maintain them at a fixed level. After April 6, 1917, the United States Government began its large advances to its Associates in the war: these advances were utilized by them for expenditures in the United States, including in such expenditures the support of their respective exchanges. One result of this support of the exchanges in the United States was, that the bills on London given by our Associates to settle their indebtedness in other countries, were sold in the New York market and the proceeds employed in the purchase on the New York market of exchange on neutral countries or in the shipment of gold thither. In the circumstances, the drain of gold became so heavy, amounting between July 13 and September 21, 1917, to $109,712,090, and the conditions that caused its export seemed so certain to continue in operation, that an embargo became necessary to protect our reserves and to forestall the uneasiness that was likely to manifest itself, if the export continued.

As a consequence of this pegging of the exchanges, the United States and its Associates, in respect of their balance of payments, constituted a unit group, and the total indebtedness of this unit group to any one country outside of the group affected the rate of exchange on that country in all of the Allied countries.

The pegging of the exchanges by the Allies was a sound policy. The moral effect of declining exchanges would have been serious both in the encouragement to the enemy contained in a decline in this generally recognized index of international credit, as in the discouragement to Allied friends and partisans. Further, the pegging of the exchanges constituted the cheapest method of payment for foreign purchases. Wise administration, under these conditions, required that foreign purchases by its nationals should be rigidly restricted to necessaries by a country that was supporting its exchange, as every such purchase added to the burdens thrown on the exchanges. This fact was recognized and every effort was made to control such purchases.

The statement that the pegging of the exchanges was a sound policy, must be understood as meaning a sound war policy. As soon as normal motives and reactions began to re-assert themselves, it became a menace, because of the artificial obstacles it opposed to a return to normal. The practice was in fact terminated by both the British and French in March, 1919. In normal times such a policy is unsound. It creates foreign debt instead of domestic debt. It tends to stimulate imports when imports should be checked. It checks the normal stimulus to export commodities and, more important, to export securities, when exports should be stimulated. It tends to retard foreign investment in that country and the carrying of foreign balances there. There has been much talk about stabilizing exchange. We must remember—and I need not here expound the matter at length, as a mere reference to the subject will recall its essential features—that the exchanges are but the index of the state of the balance of payments. When foreign payments exceed foreign receipts on all heads, visible and invisible, we have a weak exchange, and vice versa. The exchanges are the thermometer, not the temperature. Stabilizing exchange—under whatever alluring guise it may masquerade—always involves loans to the market whose exchange is being stabilized. It is the effort to borrow for the purpose of balancing an unbalanced account. "Thank God—that debt is paid," said the minister when his church settled its indebtedness by giving a mortgage.

The embargo placed by us on the export of gold was thus a necessary consequence of the pegging of the British and French exchanges as soon as our advances to those countries assumed important dimensions. Otherwise our shipments of gold might have seriously impaired our reserves. No country was permitting the export of gold except Mexico, to which we permitted the shipment of an equivalent amount of gold coin, and a certain fixed proportion in gold in return for silver shipped in to us. Some small shipments were also received from countries lacking refineries and mints. We had no means of knowing how long the war would last and the prospect was, that should the war prove of long duration, our gold losses might well be so great as to prevent our resuming specie payments at its termination. The amounts that the Orient might absorb were incalculable. Above all, we had no means of measuring the effect of a continued loss of gold on the confidence of our own people. We were yet young in war, and had not accommodated ourselves to its abnormalities. Two years later we might have seen our last dollar go without pang. At that early stage, it might have precipitated a panic and seriously jeopardized our war financing.

There were economists—rated as eminent—who implored those responsible for Government financial policies, to resume the export of gold, on the simple ground that as the import of gold between 1914 and 1917 had put up prices, so now its export would send prices down. Without now stopping to discuss whether the premise is correct, we can probably agree that the suggested remedy was childish. An inflated system cannot be cured with the hair of the dog that bit it—and we have seen that inflation was inevitable.

A word should be said in passing on the policy of several European countries during the war, of either prohibiting the import of gold or of receiving it for coinage only at a discount. Sweden first prohibited its import, and then placed a discount of 8% on gold when receiving it for coinage. Spain placed a 6% discount on gold. In both cases the purpose was to keep down commodity prices. In both cases, the device failed, as commodity prices nevertheless rose because of the scarcity of commodities, while failure to balance their budgets caused inflation. It is obvious that such a discount (so-called) on gold is equivalent to an increase in the gold content of the standard coin. The coin remains the same, but the amount of gold that must be tendered to obtain it, is increased. It is the change for the time being in the standard of value.

To complete this review a word is required on the removal in June, 1919, of the export embargo on gold. The Allies had by that time discontinued the pegging of their exchange: most of the trade restrictions imposed by the War Trade Board had been removed, and it seemed necessary at the earliest moment consistent with safety, to put into effect the natural check on credit expansion imposed by automatic gold movements. However, other countries had as yet not removed the embargo, and there was no possible way of judging when or to what extent they would do so. While a return by them to their par of exchange seemed remote, it did seem that gold might, and probably would, be sent by them to prevent further declines. The most important factors of uncertainty touching the amount of gold we would be called on to ship, were the demands of India, which could not be gauged, and the possible demands of South American and neutral European countries. These countries had been unable theretofore to employ the funds received in payment of their merchandise sales to us, either in shipping gold or in purchasing commodities to any adequate extent in our market, and, as a consequence, had accumulated large balances in our banks. The control we had instituted over exchange had been so perfected that we had accurate returns showing just what these balances amounted to, but we could not judge how they would be employed.

After gauging the situation as carefully as possible, the embargo was removed with full confidence that it was a judicious step. And so it has proved to be. The removal of the embargo was followed by an export of about $445,000,000 gold, before any large amount of gold began to move toward us. The net loss of gold through exports between June 1, and December 31, 1919, amounted to $171,000,000 after taking account of $173,000,000 German gold received by the United States Grain Corporation in payment of food sold to Germany, which, while the major part of it was actually brought into this country, only in October and November, 1920, had theretofore been incorporated in the reserves of the Federal Reserve Banks, and had been held earmarked for their account by the Bank of England. This was, of course, equivalent to an import of gold. Gold imports from Europe in appreciable amounts began in March, 1920.

It was contended by persons who instinctively felt that step to herald the beginning of deflation, and who, in imagination, felt the pinch that deflation involves, that we were permitting ourselves to be used for the benefit of other countries: that gold exports to South America were to a great extent for British or French account, and that the process should be stopped. These people failed to realize that a free gold market means, that anyone who can control a dollar balance must be permitted to convert it into gold.

The free gold market was, as you know, maintained, and we have become accustomed to seeing exports without panic, and imports without exultation, successively, and, at times, simultaneously, regarding both as normal functions of an international market.

The situation arising out of these conditions, that had to be met, was the difficulty in making payment abroad for our war purchases, at a time when we dared not send gold, and when we could spare only a limited quantity of commodities. We did what we could, to export commodities we could spare. The necessity of releasing all possible commodities for export for the purpose of paying our bills, was never lost sight of by the War Trade Board, and while this was, to a certain extent, feasible in our dealings with South America and the Orient, where there was cargo space on returning ships, it was very difficult in our dealings with Neutral Europe, where the freight movement was all one way.

Reference to the steps taken during the period of control to meet our foreign indebtedness, with a minimum of loss and discomfort, must necessarily be brief and somewhat disjointed. These steps went hand in hand with the licensing of gold and silver for export, and with the control of the exchanges, all of which were administered by the Federal Reserve Board in conjunction with the Secretary of the Treasury.

And first as to silver:—

Purchases of war material in the Orient reached huge totals during the war. Jute, hides, shellac and other products from India and China were required for army and civilian use, and through competitive buying, their values had reached unprecedented levels.

Silver is, in normal times, by preference the money metal of India, and it is the only money metal of China, but silver production during the war did not suffice to meet the enormous balances of trade in favor of these countries. The insufficiency of silver to meet this need led to heavy demands on gold for the purpose of filling the vacuum: the embargo on gold cut off this method of payment. In dealing with Oriental populations, it is impossible, except in a limited way in India, to utilize paper in place of metallic money, and the provi sion of sufficient silver to meet the debt of the Orient became a pressing problem. This situation was first dealt with by limiting exports of silver to payment for war necessities, and later by a further limitation on the export of silver which confined licenses to silver that had been purchased at not above $1 per fine ounce—later changed to $1.01½ per ounce. This was but a partial solution. A more permanent one was found in the passage of the Pittman Act, which authorized the Secretary of the Treasury to melt $350,000,000 of standard silver dollars and to use the proceeds, to quote the words of the Act:

> "for the purpose of conserving the existing stock of gold in the United States, of facilitating the settlement in silver of trade balances adverse to the United States, of providing silver for subsidiary coinage and for commercial use, and of assisting foreign governments at war with the enemies of the United States."

This Act contemplated no permanent change in our currency system, but simply provided for the temporary use of silver dollars, which were in circulation only through the silver certificates that represented them, and which for all practical purposes were lying unused in the Treasury. It contemplated in due time the repurchase of the silver at the price of $1 per fine ounce and its recoinage into standard silver dollars. Standard silver dollars could be melted only after the corresponding silver certificates had been withdrawn from circulation and, as stated above, provision was made for the ultimate recoinage of the standard silver dollars. In the meantime, to prevent contraction of the currency, Federal Reserve Bank notes were to be issuable in denominations of $1 and $2. Under the provisions of this act 200,000,000 ounces of silver were sold to the British Government, which, in connection with the purchase of the silver, undertook to provide rupee remittances for the war needs of the United States. Arrangements thus made stabilized rupee exchange in the United States for the period of the war and for a considerable period following the armistice, and by the simple device above outlined, permitted a difficult and, in many respects, delicate situation to be successfully dealt with.

Some 31,700,000 ounces of silver have been repurchased under the provisions of the Pittman Act.

During the year 1919 difficulties of a different nature arose in connection with silver. To quote the report of the Federal Reserve Board for the year 1919:

> "Continued and insistent demand for silver in China and the Orient generally led to a gradual increase in the price of silver, which on November 25, 1919, sold as high as $1.3875 per ounce. The bullion value of the silver content of the standard silver dollar is equal to $1 when silver sells at $1,2929 per fine ounce. The bullion value of the silver content of our subsidiary coinage is equal to its face value when silver sells at $1.38. It is evident, therefore, that when silver rises appreciably above $1.29 per ounce, our standard silver dollars can be exported at a profit, and that should silver remain for any length of time above $1.38 our subsidiary silver coinage would be subject to export. Standard silver dollars must, of course, be delivered on presentation for redemption of silver certificates, which are in effect trust receipts calling for the delivery of a specified number of stand-

ard silver dollars. Apart from silver so held, however, there is a considerable number of standard silver dollars free in the Treasury. In order to protect our subsidiary coinage from export it was deemed advisable to utilize the standard silver dollars free in the Treasury in order, so far as possible, so to control the rates of exchange with silver standard countries as not to permit the export of our subsidiary silver coinage to become profitable. The Board, in cooperation with the Treasury Department, accordingly arranged with American banks having their own branches in the Orient, and included in the arrangement all American banks so situated, whereby these banks under the direction of the Division of Foreign Exchange of the Federal Reserve Board, will be enabled to utilize such standard silver dollars in meeting Oriental demands. This arrangement was announced by the Board on December 6, 1919, in a statement reading as follows:

'Announcement was made to-day that under arrangements made between the Treasury and the Federal Reserve Board, standard silver dollars that are free in the Treasury will until further notice be delivered against other forms of money to the Division of Foreign Exchange of the Federal Reserve Board, which will, through the Federal Reserve Bank of New York, cooperating with the branches of American banks in the Orient, employ such dollars in regulating our exchanges with silver-standard countries.

This arrangement does not, of course, affect the redemption of outstanding silver certificates in standard silver dollars.' "

A second class of difficulties arose in our commercial relations with certain South American countries from whom we were receiving hides, wool, nitrates and other essentials, and by whom our associates in the war were being supplied with grain, beef and other foodstuffs.

The exchanges of all South American countries rose to extreme premiums in the United States and the Allied countries, and the question of dealing with these exchanges became a very difficult and urgent problem.

Negotiations were inaugurated with various of these countries, and led to arrangements with a number of them; with other countries the arrangements were still under negotiations when the war came to an end. The general plan suggested in all these cases was the same in its general principle, although it differed in a number of the details, these differences of detail taking the line of least resistance and depending to a great extent on the views of the Finance Ministers of the Governments involved. The arrangement can best be illustrated by instancing what was done in the case of the Argentine.

Parties desiring to remit to the Argentine were permitted to deposit with the Federal Reserve Bank of New York for credit of the Banco de la Nacion (the National bank of the Argentine) the amount which they desired to transmit. The Banco de la Nacion in turn made payment in the Argentine to the parties designated by the depositor, at the gold par of exchange less a deduction of 3%. This arrangement was to be effective up to $60,000,000. Its effect was to stabilize Argentine exchange required for war purposes at a premium of 3%. Deposits were received by the Federal Reserve Bank only in cases approved by the Federal Reserve Board through its Division of Foreign Exchange, and were limited to deposits made for purposes essential to the prosecution of the war. In other words, there was no attempt to stabilize exchange generally, the use of the facilities being confined strictly to war purposes. This arrangement worked perfectly. It was a part of the arrangement that within six months after the signing of the Treaty of Peace with Germany, the Banco de la Nacion should be permitted to withdraw from the Federal Reserve Bank in gold and to ship out of the country whatever amount then remained to its credit in this account. As soon as the embargo on the export of gold from this country was raised, the Argentine Government was notified that the Banco de la Nacion was free to withdraw its balance from the Federal Reserve Bank and to ship gold out of the country, so that the limitation on the shipment of the balance in gold, to six months after the conclusion of a Treaty of Peace was not insisted on. As a matter of fact, only a portion of the balance was ever actually shipped in gold. After the conclusion of the armistice, our trade relations gradually assumed a more normal aspect. The War Trade Board restrictions on exports and imports were taken down with great promptness, and all parts of the world, long deprived of goods through embargoes, purchased commodities in this country on a large scale. This increase of our exports, together with the shipment of gold following the removal of the embargo, gradually and steadily brought the exchange rates of the rest of the world to a discount as compared with dollars. In these circumstances, the Argentine exchange rate went to a discount as compared with dollars and the balance to the credit of the Banco de la Nacion with the Federal Reserve Bank was drawn down through drafts drawn by the Banco de la Nacion for the purposes of steadying the Argentine peso in its relation to the dollar and of preventing the peso from going to too great a discount. The entire balance of the Banco de la Nacion with the Federal Reserve Bank was withdrawn before the end of 1920.

Arrangements similar in substance were made with Bolivia and Peru, but the delays in perfecting them were so great that they had been availed of to only a limited extent when the end of the war reversed the position. All those currencies are now at a discount compared with the dollar.

Three other classes of exchange arrangements were made during the war. An arrangement with Switzerland placed at the disposal of the United States Treasury some 75,000,000 Swiss francs in return for a corresponding amount of dollars at the par of exchange. The Swiss francs, under the arrangement, were to the availed of only in certain fixed instalments at definite times, and their use was by the arrangement limited to governmental purposes. The American Expeditionary Force had made important puchases of supplies in Switzerland, and the balance thus created was used, broadly speaking for the purposes of the War Department. It will be remembered that one of the chief problems in connection with the sending abroad of our troops and their supply on the other side, arose out of the difficulty of obtaining sufficient shipping, and, therefore, wherever supplies could be purchased abroad the saving of shipping thus affected, made it imperative that the purchases should be so made. Payment for these purchases became a very difficult problem. It was solved in the case of Switzerland in the manner outlined above.

A different arrangement was entered into in connection with Norway and Sweden. In the case of those countries, the War Trade Board for a short time exacted from our exporters to those countries as a condition for the issue to them of export licenses, that the proceeds of the sales in the Swedish and Norwegian countries should be deposited at the par of exchange in the national banks of the respective countries for use of the Federal Reserve Bank of New York. The effect of this was to raise the price in local currency, to purchasers of our commodities in the countries concerned. These last mentioned arrangements might have involved large sums had the war continued. As it was, they involved comparatively unimportant amounts.

Lastly, an arrangement of different form and involving a comparatively large amount was concluded by the Treasury Department with a group of banks in Spain, acting in conjunction with the Bank of Spain. The American Expeditionary Force was able to purchase supplies in Spain, such as mules, saddle leather, fodder, etc., and as Spanish exchange in the United States was at a premium of perhaps 40%, the method of payment for those supplies became an extraordinarily difficult question. To meet this difficulty, a Commissioner of the United States Treasury proceeded to Spain and arranged there with a group of banks, that they were to accept drafts drawn by a group of banks in the United States, to an amount of not exceeding 250,000,000 Spanish pesetas. The drafts so accepted were to be discounted by banks of the Spanish group, rediscounted by the Bank of Spain and the proceeds placed at the disposal of the Federal Reserve Bank of New York with the Bank of Spain. The drafts so drawn were secured by United States Certificates of Indebtedness issued and payable in Spanish pesetas. The United States Treasury availed itself of this credit to the extent of 155,000,000 pesetas. The group of banks in the United States was formed by the Federal Reserve Board through its Division of Foreign Exchange. This group co-operated heartily with the Federal Reserve Board in the entire transaction. The machinery for handling these bankers' bills and securing their discount was complicated and vexatious. It was, however, thoroughly worked out and put through without a hitch. The saving to the United States Government through this arrangement was enormous. The premium on Spanish exchange, as above stated, was 40% when the transaction was undertaken, and in view of the large amounts involved, it would probably have been impossible to complete the transaction even at a very high premium, without shipment of gold. Undoubtedly it would have been necessary to ship large amounts of gold to Spain. This, it was desirable at that time, to avoid. The bills of exchange drawn under this arrangement, including several renewals, ran for a sufficient length of time so that after the conclusion of hostilities it was possible gradually to liquidate them through the exchange market. The entire transaction was wound up, not only without any loss to the Government, but at a very moderate cost for interest in respect of the moneys so raised. Spanish exchange is now at a considerable discount in dollars.

This outline of what was actually accomplished by the Treasury and the Federal Reserve Board during the war in meeting extraordinary situations in connection with the foreign exchanges has, of course, no real bearing on the permanent development of the Federal Reserve System in its relation to the foreign exchanges. It is interesting, however, as showing the flexibility of the system and its capacity to adapt itself without strain to extraordinary situations.

As bearing on the permanent relations of the System to the foreign exchanges, attention should be called to reciprocal arrangements that the Federal Reserve Banks, with the approval of the Federal Reserve Board, have made with the Government banks of various countries, whereby the central or government banks of those countries are ready to act as correspondents and agents of the Federal Reserve Banks and the Federal Reserve Banks in this country reciprocally are ready to act as agents of the foreign banks. Through the medium thus established, the foreign banks are in a position to buy bills in the United States when it suits their general policy to employ funds in this country, and the Federal Reserve Banks are placed in a position where they can employ funds abroad when their general policy makes this seem desirable. Arrangements have thus been made with the Bank of England, the Bank of France, the Bank of Japan, the Nederlandsche Bank, the Javasche Bank, and perhaps some others.

In my judgment, wise administration of the Federal Reserve System will leave the field of foreign exchange to private initiative, seeking to control the flow of credit and of the money metals, through changes in the discount rate, and intervening directly in the foreign exchange markets only, on what I believe will prove to be rare occasions, when commercial banks may be unable or unwilling to assist in giving effect to the Board's policies.

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