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# GOLD DELEGATION

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V. *Selected Documents on the Distribution of Gold submitted to the Gold Delegation of the Financial Committee.*—Document No. C.102.M.38.1931.II.

## PREFACE.

The Gold Delegation of the Financial Committee, which was appointed to "examine into and report upon the causes of fluctuations in the purchasing power of gold and their effect on the economic life of the nations", discussed at its third and fourth sessions (November 1930 and January 1931) the problem of the distribution of gold, and to this subject it devoted its Second Interim Report.

In connection with this part of its enquiry, the Delegation had invited Professor Aftalion, of the University of Paris; Professor G. W. J. Bruins, Commissioner of the Netherlands Bank, formerly Commissioner of the Reichsbank; Professor Gregory, of the London School of Economics; and Mr. George E. Roberts, Vice-President of the National City Bank of New York, to prepare memoranda on the causes and effects of the gold movements in recent years into and out of France, Germany, Great Britain and the United States respectively. These memoranda are published in the present volume, together with certain statistics prepared by the Secretariat.

While these memoranda were submitted to the Gold Delegation at its request and are published on the authority both of the Financial Committee and of that body, the responsibility for any statements or expressions of opinion contained in them rests solely with the individual authors.

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# THE CAUSES AND EFFECTS OF THE MOVEMENTS OF GOLD INTO FRANCE.

By Professor Albert AFTALION.

The flow of gold into France since 1927 has been one of the characteristic features of these past few years. From 1927 to the middle of 1929, the gold imports were made for the most part by the Banque de France. Since the middle of 1929, they have been made for private account, independently of the Banque de France and probably against the wishes of those responsible for its policy.

At the end of 1926, the gold holdings of the Banque de France amounted to 3,684.5 millions of the former francs, being the equivalent of 18,128 millions of the present francs. In April 1927, the Banque de France received back 462.8 millions of gold, which had been handed over to the Bank of England during the war as security for advances. But this sum was sold again shortly afterwards to the United States.

In addition to the increase due to imports, the gold holdings of the Banque de France were also increased by purchases of gold coin from the public in France, to the amount of 4,180 millions of present-day francs.

As the total holdings of gold amounted on September 26th, 1930, to 48,431 million francs, it follows that the imports of gold into France from the end of 1926 down to September 26th, 1930, total 26,123 million francs.

If it is held that the gold received back from the Bank of England in April 1927 should be deducted from this total—because it already really belonged to France—then the net acquisitions of gold by France since the end of 1926 amount to 23,840 million francs.

## I. CAUSES OF FRENCH IMPORTS OF GOLD.

The predominant factor which, during the period as a whole, led to or made possible the French imports of gold, was the favourable position of the French balance of payments.

Our balance of payments, which was favourable even before the war, began (at any rate from 1925 onwards) to put clear credit surpluses at our disposal after payment of the private debt arising out of the unfavourable balances of the years 1914 to 1920. Before the war, the surpluses of the balance of payments were employed to a small extent for acquiring gold, but mainly for long-term investment in foreign countries. Since 1925, when surpluses again began to be available, there has been no resumption of long-term foreign investment, to which France had for so many years ceased to be accustomed. Hence the accumulation of foreign exchange and gold.

In 1925-26, in addition to the legislative obstacles in the way of capital exports, the insecurity of the monetary position made long-term foreign investments unattractive. Short-term investments were preferred, investments in foreign exchange, deposits in foreign banks, or purchases of commercial paper with short maturities—all of which could be dropped and taken up again according to the changing aspects of the ratio between to national currency and foreign currencies. In 1925-26 the depreciation of the franc led to a demand for foreign exchange with appreciated quotations. The surpluses of the balance of payments went to build up a total holding of foreign exchange which was even then considerable, but which was held by individual Frenchmen.

After December 25th, 1926, when it was decided to stabilise the franc *de facto*, and the Banque de France began to purchase foreign exchange at fixed prices, many Frenchmen brought their capital back into the country—that is to say, they handed over their foreign exchange to the Banque de France in return for francs. The French holding of foreign exchange then passed in successive stages into the hands of the Banque de France.

Other large quantities of foreign exchange were handed over to the Banque de France in return for francs by foreign capitalists speculating, first on the rise of the franc, and later on the rise of French securities, which they purchased with the francs they received.

Fed from these two sources, the foreign exchange holdings of the Banque de France continued to grow. The Banque de France placed this foreign exchange in other countries, thus returning to the foreigners the capital which it had just received from them. The latter were thus enabled to bring it to the Bank once more; and, as the Bank in its turn again placed these sums abroad, there was nothing to prevent this cycle of operations with the same capital from continuing indefinitely, swelling the Bank's holdings immoderately and producing inflation twice over—in France by reason of the francs given by the Bank in return for the foreign exchange, and in other countries by reason of the investments of foreign exchange effected there by the Bank.

This was one of the reasons which led the Banque de France to exchange a part of its foreign exchange in other countries for gold. By purchasing gold it reduced its foreign investments, and diminished the multiplication of capital which has been described.

Another reason that induced France to purchase abroad was the desire to reconstitute the gold stocks she had held before the war. In 1914, the gold in the vaults of the Banque de France and the gold in circulation in the country may have totalled some 7 to 8 milliards of former francs. In 1926 the gold held by the Banque de France, plus the gold which it was afterwards to take back from abroad, was barely 4 milliards. A great part of the French stock of gold had therefore found its way abroad, mainly to the United States, and the Banque de France might well feel called upon to add to the gold holdings of the country in order to provide an adequate metal backing for the stability of the franc.

It may be said that, during the period from 1927 to the middle of 1929, when the Banque de France was the principal buyer, its purchases tended to establish a better balance in the world's distribution of gold. The pre-war balance had been upset by the exodus of French gold to the United States. The Banque de France was working to restore a better balance by bringing gold back from a country in which there was a superabundance of it to the country from which it came and in which its absence was felt. The Federal Reserve Banks of America were well aware of this, and showed much good grace in facilitating the movement of gold from the United States to France.

The influx of foreign exchange to the Banque de France continued notwithstanding, bringing the total holding up to more than 40 milliards of francs. The desire to strengthen its position, which had already led the Bank to purchase gold, was one of the causes for the substitution on June 25th, 1928, of the *de jure* stabilisation of the franc with the gold bullion standard for the *de facto* stabilisation on the basis of the gold exchange standard, which had been in existence since the end of December 1926. With the abandonment of the latter system, the Banque de France was no longer compelled to purchase foreign exchange. If foreign capitalists, in continuation of their speculations in France, still asked for francs at the Bank, they were now required to pay in gold, and not in foreign exchange. It was hoped, however, that foreign banks of issue, by raising their discount rate, would prevent the flight of their gold to France; and, in fact, foreign exchange holdings of the Banque de France ceased to increase after the *de jure* stabilisation of the franc. Indeed, it actually decreased, and then remained fixed in the neighbourhood of 26 milliards after the middle of 1927. But it was now the turn of the private banks to experience a heavy increase in their foreign exchange holdings —no longer as a result of foreign capital coming into the country, but merely as a consequence of the favourable balance of payments. The extent of this favourable balance made it possible to return to the foreign speculators, who were now winding up their transactions in France and repatriating their capital, the foreign exchange which they had brought into the country; and still the balance of payments left us with considerable sums to our credit, and these—since they were no longer absorbed (as before the war) by long-term foreign investment, to which the French were no longer accustomed—could only continue to accumulate in the form of foreign exchange in the private banks.

Just as the stocks of foreign exchange in the hands of the Banque de France had led to a first period of gold imports into France, so the stocks of foreign exchange in the hands of the private banks were to inaugurate a second such period.

Towards the middle of 1929, the Banque de France ceased to purchase gold abroad. Its purchases represented for the most part, as we have seen, a return to a better balance in the world distribution of gold, since they restored to France a part of the gold lost as a result of the war, and since the gold came mainly from the United States, where there was a glut of it. The gold holdings of the Banque de France at the middle of 1929 totalled some 36½ milliards of present-day francs, or rather over 7 milliards of former francs; and the Bank accordingly felt that it could call a halt in the work of replenishing its gold stocks. But at this point the French private banks came into the field, and began to import gold into France; and these imports, which already total 12 milliards at the time of writing, may be regarded as the source of a new disequilibrium in the world's distribution of gold.

But this is nothing more than the result of the normal functioning of the gold standard when a country keeps its surplus balances invested on short-term, and does not feel inclined to invest them abroad on long-term. With large stocks of foreign exchange, the private banks are led at times to sell part of them. This they may do because they consider that their exchange holdings are beginning to form too large a proportion of their assets, or because the difference between the discount rate in foreign countries and at home no longer seems to them large enough to make foreign short-term investment a profitable operation, or because the political or economic situation of the country in which they have invested their holdings no longer seems to them to offer as complete security as they consider indispensable, or because there are times when they need additional francs to meet their maturing obligations in France and do not desire to increase their indebtedness to the Banque de France. Whatever the reason, they withdraw their capital and sell their foreign exchange; and these sales may bring the exchanges to gold import point. Frequently the movement of the exchanges is not due to French initiative. Psychological and other factors peculiar to foreign countries lead to a demand for francs on the part of nationals of those countries, and this demand may also bring the foreign exchanges to French import gold point. Imports will then take place on account of the profits which they bring to those who make them.

It is the fluctuations of the exchange which are the main factor in the spontaneous movements of gold. It used to be maintained, and still is maintained, that gold goes to the country where it has most value in relation to goods—that is to say, to the country where prices are lowest. But in order to have the advantage of lower prices in a given country, it is sufficient to send foreign exchange there; there is no need to send gold. It is more accurate and safer to say that gold goes to the country where it has most value in relation to the exchange—that is to say, to the country which has the highest exchange rate. It leaves places where it can only be bartered at the banks of issue for foreign exchange, the value of which has declined, in order to go where it can be exchanged for foreign exchange the value of which is still high—as soon, that is, as the difference in the value of the respective foreign exchanges is large enough to off-set the cost of moving the metal. Gold thus found its way to the United States throughout the entire period when in the rest of the world the currency was depreciating. It now moves frequently to France because of the high exchange rate of the franc.

It had been hoped in France, at the time of the currency reform of June 1928, that these movements of gold to France would be arrested by the rise in foreign discount rates. Experience now shows that too much reliance was placed on the effect of the discount rates. It is not that the discount rates failed to act in the way anticipated. The difference in the rates of discount explains the abundance of French capital which found its way at short-term to England and Germany. What experience has shown is that a higher discount rate may *attract* foreign capital, but cannot always *retain* it. Given one or other of the circumstances described above, capital is withdrawn; and this may provoke outward movements of gold.

The policy of the Banque de France is not, therefore, responsible for French imports of gold since the middle of 1929. The Bank merely applies the rules of the gold standard. It is not entitled to refuse gold when gold is offered. What requires to be changed is not the gold policy of France, but the foreign investment policy. If England, whose balance of payments is also favourable, were to cease for five or six years, as France has done, to invest capital at long-term abroad, England also would undoubtedly experience a period of excessive gold imports.

## II. The Effects in France and Abroad of the French Gold Imports.

### (a) *The Effects in France.*

The accumulation of gold, like the former accumulation of foreign exchange, in the vaults of the Banque de France had made a section of French public opinion, as well as of French official opinion, apprehensive of an increase in the monetary circulation, and as a corollary to such increase—since the quantitative theory of money still has so many partisans—of an increase of prices in France.

An increase in the monetary circulation has, indeed, taken place. No doubt the Banque de France has not fully utilised the credit potentialities which the new gold in its vaults represents. The proportion of gold to the liabilities of the bank has increased from 40.4 per cent at the time of the *de jure* stabilisation of the franc to more than 52 per cent in September 1930. Meanwhile, the amount of the notes in circulation has increased appreciably, from a total of 53 milliards of francs at the end of December 1926 to some 74 milliards of francs at the present time at the ends of the months. The increase is in the neighbourhood of 40 per cent. The deposits in the various banks have also increased, and in even greater proportion. But, in spite of the quantitative theory of money—which (it may be said) the facts since 1921 have steadily refuted in France—it is difficult to maintain that the increase in the circulation has led to a rise in prices. The index number of wholesale prices in France, which was 640 at the time of the *de facto* stabilisation of the franc at the end of December 1926, remained in the neighbourhood of that figure, with slight fluctuations above and below it, until March 1929, when a marked decline set in bringing it down to 544 at the end of August 1930.

True, it has been said that it is not wholesale prices, which are influenced by the international price-level, but retail prices in France that would feel the effects of internal inflation. But the index number of retail prices is little more than an index of the prices of foodstuffs, the movements of which are attributable mainly to variations in the harvest returns and to the very heavy stiffening of the protective duties on agricultural produce that has come into operation since 1927. To refute the assertion that the retail price index number has been affected to any considerable extent by the monetary circulation, we need merely point out that it is only slightly over the figure at the end of 1926, and that the tendency of retail prices to hold out against the fall in wholesale prices is not peculiar to France, but has been observed in a number of other countries, even where there has been no increase in the monetary circulation.

It does not appear, therefore, that the accumulation of gold in France has had, up to the present, any really considerable influence on prices. But it remains true, nevertheless, that this accumulation has been useless ever since the gold holding has exceeded the amount required for a solid backing to the note issue. The excess of gold is in certain respects wasteful, since it deprives the country of the income which the gold would be earning if remuneratively invested abroad.

### (b) *The effects on the world of the accumulation of gold in certain countries.*

While in France our gold imports are attacked because of the grave danger of a ***rise*** in nternal prices which they are considered to involve, in foreign countries they are attacked as involving a serious danger of a *fall* in world prices. True, part of the gold brought into France comes from the United States, in which there is an even greater glut than in our own country. But the view generally taken is that, the gold in the United States and in France not being utilised to the full to increase the media of payment, the world's total of monetary instruments is restricted, and this—in conjunction with a prospective decline in the production of gold—threatens to induce a big drop in prices throughout the world.

The invalidity of this contention, so far as the present crisis and cyclical depression is concerned, is proved by the case of the United States, which had been the focus of the world crisis in spite of the large stocks of gold that they hold. But we are told that the thesis holds good if we take the movements of prices over a long period.

In that case, however, we are no longer dealing with an ascertained truth. We are dealing with a hypothesis based on the quantitative theory of money, and on that theory in its least ingenious forms, in the shape of those dogmas which allow only for the influence of the quantity of money and ignore the velocity of its circulation. The hypothesis requires the confirmation of fact.

The experiences of recent years, and earlier experiences in the matter of currency, have proved that the quantity of money has not the sovereign influence on prices which is attributed to it. On the contrary, it is frequently the monetary factors which adjust themselves to variations in prices. In the case of a relative contraction of the circulation in particular, the movement of prices has sometimes given rise to changes in the velocity of the circulation, or led to more lavish recourse to those forms of credit which economise the use of money, to supplement the inadequacy of the circulation. In the years 1922 to 1924, a very marked rise in prices took place in France as a result of the influence of the exchange, although the circulation was almost stationary. In a number of other countries marked increases in prices have been frequent since the war, though in some cases the changes in the circulation were only slight. The increase in the velocity of the circulation coming into play enabled the rise in prices to continue.

The velocity of the circulation should not be regarded as a constant. It is subject to regular cyclical variations, and also to variations extending over long periods. In my book "*Monnaie, prix et change*" I have traced the existence of variations of this kind in France, notably an increase in the velocity of the circulation in two periods of price increases from 1850 to 1873 and from 1896 to 1914, and again a decline in its velocity during the long period of declining prices from 1873 to 1896. The same conclusion is surely suggested by Professor Cassel's graphs of comparative movements in the demand for money, prices and the production of gold. If in long periods of rising prices the price-level has risen to a greater extent than would have naturally resulted from the increase in the production of gold, and if in long periods of falling prices it has declined to a greater extent than would have naturally resulted from the decrease in the production of gold, does not this imply either more extensive variations in the quantity of money than in the production of gold, or long-period variations in the velocity of the circulation of money?

Similarly, with the development of new forms of credit which effect economy in the use of money, was there not seen in England, after the famous Act of Sir Robert Peel, which was intended to bring about a restriction in the monetary circulation, that there was an increase in the media of payment as a result of deposits and payments by cheque, to an extent which no one could have foreseen, and which would probably have terrified those who framed the famous Act of 1844?

It is not at all established that the movements of prices in all countries are strictly dependent upon the quantity of money in circulation, still less upon the quantity of gold in those countries.

I admit the influence of the production of gold on world prices, but not for the reasons given by the quantitative theory of money. Technical advances and the tendency to increase the production of commodities are factors which make for a decline in prices. A marked increase in the production of gold, on the other hand, augments the incomes of numerous individuals, and thereby produces a counterbalancing effect which may arrest the fall of prices or even lead to a rise. There is nothing comparable in the case of a change in the world distribution of gold. It involves no lasting change in private incomes, and consequently does not appear likely to exercise a lasting influence on prices.

Such influence, in any case, could only be temporary. The movements of gold from the United States and France to countries which have little gold might serve to promote productive activity in those countries; and this, by increasing the incomes of employers and employees, might help to bring about a rise in prices. But, unlike the increase of income as a result of the production of gold, increase of income as a result of productive activity implies, *ex hypothesi*, an increase in the production of goods, which in due course makes itself felt on the market and, *ipso facto*, lowers prices and also incomes.

One might perhaps admit that the difficulty which the banks of issue and countries without much gold experience in increasing their circulation, owing to the absence of any immediate substitute for the gold which they lack, may for short periods prevent the full development of their economic expansion, and to that extent may tend to prevent an increase of prices.

It may be also that the necessity of jealously defending their scanty supplies of gold compels the banks of issue of these countries to raise their discount rates to a high level, which, by restricting productive activity, tends to decrease prices. But this contention is subject to reservations. In the past, long periods of falling prices have coincided with long periods not of increase, but of decrease in discount rates. There was a long period of decline both in prices and in the discount rate between 1873 and 1896. There was a long period of increase both in prices and in discount rate between 1896 and 1914. An increase in the discount rate has not, up to the present, been a factor in any long period of falling prices.

While, therefore, it is not impossible that the unequal world distribution of gold may have some effect in the direction of lowering prices, its influence in this direction is not certain. It is still less certain that that influence is really powerful. If, therefore, the decline in the production of gold necessarily involves a fall in prices, it does not appear to be proved that any better balance in the world distribution of gold could arrest such fall.

The unequal distribution of gold throughout the world is none the less an evil, but not so much because of its effect on prices as because of the instability which it is capable of producing in the rate of discount and in the exchanges of the various countries. It is for this reason desirable that the inequalities in distribution of gold should be lessened.

## III. Steps taken in France against Gold Imports.

From what precedes, it will be seen that certain of the adherents of the quantitative theory of money attack the French imports of gold for producing a regrettable increase of prices in France and a regrettable decrease of prices outside France. Those who do not believe in the quantitative theory may think that the influence thus attributed to the present distribution of gold is exaggerated, while at the same time regarding it as desirable that there should be a more equal distribution for the reason that, in France and in the United States, part of the gold which is now used for cover purposes might be advantageously replaced by additional holdings of securities, and also for the reason that, in other countries, it would allow of greater stability in the discount and exchange rates. Here the interest of France and the interest of the world appear to be one in every respect.

This identity of interests has been realised in France, and for some time past measures have been taken by the competent authorities not to oppose directly the imports of gold which are a consequence of the operation of the gold standard, but to put difficulties in their way indirectly. These measures include the following :

(1) The maintenance by the Banque de France of its discount rate at a level which is generally lower than that of foreign countries, in order, by the margin thus created, to encourage the movement of capital and gold from France to other countries.

Before the present world depression, when the official rate of discount had been increased to 6 per cent in New York, 6½ per cent in London, and still higher figures elsewhere, it remained unchanged at 3½ per cent at the Banque de France. After the crisis, when the discount rate began to be reduced throughout the world, the Banque de France, though it had not followed the other banks in increasing its rate, did not hesitate to follow them in decreasing it, first to 3 per cent and later to 2½ per cent.

(2) In spite of its anxiety to reduce its holding of foreign exchange, the Banque de France has ceased for more than a year past to sell foreign exchange on the market when the franc was near gold export point, and has more than once allowed some of its gold to go to foreign countries.

(3) In order to reduce the temptation to the French banks to sell their foreign exchange for francs to finance their monthly requirements, thus leading to gold imports, the Banque de France has agreed to rediscount commercial bills for seven days only.

(4) The French Treasury, although it also has a large holding of foreign exchange that has at times exceeded 11 milliards of francs, and at the present time requires francs for the purposes to which it proposes to devote its holdings, had decided not to sell its foreign exchange on the market, in order to prevent a decline in the foreign exchanges and the accompanying imports of gold. It proposes to hold its foreign exchange for the purpose of supplying various French public bodies and organisations which have foreign debts to pay off, as and when they require it.

(5) A number of steps have been taken by the French Parliament and Government, first to increase the French market for international bank acceptances, and, secondly, to encourage long-term foreign investments and purchases of foreign securities. As regards the latter point, the reduction from 4 per cent to 2 per cent, and later to 1 per cent, of the stamp duty on foreign securities, and the reduction from 25 per cent to 18 per cent of the tax on income from foreign securities, may be quoted in this connection. Foreign securities are now, in practice, taxed at a lower rate than French securities, because they do not pay the tax on transfer from hand to hand, which, taken together with the income tax at 16 per cent, amounts to a total deduction of 20 per cent to 25 per cent or more on the dividends on French securities.

The above measures, amongst others, show that there is a distinct French policy of opposition to gold imports. Present circumstances have not yet allowed these measures to produce all the effects which were anticipated. The lowering of the discount rate in foreign countries is not calculated to do much to stimulate our exports of capital at the present time. The world depression, moreover, which does not encourage French capitalists to purchase French securities, encourages them equally little to make long-term investments in foreign countries, in spite of the reductions of the taxation on such. Further, political or economic conditions in certain foreign countries are leading to the export of capital, which seeks a refuge in France, where the situation is considered more stable and more certain. It may be supposed that when the present difficulties have passed, the French policy of opposing gold imports will have more ample results. Other reforms, which may accentuate the movement desired, are also under consideration in France. But, in the case of some of these reforms, such as those in the matter of double taxation, the official co-operation of other countries may be necessary.

Albert Aftalion.

Paris, October 1930.

# THE MOVEMENTS OF GOLD INTO AND OUT OF GERMANY SINCE 1924.

By Professor G. W. J. Bruins.

## 1. Reichsbank and Private Banks of Issue.

In addition to the Reichsbank, there are four small banks, the so-called private banks of issue—viz., the Bayerische Notenbank, the Sächsiche Bank, the Württembergische Notenbank and the Badische Bank.

By the Bank Law of August 30th, 1924, the note circulation of the private banks of issue was limited to a total of RM. 194 million. As a rule, their actual circulation moves at a level about ten millions under this maximum. The cover also shows considerable stability. On September 30th, 1930, it amounted in all to RM. 65.8 million of gold and RM. 26.8 million of *Devisen*.

In view of the relatively small importance of the private banks of issue, the considerations following will be confined to the Reichsbank.

## 2. Different Figures as to the Movement of Gold.

The figures of German imports and exports of gold, as reflected by the Reich's foreign trade statistics, do not entirely correspond to the modifications in the gold position of the Reichsbank; firstly, owing to the circumstance that the Reichsbank can utilise for movements in the gold stock its gold deposits abroad (during a great part of the current year these gold deposits totalled RM. 150 million), and, secondly, on account of the fact that the Reichsbank also releases gold for domestic industrial purposes. These latter items, however, are, as a rule, of little magnitude.

In this paper the figures regarding the gold stock of the Reichsbank are taken as a basis.

## 3. Provisions of the Bank Law.

Under paragraph 28 of the Bank Law, the Reichsbank is obliged always to hold, as cover for its notes in circulation :

*(a)* At least 40 per cent in gold or *Devisen* (foreign exchange), of which not less than three-quarters must be in gold;

*(b)* For the remaining amount, discounted commercial bills or cheques.

Gold within the meaning of this provision is bar gold or German or foreign gold coin (the pound fine being calculated at RM. 1,392), in so far as such gold is in the possession of the Bank or deposited with a foreign central bank of issue in such a way that it is at all times at the free disposal of the Bank.

*Devisen* (foreign exchange) are bank-notes, or bills of exchange having a currency of not more than fourteen days, cheques and day-to-day claims payable in foreign currency at a bank of known solvency in a foreign financial centre. They are taken at their current gold value.

According to paragraph 22 of the Bank Law, the Reichsbank is obliged to exchange bar gold at the fixed rate of RM. 1,392 for one pound fine against its notes. This price corresponds to the monetary parity of RM. 1,395, less RM. 3 for cost of coining.

According to paragraph 31, the Reichsbank is under obligation to redeem its notes, on demand, at its own option :

*(a)* In German gold coin;

*(b)* In gold bars in pieces of not less than RM. 1,000 and not more than RM. 35,000;

*(c)* In cheques or orders to pay in foreign currency at prices not exceeding the gold export point.

By paragraph 52 of the Law, the coming into force of this obligation was made dependent upon the adoption of concurrent resolutions of the Managing Board and the General Council of the Bank. On the strength of such resolutions, the obligation of the Bank to exchange its notes for gold or *Devisen* took effect on May 17th, 1930, the date on which the " New Plan " became operative.

The legal provisions referred to all rank among those which, according to the Hague Agreement of January 20th, 1930, cannot be modified unless proposals to that effect are submitted to the Board of Directors of the Bank for International Settlements and unless, if opinions should be divided, the procedure laid down in Annex V*a* to the Agreement has been followed.

### 4. Some Pre-War Figures.

For the sake of comparison some pre-war figures are given first.

At the end of December 1913, the aggregate circulation of coins and bank-notes attained, in round figures, M. 6,450 million, inclusive of a gold circulation estimated at M. 2,750 million. The circulation of Reichsbank notes was M. 2,593 million, for which there was gold cover to the extent of M. 1,170 million. Consequently, the quantity of gold in circulation and lying as cover with the Reichsbank totalled M. 3,920 million.

### 5. Principal Figures at Beginning and End of Period under Consideration.

The course of the total circulation and of the circulation in Reichsbank notes, as well a of the cover in gold and *Devisen*, from October 15th, 1924 (the date of the first statement issued by the Reichsbank under the new Bank Law), to October 15th, 1930, is shown on the attached Diagram I.

At the beginning of the period under consideration, the Rentenbank notes, collaterally with the Reichsbank notes, occupied an important place, amounting on October 15th, 1924, to RM. 1,790.4 million. Owing to gradual redemption, the circulation of the Rentenbank notes had decreased by April 30th, 1930, to only RM. 360 million. On the other hand, the quantity of coins, which at the beginning was only a nominal one, had increased by the same date to as much as RM. 974 million.

Therefore, the considerable increase displayed in these years by the total circulation is wholly reflected in the development of the circulation of the Reichsbank notes. On October 15th, 1924, a total of RM. 1,896.7 million was outstanding. On October 15th, 1930, this figure worked out at RM. 4,188.8 million.

On October 15th, 1924, the aggregate cover amounted to RM. 818.1 million, of which RM. 613.6 million in gold and RM. 204.5 million in *Devisen*. On October 15th, 1930, the figure of the total cover had increased to as much as RM. 2,354.4 million, of which RM. 2,180.5 million in gold and RM. 173.9 million in *Devisen*.

In this connection, one should not lose sight of the fact that, as already stated, only those investments abroad which have a currency of fourteen days or less are considered as *Devisen* available for cover. Foreign bills having a longer currency are included in the item " bills and cheques ", which also comprises home bills.

The annual reports of the Reichsbank state the figures of all *Devisen* as per December 31st of each year. The figures of the *Devisen* not available for cover can therefore be inferred. In the past few years, the highest amount was RM. 1,052.7 million on December 31st, 1924, and the lowest RM. 190.0 million on December 31st, 1927.

## 6. Subsequent Measures of the Reichsbank in Respect of Purchases and Delivery of Gold.

The considerable increase in bank-note circulation which especially occurred in the former years induced the Reichsbank to reinforce its cover proportionately and, seeing that at least three-quarters of the minimum cover must consist of gold, to replenish in the first place its gold stock.

As regards the purchase of gold, one should discriminate between two periods; the first, that during which the Reichsbank itself effected these purchases abroad, and, the second, that in which the Bank confined its activity to taking over the gold offered by the gold arbitrage. The year 1927 forms the transition between these two periods.

At the beginning of the first period the situation, as a consequence of the inflation, was still artificial. The discount rate of the Reichsbank was 10 per cent, but the interest rate for short inland credits was considerably higher. Consequently, the Reichsbank could maintain its discount rate only by means of a rigid restriction of credits. In the foreign exchange market the Reichsbank maintained for the dollar a fixed rate of 4.20. The Bank delivered and received foreign exchange at rates based on this fixed dollar rate, obtaining the requisite gold cover by exchanging *Devisen* for gold.

In the course of the year 1925, these measures were gradually discontinued. Although the discount rate was lowered to 9 per cent as early as February 26th, 1925, and credit facilities were gradually made easier, the restriction of credit was not actually abandoned altogether until December 3rd, 1925. In September 1925, the releasing of gold for industry, which during the preceding years had been discontinued, was again resumed. The system of a pegged dollar rate was abandoned on August 23rd, 1926, thus opening, in principle, the possibility of gold arbitrage. As a matter of fact, however, the Reichsbank continued to maintain the rates of exchange well above the gold import point, so that a private gold traffic with foreign countries could hardly develop.

In order to attract the gold available in the country, the Reichsbank had, at the beginning, fixed its buying rate at RM. 1,395 per pound, corresponding to the actual monetary parity. On October 18th, 1927, this was reduced to the present legal price of RM. 1,392 per pound fine, as mentioned above.

During 1927, as evidenced by the diagram, the gold stock was remarkably stationary. It was not until in the course of 1928 that the stock again commenced to increase. It appeared that the Reichsbank had changed its attitude and allowed the exchange rates to reach the gold import points, so that from now on such increases reached the Reichsbank through the channel of gold arbitrage carried out by private banks.

As regards delivery of gold, although it was not yet legally bound to exchange its notes into gold or *Devisen*, the Reichsbank constantly maintained during this period the standpoint that, if the development of the rates of exchange should bring about a legitimate demand for gold, it would not hesitate to make it available. This principle was enunciated several times, *inter alia* in the annual report for 1926. As a matter of fact, such gold deliveries never took place as the Reichsbank satisfied the demand for foreign currencies by delivering *Devisen* at a price under the gold export point. Whenever replenishment of the *Devisen* stock proved to be necessary, the Reichsbank itself carried out the requisite export of gold to foreign countries. The Bank, for instance, acted in this way in the spring of 1929 and also during the past few weeks.

### 7. The Policy of the Reichsbank with Regard to its Cover. Chronological Review.

The actual course of the stock of gold and *Devisen* available for cover during the period under review is shown, as stated above, in Diagram I. On the other hand, Diagram II gives a synopsis of the progress of the *prozentual* cover, while Diagram III reflects the development of the rates of exchange. The last diagram illustrates the course of the dollar, of the pound sterling since its parity was restored, and of the French franc since its stabilisation. The ratios are expressed in percentages of parity and, therefore, can be compared one with another.

Generally speaking, the impression is given that the policy of the Reichsbank was directed to prevent the cover from dropping below 50 to 60 per cent, the *Devisen* not available for cover not being taken into consideration. Should the latter be likewise considered, the *prozentual* cover has been, as a rule, essentially higher.

The dominating factor which has prompted the Reichsbank to follow this conservative policy has been *Germany's continued debtor position with regard to both long and short terms.* For the purpose of this paper, there is no need to further investigate the causes of this debtor position, nor to examine the part played in this connection by the reparation payments. In addition to this principal factor, there came the necessity, in connection with the bank-note circulation which, especially in the early years, increased rapidly, of seeing that a corresponding rise in the cover was obtained.

The coming into force of the "Expert's Plan" on October 11th, 1924, put at the disposal of Germany, not only the proceeds of the External Loan 1924 (Dawes Loan), amounting to nominally RM. 800 million, but soon, as the result of improving international confidence, brought about a considerable flow to Germany of foreign funds, tempted by the very high rates of interest. Short credits were the first to come, soon followed by long-term credits of considerable importance.

As regards short-term foreign credits, the Reichsbank was entitled to assume that the banks, which have taken up the greater part of these credits, would, to a certain extent, procure themselves the needful cover. Nevertheless, the Reichsbank was fully aware that, should at any time a more or less acute calling in of these credits occur, the Central Bank would be called upon to bear the brunt of the shock.

As regards long-dated foreign credits, the important point from a currency standpoint was whether, and if so to what extent, the credit, on account of its destination, warranted payment of interest and redemption in foreign currency. As to credits entailing increase of exports, this could be assumed to be the case. In other instances, however, no influence on the quantity of exports, not even an indirect one, could be expected.

These considerations, together with others which need not be commented upon here, prompted the establishment, at the beginning of 1925, of the "Beratungsstelle für Auslands-anleihen" (Advisory Office for Foreign Loans), which, before coming to a decision regarding loan proposals submitted for approval (especially those of States and municipalities), had to consider the transaction from, *inter alia*, the currency standpoint explained above.

The flow of long-term foreign credits, half of which, roughly speaking, found its way to public corporations and public undertakings, has been anything but a regular one. As will be seen later on, not only was the demand from the German side for foreign credits by no means always equally strong, but the possibility of obtaining long-term credits on reasonable conditions was mainly dependent upon the development of conditions in the principal credit-granting countries. This circumstance contributed to the great mutations which occurred during the years under review in the short-term credit position of Germany.

The first period, which was characterised by the making good of the desperate shortage of raw materials resulting from the period of inflation and, consequently, by a rather favourable business situation and a very unfavourable balance of trade, did not last very long. Already, in 1926, a depression set in. The trade balance recovered its equilibrium and, temporarily, showed even a surplus. The high interest level for long-term credits continued, nevertheless, to attract foreign loans, especially for public corporations, with the result that the strain on the money market soon relaxed. Short credits from abroad were even redeemed, the home bills portfolio of the Reichsbank diminished considerably and, in spite of various reductions in the official discount rate, the Bank constantly received fresh supplies of *Devisen*. In fact, in January 1927, the discount rate could be reduced to as low as 5 per cent.

In the meantime, the depression, which was to be ascribed exclusively to internal German conditions, was followed by a gradual improvement. The depression had shown how badly the production apparatus needed amelioration and modernisation, and a period of active rationalisation commenced. In order to assist the new upward tendency, the Reichsbank maintained the discount rate of 5 per cent as long as possible. However, owing to the circumstance that the trade balance again grew more and more unfavourable, while, on the other hand, the flow of foreign loans diminished, it was unavoidable that the position of the Reichsbank should weaken. As a matter of fact, by June 1927, in a period of only five months, the Reichsbank, according to a statement of its President, lost as much as one milliard Reichsmarks, almost solely in the form of *Devisen*, half of which came from the stock which did not serve as cover and therefore is not included in Diagram I. As a consequence, the Reichsbank was obliged, on June 10th, to increase its discount rate to 6 per cent, and on October 4th to 7 per cent.

These increases soon proved effective and a strong flow of foreign credits ensued in the second half of 1927; the rates of exchange improving considerably, even as far as the gold import point.

During the whole year 1928, the discount rate of the Reichsbank was maintained at 7 per cent. Generally speaking, this year can be regarded as a period of consolidation. Chiefly on account of a gradual increase in the exports, the trade balance gradually improved. On the other hand, in the second half of the year the flow of foreign loans diminished by degrees, mainly in consequence of the circumstance that progressive speculation on the American Stock Exchange, followed by similar features elsewhere, lessened the demand for securities bearing a fixed interest. The favourable factors predominated, however, and the cover of the Reichsbank continued to improve until, in January 1929, a level of 75 per cent was reached. This induced the Reichsbank, on January 19th, 1929, to lower its discount rate by ½ per cent. In consquence of further development of speculation in the United States, however, the short-term interest rate continued its upward movement, so that the Reichsbank very soon found that its cover was dwindling seriously, and in April 1929, even in the middle of the month, the *prozentual* cover was below 60.

When, at the same time, uncertainty regarding the outcome of the Paris Reparation Conference gave rise to a certain nervousness, and foreign short-term credits were being withdrawn to a considerable amount, this downward movement was accentuated to an acute fall. In a period of two weeks the Reichsbank had to deliver 400 millions of Reichsmarks in gold and *Devisen*, and on May 7th the percentual cover dropped as low as 41. By April 25th, the discount rate had already been increased to 7½ per cent. It proved impossible to stem the tide, however, so that on May 4th it was again necessary to have recourse to a restriction of credits. This drastic measure soon proved to be successful, especially when the prospective results of the Paris Conference became more favourable. A week later the rates of exchange again definitely turned in favour of the Reichsmark, while cover again moved upwards. During the first five months of 1929, however, the Reichsbank had been obliged to surrender about RM. 1½ milliard in gold and *Devisen*.

These occurrences abundantly prove the great vulnerability of the position of the Reichsbank, in consequence of Germany's one-sided debtor position.

The acute character of the situation experienced by the Reichsbank should be attributed, not only to the withdrawal of foreign funds, but, it would appear, also to an increasing tendency of German funds to emigrate and to the circumstance that the banks were endeavouring, in view of these movements, to provide themselves with sufficient foreign exchange.

The recovery which soon set in rendered it possible to end the restrictive measures towards the middle of June and, as might have been expected, had a favourable influence on the ratio of the cover. In August a *prozentual* cover of 50 to 60 was again reached. When, a few months afterwards, owing to the crisis in the market for American securities, the short-term interest rate displayed everywhere a downward tendency, the Reichsbank, after some time, was also able to lower by degrees its discount rate.

The depression, which in the meanwhile also made itself felt in Germany and once more coincided with a favourable trade balance, contributed to relieve further the strain on the money market, so that, for the first time since 1927, the discount rate could be reduced to 5 per cent, and eventually, on June 21st, 1930, even as far as 4 per cent. As in 1926-27, the home bill portfolio of the Reichsbank diminished considerably, while cover was again in excess of 70 per cent.

More recently, however, once more in consequence of circumstances of a non-economic character, the position has changed considerably. The Reichsbank, which at first saw its cover rise gradually to the level attained at the beginning of 1929, was again exposed to heavy withdrawals of foreign exchange, so that the Bank has been obliged to raise the official discount rate once more to 5 per cent, as from October 10th, 1930.

From the above exposé, it is clear that, during the succeeding stages of the past few years, the position has been very diversified indeed. The tempo at which the indebtedness to foreign countries increased was at one moment an accelerating and at the next a diminishing one. For some short intervals, as far as can be ascertained, the total indebtedness even remained stationary, if not actually decreasing; but it is clear that this indebtedness has been the predominant factor in the policy of the Reichsbank during the past few years.

An idea of the importance of these debts may be formed, at least as far as long-term credits are concerned, by the aid of recent estimates which place the aggregate sum of loans concluded since 1924 at over RM. 8 milliard.

As already stated, the short-term debtor position has shown, during the past few years, considerable fluctuations. There is no doubt that the total amount of short-term debts always largely exceeded the total amount of short-term claims. At times, this surplus of debts was stated to total several milliards.

Strictly speaking, an actual relaxation of the situation only occured at the end of 1926 and the beginning of 1927, and during part of the current year. In 1926-27 the question was more than once raised whether the flow of foreign funds to the Reichsbank had not reached such a magnitude that there was reason to fear a certain forcing up both of the total circulation and of the price-level. It is always extremely difficult to determine such matters. The general course of the circulation does not, however, sustain this view, and, if the fear was at all justified, it can only have been the case for a very short time.

## 8. The Gold Policy of the Reichsbank.

Throughout the above summary of the principles adopted by the management of the Reichsbank since 1924, only the total cover available, comprising both gold and *Devisen*, has been considered.

As regards the actual gold policy itself, it is necessary to ascertain by what principles the Reichsbank has been guided when apportioning the total cover to each of the two components concerned.

As already said, the Bank Law prescribes that the minimum cover of 40 per cent shall consist of at least three-quarters of gold and at most one-quarter of *Devisen*.

From Diagram I it will be seen that, up to the beginning of 1927, this proportion, roughly speaking, is indeed reflected by the figures of the cover. In fact, the acquisitions of gold, which at that time were made exclusively by the Reichsbank itself, were apparently intended to maintain, in general, this proportion. The remaining *Devisen*, of which there were on hand on December 31st, 1924, over RM. 1 milliard, and on December 31st, 1925, over RM. 500 million, are in this connection left out of consideration.

In the first half of 1927 there was, for the first time, a considerable decrease, amounting, as stated before, to RM. 1 milliard. As can be seen from the diagram, the fall was entirely, or almost entirely, confined to the stock of *Devisen* available and not available for cover.

Henceforth, the proportion between gold and *Devisen* available for cover is permanently another one. The rise in the figures of the cover during the second half-year of 1928 especially turned out entirely in favour of the gold stock. This time the gold flowed to the Reichsbank through the natural channel of gold arbitrage. The *Devisen* available for cover even showed some further decline, offset, however, by an increase of the other *Devisen*, which totalled, on December 31st, 1928, RM. 374 million, against RM. 198 million a year earlier.

These far smaller margins in *Devisen* are accountable for the fact that the fall of January to May 1929 led to the export of gold in an accentuated degree as compared with the first half of 1927. Then, with a total loss of about RM. 1 milliard, the loss of gold was confined to 51 millions. In 1929, however, with a total loss of well-nigh RM. 1½ milliard, the loss of gold amounted to 965 millions.

When, after May 1929, the stock of cover was restored, the margin of the *Devisen* available for cover was, generally speaking, somewhat higher. The *Devisen* not available for cover totalled, on December 31st, 1929, RM. 411 million.

As stated before, during the last few weeks the Reichsbank has had once more to record a considerable loss in cover. Between September 6th and October 15th, the gold stock decreased by RM. 439 million, and the stock of *Devisen* available for cover by RM. 218 million. Nevertheless, the gold stock on October 15th, totalling RM. 2,181 million, exceeded the lowest point reached in May and June 1929 by 417 millions.

In conclusion, attention may be drawn to the declarations made on October 21st, 1926, by the then President of the Reichsbank, Dr. Hjalmar Schacht, before the Fifth Sub-Committee of the " Enquete Ausschuss" (Committee of Enquiry), as published in the report of the Sub-Committee.

The statement of Dr. Schacht as to the reasons which induced the Reichsbank to prefer gold to *Devisen* may be summarised as follows :

"In the first place, the export of gold, as compared with the delivery of *Devisen* in the exchange market, has the advantage of showing more clearly to the business community the danger connected with the attainment of the gold point. Further, *Devisen* represent, as a matter of fact, a double utilisation of credit. Against the issue of bank-notes in the country itself stands a credit to foreign countries. In addition to the risk of its inland credits, the Central Bank has to run a risk abroad. Such risks, if of major importance, are not advisable for a Central Bank. In conclusion, Dr. Schacht pointed out that, by attracting gold, the Reichsbank served the cause of a better redistribution of the gold among the various centres."

For the sake of completeness it should be said that the above statement was made at a moment when purchases of gold were still effected exclusively by the Reichsbank.

# THE CAUSES OF GOLD MOVEMENTS INTO AND OUT OF GREAT BRITAIN, 1925-1929.

By Professor Gregory.

## I.

The general position of Great Britain is that, owing to her traditional economic and financial connections with South Africa and other gold-producing areas within the British Empire, which occupy such a large place in the aggregate world production of gold, she should act as one of the main distributors of gold to other parts of the world. It would, therefore, not be surprising that, of the gold imported into Great Britain, a large proportion should be subsequently exported on principles with which political economy has long been familiar. The characteristic feature of the last five years, however, has been that Great Britain herself has not been able to retain any proportion of the gold flowing to her from the South African mines or, indeed, from any part of the world. In other words, Great Britain has not been able to add to the stocks of the precious metals which she possessed before the return to the gold standard in April 1925.

## II.

This fact is clearly brought out whether one has regard to the statistics of gold movements in and out of the Bank of England or to the figures furnished by the British Customs Department. These two sets of figures do not coincide, because gold imported into Great Britain and sold in the open market is not included in the movements of gold in and out of the Bank of England, and, therefore, the former movements are naturally larger than the latter. The broad position is that, in the years 1925 to 1930, gold imports into the United Kingdom amounted to 1,334,882,000 dollars, whilst exports in the same period of time amounted to 1,389,486,000 dollars, resulting in a net export of 55,604,000 dollars. The position as revealed by gold movements to and from the Bank of England is substantially the same. In the period between May 1925 and December 1930, the movements of gold into the Bank of England amounted to £97,714,000, the movement of gold out of the Bank of England amounted to £114,194,000, leaving a net excess of gold outward of £16,480,000. Thus, the effect of the movements of the precious metal over the last five years has been to leave the gold stock of the Bank of England substantially unaltered. The average annual holding of gold, which in 1925 amounted to £146,000,000 has hardly changed in the interval. It is obvious, therefore, that, in the last five years, Great Britain has been unable to retain for herself any part of the accruing gold supplies, whether from gold-producing countries or from other areas.

## III.

A survey of the most important import and export areas will show in rough outline the causes to which these movements can be attributed. If the table of gold imports and exports presented herewith is studied, it will be seen that the supply of gold coming into Great Britain in the last five years can be divided into two main sources of supply. First comes a group of gold-producing areas (Transvaal, Rhodesia, West Africa). Secondly comes a group of countries which have been sending gold to this country for reasons which are obviously connected with monetary and economic disturbances rather than with the present position of their gold production. This group includes Australasia, South America, Russia and Spain.

If the areas to which gold has gone are studied, it will again be noticeable that they divide themselves into two groups. One group consists of those areas, India, Egypt and other Eastern States, which have been absorbing gold for generations and which take gold regularly, although in fluctuating quantities, on grounds which are perfectly well known to all students of the subject. But, in addition to this group, there is a group of States, including particularly France and Belgium, Germany and the Netherlands, Switzerland and the United States, which have been taking in the last five years very large quantities of gold, a portion of the gold flow being based on grounds which cannot merely be explained away as part of the traditional pre-war system of distributing the world production of gold. In their case, in other words, other factors must be looked for besides the general principle that the world supplies of gold are distributed among the commercial nations of the world in accordance with their general economic and financial status. It is in connection with the flow of gold to these areas that the real problems of Great Britain in recent years emerge.

## IV.

A country upon a gold standard is powerless to prevent the movement of gold in the long run, given the fact that its rates of exchange with foreign countries reach the gold export point. The gold export point, as is well known, is not a fixed and invariable magnitude, but itself varies with the relative rates of interest ruling in different centres and with the time element and transport costs involved. The tendency to substitute, in the case of European countries, air transport for transport by rail has, in fact, meant that the gold points have become closer to one another, and that the money markets concerned lose gold more easily than was the case before the war. But these considerations throw no light upon the reasons why gold movements are ultimately possible. The central point in any discussion of recent gold movements must be taken by considering the forces which increase or decrease the supply of foreign exchange available in a given market. Whenever, for any reason, the demand for foreign remittances exceeds the momentary supply, then, given an effective gold standard, the tendency will be for gold to move. Hence, all those factors which are capable of influencing the supply of foreign exchange available in a market must be taken into account.

## V.

The main features of the British domestic situation in the last five years are now fairly generally known. The most significant single element, in the long run, of the British domestic situation is presented by the tendency for wage-levels to remain rigid in the face of a continuous fall in the level of wholesale prices. This involves a margin between the prices at which manufacturers can afford to sell their products abroad and the cost at which these goods are manufactured. Even if, at the moment when Great Britain returned to the gold standard, equilibrium had existed between domestic costs and international prices, this equilibrium would have been destroyed by the subsequent disparity in the movements between selling prices and costs. But there is sufficient evidence to warrant the statement that, at the moment of stabilisation—that is, the return to the gold standard—at the pre-war parity between sterling and gold, this disequilibrium was already in existence, and the tendency of the rapid decline of world prices in the last eighteen months has been, in this respect, to accentuate an already present disharmony of price-levels.

Economic theory has long been familiar with the kind of consequences which are likely to result from a situation of this sort. The rigidity of wage-rates implies a level of money incomes and therefore of retail prices which are likely to attract imports. The exporter finds that he is faced with the alternative of either selling at a loss or of lowering his prices. In general, the tendency will be for exports to fall off and for imports to rise, or, at any rate, to maintain themselves above the level which would not have been possible had money incomes in the United Kingdom generally been reduced. In other words, there is a tendency for the balance of international payments on this ground to fall into a state of relative disequilibrium.

But, as is perfectly well known, the position in Great Britain does not conform to so simple a pattern as this. Throughout English commercial history in the last fifty years, an excess of imports has been possible in consequence of the presence in the British balance of payments of a large credit item, due to the performance of certain services for foreigners and the receipt of large amounts on account of previous long-term and short-term investments in foreign countries. On the other hand, the pressure on the British balance of payments has been accentuated by the presence of large, new, long-term loans to foreign countries. Whenever a foreign loan is made, the tendency is to bring immediate pressure on the balance of payments, either through the investment of the proceeds of the loan in short-loan markets for the time being, pending the purchase of goods, or through the attempt of the borrower to transfer the proceeds of the loan via the foreign exchanges in those particular cases in which either this country does not furnish him with the kind of goods which he requires, or in which he can obtain the kind of goods which he requires more cheaply elsewhere than he would have obtained them in the United Kingdom.

The important question therefore arises whether, in view of the inelasticity of British costs, the effort to make large capital exports to foreign countries has not been the main cause of the failure of Great Britain to retain any part of the accruing supplies of gold. It has become fashionable in Great Britain to attribute the main part of the difficulty to the attempt to transfer to foreigners capital loans in excess of our ability to transfer them. It is argued that, if the country had not wanted to lend so much abroad, the balance of payments would have been adjusted without the pressure on the exchanges actually experienced. The reason that this pressure exists, it is argued, is that the amount which individuals desire to lend abroad is a function of the rate of interest at home and in foreign countries, whilst the amount which this country can safely transfer is a function of the price-level; and the rate of interest in the capital market and Great Britain's ability to export at a competitive price are elements which stand in no direct connection with one another. It is argued that the main cause which has led to an attempt to meet the balance of payments by gold exports has been the excessive foreign lending of this country in recent years, or, rather, in order to prevent an excessive amount of gold exports, it has become necessary for the monetary authorities in this country to adjust the situation by measures intended to. counteract the possible effect of excessive capital loans on the foreign exchange market and on the supply of gold. Since this country is lending too much, monetary policy has necessarily been directed to reborrowing from abroad the amounts which foreigners have been borrowing from us. Hence the monetary policy of Great Britain has been described as one of " lending long and borrowing short ", and the policy of lending long and borrowing short has, in its turn, led to the maintenance of rates of discount higher than those which would have been necessary had less been placed at the disposal of foreign borrowers in the first instance.

This is a line of argument of great importance, both as regards the currency controversy in Great Britain and as regards an interpretation of what has been happening over the last five years. To test it empirically is difficult. Recent investigations by Sir Robert Kindersley and other authorities have shown that it is excessively difficult to arrive at a true estimate of the facts in the capital market, owing to the presence of such factors as sinking fund repayments, capital investments by foreigners in British industry, the transfer to foreigners of British investments in such areas as South America, and foreign subscriptions to new foreign capital issues in London. Moreover, an investigation of the actual balance of payments shows that, over a period of time, the relationship between the excess of the favourable over the unfavourable items in the balance of payments is more closely related to the volume of foreign capital issues in London than is the case for short periods. The sum of the general credit balances on the British balance of payments for the period 1925-1929 amounted to £480,000,000; the volume of capital issues for foreign countries in the same period amounted to £576,000,000. The volume of capital issues was in excess of the credit balance available in the earlier part of the period, and was below the credit balances available in the latter part of the period. It might, therefore, very well be the case that arguments which were true of the period 1925-1927 are no longer true of the whole period 1925-1929.

From the standpoint of economic theory, moreover, the view that the amount which can be effectively transferred over the foreign exchanges is a residual element is one which requires much further investigation before it can be accepted. It essentially depends on the assumption that the exports of the United Kingdom are a fixed amount, with the absolute size of which the amount of capital exports from the United Kingdom have nothing to do. I question the correctness of the assumption that the difficulty of adjusting the balance of payments is due principally to the lack of relationship between exports of goods and long-term capital movements. The volume of exports might have been even lower without long-term loans, since, given a certain supply price for British exports, the demand for them would probably be less than it actually is, unless foreigners were lent the money with which to buy them. The difficulty of adjusting the balance of payments might, with equal justice, be ascribed to the growth in the volume of imports due to the higher level of money incomes permanently maintained in this country in the last five years. If it is argued that the actual volume of imports, however caused, would have been justified by the position of the available excess on the balance of payments, a smaller volume of capital exports being assumed, this again seems to me to be a begging of the question, since we do not know what the excess on the balance of payments would have been in the absence of long-term loans. From the practical standpoint, it is perfectly possible that, in the long run, the volume of capital exports which we chose to make was consistent with the position of British exports, without it necessarily being true that the volume of capital loans at any particular moment was consistent with exchange equilibrium at that moment, without either a certain volume of gold exports or without a counterflow of short-term money into this market, induced by a temporary rise in the market rate of interest. My main objection to the analysis just discussed is that the situation has, in practice, been more complicated than this analysis would seem to warrant. To sum up the situation by saying that we have been lending long and borrowing short is to neglect the multiplicity of factors which have been at work in the adjustment of the balance of payments in recent years. Undoubtedly, short balances and long-term loans are part of the elements in this situation; but it cannot be said that these are the only two items which require to be brought into prominence in estimating either the factors which have been making for disequilibrium or the factors which have had to be brought into play to restore the equilibrium after it had once been temporarily disturbed.

## VI.

In analysing the factors making for gold imports and exports from Great Britain in the last five years, it is clear from the figures of gold exports that the United States, France and Germany have been the three countries of greatest importance, although the nature of the British Customs statistics make it desirable, in estimating the net flow to each area, to include neighbouring States from which part of the supplies of gold may have actually gone to the areas named. A detailed investigation of the figures in the Appendix will also show that the pressure exerted on British gold supplies by these various areas in particular years has varied from time to time; thus, in the case of France and Belgium, it is clear that pressure began to be serious in 1928, and culminated in the last two years. In the case of Germany, the pressure was very strong in 1928 and 1929. In the case of the United States, the pressure was greatest in 1925 and in 1929. In the case of Switzerland, it was greatest in 1925. Similarly, as regards the areas from which gold supplies have come; in those cases in which the movement is to be regarded as associated with currency disorganisation or political necessities, the position has varied from time to time. Thus, the Russian supply was large in 1925, and again in 1928. The imports from Spain concentrated on 1928 and 1930. Australasian imports were very high in 1930 and appreciable in 1929. The excess of exports to South Africa in 1926-27 turned into a small excess of imports in 1928, which became very large in 1929 and 1930. But, quantitively, the movements to France and Belgium, on the one hand, and Germany, the Netherlands, Switzerland and the United States on the other, outweigh particular movements in other directions, and a discussion of the gold movements out of the United Kingdom must primarily be a discussion of the lines of influence which have been emanating from these areas at particular moments of time. The general character of these influences is, of course, fairly generally known. First in importance is the movements of French funds into this country in the days of the declining franc in 1926 and the subsequent repatriation of these balances after the stabilisation of the franc. In other words, Great Britain first benefited from the flight from the franc in 1926 and then suffered from the withdrawal of French balances in 1929 and 1930. How large the French balances in London were and are is a matter upon which no accurate information exists, and the degree to which the avoidance of recent gold movements to France would have been possible is also a matter of acute controversy. In so far as the repatriation of French balances is associated with the reserve requirements of the entire French currency system, the problem is one which has direct reference both to the legal requirements under which the Bank of France is required to operate and to the views entertained by the high authorities of the Bank of France as to the amount of reserve which they think it appropriate to maintain. In so far as gold has been imported on private account into France for the purpose of increasing the reserves of the French credit banks in view of an increase in the volume of currency required by their customers—the currency so taken from them being obtained from the Central Bank by sale to it of the gold so withdrawn from London—again, both the legislation under which the Bank of France is governed and the policy of the French monetary authorities comes into account. It may also be the case that the drain of gold to France has been effected by the periodical blocking up of currency in connection with the operations of French public finance. On all these questions little seems to me to remain to be added to the admirable article recently contributed to the *Economic Journal* by Mr. T. Balogh.[1] One would like to add that the view that the mere fact that the French balance of trade is favourable is no disproof of the proposition that, had the French monetary authorities desired to check the inflow of gold into France, it would have been possible for them to do so; though this might have required, not only a change of view on their part, but also an alteration both in the legislation of the Bank and of the practices of the French Treasury, as well as an alteration in the attitude towards long-term capital issues on the part of the French investor.

It is exceedingly difficult to estimate the extent to which the movement of French balances has been influenced by purely economic considerations, such as the higher level of money rates in France during a portion of the time under consideration. In so far as the process of restocking France with gold was a necessary element in the attainment of general economic equilibrium in Europe, gold flows from London to Paris cannot be condemned, however much the continuance of the flow may be regretted, in so far as it has increased the difficulties for the London money market. The only question at issue is whether the restocking process has not been continued beyond the point dictated by considerations of convenience and stability.

[1] " The Import of Gold into France ", *Economic Journal*, September 1930.

*The flow of gold to the United States, especially in the year 1929, is, of course, associated* with the peculiar monetary and Stock Exchange conditions which prevailed in that country in the year 1928, and to a much more marked extent in the subsequent period. It has been shown very clearly in an article published in the *Midland Bank Monthly Review* for December 1929-January 1930 that, if the relative pull of money rates and prices in the two countries on the dollar-sterling exchange is examined from about June 1928, priority of importance must be assigned to the movements of relative money rates in the two centres; or, as the writer of the article puts it, the charts in which he summarises his conclusions graphically " lend substantial support to the argument that, at any rate over relatively short periods, comparative money rates are a more powerful force than relative commodity price movements in determining fluctuations in the London-New York exchange rate . . . when, for some special reason, prices and money rates part company, is the superior short-term strength of money rates made apparent ".

The movements of short-money rates in the United States were, of course, in part an expression of Federal Reserve policy; but it is important, in my opinion, to take into account also those features of the situation over which the Federal Reserve System in the days of the Wall Street boom had no control whatsoever. The net effect of the rise of security prices was to check both American long-term loans to Europe and to increase the volume of European capital seeking a temporary investment in American securities. It is difficult to see how this movement of long-term capital, or relatively long-term capital, could have been avoided by anything which was done by the Federal Reserve authorities; and there is some reason to suppose that, in estimating the net movement of funds to the United States, the investment of European money in call loans has been exaggerated, whilst the actual outright purchase of American securities by European investors has been under-estimated. Nevertheless, a discussion of Federal Reserve policy in relation to the stock market situation is necessary. The Federal Reserve rediscount rate did not rise to 5 per cent until the middle of 1928, and then remained stable until the middle of 1929. During that time the call-money rate on the New York Stock Exchange rose from an average of 6.1 per cent to as much as 9.4 per cent before the rediscount rate rose to 6 per cent in August of 1929. It is arguable, therefore, that the direct influence of a high rediscount rate has been exaggerated, the call rate rising by something like 50 per cent, whilst the rediscount rate remained absolutely stable. In truth, if the Federal Reserve system is to be criticised for its policy during the boom, that criticism must take a somewhat more sophisticated line. As is well known, the Federal Reserve system attempted the task of bringing about discrimination against call loans. In so far as it was successful in so doing, it made the price of call loans higher than it would otherwise have been, and, by making it higher, it attracted a volume of funds from Europe perhaps disproportionately greater than would have been attracted had the level of call rates been lower, even though this lower level had been accompanied by a rise in the price of commercial accommodation somewhat earlier than this rise was actually brought about in consequence, partly of the level of call rates mounting steadily upwards, partly because the Bank itself was raising the rediscount rate. Had the price of commercial accommodation risen earlier during the boom, it would have undermined the foundations upon which the boom was built, in so far as steadily mounting business and industrial profits formed the justification for an upward movement. But the effect of the Wall Street boom on the European money market situation cannot be gainsaid. The effect was to attract both speculative and short-term funds, to bring immense pressure to bear on the foreign exchanges, and therefore under these conditions to inaugurate a regime of steadily rising Central Bank rates, each Central Bank in turn protecting, or trying to protect, itself against a loss of gold to its neighbours, a loss which it was quite unable to prevent if the situation as a whole is taken into account. When attention is directed to the German position, it must strike the spectator as astonishing that a country with large annual reparation payments to make should have been in a position to accumulate a large fund both of gold and foreign exchange at the Central Bank. The fact is that the German Central Bank reserves are " borrowed ", in the sense that Germany has been a consistent long- and short-term borrower throughout the whole period under review, and this excess of borrowing over her annual reparations payments has enabled her to accumulate a stock of gold and foreign exchange. In the case of Germany, as in the case of France, the question may well be asked whether the actual size of the gold and foreign exchange reserves is not greater than the circumstances of the country really warrant. Let it be admitted that the temporary situation of the German balance of payments was such as to enable the Central Bank to accumulate these large stocks of foreign currency, the question still remains open whether, at particular moments, the discount rate was not too high, and whether the Central Bank could not have done something, by the purchase of open market assets, to reduce the price of short-term money in Germany and thus prevent the constant offer of short-term money to German financial institutions upon the basis of which the actual movements of gold exchange were based.

## VII.

It becomes necessary at this stage to ask what measures have been adopted by the Central Bank in Great Britain. The Central Bank must necessarily deal, in the first instance, with the facts of the money market with which it is in much closer touch than it is with the industrial and economic structure, in the wider sense of the term. When Great Britain returned to the gold standard, the impression prevailed, in consequence of certain passages in the report of the Cunliffe Committee, that the Bank of England would attempt to maintain a total stock of gold of not less than £150,000,000, and a great deal of alarm has, therefore, always existed in the City whenever the total gold reserve fell below this figure, as anticipations were entertained that a deficit below this amount would be automatically followed by a rise in the bank rate of discount. This interpretation of the situation has shown itself to be falsified by events, and Bank of England policy has been a very complicated and delicate one ever since the return to the gold standard, containing many elements, and is not capable, therefore, of summary statement.

(1) At times when the position in the foreign exchange market was difficult, the Bank has resorted to an unofficial embargo on fresh capital issues. Such a policy was adopted in the autumn of 1925, when heavy gold losses were being experienced, though this was accompanied, for a short period in the autumn, by a reduction in the official rate of discount. Opinions on the expediency and wisdom of unofficial embargoes go very far apart, the generally prevailing opinion being that, in view of the increasing integration of money markets all over the world, an embargo on fresh capital issues cannot, in fact, control the movement of securities, and merely results in a loss of profit to the London issue houses.

(2) At times, the Bank of England has departed from its traditional policy of not buying gold above the minimum buying price fixed by the Bank Acts, and has gone into the market to compete with outside buyers for gold, thus practising a modified form of the gold premium policy and narrowing its " turn " on gold operations.

(3) At times also, the Bank of England has indulged in what it is now fashionable to call " *hidden hand financing* "—that is to say, at moments of pressure in the short-term market, when it appeared as if open market rates would rise to the level of bank rate and thus force on the Central Bank a rise in the discount rate, the Bank has bought bills in the open market for the purpose of checking the rise.

(4) The Bank, in co-operation with the discount market, has also attempted to stabilise open market rates of discount by means of conversations and discussions with the members of the discount market itself. No details of these conversations have ever been published, and the extent to which the open market has been a managed one is therefore obscure.

(5) An inspection of the Bank return shows that the Bank has attempted, within certain broad limits, to stabilise the total volume of credit available to the English economic system

by offsetting the gold losses by an increased holding of securities, and, at times when gold was flowing in fairly freely, offsetting the increased supplies of gold by a reduction in its earning assets. Thus, between the second quarter of 1926 and the third quarter of 1928, the deposits of the Bank of England varied only by four millions. This small variation in the aggregate deposits of the Bank was, however, accompanied by an increase of thirty-eight millions in the reserve of the banking department, and by a reduction of thirty-six millions in the holdings of securities by the Bank. Similarly, between the third quarter of 1928 and the last quarter of 1929, the gold holdings of the Bank of England fell by £31,000,000, whilst the securities increased by £21,000,000, the deposits fluctuating only by £3,000,000. Again, between the last quarter of 1929 and the third quarter of 1930, the gold holdings of the Bank rose by nineteen millions, whereas the securities had fallen by twenty-two millions. The long-run intention of the Bank is, therefore, fairly clear; it is to maintain deposits at a fairly steady level, while adjusting its assets in either direction according as gold flows in or out. Over the whole period, since the return to the gold standard, however, there has been a tendency for deposits to fall, and to this extent it may be argued that the Bank of England has been pursuing a deflationary policy. That this policy has not affected the position in a more marked manner is due to the fact that the joint-stock banks have altered the ratio of their cash holdings at the Bank of England to their deposits, the average yearly ratio between 1925 and 1929 having fallen from 11.78 per cent to 10.77 per cent. The aggregate deposits of the joint-stock banks have, in fact, risen from a yearly average of 1,662 millions in 1925 to a yearly average of 1,800 millions in 1929, though the effect of this increase in the volume of deposits has been to some extent counteracted by the tendency of time deposits to grow at the expense of current account deposits. It must, however, be pointed out that this movement in the relative importance of time and current account deposits is itself an effect rather than a cause of industrial depression. It marks the slowing down of the industrial machine rather than initiates such a reduction. Apart from the troubled year 1929 and the period of readjustment at the beginning of 1930, the Bank rate has, in fact, been remarkably stable. A short period of uncertainty in the autumn of 1925 was followed by a stable 5 per cent rate throughout the whole of 1926, and a stable 4½ per cent rate throughout nine months of 1927 and the whole of 1928. In assessing the relative importance of different methods of control, therefore, the significance of Bank rate can easily be exaggerated; the rate has been steadier than might have been expected, and the importance of alternative methods of control much greater.

## VIII.

Two issues of general significance remain to be discussed. Surveying the whole development in the international money markets in the last few years, the question arises, would things have been very different if the aggregate world supply of gold had been larger? Upon this it must be said that, looking at the situation from the purely British standpoint, the position of this country would not have been substantially altered unless, indeed, our monetary policy had been so adjusted that, whilst world prices were rising, British prices had been kept more stable. The new era in 1925 was begun with British costs not in equilibrium with world prices. Had our prices risen in precise accord with the rise of prices outside the country, the disequilibrium would have remained. Even had more gold been available, it does not follow that the situation would have been substantially different from what it has proved to be, unless the Central Banks of the world had allowed the accruing supplies of gold to affect the price-level. In other words, the argument that, in the last few years, the world has been suffering from an *absolute* shortage of gold is only valid in the assumption that, if the supply of gold had been actually larger, the Central Banks would not have sterilised the accruing supplies to the full extent. Given this, a larger supply of gold, although it might not have made the relative situation of the United Kingdom substantially better, would have reduced the burden of fixed charges and national debts, and might then have contributed substantially to mitigating the severity of the present crisis, in so far as that has been accentuated by the burden of large fixed charges of all kinds, including reparations and national debts.

The other question which suggests itself is whether a different policy could have been pursued by Central Banks with regard to their gold holdings; whether, in other words, a better gold distribution could have been achieved by co-operation between the central banking authorities. So far as the absolute size of the reserve in particular countries engaged in restocking themselves with gold is concerned, a better understanding of the uselessness of very large reserves could probably have done something. On the other hand, it would appear that it was the fear of losing reserves rather than the desire to add to already existing reserves which, in the last twelve months before the crash in Wall Street, added to the difficulties of the world. In other words, it was the period of competitive raising of bank rates following on the gold movements towards the United States and France in the first two-thirds of 1929 which substantially added to the burden of interest rates during that period.

# Table I.

## BRITISH GOLD MOVEMENTS.

(Thousands of dollars.)

| Country | 1925 | | | 1926 | | |
|---|---|---|---|---|---|---|
| | Imports | Exports | Net | Imports | Exports | Net |
| France and Belgium ... | 620 | 3,710 | — 3,090 | 802 | 8,257 | 7,455 |
| Germany ........... | — | — | — | | | |
| Netherlands .......... | 25,474 | 48,707 | — 23,233 | 1,175 | 14,704 | — 13,529 |
| Spain and the Canaries. | — | — | — | | 2,099 | — 2,099 |
| Switzerland .......... | — | 25,269 | — 25,269 | — | 4,242 | — 4,242 |
| United States of America ........... | 21,378 | 50,477 | — 29,099 | 180 | 1,138 | — 958 |
| South America ....... | | | — | 168 | 1,543 | — 1,375 |
| British India ......... | | 64,885 | — 64,885 | — | 12,818 | — 12,818 |
| Australia ............ | — | | — | | — | |
| New Zealand ........ | — | — | — | — | — | — |
| Egypt ............... | — | 3,240 | — 3,240 | — | 1,199 | — 1,199 |
| Rhodesia ........... | 10,410 | — | + 10,410 | 9,842 | — | + 9,842 |
| Transvaal ........... | 108,403 | | +108,403 | 153,240 | — | +153,240 |
| West Africa .......... | 6,184 | 247 | + 5,937 | 6,293 | 36 | + 6,257 |
| Russia .............. | 21,387 | 1,903 | + 19,484 | 12,349 | 5,144 | + 7,205 |
| British Malaya ....... | — | 8,038 | — 8,038 | — | 7,752 | — 7,752 |
| All other countries .... | 13,692 | 41,901 | — 28,209 | 3,557 | 73,207 | — 69,650 |
| Totals ... | 207,548 | 248,377 | — 40,829 | 187,606 | 132,139 | + 55,467 |

| Country | 1927 | | | 1928 | | | 1929 | | | 1930 (First seven months) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Imports | Exports | Net | Imports | Exports | Net | Imports | Exports | Net | Imports | Exports | Net |
| France and Belgium ... | 627 | 4,718 | 4,091 | 912 | 97,178 | — 96,266 | 2,066 | 162,567 | —160,461 | 1,369 | 108,348 | 106,979 |
| Germany ........... | 190 | 17,034 | 16,844 | 258 | 102,423 | —102,165 | 3,203 | 92,991 | — 89,788 | 7 | 63,022 | 63,015 |
| Netherlands .......... | 2,313 | 6,486 | 4,173 | 145 | 7,081 | — 6,936 | 14,382 | 2,006 | + 12,376 | 19 | 356 | 337 |
| Spain and the Canaries. | — | 7,445 | 7,445 | 9,733 | 199 | + 9,534 | 4 | 359 | — 355 | 19,468 | 148 | 19,320 |
| Switzerland .......... | — | 6,213 | 6,213 | — | 13,493 | — 13,493 | — | 10,781 | 10,781 | — | 10,404 | 10,404 |
| United States of America ........... | 8,567 | 28,042 | 19,475 | 32,532 | 32,132 | + 400 | 23,090 | 61,293 | — 38,203 | 283 | | 283 |
| South America ....... | 2,017 | 6,959 | 4,942 | 1,166 | 1,074 | + 92 | 39,129 | | + 39,129 | 15,156 | | 15,156 |
| British India ......... | | 12,462 | 12,462 | — | 10,770 | — 10,770 | — | 10,320 | — 10,320 | | 6,478 | 6,478 |
| Australia ............ | — | — | — | | — | — | 24,603 | — | + 24,603 | 84,761 | 2 | 84,759 |
| New Zealand ........ | | — | | — | — | — | 2,433 | | + 2,433 | 115 | — | 115 |
| Egypt ............... | — | 3,799 | 3,799 | 1,309 | 1,384 | 75 | — | 3,786 | — 3,786 | — | 94 | 94 |
| Rhodesia ........... | 5,958 | | 5,958 | 5,280 | — | + 5,280 | 4,641 | | + 4,641 | 3,045 | | 3,045 |
| Transvaal ........... | 124,348 | — | 124,348 | 144,482 | | +144,482 | 184,954 | — | +184,954 | 117,417 | | 117,417 |
| West Africa .......... | 4,705 | 20 | 4,685 | 3,384 | 16 | + 3,368 | 4,216 | 8 | + 4,208 | 2,921 | | 2,921 |
| Russia .............. | 1,049 | 7,732 | 6,683 | 18,582 | 26,978 | + 18,582 | — | — | — | — | | |
| British Malaya ....... | | 3,452 | 3,452 | 71 | 1,810 | — 1,739 | — | — | — | — | | — |
| All other countries .... | 8,129 | 32,647 | 24,518 | 14,803 | 26,978 | — 12,175 | 1,003 | 33,434 | — 32,431 | 883 | 11,066 | — 10,183 |
| Totals ... | 157,903 | 137,009 | + 20,894 | 232,659 | 294,538 | — 61,881 | 303,724 | 377,505 | — 73,781 | 245,444 | 199,918 | + 45,526 |

# Table II.

## BRITISH GOLD MOVEMENTS.

(Thousands of dollars.)

| Year | France and Belgium | Germany and Netherlands | United States of America | Switzerland | South America | British India | Russia |
|---|---|---|---|---|---|---|---|
| 1925 ........... | — 3,090 | — 23,233 | — 29,099 | — 25,269 | — | — 64,885 | + 19,484 |
| 1926 ........... | — 7,455 | — 13,529 | — 958 | — 4,242 | — 1,375 | 12,818 | + 7,205 |
| 1927 ........... | — 4,091 | — 21,017 | — 19,475 | — 6,213 | — 4,942 | — 12,462 | — 6,683 |
| 1928 ........... | — 96,266 | —109,101 | + 400 | — 13,493 | + 92 | — 10,770 | + 18,582 |
| 1929 ........... | —160,461 | — 77,412 | — 38,203 | — 10,781 | + 39,129 | — 10,320 | — |
| 1930 (January to July) ......... | —106,979 | — 63,352 | + 283 | — 10,404 | + 15,156 | — 6,478 | |
| Totals... | —378,342 | —307,644 | — 87,052 | — 70,402 | + 48,060 | —117,733 | + 38,588 |

| Year | Spain and the Canaries | Egypt | British Malaya | Australasia | Rhodesia | Transvaal | West Africa | All other countries |
|---|---|---|---|---|---|---|---|---|
| 1925 ........... | — | — 3,240 | 8,038 | | + 10,410 | + 108,403 | + 5,937 | 28,209 |
| 1926 ........... | 2,099 | 1,199 | 7,752 | | + 9,842 | + 153,240 | + 6,257 | 69,650 |
| 1927 ........... | 7,445 | 3,799 | 3,452 | | + 5,958 | + 124,348 | + 4,685 | 24,518 |
| 1928 ........... | 9,534 | — 75 | 1,739 | | + 5,280 | + 144,482 | + 3,368 | 12,175 |
| 1929 ........... | — 355 | 3,786 | | + 27,036 | + 4,641 | + 184,954 | + 4,208 | — 32,431 |
| 1930 (January to July) ......... | 19,320 | 94 | | + 84,874 | + 3,045 | + 117,417 | + 2,921 | — 10,183 |
| Totals... | + 18,945 | — 12,193 | — 20,981 | +111,910 | + 39,176 | + 832,844 | + 27,376 | —177,166 |

# Table V.

## UNITED KINGDOM GOLD IMPORTS AND EXPORTS FROM AND TO ALL COUNTRIES

### MONTHLY FIGURES FROM TRADE AND NAVIGATION REPORTS.

(Millions of £.)

| | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1925.** | | | | | | | | | | | | |
| Total : Imports. | 2.266 | 4.414 | 1.862 | 1.031 | 2.650 | 5.620 | 8.932 | 2.803 | 0.834 | 5.413 | 3.506 | 2.179 |
| Exports. | 4.799 | 3.823 | 3.015 | 1.091 | 2.635 | 1.616 | 3.271 | 2.702 | 2.737 | 10.176 | 8.542 | 4.368 |
| | (1 month) | (2 months) | (3 months) | (4 months) | (5 months) | (6 months) | (7 months) | (8 months) | (9 months) | (10 months) | (11 months) | (12 months) |
| Imports. | 2.266 | 6.680 | 8.542 | 9.573 | 12.223 | 17.843 | 26.775 | 29.578 | 30.412 | 35.825 | 39.331 | 41.461 |
| Exports. | 4.799 | 8.622 | 11.637 | 13.628 | 16.263 | 17.879 | 21.150 | 23.852 | 26.589 | 36.765 | 45.307 | 49.675 |
| **1926.** | | | | | | | | | | | | |
| Total : Imports. | 4.525 | 3.453 | 1.290 | 1.478 | 3.840 | 3.309 | 4.009 | 3.877 | 2.494 | 3.476 | 3.814 | 2.986 |
| Exports. | 2.448 | 1.563 | 2.620 | 0.717 | 1.408 | 1.002 | 1.277 | 1.840 | 1.031 | 4.369 | 5.053 | 3.824 |
| | (1 month) | (2 months) | (3 months) | (4 months) | (5 months) | (6 months) | (7 months) | (8 months) | (9 months) | (10 months) | (11 months) | (12 months) |
| Imports. | 4.525 | 7.978 | 9.268 | 10.746 | 14.586 | 17.895 | 21.904 | 25.781 | 28.275 | 31.751 | 35.565 | 38.547 |
| Exports. | 2.448 | 4.011 | 6.631 | 7.348 | 8.756 | 9.758 | 11.035 | 12.875 | 13.906 | 18.275 | 23.328 | 27.128 |
| **1927.** | | | | | | | | | | | | |
| Total : Imports. | 2.366 | 3.235 | 1.546 | 5.071 | 3.383 | 1.734 | 2.686 | 4.412 | 1.722 | 1.259 | 3.085 | 1.949 |
| Exports. | 3.736 | 3.181 | 1.417 | 0.767 | 5.462 | 1.988 | 1.246 | 1.188 | 1.569 | 0.971 | 4.461 | 2.167 |
| | (1 month) | (2 months) | (3 months) | (4 months) | (5 months) | (6 months) | (7 months) | (8 months) | (9 months) | (10 months) | (11 months) | (12 months) |
| Imports. | 2.366 | 5.601 | 7.147 | 12.218 | 15.601 | 17.335 | 20.021 | 24.432 | 26.154 | 27.413 | 30.498 | 32.405 |
| Exports. | 3.736 | 6.917 | 8.334 | 9.101 | 14.563 | 16.551 | 17.797 | 18.985 | 20.554 | 21.525 | 25.986 | 29.060 |
| **1928.** | | | | | | | | | | | | |
| Total : Imports. | 4.118 | 2.677 | 1.292 | 2.417 | 3.852 | 8.152 | 4.923 | 4.943 | 3.952 | 3.252 | 4.574 | 3.656 |
| Exports. | 2.235 | 3.957 | 16.152 | 0.605 | 1.130 | 1.317 | 1.939 | 4.147 | 5.804 | 9.370 | 8.628 | 5.240 |
| | (1 month) | (2 months) | (3 months) | (4 months) | (5 months) | (6 months) | (7 months) | (8 months) | (9 months) | (10 months) | (11 months) | (12 months) |
| Imports. | 4.118 | 6.795 | 8.087 | 10.504 | 14.356 | 22.508 | 27.431 | 32.374 | 36.326 | 39.578 | 44.152 | 47.808 |
| Exports. | 2.235 | 6.192 | 22.344 | 22.949 | 24.079 | 25.396 | 27.335 | 31.481 | 37.286 | 46.655 | 55 283 | 60.524 |
| **1929.** | | | | | | | | | | | | |
| Total : Imports. | 2.434 | 2.537 | 5.288 | 3.317 | 5.812 | 4.333 | 4.639 | 3.540 | 3.761 | 5.875 | 7.448 | 13.427 |
| Exports. | 5.731 | 4.394 | 1.592 | 0.763 | 0.956 | 8.220 | 20.647 | 12.181 | 8.483 | 5.506 | 5.721 | 3.378 |
| | (1 month) | (2 months) | (3 months) | (4 months) | (5 months) | (6 months) | (7 months) | (8 months) | (9 months) | (10 months) | (11 months) | (12 months) |
| Imports. | 2.434 | 4.971 | 10.259 | 13.576 | 19.388 | 23.721 | 28.360 | 31.900 | 35.661 | 41.536 | 48.984 | 62.411 |
| Exports. | 5.731 | 10.125 | 11.717 | 12.480 | 13.436 | 21.656 | 42.303 | 54.484 | 62.967 | 68.473 | 74.194 | 77.572 |
| **1930.** | | | | | | | | | | | | |
| Total : Imports. | 8.569 | 8.006 | 7.862 | 8.783 | 9.327 | 2.825 | 5.065 | 4.973 | 4.590 | | | |
| Exports. | 3.308 | 7.002 | 2.636 | 3.047 | 12.562 | 4.245 | 8.292 | 4.395 | 4.160 | | | |
| | (1 month) | (2 months) | (3 months) | (4 months) | (5 months) | (6 months) | (7 months) | (8 months) | (9 months) | (10 months) | (11 months) | (12 months) |
| Imports. | 8.569 | 16.575 | 24.437 | 33.220 | 42.546 | 45.371 | 50.436 | 55.409 | 59.999 | | | |
| Exports. | 3.308 | 10.310 | 12.946 | 15.993 | 28.555 | 32.801 | 41.093 | 45.488 | 49.649 | | | |

## Table VI.

### BALANCE OF PAYMENTS, UNITED KINGDOM.

From Board of Trade Official Estimates (February). Overseas Loans; Estimates of *Statist* 1910 to 1926; Midland Bank, 1920 onwards.

(Millions of £.)

| | 1907 | 1910 | 1913 | 1920 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Merchandise (including Silver) : | | | | | | | | | | | | | |
| Net imports ..... | *127* | *145* | *132* | *380* | *176* | *208* | *337* | *392* | *463* | *386* | *352* | *382* | |
| Gold : | | | | | | | | | | | | | |
| Net imports ..... | *6* | *5* | *14* | | – | | | | *12* | *4* | *6* | | |
| Net exports ..... | – | | – | 44 | 10 | 13 | 13 | 8 | | | | 16 | |
| Balance of Visible Items ......... | *133* | *150* | *146* | *336* | *166* | *195* | *324* | *384* | *475* | *390* | *358* | *366* | |
| Government Transactions : | | | | | | | | | | | | | |
| Net receipts ..... | — | – | – | | – | | – | | 4 | 1 | 15 | 22 | |
| Net payments.... | *9* | *9* | *12* | 7 | *5* | *25* | *28* | *11* | – | | – | – | |
| Shipping Freights : | | | | | | | | | | | | | |
| Net receipts ..... | 85 | 90 | 94 | 340 | 110 | 133 | 140 | 124 | 120 | 140 | 130 | 130 | |
| Overseas Investments : | | | | | | | | | | | | | |
| Net income ..... | 160 | 187 | 210 | 200 | 175 | 200 | 220 | 250 | 285 | 285 | 285 | 285 | |
| Short Interest, Commissions, etc. : | | | | | | | | | | | | | |
| Net receipts ..... | 25 | 25 | 25 | 40 | 30 | 30 | 60 | 60 | 60 | 63 | 65 | 65 | |
| Other Services : | | | | | | | | | | | | | |
| Net receipts ..... | 10 | 10 | 10 | 15 | 10 | 10 | 15 | 15 | 15 | 15 | 15 | 15 | |
| Balance of Invisible Items ......... | 271 | 303 | 327 | 588 | 320 | 348 | 407 | 438 | 484 | 504 | 510 | 517 | |
| General Balance : | 138 | 153 | 181 | 252 | 154 | 153 | 83 | 54 | 9 | 114 | 152 | 151 | |
| Overseas Loans .... | 89 | 189 | 198 | 60 | 135 | 136 | 134 | 88 | 112 | 139 | 143 | 94 | |

*Note.* - Export or credit figures in ordinary characters.
Import or debit figures in italics.

# Table VIII.

## CLEARING BANKS' FIGURES.

(Millions of £.)

| Period | Cash in hand and at Bank of England | Deposits | Ratio of cash to deposits |
|---|---|---|---|
| **1925 :** | | | |
| January | 199.9 | 1,693.1 | 11.81 |
| February | 198.5 | 1,682.8 | 11.79 |
| March | 190.2 | 1,643.5 | 11.57 |
| April | 193.0 | 1,644.8 | 11.74 |
| May | 189.2 | 1,636.4 | 11.55 |
| June | 201.9 | 1,662.8 | 12.14 |
| June 30th | 214.3 | 1,683.9 | 12.73 |
| July | 197.5 | 1,671.3 | 11.81 |
| August | 196.2 | 1,648.8 | 11.90 |
| September | 194.9 | 1,650.6 | 11.87 |
| October | 192.6 | 1,664.9 | 11.57 |
| November | 191.3 | 1,656.3 | 11.55 |
| December | 203.2 | 1,684.3 | 12.06 |
| December 31st | 221.7 | 1,694.3 | 13.09 |
| Yearly average | 195.7 | 1,661.6 | — |
| Percentage of deposits | — | — | 11.78 |
| **1926 :** | | | |
| January | 195.9 | 1,675.0 | 11.69 |
| February | 190.8 | 1,643.5 | 11.61 |
| March | 189.7 | 1,624.7 | 11.67 |
| April | 190.0 | 1,627.5 | 11.67 |
| May | 190.8 | 1,626.9 | 11.73 |
| June | 201.9 | 1,667.5 | 12.12 |
| June 30th | 216.1 | 1,687.3 | 12.81 |
| July | 197.8 | 1,683.6 | 11.76 |
| August | 196.4 | 1,670.8 | 11.76 |
| September | 193.7 | 1,660.1 | 11.69 |
| October | 196.0 | 1,685.9 | 11.63 |
| November | 194.8 | 1,685.1 | 11.63 |
| December | 206.4 | 1,725.5 | 11.96 |
| December 31st | 223.1 | 1,744.1 | 12.79 |
| Yearly average | 195.4 | 1,664.7 | — |
| Percentage of deposits | — | — | 11.74 |
| **1927 :** | | | |
| January | 200.4 | 1,730.8 | 11.58 |
| February | 194.8 | 1,689.7 | 11.53 |
| March | 191.9 | 1,669.3 | 11.49 |
| April | 195.7 | 1,679.1 | 11.65 |
| May | 195.0 | 1,687.0 | 11.55 |
| June | 203.0 | 1,721.9 | 11.79 |
| June 30th | 220.7 | 1,747.9 | 12.63 |
| July | 197.2 | 1,719.2 | 11.47 |
| August | 195.1 | 1,705.9 | 11.43 |
| September | 195.9 | 1,704.8 | 11.49 |
| October | 199.3 | 1,747.1 | 11.41 |
| November | 195.5 | 1,730.9 | 11.29 |
| December | 206.0 | 1,766.2 | 11.66 |
| December 31st | 231.5 | 1,788.1 | 12.95 |
| Yearly average | 197.5 | 1,712.7 | — |
| Percentage of deposits | — | — | 11.58 |

## Table VIII (*continued*).

## CLEARING BANKS' FIGURES (*continuèd*).

(Millions of £)

| Period | Cash in hand and at Bank of England | Deposits | Ratio of cash to deposits |
|---|---|---|---|
| **1928 :** | | | |
| January | 201.3 | 1,784.1 | 11.28 |
| February | 192.5 | 1,734.4 | 11.10 |
| March | 190.1 | 1,709.0 | 11.12 |
| April | 191.2 | 1,728.0 | 11.06 |
| May | 191.9 | 1,725.[illegible] | 11 12 |
| June | 197.7 | 1,768.5 | 11.18 |
| June 30th | 203.4 | 1,791.9 | 11.35 |
| July | 197.1 | 1,786.1 | 11.04 |
| August | 195.5 | 1,768.2 | 11.06 |
| September | 197.2 | 1,768.9 | 11.15 |
| October | 196.1 | 1,789.7 | 10.96 |
| November | 197.0 | 1,788.6 | 11.01 |
| December | 207.1 | 1,843.4 | 11.23 |
| December 31st | 231.9 | 1,872.5 | 12.38 |
| Yearly average | 196.2 | 1,766.2 | — |
| Percentage of deposits | — | — | 11.11 |
| **1929 :** | | | |
| January | 201.6 | 1,846.4 | 10.91 |
| February | 190.0 | 1,814.3 | 10.47 |
| March | 187.8 | 1,776.6 | 10.56 |
| April | 191.8 | 1,780.7 | 10.77 |
| May | 191.6 | 1,769.6 | 10.82 |
| June | 196.3 | 1,807.9 | 10.86 |
| June 30th | 201.2 | 1,827.8 | 11.01 |
| July | 193.2 | 1,816.0 | 10.64 |
| August | 191.5 | 1,796.3 | 10.66 |
| September | 194.5 | 1,79[illegible].8 | 10.85 |
| October | 192.7 | 1,80[illegible].5 | 10.68 |
| November | 189.7 | 1,789.0 | 10.60 |
| December | 204.9 | 1,810.7 | 11.31 |
| December 31st | 238.0 | 1,836.6 | 12.96 |
| Yearly average | 193.8 | 1,800.2 | — |
| Percentage of deposits | 10.77 | — | 10.77 |
| **1930 :** | | | |
| January | 195.5 | 1,805.0 | 10.82 |
| February | 184.6 | 1,751.1 | 10.54 |
| March | 184.4 | 1,719.3 | 10.72 |
| April | 190.7 | 1,749.7 | 10.90 |
| May | 189.8 | 1,779.8 | 10.66 |
| June | 192 7 | 1,825.6 | 10.55 |
| June 30th | 204.5 | 1,842.2 | 11.10 |
| July | 194.4 | 1,830.9 | 10.61 |
| August | 191.0 | 1,803.8 | 10.58 |
| September | | | |
| October | | | |
| November | | | |
| December | | | |
| December 31st | | | |
| Yearly average | | | |
| Percentage of desposits | | | |

# GOLD MOVEMENTS INTO AND OUT OF THE UNITED STATES, 1914 TO 1929, AND THE EFFECTS

By Mr. George E. Roberts.

I am asked to review the gold movements into and out of the United States from 1925 to 1929 and the effects. The result of all gold shipments into and out of the United States from the beginning to the end of this five-year period, together with domestic gold production and consumption in the arts, was a net reduction of the country's monetary gold stock in the sum of $215,000,000 according to the Treasury estimates. Importations during the period aggregated approximately $279,100,000 and exportations $526,200,000, or an excess of exports over imports of $247,100,000; but an excess of domestic production over consumption reduced the net loss to $215,000,000.

Upon reflection it has seemed to me that a more satisfactory account of the monetary and credit situation in the five-year period named could be given in connection with a brief review of the entire period since the great movement of gold to the United States was started by the war, in 1915. The conditions existing in 1925 to 1929 cannot be fully accounted for without reference to the gold movements and credit expansion of the preceding years.

## Monetary Stock of Gold of the United States at End of Each Year, 1914 to 1929.

Following are the Treasury figures for the monetary stock of gold in the United States at the end of each year from 1914 to 1929 inclusive, divided into three periods—to wit, (1) the war period, from the beginning of 1915 to the end of 1918; (2) the post-war period, from the beginning of 1919 to the end of 1924; and (3) the final period, 1925 to 1929; the latter being the period expressly named to be covered by this paper·

| | Monetary gold stock $ |
|---|---|
| December 31st : | |
| 1914 | 1,813,000,000 |
| 1915 | 2,312,000,000 |
| 1916 | 2,843,000,000 |
| 1917 | 3,155,000,000 |
| 1918 | 3,160,000,000 |
| Net increase, four years | 1,347,000,000 |
| December 31st : | |
| 1919 | 2,994,000,000 |
| 1920 | 2,926,000,000 |
| 1921 | 3,660,000,000 |
| 1922 | 3,929,000,000 |
| 1923 | 4,244,000,000 |
| 1924 | 4,499,000,000 |
| Net increase from December 31st, 1918, six years | 1,339,000,000 |

| December 31st : | Monetary gold stock $ |
|---|---|
| 1925 .................................... | 4,399,000,000 |
| 1926 .................................... | 4,492,000,000 |
| 1927 .................................... | 4,379,000,000 |
| 1928 .................................... | 4,141,000,000 |
| 1929 .................................... | 4,284,000,000 |
| Net increase from December 31st, 1924, five years .... | 215,000,000 |
| Net increase from December 31st, 1914, fifteen years.... | 2,471,000,000 |

In the year 1914, exports of gold exceeded imports by $165,200,000, the entire movement having been in the period from June to December.

Importations from Europe in the war period practically closed with the entry of the United States into the war in 1917.

In the aggregate, the United States lost gold from the close of the year 1924 to the close of 1929, including nearly all of its own production in that time.

In 1919, previously existing restrictions upon gold exports were removed, and exports during the year aggregated $368,000,000, but the net loss was much less. The outward movement continued in the first half of 1920, but was reversed in the second half. In 1921, 1922, 1923 and 1924 the inward movement was steadily maintained, until the last five months of 1924, when exports and earmarkings for foreign account effected a small reduction of the year's gains.

In 1925, the outward movement was, in some measure, due to the American subscriptions to the German loan of 1924 under the Dawes Plan. The primary object of the loan was to provide a gold reserve for the re-organised Reichsbank, hence the proceeds were taken in gold. Gains in 1926 increased the American stock almost to what it was at the close of 1924. In the fore part of 1927, imports exceeded exports, but in the latter part of the year the largest outward movement of record set in, aggregating, from the beginning of August to the end of June 1928, exports of over $500,000,000, and a net loss of $479,000,000 in the monetary stock. In 1929, a net gain of $245,000,000 was realised to the end of October, but exportations in November and December reduced this amount to $143,000,000 at the end of the year.

The monetary gold stock of the United States was at the high mark in April 1927, when it stood at $4,610,000,000 but at no year-end since 1924 has it been as high as on December 31st, 1924.

It seems desirable to review briefly the circumstances related to the gold movements of each of the three periods and the effects of the movement upon the banking and business situation in the United States.

## The First Period, 1915 to 1918.

### *The War-Time Inflation of Credit and Prices.*

The main cause of the gold movement in the first period was the enormous balance of trade running to the United States, aggregating $5,837,000,000 in the three years from June 30th, 1914, to June 30th, 1917. The trade balance continued high in 1918 and 1919, but was settled in part for the time being by credits granted by the Government of the United States to the European Governments associated with it in the war.

The heavy volume of purchases supported by these credits gave a great stimulus to the industries and to business generally, causing an increased demand for bank credit, and the new gold supplies, entering the bank reserves, enabled the banks to expend their loans. The new Federal Reserve System did not begin to function until November 1914, and developed slowly, the total earning assets of the twelve reserve banks not reaching $100.000,000 until February 1916. However, the Federal Reserve Act had reduced the reserve requirements previously in force under the National Bank Act, and member banks and non-member banks operating under State banking systems were able to meet the demands for credit so adequately that interest rates were moderate throughout this period. The annual average, based on weekly averages of high and low rates on choice commercial paper, as quoted in the New York market, was 3.45 per cent in 1915, 3.43 in 1916, 4.74 in 1917 and 5.87 in 1918. Call money ruled in 1918 within the range of 2 to 6 per cent, and in the earlier years generally lower. The discount rate of the Federal Reserve Bank of New York was not below 4 per cent or above 4¾ per cent from the beginning of 1915 to the end of 1918.

Loans, however, were rapidly increasing. The loans of all member banks of the reserve system stood at $6,419,000,000 on December 31st, 1914, and on December 31st, 1918, the aggregate was $14,224,000,000. However, part of this increase came from additions of new banks to the reserve system, and, in order to obtain a complete picture of the banking situation, it is necessary to include the banks organised under State systems which are not members of the reserve system or have joined from time to time over the period reviewed. It should be understood that banks belonging to the national banking system were required to join the reserve system at its inception, but banks which were organised under the banking laws of the several States could not be required to join. They are permitted to join and, in general, the larger ones have done so; but statistics from the time of the inception of the reserve system are not comparable unless both member and non-member banks organised under State charters are included. The last-named exceed the number organised under National charters.

Figures for all banks are available only at or near the end of June of each year. On June 30th, 1914, loans and discounts of all banks in the country reporting to national or State authorities aggregated $15,339,000,000, and investments (mainly bonds) aggregated $5,585,000,000, a total of $20,924,000,000 of bank credit in use. On June 29th, 1918, loans and discounts aggregated $22,515,000,000, and investments $9,742,000,000; in all, $32,257,000,000.

This increase of 54 per cent in the volume of bank credit in four years, of course, did not signify that the volume of production and general business had increased in like measure. As in all other countries at that time, the demand for manpower and for industrial materials and products was in excess of supply, and, backed by purchasing power in the form of bank credit, competitive bidding had driven up wages and prices until the greater part of the increase of purchasing power was absorbed by higher prices. The United States Bureau of Labour Statistics table of index numbers of wholesale prices, based upon 1913 prices as 100, gives 202 as the index number of average prices in the month of December 1918.

## *Further Liberalisation of Reserve Requirements.*

That the banks were not pressed to the limit of their resources by current demands for bank credit is indicated, not only by the moderate interest rates, but by the fact that they had funds continually available for investment in bonds. This state of ease in face of the fact that gold imports practically ceased in 1917 until 1920 is accounted for in part by an amendment to the Reserve Act effecting a further reduction in the reserve requirements imposed upon the member banks, thus increasing the efficiency of the reserves and the lending power of the banks [1], also by the maintenance of low discount rates at the reserve banks.

[1] Following is a summary of the member bank reserve requirements:

*Reserves of Member Banks.*

"Demand deposits within the meaning of this Act shall comprise all deposits payable within thirty days, and time deposits shall comprise all deposits payable after thirty days, all savings accounts and certificates of deposit which are subject to not less than thirty days' notice before payment, and all postal savings deposits.

"Every bank, banking association, or trust company which is or which becomes a member

## THE SECOND PERIOD, 1919-1924.

### *Post-War Boom; Commercial Crisis; Deflation; Renewal of Gold Imports.*

The year 1919 began with uncertainty prevailing in business circles. The war was over, the war demands for man-power and credit were ended; the armies were to be disbanded and business must adjust itself to peace conditions. The volume of trade slumped off for a few months, then revived as demands of many kinds, hitherto restrained, were let loose, Governmental expenditures continued on a great scale, financed by more loans, inflation was rampant, wages and prices advanced rapidly, and, owing to the disorganised state of trade and transportation, a shortage of all kinds of commodities appeared to exist. It soon developed that this was an illusion, and that, in reality, stocks of goods were very large in relation to the ability of the public to make purchases at prevailing prices.

Loans and discounts of member and non-member banks had increased from $22,515,000,000 on June 29th, 1918, to $31,208,000,000 on June 30th, 1920, and investments from $9,742,000,000 to $11,387,000,000. The latter had been $12,230,000,000 on June 30th, 1919, but under the pressure of a tightening market the banks had reduced them.

The total expansion of bank credit in the two years from June 29th, 1918, to June 30th, 1920, was from $32,257,000,000 to $42,595,000,000, or 32 per cent, and from June 30th, 1914, slightly more than 100 per cent.

The United States Government issued its Victory Loan in May 1919, for the purpose of cleaning up the hang-over of war obligations. It was placed on a 4¼ per cent basis, which was far below current market rates for money at the times. Subscriptions were promoted by an understanding that member banks and reserve banks would carry loans on these bonds at the issue rate. Under the circumstances, the funds, naturally, were largely raised in this manner, and increased the volume of circulating credits.

On June 20th, 1919, Governor Harding, of the Federal Reserve Board, addressed a letter to each of the Governors of the twelve federal reserve banks, in which he said :

> " The Federal Reserve Board is concerned over the existing tendency toward excessive speculation, and, while ordinarily this could be corrected by an advance in discount rates at the federal reserve banks, it is not practicable to apply this check at this time because of Government financing."

of any federal reserve bank shall establish and maintain reserve balances with its federal reserve bank as follows :

> " *(a)* If not in a reserve or central reserve city, as now or hereafter defined, it shall hold and maintain with the federal reserve bank of its district an actual net balance equal to not less than seven per centum of the aggregate amount of its demand deposits and three per centum of its time deposits.
>
> " *(b)* If in a reserve city, as now or hereafter defined, it shall hold and maintain with the federal reserve bank of its district an actual net balance equal to not less than ten per centum of the aggregate amount of its demand deposits and three per centum of its time deposits.
>
> " *(c)* If in a central reserve city, as now or hereafter defined, it shall hold and maintain with the federal reserve bank of its district an actual net balance equal to not less than thirteen per centum of the aggregate amount of its demand deposits and three per centum of its time deposits.

" In estimating the balances required by this Act, the net difference of amounts due to and from other banks shall be taken as the basis for ascertaining the deposits against which required balances with federal reserve banks shall be determined."

Central reserve and reserve cities are duly designated as such, on account of their importance as banking cities. There are but two central reserve cities—namely, New York and Chicago —and sixty-one reserve cities.

*Monetary Stringency.*

In November 1919, the reserve authorities deemed that time enough had elapsed since the flotation of the Victory Loan to warrant taking the first step toward control of the credit situation by means of the discount rate. The rate on commercial paper was 4¾ per cent, but a rate of 4¼ per cent existed on paper secured by Government war loans. By two steps, a month apart, this preference was removed,and on January 30th the rate on commercial paper was raised to 6 per cent, and on June 1st, 1920, to 7 per cent, the highest rate ever established in the reserve banks.

Interest rates in the market advanced sharply in the second half of 1919, under the pressure of demands resulting from an expanding volume of business and rising prices, coincident with diminishing bank reserves, the result of gold exports. Call-money rates fluctuated violently from 2 to 30 per cent, and touched 15 per cent or a higher rate in every month but one from June to December. The commercial paper rate, however, held below 6 per cent for choice names throughout 1919.

In 1920, inflation culminated, with prices rising and gold exports continuing. The call rate for money ranged from as low as 5 to as high as 25, rising above 10 in ten of the twelve months, and commercial paper of the best class was quoted as high as 8 per cent throughout the last half of the year. Money was extremely tight.

*The Course of Prices.*

The peak of the commodity-price movement was reached in May 1920. The course of prices from 1915 to that date is indicated by the Bureau of Labour Statistics wholesale-price index, as given by its classified groups herewith :

| | 1913 = 100 | | | |
|---|---|---|---|---|
| | June 1915 | June 1918 | December 1918 | May 1920 |
| All commodities | 101 | 194 | 202 | 247 |
| Farm products | 101 | 210 | 227 | 241 |
| Woods | 102 | 180 | 206 | 248 |
| Cloths and clothing | 96 | 233 | 233 | 328 |
| Fuel and lighting | 81 | 169 | 179 | 239 |
| Metals and metal products | 102 | 184 | 187 | 202 |
| Building materials | 93 | 172 | 177 | 293 |
| Chemicals and drugs | 123 | 205 | 194 | 213 |
| House-furnishing goods | 100 | 152 | 163 | 247 |
| Miscellaneous | 93 | 160 | 163 | 208 |

The downward trend of prices following is shown by the composite index numbers for each succeeding month of 1920 after May as follows : June, 243; July, 241; August, 231; September, 226; October, 211; November, 196; December, 179; Average for the year, 226.

In 1921, prices continued downward, the composite index numbers at quarterly intervals being as follows : January, 170; April, 148; July, 141; October, 142; December, 140; average for the year, 147. The low point of the monthly average was reached in January 1922, at 138; by May it had recovered to 148, and the average for 1922 was 149. The average for each year, based on the monthly figures from 1918 to June 30th, 1930, has been as follows :

| | | | |
|---|---|---|---|
| 1918 | 194 | 1925 | 159 |
| 1919 | 206 | 1926 | 151 |
| 1920 | 226 | 1927 | 136 |
| 1921 | 147 | 1928 | 140 |
| 1922 | 149 | 1929 | 138 |
| 1923 | 154 | 1930 | 130 |
| 1924 | 150 | (first six months) | |

Naturally, a very serious depression in industry and trade accompanied this fall of prices. Heavy losses were suffered upon all stocks of commodities, many business failures occurred, business fell off very seriously in volume and much unemployment resulted.

*Liquidation of Credit.*

It is incorrect to attribute the fall of prices to a purpose or agressive policy on the part of the reserve banks as sometimes has been done. By the spring months of 1920, the reserve banks were expanded practically to the limit of their capacity under the law. The consolidated statement showed a small margin above the legal requirement; but, at the end of April, three of the twelve banks were carrying rediscounts for seven of the others; at the end of October three were rediscounting for seven of the others; and at the close of the year three were rediscounting for five of the others.

Obviously, the time had come when further credit expansion could serve no useful purpose, or be allowed under the provisions of the banking law. The policy of the reserve authorities was not directed to a reduction of available credit, but to a check upon continuing expansion. Unfortunately, inflation was under such headway that more inflation was constantly required to prevent a crisis. In its annual report at the end of 1919, the Board said :

> " The expansion of credit set in motion by the war must be checked. Credit must be brought under effective control and its flow be once more regulated and governed with careful regard to the economic welfare of the country and the needs of its producing industries."

This may be taken as a frank statement of the Board's animating purpose.

It is to be considered also that the decline of prices was already worldwide, the earliest development of the movement having appeared in a crisis in Japan in March 1920. By the fall months of that year it was recognised everywhere as a world movement. The staple export commodities of the United States were falling in all foreign markets before any reduction of the volume of reserve credit occurred, and obviously could not be sustained within the United States.

That the reserve banks were not reducing their outstanding credits during this period of stress is to be seen from the following figures of their total earning assets at dates from August 1st, 1919, to November 5th, 1920 :

TOTAL BILLS AND SECURITIES, ALL RESERVE BANKS.

| | $ |
|---|---|
| August 1st, 1919 | 2,468,086,000 |
| November 7th, 1919 | 2,923,204,000 |
| May 7th, 1920 | 3,214,357,000 |
| November 5th, 1920 | 3,421,575,000 |

Falling prices, however, undoubtedly had the effect of stimulating liquidation of both goods and indebtedness, for the motive to hold commodities no longer existed and owner-borrowers had become eager to realise on them. Banks, of course, were alert to protect their loans. The aggregate of bank credit in use on June 30th, 1920, and the corresponding dates of the following three years are shown by the figures given herewith :

AGGREGATE LOANS, DISCOUNTS AND INVESTMENTS.

| | June 30th 1920 | June 30th 1921 | June 30th 1922 | June 30th 1923 |
|---|---|---|---|---|
| | $ (000,000 omitted) | | | |
| Member and non-member Banks : | | | | |
| Loans and discounts... | 31,208 | 28,932 | 27,860 | 30,416 |
| Investments .......... | 11,387 | 11,382 | 12,547 | 13,672 |
| Total ... | 42,595 | 40,314 | 40,407 | 44,088 |

It will be seen that by June 30th, 1922, member and non-member banks were beginning again to buy bonds to employ their funds. By June 30th, 1923, a substantial business recovery was under way and the volume of credit was well above the 1920 figures. A new gold movement was largely responsible for the credit expansion.

*The Gold Movement,* 1920 *to* 1924.

In the latter part of 1920, the preponderant gold movement was inward and continued to be so on a large scale in 1921, 1922, 1923 and until December 1924, when the proceeds of the German loan began to move out.

When this import movement assumed importance in the fall of 1920, the rediscounts of the reserve banks aggregated $2,801,000,000 (October 29th), and by this time, by reason of slackening trade and falling prices, the loans of the member banks were declining. Accordingly, the latter gradually reduced their obligations at the reserve banks, as shown below. Total bill and security holdings of reserve banks, percentage of consolidated reserves and discount rate of New York Reserve Bank also are given.

| | Bills discounted all reserve banks | Total bills and securities | Discount rate New-York Reserve Bank |
|---|---|---|---|
| | $ (000,000's omitted) | | (Per cent) |
| **1920 :** | | | |
| December 30th | 2,719 | 3,263 | 7 |
| **1921 :** | | | |
| January 31st | 2,457 | 2,907 | 7 |
| February 28th | 2,389 | 2,841 | 7 |
| March 31st | 2,233 | 2,629 | 7 |
| April 30th | 2,076 | 2,453 | 7 |
| May 31st | 1,907 | 2,249 | 6½ |
| June 30th | 1,751 | 2,050 | 6 |
| September 30th | 1,413 | 1,685 | 5 |
| December 31st | 1,144 | 1,523 | 4½ |
| **1922 :** | | | |
| March 31st | 680 | 1,241 | 4½ |
| June 30th | 461 | 1,177 | 4 |
| August 31st | 397 | 1,084 | 4 |
| September 30th | 463 | 1,190 | 4 |
| December 31st | 597 | 1,226 | 4 |
| **1923 :** | | | |
| March 31st | 698 | 1,212 | 4 |
| June 30th | 836 | 1,144 | 4 |
| December 31st | 723 | 1,211 | 4 |
| **1924 :** | | | |
| March 31st | 447 | 1,009 | 4½ |
| June 30th | 333 | 802 | 3½ |
| December 31st | 314 | 1,249 | 3 |

During all of this period, from the latter part of 1920 to the end of 1924, gold was coming into the country in large amounts; but the first two years was a period of liquidation in which the attention of the business public was generally concentrated upon reducing liabilities, and the gold served no purpose except to reduce the amount of rediscounts. In the latter part of 1922 credit was in greater demand, particularly for the purchase of securities. In 1923, general business had a substantial revival and rediscounts increased; but in 1924 business slumped again and there was little demand for reserve credit. At no time in 1922, 1923 or 1924 was the discount rate of the Reserve Bank of New York above 4½ per cent, and except at brief periods it was at 4 per cent or lower, down to 3.

The gold holdings of the reserve banks were rising from $2,059,333,000 on December 31st, 1920, to $3,047,393,000 on December 31st, 1922, and slightly larger figures later. About this time the practice was inaugurated of paying gold certificates into circulation along with other currency, or the figures for gold holdings might have been higher. This subject will be referred to later.

*The Development of Speculation.*

The important features of this period were the credit crisis, the collapse of prices, the business depression, the resumption of gold imports at a time when the demand for credit was declining, and the development of speculation in securities.

As we have seen, money had been tight in the years immediately following the war and interest rates high. The Government's war issues clogged the security market and depressed the prices of stocks and bonds. However, the gold importations began to affect this situation. In 1922, the quoted interest rate on sixty-to-ninety day collateral loans averaged 4.55 per cent throughout the year; throughout 1923 about 5 per cent; throughout 1924 about 3.50 per cent; and throughout 1925, 1926 and 1927 under 5 per cent. In the earlier of these years, listed stocks and bonds could be bought at prices and carried at interest costs which afforded a profit from their current returns. This situation afforded the basis for the great speculation in securities which began in 1922, and absorbed an increasing amount of capital and credit until the latter part of 1929.

*Building Operations and Speculation.*

Real estate investments and speculation also were an important factor in this period. Building and constructional work of all kinds had been held in check during the war, and high interest rates exerted a similar effect, until about 1922, when real-estate operations became extensive, particularly in the suburbs of important cities. These and the security markets gradually absorbed the new credit supplies.

Industry and the regular lines of business had suffered great losses in the fall of prices in 1920-21, and were disinclined to extend their operations on borrowed money. Notwithstanding the severe decline of commodity prices from the high level of 1920, or perhaps because of it, the regular lines of business had apprehensions that prices might go lower. There was no speculation in merchandise, no fear of rising prices; hand-to-mouth buying was the rule. Predictions of a general inflation of commodity prices in the United States failed of realisation, although certain commodities, mainly raw products, advanced from the depressed level of 1921. It is a mistake to suppose that the failure of commodity prices to recover was due to any conscious purpose or policy on the part of the banking authorities. Commodity prices did not respond to the increasing supplies of money simply because the public did not wish to use credit for the purpose of holding commodities. There was little, if any, demand for money or credit for that purpose.

However, it is an axiom that money will find employment in some way, at some rate, and eventually the stock market developed a capacity to absorb all that was available.

Interest rates at first were low. The money markets of the United States were not an attraction accounting for the movement of gold to the country in the years prior to 1925, for rates were lower here than in Europe. The United States began to lend heavily abroad in 1924, and from 1924 to the first half of 1928 inclusive the aggregate of foreign flotations in the United States was $7,005,210,000.

*Causes of the Gold Movement.*

The main explanation of the causes of the gold movement into the United States in the years prior to 1925 is to be found in the disordered state of finance, industry, trade and social and political affairs in Europe, resulting from the war. The United States had the industrial capacity to supply goods that were wanted, its monetary system was firmly established on a gold basis, and it was far removed from the centre of the world's chief disorders. Not only were there large trade balances in its favour, but, most of the currencies of the world being off the gold basis, a strong inducement existed for residents elsewhere to establish reserves in this country. As illustrating this tendency, particular reference may be made to the fact that, when, in 1926-27, the currency of France was stabilised, the amount of French funds found to be temporarily employed in the New York market aggregated many hundreds of millions of dollars. There is reason to believe that capital was sent from many countries to the United States in the period named for safe temporary investment. It contributed to the rapid relaxation of the tension in the New York money market and to the rise of security prices.

Many foreign banking institutions, including Central Banks, deemed it desirable to maintain reserves in New York. The *Federal Reserve Bulletin*, official publication of the Federal Reserve Board, in its June 1927 issue, made the statement that, without attempting to determine the amount precisely, there was reason to believe that "perhaps as much as $1,000,000,000 of the operating reserves of foreign Central Banks is in the form of dollar exchange". Presumably, these reserves were maintained for the reason that New York exchange was a ready means of payment in any part of the world.

## The Third Period, 1925 to 1929.

The third period began with prospects for comparative stability. The reparation problem in Europe had been settled—at least, for a term of years—by the adoption of the Dawes Plan, and Germany was re-established on a gold basis. Early in the year, Great Britain and Holland restored the gold standard. Industry and trade were recovering, and the price situation appeared to have reached a fair state of stability. In the United States, industry was active, labour well employed and, although agriculture complained that its products were below the general parity with other products, even that situation appeared to be improving, and the way seemed clear for general prosperity. The state of business remained good throughout 1925 and 1926, but rising speculation in securities, especially stocks, was manifest, as confidence in a long period of prosperity strengthened.

The country lost $100,000,000 of gold in 1925, and regained approximately that amount in 1926, also gained another $100,000,000 in the forepart of 1927, before the heavy exports of that year began. Member and non-member loans, discounts and investments increased from $49,284,000,000 on June 30th, 1925, to $52,048,000,000 on June 30th, 1926; $54,525,000,000 on June 30th, 1927; and $58,728,000,000 on June 30th, 1929. The average of reserve bank credit outstanding in the first eight months of 1924 was $880,000,000, $1,053,000,000 in the corresponding period of 1925, $1,147,000,000 in 1926, and $1,011,000,000 in 1927. The reserve percentages of the reserve banks varied but little in these years. They recovered to 70 per cent in the latter part of 1921, partly by the general liquidation of credit and partly as a result of the gold importations. The consolidated statement did not show a percentage below 70 again until the last month of 1927.

### *Attitude Toward Gold Imports.*

The attitude of the reserve authorities and of bankers generally toward gold imports in these years was one of apprehension and anxiety. Far from being viewed as advantageous and desirable, they were regarded as abnormal, temporary, and, therefore, a menace to financial stability. Bankers generally viewed with misgivings the development of a structure of credit upon them, considering it probable that within a short time the re-establishment of Europe upon the gold basis, together with economic recovery, would result in the recall of a substantial portion of this gold, thereby possibly requiring a drastic contraction of credit in the United States. Competitive conditions practically compelled an expansion of credits, as additions to reserves occurred, but a wholesome prudence forbade them to incur continuing indebtedness at the reserve banks for the purpose of serving the speculative operations of the stock markets, by this time of increasing importance.

*Federal Reserve Policy.*

Throughout these years of gold imports from 1920 on, the management of the Federal Reserve Bank of New York was known to be in close relations, for purposes of conference and co-operation, with the authorities of the principal Central Banks of Europe, with a view to limiting, so far as practicable, this flow of gold. The inflow constantly exerted an inflationary influence in the security and other speculative markets, beyond the power of the reserve banks to control. Obviously, it is only as the member banks resort to the reserve banks that the latter are able to exert influence upon the credit situation; but, as will be seen, the member banks have very large powers of expansion on their own account.

From the middle of 1922 to the end of 1929, the discount rates of the Federal Reserve Bank of New York have been as follows, going into effect at the dates named :

| Date of taking effect | | Rate per cent |
|---|---|---|
| 1922 : | June 22nd | 4 |
| 1923 : | February 23rd | 4½ |
| | May 1st | 4 |
| | June 12th | 3½ |
| | August 8th | 3 |
| 1925 : | February 27th | 3½ |
| 1926 : | January 4th | 4 |
| | April 23rd | 3½ |
| | August 13th | 4 |
| 1927 : | August 5th | 3½ |
| 1928 : | February 3rd | 4 |
| | May 18th | 4½ |
| | July 13th | 5 |
| 1929 : | August 9th | 6 |
| | November 1st | 5 |
| | November 15th | 4½ |
| 1930 : | February 7th | 4 |
| | March 14th | 3½ |
| | May 2nd | 3 |
| | June 20th | 2½ |

From about the beginning of 1925 until the fall of 1927, the constant problem of the reserve authorities was to avoid, on the one hand, giving stimulus to the speculative fever at home by making money unduly cheap, and, on the other hand, to avoid giving encouragement to gold imports by making rates relatively high. The desire to favour foreign loan flotations in New York was a constant consideration.

The reduction of the discount rate from 4 to 3½ per cent on August 5th 1927, illustrates this problem, and was the subject of much controversy both within the reserve system and outside. At that time the efforts of Europe to re-establish the gold standard were still in an experimental stage. Gold had been lost to the United States in 1926 and in the first half of 1927 in amounts which aroused grave concern as to whether the payments running to the United States were not so large as to definitely unsettle the world equilibrium and prevent the maintenance of free gold payments in Europe. In April 1927, the Bank of England had ventured to reduce its discount rate from 5 to 4½ per cent, but the movement of exchange rates in the following July indicated that this action would have to be rescinded or gold would go to New York. The New York exchange rate in London fluctuated very close to the export point, and, with the season of heavy payments to America approaching, it seemed inevitable that, unless that rate declined, London would lose gold.

Lower interest rates in New York were deemed undesirable on account of the rising tide of speculation. On the other hand, general business was undergoing a recession, and on this account an advance of the discount rate seemed inopportune; moreover, gold imports would have unfavourable reactions in Europe, and might affect the usual fall purchases of American products. In view of these several considerations, the Federal Reserve Bank of New York reduced its rate to 3½ per cent on August 5th, 1927, and corresponding reductions were made by the other reserve banks, The effect upon exchange rates was immediate, the London rate of exchange on New York moving decisively away from the gold export point, which was not approached again that year. This incident illustrates the attitude and policy of the reserve authorities toward gold imports throughout the period under review. The international situation was constantly in view.

### *Restriction upon Reserve Banks.*

In considering the attitude of the reserve authorities toward stock-market loans in 1928 and 1929, it should be understood that the Reserve Act places a very definite ban upon loans based upon stocks and bonds. It was the deliberate intent of the makers of the law to establish restraints upon these banks which would prevent their resources from being drawn upon for speculative or even investment operations. The reserve banks were designed to support and facilitate the regular movement of goods in trade. Other operations are inhibited, except that the banks may buy, sell or lend upon certain public securities. Eligible paper is defined in Section 13 of the Federal Reserve Act as follows :

> " Upon the indorsement of any of its member banks, which shall be deemed a waiver of demand, notice and protest by such bank as to its own endorsement exclusively, any federal reserve bank may discount notes, drafts and bills of exchange arising out of actual commercial transactions —that is, notes, drafts and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used, or are to be used, for such purposes, the Federal Reserve Board to have the right to determine or define the character of the paper thus eligible for discount, within the meaning of this Act. Nothing in this Act contained shall be construed to prohibit such notes, drafts and bills of exchange, secured by staple agricultural products or other goods, wares, or merchandise from being eligible for such discount, and the notes, drafts and bills of exchange of factors issued as such making advances exclusively to producers of staple agricultural products in their raw state shall be eligible for such discount; *but such definition shall not include notes, drafts or bills covering merely investments or issued or drawn for the purpose of carrying or trading in stocks, bonds or other investment securities, except bonds and notes of the Government of the United States.* Notes, drafts and bills admitted to discount under the terms of this paragraph must have a maturity at the time of discount of not more than ninety days, exclusive of grace."

### *The Outward Movement of Gold in* 1927 *to* 1929.

In the last four months of 1927, an outward movement of gold set in which, before it ended, had taken the accumulations of the preceding five years. The exports of the four months were mainly traceable directly to loan flotations in the New York market. Argentina placed a loan of $40,000,000 and took in all over $61,000,000, the excess over the loan proceeds being mainly on European account in settlement of a favourable trade balance, created by a good crop year. Brazil placed a loan and withdrew $33,000,000 in gold, and the aggregate of American investments abroad in that year was in the neighbourhood of $1,000,000,000. Net gold exports in the four months were $140,000,000, and in the year approximately $100,000,000.

A significant shipment in the last month was one of $10,000,000 to Paris, which proved to be the beginning of a continuous movement which, before it ended in 1928, aggregated $345,000,000. Total exports in 1928 aggregated $560,759,000, against which, however, there were imports of $168,897,000, resulting in a net loss of $392,000,000.

The movement to France afforded tangible evidence of the abnormal character of much of the gold movement into the United States in the preceding years. Apparently, a feeling of alarm had existed in France during the time of monetary instability and had prompted the people of that country to accumulate these funds in the United States. It may be assumed that the banking policies in the United States had little or nothing to do with it, beyond the fact that the monetary system was on a free gold basis. In the latter part of July 1926, under the administration of M. Poincaré as Premier and Minister of Finance, with the co-operation of Parliament, a series of budgetary and financial measures were adopted which radically changed the situation and restored confidence in the currency. The result was that a return flow of capital to France began, and in the forepart of 1927 had reached large proportions. It was manifested in a rise of French exchange, which soon brought the franc back approximately to the level which had been for some time the basis of commodity prices in France. Inasmuch as a further rise threatened to disarrange price relationships and disturb business, the Government and Bank of France intervened at this point to effect at least a temporary stabilisation at approximately 25.5 francs to the dollar, which eventually was made permanent. This was accomplished by action of the Bank of France in buying foreign exchange offerings at this price, giving franc currency in exchange. This policy soon placed the Bank of France in possession of large holdings of funds in London, New York, and probably other gold standard countries. The first general knowledge of the extent of this accumulation of foreign exchange by the Bank was gained by the public when the Bank paid off a loan of approximately $160,000,000 at the Bank of England, in April 1927, although the loan had several years to run to maturity.

The security for this loan included a pledge of about $90,000,000 of gold, and, when this gold was released, the Bank began shipping it in $10,000,000 lots to New York. When $30,000,000 had been skipped, the federal authorities interrupted the movement by purchasing the remaining $60,000,000 to prevent its being brought to New York, and it was soon afterward disposed of in London. The incident testifies to the attitude of the federal reserve authorities toward gold imports at that time.

When the first statement of the Bank of France was published after the monetary reform, in June 1928, and figures were given of the Bank's foreign holdings, it was revealed that foreign exchange and foreign bills aggregated about $1,422,000,000. This was after withdrawals from the United States in 1927 and 1928, aggregating $250,000,000. What the accumulation of French funds in the United States aggregated at the high point has not been made public; but, evidently, this accumulation was an important factor in the increasing gold stock of the United States in the post-war period down to 1927, even though comparatively little of the gold came directly from France. The peak of gold holdings in the United States was touched in May 1927.

### *Conditions in the United States*, 1927 *to* 1929.

Reference has been made to the fact that the federal reserve authorities offered no opposition to the gold movement from the country in 1927. They had acted to curtail a movement from London to New York in the forepart of that year and had lowered the discount rate in August to avert imports. Moreover, to prevent the tightening of the home money market, which, naturally, would result from the gold exports and rising commercial demands of the fall months, they began open market purchases of both bills and Government bonds. From September 1st to December 31st, while bills discounted for member increased by $87,000,000, open market holdings of bills and Governments increased by $328,000,000. That this release of credit was sufficient to prevent any rise of interest rates in this period is evident from the fact that both call and time rates ranged lower than in the last half of either 1926 or 1925. The quoted range of time money, collateral security, in the last four months of 1927, was from 4.05 to 4.25 per cent.

Reference has been made to one circumstance influencing the reserve authorities to keep money cheap at this time—*i.e.*, the fact that trade was declining. The years 1925 and 1926 had been a period of sustained activity on a high level and signs of recession were evident. In the last quarter of the year unemployment was reaching serious proportions. Unquestionably, these conditions had an influence in moving the authorities to completely nullify the effects of gold exports upon the money market.

*Increasing Speculation.*

Meantime, speculation upon the Stock Exchange had been gaining headway. Notwithstanding the fact that general business was suffering a relapse, the volume of trading on the exchange was increasing, and prices achieved a substantial advance. Brokers' loans from all sources, as reported by the Stock Exchange authorities, aggregated $3,292,860,255 on January 1st, 1927, and $4,432,907,321 on January 1st, 1928, an increase of $1,140,167,066, or nearly one-third.

The reserve authorities had one eye on the business situation and one eye on this developing market situation. They did not wish to take any action unfavourable to business, but inclined to the opinion that the 3½ per cent discount rate was too helpful to the latter. On February 3rd, 1928, the discount rate was raised to 4 per cent.

The stock market was quiescent for a time after this, but, with the opening of spring, general business conditions showed improvement, and the speculative spirit grew stronger At the beginning of May, the Stock Exchange report showed brokers' loans at $4,907,000,000. On May 18th, the discount rate was raised to 4½ per cent.

Gold exports were continuing, the net loss from the monetary stock from January 1st to June 1st having been about $300,000,000, and, to meet the loss at a time of increasing demands for commercial credit, the banks had been increasing their rediscounts at the reserve banks. Reviving business was in part responsible for increased credit demands, but increasing speculation was a larger factor. At the beginning of June, Stock Exchange loans were $5,274,000,000.

*Rising Interest Rates.*

Interest rates in the market by this time were materially higher. On July 13th, the Federal Reserve Bank of New York raised its discount rate to 5 per cent. The member banks discriminated in favour of industry and trade, both in supplying accommodations and in the rate charged; but in the second half of 1928 choice commercial paper carried rates about 1½ per cent above those prevailing in the corresponding months of 1927. On collateral loans, the increase was greater. When the banks had supplied the wants of their regular customers, they assigned whatever supplies of credit they had remaining to the open market at current rates. Rates in the call market fluctuated wildly under the influence of daily supply and demand, 7 and 8 per cent becoming common rates, and higher ones not infrequent.

Prices for stocks had been rising over so long a period (with occasional recessions, since 1921) that the Stock Exchange clientele had become a very large one, and paper profits were large. In comparison with these profits, and talked-of profits yet to be made, interest charges, even at the high rates, seemed insignificant and exerted out a slight deterrent influence. Borrowers showed little anxiety about supplies of credit and indifference to interest rates. The high rates brought money from widening areas.

*Source of Funds.*

One important source was the deposit accounts of corporations in the financial centres. For some years, as a result of competitive conditions, the banks had followed the practice, upon request, of lending funds in the market for out-of-town banks and other valued customers. This practice developed rapidly as rates began to advance in 1928.

The Federal Reserve Bank of New York collects weekly from its member banks in New York City a report of their loans to brokers and dealers in stocks and bonds, and publishes the aggregate figures. These figures differ from the figures for brokers' borrowings given out by the Stock Exchange authorities, being smaller, because the latter include loans from other than member banks of the reserve system, but the reserve report is especially interesting on account of the analysis of sources. Below are the reserve figures for different dates in 1928 and 1929, showing the growth of loans for "Others"—which includes corporations and individuals—down to December 31st 1929.

LOANS TO BROKERS AND DEALERS IN STOCKS AND BONDS BY NEW YORK CITY MEMBERS OF THE FEDERAL RESERVE BANK OF NEW YORK.

| | Dec. 31st, 1929 | Oct. 30th, 1929 | June 26th, 1929 | Dec. 26th, 1928 | June 27th, 1928 | Jan. 4th 1928 |
|---|---|---|---|---|---|---|
| | | | $ (000,000's omitted) | | | |
| For own account..... | 1,167 | 2,069 | 1,038 | 1,109 | 941 | 1,511 |
| For out-of-town banks | 709 | 1,026 | 1,536 | 1,660 | 1,483 | 1,371 |
| For others .......... | 1,548 | 2,538 | 2,969 | 2,322 | 1,754 | 928 |
| Total ... | 3,633 | 5,633 | 5,543 | 5,091 | 4,178 | 3,810 |

It will be seen that, after the first half of 1928, the loans of this class by New York City member banks did not increase, except as occasionally these banks came into the situation to stabilise it. On October 30th, 1929, when the market collapsed, and outside money was largely withdrawn, they came in for a large increase with the help of the reserve banks.

Thus it appears that the attempt of the banking authorities to prevent an excessive absorption of credit by the speculative market was defeated by an influx of outside funds. The market, by the payment of high interest rates, was successful in attracting money from many sources, including the most valued patrons of the banks. Furthermore, funds came from many countries, particularly from Europe, partly for loans at the high rates, partly for participation in the chances for profit.

When the time of year came for regular credit expansion to care for moving the crops and the expansion of fall trade, the reserve authorities found it advisable to release credit more freely, in order to avoid the construction of trade, and this credit, once released, passed into general circulation and tended to ease the situation in all divisions of the money market. The money market can not be divided into watertight compartments.

From a total of $4,837,000,000 of brokers' loans reported by the Stock Exchange on August 1st, 1928, the aggregate rose to $6,439,000,000 on January 1st, 1929, $7,071,000,000 on July 1st, and $8,549,000,000 on October 1st. Then it dropped to $5,108,000,000 on November 1st, and $3,989,000,000 on January 1st 1930.

### *Effects upon General Business.*

The general volume of trade was high throughout the second half of 1928, and rose higher in the first half of 1929. According to the index of production used by the Department of Commerce, the highest point reached since the war was touched in June 1929. The earnings statements of the leading corporations whose stocks are listed on the New York exchanges, for the first six months of 1929, gave a new impetus to the rise of prices on the exchanges, and particularly to the organisation of stock-trading corporations and investment trusts.

It was not easy to find evidence in this period that general business was suffering from stringency of high interest rates. Banks generally cared for regular customers at moderate rates, but call money was high and very irregular and time money on collateral security commanded about 8 per cent in 1929.

### *Effects upon the Bond Market.*

Little was doing in the regular bond market after the middle of 1928, although bonds having a privilege of conversion into stock sold to very good advantage. The public was full of confidence in the future of the leading industries, and wanted a share in equities rather than in fixed obligations. It was not difficult to raise capital for new enterprises or the enlargement of old ones, but the offerings had to be of the former instead of the latter class.

TOTAL NEW CAPITAL ISSUES.

($ 000's omitted)

| Year | Domestic corporate bonds and notes | Domestic stocks | Domestic municipals [1] | Foreign issues | Total |
|---|---|---|---|---|---|
| 1925.......... | 2,451,962 | 1,152,542 | 1,529,505 | 1,086,161 | 6,220,170 |
| 1926.......... | 2,666,864 | 1,087,082 | 1,445,089 | 1,145,100 | 6,344,135 |
| 1927.......... | 3,182,736 | 1,474,065 | 1,573,209 | 1,561,120 | 7,791,130 |
| 1928.......... | 2,385,338 | 2,960,730 | 1,449,158 | 1,319,169 | 8,114,395 |
| 1929.......... | 2,078,177 | 5,933,886 | 1,424,963 | 757,837 | 10,194,863 |

The aggregate of flotations increased largely in the last three years. Foreign issues, consisting mainly of bonds, declined in the last two years. Domestic stock issues constituted more than one-half of the total in 1929. Domestic bond issues declined, but the most notable feature of this class of financing is not shown by the record—to wit, the fact that the greater part of these issues were of the convertible class. The influence of high interest rates in the short-term market upon the bond holdings of banks was seen in a decline of bank investments from $10,758,000,000 on June 30th, 1928, to $9,749,000,000 on October 1st, 1929.

### *Unfavourable Developments.*

Notwithstanding the general state of activity among the industries in 1928 and 1929, there were signs that the high interest rates and prevalence of speculation were having undesirable effects. Savings-bank deposits were tending to decline rather than increase, due to the attractiveness of stock speculation or high interest rates in the market. Mortgage loans upon real estate were becoming difficult to renew, owing to efforts to withdraw funds for other investment. Mortgage money to finance building operations was becoming unobtainable. These were symptoms of abnormal conditions, and signs of extravagant living indicated that many persons were adapting their expenditures to expectations that were not to be realised. Such expenditures created an artificial demand for goods, which has made the depression of 1930 more striking in contrast.

[1] Including farm land bank issues.

In the latter part of the year, the worldwide decline of prices for agricultural products and raw materials became a pronounced factor in the situation, affecting both domestic and foreign trade.

*Gold Imports.*

The high interest rates prevailing in the latter part of 1928 induced a renewal of gold imports, which continued on an important scale until after the break in the stock market in October 1929. The aggregate of this movement was over $300,000,000. This gold, entering the member banks of the reserve system, enabled them to accomplish a considerable expansion of loans without using reserve credit. The amount of reserve credit in use was not, on the average, greater in 1929 than in 1928. The great market speculation financed itself by drawing resources from far and wide in defiance of efforts to stop it.

*Treasury Gold Certificates.*

It is apparent that the Treasury Gold Certificates, which have been a feature of the monetary system of the United States for fifty years or more, have been a subject of some misunderstanding in connection with the policies of the reserve banks. These certificates are no part of the currency system established by the Federal Reserve Act. They were authorised long before, as a means of facilitating the use of paper money in circulation in place of coin. The Treasury was authorised to receive gold and issue certificates in equal amounts therefor, and these certificates have been an important part of the monetary circulation ever since. They simply show that the Treasury holds certain amounts of gold, payable to bearer, or in some instances to order. As one factor in the monetary system they have played a part somewhat similar to that of the Bank of England notes which are issued against equal amounts of gold.

The United States Government has long maintained an assay office in New York, where all importations of gold at that port have been received, assayed and purchased on Treasury account, there being no mint in New York. Importers elect to receive pay for this gold in Treasury drafts or gold certificates, instead of gold coin, as provided in the coinage law. No change in this system was made by the Federal Reserve Act. The reserve banks do not conduct assaying operations, but the gold certificates thus issued find their way into the member banks, the reserve banks and circulation. The gold behind the certificates is in Treasury vaults. The certificates are a lawful reserve for the reserve banks, the same as gold itself.

When the reserve banks began business in 1914, the amount of gold certificates in circulation was $1,080,974,869. The amount outstanding has varied, as gold was being imported or exported, and the amount of the certificates held by the reserve banks has varied, as these banks were interested or not in building up their reserves. In 1920 and following, when the reserve ran low, they held on to all the certificates that came their way, replacing them in circulation by federal reserve notes, but afterward, when the reserve percentages mounted up into the seventies, they were paid out with other currency about as received. The amount in circulation has remained around $1,000,000,000.

On June 30th, 1930, the total amount outstanding was $1,489,989,000, of which $495,000,000 were in the reserve banks and $994,841,000 were in circulation. If all were in the reserve banks, the reserve percentage would be higher than it is; but, with the reserve percentage above 70, it has not been considered important to increase it. Indeed, at a time when inflationary tendencies were apparent, a psychological consideration may have been a factor in the policy followed.

However, the policy has been of no tangible or traceable effect, except upon the reserve percentage. At the date of this writing the last consolidated statement of the reserve banks (August 6th, 1930) shows a gold reserve of 78.7 per cent. If all of the gold certificates had been added to the reserves and reserve notes placed in circulation instead, it is evident that these additional reserve notes would have been secured, dollar for dollar by gold, like non-fiduciary Bank of England notes. The new reserve percentage would have been a trifle higher (approximately 88 per cent), but, with the discount rate of the New York Reserve Bank already at 2½ per cent, it is not conceivable that such a change would make any difference in the lending policy of the reserve system.

*Summary of Credit Expansion.*

Summarising this review, it may be said that the gold movements into and from the United States since 1914 have been extraordinary and abnormal, resulting, in the main, from causes arising either directly or indirectly from the great war, and in comparatively slight degree subject to banking control. Notwithstanding the high reserve percentages of reserve banks, as calculated in relation to their own note and deposit liabilities, the expansion of bank credit in the United States has been very large—from less than $21,000,000,000 in 1914 to above $58,000,000,000 in 1929. As is well known, the reserve banks were superimposed upon an existing banking system, already sufficiently developed to care for the ordinary needs of the country, the purpose being to concentrate the reserves that had been scattered among thousands of banks. The gold holdings of the reserve banks must be considered in relation to the entire credit structure of the country, and the latter has grown more than in proportion to the increasing gold stock.

The official figures show that, with a gain of $2,433,000,000 in the country's gold stock, from June 1914 to June 1929, additional bank credit to the amount of $37,685,000,000 was put into circulation, or more than $15 of bank credit to each additional dollar of gold. [1] In view of the final results of that credit expansion many persons have been of the opinion that it went quite far enough, for the good of the whole world.

In order to understand how this vast expansion has occurred, it is necessary to appreciate the lending resources which the local banks have, without aid from the reserve banks, but by reason of the concentration of cash reserves in the reserve banks. Gold imports find their way through the member banks of the system to the reserve banks, and credits at the latter enable the member banks to increase their loans, on the average, approximately thirteen to one. Naturally, the member banks, relying upon the reserve banks for aid in emergencies, seek to make full employment of their own lending power. Against time deposits, defined as those upon which more than thirty days' notice of withdrawal must be given, the required reserve is but 3 per cent. It must be understood, also, that banks outside of the reserve system use reserve currency and rely upon member banks for credit accommodations, thus increasing the amount of credit based upon the gold reserves. All of this is credit expansion quite independent of any regulation by the reserve authorities, free and subject to the competitive conditions naturally existing among thousands of independent banking institutions. Credit expansion through rediscounts by the reserve banks is additional.

*Gold Reserves in Relation to Currency and Banking Liabilities.*

The relation of gold reserves to the volume of currency and bank deposits in the country as at July 1st, 1928, and 1929, is shown by the following table. Gold holdings increased and bank deposits decreased slightly from the first date to the second, with a resulting rise of the reserve percentage :

[1] " When member bank deposits increase, their reserve requirements and their need for balances at the reserve banks are likewise increased, but an increase of $100 of deposits under the law causes an increase of reserve requirements of only $7.50 on the average " (see *Federal Reserve Bulletin*, June 1930, page 342).

## Currency and Banking Systems of the United States.

$ (000,000's omitted)

| | July 1st, 1928 | July 1st, 1929 |
|---|---|---|
| Total gold coin and bullion in United States Treasury and federal reserve banks[1] | 3,732 | 3,956 |
| Credit currency in circulation (outside Treasury and reserve banks | 4,420 | 4,378 |
| Individual deposits in all member and local banks (including Government deposits and certified cheques) | 54,275 | 54,261 |
| Deduct till money | 888 | 820 |
| Net deposit liabilities | 53,387 | 53,441 |
| Total currency and deposit liabilities | 57,807 | 57,819 |
| Of gold reserve to liabilities | 6.46 | 6.84 |

This is not intended to be an argument against a reduction of the reserve percentage of the Federal Reserve System, either by a relinquishment of gold or an increase of loans and deposits in the banking system, but simply to set forth the present credit situation in the United States. It need not be doubted that the monetary and banking systems of the world can be safely conducted upon very much smaller gold reserves than, according to conventional ideas, have been thought necessary, or desirable, in the past.

It is intended, however, to indicate that, judged by reserve standards generally accepted in the past, the banking system of the United States has not been unduly conservative in supplying credit. There has been no locking up or sterilisation of gold, in the sense of withdrawing it from the use of trade and industry, of placing unusual conditions or charges upon its use, or of raising obstacles to its free movement to other countries. The only feature of reserve bank policy which has afforded any basis for complaint of restriction has been in its refusal to contribute to the support of one of the wildest outbursts of speculative mania known to financial history. The central banking authorities of every country undoubtedly have a responsibility for the maintenance of sound credit conditions, in their own countries, and for their proper share in maintaining the financial equilibrium of the world. It cannot be any part of their functions to promote a speculative movement which is absorbing vast sums of credit at the expense of industry and trade, or to stimulate an unhealthful state of inflation in the general business situation of their own countries. It seems entirely reasonable to say that whatever maldistribution of gold may have resulted from the great upheaval due to the war should be corrected through some other policy than this.

In considering the great expansion of bank credit in recent years with special regard to its relations to industry and trade, it is worthy of note that the increased use of credit since the time of deflation in 1921 has been principally for other than commercial loans. Confining this comment for the moment to member banks of the reserve system, which are the banks which have the largest proportion of demand deposits and of commercial business, total loans and investments increased from $24,121,000,000 on June 30th, 1921, to $35,711,000,000 on June 30th, 1929, or by $11,590,000,000, of which increase $4,000,000,000 was in investments (bonds), the purchase of which by commercial banks indicates a dearth of commercial paper. Loans on securities increased in the same period from $6,921,000,000 to $9,759,000,000 and loans on real estate from $1,135,000,000 to $3,164,000,000. These three classes account for nearly $9,000,000,000 of the total increase, and it cannot be said that all of the remainder was strictly commercial paper.

[1] Including Treasury Gold Certificates.

These figures indicate that the capacity of these banks to provide credit was increasing faster than the demand for the short-term credit required by trade and industry and that they went into other field to employ their funds. Commercial paper would have been their first choice.

In view of the great absorption of bank credit in recent years for other than purposes which have a first claim on banking resources, there seems to be good reason to question that the present industrial depression has had its origin in a deficiency of bank reserves or Gank credit. The changes in the production of gold are small in comparison with the fluctuations which have occurred in the volume of credit. Upon this point the following paragraph from editorial comment in the *Federal Reserve Bulletin* of June 1930, is offered as pertinent :

> " There appears to be no evidence in the available information that price declines in recent years have at any time reflected a general shortage of banking reserves, or of gold, but there are indications that the diversion of funds to this country during the period of high money rates contributed to the difficulties of economic reconstruction in Europe. Reduced industrial activity abroad, in turn, diminished the demand for raw materials and was a factor in the price decline. Furthermore, unfavourable conditions in our bond market in 1929 made it difficult for foreign countries to arrange for long-time financing in this country, and were a further factor tending to delay industrial recovery abroad and to depress the world level of commodity prices."

Economists generally are agreed that, in the long run, the distribution of gold among the countries must be determined by the natural economic forces. The goods which move in trade, and the capital which is transferred from country to country for investment, are private property, controlled by the owners, who will be actuated by economic motives and conditions. The world has not yet recovered its economic equilibrium from the vast disturbance occasioned by the war, and it may be that this disturbance is responsible, not only for a maldistribution of gold, but for maladiustments in trade relations which are of even greater importance.

# Annex A.

## MONETARY GOLD STOCK OF UNITED STATES, 1914 TO 1930.

(Millions of dollars)

| End of month | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 |
|---|---|---|---|---|---|---|---|---|---|
| January.... | 1,922 | 1,922 | 2,325 | 2,922 | 3,160 | 3,162 | 2,929 | 2,966 | 3,685 |
| February... | 1,919 | 1,838 | 2,325 | 2,996 | 3,162 | 3,165 | 2,887 | 3,000 | 3,723 |
| March...... | 1,931 | 1,869 | 2,323 | 3,105 | 3,165 | 3,165 | 2,850 | 3,086 | 3,570 |
| April....... | 1,941 | 1,893 | 2,318 | 3,137 | 3,166 | 3,177 | 2,841 | 3,164 | 3,764 |
| May ....... | 1,929 | 1,929 | 2,336 | 3,133 | 3,172 | 3,177 | 2,856 | 3,231 | 3,771 |
| June....... | 1,891 | 1,985 | 2,445 | 3,220 | 3,163 | 3,113 | 2,865 | 3,275 | 3,875 |
| July ....... | 1,859 | 2,007 | 2,506 | 3,190 | 3,162 | 3,064 | 2,862 | 3,347 | 3,829 |
| August..... | 1,853 | 2,076 | 2,549 | 3,165 | 3,161 | 3,124 | 2,851 | 3,439 | 3,855 |
| September . | 1,844 | 2,123 | 2,630 | 3,151 | 3,153 | 3,147 | 2,873 | 3,519 | 3,873 |
| October .... | 1,808 | 2,198 | 2,713 | 3,153 | 3,156 | 3,103 | 2,868 | 3,572 | 3,888 |
| November .. | 1,807 | 2,260 | 2,736 | 3,154 | 3,159 | 3,044 | 2,897 | 3,627 | 3,906 |
| December .. | 1,813 | 2,312 | 2,843 | 3,155 | 3,160 | 2,994 | 2,926 | 3,660 | 3,929 |

| End of month | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 |
|---|---|---|---|---|---|---|---|---|
| January ... | 3,952 | 4,289 | 4,423 | 4,412 | 4,564 | 4,373 | 4,127 | 4,293 |
| February... | 3,963 | 4,323 | 4,369 | 4,423 | 4,586 | 4,362 | 4,153 | 4,355 |
| March...... | 3,970 | 4,364 | 4,346 | 4,441 | 4,597 | 4,304 | 4,188 | 4,423 |
| April....... | 3,982 | 4,411 | 4,350 | 4,438 | 4,610 | 4,266 | 4,260 | 4,491 |
| May ....... | 4,028 | 4,455 | 4,361 | 4,433 | 4,608 | 4,160 | 4,301 | 4,517 |
| June....... | 4,049 | 4,488 | 4,365 | 4,447 | 4,587 | 4,109 | 4,324 | 4,534 |
| July ....... | 4,079 | 4,511 | 4,370 | 4,471 | 4,580 | 4,112 | 4,341 | |
| August .... | 4,111 | 4,521 | 4,383 | 4,473 | 4,588 | 4,123 | 4,360 | |
| September . | 4,136 | 4,511 | 4,381 | 4,466 | 4,571 | 4,125 | 4,372 | |
| October .... | 4,167 | 4,509 | 4,407 | 4,473 | 4,541 | 4,142 | 4,386 | |
| November .. | 4,207 | 4,527 | 4,397 | 4,477 | 4,451 | 4,128 | 4,366 | |
| December .. | 4,244 | 4,499 | 4,399 | 4,492 | 4,379 | 4,141 | 4,284 | |

# Annex B.

## CONDITION OF ALL MEMBER BANKS OF THE RESERVE SYSTEM.

(Millions of dollars)

| Call date | Number of banks | Total loans and investments | Total loans | Investments: Total | Investments: United States securities | Investments: Other | Total deposits |
|---|---|---|---|---|---|---|---|
| 1914 : December 31st | 7,582 | 8,498 | 6,419 | 2,079 | 760 | 1,319 | 8,305 |
| 1915 : June 23rd | 7,615 | 8,764 | 6,720 | 2,044 | 749 | 1,295 | 8,894 |
| December 31st | 7,631 | 9,861 | 7,622 | 2,239 | 742 | 1,497 | 10,636 |
| 1916 : June 30th | 7,606 | 10,315 | 7,964 | 2,351 | 703 | 1,648 | 11,133 |
| December 27th | 7,614 | 11,275 | 8,714 | 2,561 | 690 | 1,871 | 12,661 |
| 1917 : June 20th | 7,653 | 12,453 | 9,370 | 3,083 | 1,065 | 2,018 | 13,397 |
| December 31st | 7,907 | 16,896 | 12,316 | 4,580 | 1,759 | 2,820 | 18,628 |
| 1918 : June 29th | 8,213 | 18,507 | 13,233 | 5,274 | 2,465 | 2,809 | 18,954 |
| December 31st | 8,692 | 20,593 | 14,224 | 6,368 | 3,472 | 2,896 | 21,457 |
| 1919 : June 30th | 8,822 | 22,242 | 15,414 | 6,827 | 3,803 | 3,024 | 22,833 |
| December 31st | 9,066 | 24,778 | 18,149 | 6,630 | 3,324 | 3,306 | 26,139 |
| 1920 : June 30th | 9,399 | 25,559 | 19,533 | 6,026 | 2,811 | 3,215 | 25,401 |
| December 29th | 9,606 | 25,531 | 19,555 | 5,976 | 2,619 | 3,357 | 24,220 |
| 1921 : June 30th | 9,745 | 24,121 | 18,119 | 6,002 | 2,561 | 3,441 | 23,350 |
| December 31st | 9,779 | 23,482 | 17,394 | 6,088 | 2,581 | 3,507 | 23,247 |
| 1922 : June 30th | 9,892 | 24,182 | 17,165 | 7,017 | 3,205 | 3,812 | 25,547 |
| December 29th | 9,859 | 25,579 | 17,930 | 7,649 | 3,754 | 3,896 | 27,288 |
| 1923 : June 30th | 9,856 | 26,507 | 18,750 | 7,757 | 3,835 | 3,922 | 27,088 |
| December 31st | 9,774 | 26,487 | 18,842 | 7,645 | 3,603 | 4,042 | 28,507 |
| 1924 : June 30th | 9,650 | 27,167 | 19,204 | 7,963 | 3,575 | 4,387 | 29,566 |
| December 31st | 9,587 | 28,746 | 19,933 | 8,813 | 3,874 | 4,939 | 32,384 |
| 1925 : June 30th | 9,538 | 29,518 | 20,655 | 8,863 | 3,780 | 5,082 | 32,457 |
| December 31st | 9,489 | 30,884 | 21,996 | 8,888 | 3,728 | 5,160 | 34,250 |
| 1926 : June 30th | 9,375 | 31,184 | 22,060 | 9,123 | 3,745 | 5,378 | 33,762 |
| December 31st | 9,260 | 31,642 | 22,652 | 8,990 | 3,389 | 5,601 | 34,528 |
| 1927 : June 30th | 9,099 | 32,756 | 22,938 | 9,818 | 3,796 | 6,022 | 35,398 |
| December 31st | 9,034 | 34,247 | 23,886 | 10,361 | 3,978 | 6,838 | 36,669 |
| 1928 : June 30th | 8,929 | 35,061 | 24,303 | 10,758 | 4,225 | 6,534 | 36,060 |
| December 31st | 8,837 | 35,684 | 25,155 | 10,529 | 4,312 | 6,217 | 39,075 |
| 1929 : June 30th | 8,707 | 35,711 | 25,658 | 10,052 | 4,155 | 5,897 | 35,893 |
| December 31st | 8,522 | 35,934 | 26,150 | 9,782 | 3,862 | 5,920 | 38,013 |
| 1930 : March 27th | 8,406 | 35,055 | 25,118 | 9,936 | 4,085 | 5,851 | 35,836 |

# Annex C.

## ALL BANKS IN THE UNITED STATES.

(Millions of dollars)

| June 30th | Number of Banks | Total resources | Loans and discounts | Investments | Capital and surplus | Individual deposits |
|---|---|---|---|---|---|---|
| 1915......... | 27,062 | 27,804 | 15,722 | 5,882 | 3,896 | 18,966 |
| 1916......... | 27,513 | 32,271 | 17,812 | 6,796 | 4,045 | 22,526 |
| 1917......... | 27,923 | 37,126 | 20,594 | 8,004 | 4,220 | 26,058 |
| 1918......... | 28,880 | 40,276 | 22,515 | 9,742 | 4,386 | 27,716 |
| 1919......... | 29,123 | 47,615 | 25,301 | 12,230 | 4,619 | 32,629 |
| 1920......... | 30,139 | 53,079 | 31,208 | 11,387 | 5,113 | 37,268 |
| 1921......... | 30,812 | 49,671 | 28,932 | 11,382 | 5,446 | 34,791 |
| 1922......... | 30,389 | 50,425 | 27,860 | 12,547 | 5,641 | 37,144 |
| 1923......... | 30,178 | 54,035 | 30,416 | 13,672 | 5,852 | 39,984 |
| 1924......... | 29,348 | 57,145 | 31,427 | 14,229 | 6,082 | 42,904 |
| 1925......... | 28,841 | 62,057 | 33,884 | 15,400 | 6,343 | 46,715 |
| 1926......... | 28,146 | 64,893 | 36,233 | 15,815 | 6,745 | 48,827 |
| 1927......... | 27,061 | 68,133 | 37,270 | 17,255 | 7,141 | 51,062 |
| 1928......... | 26,213 | 71,574 | 39,542 | 18,772 | 7,651 | 53,245 |
| 1929......... | 25,330 | 72,173 | 41,376 | 17,349 | 8,408 | 53,138 |
| 1930[1]........ | 24,223 | | 40,686 | 16,700 | | 53,185[2] |

[1] March 27th, 1930.
[2] Total deposits.

## Annex D.

# CALL LOAN RATE, PER CENT.

*Monthly and Annual High and Low.*

| | January | February | March | April | May | June | July | August | September | October | November | December | Year |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1914 : High .. | 10 | 3 | 2 | 2 | 2 | 2½ | 7 | 8 | 8 | 8 | 6 | 5 | 10 |
| Low .. | 1½ | 1½ | 1¾ | 1½ | 1½ | 1½ | 1¾ | 6 | 6 | 5½ | 4½ | 2½ | 1½ |
| 1915 : High .. | 3 | 2½ | 2½ | 2½ | 2½ | 2 | 2 | 2 | 2 | 2 | 2 | 2½ | 3 |
| Low .. | 1½ | 1¾ | 1½ | 1¼ | 1 | 1 | 1½ | 1½ | 1½ | 1½ | 1½ | 1½ | 1 |
| 1916 : High .. | 3 | 2½ | 2¼ | 3 | 3½ | 4 | 6 | 3 | 3 | 4 | 6½ | 15 | 15 |
| Low .. | 1½ | 1½ | 1¾ | 1¾ | 1½ | 2½ | 2 | 2 | 2 | 2 | 2 | 2 | 1½ |
| 1917 : High .. | 3 | 3 | 2½ | 4 | 4½ | 6 | 10 | 6 | 7 | 6 | 6 | 6 | 10 |
| Low .. | 1½ | 1½ | 2 | 2 | 2 | 2 | 1½ | 2 | 2½ | 2 | 2½ | 3 | 1½ |
| 1918 : High .. | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Low .. | 2¾ | 3 | 2½ | 2 | 2 | 3 | 3½ | 4½ | 5 | 4 | 5 | 3½ | 2 |
| 1919 : High .. | 6 | 7 | 6 | 6 | 6 | 15 | 18 | 6 | 15 | 19 | 30 | 25 | 30 |
| Low .. | 3¾ | 3¾ | 3¾ | 4 | 3½ | 4¾ | 5 | 3 | 4 | 4 | 2 | 5 | 2 |
| 1920 : High .. | 20 | 25 | 15 | 15 | 12 | 15 | 11 | 10 | 9 | 10 | 10 | 7 | 25 |
| Low .. | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 5 | 6 | 5 |
| 1921 : High .. | 7 | 9 | 7 | 7 | 8 | 7½ | 6½ | 6 | 6 | 6 | 6 | 6 | 9 |
| Low .. | 6 | 6 | 6 | 5 | 6½ | 5 | 3½ | 4½ | 4½ | 4 | 4 | 4½ | 3½ |
| 1922 : High .. | 6 | 6 | 3½ | 5 | 5 | 5½ | 5 | 5 | 6 | 6 | 6 | 5½ | 6 |
| Low .. | 3 | 4 | 3 | 3½ | 3 | 2¾ | 2¾ | 3 | 3½ | 4 | 3½ | 3¾ | 2¾ |
| 1923 : High .. | 5½ | 6 | 6 | 6 | 6 | 6 | 6 | 5½ | 6 | 6 | 5½ | 6 | 6 |
| Low .. | 3½ | 4 | 4½ | 4 | 4 | 4 | 4 | 4½ | 3½ | 4 | 4½ | 4½ | 3½ |
| 1924 : High .. | 6 | 5½ | 5½ | 5½ | 4½ | 3 | 3 | 2 | 3 | 3 | 4 | 5½ | 6 |
| Low .. | 3¾ | 4 | 2½ | 3½ | 2¾ | 2 | 2 | 2 | 2 | 2 | 2 | 2½ | 2 |
| 1925 : High .. | 4½ | 5 | 5 | 4½ | 4½ | 6 | 5 | 4½ | 6 | 5½ | 5 | 6 | 6 |
| Low .. | 2 | 3 | 3 | 3½ | 3½ | 3¾ | 3½ | 4 | 3½ | 4 | 4½ | 4½ | 2 |
| 1926 : High .. | 6 | 5½ | 5½ | 5½ | 4½ | 5 | 5 | 5 | 6 | 5½ | 5½ | 6 | 6 |
| Low .. | 4 | 4 | 4 | 3 | 3½ | 3½ | 4 | 4 | 4½ | 4 | 4¼ | 4½ | 3 |
| 1927 : High .. | 5 | 5 | 4½ | 5 | 4½ | 5 | 4½ | 4 | 4½ | 4½ | 4½ | 5½ | 5½ |
| Low .. | 4 | 3¾ | 3½ | 4 | 4 | 4 | 3½ | 3½ | 3½ | 3½ | 3½ | 4 | 3½ |
| 1928 : High .. | 5½ | 4½ | 5 | 6 | 6½ | 8 | 10 | 8 | 9 | 10 | 10 | 12 | 12 |
| Low .. | 3½ | 4 | 4¼ | 4½ | 4½ | 5½ | 5 | 4½ | 6 | 6 | 6 | 6 | 3½ |
| 1929 : High .. | 12 | 9 | 20 | 16 | 15 | 10 | 15 | 12 | 10 | 10 | 6 | 6 | 20 |
| Low .. | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 4½ | 4½ | 4½ |
| 1930 : High .. | 6 | 4½ | 4½ | 4 | 4 | 3 | 3 | — | — | — | — | — | — |
| Low .. | 4 | 4 | 2 | 3½ | 3 | 1½ | 2 | — | — | — | — | — | — |

## Annex E.

### AVERAGE OF HIGH AND LOW WEEKLY RATES.

*On Four to Six Months' Commercial Paper (Choice).*

| | January | February | March | April | May | June | July | August | September | October | November | December | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1914 ........ | 4.53 | 3.84 | 3.88 | 3.73 | 3.88 | 3.84 | 4.40 | 6.34 | 6.70 | 6.44 | 5.50 | 4.35 | 4.78 |
| 1915 ........ | 3.84 | 3.75 | 3.38 | 3.66 | 3.72 | 3.65 | 3.25 | 3.53 | 3.25 | 3.22 | 2.98 | 3.31 | 3.45 |
| 1916 ........ | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.63 | 3.97 | 3.73 | 3.38 | 3.38 | 3.50 | 3.91 | 3.43 |
| 1917 ........ | 3.55 | 4.09 | 4.13 | 4.28 | 4.83 | 5.00 | 4.68 | 4.81 | 5.38 | 5.38 | 5.47 | 5.50 | 4.74 |
| 1918 ........ | 5.58 | 5.69 | 5.88 | 5.90 | 5.88 | 5.88 | 5.88 | 5.94 | 6.00 | 6.00 | 5.97 | 5.86 | 5.87 |
| 1919 ........ | 5.19 | 5.19 | 5.38 | 5.38 | 5.38 | 5.53 | 5.42 | 5.38 | 5.38 | 5.38 | 5.50 | 5.88 | 5.42 |
| 1920 ........ | 6 00 | 6.41 | 6.68 | 6.81 | 7.16 | 7.72 | 7.84 | 8.00 | 8.00 | 8.00 | 7.94 | 7.88 | 7.37 |
| 1921 ........ | 7.83 | 7.75 | 7.63 | 7.55 | 6.88 | 6.63 | 6.28 | 6.00 | 5.90 | 5.65 | 5.13 | 5.13 | 6.53 |
| 1922 ........ | 4.88 | 4.88 | 4.78 | 4.60 | 4.25 | 4.05 | 3.94 | 3.91 | 4.25 | 4.38 | 4.63 | 4.63 | 4.43 |
| 1923 ........ | 4.63 | 4.69 | 5.00 | 5.13 | 5.13 | 4.88 | 4.94 | 5.03 | 5.16 | 5.13 | 5.09 | 4.98 | 4.98 |
| 1924 ........ | 4.88 | 4.78 | 4.59 | 4.63 | 4.23 | 3.91 | 3.53 | 3.23 | 3.13 | 3.13 | 3.28 | 3.56 | 3.91 |
| 1925 ........ | 3.63 | 3.65 | 3.94 | 3.95 | 3.88 | 3.88 | 3.93 | 4.00 | 4.25 | 4.44 | 4.38 | 4.38 | 4.03 |
| 1926 ........ | 4.31 | 4.19 | 4.28 | 4.19 | 4.00 | 3.88 | 3.97 | 4.25 | 4.43 | 4.50 | 4.44 | 4.38 | 4.24 |
| 1927 ........ | 4.13 | 3.88 | 4.00 | 4.09 | 4.13 | 4.13 | 4.06 | 3.90 | 3.91 | 4.00 | 3.94 | 3.95 | 4.01 |
| 1928 ........ | 3.88 | 4.00 | 4.15 | 4.40 | 4.55 | 4.70 | 5.13 | 5.39 | 5.59 | 5.50 | 5.38 | 5.43 | 4.84 |
| 1929 ........ | 5.50 | 5.56 | 5.69 | 5.90 | 6.00 | 6.00 | 6.00 | 6.09 | 6.13 | 6.13 | 5.41 | 5.00 | 5.78 |
| 1930 ........ | 4.85 | 4.63 | 4.19 | 3.88 | 3.72 | 3.50 | | - | | | | | |

## Annex F.

### AVERAGE OF HIGH AND LOW WEEKLY RATES.

*On Sixty- to Ninety-Day Time Loans, Collateral Security.*

| | January | February | March | April | May | June | July | August | September | October | November | December | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1914 ........ | 3.65 | 2.88 | 2.93 | 2.72 | 2.52 | 2.38 | 2.79 | 7.63 | 7.00 | 6.50 | 5.20 | 3.88 | 4.17 |
| 1915 ........ | 3.12 | 2.76 | 2.73 | 2.77 | 2.77 | 2.81 | 2.59 | 2.68 | 2.62 | 2.59 | 2.60 | 2.46 | 2.71 |
| 1916 ........ | 2.69 | 2.69 | 2.76 | 2.82 | 2.81 | 3.32 | 3.88 | 3.07 | 3.16 | 3.24 | 3.12 | 4.24 | 3.15 |
| 1917 ........ | 3.15 | 3.71 | 4.21 | 3.82 | 4.45 | 4.74 | 4.30 | 4.39 | 5.47 | 5.54 | 5.39 | 5.51 | 4.57 |
| 1918 ........ | 5.61 | 5.72 | 6.00 | 6.00 | 6.00 | 5.78 | 5.69 | 5.90 | 6.00 | 6.00 | 6.00 | 5.72 | 5.87 |
| 1919 ........ | 5.18 | 5.32 | 5.50 | 5.79 | 5.58 | 5.79 | 6.00 | 5.95 | 5.88 | 6.15 | 6.50 | 6.60 | 5.85 |
| 1920 ........ | 7.25 | 8.13 | 8.19 | 8.10 | 8.25 | 8.06 | 8.28 | 8.72 | 8.41 | 7.89 | 7.85 | 7.30 | 8.04 |
| 1921 ........ | 6.60 | 6.81 | 6.75 | 6.68 | 6.60 | 6.75 | 6.20 | 6.00 | 5.65 | 5.38 | 5.19 | 5.13 | 6.14 |
| 1922 ........ | 4.75 | 4.85 | 4.74 | 4.41 | 4.19 | 4.13 | 4.30 | 4.22 | 4.44 | 4.71 | 4.96 | 4.93 | 4.55 |
| 1923 ........ | 4.66 | 4.85 | 5.23 | 5.31 | 5.11 | 4.88 | 5.13 | 5.25 | 5.44 | 5.31 | 4.99 | 4.94 | 5.09 |
| 1924 ........ | 4.75 | 4.72 | 4.67 | 4.31 | 3.94 | 3.26 | 2.75 | 2.52 | 2.81 | 2.68 | 3.21 | 3.34 | 3.58 |
| 1925 ........ | 3.64 | 3.66 | 4.05 | 3.85 | 3.63 | 3.80 | 3.94 | 4.38 | 4.45 | 4.78 | 4.93 | 4.99 | 4.18 |
| 1926 ........ | 4.77 | 4.63 | 4.70 | 4.19 | 4.03 | 4.13 | 4.38 | 4.67 | 4.93 | 4.95 | 4.64 | 4.69 | 4.56 |
| 1927 ........ | 4.47 | 4.38 | 4.40 | 4.36 | 4.31 | 4.44 | 4.34 | 3.98 | 4.11 | 4.25 | 4.05 | 4.15 | 4.27 |
| 1928 ........ | 4.34 | 4.51 | 4.61 | 4.98 | 5.19 | 5.73 | 5.94 | 6.30 | 6.97 | 7.09 | 6.88 | 7.63 | 5.84 |
| 1929 ........ | 7.65 | 7.69 | 8.00 | 8.60 | 8.70 | 8.16 | 7.90 | 8.88 | 8.94 | 7.88 | 5.44 | 4.88 | 7.72 |
| 1930 ........ | 4.70 | 4.66 | 4.16 | 4.05 | 3.41 | 2.88 | — | — | — | — | — | — | — |

## Annex G.

## GOLD CERTIFICATES OUTSIDE THE TREASURY.

(Millions of dollars)

| June 30th | Total | Held by federal reserve banks | In circulation |
|---|---|---|---|
| 1922 ............... | 695 | 522 | 173 |
| 1923 ............... | 737 | 351 | 386 |
| 1924 ............... | 1,218 | 417 | 801 |
| 1925 ............... | 1,608 | 604 | 1,005 |
| 1926 ............... | 1,680 | 623 | 1,057 |
| 1927 ............... | 1,625 | 618 | 1,007 |
| 1928 ............... | 1,514 | 495 | 1,019 |
| 1929 ............... | 1,384 | 449 | 935 |
| 1930 ............... | 1,490 | 495 | 995 |

(I have taken the figures of gold certificates held by federal reserve banks from the individual circulation statements, and therefore have not been able to get figures earlier than 1922 because of the revision made in the statement in that year, making earlier figures incomparable. A good deal of the data covering earlier years has appeared in the Treasurer's report, but not in the case of gold certificates.)

# Annex H.

## CHANGES IN REDISCOUNT RATE OF FEDERAL RESERVE BANK OF NEW YORK AND CORRESPONDING RATES IN EUROPEAN CENTRAL BANKS.

| | New York Federal Reserve Bank | Bank of England | Bank of France | German Reichsbank | National Bank of Belgium | Netherlands Bank | Swiss National Bank | Bank of Italy |
|---|---|---|---|---|---|---|---|---|
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent |
| 1914 : November 16th . | 6 | 5 | 5 | 4 | 5 | 3½ | 4 | 5½ |
| December 23rd . . | 5 | 5 | 5 | 5 | 5 | 3½ | 4 | 5½ |
| 1915 : February 3rd . . | 4½ | 5 | 5 | 5 | 5 | 3½ | 4½ | 5½ |
| February 18th . | 4 | 5 | 5 | 5 | 5 | 3½ | 4½ | 5½ |
| 1917 : December 21st . | 4½ | 5 | 5 | 5 | 5 | 4½ | 4½ | 5½ |
| 1918 : April 6th . . . . . . . | 4¾ | 5 | 5 | 5 | 5 | 4½ | 4½ | 5 |
| 1919 : January 23rd . . | 6 | 5 | 5 | 5 | 5 | 4½ | 5½ | 5 |
| June 1st . . . . . . . | 7 | 5 | 5 | 5 | 5 | 4½ | 5½ | 5 |
| 1921 : May 5th . . . . . . . | 6½ | 6½ | 6 | 5 | 6 | 4½ | 4½ | 6 |
| June 16th . . . . . . | 6 | 6½ | 6 | 5 | 6 | 4½ | 4½ | 6 |
| July 21st . . . . . . . | 5½ | 5½ | 6 | 5 | 6 | 4½ | 4½ | 6 |
| September 22nd . | 5 | 5½ | 5½ | 5 | 5½ | 4½ | 4 | 6 |
| November 3rd . . | 4½ | 5 | 5½ | 5 | 5½ | 4½ | 4 | 6 |
| 1922 : June 22nd . . . . . | 4 | 3½ | 5 | 5 | 5 | 4½ | 3½ | 6 |
| 1923 : February 23rd . | 4½ | 3 | 5 | 12 | 5 | 4 | 3 | 5½ |
| 1924 : May 1st . . . . . . . . | 4 | 4 | 6 | 10 | 6 | 5 | 4 | 5½ |
| June 12th . . . . . . | 3½ | 4 | 6 | 10 | 6 | 5 | 4 | 5½ |
| August 8th . . . . . | 3 | 4 | 6 | 10 | 6 | 5 | 4 | 5½ |
| 1925 : February 27th . . | 3½ | 4 | 7 | 10 | 7 | 4 | 4 | 5½ |
| 1926 : January 4th . . . . | 4 | 5 | 6 | 9 | 6 | 3½ | 3½ | 7 |
| April 23rd . . . . . . | 3½ | 5 | 6 | 7 | 6 | 3½ | 3½ | 7 |
| August 13th . . . . | 4 | 5 | 7½ | 6 | 7½ | 3½ | 3½ | 7 |
| 1927 : August 5th . . . . . | 3½ | 4½ | 5 | 6 | 5 | 3½ | 3½ | 7 |
| 1928 : February 3rd . . . | 4 | 4½ | 3½ | 7 | 3½ | 4½ | 3½ | 7 |
| May 18th . . . . . . | 4½ | 4½ | 3½ | 7 | 3½ | 4½ | 3½ | 6 |
| July 13th . . . . . . | 5 | 4½ | 3½ | 7 | 3½ | 4½ | 3½ | 5½ |
| 1929 : August 9th . . . . . | 6 | 5½ | 3½ | 7½ | 3½ | 5½ | 3½ | 7 |
| November 1st . . | 5 | 6 | 3½ | 7½ | 3½ | 5 | 3½ | 7 |
| November 15th . | 4½ | 5½ | 3½ | 7 | 3½ | 4½ | 3½ | 7 |
| 1930 : February 7th . . . | 4 | 4½ | 3 | 6 | 3 | 4 | 3½ | 7 |
| March 14th . . . . . | 3½ | 4 | 3 | 5½ | 3 | 3½ | 3½ | 6½ |
| May 2nd . . . . . . . | 3 | 3 | 2½ | 5 | 2½ | 3 | 3 | 6 |
| June 20th . . . . . . | 2½ | 3 | 2½ | 4 | 2½ | 3 | 3 | 5½ |

# Annex I.

## UNITED STATES DEPARTMENT OF LABOUR WHOLESALE PRICE INDEX.

1913 = 100

| | January | February | March | April | May | June | July | August | September | October | November | December | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1918 ........ | 184 | 186 | 187 | 190 | 190 | 191 | 196 | 200 | 204 | 202 | 203 | 202 | 194 |
| 1919 ........ | 199 | 193 | 196 | 199 | 202 | 203 | 212 | 216 | 210 | 211 | 217 | 223 | 206 |
| 1920 ........ | 233 | 232 | 234 | 245 | 247 | 243 | 241 | 231 | 226 | 211 | 196 | 179 | 226 |
| 1921 ........ | 170 | 160 | 155 | 148 | 145 | 142 | 141 | 142 | 141 | 142 | 141 | 140 | 147 |
| 1922 ........ | 138 | 141 | 142 | 143 | 148 | 150 | 155 | 155 | 153 | 154 | 156 | 156 | 149 |
| 1923 ........ | 156 | 157 | 159 | 159 | 156 | 153 | 151 | 150 | 154 | 153 | 152 | 151 | 154 |
| 1924 ........ | 151 | 152 | 150 | 148 | 147 | 145 | 147 | 150 | 149 | 152 | 153 | 157 | 150 |
| 1925 ........ | 160 | 161 | 161 | 156 | 155 | 157 | 160 | 160 | 160 | 158 | 158 | 156 | 159 |
| 1926 ........ | 156 | 155 | 152 | 151 | 152 | 152 | 151 | 149 | 151 | 150 | 148 | 147 | 151 |
| 1927 ........ | 138 | 137 | 135 | 134 | 134 | 134 | 135 | 136 | 138 | 139 | 139 | 139 | 136 |
| 1928 ........ | 138 | 138 | 138 | 140 | 141 | 140 | 141 | 142 | 143 | 140 | 139 | 139 | 140 |
| 1929 ........ | 139 | 139 | 140 | 139 | 139 | 138 | 140 | 140 | 140 | 138 | 135 | 135 | 138 |
| 1930 ........ | 134 | 132 | 130 | 130 | 128 | 124 | | — | — | | | — | — |

# STATISTICS OF GOLD MOVEMENTS,

# 1925 TO 1930.

Table I carries Appendix II of Annex XIII of the First Interim Report of the Gold Delegation (document C. 375.M.161.1930.II) up to the end of 1930 and shows, in addition, increases or decreases of monetary gold stocks since 1925. Reference should be made to the notes on pages 116 and 117 of that report, which have not been reproduced here. The table is believed to be complete as regards gold reserves of note-issuing institutions; but it ignores most of the gold in private hoards, especially in Asia and Africa. The figures for 1930 are in part provisional and may be subject to revision even in some cases where indication to that effect is not given.

It may be noted that the increase in monetary gold stocks in 1930 exceeded the total amount of new gold produced in that year. The information at present available points to the conclusion that this quite exceptional increase was mainly due to large exports of gold from China, which is normally a gold-importing country. In addition, it is understood that considerable amounts of old non-monetary gold were converted into bullion in the Union of Soviet Socialist Republics. It is also possible that a certain amount of old gold coin not accounted for in the table may have come forward from private hoards.

On the other hand, India absorbed a smaller proportion of the total production of new gold than in preceding years, and owing to the economic depression there was a drop in the demand for new gold in the arts.

Table II, showing net imports or exports of gold bullion and coins according to trade statistics, has been confined to those countries which show the greatest movements in monetary gold stocks. Exact agreement with these movements cannot *a priori* be expected for several reasons and especially because :

*(a)* Part of the changes shown in Table I are due to earmarking of gold for foreign account necessitating no shipments;

*(b)* In the case of some countries, part of the addition to monetary gold stocks and part or the whole of the gold exported is derived from domestic production;

*(c)* Net imports shown in Table II include gold used for non-monetary purposes.

Gold import or export figures for Russia are not available. Figures for net imports into India, representing almost exclusively gold used in the arts and increments to private hoards, and net exports from South Africa, representing output of the gold mines, are given for purposes of comparison.

# Table II.

## NET IMPORTS (+) OR NET EXPORTS (—) OF GOLD BULLION AND SPECIE ACCORDING TO TRADE STATISTICS OF COUNTRIES SHOWING GREATEST MOVEMENT IN MONETARY GOLD STOCKS.

(Millions of dollars)

| Country | 1925 | 1926 | 1927 | 1928 | 1929 | Four years 1926 to 1929 | 1930 | Five years 1926 to 1930 |
|---|---|---|---|---|---|---|---|---|
| Austria | + 1 | + 6 | + 8 | + 6 | + 4 | + 24 | + 6* | + 30* |
| Belgium [1] | + 1 | + 34 | + 15 | + 28 | + 40 | + 117 | + 31 | + 148 |
| France | + 3 | + 2 | — 20 | + 254 | + 337 | + 573 | + 460 | + 1,083 |
| Germany | + 150 | + 135 | + 45 | + 218 | 105 | + 293 | — 16 | + 277 |
| Italy | + 3 | + 3 | + 8 | + 3 | + 12 | + 26 | + 6* | + 32* |
| Netherlands | — 10 | + 5 | — 6 | + 14 | 11 | + 2 | — 8 | 6 |
| Poland | | | | + 34 | + 1 | + 35 | 4 | + 31 |
| Switzerland | — 9 | — 3 | + 3 | + 14 | + 16 | + 30 | + 22 | + 52 |
| United Kingdom | 41 | + 56 | + 16 | 62 | 74 | 64 | + 24 | 40 |
| Total | + 98 | + 238 | + 69 | + 509 | + 220 | + 1,036 | + 521* | + 1,557* |
| Canada | + 50 | — 19 | — 16 | + 76 | 42 | 153 | + 21 | — 132 |
| U. S. A. [2] | 134 | + 98 | + 6 | 392 | + 175 | 113 | + 280 | + 167 |
| Total | — 84 | + 79 | 10 | 468 | + 133 | 266 | + 301 | + 35 |
| Argentine | + 8 | — 2 | + 84 | + 84 | — 168 | + 2 | — 25 | — 23 |
| Brazil | — | + 1 | + 43 | + 47 | + 2 | + 93 | — 135* | — 42* |
| Chile | + 1 | — 23 | — 4 | — | — | — 27 | — | — 27 |
| Total | + 9 | — 20 | + 123 | + 131 | — 166 | + 68 | — 160* | — 92* |
| Dutch East Indies | + 5 | + 8 | + 7 | + 5 | + 8 | + 28 | ... | ... |
| Japan | — 11 | — 16 | — 18 | | — | 34 | 138 | — 172 |
| Total | — 6 | — 8 | — 11 | + 5 | + 8 | — 6 | — 130* | — 136* |
| Australia | + 52 | — 61 | — 21 | — 6 | — 51 | 130 | — 110* | — 249* |
| GRAND TOTAL | + 69 | + 228 | + 150 | + 171 | + 144 | + 693 | + 422* | + 1,115* |
| India | + 222 | + 85 | + 60 | + 77 | + 65 | + 287 | + 54 | + 341 |
| South Africa | — 201 | — 207 | — 212 | — 208 | — 219 | 846 | — 226 | — 1,072 |
| Net balance | + 90 | + 106 | — 2 | + 40 | — 10 | + 134 | + 259* | + 384* |

* Provisional figure.

[1] Belgium : Including gold shipments for monetary purposes which are almost completely ignored in the official trade statistics.

[2] U. S. A. :

| 1919 | 1920 | 1921 | 1922 | 1923 | 1927 |
|---|---|---|---|---|---|
| — 292 | + 95 | + 667 | + 238 | + 294 | + 258 |