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SECOND INTERIM REPORT

OF THE

GOLD DELEGATION

OF THE FINANCIAL COMMITTEE

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**REPORT OF THE FINANCIAL COMMITTEE
TO THE COUNCIL OF THE LEAGUE OF NATIONS**

The Financial Committee has the honour to inform the Council of the work done since September 1930 by the Delegation appointed to consider the problem of the purchasing power of gold.

At a session held in November, at which the distribution of gold was the chief question discussed, the Delegation had the opportunity of hearing the views of several experts, whom it had asked to analyse the causes and effects of the movements of gold in different countries during recent years. These investigations were carried out by Professor Aftalion for France, by Dr. Bruins for Germany, by Professor Gregory for Great Britain and by Mr. G. E. Roberts for the United States. The Delegation is greatly indebted to these experts for their assistance and has recommended to the Committee that their reports should be published.

During the course of its following session, held in January, the Delegation drafted a second interim report, which is confined to the question of the distribution of gold. It still has to examine the questions of the effect of price fluctuations on general prosperity, of the manner in which such variations can best be measured and of cyclical as distinguished from long-term movements, and desires to reserve to itself the right to unite in a methodical manner in its final report its analyses of these questions and the subjects treated in the two interim reports.

The Financial Committee is of the opinion that, in view of the importance of the subject dealt with in this second interim report, it should be communicated to all Members of the League and to non-Member States. It thinks it desirable, however, to make the following observations.

In the first place, it did not fall within the Delegation's terms of reference to enquire whether or not there has been any relationship between the present economic depression and the distribution of gold. Indeed, its terms of reference were formulated before the present depression began to make itself felt. In view of this fact, it is natural that the present report should not deal in direct terms with this problem.

In the second place, the Delegation has confined itself to indicating the principles on which the efficient working of the gold standard must, in its opinion, primarily depend. These principles are concerned with the general policy of central banking. They do not and cannot imply an arbitrary or mechanical contrivance for the distribution of gold. The successful application of these principles, however, must depend to a large extent upon the existence of settled economic conditions and will necessarily be impeded, if there is a lack of public confidence. The movement of gold is directly influenced by the movement of capital, and a steady flow of capital and credit cannot be maintained when the necessary conditions of security are lacking.

Geneva, January 20th, 1931.

SECOND INTERIM REPORT OF THE GOLD DELEGATION

I. INTRODUCTORY.

In our interim report published in September 1930, we dealt with the problem whether "the current and prospective production of gold, on the one hand, and the normal increase in demand... on the other, are such as to make it likely that the general trend of prices over a series of years (and apart from short-term oscillations) will be in an upward or downward direction".

We reached the conclusion that the possibility of gold constituting a factor in the course of the next decade or more, tending to exercise an influence towards depressing prices, was such as to render it desirable to keep careful watch on future developments and to take measures for economising the use of gold as a basis of money.. We would draw attention again to the fact that we were dealing in that report with long-term price movements and with the probable monetary demand in the future : we were not dealing with sudden variations in prices or in general economic activity such as those which the world has recently experienced. We reserved for future consideration a number of questions falling within our terms of reference, including the effect of price fluctuations on general prosperity, of cyclical as distinguished from long-term movements, and of the distribution of gold. With the last-mentioned problem—the distribution of gold—we propose to deal in the present interim report. Before turning to this subject, however, we think it desirable, in order to avoid the possibility of misinterpretation, to emphasise once more the fact that the data on which our previous calculations were based referred to the end of the year 1928. Wholesale prices have fallen very sharply since that date, and, were they to settle down at, for instance, approximately to-day's level, the supplies of new gold likely to become available for money would probably meet the demand for an appreciably longer period of time than they would were the former level to be restored. But whatever the tendency of prices may be when the present economic depression is past, we believe, as we have already stated, that measures can be found which should prevent the quantity of the supplies of new gold becoming available for monetary purposes from exercising a decisive influence.

As we remarked in our previous report, the adequacy or inadequacy of gold to serve as the basis of the credit structure and of prices in gold standard countries must depend, not only on the total amount of gold available for monetary purposes, but also upon the manner in which the monetary stocks held at any moment are divided between various centres. The distribution of gold is, therefore, one of the factors influencing the purchasing power of money which falls under our mandate for consideration by us. In view of the public attention which is being paid to this particular problem at the moment, we considered it opportune to deal with it now.

II. FACTORS WHICH HAVE DETERMINED THE DISTRIBUTION OF GOLD IN RECENT YEARS.

The manner in which the distribution of gold will be effected in normal times will depend on the relative rate of economic development in different countries, on the monetary systems which are in force and upon monetary policy.

But by no policy can a distribution of gold appropriate to real needs be assured when political conditions are unstable or when the demand for gold is largely affected either by an endeavour on the part of any country to maintain a level of values out of tune with that in the rest of the world or by sudden and violent changes in economic policy which tend to disturb the existing channels of trade or sources of production or when the free flow of capital is impeded.

The present distribution mainly the result of abnormal economic general conditions;

We do not consider it necessary to describe in detail the changes which have taken place in the distribution of gold in recent years or the causes which have determined those changes. We think it sufficient to say that those causes have sprung from the general political and economic conditions of the world during the last fifteen years, from the war and its immediate consequences, from its influence on the economic structure, from the disruption of normal trade relations, from the profound changes during certain periods in the relative prices of crude products and manufactured goods. The distribution of gold to-day is indeed due more to the fact that the vast majority of countries have, in consequence of budgetary deficits, departed from the gold standard in the course of the last decade and a-half than to the normal working of that standard.

Thus, from 1914 to 1917, when she entered the war, the United States of America received large quantities of gold in exchange for the goods she supplied to the European belligerents. Further, heavy imports took place between 1920 and 1924, when inflation in the majority of the other gold standard countries rendered them unable to buy gold and caused an exodus of capital. After 1925, as one currency after another was stabilised, an increased demand for gold arose, in Europe and elsewhere, on the part of Central Banks for the reconstitution of their reserves and the gradual repatriation of capital which had sought refuge abroad.

In certain cases, however, under their new statutes, Central Banks were empowered to hold foreign assets in place of gold for reserve purposes. This option has led to an economy in the use of gold. But, at the same time, it has resulted in the accumulation of large quantities of foreign exchange in certain centres, and, since the countries owning the exchange could convert it at any time into physical gold, the markets in which the exchange was accumulated were rendered subject to the risk of a sudden demand for gold whenever confidence was weakened, and in certain cases they have considered it necessary to increase their stocks.

Confidence is essential to monetary stability. But both the experience of past inflation and certain political events since the readoption by most countries of the gold standard have tended to undermine confidence. As a result, not only has the drift of gold in this direction or in that been determined by abnormal events, but the freedom of gold movements has been impeded. Thus, Central Banks which had the option of meeting their obligations in foreign exchange or in gold have shown a certain unwillingness to liberate their gold; the general public in some other countries has shown a certain unwillingness to lend money abroad, even when domestic supplies were excessive and gold was available in abundance as a basis for credit at that time. This hesitation, however, has been due in part not to present instability but to past losses, and in certain cases the machinery for foreign lending has not been developed as rapidly as the power to lend has increased, and the incentive to lend has been weakened by inappropriate fiscal measures. These defects in the present situation are to a large extent the natural and, it may be anticipated, temporary result of the fact that, while currencies were being inflated, Governments directed their attention to the elaboration of measures intended to check the export of capital abroad. These restrictive measures were only partially removed after currency stabilisation was achieved, and constructive measures for facilitating the export of capital have not in all cases yet been completed.

Further, uncertainty concerning the probable course of economic development, the desire of the less highly developed States to protect themselves against the force of external competition, of the more highly developed to restore the conditions to which they had been accustomed before the war and of both classes of States to maintain the industrial equipment built up during the war, all contributed to induce Governments to obstruct also the free movement of goods and of men. As we shall endeavour to show below, neither the gold standard nor any other international monetary system can function successfully, if, whenever there is any disturbance in the balance of international commitments, measures are taken to prevent the free flow of goods or capital from one country to another. Sudden and violent fluctuations in the flow of either goods or securities must create disturbances. It is the function of gold to

right such disturbances, and, when the necessary adjustments which gold movements bring about are checked by restrictive measures, the very object of an international currency system is stultified.

The distribution of gold has thus been largely determined by non-monetary causes of a political and economic nature, though monetary factors have no doubt also played a part. Opinions may differ concerning the relative importance of the monetary and of the non-monetary factors, and concerning the extent to which it might have been possible to influence the latter by appropriate monetary policy. But, whatever the merits of these divergent views may be, the past cannot be undone, and it is wiser therefore to concentrate on the needs of the future. We believe that the non-monetary causes which have made themselves felt during the last decade will gradually diminish in force as the disturbances caused by the war and the subsequent period of currency inflation and stabilisation work themselves out. But that process will prove a slow one if measures are not adopted to restore confidence. We do not consider it our function to enter into the political problems which the restoration of confidence necessarily involves or to undertake any elaborate analysis of the non-monetary factors that have influenced the situation. We propose to confine ourselves to indicating the contribution which may be made by monetary policy, to explaining the principles underlying the normal operation of the gold standard, and to suggesting certain reforms which should facilitate the task before currency authorities and help them to economise the use of gold when such economy is required. The extent to which the principles considered can in fact be successfully applied must, however, itself depend upon the general political and economic situation.

but we are mainly concerned with the prospects for the future.

III. THE FUNCTIONING OF THE GOLD STANDARD.

When the general economic and political conditions are not such as seriously to impede the functioning of the gold standard, the distribution of gold for monetary purposes will depend, not only on the relative growth of wealth in different countries and the monetary mechanism employed, but also on the monetary policy pursued. Each member of an international monetary system must be influenced to some extent by the policy pursued by each other member, and we attach great importance therefore to the strict observance of certain principles inherent in the gold standard.

Failure to apply these principles may result in a contraction of the basis of credit in one or more countries by the undue accumulation of gold in others, or in avoidable variations in the volume of credit owing to its fitful liberation.

The gold standard is not a fixed and rigid mechanism, but a system of monetary and credit policy which has gradually developed in the light of experience and has adapted itself to the needs of changing economic conditions. It may, perhaps, help to an understanding of its working to-day, if we trace very briefly the major changes which it has undergone since its general adoption in the second half of the nineteenth century. But in tracing these changes or in describing the system as it existed at any moment of time, the picture which is presented—unless given in laboured detail—must necessarily simplify, and to that extent distort, the facts. For never in history has the gold standard been simultaneously applied in exactly the same manner in all the countries which are roughly classified as adhering to it. In practice very different credit policies have been pursued. At no time have all countries been prepared to accept to a like extent all the responsibilities which devolve from an international monetary system. The account we give, therefore, in the following sections is rather an abstract description of leading tendencies than an exact reflection of the complex and intricate evolution of events.

The pre-war system was not uniformly applied.

Its major characteristics.

The normal features of the gold standard in its simplest form were perhaps the acceptance of gold without limit by Governments at a fixed price for minting into coin, the free circulation of gold coin as full legal tender and the unrestricted import and export of gold.

Illustration of the working of a pure gold standard.

Were gold the only medium of exchange, its movement from one country to another would in itself produce a change in the quantity of money in circulation and hence would have a direct effect upon prices. The influences of gold movements in such circumstances may perhaps best be described by means of an imaginary illustration. We may imagine a country the value of whose exports, owing to an unusually abundant harvest, appreciably exceeded that of her imports. The excess of exports, we may assume, was paid for by an import of gold. This gold would then pass into circulation in the country receiving it and conditions be created likely to result in an increase in the total money income of the population of that country, and in consequence in the demand for (and the prices of) the goods upon which this income was expended. This increase in domestic prices would have made foreign goods, the prices of which had not risen proportionately, more attractive to buy, and the domestic goods less attractive to the foreigner. The commodity imports of the country would therefore tend to increase and its commodity exports to decrease. This process might continue until a new equilibrium between imports and exports was established. If it continued beyond that point, the excess of imports would have to be paid for (failing temporary loan accommodation) by an export of gold. The original gold influx would thus set in motion a train of events leading to a new equilibrium of values and to a reverse movement of gold.

Meanwhile, in the country from which the gold had been received a contrary sequence of events would have been started; money incomes and prices would have been reduced, exports have been stimulated and imports checked. The influence of gold movements in such circumstances would thus be not only automatic but also reciprocal.

We give this illustration in the hope that it may help to an understanding of the fundamental forces at work. It is, however, as we have stated, imaginary and abstract. In fact, a primitive gold standard, under which gold was the only form of currency in use, has never existed among more advanced nations as an international system. In all countries which adopted gold as the basis for their currency during the nineteenth century, some system of banking was already in operation and some medium of payment other than metallic coin in use. But, although the existence of other means of payment and of an elaborated credit structure modify the sequence of events, and render it at once more complex and more subject to deliberate control, it does not fundamentally alter the forces at work.

The influence of alternate means of payment.

Actually, in almost all the gold standard countries of the world before the war, payments could be effected either by means of coin or notes or cheques drawn against deposits in banks. The proportion in which these different classes of means of payment were actually employed differed greatly from country to country. But the amount of notes which could be issued was, in almost all cases, restricted by law in such a way as to link them, directly or indirectly, to the gold held in reserve by the note issuing institutions. Similarly a certain relationship was established between the volume of sight deposits and that of other media of exchange by the cash ratios which the commercial banks were in the habit of maintaining—by cash being understood either gold or notes or deposits with the Central Bank. In these circumstances, when gold was imported by any country, part of that gold might go directly into circulation, part into the reserves of commercial banks and part into the reserves of the Central Bank. The influence which any addition to the gold stock could exercise on the total monetary circulation would then depend in the first instance on the manner in which it was divided between these various possible uses. If all the gold imported went straight into circulation and none into reserves, the addition to the circulation would be equal to the amount of that gold and no more. If, on the other hand, the gold went direct to a Central Bank, which was empowered to issue notes up to three times the amount of its gold reserve, and commercial

banks, employing notes as cash, were in the habit of maintaining a cash reserve of say 15 per cent against their deposits, the maximum theoretical limit to the expansion of purchasing power was obviously a very wide one. In practice, this theoretical limit would, of course, not be reached, because, first, the Central Bank would, in all cases, require to keep some surplus reserve in excess of its legal minimum ; secondly, the commercial banks, so long as gold was the legal tender mainly employed, would be compelled to keep part of their cash in coin ; and, finally, the public would expand their individual holdings of coin as total currency increased, though not necessarily in exact proportion to that increase.

The influence of any influx of gold on the available purchasing power of the community receiving it was thus not automatic and direct. It depended upon the amount which went into circulation, or into commercial or Central Bank reserves respectively, upon the law or custom which determined the cash ratios of commercial banks, the legal regulations determining the reserve systems of banks of issue, and finally the policy which these central institutions adopted at any moment in regard to the expansion or contraction of their reserves within the limits set by the law.

The relationship between gold movements and prices.

Secondly, the effect of an increase in money or bank credit (discounts, advances, etc.) on prices would not be automatic, but would depend upon the manner in which that credit was employed by those whose incomes were ultimately increased by it. The granting of a bank advance increases the purchasing power of its recipient—his effective demand over goods and services. The effects of this increase in demand spread gradually, through the higher wages and salaries offered, to other sections of the population and tend to raise their money incomes. This increase in money incomes may in its turn be expended either on goods for final consumption or on capital goods, or be saved in the form of bank deposits. To the extent to which such saving takes place the demand for articles of final consumption will temporarily not be increased, and the prices of such articles therefore not be raised. To the extent to which the savings are not expended in the form of investments on capital goods, will the demand for capital goods and the prices of such goods remain unaltered.

The effect of the introduction of additional purchasing power into any highly organised economic community will depend, therefore, not only on the action of the body responsible for its introduction, but also on the behaviour of the aggregate of individuals who go to make up the community's power of spending, of saving, and of investment. That behaviour, moreover, may modify the velocity of the circulation and hence the amount of purchases which a given quantity of money may effect in a defined period.

In such circumstances it is clear that neither the effect of an influx or efflux of gold upon the total media of payment, nor the effect of changes in that total upon prices, is automatic or inevitable. An influence may be exerted directly on the first of these effects and indirectly on the second by banking policy, and more especially by central banking policy. Before the war, the instrument of control generally employed by Central Banks—though some had others at their disposal—was their discount rate. By varying their rates, banks were able to exercise a potent influence, varying with circumstances, at once over the effects of inward and outward movements of gold on the domestic credit structure and on the volume of those movements themselves.

The necessity for monetary policy.

In countries (to take a simple example) where commercial banks normally increase their cash reserve by rediscounting paper at the Central Bank, a rise in bank rate would tend to increase market rates also, and thus raise the price of credit facilities and restrict demand. In this way the total volume of loans and advances, and of the deposits in which those advances were duplicated, could be controlled. If in such circumstances, prices tend to fall this is due to the effect which the higher rates exercise on the domestic demand for credit and ultimately for capital. On the one hand, they render saving more attractive by increasing the interest

The influence of discount rates.

earned on such savings ; on the other hand, they diminish the demand for capital goods by increasing the cost of borrowing. Purchasing power is thus directed from consumption goods to savings, but not in its turn diverted to capital goods by means of investments. Prices of both classes of goods are depressed. This depression of prices in its turn renders the country a favourable market for foreign purchases and the balance of payments is affected in the manner described above. At the same time, the higher rates obtaining in the market where the rate had been raised would render it advantageous to lend in and thus attract short term capital from abroad, and restrict loans made by it to foreign countries. This change in the relative attractiveness of home and foreign lending and borrowing would moreover result in an inflow of gold which in its turn would increase the basis of credit and promote conditions favourable to a rise in prices. It was possible, therefore, for Central Banks by means of their discount rate to influence both the balance of commodity imports and exports and the balance of foreign lending and borrowing.

*The degree of
automatism in the
pre-war system.*

Before the war, there was a tendency to change the bank rate more or less automatically in accordance with the changes which took place in gold reserves. When these reserves fell, through the export of gold, below a certain amount or certain percentage ratio to notes, the rate was raised ; and, when they rose above a certain point, the rate was lowered. But, even so, this tendency towards automatic alterations of the bank rate was neither absolute nor universal ; nor did the majority of countries enforce the gold standard in such a way as to allow the free export of gold whenever their balance of commitments was such that it was cheaper to export gold than to buy foreign exchange. By the reservation of the right which some possessed to offer silver instead of gold in exchange for notes, or by other means, certain Central Banks frequently exercised a controlling influence over gold movements without having recourse to alterations in their rates. Others, again, kept reserves so large that they were able to suffer the loss of considerable quantities of gold before the necessity to change their discount rates arose. In such a case the effect of gold movements was largely one-sided.

But the general result of the system as it was actually applied was to allow gold, by its direct influence and its indirect influence through the bank rate, to act as a corrective to any disturbance in the international equilibrium.

IV. RECENT CHANGES IN THE GOLD STANDARD SYSTEM.

Since the war, a number of changes have been introduced in monetary and banking legislation and practice and a number of forces of a non-monetary character have impeded—and still impede—the efficient functioning of the gold standard. We have already drawn attention to certain of the non-monetary factors which have influenced the movement of gold in recent years and we shall have occasion to refer to them again. Their influence on the working of the gold standard, however, cannot be fully understood without a prior consideration of the mechanism of the gold standard system as it exists to-day.

The characteristic mechanism towards the end of the nineteenth century and in the early years of the twentieth century was one under which the aggregate means of payment consisted of gold coin, bank-notes, and sight deposits, to which were added various forms of subsidiary coin. Gold drifted into and out of bank reserves from the free circulation. In their reserves, a number of countries held also minor quantities of silver and foreign exchange.

The more important changes which have taken place may be enumerated as follows :

*Resulting directly
from
post-war
legislation.*

(a) In almost all countries gold coin has been effectively withdrawn from circulation, and all—or almost all—monetary gold has been concentrated in the vaults of Central Banks.

(b) In consequence, for the obligation of Central Banks to convert their notes into gold coin, has been substituted in most countries an obligation to convert them into either (i) gold bullion, or (ii) foreign gold exchange, or (iii) either the one or the other at their option.

(c) Banks empowered to convert their notes into sight claims on gold are allowed by the new banking laws to keep the whole or a part of their reserve in the form of such claims.

(d) In consequence, banks enjoying this alternative, are in the habit of holding in their reserves gold exchange in certain international monetary centres, principally New York and London, which collectively amount to very considerable sums.

(e) In most cases, whether such foreign gold exchange is allowed to constitute a part of the gold reserves or not, the total reserves required by the new legislation are expressed as a definite percentage of total notes outstanding or notes plus Central Bank sight liabilities. Although this percentage reserve system is by no means new, it has, in recent years, become more generally adopted than before the war, and frequently in a more rigid form.

In addition to these changes, which result directly or indirectly from the new legislation that has been introduced, the functioning of the gold standard system has been affected by certain changes in bank practice and in general financial conditions—such, for instance, as the development of open market operations more especially in London and New York, the growth of New York as a major lending centre, and the narrowing of the gold points as a result of economies in the transport of gold. To some of these and other new developments we shall refer later ; it is desirable first to consider the extent to which recent legislation has affected the mechanism of the gold standard.

Other changes.

The result of the concentration of gold in Central Bank reserves and the abolition of gold coin for normal circulation purposes is at once to effect an economy in its use and to increase the potential influences of any gold movement. Under the present system, all accessions of gold may be made to exercise a maximum influence on the total volume of currency, for they inevitably accrue to the foundations of the whole credit structure—the reserves of Banks of Issue. At the same time, the power of Central Banks to influence the situation has been enhanced as they are no longer subject to the risk that gold may be absorbed into the internal circulation.

Effect of the withdrawal of coin.

The holding of foreign gold exchange instead of gold for reserve purposes likewise renders possible an economy in the use of gold—though not to the extent which is sometimes believed. To the country holding such assets the economy is absolute. But the country on which such gold exchange constitutes a claim may well consider it necessary to augment its gold reserve in order to meet possible demands resulting from the conversion of these claims into gold.

Of foreign assets in banking reserves;

But the generalisation of this so-called gold exchange standard system has had other results of some importance. It has somewhat complicated the mechanism of the international system by distorting in certain cases the reciprocal effect of the transference of central banking reserves. We have shown above that an export of gold from one country to another used to set in motion reverse sequences of events in the exporting and in the importing countries. If the reserve consists of foreign assets, however, such reciprocal changes need not necessarily take place at the same time. The exact effect of a transfer of the claims which such assets represent will depend on how those assets are held and between what countries the transfer takes place.

Of the gold exchange standard in general;

Thus, if a Central Bank keeps its foreign assets in the form of a sight deposit in a foreign commercial bank in a gold centre and sells its claims on that bank to a trader who has obligations to meet in that market, conditions will be created tending to compel it to curtail credit at home. But no reciprocal conditions will be created in the country in which the commercial bank is situated. The commercial bank may find that the only change in its position is a substitution of a domestic for a foreign depositor. Moreover, the Central Bank in this country may have remained unaware of the transaction and be deprived therefore of the means of obtaining immediately information which might prove important for the conduct of its policy. If the deposit on the other hand had been held in the Central Bank of the country in question, the result might have been to change that Bank's foreign sight liability into a commercial bank 'cash' deposit with it and thus to create conditions tending to a partial—though not equivalent—

expansion of credit. In any case, it would have enabled that Central Bank to ascertain the facts on which its policy should be based.

The effects of such operations are again different if the transfer is made by the country holding foreign assets to any country other than that in which those assets are held. In such circumstances, if both parties hold assets in the same country and the transfer is made between their respective accounts, there is reciprocity of effect between them and no effect on the country in which those deposits are held. If the transfer is made by the conversion of those assets into gold and the shipment of that gold to the country to which payment is due, there is a triple influence which may bear no relationship to the actual balance of payments between the country in which the deposit is held and any other.

An economy in the use of gold has been secured, but at the same time the functioning of the gold standard has been rendered more complicated. It is obvious that, in such circumstances, the central banking authorities have a more difficult task to perform and that the policy which they pursue acquires a new importance.

*Of the percentage
reserve system;*

But the more rigid percentage reserve system which has been adopted in recent years tends to restrict the powers of Central Banks as compared at any rate with the system in force in, for instance, France before the war. The unsettled conditions which existed when the recent currency legislation was passed naturally induced those responsible for this legislation to act with great caution. We suggest below that certain changes might with advantage be introduced. In making that suggestion, we in no way underestimate the need for efficient safeguards. We believe, however, that less rigid stipulations might safely be accepted if they were adopted simultaneously in different countries as a result of an international understanding.

Under the percentage system, any reduction in the reserve, unless a surplus over the legal minimum is maintained, will tend to necessitate a multiple contraction of the note circulation and of bank credit. In consequence, banks working under this system are driven to keep considerable reserves in excess of the legal minimum. When a part or the whole of the reserves may be maintained in foreign assets, the strain thus caused on the world's gold resources is alleviated, but the need for a large safety margin of reserves in gold or assets is not reduced.

*Of the narrowing
gold points;*

Recent legislative changes have thus tended, in part, to economise gold and, in part, to enhance the demand for it. Certain of the means by which economy has been achieved are such as to necessitate a more deliberate control on the part of Central Banks. Their powers have been increased by the withdrawal of gold from circulation and restricted by the practice of depositing foreign assets reserves with commercial banks. Their task has been rendered more difficult by certain of the changes in the monetary and banking situation not due to new legal stipulations, to which passing allusion was made above. Thus the narrowing of the gold points owing to the reduction in transport costs has rendered the monetary system of each country more sensitive to international disequilibria, for a slighter change in the relative value of any two currencies than was formerly required (a smaller departure from international equilibrium) will render a purchase or sale of gold profitable to those who have commitments abroad to meet.

*Of the increased
strength of com-
mercial banks; and*

On the other hand, in certain countries during the last few years, the independence and power of commercial banks and other financial institutions have tended to increase, so that control by the central banking authorities has been rendered more difficult. In the ultimate analysis the control of the Central Banks over commercial banks is determined by the "cash" reserves whether in notes or sight deposits with Central Banks which commercial banks have to maintain. In recent years the quantity of liquid capital—that is, of savings which have not by investment been converted into permanent claims on fixed capital goods—has been abnormally large. Owing to the feeling of uncertainty which exists, money has remained in the liquid capital market instead of being absorbed as long-term capital. Both the greater independence of the financial institutions which supply credit direct to the general public

*Of the large liquid
funds available.*

and the abundance of liquid capital to which that independence is largely due have rendered the task of Central Banks more difficult. For not only is control less easy to exercise but the forces which may give rise to changes in international equilibrium have been altered and intensified. Gold moves, as we have seen, when foreign payments which have to be made and the claims for payment made by other countries fail to balance. These commitments and claims may arise from what it has become customary to call visible imports and exports—the exchange of goods—and from such “invisible” items as the service of foreign debt, which the new political debts have greatly increased, the purchase and sale of securities, the expenditure of tourists, etc. Disequilibrium in the balance of payments will arise when the active and passive totals of these visible and invisible items fail to equate. During the last decade the importance of the invisible items relatively to the visible has increased owing to the growth of international indebtedness, larger short-term borrowings, the heavy tourist traffic and other causes.

This fact demands attention because certain of the invisible items—and more especially those arising from the temporary investment of liquid funds—are very much more sensitive than are the visible. It is relatively difficult for a country deliberately and rapidly to modify the total volume of its purchases or sales of commodities. Such a result can only be achieved by gradually exercising an influence on prices or by more direct measures intended to impede or stimulate imports or exports, which inevitably interfere with the smooth working of the whole economic mechanism. Moreover, in recent years the structural changes that have taken place have tended to reduce the flexibility of the whole industrial organisation. That organisation is based to-day on larger and less pliant units of production than heretofore. The greater powers acquired to maintain the prices of certain classes of goods by these large groups of producers or distributors have rendered general price adaptation more difficult and dilatory and further the influence of prices on output has become less prompt and effective. On the other hand, funds can be transferred from one country to another with great facility and rapidity. In consequence, there is a growing risk of disturbance by fluctuations in the invisible items of the balance of international payments, while the inelasticity of the visible trade is increased not only by barriers of one kind or another impeding the international exchange of goods and services but also by the inelasticity of wages. There has thus been a tendency in recent years for gold movements to be caused rather by such movements of funds than by normal changes in the volume of exports and imports. Capital can only be transferred in the form of goods or gold or claims to existing wealth and when capital transfers are made with such rapidity as to allow insufficient time for their ultimate effect on the volume of the imports or exports of goods to make itself felt, a disequilibrium of the total balance of payments is likely to be caused which will give rise to gold movements. What is necessary for the normal working of the gold standard is that there should be a smooth flow from country to country alike of goods, services and securities. Only then can short-term capital perform its proper function of allowing temporary accommodation in such a way as to lessen and not occasion gold transfers.

The sensitiveness of liquid capital, however, has been due not so much to its magnitude as to the unstable economic and political conditions to which we made allusion in our introductory remarks. There has been an inevitable flight of capital from countries in which currencies have been inflated and a repatriation after stabilisation was achieved. Capital has moved on account of political uneasiness from those parts of the world where the need for it was greatest to countries where there was already an excess of funds. It has been attracted not simply by the real needs of business but by the chance of quick profits from Stock Exchange speculation. Simultaneously, the normal flow of goods has been impeded by sudden changes in customs tariffs, by the imposition of prohibitions, and by the innumerable measures which governments (or industrial combines) have taken to shelter domestic markets against external competition.

The commercial policy of recent years has itself been largely determined by the unstable and abnormal fundamental conditions which have resulted from the war, and it may be hoped that the force of these exceptional circumstances will decline. To the extent that this happens and public confidence improves will it become more possible to assure an optimum distribution of the gold available for monetary use and therefore to reduce to a minimum the risk of a shortage of gold in any centre being caused by the trapping of gold in others. The manner in which this result may, we hope, ultimately be achieved, in spite of the greater complications of the present gold standard system is considered in the following section.

V. MONETARY REFORMS AND BANKING PRINCIPLES.

Countries adopting the gold standard become thereby automatically members of an international system under which they assume a responsibility for conducting a reasonable economic and financial policy which, with the maintenance of confidence, will facilitate the general working of that standard. Since all countries derive benefits from it, all share in the obligation to contribute to its stability. The endeavour of any country to protect itself against the reactions of external events (or of its own previous policy) is likely to affect other members of this international system—and may adversely affect them. Circumstances may arise, however, from time to time in which it is in the interest of all parties to check the effects of, for instance, an import or export of gold. An automatic application of the mechanism which has been set up is therefore not adequate. This was probably always the case; but postwar conditions have increased the occasions when the exercise of conscious direction is necessary. For this reason the granting of adequate powers to those mainly responsible for its working are of special importance to-day.

*The objects of
gold reserves*

We may perhaps most easily elucidate the point which we wish to make by considering the objects for which a gold reserve is maintained.

Gold has come into general use as the foundation of the monetary systems of the vast majority of the civilised countries of the world for historical reasons into which we need not enter here. But the traditional belief that gold is in a peculiar sense representative of wealth remains and cannot be ignored. Gold reserves serve to some extent, therefore, to maintain that confidence in the whole credit structure which springs from the knowledge that a certain quantity of gold is physically held by the Central Bank. Now that gold coin is no longer in circulation¹ and an internal drain cannot take place, the reserves are required to meet possible deficits in the international balance of payments.

Such deficits—and this is the essential fact that must govern monetary policy—may be of two kinds. They may be temporary deficits due to some casual circumstances, or they may be deficits which would provoke a permanent drain of gold were not measures adopted to bring about some fundamental change in the range of values in the country in question.

Temporary disequilibria may arise through causes over which the country mainly affected has itself no direct control, such, for instance, as a failure of crops or financial difficulties in one of its main export markets. They can be met by temporary gold movements or by the provision of short-term credits. In such cases, if equilibrium existed before these temporary causes made themselves felt and the movement of gold is allowed to affect the general level of values in either the losing or the recipient country it may be found, after these special causes have ceased to operate, that owing to that change in values a more permanent and serious form of disequilibrium has been caused and that a complete reversal of policy is required. If, on the other hand, the movement of gold is not allowed to exercise its natural influence promptly

¹ The exceptions to the general rule are now negligible.

when more permanent causes of disequilibrium are operating, then serious instability may result and gold may continue to flow from one centre to another until its shortage or excess forces upon Central Banks a drastic change of credit policy. Apparently identical phenomena may thus require exactly opposite measures to be adopted by monetary authorities, and great discretion has to be exercised in the planning and execution of monetary policy.

For this reason it is desirable that the monetary authorities should be allowed the powers necessary to enable them to pursue such credit policy as the circumstances demand.

can be secured
only if Central
Banks allowed
adequate discre-
tion.

But, as we pointed out above, the proportional gold reserve system is apt to produce an excessive disturbance whenever the actual reserve approaches the legal minimum. Under this system Central Banks are thus compelled to maintain a reserve in excess of the legal minimum, in order to prevent such excessive disturbances being caused by gold movements. It was shown in an annex to our interim report that the excess reserves over the average minima at the end of 1928 only amounted to from 6 to 12 per cent, and suggested in the report itself that the existing minimum reserve percentages could be reduced without in any way weakening the general credit structure. In fact, the necessary liberty could be afforded to Central Banks and the risk of a strain on the gold resources of the world averted by means of reducing the legal minima to a figure well below that which countries are likely to desire to maintain in practice. Such a reduction in the immobilised portion of the world's monetary gold would increase the working reserves of the Central Bank and give greater elasticity to the whole system.

The percentage
system now en-
forced is too rigid

Now that gold is no longer used for internal circulation, the amount of gold reserve that is required by a Central Bank depends rather on the probable amount of any temporary disequilibria in its balance of international commitments than on the volume of the note circulation and the Central Bank's sight liabilities. We do not propose to enter into the details of this problem in our present report; nor do we believe that any hard and fast rule equally applicable to all countries can be framed. The working reserves required by any country will depend, *inter alia*, upon its general economic structure.

and requires
modification.

Thus, debtor States and agricultural and other countries whose exports are composed of a relatively restricted number of commodities are likely to require a larger reserve proportionately to their total external trade or average balance of international payments than are countries with a more mixed economy. Countries again in which foreign Central Banks keep their reserves in the form of large sight claims may well consider it advisable to maintain an additional stock of gold against these special international liabilities.

We are of the opinion, therefore, that, in order at once to allow Central Banks the liberty of action which is necessary for the conduct of a rational credit policy, and to permit of an economy in the use of gold, the existing legal stipulations concerning gold reserves should be modified.

As we stated in our previous report, the existing minimum could be reduced without in any way weakening the general credit structure, granted an international understanding had previously been reached.

We should add, however, that it is a prerequisite of such reforms that gold coin should not be put back into circulation. For, were coin to be used for domestic purposes, reserves would be required to meet the possibility not only of an external but also of an internal drain. In such circumstances the distribution of gold would be determined largely by the relative force of hoarding instincts in different countries, and monetary authorities would be divested of an important part of the powers which they now possess.

Gold coin should
not be put into
circulation.

But within whatever legislative framework the gold standard operates, the application of certain general principles is essential to its proper working.

With gold coin no longer in circulation, gold movements make their effect felt by influencing the volume of credit and money rates. It is essential when the gold movements are due to some cause of a non-temporary character which may be counteracted

Gold movements
should normally
be allowed to make
their effects felt.

by monetary policy—to a real disequilibrium in national values—that credit should be extended or contracted and money rates modified with a view to righting the balance.

If, for instance, a country to which gold is being attracted by exceptionally low average commodity prices or exceptionally favourable rates of interest fails to reduce its rates, gold may continue to drift to it from other countries, thus unnecessarily straining their credit structure.

Unnecessary movements should be avoided.

But, if the influence of gold movements is to be allowed—in normal circumstances—to make itself felt, those movements must result from the automatic operation of the exchanges and not be artificially caused by purchases of gold by Central Banks working under the gold exchange standard when the import of gold is not rendered necessary either by the rates of exchange or by the statutory provisions under which these banks operate. When the statutory provisions lay down that a certain proportion of the total legal minimum reserve of Central Banks must be held in gold, such purchases of gold at prices above those which would rule if the exchanges were at gold import point may be difficult to avoid. We believe such rigid stipulations to be undesirable, for, if gold is purchased in this way, the selling country may find itself forced to bring about fundamental changes (increase of interest rates—credit contraction) which are in no way justified by the general levels of national values or capital movements.

The purchase and sale of gold should normally be unrestricted.

On the other hand, it is no less important that the exchanges should be permitted to operate freely and that when export or import gold point is reached gold should, normally, be allowed to move without hindrance. As we observed on page 16 above, however, circumstances may arise from time to time, which render it desirable to avoid an export or import of gold. Thus, disequilibrium due to purely temporary or recognisable causes may be so considerable as under existing monetary legislation to make fundamental changes unavoidable—even when those changes are known to be unnecessary and objectionable. But the probability of such a state of affairs arising could be greatly diminished if the reserve regulations were modified and greater liberty thus given to the central monetary authorities. When they do arise they can be overcome only by means of close co-operation between those authorities. It is due to lack of liberty and the possibility of circumstances arising such as those we have just described, that gold movements are sometimes erroneously looked upon as damaging in themselves. They are, on the contrary, as a rule the necessary preventive of an evil that would otherwise follow.

It should not be rendered difficult by the operation of the Gold Exchange System.

The free movement of gold, however, has to some extent been impeded by countries on the gold exchange standard which hold gold in addition to foreign exchange in their Central Bank reserve. If a Central Bank in such a country stimulates imports of gold by restricting its purchases of foreign exchange when its exchange rate is in the neighbourhood of the gold import point and then sells only gold exchange when its exchange rate touches the gold export point, there is a danger that that country may become a trap into which gold flows but from which it can never be released. We consider it important therefore that countries which employ the gold exchange standard should pursue a policy which will admit of gold moving freely when the general conditions are such as to call for it.

Care must be taken in converting foreign assets into gold.

Similarly, countries employing this system should abstain from creating an unnecessary demand for gold by converting their foreign assets into gold. Should they for any reason consider it desirable to alter the proportion in which their reserves are divided between foreign assets and gold, and augment their gold stock, they should endeavour to do this when the exchanges are so strongly in their favour that gold would naturally be imported had they not the option of accepting foreign assets in its stead.

As we pointed out above, the gold exchange standard does not necessarily produce that reciprocity of effect which is characteristic of the gold bullion or specie standard. The sale or purchase of foreign exchange by one Central Bank may not only fail to affect another in the same way as would a movement of gold, but may be accomplished without the Central Bank of the country in which that operation takes place having any immediate or subsequent knowledge of it.

Foreign assets of Central Banks should, as far as possible, be concentrated in Central Banks.

This fact reinforces the point which we have already emphasised, that the more elaborate monetary system of to-day demands a greater measure of co-operation between Central Banks than did the semi-automatic system of pre-war days. The gold exchange standard especially involves a number of practical problems which demand the constant joint attention of Central Banks. In this particular case, such collaboration would clearly be facilitated, were the foreign reserve assets of Central Banks kept as a general rule with other Central Banks.

When for any reason, or at any moment, such centralisation is found to be inexpedient, then, in our opinion, the Central Bank of the country in whose money market the reserves are held should keep itself regularly informed of their magnitude.

When kept elsewhere, the Central Bank of the market concerned should keep itself informed.

The problems which we have considered up to now concern all countries adhering to the gold standard system. But the successful administration of the gold standard presents problems to lending and to borrowing nations which are, in certain respects, profoundly different.

The obligations of borrowing and lending States not identical.

The position of borrowing countries is necessarily weaker and their powers are less direct than those enjoyed by the countries from which they borrow.

Borrowing States

If equilibrium has been maintained with the aid of short-term capital or a steady flow of long-term loans, and credits are not renewed or further loans cannot be secured, the countries concerned may be forced to lose gold and conduct their trade on less favourable terms. As borrowers their first concern must be to maintain conditions both economic and political such as to inspire confidence.

must maintain conditions necessary for future confidence

The aid of countries which have capital to export cannot be secured by markets in which security is lacking. Confidence in the economic conditions will not be secured unless the proceeds of the loans they raise are devoted to productive purposes. New countries which have borrowed for purposes of economic development must prepare for the time when the service of their foreign obligations exceeds their new borrowings and the balance of their capital and interest account thus becomes passive. Such preparation lies not in the purchase of large stocks of gold, but in the active development of their productive forces. But countries in the earlier stages of their economic development will, as we have stated above, require relatively large reserves in gold or foreign assets to meet variations in their harvest returns or in the supplies of short-term capital rendered available to them.

and devote their borrowings to productive purposes.

To countries which have to meet the service of debts which were not incurred, or have not been employed, for internal economic development, the need of caution in further borrowing is obviously still more imperative. Temporary borrowing intended to postpone such fundamental adjustment of values and of the re-organisation of production as is required in order to render a debtor State able to meet its liabilities, is likely later only to intensify the difficulties by which it is faced. Nor are those difficulties likely to be alleviated in the long run by the artificial stimulation of exports by bounties or subsidies, or by the artificial restriction of imports by tariffs or prohibitions.

Countries with funds available to lend are in a stronger position, as they are not dependent upon external supplies of capital to satisfy their domestic demand for capital. In addition, they can influence the markets in the countries seeking loans by the terms on

Lending States

which they are prepared to lend, and in a large measure determine the objects to which the loans they grant are devoted. Their power to influence international conditions is accordingly greater than that of borrowing countries, and that greater power involves correspondingly greater responsibilities.

In order that equilibrium may be maintained in such countries it is necessary that the volume of foreign lending should not exceed or fall far short of their net active balance on income account. If foreign lending is relatively too great, an export of gold will result; if it is too small, gold will be imported. But foreign lending will be determined—granted normal political and economic conditions—by the relationship of interest rates at home and abroad, and the balance on income account mainly by the relationship of domestic to foreign prices—and changes in interest rates may be effected both more rapidly and more directly than changes in prices. It does not, of course, follow that foreign lending should not be increased or contracted, or that the balance of trade cannot be affected ultimately by such processes. But changes in the volume of lending should be gradual and not spasmodic.

must maintain an even flow of capital

A country in a strong creditor position on short term account or with considerable funds to lend can do much to check the effects of minor and temporary disequilibria. On the other hand, if it suddenly withdraws its credit or if it fails to maintain an adequate and even flow of capital, it may cause unnecessary disequilibria. This would force on other countries whose supply of available funds is relatively restricted measures for the adjustments of their price level which would otherwise have been unnecessary. These readjustments are apt to react on the international price-level and so to cause disturbances in the whole system of the world economy.

and lend for productive purposes only.

Similarly, if lending countries fail to restrict their loans to productive purposes their debtors may be driven at some later date to undergo a painful process of price contraction with all its possible harmful effects on production and the national standard of living.

The regular flow of capital postulates

These two major obligations of lending countries—the maintenance of a steady flow of capital and credit and the restriction of loans to productive purposes—can, however, only be met, if the organisation of markets for the flotation of long-term foreign loans and the introduction of foreign securities is adequate and confidence is not undermined by general economic or political insecurity.

the absence of impediments to lending and

Lending must not be impeded by artificial restrictions such as discriminatory rates of taxation or exchange control. We believe that any measures designed to improve the mechanism for the issue of foreign loans, or to promote international transactions in existing securities, would contribute to the smooth working of the gold standard, granted the powers of Central Banks to control temporary disequilibria are adequate. We have in mind such measures as the improvement of facilities for foreign investments, the quotation of foreign securities on national Stock Exchanges, the equalisation of taxes on domestic and foreign investments. We also attach particular importance to the discussions now taking place with a view to the solution of the problem of double taxation. The high rates of taxation in certain countries constitute an insuperable barrier to capital movements in cases when, owing to the absence of any international understandings, the owner of foreign securities is liable to be taxed twice on his holdings. We realise, however, that all these various measures designed to facilitate long-term lending and the international purchase and sale of securities will require time for their perfection.

of the imposition of serious obstructions to trade.

But measures designed to permit the free flow of capital may prove harmful rather than beneficial, if they are accompanied by restrictions on the exchange of the goods and services which constitute the items of current account in the international balance of payments. Capital, as we have stated above, can only move in the form of goods or gold or claims to existing wealth. If the flow of capital is accelerated and that of goods restricted by tariffs or prohibitions, a constant strain on gold reserves and, in consequence, on the structure of credit

maintaining national values may be created. A similar strain will be caused if a country endeavours to maintain its level of wages or other industrial costs above the level at which it can successfully place its goods on foreign markets. Adherence to an international monetary standard at once implies and necessitates adherence to an international economic system.

The central authorities have, as we have seen, two functions of special importance to perform—the prevention of such disequilibria as may be averted by monetary policy and the restoration of equilibrium when balance has been lost. We have already pointed out that to obviate unnecessary adjustments Central Banks are compelled to keep a reserve in gold in excess of their legal minimum and suggested that the reserve stipulations should be modified. But the unnecessary export or import of gold may itself be avoided by means of the provision of short-term credits between Central Banks. Inter-Central Bank credits postulate a co-operation and mutual understanding the steady development of which should, in our opinion, be the constant object of these institutions.

The tasks of Central Banks will be facilitated by inter-Bank co-operation and

When adjustments are required they are under existing conditions effected by means of a modification in the rates of interest. The efficacy of the Central Bank's control is therefore mainly determined by its power to influence these rates. The manner in which a change of rates makes its influence felt has already been explained in Section III above. In certain countries the central control has been greatly increased in recent years by the adoption or perfection of what are known as open market operations. By this term is understood the direct purchase or sale of bills or securities on the market by the Central Bank with a view to increasing or decreasing the cash reserves of the commercial banks. If securities are sold in sufficient quantities the liquid resources of the market will be diminished and its power to augment the volume of credit curtailed. The Central Bank can thus at once influence the market rates up to a certain point without changing its official rate of discount and render that official rate effective.

may be further facilitated in other ways, such as the development of open market operations,

We do not propose to enter here into the detailed technicalities of this system. Its efficacy is, however, undisputed, and we mention it because we consider that effective collaboration between Central Banks must depend to a large extent on the possession by each one of them of adequate powers to control its own market. We realise that conditions do not render it advisable to introduce this system now into all countries; but we are of the opinion that the revision of bank statutes in such a way as to give powers to Central Banks in certain cases to conduct this form of operation constitutes one of the questions which deserves careful study. An allied question to the study of which we would draw attention is that of the desirability of requiring commercial banks to keep a defined cash reserve with Central Banks. Such a measure would in our opinion materially aid Central Banks in the execution of their functions. A more extended use of commercial bills would also assist Central Banks.

Finally, in this connection we may perhaps draw attention to certain points on which the Financial Committee has always laid particular emphasis—namely, the provision of adequate measures for the repayment of State debts to Central Banks and the principle of concentrating with Central Banks the liquid funds both of the State and State enterprises and of semi-public financial institutions. Measures should also be taken to assure the co-ordination of the policy of large public or semi-public financial institutions with that of the Central Bank.

and the strengthening of their position in the money market.

VI. FINAL OBSERVATIONS.

In a previous section we laid emphasis on the fact that the present distribution of gold was due to causes in part political, in part economic or fiscal. In later sections we have endeavoured to outline the conditions upon which a beneficial distribution of gold may be

secured. The first of these conditions is public confidence ; others are related to economic policy in the widest sense of that word, others again, and those on which we have naturally laid especial stress, to monetary policy. We desire before concluding to make it clear, however, that the banking principles the application of which is likely to prevent a maldistribution of gold stocks and to secure economy in their distribution, will not by themselves ameliorate the existing distribution in so far as that is at present defective.

A constant flow of monetary gold from or to any country is a sure sign of maladjustment in international values or interest rates, or of a lack of public confidence. Such maladjustment, if confidence is restored, the application of these principles should overcome.

We venture to believe that if the principles that we have elaborated above are generally accepted and applied, more economical distribution of gold in future years may be secured, granted the general political and economic conditions are not such as to create disturbances which no monetary policy can hope to counteract. Such distribution will go far to prevent the amount of the supplies of new gold from exercising an influence on the long-term trend of the purchasing power of gold in the future.

But the application of these principles can only be expected if the Central Banks are allowed the necessary freedom—a freedom which will be, we consider, assured by the legislative changes we have suggested. Further, we attach special importance to the closest possible co-operation being maintained between these institutions, for the measures we have mentioned imply a close co-operation between Central Banks at an early stage, with a view to preventing developments which may ultimately cause disequilibria, and, at a later stage, if for one reason or another disturbance has not been avoided, with a view to localising that disturbance and securing that the necessary correctives are put into operation.

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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.

Geneva, February 12th, 1931.

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[*Translation.*]

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 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 internal 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 Sächsische 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. 1,892), 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. 1,892 for one pound fine against its notes. This price corresponds to the monetary parity of RM. 1,895, 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. 85,000;
- (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 Va 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 as 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. 618.6 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. 2,854.4 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 Auslandsanleihen" (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 $\frac{1}{2}$ per cent. In consequence 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 $7\frac{1}{2}$ 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. $1\frac{1}{2}$ 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 occurred 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. 874 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.

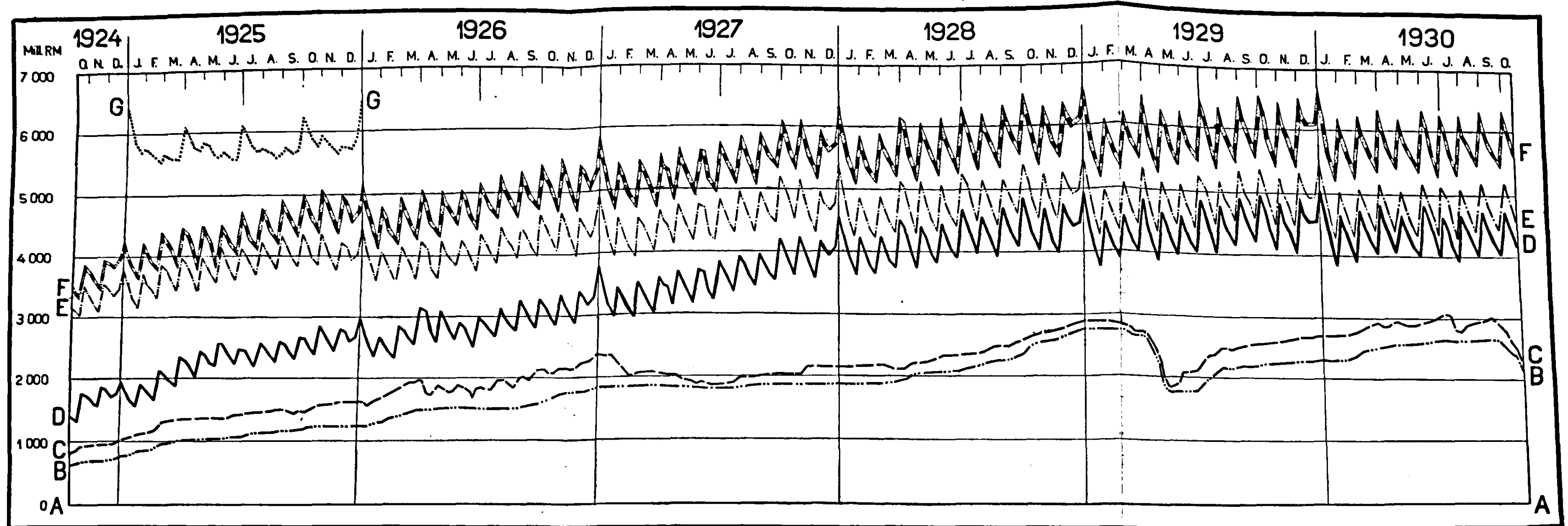
In conclusion, attention may be drawn to the declarations made on October 21st, 1926, by the then President of the Reichsbank, Dr. Hjalmar Schacht, before the Fifth Sub-Committee of the "Enquete Ausschuss" (Committee of Enquiry), as published in the report of the Sub-Committee.

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.

Diagram I.



A-F Total circulation of means of payment 1924-1930. A-B Gold holdings 1924-1930.
 A-D Circulation of Reichsbank Notes 1924-1930. B-C Devisen available for cover 1924-1930.
 D-E Circulation of Rentenbank Notes 1924-1930. A-G Total circulation of means of payment 1913.

Diagram II.

PERCENTUAL COVER FOR REICHSBANK NOTES IN GOLD AND DEVISEN AVAILABLE FOR COVER.

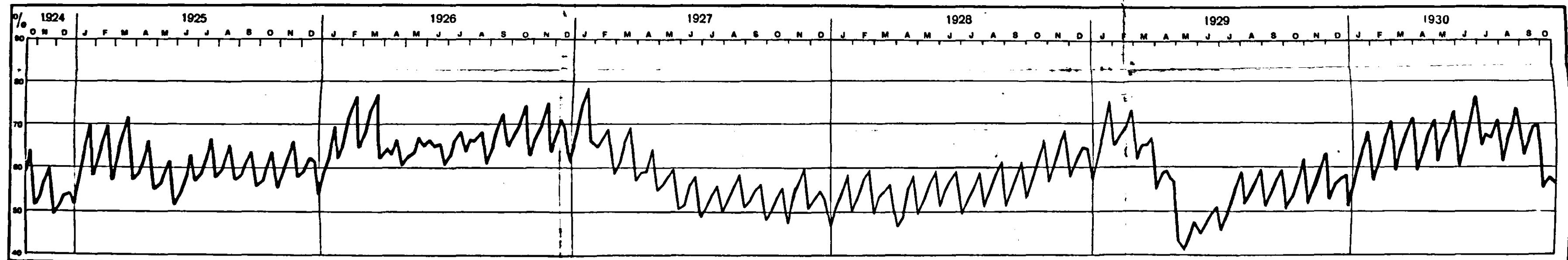
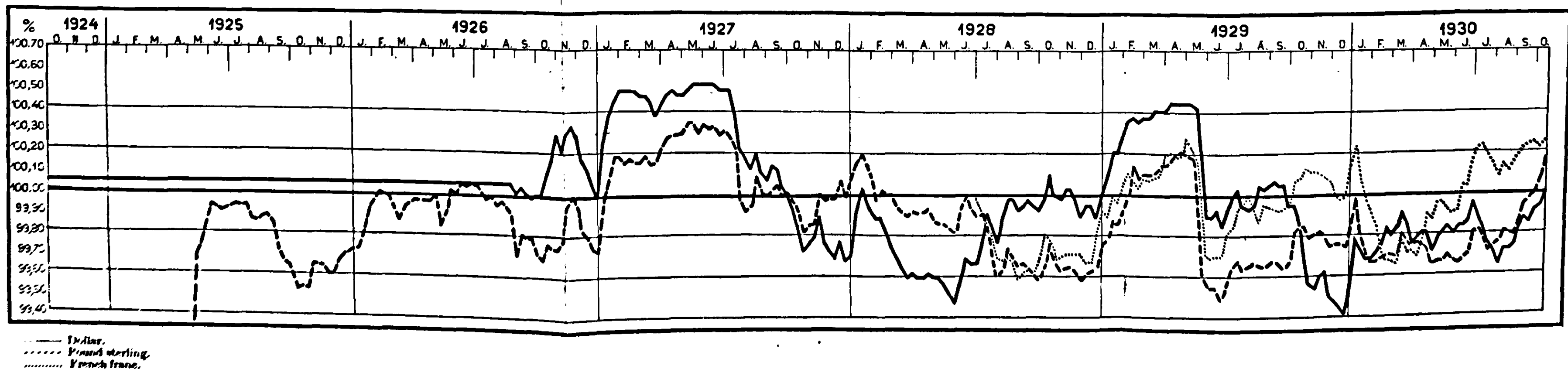


Diagram III.

FOREIGN EXCHANGE RATES IN BERLIN (WEEKLY AVERAGES IN PERCENTAGES OF PARITY).



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 re-borrowing 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, quantitatively, 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
BRITISH GOLD
(Thousands)

Country	1925			1926			1927	
	Imports	Exports	Net	Imports	Exports	Net	Imports	Exports
France and Belgium ...	620	3,710	— 3,090	802	8,257	— 7,455	627	4,718
Germany	—	—	—	—	—	—	190	17,034
Netherlands	25,474	48,707	— 23,233	1,175	14,704	— 13,529	2,313	6,486
Spain and the Canaries.	—	—	—	—	2,099	— 2,099	—	7,445
Switzerland	—	25,269	— 25,269	—	4,242	— 4,242	—	6,213
United States of America	21,378	50,477	— 29,099	180	1,138	— 958	8,567	28,042
South America	—	—	—	168	1,543	— 1,375	2,017	6,959
British India	—	64,885	— 64,885	—	12,818	— 12,818	—	12,462
Australia	—	—	—	—	—	—	—	—
New Zealand	—	—	—	—	—	—	—	—
Egypt	—	3,240	— 3,240	—	1,199	— 1,199	—	3,799
Rhodesia	10,410	—	+ 10,410	9,842	—	+ 9,842	5,958	—
Transvaal	108,403	—	+108,403	153,240	—	+153,240	124,348	—
West Africa	6,184	247	+ 5,937	6,293	86	+ 6,257	4,705	20
Russia	21,387	1,908	+ 19,484	12,349	5,144	+ 7,205	1,049	7,732
British Malaya	—	8,038	— 8,038	—	7,752	— 7,752	—	3,452
All other countries	13,692	41,901	— 28,209	3,557	73,207	— 69,650	8,129	32,647
Totals ...	207,548	243,377	— 40,829	187,606	132,139	+ 55,467	157,903	137,009

Table
BRITISH GOLD
(Thousands)

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	— 10,820	—
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

I.
MOVEMENTS.

of dollars.)

Net	1928			1929			1930 (First seven months)		
	Imports	Exports	Net	Imports	Exports	Net	Imports	Exports	Net
— 4,091	912	97,178	— 96,266	2,066	162,567	—160,461	1,369	108,848	—106,979
— 16,844	258	102,423	—102,165	3,203	92,991	— 89,788	7	63,022	— 63,015
— 4,173	145	7,081	— 6,936	14,382	2,006	+ 12,376	19	356	— 837
— 7,445	9,733	199	+ 9,534	4	359	— 355	19,468	148	+ 19,820
— 6,213	—	13,493	— 13,493	—	10,781	— 10,781	—	10,404	— 10,404
— 19,475	32,532	32,132	+ 400	23,090	61,293	— 38,203	283	—	+ 283
— 4,942	1,166	1,074	+ 92	39,129	—	+ 39,129	15,156	—	+ 15,156
— 12,462	—	10,770	— 10,770	—	10,320	— 10,320	—	6,478	— 6,478
—	—	—	—	24,603	—	+ 24,603	84,761	2	+ 84,759
—	—	—	—	2,433	—	+ 2,433	115	—	+ 115
— 3,799	1,309	1,384	— 75	—	3,786	— 3,786	—	94	— 94
+ 5,958	5,280	—	+ 5,280	4,641	—	+ 4,641	3,045	—	+ 3,045
+124,348	144,482	—	+144,482	184,954	—	+184,954	117,417	—	+117,417
+ 4,685	3,384	16	+ 3,368	4,216	8	+ 4,208	2,921	—	+ 2,921
— 6,683	18,582	26,978	+ 18,582	—	—	—	—	—	—
— 3,452	71	1,810	— 1,739	—	—	—	—	—	—
— 24,518	14,803	26,978	— 12,175	1,003	33,434	— 32,431	883	11,066	— 10,183
+ 20,894	232,659	294,538	— 61,881	303,724	377,505	— 73,781	245,444	199,918	+ 45,526

II.
MOVEMENTS.

of dollars.)

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

Table III.

BRITISH GOLD MOVEMENTS.

DISTRIBUTION OF GOLD IMPORTS AND EXPORTS BASED ON FEDERAL RESERVE BULLETIN.

(Thousands of dollars)

	Gold Imports	Gold Exports	Import Areas		Export Areas	
1925.....	207,548	248,377	Transvaal	832,844	France and Belgium	378,342
1926.....	187,606	132,139	Rhodesia.....	39,176	Germany and Netherlands .	307,644
1927.....	157,903	137,009	West Africa ...	27,376	Switzerland ...	70,402
1928.....	232,657	294,538	Australasia ...	111,910	United States of America	87,052
1929.....	303,724	377,505	South America.	48,060	India	117,733
1930.....	245,444	199,918	Russia	38,588	Egypt	12,193
			Spain	18,955	Malaya	20,981
					Other countries.	177,166
	1,334,882	1,389,486		1,116,909		1,171,513
		1,334,882				1,116,909
Net exports ...		55,604			Net exports .	55,604

Table IV.
GOLD MOVEMENTS TO AND FROM THE BANK OF ENGLAND.

(Thousands of £)

	1925	1926	1927	1928	1929	1930
January	—	— 251	— 16	+ 8,945	— 197	+ 8,598
February	—	+ 1,387	— 1,180	+ 21	— 1,424	+ 1,071
March	—	+ 1,058	+ 401	— 149	+ 1,680	+ 4,794
April	—	— 259	+ 2,211	+ 2,408	+ 4,660	+ 7,126
May	+ 1,347	+ 2,646	— 1,545	+ 2,820	+ 5,021	— 6,628
June	+ 1,044	+ 1,151	— 1,140	+ 8,466	— 7,085	+ 78
July	+ 6,358	+ 1,768	+ 699	+ 2,106	—14,847	— 4,438
August	— 1,338	+ 8,211	— 586	+ 1,244	— 6,617	+ 2,458
September	— 2,787	+ 159	— 770	— 4,762	— 5,615	— 548
October	—10,829	— 8,518	+ 671	— 5,233	+ 1,846	+ 8,227 ¹
November.....	— 8,281	+ 543	— 1,212	— 5,088	+ 2,815	—
December	— 2,109	— 1,624	+ 1,252	— 6,594	+12,085	—
Totals...	—11,595	+ 6,271	— 1,215	— 1,821	— 8,228	+11,088

Sum of deficits	Sum of surpluses
— 11,595	+ 6,271
— 1,215	+ 11,088
— 1,821	—
— 8,228	—
<hr/>	<hr/>
— 22,859	+ 17,859

Net excess of gold
outflows :
£5 millions.

¹ To October 22nd.

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	1.901	2.635	1.616	3.271	2.702	2.737	10.176	8.542	4.368
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	23.853	26.589	36.765	45.307	49.675
	(1 month)	(2 months)	(3 months)	(4 months)	(5 months)	(6 months)	(7 months)	(8 months)	(9 months)	(10 months)	(11 months)	(12 months)
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	2.936
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
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
	(1 month)	(2 months)	(3 months)	(4 months)	(5 months)	(6 months)	(7 months)	(8 months)	(9 months)	(10 months)	(11 months)	(12 months)
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	0.787	5.462	1.988	1.246	1.188	1.569	0.971	4.461	2.167
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
	(1 month)	(2 months)	(3 months)	(4 months)	(5 months)	(6 months)	(7 months)	(8 months)	(9 months)	(10 months)	(11 months)	(12 months)
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
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
	(1 month)	(2 months)	(3 months)	(4 months)	(5 months)	(6 months)	(7 months)	(8 months)	(9 months)	(10 months)	(11 months)	(12 months)
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
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
	(1 month)	(2 months)	(3 months)	(4 months)	(5 months)	(6 months)	(7 months)	(8 months)	(9 months)	(10 months)	(11 months)	(12 months)
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			
Imports.	8.569	16.575	24.437	33.220	42.546	45.371	60.436	65.409	69.999			
Exports.	3.308	10.310	12.946	16.993	28.555	32.801	41.093	45.488	49.649			
	(1 month)	(2 months)	(3 months)	(4 months)	(5 months)	(6 months)	(7 months)	(8 months)	(9 months)	(10 months)	(11 months)	(12 months)

Table VII.

	Gold movements to and from the Bank of England	Bank of England			Bank of England: Gold coin and bullion in issue Department (quarterly averages)	Average monthly rate of exchange		London		New York		Capital issues		Net imports	Net exports	Visible trade balance (including bullion)
		Deposits	Securities	Reserve		New York	Paris	Three months' rate	Bank rate	Call rate (average)	Bank rate	United Kingdom	Overseas			
	£ ¹ (000's)	£ ² (000's) (Quarterly averages)	£ ² (000's) (Quarterly averages)	£ ² (000's) (Quarterly averages)	£ (000's)	£ to \$ ¹	Franc to \$ ¹	Per cent ¹	Per cent ²	Per cent ³	Per cent ³	£ ⁴ (000,000's)	£ ⁴ (000,000's)	£ ⁵ (000,000's)	£ ⁵ (000,000's)	£ ⁵ (000,000's)
1925:																
January	—					4.780	88.54	3.82	4	3.21	3					
February	—					4.772	90.34	3.77	4	3.69	3½ (27th)					
March	—	128,435	122,944	23,645	126,771 ²	4.777	92.18	4.50	5 (5th)	4.01	3½			312	209	99
April	—					4.796	92.37	4.29	5	3.84	3½					
May	+ 1,347					4.855	94.11	4.69	5	3.78	3½					
June	+ 1,044	125,339	114,907	28,225	148,081	4.861	102.11	4.41	5	4.12	3½	85.1	89.2	236	184	104
July	+ 6,858					4.860	103.48	4.43	5	4.09	3½					
August	+ 1,388					4.857	103.54	4.02	4½ (6th)	4.23	3½					
September	— 2,787	127,439	107,921	37,680	160,439	4.847	102.86	3.79	4½	4.72	3½			258	187	69
October	— 10,829					4.843	109.16	3.42	4 (1st)	4.79	3½					
November	— 3,281					4.846	122.2	3.90	4	4.74	3½					
December	— 2,109	126,522	118,920	25,365	146,869	4.850	129.6	4.71	5 (3rd)	5.36	3½	47.0	48.6	316	194	110
1926:																
January	— 251					4.858	128.7	4.86	5	4.46	4 (8th)					
February	+ 1,387					4.864	132.4	4.36	5	4.89	4					
March	+ 1,058	125,276	120,291	23,159	143,594	4.861	135.3	4.40	5	4.56	4			284	190	97
April	+ 259					4.862	143.4	4.38	5	3.97	3½ (23rd)					
May	+ 2,646					4.862	154.3	4.46	5	3.83	3½					
June	+ 1,151	123,895	114,565	27,121	147,002	4.866	165.0	4.27	5	4.12	3½	68.4	63.2	252	149	108
July	+ 1,768					4.864	197.7	4.31	5	4.28	3½					
August	+ 3,211					4.858	171.4	4.36	5	4.58	4 (13th)					
September	+ 159	121,536	107,062	32,646	152,443	4.855	169.9	4.53	5	5.05	4			277	158	125
October	+ 3,518					4.850	165.2	4.69	5	4.70	4					
November	+ 543					4.849	141.8	4.74	5	4.60	4					
December	— 1,624	124,035	108,613	33,206	151,447	4.851	122.9	4.47	5	5.16	4	72.4	49.2	305	156	146
1927:																
January	— 16					4.853	122.57	4.23	5	4.27	4					
February	+ 1,180					4.850	123.63	4.14	5	4.06	4					
March	+ 401	123,575	108,569	33,199	149,454	4.854	124.01	4.38	5	4.18	4			290	170	118
April	+ 2,211					4.857	123.98	4.23	4½ (21st)	4.21	4					
May	+ 1,545					4.857	123.97	3.62	4½	4.27	4					
June	+ 1,140	118,097	100,023	35,884	151,374	4.856	123.97	4.35	4½	4.26	4	102.9	56.8	262	172	92
July	+ 699					4.8552	124.00	4.34	4½	3.95	4					
August	+ 586					4.8606	124.01	4.34	4½	3.66	3½ (5th)					
September	— 770	116,546	100,599	34,128	149,930	4.8634	124.00	4.32	4½	3.84	3½			258	176	87
October	+ 671					4.8700	124.08	4.31	4½	3.88	3½					
November	— 1,212					4.8740	124.00	4.34	4½	3.60	3½					
December	+ 1,252	119,574	103,176	34,178	149,684	4.8825	124.00	4.31	4½	4.43	3½	73.1	81.9	237	191	95
1928:																
January	+ 3,945					4.8758	124.00	4.29	4½	4.15	3½					
February	+ 21					4.8750	124.02	4.20	4½	4.33	4 (3rd)					
March	— 149	117,314	94,201	41,290	155,837	4.8601	124.02	4.17	4½	4.48	4			277	182	80
April	+ 2,403					4.8621	124.01	4.03	4½	5.06	4					
May	+ 2,320					4.8617	124.01	3.96	4½	5.69	4½ (18th)					
June	+ 3,466	117,445	87,810	47,398	161,286	4.8805	124.16	3.74	4½	6.32	4½	117.2	85.4	261	173	100
July	+ 2,106					4.8642	124.18	3.95	4½	6.06	5 (13th)					
August	+ 1,244					4.8538	124.23	4.28	4½	6.91	5					
September	— 4,762	119,773	78,861	59,081	172,363	4.8508	124.18	4.25	4½	7.40	5			257	180	80
October	— 5,233					4.8498	124.14	4.33	4½	7.12	5					
November	— 5,088					4.8495	124.11	4.38	4½	6.86	5					
December	— 6,594	115,055	85,867	47,010	161,084	4.8525	124.10	4.36	4½	8.86	5	101.9	58.0	232	166	82
1929:																
January	— 19					4.8503	124.08	4.31	4½	6.94	5					
February	— 1,424					4.8525	124.23	5.23	5½ (7th)	7.47	5					
March	+ 1,680	118,360 ⁴	78,185 ⁴	55,212 ⁴	152,164 ⁴	4.8529	124.24	5.38	5½	9.80	5			276	181	92
April	+ 4,660					4.8534	124.21	5.27	5½	9.46	5					
May	+ 5,021					4.8510	124.14	5.23	5½	8.79	5					
June	— 7,085	115,182	74,535	58,441	159,480	4.8485	123.99	5.28	5½	7.83	5	124.1	71.5	268	178	93
July	— 14,347					4.8511	123.88	5.33	5½	9.41	5					
August	— 6,617					4.8488	123.90	5.47	5½	8.15	6 (9th)					
September	— 5,615	113,673	97,590	34,270	140,208	4.8479	123.87	5.49	6½ (26th)	8.62	6			268	185	55
October	+ 1,346					4.8695	123.89	6.22	6 (1st)	6.10	6					
November	+ 2,315					4.8777	123.85	5.66	5½ (21st)	5.40	5 (1st)					
December	+ 12,035	114,703	99,104	33,398	135,272	4.8617	123.92	4.80	5 (12th)	4.88	4½ (15th)	85.3	22.9	299	186	125
1930:																
January	+ 3,953					4.8695	123.91	4.11	5	4.31	4½					
February	+ 1,071					4.8621	124.16	3.96	4½ (6th)	4.28	4 (7th)					
March	+ 4,794	113,920	69,384	61,971	151,770	4.8632	124.26	3.03	3½ (20th)	3.56	3½ (14th)			259	164	106
April	+ 7,128					4.8634	124.10	2.49	3½	3.79	3½					
May	+ 6,628					4.8699	123.90	2.14	3 (1st)	3.05	3 (2nd)					
June	+ 78	116,279	74,605	60,626	159,122	4.8588	123.81	2.33	3	2.60	2½ (20th)	73.7	68.2	233	141	94
July	— 4,438					4.8652	123.66	2.37	3	2.18	2½					
August	+ 2,458					4.8708	123.82	2.29	3	2.22	2½					
September	— 548	111,901	77,978	52,488	154,676			2.09	3		2½			225	136	87

¹ London and Cambridge Economic Service.
² Statistical Abstract, United Kingdom, 1928.
³ Annual Report, Federal Reserve Board, 1929.
⁴ Federal Reserve Board's Monthly Bulletins.
⁵ Midland Bank Monthly Circular.
⁶ Economist.

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	18	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	1,694.8	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	—	—	11.53

Table VIII (continued).
CLEARING BANKS' FIGURES (continued).
(Millions of £)

Period	Cash in hand and at Bank of England	Deposits	Ratio of cash to deposits
1928 :			
January	201.8	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	1,725.4	11.12
June	197.7	1,768.5	11.18
June 30th	203.4	1,791.9	11.85
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	12.88
Yearly average	196.2	1,766.2	—
Percentage of deposits	—	—	11.11
1929 :			
January	201.6	1,846.4	10.91
February	190.0	1,814.8	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	1,796.8	10.66
September	194.5	1,791.8	10.85
October	192.7	1,802.5	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	1,719.8	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 deposits			

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	1,818,000,000
1915	2,812,000,000
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	4,899,000,000
1926	4,492,000,000
1927	4,879,000,000
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 8.45 per cent in 1915, 8.43 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 4½ 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 banks¹, 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 \$11,887,000,000. 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 82 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 4½ 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 $4\frac{1}{2}$ per cent, but a rate of $4\frac{1}{4}$ 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 aggressive 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	3,214,857,000
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 \$ (000,000's omitted)	Total bills and securities	Discount rate New-York Reserve Bank (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	1,326	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 $4\frac{1}{2}$ 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 $3\frac{1}{2}$ 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 18 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 shipped, 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	6,844,135
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	1,819,169	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 authorized long before, as a means of facilitating the use of paper money in circulation in place of coin. The Treasury was authorized 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 83 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 842).

CURRENCY AND BANKING SYSTEMS OF THE UNITED STATES.

	\$ (000,000's omitted)	
	July 1st, 1928	July 1st, 1920
Total gold coin and bullion in United States Treasury and federal reserve banks ¹	8,732	8,956
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	53,887	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 unhealthy 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 \$1,185,000,000 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 bank 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 maladjustments 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	1,898	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	3,878
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	3,600	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 deposits
				Total	United States securities	Other	
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	2,851	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	19,993	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	3,889	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	6,338	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	4,812	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	18,906
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	7,671	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.

	Janu- ary	Febru- ary	March	April	May	June	July	August	Sep- tember	Octo- ber	No- vember	De- cember	Year
1914 : High ..	10	3	2	2	2	2½	7	8	8	8	6	5	10
Low ..	1½	1½	1½	1½	1½	1½	1½	6	6	5½	4½	2½	1½
1915 : High ..	3	2½	2½	2½	2½	2	2	2	2	2	2	2½	3
Low ..	1½	1½	1½	1½	1	1	1½	1½	1½	1½	1½	1½	1
1916 : High ..	3	2½	2½	3	3½	4	6	3	3	4	6½	15	15
Low ..	1½	1½	1½	1½	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 ..	2½	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 ..	3½	3½	3½	4	3½	4½	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	2½	2½	3	3½	4	3½	3½	2½
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 ..	3½	4	2½	3½	2½	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	3½	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	4½	4½	3
1927 : High ..	5	5	4½	5	4½	5	4½	4	4½	4½	4½	5½	5½
Low ..	4	3½	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	4½	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	4.85	4.78
1915	3.84	3.75	3.88	3.66	3.72	3.65	3.25	3.53	3.25	3.22	2.98	3.81	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	5.88	5.88	5.88	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	5.88	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	2.88	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	5.88	5.19	5.13	6.14
1922	4.75	4.85	4.74	4.41	4.19	4.13	4.80	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	4.81	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	4.93	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 Reiche- bank	National Bank of Belgium	Nether- lands 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	4½	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.

1918 = 100

	Janu- ary	Febru- ary	March	April	May	June	July	August	Sep- tember	Octo- ber	No- vember	De- cember	Aver- age
1918	184	186	187	190	190	191	196	200	204	202	208	202	194
1919	199	198	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	184	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 I.
MOVEMENT IN MONETARY GOLD STOCKS, 1925 to 1930.
(Millions of dollars.)

Country	Total gold reserves and monetary gold stocks at the end of :						Increase (+) or decrease (-)						
	1925	1926	1927	1928	1929	1930	1925-1926	1926-1927	1927-1928	1928-1929	1929-1930	4 years 1925 to 1929	5 years 1925 to 1930
Albania.....	5	5	5	5	5	5	-	-	-	-	-	-	-
Austria.....	2	7	12	24	24	30	+ 5	+ 5	+ 12	+ 37	+ 6	+ 22	+ 28
Belgium.....	53	86	100	126	163	191	+ 33	+ 14	+ 26	+ 37	+ 28	+ 110	+ 138
Bulgaria.....	8	8	9	10	10	11	-	+ 1	+ 1	+ 1	+ 1	+ 2	+ 3
Czechoslovakia.....	27	27	30	34	37	46	-	+ 3	+ 4	+ 3	+ 9	+ 10	+ 9
Danzig.....	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark.....	56	56	49	46	46	46	-	- 7	- 3	-	-	- 10	- 10
Estonia.....	8	8	8	2	2	2	-	-	- 1	-	-	- 1	- 1
Finland.....	8	8	8	8	8	8	-	-	-	-	-	-	-
France.....	711	711	799	1,247	1,631	2,099	-	+ 88	+ 448	+ 384	+ 468	+ 920	+ 1,388
Germany.....	1,066	1,066	1,065	1,259	1,631	2,099	-	+ 1	+ 194	+ 372	+ 468	+ 565	+ 1,033
Greece.....	303	452	460	666	560	544	+ 149	+ 8	+ 206	- 106	+ 16	+ 257	+ 241
Hungary.....	13	13	15	7	8	7	-	+ 2	+ 8	+ 1	- 1	- 5	- 6
Italy.....	10	30	84	35	29	29	+ 20	+ 4	+ 1	+ 6	-	+ 19	+ 19
Latvia.....	221	223	239	266	273	279	+ 2	+ 16	+ 27	+ 7	+ 6	+ 52	+ 58
Lithuania.....	5	5	5	5	5	5	-	-	-	-	-	-	-
Netherlands.....	3	3	3	3	4	4	-	-	-	+ 1	-	+ 1	+ 1
Norway.....	178	166	161	175	180	171	- 12	- 5	+ 14	+ 5	- 9	+ 2	- 7
Poland.....	189	180	176	190	195	185	- 9	- 4	+ 14	+ 5	- 10	+ 6	- 4
Portugal.....	89	89	89	39	39	39	-	-	-	-	-	-	-
Roumania.....	26	27	58	70	79	63	+ 1	+ 31	+ 12	+ 9	- 16	+ 53	+ 37
Russia (U.S.S.R.).....	11	9	9	9	9	9	- 2	-	-	-	-	- 2	- 2
Spain.....	46	47	48	49	55	55	+ 1	+ 1	+ 1	+ 6	-	+ 9	+ 9
Sweden.....	94	84	97	92	147	249	- 10	+ 13	- 5	+ 55	+ 102	+ 53	+ 155
Switzerland.....	490	493	502	494	495	471	+ 3	+ 9	- 8	+ 1	- 24	+ 5	+ 19
United Kingdom.....	62	60	62	63	66	65	- 2	+ 2	+ 1	+ 3	- 1	+ 4	+ 3
Yugoslavia.....	90	91	100	103	115	138	+ 1	+ 9	+ 3	+ 12	+ 23	+ 25	+ 48
TOTAL EUROPE.....	141	142	139	139	151	180	+ 1	+ 3	-	+ 12	+ 29	+ 10	+ 39
Canada.....	704	735	742	746	711	722	+ 81	+ 7	+ 4	- 35	+ 11	+ 7	+ 18
United States of America.....	712	743	750	754	719	730	+ 31	+ 7	+ 4	- 35	+ 11	+ 7	+ 18
North America.....	15	17	17	18	18	19	+ 2	-	+ 1	-	+ 1	+ 3	+ 4
South America.....	8,178	8,400	8,601	4,337	4,714	5,302	+ 222	+ 201	+ 736	+ 377	+ 588	+ 1,536	+ 2,124
Argentina.....	3,608	3,833	3,934	4,413	4,778	5,371	+ 225	+ 101	+ 479	+ 365	+ 593	+ 1,170	+ 1,763
Bolivia.....	226	230	229	191	151	194	+ 4	- 1	- 38	- 40	+ 48	- 75	- 32
Brazil.....	3,985	4,083	3,977	3,746	3,900	4,225	+ 98	- 106	- 231	+ 154	+ 325	- 85	+ 240
Chile.....	4,399	4,492	4,379	4,141	4,234	4,593	+ 93	- 113	- 238	+ 143	+ 309	- 115	+ 194
Colombia.....	4,211	4,313	4,206	3,937	4,051	4,419	+ 102	- 107	- 269	+ 114	+ 368	- 160	+ 208
Equador.....	4,625	4,722	4,608	4,332	4,435	4,787	+ 97	- 114	- 276	+ 103	+ 352	- 190	+ 162
Paraguay.....	436	436	461	473	405	411	-	+ 25	+ 12	- 68	+ 6	- 31	- 25
Peru.....	459	459	540	619	445	420	-	+ 81	+ 79	- 174	- 25	- 14	- 39
Venezuela.....	8	9	9	8	5	5	+ 1	-	+ 1	+ 8	-	- 8	- 3
South America.....	54	56	101	149	150	15	+ 2	+ 45	+ 48	+ 1	- 135	+ 96	- 39
Argentina.....	34	10	7	7	8	8	- 24	- 3	-	+ 1	-	- 26	- 26
Bolivia.....	36	12	9	9	9	9	- 24	- 3	-	-	-	- 27	- 27
Brazil.....	15	18	20	24	22	17	+ 8	+ 2	+ 4	- 2	- 5	+ 7	+ 2
Chile.....	17	21	23	27	24	19	+ 4	+ 2	+ 4	- 3	- 5	+ 7	+ 2
Colombia.....	5	5	2	1	1	1	-	- 3	- 1	-	-	- 4	- 4
Equador.....	8	3	3	1	1	1**	-	-	- 2	-	-	- 2	- 2
Paraguay.....	21	21	23	21	21	16	-	+ 2	- 2	-	- 5	-	- 5
Peru.....	22	22	24	22	22	17	-	+ 2	- 2	-	- 5	-	- 5
Venezuela.....	57	57	68	72	68	60	-	+ 11	+ 4	- 4	- 8	+ 11	+ 3
South America.....	58	58	69	73	69	61	-	+ 11	+ 4	- 4	- 8	+ 11	+ 3
Argentina.....	16	15	16	18	18	16**	- 1	+ 1	+ 2	-	- 2	+ 2	-
Bolivia.....	649	630	710	774	699	550	- 19	+ 80	+ 64	- 75	- 149	+ 50	- 99
Brazil.....	678	660	796	927	744	564	- 18	+ 136	+ 131	- 183	- 180	+ 66	- 114
Chile.....	29	18	17	14	17	20	- 11	- 1	- 3	+ 3	+ 3	- 12	- 9
Colombia.....	151	164	178	188	200	193**	+ 13	+ 14	+ 10	+ 12	- 7	+ 49	- 49
Equador.....	4,889	4,961	4,933	4,725	4,767	4,989	+ 72	- 28	- 208	+ 42	+ 222	- 122	+ 100
Paraguay.....	5,454	5,546	5,582	5,447	5,379	5,544	+ 92	+ 36	- 135	- 68	+ 165	- 75	+ 90
Peru.....	109	109	119	124	128	126	-	+ 10	+ 5	+ 4	- 2	+ 19	+ 17
Venezuela.....	74	75	72	68	56	56	+ 1	+ 3	- 4	+ 12	-	- 18	- 18
South America.....	576	562	542	541	542	412	- 14	- 20	- 1	+ 1	- 130	- 34	- 164
Argentina.....	8	3	3	3	3	3**	-	-	-	-	-	-	-
Bolivia.....	2	2	2	2	2	2**	-	-	-	-	-	-	-
Chile.....	15**	15**	15**	15**	15**	15**	-	-	-	-	-	-	-
Equador.....	779	766	753	753	746	164	- 13	- 13	-	- 7	- 132	- 33	- 165
Paraguay.....	17	18	19	18	19	43	+ 1	+ 1	- 1	+ 1	- 4	- 1	- 5
Peru.....	48	47	50	48	47	60	- 1	+ 3	- 2	- 1	- 4	+ 4	-
Venezuela.....	60	65	66	65	64	20	+ 5	+ 1	- 1	- 1	+ 1	+ 2	+ 3
South Africa.....	1	1	2	2	2	2**	-	+ 1	-	-	-	+ 1	+ 1
Rest of Africa.....	66	66	71	68	68	65	-	+ 5	- 3	-	- 3	+ 2	- 1
TOTAL AFRICA.....	78	84	87	85	85	82	+ 6	+ 3	- 2	-	- 3	+ 7	+ 4
Argentina.....	128	107	105	109	89	75	- 21	- 2	+ 4	- 20	- 14	- 39	- 33
Bolivia.....	279	232	220	223	185	75	- 47	- 12	+ 3	- 33	- 110	- 94	- 204
Chile.....	34	34	34	32	28	29	-	-	- 2	- 4	+ 1	- 6	- 5
Equador.....	162	141	139	141	117	104	- 21	- 2	+ 2	- 24	- 13	- 43	- 33
Paraguay.....	813	266	254	255	213	104	- 47	- 12	+ 1	- 42	- 109	- 100	- 200
Peru.....	9,074	9,334	9,497	10,024	10,412	11,074	+ 260	+ 163	+ 527	+ 388	+ 662	+ 1,333	+ 2,000
Venezuela.....	10,232	10,495	10,610	10,953	11,201	11,715	+ 263	+ 115	+ 343	+ 248	+ 514	+ 969	+ 1,423

* Estimated total monetary gold stocks.

** Provisional figure or estimate.

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	+ 81	+ 148
France	+ 8	+ 2	— 20	+ 254	+ 337	+ 573	+ 460	+ 1,088
Germany	+ 150	+ 135	+ 45	+ 218	— 105	+ 293	— 16	+ 277
Italy	+ 3	+ 3	+ 8	+ 8	+ 12	+ 26	+ 6*	+ 32*
Netherlands	— 10	+ 5	— 6	+ 14	— 11	+ 2	— 8	— 6
Poland	—	—	—	+ 34	+ 1	+ 35	— 4	+ 31
Switzerland	— 9	— 3	+ 8	+ 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	— 158	+ 21	— 132
U. S. A. ²	— 134	+ 98	+ 6	— 392	+ 175	— 118	+ 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	+ 250*	+ 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

LEAGUE OF NATIONS

**THE FUNCTIONING
OF THE GOLD STANDARD**

**A Memorandum Submitted to the Gold Delegation
of the Financial Committee**

by

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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.88.1931.II.
 - VI. *The Functioning of the Gold Standard*, by Dr. Feliks Mlynarski.—Document No. F. 979.
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CHAPTER I.

THE CHANGES IN THE STRUCTURE.¹

1.

The chief characteristics of the pre-war gold standard were the statutory obligation to redeem notes in gold coin, and in the free export of gold from one country to another. This does not mean, however, that the pre-war structure of the gold standard did not reveal any divergences from the above principles.

The limits fixed by law to the note issue were regulated by three different methods. The Bank of England had a fixed maximum, established by law, for the fiduciary issue. Every note issued in excess of this fixed amount had to be covered in full by gold. The Bank of France had a legally fixed maximum for the note issue, and this could not be exceeded even if gold were purchased. The actual issue of notes up to this total had to be covered in gold, or partly in silver, in such a proportion that they should still be convertible into gold. Subject to this condition, the fixing of the reserve percentage was left to the discretion of the management of the Bank. The Reichsbank was not hampered by any maximum for its note issue. Its Statutes contained only the requirement that at least one-third of the issue should be covered at all times by gold.

There were thus three principal systems of note issue: (1) total quota, (2) partial quota, and (3) minimum reserve requirement. All other Central Banks were more or less modelled on one of these three systems, that of the minimum reserve requirement being the most widely employed.

Each of the three systems embodied the principle of the obligatory convertibility of notes into gold coin. No bank—the Bank of the Netherlands, for example, was an exception—was under the legal obligation to redeem its notes in other ways; for instance, in gold bars, or in foreign exchange convertible into gold, instead of in gold coin. This accounts for the familiar general notion of the uniformity of the pre-war gold standard. It was in reality a generally adopted gold specie standard.

This does not mean, however, that the gold reserves of pre-war Central Banks consisted exclusively of gold coin being the legal currency in the country concerned. The reserves included gold bars on an equality with gold coin, and these bars were the object of international transactions. Special gold transactions between Central Banks were also known, one bank for account of another bank, sending gold to a third bank. In 1909, for instance, the Reichsbank sent gold to Russia and the Austro-Hungarian Bank to Egypt for account of the Bank of England. In spite, however, of this kind of special transaction, in which not only gold coin was used, but also gold bars, the fundamental structure of the pre-war gold standard did not undergo any essential change. The statutory convertibility was based on the assumption that gold coin was the only

¹ Written in 1930.

means of payment. Any person presenting notes to be exchanged for gold might refuse to accept gold in bars.

The position was the same in those Central Banks which were authorised by their statutes to include in the metallic reserve foreign exchange convertible into gold.

Before the world war, there were five countries in Europe—Belgium, Bulgaria, Finland, Russia and Italy—in which the Central Banks might include in their metallic reserve, without limit, foreign bank-notes, balances with foreign banks, and bills accepted by foreign debtors. In three countries—Greece, Portugal and Sweden—the Central Banks were authorised to count in the metallic reserve their balances with foreign banks, but not foreign bills or bank-notes. In five other countries foreign exchange could be included in the metallic reserve, but only to a limited amount. In Austria-Hungary and Roumania the Central Banks were permitted to include in the metallic reserve, to a limited amount, balances with foreign banks, but not foreign bills or bank-notes. In Denmark, Norway and Spain, limited amounts, not only of foreign balances, but also of foreign bills and bank-notes, could be included in the metallic reserves. Moreover, there were some banks, such as the Netherlands Bank, which could buy and sell foreign exchange, but had not the right to include it in the fundamental metallic reserve. In the case of this last bank, foreign exchange on an equality with the portfolio of home bills constituted an additional subsidiary reserve, but could not form part of the fundamental reserve.

These methods in no way interfered with the statutory obligation regarding conversion, which was very strictly defined and allowed notes to be redeemed in gold coin only. Central Banks did not have the option of effecting conversion in gold bars or in foreign exchange, even when they were allowed to include these values in their fundamental reserves. Gold bars, some silver, and foreign exchange to a limited or unlimited amount, constituted the assets which could be included in the metallic reserve as the basis for the issue of notes; but the Statutes of most of the pre-war Central Banks precluded the use of these assets as a means of payment in the obligatory redemption of notes. Their rôle was one sided. A person presenting notes for redemption could refuse to accept payment in gold bars, silver, or foreign exchange.

Such was the legal aspect of the position. In actual practice the stabilisation of the rates of exchange between currencies was frequently based on the so-called foreign exchange policy of the Central Bank. A classic example of such a policy is afforded by the Austro-Hungarian Bank, which, though under no legal obligation to redeem notes in gold, nevertheless succeeded in maintaining the rate of exchange of the crown within the gold points by buying and selling foreign exchange. Examples of this kind, however, do not affect the truth of the assertion that the pre-war system of the gold standard, in its legal aspect, was based principally on the obligation to redeem notes in gold coin. It was, in fact, a classic example of the gold specie standard. Its visible sign was the widespread circulation of gold coin, which was such a feature of pre-war conditions. At the outbreak of the war, the circulation of gold coin in England was more than twice as large as the total reserves of the Bank of England.

2.

The outbreak of the world war opens a new era in the history of the gold standard, which may be divided into two periods. The first period lasted from the beginning of the war to the Brussels Conference, and the second from that Conference to the present time.

In the first period, not one European currency escaped collapse or, at the best, serious difficulties. It was a period marked by the destruction of the pre-war gold specie standard.

While gold was abandoned as the basis of currencies, its production increased, reaching its peak in 1915. Simultaneously, there were violent disturbances in industrial and agricultural production and consumption. This resulted in an excessive accumulation of gold in neutral countries, and especially the United States of America.

The beginning of the second period was marked by a considerable degree of deflation in the United States, which entailed a further outflow of gold from Europe to America. The succeeding years witnessed energetic international co-operation with a view to stabilising currencies on a gold basis. Apprehensions of a future deficiency in the output of gold were mitigated by hopes that the neutral countries, and especially America, would be ready to return their gold surplus. At the end of 1928, the efforts to restore the gold standard entered upon their final stages. The stabilisation of currencies on a gold basis was almost complete.

The post-war return to the gold standard has not, however, been a return to the gold specie standard. Great shocks have caused great changes.

The position of the Central Banks in many countries has improved. In countries in which there were more than one bank of issue, the number has been reduced to one. Little now remains to be done in this respect. State banks have also decreased in number, giving place to private joint-stock banks, while the management of Central Banks have become more independent of the Government and political influences. Co-operation between Central Banks is extending and developing in a marked degree, and the establishment of an International Bank of Central Banks, in the shape of the Bank for International Settlements, is already an accomplished fact.

The rules governing the right of note issue have become more and more uniform. With the amendment of the Statutes of the Bank of France, the type of Central Bank which had the right to issue notes up to the maximum amount fixed by its Statutes, irrespective of the reserve percentage, has completely disappeared. The Bank of England maintains the traditional principle of the partial quota of the fiduciary issue, but this new quota can be increased with the consent of the Treasury, no special legislation being required. Outside England, the principle of the minimum reserve requirement is now generally accepted. The principle of the elasticity of cover for notes has won the approval of even the most conservative economists. Its advantages have led to a wider and wider use of the right to lower the minimum reserve on condition of paying to the Treasury, by way of penalty, a tax on that portion of the note issue which represents the lowering of the reserve ratio below the statutory minimum.

The structure of the reserves of Central Banks underwent more radical changes during the same period. The suspension of gold payments caused by the outbreak of the war created a situation in which Central Banks withdrew gold coin from circulation, and could not afterwards return it to the market. This was the beginning of the concentration of gold in the vaults of the Central Banks. Similarly, the minting of gold coin was stopped. The gold circulation shrank more and more, and is now negligible. Post-war endeavours to bring about a revival of the circulation of gold coin, chiefly in Holland and Switzerland, were unsuccessful, the public having lost the habit of using gold coin. Simultaneously, the belief was gaining ground that the circulation of gold coin was a luxury, and that in the interest of economising gold it should be abandoned.

This disappearance of gold from circulation found an outward expression in the considerable increase, as compared with the pre-war position, in the gold reserves of Central Banks. These reserves now consist of the pre-war reserves together with gold coin withdrawn from circulation and purchases of new gold.

Before the war, the gold reserves in any country consisted of the reserves held in the vaults

of the Central Bank, together with the total circulation of gold coin. To-day, the gold reserves of a country are, practically speaking, the reserves of the Central Bank, which have increased in proportion to the decline in the circulation of coin.

The disappearance of gold coin from circulation caused, not only a one-sided concentration of gold in the vaults of Central Banks, but also marked changes in the use of that gold by the Central Banks. Transactions in gold coin soon became less common, giving place to transactions in gold bars. This meant that the methods of effecting the obligatory conversion of notes into gold had also to change. In the spring of 1925, England set the example by officially abandoning the pre-war system of the obligatory redemption of notes in gold coin, thus introducing the new system unknown before the war, of notes obligatorily convertible into gold bars. On the principle that gold is superfluous in internal circulation, the obligation to sell gold bars in exchange for notes is confined to transactions in which gold is used exclusively for payments abroad. A further restriction is the fixing of a legal minimum quantity of gold below which the bank is not bound to sell.

Neglecting these restrictions, which are characteristic of the system but do not apply everywhere, we arrive at the conclusion that, in consequence of post-war developments, a new form of the gold standard has come into being — the so-called gold bullion standard. Following the example of England, several countries adopted the same system. The French reform of 1928 introduced another novelty—the obligation to redeem notes either in gold bars or in gold coin at the option of the management of the Bank of France. The right of choosing the means of payment was thus created, but belongs to one party only—namely, the Central Bank. We have here a mixed form of the gold bullion standard, which may be called the gold bullion and specie standard.

The same process of development pointed to the part that foreign exchange could play in the reserves of Central Banks. Before the war, as has been mentioned above, foreign exchange was, in actual practice, frequently included in the fundamental reserves. No Central Bank, however, was under a legal obligation to redeem its notes otherwise than in gold. The exchange of notes for foreign exchange, although carried out *de facto*, was never established *de jure*. After the war, the number of banks which included foreign exchange in their fundamental reserves considerably increased, and in these countries the rate of exchange of the home currency was chiefly regulated by the purchase and sale of foreign exchange by the Central Banks. The development of this custom is shown best by the following figures. At the end of 1913, the foreign exchange reserves of Central Banks amounted to about 350 million dollars, whereas at the end of 1928 they had increased to about 2,000 million dollars. This was the result, not only of the increase in the number of countries whose currencies were based on foreign exchange reserves held on an equality with gold, but also of the fact that two large Central Banks—the Reichsbank for an indefinite period, and the Bank of France from September 1926 to June 1928—adopted this system. In the history of the gold standard, the accumulation of foreign exchange by the Bank of France will constitute one of the most striking features.

However, it is not the increase in the number of banks which include foreign exchange in their reserves on an equality with gold, nor the abnormally large accumulation of foreign exchange that is the most striking characteristic of the change in the gold standard. The most noteworthy feature of the situation is the fact that, since the war, the Statutes of Central Banks have been modified on the principle that the obligatory redemption of bank-notes may be carried out either in gold or in foreign exchange. The right of Central Banks to effect redemption either in gold or in foreign exchange thus went considerably farther than the right to effect redemption

in gold bars or gold coin. The process, indeed, went even further than that. Two Central Banks were established, in Danzig and Estonia, under the statutory obligation to redeem notes exclusively in foreign exchange, gold being entirely eliminated.

The result was that, side by side with the gold bullion standard, the gold exchange standard appeared. Before the war, the redemption of notes was, in practice, effected in gold bars or foreign exchange, but legally the only standard was the gold specie standard. After the war, in addition to the gold specie standard, we meet with two forms that are new from the legal point of view—the gold bullion standard and the gold exchange standard. Independently of these three principal forms, moreover, there are certain mixed forms, such as the gold specie and bullion standard, and the pure foreign exchange standard as used in Danzig and Estonia.

3.

It may be said that all these changes were the outcome of apprehensions of a future shortage of gold in relation to demand. At the Brussels Conference, as well as at the Genoa Conference, much stress was laid on the impending shortage of gold in view of the increasing disproportion between the demand for gold and the outlook for its future production. The slogan of economy in the use of gold for monetary purposes was raised. Under the influence of this slogan, the disappearance of gold coins from circulation and the concentration of gold reserves in the vaults of Central Banks became complete. The same influence was responsible for the raising of foreign exchange to the status of a means of payment in the redemption of notes, and for the marked acceleration in the process of accumulating foreign exchange in Central Banks.

The principle of economy in the use of gold is, without doubt, a sound one, but it has had in practice not only favourable but also unfavourable consequences. Before the war, in the case of the Central Banks whose note issue was based on the principle of minimum reserve requirements, the system of covering the note issue to the extent of one-third by gold was prevalent. After the war, the statutory requirements became stricter rather than more liberal in this respect. The minimum gold reserve in many cases was raised to 40 per cent of the note issue. Where a minimum reserve lower than 80 per cent was allowed, the banks were bound on their Statutes to increase it gradually over a specified period of time. Although the Statutes permit the minimum reserve to be lowered on condition that a penalty is paid to the Treasury, in actual practice this right has always been of purely theoretical value. In the view of every nation, the minimum reserve has become thus an untouchable reserve.

The greater strictness in minimum reserve requirements has found an outward expression in the fact that the number of banks in which the statutory reserve ratio is calculated, not only on the circulation of notes, but also on the total amount of sight liabilities, has considerably increased.

It is true that such liabilities must be met on demand at any moment; but in actual practice the whole of them are never met at one time. The accounts payable on demand at the Central Bank are not only deposits, in the commercial sense, but also instruments of non-cash money turnover. The sudden liquidation of the whole of these accounts would be equivalent to the destruction of the mechanism without which the monetary circulation cannot function properly, and non-cash payments cannot be effected. Therefore, though I admit that the principle of including sight liabilities in calculating the reserve ratio is a sound one, I am of the opinion that, in practice, it is not necessary to take the total amount of sight liabilities into account.

In anticipation of a shortage of gold on account of a falling-off in the production of new gold, more stress should be laid on the possibility of using the reserves of gold accumulated in Central Banks. In view of the fact that the output of new gold is likely to diminish in the future, it is necessary to create in advance a legal position which will facilitate the use of the reserves of old gold. On this principle it would be advisable rather to lower than to raise the statutory minimum reserve requirements.

It cannot be disputed that the raising of the minimum reserve requirements was a policy contrary to the spirit of gold economy. The almost complete elimination of silver from metallic reserves was a second outward sign of this lack of consistent policy. The metallic reserves of a Central Bank never fall to zero. The lowest strata of the reserves, which lie at the bottom of the vaults of a Central Bank, never come to the surface. The question arises, therefore, whether silver could not play the part of the deepest strata, which are never put into circulation, on condition that it was included in the reserves at its gold value and to a limited amount. The elimination of silver after the war and the raising of the minimum reserve requirements cannot be reconciled with the spirit of gold economy. These were steps back and not forward.

Similarly, it was an unsound policy to embody in the Statutes of Central Banks provisions requiring at least two-thirds of the minimum gold reserves to be held in the vaults of the bank. This limitation restricts the freedom to deposit gold with foreign banks, and raises difficulties in clearing operations, which eliminate transport charges. Under the present conditions, it is not only necessary to dig deeper into old reserves, gold transactions must also be facilitated by means of book entries, which alarm the money market less than actual shipments—especially since the disappearance of coin from circulation and the concentration of gold reserves in one bank lays the whole burden of effecting gold transactions on that bank.

Before the war, the deficit in the balance of foreign payments was first covered by the outflow of gold coin from circulation, before it became necessary to resort to the reserves of a Central Bank. To-day, the Central Banks no longer have the protection afforded by the circulation of gold coin, and consequently the policy of facilitating gold movements by book entries is playing, and will play, an increasingly important rôle. Therefore, any limitation in regard to the amount of gold which may be held abroad cannot be reconciled with the spirit of gold economy.

The mistakes mentioned above, which are incompatible with a consistent policy, originate in apprehensions as to the future of gold. Gold began to be overvalued before its production actually began to diminish. Every country is now trying to obtain the highest possible level of reserves, and is growing more and more reluctant to sell gold. Owing to this atmosphere of apprehension, the return of gold from America and the neutral countries is also delayed and rendered more difficult. Some of these countries, such as Holland, made the freedom of gold exports dependent on reciprocity from other countries. The Central Banks began to regard themselves as morally bound to observe the principle of non-interference—that is to say, that a Central Bank must not be compelled to sell gold against its will, even though it may be under a legal obligation to sell. Although the legal embargo on gold exports has been lifted in many countries, it is replaced by a moral embargo which is often as effective as the legal one.

This picture will be still more striking if we take into consideration the rôle of the countries which apply the gold exchange standard. Banks which redeem their notes in foreign exchange are compelled to buy gold from time to time, because they are obliged to do so under their Statutes, which establish a minimum for their gold reserves. The situation then arises that banks of this type buy gold but do not sell it. Such gold accordingly disappears from the international market, and is to a certain extent hoarded. Thus, in addition to private hoarding, so

common in the Far East, we find an official hoarding of gold by Central Banks which apply the gold exchange standard. All these circumstances lead to the paradoxical situation that, although from a legal point of view the gold market is very wide (as gold export is now legally free in thirty-five countries), in practice this freedom is a mere fiction.

Greater strictness in establishing the minimum reserve requirements, the elimination of silver, the restrictions on the freedom to deposit gold abroad, and, finally and most important, the official hoarding of gold by Central Banks which apply the gold exchange standard—all these are the poisonous fruit of exaggerated and premature apprehensions of a future shortage of gold. Propaganda for economy in view of the impending deficiency in the production of gold proved as dangerous as propaganda for foreign exchange restrictions in countries which possessed a depreciating currency. The greater was the propaganda against the accumulation of foreign exchange, the more it was accumulated. Similarly, the propaganda designed to give a serious warning against the future deficiency in the production of gold merely led to an increase in the hoarding of gold.

4.

Summing up, we arrive at the conclusion that the post-war structural changes in the administration of monetary gold went in two directions.

First Group :

- (a) Disappearance of gold coins from circulation;
- (b) Concentration of monetary gold in Central Banks;
- (c) Increased use of gold bars in the redemption of bank-notes and in special transactions between Central Banks,
- (d) Increased use of foreign exchange in the redemption of bank-notes,
- (e) Extraordinary increase in the accumulation of foreign exchange as a component of fundamental reserves.

The changes in the first group are in harmony with the modern spirit of economy in using gold.

Second Group :

- (a) Greater strictness of statutory minimum reserve requirements;
- (b) Almost complete elimination of silver as a component of fundamental reserves;
- (c) Increase in the number of banks which follow the one-sided practice of purchasing gold without offering it for sale;
- (d) Increase in this one-sided practice concurrently with the increase in the accumulation of foreign exchange in fundamental reserves;
- (e) Limitations of the freedom to deposit gold abroad by statutory requirements as to the minimum amount of gold that must be held in the vaults of the bank.

The changes in the second group are contrary to the modern spirit of economy in using gold.

In consequence of the changes in the first group, the pre-war uniformity of the gold standard—as regards the legal definition of the obligation and the methods of redeeming notes in gold—was destroyed. In addition to the pre-war gold specie standard, two new main forms, the gold

bullion standard and the gold exchange standard, were created. There also appeared two further derivative forms, the gold specie and bullion standard and the pure foreign exchange standard.

In consequence of the changes in the second group, the restoration of the stability of currencies on a gold basis was not helped by a general return to free gold export. Although the number of countries which maintain legal restrictions on the export of gold is very small, there is, in reality almost everywhere, at least a moral embargo on gold exports. In law, the gold market is very wide, but in practice it is very narrow. This is due, not only to the one-sided transactions of banks which apply the gold exchange standard, but also to such principles as those of reciprocity and non-interference, which, though not officially agreed upon, are applied in practice by the leading Central Banks.

The stabilisation of currencies, therefore, is still not fully achieved, since, of the two chief principles of the gold standard—the convertibility of notes into gold and full freedom of gold movements—only the first has been really restored.

CHAPTER II.

THE CHANGES IN THE FUNCTIONING.

1.

The doctrine of the automatic functioning of the gold standard laid chief stress on the following factors—the condition of the gold reserves, the volume of the monetary circulation, the price and the volume of credits at the Central Bank, and the level of prices. When gold flows out, the monetary circulation shrinks, which increases the cost and curtails the volume of the credits granted by the Central Bank. As a further consequence, the price-level falls. The market from which gold flows out becomes then a place where one can buy more cheaply. Exports begin to increase and imports to decline. The balance of foreign payments shows an improvement, the outflow of gold is soon checked, and a reverse process begins. Gold flows in and the monetary circulation increases. Credit becomes cheaper and more abundant, and the level of prices rises under the pressure of an increased demand. Then the inflow of gold is checked in its turn, because, with a higher level of prices as compared with other markets, it is more profitable to buy abroad. Consequently, exports diminish and imports increase. In this way the movement of gold from one country to another automatically regulates the scale of credit and the level of prices.

The above reasoning would be not only logical but be confirmed in practice, but for the existence of an important additional factor—namely, the total amount of bank deposits which serves as an additional credit basis. The doctrine of automatic functioning under-estimated the rôle played by this additional factor. In reality, not only do bank deposits constitute a special credit basis, but their rate of increase is more rapid than that of the monetary circulation. During the eighty-five years which followed the passage of Peel's Act, the total amount of bank deposits in England increased ten times, whereas the monetary circulation increased only five times. Thus, the rate at which bank deposits increased was twice as large as the rate at which the monetary circulation expanded. The situation in other countries was similar.

The greater the accumulation of monetary capital in the form of bank deposits, the more the total credit structure of the country differs from the volume of credit granted by the Central Bank, for the increase of bank deposits brings about an increase of bank credit outside the Central Bank. The increase of bank credits in its turn causes a further increase of deposits. For this reason the rate of increase of bank deposits is more rapid than that of the monetary circulation.

Two spheres of credit are created in this way, one controlled directly by the Central Bank, the other indirectly. If the Central Bank succeeds in controlling both spheres by means of its discount policy, the conditions required by the doctrine of automatism are fulfilled. The movements of gold bring about changes in the discount policy, and these changes in turn affect the

level of prices. This applies, however, only to ideal conditions—that is to say, when there is perfect harmony between the changes in the volume of credit granted by the Central Bank, and in the volume of bank credit which is based on the accumulation of deposits. Close harmony between the changes in these two volumes of credit is the essential factor in the automatic operation of the gold standard.

In the majority of cases, however, this harmony is lacking.

Let us suppose that gold flows out, and that the Central Bank is obliged to raise its official rate in order to curtail the volume of credit. A higher rediscount rate may attract money hoarded in the country, as well as foreign funds seeking a more profitable field for investment. In that case, the credit-restriction policy of the Central Bank meets with impediments in the form of the inflow of bank deposits and the tendency of banks to invest these new funds profitably. A situation then arises in which the shrinkage in the credit granted by the Central Bank may be offset by the increase in credits given by commercial banks. The attempt to influence the level of prices then ends in failure, because the amount of purchasing power on the market does not diminish, in spite of the Central Bank's policy of restriction.

A similar situation arises when there is an inflow of gold. The Central Bank reduces its discount rate in order to increase the volume of credit, but the low rate begins to discourage foreign deposits, and at the same time home capital to some extent is driven abroad in search of more profitable fields for investment. Consequently, the volume of credit does not increase, and may, indeed, temporarily diminish. The amount of purchasing power in the hands of the public does not change in strict proportion to the inflow of gold, and, in spite of a reduction in the rate of interest, the level of prices does not receive the required stimulus.

Many other instances of the same kind may readily be quoted, especially in view of the influence of other factors for the most part ignored by the doctrine of automatism, such as the economic situation of the country, and psychological factors, which also effect the money market. No wonder, therefore, that, not only after the war, but also before, practice was so often inconsistent with theory. The history of the gold standard before the war offers too many instances of these divergences to quote.

2.

The gold which is held as cover for the total of the notes in circulation and the sight liabilities of all Central Banks amounts at present¹ to about 40 per cent of these notes and liabilities. On the other hand, the total stock of monetary gold amounts to only about 10 per cent of the total deposits of commercial banks. The difference between these figures illustrates clearly how far the accumulation of bank deposits outran the expansion of the notes and sight liabilities of Central Banks. It is clear, therefore, that, under these conditions, a partial emancipation of commercial banks from the control of Central Banks was bound to result. We know that it has become more and more difficult for Central Banks to control the money market. The pre-war method of manipulating the discount rate according to the movement of gold does not suffice to-day, and new additional methods must be devised.

The Bank of England and the Federal Reserve Banks in the United States resort to what are known as "open market operations". When raising or lowering the discount rate, they purchase or sell securities in order to reduce or expand the circulation, because the raising or lowering of the discount rate alone does not bring about this result—or, at any rate, does not

¹ This chapter was written in 1930.

bring it about as quickly as is required. In those countries in which the money market is weaker, the Central Banks limit or expand the amount of credit granted to clients, as the manipulation of the discount rate would not bring about the desired results. The regulation of the volume of credit granted to clients and open market operations are at present the two essential methods which Central Banks possess for supplementing their discount policy. This is a practical reaction caused by the increased importance of the part played by liquid capital. Not only has this increased in amount, but the technique by which it is transferred from one market to another has become more elastic.

The technical progress that has been made in modern banking is enormous. Advances have been made not only in the technique of attracting deposits, but also in the method of investing them profitably both at home and abroad. Such inventions as wireless telephony and telegraphy, the aeroplane as a means of transporting gold, book-keeping machines which reduce working hours, etc., have exercised an important influence on the emancipation of capital from the supervision of Central Banks. The sphere of activity of money markets has increased as they have become more and more international. Funds are now transferred so easily and so quickly from one place to another that the discount policy of Central Banks has become more and more complicated and difficult, and at the same time further removed from the passive rôle of a registrar of the movements of gold which was assigned to it by the doctrine of automatism in the days of Peel's Act.

8.

The most important consequence of the changes caused by the progress and technical modernisation of the accumulation of capital is an appreciable weakening of the connection between the movements of gold and changes in the level of prices. According to the adherents of the automatic operation of the gold standard, the outflow of gold creates a dearth of credit and a shrinkage of its volume, as a consequence of which the level of prices is bound to change correspondingly. A reverse process is then witnessed. Gold flows in, and this lasts until cheaper and more abundant credit brings about another outflow. In other words, the inflows and outflows of gold regulate each other by the changes in the price level, which are bound to appear under the pressure of changes in the volume and price of credit. If a fairly large outflow of gold is registered, the inflow can take place only *after lowering of the price-level*, as the lowering of the latter constitutes the condition *sine qua non* of changes in the movements of gold.

In this unavoidable dependence of the movements of gold on the changes in the price-level resided the most essential features of the doctrine of automatism. It was particularly this central point in the whole doctrine of the gold standard that was shaken by the progress of the accumulation of capital and the modernisation of banking technique. Let us assume that before the war (though in practice it was very seldom the case) the gold standard did operate automatically and the movements of gold regulated each other by changes in the level of prices. To-day, in the present state of the accumulation of capital and of banking technique, such an automatic interdependence between the movements of gold and changes in the price-level cannot exist. We witness a turning point in the history of the gold standard. To-day the inflow or outflow of gold, by causing a raising or lowering of the price of discount credit, causes such a rapid and considerable shifting of the liquid funds on the world money market that the direction of the movement of gold is bound to change *before any alteration in the price-level can take place*. The

year 1928—if I am not mistaken—breaks all records as regards this lack of harmony between the movements of gold, the price of credit, and the levels of the prices of goods.

The dependence of the movements of gold on price levels has thus become looser. The classic contention that "the export of gold means a fall in prices"¹ has become an anachronism. To-day, a change in the price of credit alone suffices, not merely to check the inflow or outflow of gold, but to change an outflow into an inflow or *vice versa*. The dearness of credit attracts foreign capital like a magnet. A rapid and abundant inflow of short-term foreign capital improves the rate of exchange of the inland currency more rapidly than before the war and arbitrage exports of gold become—provided special factors do not come into play—unprofitable. When the inflow of capital assumes fairly large proportions, an inflow of gold may even begin. All this happens *independently of the level of prices*, because during such a short period the changes in the price of credit cannot exercise an influence on the level of prices.

Under present conditions, a Central Bank must operate by means of a strong credit policy maintained over a fairly long period, if it wishes to influence the level of prices. The difficulties which confronted the Federal Reserve Banks during the period 1928-29 afford an example of this. Even before that period it could have been observed that in America after the war the movements of gold were steadily countered by changes in the discount policy, heavy imports and exports of gold being registered while the price-level—apart from certain seasonal fluctuations—remained relatively stable. The reserves of the Bank of England have fluctuated since 1925 in the vicinity of 150 million pounds, but the level of prices has shown a steady downward trend which was not in harmony with the changes in the discount rate or the movements of gold.

The beginnings of this change in the operation of the gold standard date back to the pre-war period, for even in those days its automatic operation was more of a legend than an historical truth. Since the war, this change has become so apparent that, to-day, the non-existence of such an automatism is unquestioned, and it is generally held that the gold standard now is, and must be in an increasing degree, a manipulated standard.

The completed evolution has its favourable and unfavourable features. Undoubtedly, the greater ease with which the rates of exchange may be regulated is all to the good. Under the pressure of the raising or lowering of the discount rate, rapid movements of short-term capital may be brought about, and these cause the rate of exchange of the inland currency to return to its normal level—*i.e.*, within the limits fixed by the gold points. *The stability of a currency can be now more easily regulated from the point of view of banking technique.* This is achieved, however, at the expense of the influence on price-levels, and therein lies the weakness of the system.

The weakening of the connection between the movements of gold and the level of prices is responsible for the fact that the changes in this level are influenced to a greater extent by non-monetary factors. In order to counteract the influence of these factors, a Central Bank ought to manipulate its official rate with thoroughness and over a fairly long period of time. The success of such a manipulation depends also more and more *on the co-operation of other Central Banks*. To-day, one Central Bank, unaided, cannot exercise a lasting influence on the level of prices; in the carrying out of its credit policy, it is bound to look for assistance from abroad. Therefore, the co-operation of Central Banks becomes indispensable from the international point of view, just as open market operations or the allotment of credits by the quota system is indispensable from the point of view of the home market.

¹ *Argentarius*, "Valuta", page 42.

Did the gold standard still operate automatically, the direction of the gold movements would be dependent on changes in the price-level, and conversely changes in the price-level would be responsible for the direction of the gold movements. Thus, as long as changes in the price-level constituted the decisive factor in determining the direction of the gold movement, those movements being in turn responsible for changes in prices, the problem of stabilising the purchasing power of gold had no logical foundation.

The situation is different, however, when the automatic operation of the gold standard is absent. Then the movements of gold no longer constitute brackets, as it were, limiting the fluctuations of prices. The process of levelling-up price-levels by means of the movements of gold is rendered more difficult than formerly. The movement of gold, the volume and price of credit and the changes in price-levels have lost their mutual correlation. Harmony has given place to discord. The Central Bank, in its discount policy, neither is nor can be a passive registrar of the movements of gold. If it wishes to control prices, it must resort to manipulation, and in this action it ought to secure the co-operation of other Central Banks. Such co-operation becomes indispensable if the Central Banks desire to protect themselves against any surprises caused by fluctuations of price-levels, for these are more and more subject to changes under the influence of non-monetary factors. No wonder, therefore, that, with the post-war operation of the gold standard, the problem of the stabilisation of prices is logically possible, and that it should have become the subject of increasingly lively discussion. The popularity of this problem is to some extent a symbol of the radical change which the accumulation of bank deposits introduced in the operation of the gold standard by relaxing the correlation between the movements of gold and changes in price-levels.

The weakening of the relationship between the movements of gold and the changes in price levels has had another consequence—it has increased and facilitated the effect of non-monetary factors in shaping prices.

As long as that relationship existed—we may remind the reader here that it was encouraged by the pre-war free-trade policy—the movements of gold from one country to another levelled up excessive differences between local price-levels. This levelling process took place almost automatically. Consequently, it was possible to speak of a world price-level as an average of local price-levels, because the latter were united in a single system by the movements of gold. Under present conditions, however, when the movements of gold are not parallel to the movements of prices, local price-levels have become more mutually independent. The process of levelling-up price-levels cannot be carried through so mechanically as before the war, and—what is still worse—the action of the movements of gold in this process is more and more replaced by the intervention of non-monetary factors.

The free-trade policy has given way to a general policy of protection. Even in England, the home of free trade, the adherents of protection are increasing in numbers. The United States, where the gold standard has the most solid foundation, has the highest tariff barriers of any great Power. In order to control prices, the Governments of various countries also resort to other measures as well as tariff barriers. Under these conditions the term “world price-level” is a greater statistical fiction than before the war, when there was a closer correlation between the movements of gold and the movements of prices, and when tariff barriers were lower; for price-levels in the various countries are to-day more local—*i.e.*, are less dependent on price-levels elsewhere.

As a result, we observe such a paradox as, for instance, the fact during the period 1927-28 prices in America were relatively stable, while in England they showed a decline, and in France,

simultaneously, they displayed an upward tendency. South Africa, the country that produces most gold, has at the same time one of the lowest price-levels in the world. In other words, the country which has an abundance of gold is at the same time one of the countries in which the purchasing power of gold is highest. Many other similar examples might be quoted.

4.

Someone may here remark that the war retarded the process of the accumulation of capital, and yet the influence of the accumulation of bank deposits on the relationship between movements of gold and movements of prices after the war is stronger than before the outbreak of war; which means that additional special causes must have come into play.

The above-mentioned improvements in banking technique constitute one group of such special causes. The most remarkable progress has been made in the modernisation and the rationalisation of this technique, particularly since the war. There exists, however, a second group of causes of still greater importance—namely, the phenomena connected with the development of the so-called gold exchange standard.

The system of the gold exchange standard consists in including foreign exchange in the fundamental reserves and redeeming notes in foreign exchange instead of gold. This system is based on the assumption that foreign exchange, as a component of the fundamental reserves and as a basis for the issue of notes, is “as good as gold”. We have already mentioned in Chapter I that this system was applied, in fact, already before the war. It has only developed to any extent, however, in the first decade of the post-war period.

At the end of the year 1913, the total amount of foreign exchange included in the fundamental reserves of the world amounted to about 350 million dollars. At the end of 1929, it had risen to more than 2,000 million dollars, or about six times as much.

The reader will find a detailed analysis of the good and bad features of the gold exchange standard in my other works.¹ In this present work I shall confine myself to a few remarks which have a direct connection with the question of the accumulation of deposits and its influence on the relationship between movements of gold and movements of prices.

The principle of including foreign exchange in the fundamental reserve instead of exchanging it into gold and bringing the latter to the country is undoubtedly a good feature of the gold exchange standard system. On the other hand, the method, hitherto practised, of using the foreign exchange which is included in the fundamental reserves as short-term capital which the Central Banks lend to foreign commercial banks, is a bad feature of the system. These operations bring interest, which is also included in the fundamental reserves, and this is responsible for the fact that the increase of foreign exchange reserves is more rapid than the increase of the reserves of gold, which bear no interest. If we assume that the former carry interest of 3 per cent yearly, with the present amount of total foreign exchange reserves (2 billion dollars) this artificial additional inflow of foreign exchange amounts yearly to about 60 million dollars, a sum equal to about 30 per cent of that part of the yearly production of gold which is used for monetary purposes.

The commercial banks, making use of the credits granted by foreign Central Banks,

¹ “Gold and Central Banks”, New York, 1929, The Macmillan Co., and *Revue d'Economie Politique*, August 1929.

emancipate themselves to a certain degree from the control of the local Central Bank. When the latter raises its discount rate and strengthens its restrictive power by the sale of securities, the local commercial banks look for credit assistance from foreign Central Banks.

This assistance they obtain by raising their interest rates. The inflow of deposits from foreign Central Banks in large amounts develops rapidly, and to this extent the restrictive policy of the local Central Bank is rendered difficult.

We find a classic example of such a situation in the second half of 1928 in the United States, where, in consequence of the raising of the discount rate, the amount of bank acceptances purchased by foreign Central Banks increased during a period of six months by more than 200 million dollars. The reverse holds good when the official discount rate is lowered. In consequence of the reduction of the official rate, the deposits in Central Banks are withdrawn and transferred to a market where investments are more profitable. The outflow of deposits is then rapid, and assumes large dimensions. This phenomenon has been particularly noticeable in England whenever the Bank of England has tried to lower its rate below that of the Federal Reserve Banks.

The credit operations conducted by Central Banks on foreign markets are responsible also for the fact that the movement of foreign exchange from one market to another does not perform the same functions as the international movement of gold. If, in a given country, gold flows out from the Central Bank, the monetary circulation in that country shrinks by the same amount. At the same time, the circulation in the country to which the gold flows increases. Thus the international movement of gold has reciprocal effects; it reduces the monetary circulation in one country and increases it in some other country.

The situation is different, however, with the international movement of foreign exchange which is included in the fundamental reserves on an equality with gold.

Foreign exchange is not gold, but a right to receive gold. Consequently it cannot be exported like gold, which is a substance like other commodities. A right may be utilised or not, but it is physically impossible to export it. In consequence of this essential difference, the movement of foreign exchange is nothing other than a transfer of rights to gold from one bank account to another.

If an American importer pays for goods received from abroad by means of a dollar cheque, and this cheque is purchased by a foreign Central Bank, a corresponding amount of dollars is transferred from the account of the importer to the account of the foreign Central Bank. The monetary circulation in the United States does not shrink on account of this fact. On the other hand, the monetary circulation increases in that country in which the Central Bank purchased the cheque and paid for it by increasing the issue of notes. Thus the movement of foreign exchange has a unilateral effect. In the country into which it flows, if the Central Bank purchases it and includes it in the fundamental reserve on an equality with gold, the monetary circulation will expand. At the same time, in the country out of which it flows, the monetary circulation may remain unchanged instead of diminishing to offset the expansion abroad. This is the case, of course, when, in the country out of which foreign exchange flows, the importer pays in the inland currency, by a cheque on his bank; for, in that case, the payment is effected by transferring the amount due from the importer's account to that of the foreign purchaser of the cheque.

When the transaction is more complicated—i.e., when the importer pays by a cheque in foreign currency and the amount due is debited to his account with a foreign bank, then the course of events is somewhat different. I give a detailed analysis of this operation in my above-mentioned publications. The fundamental nature of this transaction, however, remains the

same in either case—*i.e.*, the international movement of foreign exchange is a transfer from one bank account to another, and the influence of this movement on the monetary circulation is—with the present methods of Central Banks—unilateral, and different from the influence of the movement of gold, which is a reciprocal one.

Should the Central Banks, which purchase foreign exchange and include it in their fundamental reserves, concentrate their foreign deposits exclusively on accounts with foreign Central Banks, the movement of foreign exchange would become more similar to the movement of gold, as regards the latter's influence on the volume of the monetary circulation. I have analysed this question in greater detail in my above-mentioned works, and I intend to return to the subject again when I discuss the question of enforcing economy in the use of gold. In this place, I shall confine myself to the remark that the present practice of the Central Banks applying the gold exchange standard, which consists in using foreign exchange included in the fundamental reserve in credit operations on foreign markets, not only renders the discount policy of foreign Central Banks more difficult, but is responsible for the fact that the international movement of foreign exchange has a unilateral influence on the monetary circulation unlike the movement of gold, which has a reciprocal effect. In this way an additional disturbing element has crept into the world economic system.

The history of the Bank of France during the period 1926-1928 affords us an example of what considerable dimensions the accumulation of foreign exchange may assume under special circumstances. Practically all foreign exchange reserves are held on bank accounts in a few countries which have the strongest currencies, and which give the maximum guarantee that these foreign exchange reserves will be at any time convertible into gold. The banks which apply the gold exchange standard concentrate their foreign exchange reserves in the so-called gold centres—*i.e.*, chiefly in London and New York, and at present also in Paris. If this concentration took the form of non-interest-bearing accounts in the Central Banks of those gold centres, the situation would be quite clear. The Central Banks of those centres would then know what the amount of the non-utilised rights to receive gold were at any time, and, as a consequence, they would be in a better position to regulate their own discount policies. In view, however, of the facts that foreign exchange reserves are concentrated for the most part, not in the Central Banks, but in commercial banks, the situation is never sufficiently clear. The Central Banks in the countries in which foreign reserves are invested in the form of credits granted to commercial banks, under the fear of being surprised, endeavour to pursue a policy of hoarding gold in order that they may possess sufficient gold reserves in case foreign Central Banks should suddenly withdraw their credits and change foreign exchange into gold, bringing the latter to their own countries.

Thus the accumulation of foreign exchange reserves and the practice of utilising those reserves for credit operations in the gold centres creates a special disturbing element—the *potential demand for gold*, equal to the amount of the non-utilised rights to gold, which rights are temporarily lent to commercial banks in the gold centres. An American expert¹ justifies the large gold holdings of his country, which are, in a sense, sterilised, simply by pointing to the enormous foreign exchange reserves held in American banks by the European Central Banks which apply the gold exchange standard. Similarly, the Bank of England, although it has neither an abundance of gold nor special *ad hoc* sterilised reserves of gold, is steadily pursuing a policy of credit restrictions under the pressure of the potential demand for gold represented by the deposits

¹ Dr Burgess.

of Continental Central Banks held in the banks of the City. During the period from the spring of 1925 to the end of 1928, the total credits granted by the Bank of England decreased by 86 per cent. This is also to be regarded as a policy of quasi-sterilisation.

As a result, the competitive pressure on the gold market does not diminish, and every large transaction is effected in an atmosphere of public criticism, the more so as the banks which apply the gold exchange standard appear on the gold market exclusively in the rôle of purchasers. They buy often, but they sell only under exceptional circumstances. Consequently, gold purchased by such a bank is in a sense hoarded. *This is a form of hoarding which was not known in its present proportions before the war*, and its influence on the gold market is not and cannot be favourable.

5.

On the pre-war gold market, arbitrage transactions, based on a strict calculation of the profits to be made on differences in rates of exchange, played a dominant rôle. Special transactions, in which the profit was not the decisive factor, were comparatively rare. This was one of the features of the gold standard in its pre-war form. The Central Bank legislation was based on the principle of the gold specie standard. The gold bullion standard was unknown, and the gold exchange standard, although it existed in fact, was not of any considerable importance. To-day, the position is reversed. England—the chief gold centre of the pre-war period—applies the gold bullion standard; the gold exchange standard has developed, causing a large accumulation of foreign exchange reserves; and the gold specie standard is applied only in exceptional cases. Such a fundamental change in the structure of the gold standard was bound to exercise a radical influence on the gold market. With the present structure of the gold standard, even arbitrage transactions—as regards their amounts—are conditional on the official or semi-official consent of the Central Banks, which are in possession of considerable foreign exchange reserves.

These Central Banks have a privileged position on the gold market. In the first place, they can play only the part of purchasers of gold, because they regulate the rate of exchange of the inland currency by selling foreign exchange and not by selling gold. They can, moreover, exercise a still more disturbing influence inasmuch as, having always at their disposal a large foreign exchange reserve, they are able (*a*) to buy gold at any time without considering the question of probable profits, and (*b*) to facilitate the arbitrage transactions of commercial banks. As regards their own direct purchases of gold from other Central Banks, or on the free gold market in London, such special transactions may be controlled more or less effectively by public opinion. The time when such transactions are made, and their proportions, may be easily regulated by means of agreements and by the co-operation of the leading banks. Such an agreement does, in fact, exist, and the several conferences of the Central Bank governors that have taken place have succeeded in establishing the principle of non-interference.

The other side of the question, however, still remains to be settled—namely, *the influence of the accumulation of foreign exchange reserves on arbitrage transactions*. The large arbitrage purchases of gold effected in London by German banks in the autumn of 1928 could have assumed such considerable proportions only because of the fact that they were based on the foreign exchange reserves of the Reichsbank. The inflow of foreign credits to Germany found an outlet in the Reichsbank in the form of the purchase and accumulation of foreign exchange. When the rate of exchange of the German mark in London changed to the advantage of Berlin, and gold began to be exported from London, the exchange situation did not show any change for a

long time, in spite of the outflow of gold, because the German banks which took part in arbitrage transactions were given the opportunity of buying any amount of pounds sterling at the Reichsbank at any time. But for the existence of the large foreign exchange reserves at the Reichsbank, the amount of sterling bills held by the German banks *would have been rapidly exhausted in consequence of the imports of gold from London*, and the rate of exchange would have changed correspondingly in favour of London. Owing, however, to the fact that the Reichsbank sold sterling bills on London without any limitation, arbitrage imports of gold from London lasted considerably *longer* and assumed *greater* dimensions than could have been the case before the war, when the Reichsbank applied the pure gold standard and did not possess foreign exchange reserves.

This illustration shows clearly what a privileged position is occupied on the gold market by the Central Banks applying the gold exchange standard. Not only can they always buy gold anywhere without waiting for profit and without waiting for offers of gold for purchase, but—what is more important—*they can artificially facilitate arbitrage transactions to their own advantage*. By regulating the rate of exchange through the sale and purchase of foreign exchange, they can at any time create a direct or indirect demand for gold on the international market, thereby increasing competition and rendering the position of banks which apply the gold specie or gold bullion standard more difficult. On the other hand, *they cannot restrict the sale of foreign exchange*, because the redemption of notes in foreign exchange by the banks which apply the gold exchange standard is *a condition of the stabilisation of their currencies*, which is based on the principle of the gold exchange standard.

The group of banks which do not apply the gold exchange standard are always in a less advantageous position on the gold market. Not possessing considerable foreign exchange reserves, they are obliged to wait passively *until gold is offered to them*. They can only purchase gold in exchange *for their own currency*; they *cannot purchase gold for foreign currency*, because they have none. Similarly, their position is less advantageous as regards arbitrage transactions. The commercial banks which are under their control, and which are deprived of the possibilities of buying foreign exchange from their Central Banks, rapidly exhaust their own reserves in proportion to the imports of gold. A shortage of foreign exchange on the market ensues, and the rate of exchange quickly returns to its normal level. Arbitrage transactions are no longer profitable, and gold imports are interrupted.

In those countries in which the Central Bank has considerable foreign exchange reserves, *a favourable rate of exchange encouraging import transactions may last longer, and consequently imports may artificially assume larger proportions*. In those countries in which the Central Bank is not in possession of considerable foreign exchange reserves, a favourable rate of exchange encouraging arbitrage imports lasts a *shorter time*, and these imports *are not artificially stimulated*. These are important differences which exercise a disturbing influence on the international gold market.

The history of the London market affords a typical instance of this.

In the autumn of 1928, large amounts of English gold were exported to the Reichsbank by means of arbitrage transactions. What portion of this gold returned to the Bank of England? Practically none. When, later on, the rate of exchange of the mark declined to the disadvantage of Berlin, the gold which was exported from London in the spring of 1929 was exported to Paris and New York, but not back to London. Nor could it have been otherwise, because the Reichsbank had a larger amount of bills on London than on Paris or New York. This phenomenon appears also to some extent in the French purchases of gold in London.

The French purchases were of larger proportions than the German purchases of the autumn of 1928. How much English gold returned from Paris to London by means of arbitrage transactions? Again, practically none. Let us suppose that the Bank of France begins to sell foreign exchange again, especially sterling bills. Then arbitrage imports may theoretically continue without serious interruption, because they will not exercise a sufficient influence on the rate of exchange of the French franc in London. On such a foundation as the foreign exchange reserves of the Bank of France, the banks in Paris could engage freely in arbitrage transactions, and even large amounts of imported gold would not exercise such an influence on the rate of exchange of the pound sterling in relation to the French franc as would be the case if the pre-war system of the gold standard still existed,¹ especially as *the French balance of payments is strongly on the credit side*, and an adverse rate of exchange is a comparatively rare experience.

In consequence of these abnormal conditions prevailing on the London market, we witness a very interesting phenomenon—namely, that the gold reserves of the Bank of England, which fluctuate in the vicinity of 150 million pounds, can be maintained at this level only because of the inflow of gold from the British Dominions, and to some extent from new production. *For, in consequence of arbitrage transactions, the Bank of England is steadily losing gold, which very seldom returns to it in the same manner.* This, in spite of the fact that the internal value of English currency has steadily increased since the spring of 1925, at a more rapid rate than in the other countries, as the decline of wholesale prices in England has constantly anticipated the fall of prices elsewhere. The Bank of England makes good the losses in its gold reserves principally by drawing on the reserves of South Africa, Australia and the Argentine, but to a certain extent by purchasing from time to time on the open market such part of the gold shipments as remains after the requirements of India and those for industrial purposes have been covered, as well as the still more important needs of the so-called “unknown buyer”. The latter is a new figure on the post-war gold market. He is, to a certain extent, a symbol of the profound changes which have taken place in the structure and operation of the gold standard.

This abnormal state of affairs is illustrated in an equally striking manner by the statistics of gold transactions effected in London since the spring of 1925. The annual purchases and sales of gold by the Bank of England during the last few years were as follows (in millions of pounds):

	Purchases	Sales
1925 (months)	17.2	28.8
1926.....	24.0	17.7
1927.....	19.4	20.7
1928.....	85.6	86.9
1929.....	52.7	60.9

It will be noticed that these transactions increase from year to year, reaching a record level in 1929.

¹ Actually, the Bank of France does not sell foreign exchange on the market, and has not sold any since the end of 1928. It confined itself to the sale of the interest accruing on the already existing reserves. Its former rôle, however, is partly filled by the Treasury, which also has a fairly large reserve of foreign exchange, which it sells to collective bodies, thus reducing the volume of demand on the market. In addition, the Bank of France is not legally debarred from resuming its sales of foreign exchange if the rate of exchange reaches the gold export point.

A similar picture is offered by the statistics of exports and imports published by the Board of Trade (in millions of pounds):

	Imports	Exports
1925.....	41.5	49.7
1926.....	38.5	27.1
1927.....	32.4	29.1
1928.....	47.8	60.5
1929.....	62.4	77.6

Both tables reveal that the above transactions are following a steady upward trend, having almost doubled in the course of the last five years. Thus, the situation on the gold market becomes more difficult instead of easier. No one can point to natural economic causes which would justify such a large expansion of transactions in gold—especially as these transactions took place on the London market, which is still a world centre of gold and may therefore be regarded as the best gauge of the amount of pressure which exists at any given moment. It is beyond dispute that new and disturbing elements, having their origin in the changes in the structure and the working of the gold standard, have entered into play and are still existent.

6.

The changes in the operation of the gold standard took place under the influence of two factors: (1) the steadily increasing accumulation of bank deposits, and (2) the variations in the structure of the gold standard, which has been split into three different forms. In consequence of these two phenomena; (a) the influence of the movements of short-term capital on the movements of gold is steadily increasing; (b) the correlation between the movements of gold and changes in price-levels has been weakened; and (c) there is a lack of co-ordination between the gold exchange standard and the two other systems—namely, the gold specie standard and the gold bullion standard. The great development of the gold exchange standard in the post-war period is largely responsible for these changes in the operation of the gold standard. The accumulation of foreign exchange reserves by the banks which apply this system, and the rapid transfer of these reserves in large amounts from one market to another, cause special complications both on the short-term capital market and on the gold market.

The above principal changes have brought about numerous further results, among which may be mentioned the following:

(a) The discount policy of Central Banks has encountered greater difficulties, because the international movements of short-term capital to a certain extent emancipate the commercial banks from the control of the Central Banks;

(b) The use of the discount rate must be reinforced by open market operations, or by the allotment of credits through a quota system;

(c) The Central Banks, wishing to influence the price-level, are obliged to continue their credit policy over a longer period of time in one direction, and with greater thoroughness, if they wish to counteract the influence of non-monetary factors or overcome the disturbing effect of the international movements of short-term capital;

(d) A new factor has appeared on the gold market—viz., the potential demand

for gold represented by the accumulation of foreign exchange by the banks which apply the gold exchange standard;

(e) Owing to this potential demand for gold, some Central Banks are compelled to sterilise an excessively large portion of their reserves;

(f) The number of special gold transactions tends to increase;

(g) Arbitrage transactions may more easily be effected in the countries which apply the gold exchange standard, because such transactions find an artificial basis in the foreign exchange reserves of the respective Central Banks;

(h) Competition on the gold market is rendered more acute by the inequality of opportunities—*i.e.*, by the privileged position of the banks which apply the gold exchange standard.

In the light of all these difficulties, two problems appear to be of paramount importance :
(a) Can the policy of Central Banks control prices? and (b) Is it possible to establish more effective co-ordination between the three forms of the gold standard which at present exist?

These are two distinct problems. In any case, however, the task of Central Banks—as regards their economic rôle—would be markedly easier and their influence in shaping prices greater, if it were possible to remove the inequality of opportunities on the gold market, which originates in the splitting of the gold standard into three unco-ordinated forms. It is beyond question that the present abnormal conditions on the gold market do not assist Central Banks to influence the level of prices, but render it more difficult for them to do so. The elimination of these abnormal conditions is therefore a matter of primary importance, and should be given priority.

Can this problem be solved?

That will depend, not only on the present structure of the gold standard being reformed in one way or another, but also on whether the world possesses, and will possess in the future, enough gold to make such a reform feasible.

CHAPTER III.

THE ADEQUACY OF THE WORLD SUPPLY OF GOLD.

I.

Will the world have a sufficient supply of gold to restore and maintain the smooth working of the gold standard ?

According to statistics compiled by the Secretariat of the League of Nations from official sources, and according to the estimates of the well-known expert in precious-metal statistics, Mr. Joseph Kitchin, the prospects for the production of gold in the next decade are as follows (in millions of dollars) :

Production in the year :	Official figures	Kitchin's estimates
1931	401	402
1932	407	410
1933	399	407
1934	390	403
1935	381	398
1936	356	397
1937	357	392
1938	357	364
1939	323	370
1940	314	370

Whether we take the official figures in the first column, which are calculated on a more conservative basis, or Mr. Kitchin's estimates, which are more optimistic, in either case it will be seen that, beginning with the year 1933 in one case, and in the other the year 1935, the production of gold will decline below 400 million dollars yearly.

Approximately half the annual production, about 200 million dollars yearly is used for industrial purposes, or hoarded in Asiatic countries. The remainder, a little more than 200 million dollars, is free to be used for monetary purposes. Should the yearly requirements for industrial purposes and Asiatic hoarding be maintained at approximately the present level, the amount of gold available for monetary purposes in 3 or 5 years, as the case may be, will decline below the present level of 200 million dollars yearly.

Under normal conditions, the production of goods increases from year to year, and, as a result, the exchange of goods expands on parallel lines. In order to finance the increasing

production of goods as well as the increasing trade turnover, a larger amount of credit is necessary. With the growth of the world's credit system, however, it will be necessary to accumulate larger metallic reserves, for as long as mankind applies the gold standard it will be impossible to separate the pyramid of credit from its gold base. An inflow of new gold, in some proportion to the increasing economic turnover, therefore, is necessary.

This is not only a question for the present decade. The prospects for the production of gold after 1940 are likely to be still worse, unless, in the meantime, new gold-bearing strata are discovered, which will make good in the next few years the probable decline in South African production. The South African mines have already reached their peak of production, and their output constitutes at present more than half of the world's total. The increase in gold production in Canada and Russia from strata already discovered will not offset the more rapid decline in the output of South African mines. Furthermore, we are not justified in counting too much on extraordinary improvements in the technique of gold production. In this field, important technical inventions seem as improbable in the near future as the discovery of new rich gold-bearing strata.

Let us leave it to prophets to prophesy new discoveries.

From the scientific point of view, the simple fact that the production of gold will soon show a decline, and that this decline will be a lasting one has the greatest significance. We are entering upon a period in which less new gold will be available each year to replenish the world's reserves. The decline in the production of gold is thus a problem of vital importance for the immediate future. Out of it a question of equally vital importance arises—whether or not it will be possible, with the inflow of new gold diminishing from year to year, to maintain a steady increase in production and trade.

Should the production of coal, for instance, decline in the next few years and the demand for coal continue to increase *pari passu* with economic progress, the exchange value of coal would rise. With diminishing production and increasing demand, it would be only natural that a unit weight of coal should be exchanged for a larger number of unit weights of other goods. The same applies to gold. With diminishing production and increasing demand, the exchange value of gold ought to rise just as the value of coal or any other commodity would. This is all the more true because the demand for gold is more general. Gold is not only used for industrial purposes, or hoarded as the most convenient form of property, but is also a means of payment in the exchange of goods, both in home and international transactions. Should, therefore, the production of gold steadily diminish, in the next ten years, without a corresponding falling-off in the demand for gold, the exchange value of gold may be expected to increase more rapidly than that of other goods under similar circumstances.

When considering coal, we speak of its exchange value; but when considering gold, we speak of its purchasing power instead. This difference in terms, however, does not signify any difference in the very nature of these phenomena. The purchasing power of gold is one of the synonyms of its exchange value. With the diminishing production of gold and the increasing demand for it, the purchasing power of gold must and will increase. That means that, in exchange for a unit of any given commodity, we shall give fewer and fewer units of gold. In everyday language, this means a decline in prices, because price is the exchange value of goods or services expressed in gold.

The shortage of gold thus means a downward trend in prices. This prospect certainly cannot be viewed by the world without apprehension, for it is not beneficial to economic progress. Under falling prices, production declines, unemployment increases, and unfavourable changes

take place in the distribution of the national income. Changes in social and political life may also result.

Estimates of the future production of gold reveal the possibility of this danger. It would not be a seasonal phenomenon, or an outcome of a temporary cycle. The world is threatened with *a process of long, even secular duration*. It passed through a period of somewhat the same character in the years 1873 to 1896, but was that period, in fact, one marked by a permanent and steadily increasing economic depression?

If we acquaint ourselves with the historical data collected by Mr. W. C. Mitchell in his "Business Cycles", we shall easily arrive at the conclusion that the period 1873 to 1896 as a whole was by no means a catastrophic one. It was undoubtedly characterised by a longer duration of individual trade cycles. We know that a longer duration of these cycles is connected with the predominance of the phases of depression over the phases of prosperity, as may be seen from the following table :

		Years of prosperity per year of depression
<i>England :</i>		
1849-1873	rising prices	3.3
1873-1896	falling prices	0.4
1896-1920	rising prices	2.7
 <i>United States of America :</i>		
1849-1865	rising prices	2.9
1865-1896	falling prices	0.9
1896-1920	rising prices	3.1

The predominance of phases of depression during the period 1873 to 1896 is obvious. It would be incorrect, however, to draw the conclusion that, owing to this predominance, the period as a whole was a catastrophic one. The United States of America enjoyed, during that period, both six years of prosperity and six years of partial prosperity. England likewise had six years of prosperity and four years of partial prosperity and France five years of prosperity and five years of partial prosperity. Nor should it be forgotten that, during that period of falling prices, railway and steamer construction showed rapid progress and the organisation of modern industry was pursued with equal energy. It was in that period that the foundations of the future industrial development of Germany and the United States of America were laid.

This apparent discrepancy between facts and figures is explained by the fact that world economy gradually adjusts itself to the secular trend of falling prices. From this point of view, short-term trends have frequently more adverse effects than secular ones. For instance, the decline in prices caused by the pressure of a trade cycle, or the credit policy of the banks, has a more depressive influence on the psychology of the market. In view of an unfavourable outlook, every manufacturer is more inclined to wait for a change in the situation than to adapt himself to the new conditions. The great American deflation in the years 1920 and 1921 affords a typical instance of this. Equally instructive is the experience with falling prices in the years 1929 and 1930. Only when a certain period of time has elapsed after each blow, is the market able to adjust itself to the new situation, and then depression gradually gives way to a new revival of activity.

As may be seen from the history of the period 1873 to 1896, a revival of activity is possible

and often successful, *in spite of the continuance of a downward trend of prices possessing a secular character*. Let us examine, for example, the trade cycles of the period 1873 to 1896, which took place in England, the leading country at that time in world economic affairs. The first cycle, and the longest, embraced six years of depression. Sauerbeck's index, which is quoted by Cassel and Kitchin, declined from 132 in 1874 to 108 in 1879. This was a reaction after the former cycle of prosperity, which lasted four years, from 1870 to 1873 inclusive, in which latter year the index of prices reached its peak of 144. But, in the same year, panic broke out in America, Germany and Austria. Simultaneously England and France registered a period of economic retrogression and depression. The state of affairs was, in fact, similar to that anticipated by the doctrine. After a cycle of increasing prices, reaction set in, and the ensuing decline of prices was accompanied by economic depression which lasted six years.

What was the course of events in the following years? In 1880, the index rose to 114, and an economic revival could be observed. During the period 1881 and 1882, however, the index fell to 110 and 109 respectively, but in spite of this fact *the economic revival evolved into a mild prosperity*. This was the first sign that economy had begun to adapt itself to the secular trend.

The following years, 1883 to 1886, constituted a new period of declining prices, which, in its turn, gave place to a cycle of rising prices during the period 1887 to 1890. Thus, the period 1883 to 1886 was a depressed phase, and the following period 1887 to 1890 a prosperous phase. Each cycle lasted four years. In the depressed phase, 1883 to 1886, the price indices were as follows: 106, 97, 94, 90; in the prosperous phase which followed immediately they were 88, 91, 94, 94. The range of the depressed phase amounted to 16 points; that of the prosperous phase to only 6 points. A revival of activity was thus possible with an upward trend of prices which was considerably weaker than the former downward trend. This is another proof that the influence of the secular trend on economic life had diminished, and that the pulse of this economic life was regulated more and more by price fluctuations of an annual character.

This is confirmed by the last cycle of the period from 1891 to 1895, in which latter year the index declined to 81. The cycle of depression lasted only five years, although the secular downward trend had continued for twenty years. In the following year, there was a further fall of the index to 79. This was the lowest level reached, and with it the secular period, 1873 to 1896, closed. In spite of this low level, a revival of economic activity was noticeable in that very year, and the depression disappeared *before* a substantial increase in the inflow of new gold had taken place.

Undoubtedly annual fluctuations of prices can, and in fact frequently do, exercise a more adverse influence than price-trends of a secular character. We too often overestimate the adverse influence of secular fluctuations and underestimate the destructive effects of annual fluctuations. It is not the absolute figures of price-indices that are of most importance but rather *the change in their trend in annual cycles and the range of their fluctuations*. In the period of increasing prices, from 1850 to 1873, England passed through two periods of depression—one in 1854 and 1855 and the other in 1866, 1867 and 1868. The price-levels of the first period were 182 and 131; those of the second period, 132, 130 and 129. During the subsequent period of declining prices, 1873 to 1896, phases of prosperity were experienced with *markedly lower price-levels*, and in 1880, 1881 and 1882 we find indices of 114, 110 and 109, while in 1887, 1888, 1889 and 1890 the indices were 88, 91, 94, and 94. The absolute level of prices in the secular period 1850 to 1873 *was 20 to 30 points higher in the periods of depression than the absolute price-level during the prosperous phases of the following secular period*. In view of these figures, we cannot but agree with Professor Irving Fisher that the volume of employment, which is

symptomatic of the real state of industrial activity, does not depend in principle on a high or low level of prices. Reviewing the period 1873 to 1896, he rightly arrived at the conclusion that only "if we sink from one level to another" or conversely, does the volume of employment tend to increase or decrease.¹

2.

The existence of a danger does not mean that the malady must inevitably break out. Should the production of coal steadily decline from year to year, undoubtedly the demand for coal will also begin to fall off, or, at all events, will cease to increase. The fall in demand will be the result partly of economy in consumption, partly of a wider use of other kinds of fuel. The same may be said of the purchasing power of gold, which depends not only on supply but also on demand. If the output of gold diminishes, it is not impossible that the demand will diminish also.

We have seen, in the first chapter, the changes that occurred in the structure of the gold standard, and evidence that economy in the use of gold for monetary purposes has already made some progress. Furthermore, we know that, since the war, in spite of apprehensions of a future shortage of gold, certain structural changes have been introduced which are contrary to the principle of economy. It is possible to carry through additional reforms, which will greatly assist in economising gold and reduce the demand for it. Independently, however, of this problem of reforms, to which I shall return later, the question arises whether it is, in fact, impossible to devise measures which could at least partially check the decline in the production of gold.

The increase in the purchasing power of gold and the decline in the price-level are two sides of the same medal. If, therefore, the prices of foodstuffs, of the means of production and of labour fall in proportion, the cost of producing gold will diminish, and the profits derived from its production will consequently increase. Higher profits will more easily attract free capital to be used for further investment in gold-producing enterprises, and it will be easier to expand the field of operations by working strata which contain less gold. We know that, with the present level of production costs, mine-owners are compelled to throw away large quantities of gold ore because it would not be profitable to work it. In the South African mines, there are hundreds of millions of tons of such ore which are not utilised. We may therefore suppose that, in South Africa, as well as in other territories, it will be possible to include in the process of production gold-bearing strata which are not worth working to-day, but which will promise better profits in the event of a greater decline in prices and costs of production.

It is a well-known theory that the production of gold is elastic, and that a shortage of gold can cure itself because the decline in gold production lowers costs of production, thus facilitating an increase of production through the working of strata containing a lower percentage of gold. This theory probably contains a grain of truth.

The question is most important in regard to South Africa, which is responsible at present for more than half the world output of gold, and where there are certain areas which are not worked, but which it might be worth while to work should costs of production undergo a marked fall. In Canada, whose output of gold is steadily increasing, a fall in prices will undoubtedly stimulate it further. Will this also be possible in South Africa, where production has already reached its highest point and is about to enter upon a period of decline? This is a more doubtful point.

¹ *International Labour Review*, Vol. XIII, page 788.

The level of prices in South Africa is to-day one of the lowest in the world, and those who know the country draw from this fact the conclusion that any further decline of prices will not proceed so rapidly there as in other countries. Black labour which is cheaper than white, is also already employed on a large scale. In view of these facts, there is a general belief that the chances of checking the decline in the production of gold are small. This pessimism found an outward expression in the fact that during the Stock Exchange crisis which took place towards the end of 1929 and the beginning of 1930, the shares of gold-producing undertakings did not show any particular power of resistance. The market did not anticipate favourable prospects for an increase in the production of gold under the influence of declining costs of production, although the world level of wholesale prices declined on the average by about 25 per cent in the course of six months.

This pessimism as regards South Africa is somewhat exaggerated. The decline in prices chiefly affected agricultural production, and it should here be remarked that it is owing to the growth of agricultural production since the war that the purchasing power of gold in South Africa is higher than elsewhere. Before the war, South Africa imported foodstuffs; since the war, she has exported them. The decline in the prices of agricultural products may, however, cause a crisis in this branch of production in South Africa, thereby reducing the area under cultivation. Less negro labour will then be absorbed by agriculture, and more will be available in the gold-producing centres. The producer of gold in South Africa is already paying less for the means of production, and he may soon begin to pay less for white labour. Moreover, the supply of negro labour may increase.

There are, however, natural limits to such a process. With present technical methods, gold ores containing a relatively small amount of gold are already used. The ores which are thrown away contain gold, but in such small quantities that only with considerably lower costs of production would it be worth while to work them. It is not impossible; but it is very difficult with the present capitalist system of production. Capital has become accustomed to draw large profits from the production of gold, and would be reluctant to try any experiments which, even if successful, would bring a low rate of profit. We cannot delude ourselves that the working of low-grade ores will ever bring large profits, even after a long period of gold shortage and declining prices.

Caution, therefore, compels us to limit ourselves to the assumption that the decline in the production of gold—provided it causes a long period of declining prices and production costs—may stimulate the capitalistic production of gold and increase its output to a certain extent, thereby *slackening the rate of its decline*. From this point of view, the more optimistic figures compiled by Kitchin for the coming decade appear to be nearer the truth than the official ones. It would, however, be far too optimistic to expect that this decline in gold production will be cured by itself; in other words, that, in view of the considerable increase in the purchasing power of gold, such large amounts of capital will be invested in the working of low-grade ores that the output of these inferior strata will make good the deficiency in the output of the high-grade strata.

The capitalist system of production will not solve this problem. The question arises, therefore, whether or not the shortage of gold, when it becomes really noticeable and begins to cause a downward movement of prices, will provoke public intervention. Will the menace of the inadequacy of gold reserves bring about a crisis in the capitalist system of production? As gold is used for monetary purposes, it performs a public function. Large fluctuations of its purchasing power are of vital importance to the welfare or misery of individuals, classes of the community, and nations. If, therefore, the capitalist system of production does not succeed

in securing the required inflow of gold—in which case, harmful consequences of an economic, a social or even a political character will ensue—the world may be confronted with the question whether, in the general interest, it should not control the production of gold.

Will the world remain passive when this paradox is wholly revealed, that there is plenty of gold in the world, but that the capitalist system of producing it is not adequate?

Lehfeldt's popular pamphlet¹ can be regarded as a proof that this possibility may become an actual fact. The pamphlet, published in 1926, aroused lively discussion among the economic thinkers of the world. The author lived in South Africa, and had a thorough knowledge of the conditions of gold production and its future prospects. He was of the opinion that, by an investment of capital in those territories which do not at present yield satisfactory profits, it would be possible to produce sufficient quantities of gold from the existing strata. This cannot be achieved, however, by capitalist methods limited to private undertakings. Public intervention is necessary. If Lehfeldt were still alive, however, he would most likely not connect such action with the League of Nations. He would, I imagine, rather place the initiative in the hands of the Bank for International Settlements.

I shall not discuss here the technical details of Lehfeldt's plan, or the possible action of the International Bank. Both can be criticised to-day on various grounds. What matters is, that the shortage of gold with which the world is threatened should be in a certain measure mitigated by public intervention. Only public intervention can increase the production of gold from those ores which contain an insufficient amount of the metal to warrant their being exploited by private undertakings seeking the largest possible profits.

For this purpose, it is not necessary to-day to propose far-reaching plans such as the organisation of international action, the subscription of capital on the basis of a guarantee given by the Governments concerned, and so forth. Under present conditions, a certain measure of success might be obtained if the Governments of those States in which gold is produced would lower the taxes levied on undertakings producing gold from low-grade ores. In exceptional cases, such undertakings could even be entirely exempt from taxes, if the profit gained from producing gold from such ores were unusually uncertain.

Compared with pre-war conditions, gold-producing enterprises to-day have everywhere to bear the burden of heavier taxes. In South Africa, moreover, another factor is noticeable. The Government leases its gold-bearing territories to private undertakings in exchange for a share in the profits. It is very probable, therefore, that, in proportion to the lowering of fiscal charges, the production of gold would increase owing to the wider and better utilisation of ores containing less gold.

The theory of elasticity in the production of gold refers also to another phenomenon. With the increasing purchasing power of gold, if this tendency is of long duration and assumes large proportions, the demand for gold for industrial purposes usually diminishes. A reverse process may even ensue—namely, that gold acquired for industrial purposes may be used for increasing the reserves of monetary gold. If we examine the increase in the purchasing power of gold of the last secular period, which is well known to us—namely, the period of declining prices from 1873 to 1896—such a trend does seem to have existed.

The gold reserves of the Bank of England increased during that period from an average of 21 million pounds in 1870 to 1874 to 25 million in 1890 to 1894. At the Bank of France, the

¹ "Controlling the Output of Gold."

gold reserves increased during that period by 804.2 million francs, at the Reichsbank by 349.9 million marks. The circulation of coin increased everywhere simultaneously, but the exact figures cannot be established. The inflow of gold to the United States of America in the same years assumed still larger proportions. During the period 1875 to 1887, it amounted to 639 million dollars, being particularly strong from the middle of 1876 to the end of 1881. The reserves of monetary gold in America increased during that period of five and a-half years by nearly 400 per cent—*i.e.*, from 99 million dollars to 485 million dollars—representing 64 per cent of the world production of gold during that period. In spite of this, the European gold reserves increased. Undoubtedly, a portion of the gold acquired for industrial purposes was absorbed also by the reserves of monetary gold.

Shall we witness such a situation again during a new secular period of falling prices? This cannot be easily foreseen, and any positive conclusions would be hazardous. There can be no doubt, however, that some assistance may be expected from this source, and that this will mitigate the adverse effects of a decline in the production of gold. This, however, cannot be of such importance as production in those goldfields where it does not at present pay.

To sum up, I must repeat that the statistics of gold production for the coming decade point to a gradual decline, beginning with the year 1933 or 1935. The outlook for production in the following decades is still worse, but it would be premature to risk any estimate in figures. In view of these prospects, there is a danger that the continued decline in the production of gold will cause *an increase of long duration in the purchasing power of gold*. This would be a period of a *secular character*, and one not to be desired from the point of view of economic progress.

The danger exists, but the malady need not inevitably break out, or at least, not in the most acute form. In proportion to the decline in prices, the demand for gold for industrial purposes may gradually diminish, and even a certain inflow of gold from non-monetary reserves may ensue. By lowering costs of production, the fall of prices may simultaneously increase investments of capital in gold production, the profits of which will increase in proportion to the increase in the purchasing power of gold.

The temporary reduction in the demand for gold for industrial purposes, the partial inflow from the non-monetary reserves, and increased investment in gold-producing enterprises, may *mitigate* the effects of the decline in gold production on economic activity, *but they will not be able to compensate for this decline in full*. In this respect, action which has for its purpose *the introduction of further economies in the use of gold for monetary purposes is of much greater importance*. Much still remains to be done in this respect, and it is on this point that international action in the next few years should be concentrated.

Should this action aiming at economising gold end in failure on account of a lack of understanding or readiness to co-operate, the malady may assume such large proportions that abnormal and extraordinary measures will be necessary. One of these measures, which appears fantastic to-day, but may be workable to-morrow, is Lehfeldt's plan, the essence of which is that, by means of public international intervention, those gold-bearing strata which do not at present pay should be worked. In theory, it must be recognised that in this way the adverse effects of the failure of international action to reduce the monetary demand for gold can be nullified.

From the point of view of industry, to replace private initiative by public action is neither a normal nor a sound policy. In this respect, the production of gold is not, and cannot be, an exception. If the world, however, should neglect the danger to such an extent that in the next few years it cannot succeed in reducing the demand for gold for monetary purposes by greater

economy in the use of the existing reserves, a better distribution of those reserves, and more honest co-operation, we shall be confronted with the alternative of either accepting a steadily increasing shortage of gold, or undertaking the costly and very difficult task of replacing capitalist methods of production by international public action.

Would it not be better to avoid the necessity of choosing between two such undesirable alternatives by organising efficient action to reduce the demand for gold ?

3.

The above considerations are based on the assumption that there is a measure of interdependence between economic progress and the quantity of produced gold. As long as we examine the question of the adequacy of the gold supply only from this point of view, the problem of mitigating the adverse effects of the fluctuations in the production of gold on the rate of economic progress does not present any insurmountable difficulties. It will not be so simple, however, if we proceed from the assumption that the general level of prices ought to be kept relatively stable, and that for this purpose, a yearly inflow of new gold, the amount of which should be in a *constant* proportion to the existing total world reserves, is indispensable. Whatever the percentage may be, it will always result that a production of gold which is sufficient to-day, for instance, may prove insufficient after a certain number of years.

Let us suppose that, in order to keep the general level of prices relatively stable, a yearly inflow of new gold, amounting, according to Cassel's theory, to 3 per cent of the existing total world supply, is necessary. Then the amount of new gold required according to this formula will increase every year in proportion to the rate at which the gold stocks of the world grow. The more gold there is in the world, the greater must be the yearly inflow of new gold, and the greater must the production of gold be in each succeeding year. The production of gold, then, ought to increase at a constantly greater rate. This cannot, however, continue indefinitely. Sooner or later, the production of gold will fail to attain such progressive increase. Already to-day such a rate of increase is not being maintained

This is regarded by Cassel as the "fundamental difficulty" of the gold standard and a fact "of the highest importance" so far as the question of the adequacy of world reserves is concerned. In his opinion, it is "the paradox of the gold standard" that the greater the accumulation of gold, the greater ought also to be the yearly inflow of new gold, and the more rapid ought to be the yearly increase in the production of gold.

It is clear that we shall avoid such a "paradox" only if we examine the question of the adequacy of gold reserves from the point of view of the general formula—namely, that between the rate of economic progress and the inflow of new gold there exists some measure of interdependence. We shall not be able, on the other hand, to avoid it, if we assume that, in order to keep the general level of prices relatively stable, a yearly inflow of gold amounting to 3 per cent of the existing total world supply is indispensable. In the latter case, the future of the gold standard appears in darker colours.

Must it indeed be so ?

If we are to regard the theory of the 3 per cent inflow as an economic law, we must be convinced that it is a conclusion drawn from observation and experience. This is, in fact, the method applied by Cassel, but it is precisely his remarks on the pre-war history of the gold standard that give rise to serious doubts.

Cassel¹ limits his field of observation to the sixty-year period from 1850 to 1910. The general level of prices in the first and in the last year of that period was approximatively the same. This is shown by Sauerbeck's indices, quoted by Cassel. If, therefore, the level of prices in 1910 was equal to that in 1850, the world gold reserves in both years were bound to be in the same degree sufficient to counterbalance the differences between two states of world economy.

By the end of the period 1850 to 1910, the world's gold reserves had become more than five times—to be accurate, 5.2 times—as great as at the beginning. The increase amounted on the average to 2.79 per cent yearly, or 2.8 per cent in round figures. From these facts Cassel draws the conclusion that if, during these sixty years, the production of gold had increased uniformly every year by 3 per cent (2.8 per cent + 2 per thousand for "wear and tear"), the level of prices would not have shown any fluctuations on account of a shortage or abundance of gold. No disturbances of a secular character would have been registered. Furthermore, there would have been no divergence between the rate of inflow of gold and the rate of economic progress, because the average economic progress during the period under review was bound to amount also to 3 per cent yearly, if the level of prices at the beginning of the period was equal to that at the end.

The average yearly rate of economic progress is very difficult to determine in exact figures. Nevertheless, Cassel considers it possible to adopt the 3 per cent increase as the formula of average progress. As an example confirming his theory, he takes the production of pig-iron, which he considers as an index typical of the general industrial development. During the period 1850 to 1907, the world production of pig-iron increased on the average by 4.2 per cent yearly. On the other hand, the yearly increase of agricultural production in that period is estimated by Cassel at 1.2 per cent. If we attach the same weight to both agricultural and industrial production, the average yearly rate of economic progress may be estimated at 2.7 per cent. If, however, we attach slightly more importance to industrial production, we may feel ourselves "on fairly solid ground, if we reckon with a figure of round 3 per cent, as characteristic of the economic development" in the period under review.

The above calculation does not carry sufficient conviction. The adoption of only pig-iron gives too narrow a basis for far-reaching conclusions. If we take for this basis a larger number of raw materials, the resulting figures will be different. Let us take, for instance, in addition to pig-iron, coal, petroleum, copper, lead, zinc, tin, cotton, wool and silk. The value of the production of these raw materials, calculated on the basis of their average prices from 1909 to 1913, increased during the period 1850 to 1910 from 693.2 million dollars to 5,764.5 million dollars. The average yearly increase, calculated in accordance with Cassel's method, amounted to 3.6 per cent, whereas for pig-iron alone it was 4.6 per cent, a figure slightly higher than Cassel's, which is based on the shorter period 1850 to 1907. Now, if we estimate the average yearly increase of agricultural production to be 1.2 per cent, as Cassel does, and if we give equal weight to industrial and agricultural production, the average increase of total production will amount to barely 2 per cent, instead of 2.7 per cent. As I agree with Cassel that "a somewhat higher weight" should be given to industrial production, I can at the best adopt 2.5 per cent as the yearly average increase of production, but in no event can I agree to the ratio of 3 per cent. Even if we were to give to agricultural production a weight half that of industrial production,

¹ In discussing Cassel's doctrine, I quote here from his Memorandum prepared for the Gold Delegation of the League of Nations.

which would not be wholly unjustified, we should get only 2.4 per cent as the average rate of economic progress.

I do not intend to decide between Cassel's figures and my own. The former as well as the latter are far from being exact. To establish to-day the exact figure of the average rate of economic progress for the period under review is impossible. No figures can be more than hypothetical and approximative. The question is, can such figures be regarded as sufficient proof that, during the period 1850 to 1910, the average rate of economic progress was about 3 per cent per annum and the yearly increase of gold reserves must also have been 3 per cent in order "to keep the general level of prices at a constant height"? The statistical basis from which such far-reaching conclusions are drawn is too fragile and shaky—especially since, in addition to the rate of gold inflow and the rate of economic progress, another factor should be taken into consideration, which from 1850 to 1910 also exercised an influence on the level of prices.

In addition to the accumulation of gold, bank deposits also accumulated rapidly, forming a secondary basis for the world's credit structure. We have already mentioned in the chapter which deals with the changes in the operation of the gold standard, that in England, during the period 1844 to 1929, the total amount of bank deposits was multiplied by ten, whereas the total amount of gold was multiplied by only three. Thus, the rate of accumulation of deposits was several times as rapid as that of accumulation of gold. It is beyond doubt that this disproportion exercised an important influence on the amount of credit and thereby on the level of prices. This is indirectly confirmed by the fact that in proportion to the rate of accumulation of bank deposits and to the improvements in the organisation of bank credit, the number of panics on money markets steadily diminished. During the period 1850 to 1873, the number of monetary panics in England, America, France and Germany was twelve, while, during the period 1874 to 1896, there were only four, and, during the period 1896 to 1910, there was only one serious panic responsible for a sudden change in the price-level.

During the period 1850 to 1910, economic progress was counterbalanced, not only by the inflow of gold, but also by the expansion of bank credit, which was more rapid than the inflow of gold. Even if the inflow of gold had increased uniformly during that period by 3 per cent yearly and even if the rate of economic progress had also been 3 per cent yearly, it is more than doubtful, whether the level of prices would have been maintained "at a constant height". For economic progress would have been not only under the influence of a uniform inflow of gold, but at the same time it would have been financed by a more and more rapid expansion of bank credit based, not only on a uniform inflow of gold, but also on the accumulation of bank deposits, which steadily *exceeded* the inflow of gold.

Cassel is, of course, aware of the important rôle played by bank credit. Nevertheless, he is of the opinion that the average rate of economic progress for the whole world, "if it could be calculated exactly, would prove to have been, during the period in question, not greater than 2.8 per cent per annum". This optimism is not the outcome of induction, for a strict calculation is impossible. It is rather a deduction from the fact that the average yearly inflow of gold was 2.8 per cent and that the price-levels in 1850 and 1910 were more or less equal.

A consistent belief in the hypothesis that, during the period 1850 to 1910, the average rate of economic progress was the same as the average rate of the inflow of gold is necessary if one is to draw the following general conclusions: "If the rate of progress for the future is assumed to be the same as it was for the period 1850 to 1910, the stability of the present price-level will depend on the possibility of the annual gold production, amounting to 3 per cent of the world's

total stock of gold". In other words, the 3 per cent inflow will prove sufficient, *provided the rate of economic progress does not change*. Should the rate of economic progress increase to 4 per cent, however, the production of gold must increase in the same proportion. On the other hand, should the rate of economic progress decrease to 2 per cent, the inflow of new gold must also diminish if the general level of prices is to be maintained at a constant height. Thus the formula of a 3 per cent inflow cannot be regarded as of instructive value for the future, because we never know in advance what will be the rate of economic progress.

Cassel himself regarded his formula as no more than an interesting historical remark on the evolution of the period 1850 to 1910. Is it then reasonable for us to use such a formula in discussing the present problems of the policy of Central Banks ?

4.

It appears to me unnecessary for Cassel to attach so much importance to the mathematical equality of the average rate of the inflow of gold and the average rate of economic progress, for his most important thesis does not concern the strict harmony between the rate of the inflow of gold and the rate of economic progress, but instead the harmony which exists between a rate of gold inflow of 2.8 per cent per annum and the general level of prices.

Cassel distinguishes between the actual quantity of gold reserves in a given period and the "normal" quantity which would exist if the inflow of new gold during that year amounted strictly to 2.8 per cent. The ratio of the actual stock in a given year to the "normal" stock is called by him the "relative" stock. This is a theoretical figure which represents the actual stock, existing at the end of a given year as a percentage of the "normal" stock. On comparing the curve representing the relative stock with the curve representing the general level of prices as given in Sauerbeck's index, Cassel found an astonishing harmony between the two. He would have found it, however, without introducing into the discussion such a debatable question as the rate of economic progress.

The price-curve is based on facts and on Sauerbeck's calculations. The curve representing the "relative" stock of gold is based on the actual amount of gold reserves and on the hypothesis of the "normal" reserve. The latter is based on the fact that, during the period 1850 to 1910, the gold reserves were multiplied by 5.2, and that therefore the average yearly increase amounted to 2.8 per cent. Whether the rate of economic progress was 2.8, 3 or 2.4 per cent per annum is an interesting problem, but one that has no direct connection with the concordance between the curve of the level of prices and that of the "relative" gold supply. Should it be found by careful calculation that the rate of economic progress in the period under review was not 2.8 per cent, but only 2 per cent, this would not destroy the concordance between the two curves. It is from the existence of such concordance that Cassel draws all his further conclusions. In relation to these conclusions, the hypothesis that the rate of economic progress in a given period is equal to the average rate of inflow of gold is of secondary importance.

It is evident from the above that the whole doctrine is based on, and stands or falls with, the conception of the "normal" stock, because the conception of the "relative" stock is only a deduction from the conception of the "normal" stock. The idea of the "normal" stock is based on the fact that the price-levels in 1850 and 1910 were equal and that the world reserves were multiplied by 5.2 during that period so that the average yearly increase was 2.8 per cent. If the above facts are correct, the doctrine has a logical foundation.

It is true that the general level of prices—as shown in Sauerbeck's index at the beginning and at the end of the period under review—was more or less equal. I am not considering how far Sauerbeck's index is an accurate measure of the purchasing power of gold. It seems to me that in this respect Sauerbeck¹ had less confidence in his own indices than those who use them. Another question is of more importance here—namely, whether it is proper to connect the level of prices in 1850 solely with the amount of the total world supply of gold?

In 1850, the world's reserves of gold amounted to 10 billion marks. It must, however, be remembered that the gold standard then existed, practically speaking, only in England. Other countries *applied the bi-metallic standard, or used a silver currency*. The level of prices in 1850, therefore, was influenced not only by the gold reserves, but was also affected—and to a far greater extent—by the reserves of silver. The weight of this argument is not weakened by the fact that gold coin was almost everywhere in circulation, although only England possessed the gold standard, for the circulation of gold coin does not necessarily imply the existence of the gold standard.

Cassel used in his calculations the total gold supply of the world, and not only the reserves of monetary gold. In his opinion, there is a definite connection between the total gold supply and the part of it which is used for monetary purposes, and therefore it is better for purposes of comparison to consider the total supply and not simply a portion of it. The same argument should apply also to silver as long as silver is used for monetary purposes.

Between the total stock of silver and the part of it used for monetary purposes a more or less definite connection ought also to exist. If we choose to compare the total stock of gold with the level of prices, we must also apply this method to silver as long as it was used for monetary purposes on an equality with gold. In studying the year 1850, therefore, we ought also to take into account the total stock of silver.

The situation is different, however, as regards the year 1910. For that year, owing to the demonetisation of silver and an almost general move to the gold standard, we must not take into account the total stock of silver, but only the remaining reserves of monetary silver; for, in 1910, no connection whatever could exist between the total stock of silver and that part of it which was used for monetary purposes.

According to the *Statistisches Jahrbuch*, the total world stock of silver in 1850 amounted to 29,430 million marks, whereas the reserves of gold amounted to hardly 10,000 million marks; in other words, *the reserves of gold were about one-third as large as the reserves of silver*. The influence of the two metals on prices ought to have been also in this proportion especially since, outside of England, the gold standard practically did not exist. Prices were, as a rule, expressed in silver, or in a bi-metallic currency, and only in England were they expressed in gold.

In 1910, we have quite a different picture. The total stock of gold had increased to 52,003 million marks, while the reserves of monetary silver—according to the *American Mint Report*—amounted to hardly 2,600 million dollars, or 10,920 million marks. Thus the reserves of monetary silver, which played a certain rôle in the credit structure, were but a little more than one-fifth as large as the reserves of gold. If we now compare the figures for the two years, we shall have the following result:

In 1850, the total stock of gold and silver amounted to 89,430 million marks;
In 1910, the total stock of gold + the reserves of monetary silver amounted to
62,923 million marks.

¹ Article published by Sauerbeck in the *Journal of the Royal Statistical Society*, September 1886.

The average yearly increase *was thus 0.78 per cent*. This figure is so small that it cannot be compared with that of 2.8 per cent obtained by Cassel, who entirely eliminated silver from his calculations. Is it possible, though, to eliminate silver when considering the general level of prices in 1850? Did not prices rise during the period 1873 to 1896 in the countries which possessed a silver currency, while they simultaneously declined in the countries which were on a gold basis.

The index of prices for India¹ was 107 in 1873, and 140 in 1896. For Japan, the corresponding figures were 104 and 133; for China, 100 and 109. If we let the average prices of the period 1873-1876 equal 100 in the countries which were on a gold basis, the average index for the period 1890 to 1893 was only 78, whereas, in the countries with a silver currency, it was 117. On compiling an index for the whole world we should take both these tendencies into account by giving the average of the declining as well as of the rising indices. Even if we express in terms of gold the indices of the countries which possessed a silver currency, we cannot get rid of the fact that in the second half of the past century silver was an important factor in determining the prices of goods and services.

As we have seen above, the corner-stone of the doctrine is the conception of the "normal" stock of gold. This "normality" is based on the formula of the average 2.8 per cent inflow of gold during the period under review, 1850 to 1910. If we eliminate silver from that period, the 2.8 per cent formula is correct. If, however, we take it into consideration—and *we must do so*—we get the figure 0.78 per cent. With this last figure the conception of "normality" is totally changed, and, at the same time, the value of the "relative" stock is also changed, since the latter represents the actual gold reserves as a percentage of the "normal" reserves.

Cassel found a concordance between the curve of the general level of prices and that of the "relative" stock of gold, which was based on the 2.8 per cent figure. However, if we replace the 2.8 per cent increase by a 0.78 per cent increase, *the two curves will no longer concord*. Moreover, it will then become possible to gauge the truth of the alleged concordance discovered by Cassel. I refer to the concordance between the curve of the indices compiled by Sauerbeck and the curve of the fictitious stock of gold, calculated on the basis of the artificial formula of a 2.8 per cent increase which was obtained by eliminating silver from the calculations.

If, in spite of the elimination of silver, the curve based on the indices compiled by Sauerbeck displays a certain concordance with Cassel's curve of the fictitious relative stock of gold, only one conclusion can be drawn, namely *that Sauerbeck's index is not satisfactory as a measure of the purchasing power of gold*. Moreover, we know this from Sauerbeck himself.

5.

Even if it were possible to accept the 2.8 per cent formula and the elimination of silver, the doctrine would still not be sufficiently convincing, because it cannot fulfil the conditions which Cassel himself requires of it. It does not give a guarantee that, with a 3 per cent inflow of new gold, the level of prices in the countries which are on the gold standard can be maintained "at a constant height". And we know that, according to Cassel, the object of all investigations into the question of the adequacy of gold reserves is to secure the stability of the price-level, or,

¹ Irving FISHER, "Purchasing Power of Money", page 243.

in other words, to do away with fluctuations in the purchasing power of gold. In this respect, the doctrine fails to reach its goal, in spite of the whole statistical apparatus.

A constant inflow of gold, amounting to 3 per cent of the total of the existing world reserves, can protect the world against price-fluctuations of long duration—i.e., those which possess a secular character. It cannot, however, give protection against fluctuations of short duration, which possess a cyclical character. The latter, as Cassel acknowledges himself, “*have no connection at all with the supply of gold*”. Cyclical fluctuations correspond to cyclical movements of trade, and reflect “*extensions and restrictions of the supply of means of payment, independent of the supply of gold*”. By ending secular fluctuations, we cannot *ipso facto* end cyclical fluctuations, which *do not depend on the reserves of gold*. The price-level will thus remain changeable in spite of the 3 per cent inflow; first, because of the changes in trade cycles, and, secondly, because of the changes in the credit policy of banks—which, by means of “*extensions and restrictions of the supply of means of payment*”, will continue to exercise an influence on price-fluctuations.

The reader may here remark that fluctuations of a secular character are more detrimental to the world economy than are cyclical fluctuations, because they last longer and have a wider range. Although this may seem true at first glance, in reality the situation may be quite different.

We have already seen that the years 1873 to 1896—a period with a downward price trend of a secular character—was one by no means marked by a permanent and increasing economic depression, for it is typical of secular fluctuations that the economic activity of the world gradually adjusts itself to them, and *cyclical fluctuations provide the machinery by which adjustment is brought about*. It is an incorrect belief that cyclical price-fluctuations are less harmful than secular fluctuations. On the contrary, the fall of prices under the pressure of a trade cycle or a mistaken credit policy on the part of banks immediately affects economic activity by exercising a discouraging psychological influence on the market.

Indeed, *we too often overestimate the influence of secular and underestimate that of cyclical fluctuations*. The range of the latter is not in reality so small as is generally believed. A trade cycle or a restrictive credit policy may cause a considerable fall in prices, which may last for a relatively long period of time. The psychological effect of the fall is immediate, for it exercises a stronger retarding or stimulating influence than does the secular trend, the effect of which does not manifest itself so directly upon the interests of any individual business man.

In the light of the above remarks it would be difficult not to see that Cassel's doctrine fails to reach its goal as far as the “*constant height*” of the general level of prices is concerned. A regular 3 per cent inflow of gold may give protection against secular fluctuations, but it does not touch cyclical fluctuations, which—according to Cassel himself—*are entirely independent of the supply of gold*, depending as they do on trade cycles and the credit policy of banks. By ending secular fluctuations through the 3 per cent inflow of gold, we do not end cyclical fluctuations, and these latter may have a wide range, while their depressing influence is always *more direct* than that of secular fluctuations. In view of these facts, it is not open to dispute that :

(1) The control of cyclical fluctuations is not less important, but often more important, than that of secular fluctuations;

(2) The possibility of controlling cyclical fluctuations does not depend on either percentage formula for the yearly inflow of gold;

(3) The possibility of controlling cyclical fluctuations is to be found chiefly in the domain of the credit policy of banks, which curtail and expand means of payment more or less in accordance with the development of a trade cycle.

To sum up, we repeat that the statistics upon which Cassel bases his theory of the 3 per cent inflow of gold are not sufficiently convincing. If we supplement them by introducing silver into the calculation, we arrive at the theory of a 0.78 per cent inflow and if we correct this figure by adding the amount of metal which is lost through "wear and tear", we come to the following conclusion :

The average inflow of monetary metals during the period 1850 to 1910 was at the most 1 per cent per annum.

Even if we were to accept the theory of the 3 per cent inflow in spite of our criticism we know that it would not ensure the stability of the general level of prices. For even if a 3 per cent inflow does do away with secular fluctuations, yet if *cyclical fluctuations continue on the same scale and with the same consequences as hitherto*, the question of the adequacy of gold reserves from the point of view of the stability of the general level of prices *remains unsolved*. Such is also Cassel's conviction, and the reason why he advocates so strongly the replacement of the present gold standard by the system of a managed gold standard.

6.

Cassel's ingenious theory gave the impetus to this line of thought. A variant of his theory worked out by Kitchin¹ has, however, become more popular.

Cassel compared the general level of prices with the total stock of gold in the world. Kitchin limited his comparison to the reserves of monetary gold. Both adopted as a basis for their study the period 1850 to 1910. The total stock increased during that period, on the average, by 2.79 per cent yearly; this is Cassel's formula. The reserves of monetary gold increased during the period by 3.096 per cent yearly; this is Kitchin's formula. Cassel's formula expressed in round figures is 2.8 per cent; Kitchin's, 3.1 per cent. The similarity between the two is striking; but, at the same time, they present remarkable differences.

The fact that Kitchin's method is the more popular is to be ascribed to two causes. The connection between the reserves of monetary gold and the level of prices appears to everyone "natural" and more easily understood. Moreover, Cassel made his theory more intricate by linking the question of the equality of the rate of gold inflow with the rate of economic progress. Whether we consider the total stock of gold or only the reserves of monetary gold, in either case—according to Cassel—"the rate of increase arrived at should be compared with the rate of progress characterising the world's economic development". When he examines the period 1850 to 1910, he does not stop after finding the figure 2.8 per cent for the average yearly inflow of gold. On the contrary, he does not hesitate to formulate the hypothesis that "the average rate of economic progress for the world as a whole, *if it could be calculated exactly*, would prove to have been during the period in question not greater than 2.8 per cent per annum". It is here that Cassel and Kitchin differ.

Were Kitchin to apply Cassel's method strictly, he would be obliged to come to the conclusion that, during the period 1850 to 1910, the rate of economic progress was on the average

¹ In discussing Kitchin's doctrine, I quote his "Gold Production" from the *Review of Economic Statistics*, May 1929, Memorandum prepared for the Gold Delegation in 1930, and the statement of evidence to the Royal Commission on India Currency and Finance, March 1920.

3.1 per cent. From this it would result that the average rate of economic progress during the period 1850 to 1910 differed according to whether it was regarded from the point of view of the total stock of gold or from that of the monetary stock. *In the first case it would amount to 2.8 per cent, and in the second to 3.1 per cent.* This difference is not without significance, if sufficiently long periods of time are taken into consideration. It is no wonder that Kitchin is not so strongly convinced that there *must be* a strict mathematical equality between the average rate of economic progress and that of the inflow of gold.

More important, however, are the further consequences. Kitchin, attaching less weight to the connection between the rate of economic progress and that of the inflow of gold, advanced a theory which can be more easily applied in studying the *current* changes in the general level of prices. Cassel's figure of 2.8 per cent can be used only on condition that the average rate of economic progress remains in the future what it was during the period 1850 to 1910. Kitchin's figure can be used independently of this condition. Almost every week, indeed, someone in discussing the changes in the general level of prices, refers to the indispensable 3 per cent inflow of monetary gold.

Kitchin's formula has become more popular because it can be applied more easily. This is largely due to the difference between the opinions of these two experts on the rôle of monetary gold.

Cassel's view is that :¹ "The quantity of money is not rigorously marked off in relation to the total supply of gold. On the contrary, the gold passes from the non-monetary supply to the monetary and back . . . thus the monetary supply of gold at the time affords *no objective cause* for determining the value of money. To trace the general level of prices to objective causes is, in fact, *only* possible when the general level of prices is brought into connection with the total supply of gold." Discussing this subject later in a more detailed fashion, he states that such factors as the amount of currency in circulation, the velocity of its circulation, the amount of bank deposits, and the terms upon which bank advances are made, are not "independent variables". He arrives thus at the ultimate conclusion that "the general level of prices is directly proportional to the total quantity of gold", as the only objective cause.

Kitchin's point of view is quite different. He prefers "to take as a basis the total stock of gold money rather than the total supply, because it is closer to money in general (including credit) which influences prices". Not only is it "necessary to distinguish between the aggregate output of gold and the stock of gold money"; it is also "necessary to distinguish between the stock of gold money and the *effective stock*—i.e., the amount of gold money held by Central Banks and Treasuries". Comparing, for instance, the reserves of monetary gold in 1913 and 1928, Kitchin reckons that "the amount of gold in State banks and Treasuries has, in the fifteen years, increased at the rate of 5.1 per cent per annum, and the 2.1 per cent surplus on a 3 per cent rate *would alone account for prices being 36 per cent above the 1913 level, other things being equal*". The reservation as to "other things" is proper, but does not weaken the force of the main thesis, that the rate of increase of the "effective" gold reserves in Central Banks, if more rapid or less rapid than 3 per cent, exercises a direct influence on the general level of prices.

Important consequences result from these differences of opinion regarding the rôle of monetary gold reserves.

First, the attitude of the two authors with regard to the problem of the distribution of gold

¹ "The Theory of Social Economy", 1923, pages 428 to 430.

is not the same. To Cassel, the yearly inflow of gold to the monetary stock and the manner in which this inflow is distributed among the various countries are unimportant. As long as the production of gold increases regularly and at the rate of not less than 3 per cent per year, and as long as the rate of economic progress also amounts to about 3 per cent yearly, he believes that the general level of prices will be maintained "at a constant height", even though the stock of monetary gold may increase at quite a different rate, or fail to increase at all.

For, according to Cassel, the general level of prices is directly proportional to only the total stock of gold in the world, while the reserves of monetary gold do not constitute any "objective cause". In reality, the total yearly production is never used for industrial purposes and for hoarding. From a theoretical standpoint, however, we cannot exclude the possibility that the reserves of gold might prove sufficient, even though the monetary stock should increase at a rate lower than 2.8 per cent per year or fail to increase at all.

I mention the above theoretical possibility in order to show that *it is impossible to deduce from Cassel's theory the proportions in which the distribution of gold should be made*. Cassel treats the problem of distribution among countries and Central Banks *independently of his theory regarding the inflow of gold*. Kitchin's attitude is different. The manner in which gold should be distributed *is a direct and logical result of his statement that the reserves of monetary gold should increase by 3.1 per cent per annum*, for it is on this rate of increase of the monetary stock of gold that, in his opinion, the stability of the general level of prices over long periods depends. If this theory is held to be correct, the amount of the yearly increment of new gold to the reserves of monetary gold is of great importance.

To sum up, I repeat that the problem of the distribution of gold does not enter directly into Cassel's theory. His 2.8 per cent figure does not differentiate between the total stock and that part of it devoted to monetary purposes, or between the total stock and that part which is called by Kitchin "effective" reserves—namely, those in the possession of Central Banks and State Treasuries. The distribution of monetary gold may be effected in various ways in accordance with the conditions prevailing on the different markets. Neither the monetary reserves nor the "effective" reserves at the disposal of Central Banks or State Treasuries increase in strict accordance with the 2.8 per cent formula. Kitchin takes a different point of view. The manner in which gold is distributed plays an important part in his calculations. His figure of the 3.1 per cent inflow applies in theory to the reserves of monetary gold, but, in practice, it is equally applicable to the "effective" reserves, since these amount at present to about 90 per cent of the former.

7.

Let us suppose that for the moment we accept Kitchin's formula. Then the reserves of monetary gold should increase every year by 3.1 per cent. The greater the reserves of monetary gold, the larger must be the production of gold if the increase is to amount to 3.1 per cent, and the rate at which production increases must itself rise every year by at least the proportion in which the stock of monetary gold increases. This is analogous to which Cassel calls "the paradox of the gold standard"—namely, that the greater the stock accumulated, the greater must be the production. Cassel, however, took into consideration the total stock of gold, and not only the reserves of monetary gold. When we apply Kitchin's formula we meet with still greater difficulties. Cassel's "paradox of the gold standard" becomes still more paradoxical.

Why?

From Kitchin's point of view, not only will it be increasingly difficult to secure a steady increase in the production of gold; *it will also be increasingly difficult to secure a reasonable distribution of the reserves of monetary gold.* For if the effective stock—i.e., the amount of gold held in the vaults of Central Banks and Treasuries—exercises a direct influence on prices, the more gold there is in the banks the greater will be the amount of gold required every year in order to avoid an adverse effect on prices. If we accept Kitchin's theory, we accept the law that the greater reserves are, the greater should be the inflow of new gold. If this be true it may have a dangerous effect on the gold market.

If the production of gold increased in the future at a sufficient rate, it might be possible to effect its distribution in such a way as to secure to every country a 3 per cent yearly inflow. Should the rate of increase be insufficient, however, the danger might become a reality; for every country will endeavour to secure an inflow equal to 3 per cent of the reserves which it possesses, in order to protect the price level from the disturbances which a deficiency in its gold reserves would cause. Countries which already possess large reserves will feel themselves entitled to a larger proportion of the new gold produced. The competition on the gold market will thus be rendered more acute, and the distribution of gold will become less and less reasonable.

In addition to the *primary paradox* of the gold standard indicated by Cassel, a *secondary paradox* appears as a logical consequence of Kitchin's doctrine. The latter is an even more serious threat than the former to the future of the gold standard. On Kitchin's theory the future appears more dark and difficult than on Cassel's theory, which separates the problem of the distribution of gold from the question of the adequacy of the total supply of gold.

If Kitchin's theory be correct, we are obliged to recognise that the three countries with the largest reserves of gold are to-day entitled to acquire *all new gold* derived from production.

The inflow of gold to monetary reserves amounts at present to about 200 million dollars yearly. The "effective" reserves in France, America and England amount to about six and a-half billion dollars. The 3 per cent inflow to these reserves would already amount to about 200 million dollars, or, in other words, it would be equal to the whole of that part of the yearly production of gold which is available for monetary purposes. What will remain, then, for the rest of the world? Should other countries abandon the gold standard because there is no prospect of an adequate inflow of gold? Or should America, France and England, in the interest of the rest of the world, cease to secure a 3 per cent inflow—which might cause their price-levels to take a permanent downward trend?

Both alternatives sound paradoxical, but they are a logical corollary of Kitchin's doctrine, which embodies the secondary paradox of the gold standard based on Cassel's primary paradox. If you start from paradoxes, no wonder that you get paradoxical alternatives.

The international discussion on the subject of the adequacy of the gold supply is full of such paradoxical conclusions, and what is worse, they are treated seriously and not recognised as paradoxes. For example, an American economist¹ undertook the laborious task of calculating the rate of accumulation of gold in America. By dividing the existing reserves of gold by the index of the Bureau of Labour, in order to eliminate the moments of inflation and deflation, he found that, during the period 1896 to 1913, the average rate of increase amounted to 4.4 per cent per annum. Taking Snyder's index, he found the rate to be 3.8 per cent. Applying the same methods to the period 1913 to 1927, he found the figures 4.8 per cent and 2.6 per cent respec-

¹ *The Journal of Political Economy*, Chicago, October, 1928. Article by Lionel D. Edie: "Rate of Increase of the Monetary Gold Stock of the United States".

tively. This was indeed a discovery! The rate of accumulation during and after the war was found to be less than in the pre-war period. In his further arguments, he adopts the minimum figure of 2.6 per cent, and, on this basis, he asserts that America must already import at least 114 million dollars of gold every year in order to maintain a sufficient increase to keep the price-level stable.

There is a still more eloquent example. It has become customary to explain the present fall of prices which began in 1925 by the shortage of gold. In studying these explanations one often comes across calculations in which not only the figures of the effective inflow of gold are taken into consideration, but also those which concern the so-called sterilisation of gold. Not only the inflow of gold comes into question, but also the way in which the gold is used in the receiving country during the different periods of a year. This method is applied in particular in criticisms of the accumulation of gold effected during the past few years by the Bank of France.

A sterilisation of gold takes place when the Central Bank does not use the gold it has for the greatest possible expansion of credit. It is a question of bank policy, of expanding or reducing the monetary circulation. Cassel asserts categorically that such action influences the annual changes in the price-level, but has *no influence on secular changes*. Similarly, Kitchin found a concordance between changes in the reserves of monetary gold and changes in the price-level only as far "*as their general trend is concerned*". The introduction, therefore, of the question of the sterilisation of gold, which is purely a question of bank policy, proves that neither Cassel's theory, nor the variant of that theory worked out by Kitchin, *is properly understood*. This is a simplification which does not usefully serve the discussion on the adequacy of the supply of gold.

Undoubtedly, Kitchin must be held responsible for this *reductio ad absurdum* of his own theory, because he himself gave an example of the application of his 3.1 per cent theory to the so-called "effective" reserves of gold during the period 1913 to 1928. There was only one step necessary to confuse the term "effective" reserves, as used by him to mean the reserves accumulated by Treasuries and Central Banks, with the entirely different question of what part of these so-called "effective" reserves was effectively used.

Fortunately, the difficulties which arise from the secondary paradox of the gold standard are fictitious, because the theory of the 3.1 per cent inflow is not sufficiently justified. *The criticism of Cassel's calculations applies also to Kitchin's*. It does not apply, however, to the question of economic progress, because Kitchin, unlike Cassel, is by no means certain that the rate of economic progress and the rate of the gold inflow ought strictly to balance. In this respect, the 3.1 per cent theory is unconditional, whereas the 2.8 per cent theory is conditional. On the other hand, what I have said about the rôle of monetary silver should be applied to Kitchin's statistical methods.

Kitchin considers only the monetary stock of gold. He justifies his attitude by what he believes to be the necessity of taking into consideration the direct influence exercised on the level of prices by "money in general, including credit". Did not silver, however, constitute the major part of "money in general" in 1850? Did not credit based on silver form part of the total of credit? It is unquestionably a mistake to omit the monetary reserves of silver from the total metallic reserves in 1850. It is another mistake, no less important than the first, to omit from the reserves in 1910 not only the remaining proportion of monetary silver, but also foreign exchange included in the fundamental reserves.

Not only is foreign exchange included in the reserves serving as cover for the inland currency a debt of country B to country A, but, in country A, it constitutes a *new and economical form of*

monetary gold, because it serves equally with gold to increase the monetary circulation. This increase is two-fold: it is caused, first, by the purchase of foreign exchange, and, secondly, by the increase of credit on the basis of this foreign exchange. From this point of view, it cannot be doubted that the "effective" metallic reserves in 1910 consisted of gold, the remaining proportion of monetary silver, and the reserves of foreign exchange held by Central Banks, which, in fact, applied the gold exchange standard. The comparison, therefore, between the years 1850 and 1910 would be justified only if we included the reserves of monetary silver in the metallic reserves at the beginning of the period, and only if we included in the reserves at the end of the period the remaining proportion of the reserves of monetary silver and the foreign exchange held in the reserves of Central Banks on an equality with gold.

The average increase in the total metallic reserves, and at the same time the relationship between the gold and silver curve and the price curve, would then show a marked change. *We should get a much smaller figure.* But even then we should not get a figure which would be binding in the future under all circumstances, because the rate of increase of metallic reserves cannot be entirely independent of the rate of economic progress.

The demand for monetary metal is connected with the development of production and trade. In this respect Cassel is right in principle; only, he need not try to prove that the average rate of economic progress *must be* strictly the same as the average rate of the gold inflow. This is not true, and Cassel was not able, nor will anyone else be able, to prove it.

8.

The attempts to find a strict formula which would indicate the yearly percentage increase of gold reserves indispensable for protecting the general level of prices against secular disturbances, did not—as we have seen above—have satisfactory results. Neither the 2.8 per cent formula nor the 3.1 per cent formula is sufficiently justified. It is not even certain whether it is possible to find such a formula.

The demand for gold for monetary purposes is not a fixed demand, for it depends on the development of production and trade. The rate of this development is subject to the influence of various factors, owing to which it is liable to greater or smaller fluctuations. Consequently, the rate of increase in the demand for gold cannot be constant. This is the more true as, independently of the fluctuations in economic progress, the rate of increase in the demand for gold can also be determined by a conscious and consistent economy in the use of gold by the Central Banks. If, for instance, a Central Bank lowers its statutory reserve ratio, it thereby reduces its requirements of gold independently of the rate of economic progress.

Cassel is a firm adherent of the theory that the general level of prices is exclusively a monetary phenomenon, and that gold as an objective factor can be partly replaced by the manipulation of bank credit. From this point of view, the assertion that the inflow of new gold must be in a strict proportion to the existing reserves is devoid of logical foundation. He who believes that a managed currency could be made to function in such a way as to maintain the general level of prices at a constant height is wasting his time if he looks for a strict formula for the inflow of gold.

Should the statistical method applied by Cassel and Kitchin to the period 1850 to 1910 be accepted as unquestionable, even then the percentage formula obtained would at best be only

an interesting historical observation, and could not be set up as an economic law to determine the inflow of gold *in the future*.

No such law in fact exists, and it is impossible to find one.

Whether the gold reserves are adequate in the sense that they do not cause a downward price-trend of a secular character depends, not only on the rate at which gold is produced, but also on the progress made as regards reforms which aim at greater economy in the use of gold for monetary purposes. Can the pace of such reforms be expressed by a percentage formula? No answer to this question is needed. The problem whether or not gold reserves are adequate cannot be solved by an examination which is confined to the production of gold and neglects *the results* of economy in the use of gold. Nor, on the other hand, can it be solved by an examination which is confined to the methods of economising gold but which ignores the question of production.

With the declining production of gold the supply of new gold diminishes. The purchasing power of gold may then increase, provided that the demand for gold does not diminish. With a persistent disproportion between the inflow of new gold and the demand for it, a downward trend of prices, possessing a secular character, may ensue. The figures for the present production of gold seem to forebode such a danger. The world must reckon with it, regardless of the debatable formulæ of the indispensable inflow. In dismissing the 3 per cent formula, we cannot dismiss the problem of the adequacy of gold reserves. Furthermore, without such a formula it is possible to appreciate clearly the consequences of the impending decline in the production of gold.

The best answer to the problem, as formulated above, and the one which is the least debatable, would be to stress the necessity of reforms aiming at enforcing economy in the use of gold for monetary purposes. *Should it prove possible to proceed with such reforms at an adequate rate, the decline in the production of gold can be counterbalanced.* The reserves of gold which we actually have may, if economy is increasingly practised, prove sufficient to protect the world against a downward secular trend of prices, even though the inflow of gold may be steadily less than 3 per cent, or than any of the other percentages which have been suggested.

The question of the measure in which further reforms in the use of gold for monetary purposes may be possible will be dealt with in a separate chapter. But from the analysis which we have already made above of the statistical material used by Kitchin and Cassel, certain conclusions can be drawn which encourage some degree of optimism.

The first of these conclusions concerns the *problem of a subsidiary metal* which can be used in the future for monetary purposes in addition to gold. In practice, this applies chiefly to silver, because the amount of platinum available for this purpose is not great. To counteract the effect of the downward trend in the production of gold, will the world be able to devise a method which would partly restore silver without introducing bimetallic elements into the structure of the gold standard?

The second conclusion which can be drawn from the examination of the methods elaborated by Kitchin and Cassel concerns the problem of the use of foreign exchange, *as a new and economical form of monetary gold*. Foreign exchange which is held as a component part of the metallic reserves of the Central Bank of a country performs the function of gold in that country. If it performs the function of gold, it ought to be included in the statistics of the world reserves of monetary gold. The elimination, therefore, of foreign exchange of this kind from the reserves of gold when the question of the adequacy of these reserves is examined is not justified. The adherents of the 3 per cent inflow are continually making this error in their calculations, and unnecessarily increase the existing pessimism as to the future of the gold standard.

This is not merely an error in calculation, but an obvious contradiction. If the adherents of the 3 per cent inflow demand that reforms aiming at economy in the use of gold should proceed at a more rapid rate, *they must not ignore the results which have already been obtained in this respect.* The total amount of foreign exchange in Central Banks is at present about 2 billion dollars. This figure expresses the results obtained up to the present by this manner of economising gold. By eliminating this foreign exchange from the reserves of monetary gold, and by continuing to repeat that the minimum inflow should amount to about 3 per cent yearly, the adherents of this formula are bound to create the impression *that economy in the use of gold cannot mitigate the effects of a falling-off in the production of gold.* This is a striking contradiction which adversely affects the further development of the methods of economising gold.

One more conclusion can be drawn in addition to those which concern the use of a subsidiary metal and the use of foreign exchange as a form of monetary gold. Examining the total stock of gold, Cassel arrived at the 2.8 per cent formula. Examining the reserves of monetary gold alone, Kitchin arrived at the 3.1 per cent formula. The similarity of these two figures is obvious. It points to the conclusion that, between the total stock of gold and that part which is used for monetary purposes, there exists a closer relation than is generally thought to-day. If during the period 1850 to 1910 the total stock of gold increased on the average by 2.8 per cent yearly, and the monetary reserves by 3.1 per cent, the passing of gold from non-monetary to monetary reserves and back was a *more balanced movement* than is generally supposed. This is, in my opinion, the only lasting conclusion which may be derived from the laborious calculations made by Cassel and Kitchin. For the discovery of the existence of a more regular connection between the non-monetary and monetary parts of the total stock of gold enables us to hope that, in the future, in case of a deficit in the production of gold, the monetary part may be partly replenished by the inflow from the non-monetary part. Then the adverse influence of the decline in the production of gold on the economic life of the world can be attenuated, and it will be easier to ensure the efficiency of the reforms made in connection with the demand for gold.

This advantage does not, however, counterbalance the weak points of the doctrine of the 3 per cent minimum inflow. Exaggerated apprehensions as to the possible deficit of gold have so far brought about an undesired result; *instead of accelerating the reforms aiming at economy in the use of gold, they have retarded them.* Competition on the gold market has become more acute, because every bank desires to secure an inflow of at least 3 per cent and, what is still worse, the doctrine of the 3 per cent inflow diverts attention from the more deep-seated and fundamental factors which are responsible for the more important changes in the general level of prices.

Economists busy themselves too much in calculating whether or not the inflow of gold in a given year did, in fact, reach 3 per cent and pay too little attention to factors which often exercise a greater influence than gold on the level of prices.

CHAPTER IV.

DO WE SUFFER FROM THE SHORTAGE OF GOLD ?

1.

The world level of wholesale prices has shown a downward trend since the year 1925. Up to October 1929, this trend was a moderate one. Since then, however, prices have fallen more rapidly and the year 1930 has consequently been a period of general economic depression. The output of all kinds of goods and international trade have decreased markedly, while unemployment everywhere—not excluding America—has reached abnormal proportions. The policy of cheap money pursued by all the leading Central Banks, although it has already lasted for a year, and although the discount rate in the chief countries has been reduced to the lowest pre-war levels, has not been able so far (October 1930) to master the situation.

On examining the causes of this marked decline of wholesale prices, the world was not slow to find a scapegoat. It has become a popular assertion, that the alleged "shortage of gold" is chiefly responsible for the fall in prices and the depression in production and trade. Such a diagnosis is of course a convenient one for journalists, who are fond of simple formulæ. Can we, however, find any strict scientific justification for it?

If we employed Cassel's formula, which requires a yearly increase in the production of gold amounting to 3 per cent of the total world supply of gold, we should be obliged to assume that we are indeed confronted with a shortage of gold. In the years under review, the yearly production of gold amounted to less than 3 per cent of the existing world supply of gold. Furthermore, the application of Cassel's formula seems to be justified, for economic progress in 1925 to 1929 amounted on the average to at least 3 per cent per annum. Against the above-mentioned "pros" there are, however, many "cons".

As we have seen in the preceding chapter, its statistical basis does not provide adequate justification for Cassel's formula. The average for the period 1850 to 1910 was calculated artificially, by eliminating silver. A no less important argument is the necessity of taking into consideration the progress made in economy in the use of gold for monetary purposes. The cheque turnover, the clearing of payments, the inclusion of foreign exchange instead of gold in the fundamental reserves of Central Banks and the steadily increasing concentration of free funds at the commercial banks, constitute a system of measures, which has already made substantial progress. This fact should not be neglected in examining the present conditions. Is it possible, however, to express in the form of a strict formula the influence exercised by measures which aim at reducing the demand for gold?

It is clear that the answer must be in the negative. Even if the 3 per cent formula for the inflow of gold were to be adopted, we should not know by how much this percentage should be lowered as various measures of economy were introduced. Since we are not able to do this, by

taking into consideration the effects of economy in the use of gold, we cannot satisfactorily apply such a formula, and in consequence we cannot regard it as a proved fact that since 1925 we have entered upon a period of a *secular* downward trend of prices, caused by an insufficient increase in the production of gold.

Kitchin's theory is as unsatisfactory from this point of view as Cassel's : The average inflow of new gold for monetary purposes amounted in the years in question to slightly more than 200 million dollars yearly. This is a smaller sum than the 8.1 per cent figure advanced by Kitchin would require. If, therefore, we were to adopt Kitchin's method we should be obliged to agree with Kitchin, as well as with Cassel, that we have entered upon a new period of a secular decline of prices caused by a shortage of gold. Kitchin's formula is not, however, better justified than Cassel's, but is, if anything, less so.

It is easier to understand why Cassel eliminated silver from calculations than why Kitchin did so. Such an elimination made by Kitchin, who adopted as his basis only the monetary stock and not the total stock of gold, can in no case be justified. Nor is it possible to apply Kitchin's formula without taking into consideration the reduction of the demand for gold effected by greater economy in the use of gold. The progress made in this direction cannot be expressed in the form of an arithmetical formula. Therefore, it is not possible to correct the 8.1 per cent formula for this factor, still less to apply it. Not being able to apply Kitchin's formula, we cannot regard it as a proved fact that since 1925, under the influence of the shortage of gold, a new period of a *secular* decline of prices has begun.

According to Cassel's doctrine we can speak of the shortage of gold *only* when a long-term downward trend of the general level of prices is noticeable. A shortage of gold causes a price fall of a secular and not of a cyclical character. In Cassel's opinion, short-term fluctuations of the general level of prices are not chiefly caused by a change in the production of gold, but result from trade cycles and the credit policy of banks. It may be supposed, therefore, that we are at present witnessing fluctuations which possess a short-term, cyclical character. By this reasoning, however, we lose all grounds for a discussion of whether or not these fluctuations are caused by a *shortage of gold*, because cyclical fluctuations, according to Cassel, *do not depend* on changes in the supply of gold.

The situation is different, however, when regarded from the point of view of Kitchin's doctrine, which distinguishes the so-called "effective" stock of gold—*i.e.*, the stock which is in the possession of Central Banks and State Treasuries from the total monetary stock. The total stock of monetary gold, in Kitchin's opinion, determines price-level fluctuations which possess a secular character. The "effective" stock influences fluctuations which have a short-term character. If, therefore, we take into consideration the period of an actual downward trend of prices, which began in 1925, and particularly the latest phase of it, which began in October 1929, we must confine ourselves, in suggesting possible causes of the crisis, to the changes in the "effective" stock of gold.

Do the changes in the "effective" stock justify the assumption that we are now confronted with a shortage of gold?

According to the statistics compiled by Sir Henry Strakosch in his memorandum written for the League of Nations, the reserves of monetary gold which are in possession of all Central Banks and State Treasuries (converted into dollars) amounted at the end of 1925 to 9,144 millions; of 1926 to 9,484 millions; of 1927 to 9,779 millions; of 1928 to 10,228 millions, and of 1929 to 10,519 millions.

It will be seen that the percentage increases from year to year amounted to : 8.7, 8.1, 4.6

and 2.8 per cent respectively. The average yearly increase was about 3.5 per cent—in other words, it was higher than Kitchin's figures. The lowest rate of gold inflow—namely, that registered during the year 1929, corresponded exactly to Cassel's figure. It is obvious that we cannot speak of a shortage of gold during this period. The "effective" stock of monetary gold increased at a rate which to a large extent corresponded to the requirements of Kitchin's doctrine.

Both Cassel and Kitchin assert categorically that the demand for gold is reduced in proportion to the development of economy in the use of gold. We see from the above figures, however, that even if we ignore the effects of economies introduced in the use of gold, the inflow of gold in this period was more than sufficient, provided that the calculations of Kitchin and Cassel are accurate. In spite of this, prices showed a downward trend throughout the period, and since the autumn of 1929 the fall of prices has entered upon an acute phase, which bears no relation whatever to the somewhat lower figures for the inflow of gold in 1929.

An explanation was soon found for this situation. The sterilisation of gold by some Central Banks was made the scapegoat. This sterilisation is said to exist where the Central Bank does not use the gold, which it receives for a further expansion of credit. The gold acquired is held in the vaults of the Bank and does not contribute to increase the monetary circulation, except for the amount of notes which the Bank issues in paying for it. Such a sterilisation of gold was and is a frequent event. Not only in America and France does it occur, but at times also in many other countries. Even England is not free from this sterilisation, for during the period in question (1925-1929) her Central Bank not merely did not increase the volume of credit granted to the market, but considerably diminished it.

The result of this is that the amount of the effective inflow of gold is artificially reduced by the amount of gold which lay idle during the year. In this way, the doctrine has been saved. We forget, however, that only does the sterilisation of gold take place from time to time, but methods of economising gold improve. Sterilisation and economy thus constitute two distinct features of bank policy. If we wish, therefore, to estimate correctly the "effective" stock of gold (which may be considered as a liability) and the progress in economising gold (which may be considered as an asset), both aspects of the question must be taken into consideration. To take the sterilisation of gold into consideration while ignoring the economy would be a misleading and one-sided method of book-keeping.

It would be difficult to establish in figures the progress of the economy of gold in all its forms. There exists, however, one form of economy which can be expressed in accurate figures. I refer to the increase in the foreign exchange reserves of Central Banks.

Foreign exchange as a component of the fundamental reserve—according to Cassel and his adherents—is as good as gold. When the Central Bank purchases foreign exchange, it increases its issue of notes in the same manner as when it purchases gold. By including foreign exchange in its fundamental reserve, the Bank raises its reserve ratio against its liabilities and can increase the amount of credit, since credit is granted on the basis of reserves. Foreign exchange as a component of the fundamental reserve is a new form of monetary gold, and as such it exercises an influence on the level of prices similarly to that of monetary gold. Therefore foreign exchange which serves as cover for the issue of notes should be considered along with gold when we speak of "effective" reserves. Anyone who does not apply this principle, but instead reduces the "effective" stock by taking account only of the sterilisation of gold, is practising a one-sided form of book-keeping.

The sterilisation of gold has undoubtedly played a certain rôle during the period in question.

The inflow of foreign exchange to the Central Banks, however, has played not a less important rôle, but, on the contrary, an even more important one. This inflow, according to the *Bulletin Mensuel de Statistique* and the *Recueil Mensuel de Statistique*, was as follows (in millions of dollars):

At the end of	Absolute Increase	
1925	828	—
1926	1,120	+ 292
1927	1,838	+ 218
1928	1,847	+ 514
1929	2,208	+ 361

The percentage increase of gold and foreign exchange (let us compare this table with the preceding table, which illustrates the inflow of gold) amounted in the period in question to: 6.3 per cent for 1926, 4.8 per cent for 1927, 8.7 per cent for 1928 and 5.4 per cent for 1929. Even if we deduct from the "effective" reserves the amount of gold lying idle and the amount of foreign exchange—which, as, for instance, at the Netherlands Bank, is not included in the fundamental reserves—it will be seen that the combined inflow of gold and foreign exchange was considerably greater than the most rigid requirements of Kitchin's doctrine. It is absolutely impossible, therefore, to speak of a present shortage of gold.

The whole picture will appear still more interesting if we take into consideration the figures which refer, not to the whole world, but to Europe alone. The reserves of gold in the Central Banks of Europe (excluding Lithuania, Estonia and Danzig) at the end of 1925 amounted to 3,231.9 million dollars. By the end of 1929, these reserves had increased to 4,751 million dollars. Over this period of four years the increase amounted to 47 per cent, or about 12 per cent yearly. The combined reserves of gold and foreign exchange increased from 3,948.5 million dollars at the end of 1925 to 6,969.4 million dollars at the end of 1929. The increase for the period of four years amounted to 76.5 per cent, or about 19 per cent yearly. In the face of such figures, the fact that a sterilisation of gold is practised by some Central Banks from time to time is deprived of any real significance. If we take into consideration the sterilisation of gold, the figures for the average inflow of gold will be made somewhat smaller, but it is absolutely impossible to reduce the percentage increase from 12 or 19 per cent yearly to below 8.1 per cent yearly.

The simultaneous inflow of gold into the United States of America in the same period of four years was only 5.5 per cent or a little less than an average of 1.4 per cent yearly. The inflow into America was thus below Kitchin's figure, while the inflow into Europe was much above this figure. America is benefiting by an abundance of gold previously accumulated, for which reason there is no talk of a shortage of gold there. In the meantime, Europe considerably raised its reserves. At the end of 1929, the two leading economic centres of the world, Europe and the United States of America, possessed reserves of gold, or of gold and foreign exchange, greater than those required by Kitchin's doctrine. Why, then, did a fall in prices and a depression in production and trade, which later became more acute in Europe than on other continents begin in October 1929 in America?

The sterilisation of gold in America can be partly explained by the necessity of keeping special reserves as cover for the short-term deposits held on that market by the Central Banks which apply the gold exchange standard. America must reckon with the potential demand for her gold which is represented by the above-mentioned deposits of foreign Central Banks. These Banks have a right to American gold, a right which cannot at the moment be enforced, but which

may be enforced at any time in the future. The net reserves of gold in America are, in reality, smaller than the figures officially published, for unenforced rights to American gold which often exceeded one billion dollars during the period in question should be deducted from this figure.

The same situation exists on the London market, where there are likewise a considerable amount of deposits held by foreign Central Banks which apply the system of the gold exchange standard. The net gold reserves of the Bank of England are smaller than those actually published for from there also we should deduct the amount of the non-utilised rights to English gold held by those Central Banks which hold their reserves of foreign exchange in London and at any time may demand that these reserves be exchanged for gold. Under the influence of this potential demand for English gold, the Bank of England was obliged during this period to reduce the volume of commercial credit granted by it to the market, and was compelled almost always to maintain its discount rate at a higher level than that of New York. This was also a quasi-sterilisation policy, which aimed at protecting the existing reserves and increasing them to above 150 million pounds.

The French sterilisation is a more instructive case. In the period in question, Paris did not play an important part as a market for the deposits of foreign Central Banks. The Bank of France was not burdened by a potential demand on the part of these banks. The reserves officially published were in fact net reserves, because it was not necessary to deduct from them the amount of the non-utilised rights of foreign banks to French gold. In the period under review, such rights amounted to so little that they can be excluded from our calculations. Accordingly, the French sterilisation, which has assumed considerable proportions in the years 1928 to 1930, must be ascribed to other and more complicated causes.

In examining the figures of the French sterilisation, it is usually forgotten that, during the period from the effective stabilisation of the franc in 1926 to the legal stabilisation in the summer of 1928, the Bank of France accumulated an unusually large amount of foreign exchange. This was the result of a temporary application of the gold exchange standard. Although the Bank of France has abandoned this system since the summer of 1928, it possesses, in addition to the legal reserves of gold, a secondary reserve in the form of foreign exchange previously accumulated. The latter has gradually diminished while the reserves of gold have increased. If we compare the end of 1928 with the end of 1929 we find the following figures (in millions of dollars) :

	End of 1928	End of 1929	Increase or Decrease
Reserves of gold	1,247	1,637	+ 384
Reserves of Foreign Exchange..	1,287	1,021	— 266

The supply of gold increased during the year 1929 by 384 million dollars but meanwhile the reserves of foreign exchange decreased by 266 million dollars. The net increase thus amounted to 118 million dollars. Only in 1930 did it occur that the imports of gold to the Bank of France were not accompanied by an equivalent reduction of the foreign exchange reserves. This, however, is to some extent connected with the difficulties of production and trade in 1930 because the French commercial banks, which could not easily invest their abundant free funds, engaged in large gold arbitrage transactions.

In hard times even a small profit on large transactions has its importance for a bank, which is obliged to earn profits for its shareholders. The Paris banks therefore threw their foreign exchange reserves on the gold market, and this they could do freely for, if they needed foreign exchange, they could partly buy it from the Bank of France and simultaneously the market was

fed by Treasury sales of its foreign exchange reserves to collective bodies. The public foreign exchange reserves have played and continue to play the decisive part in determining the proportions and the rate of the inflow of gold. I have discussed this subject already in the chapter dealing with changes in the operation of the gold standard, and I shall return to it again in one of the later chapters, which deals with the co-ordination of the different forms of the gold standard.

As far as the gold which flowed in in exchange for the foreign exchange reserves is concerned, we cannot say that there was any active sterilisation on the part of the Bank of France. Rights to gold were then changed into actual gold, but this change did not *ipso facto* bring about any difference in the volume of the monetary circulation. The note circulation diminished by the amount which the market spent on buying foreign exchange from the Bank of France, but increased by the amount which the Bank paid for the gold delivered to it. As the Bank had previously accumulated excessive foreign exchange reserves which it was not able to utilise as a basis for the expansion of credit, *the sterilised foreign exchange reserves could not have been changed into non-sterilised gold*. As far, therefore, as concerns imports of gold effected at the expense of the excessive accumulation of foreign exchange, the Bank of France cannot be said to have pursued a deliberate policy of sterilising the imported gold.

The question arises, however, whether or not the Bank of France pursued a policy of sterilisation in relation to those gold imports which were effected without a simultaneous reduction in its foreign exchange reserves. This suggestion may seem justified at first sight. It is, however, refuted by the fact that during the period 1928-29, while the whole world was suffering from deflation and dearness of credit, France was a happy island where liquid short-term capital was available in abundance. During that period, the discount rate of the Bank of France was not raised even once, nor did the Bank resort to any restrictive measures of deflation. On the contrary, in the summer of 1929 the Bank of France participated in the creation of the new Acceptance Bank and granted it a discount credit of five hundred million francs, even before it began its activities.

In view of these facts, can we say that there was any *active* sterilisation on the part of the Bank of France? Can we assert that such a sterilisation was artificially and deliberately forced upon the market by the Bank of France? Was not the reverse rather the case?

We can speak of active sterilisation only when the Central Bank manipulates its discount rate in such a way as to check the expansion of credit or reduce the volume of existing credit by making it dearer. In the period under review, no such sterilisation took place in France. Imports of gold steadily continued in an atmosphere of excessively abundant short-term capital and the cheapest discount credit on the European continent. French sterilisation, therefore, was not an active, but a passive one. It did not proceed from the Bank of France to the market, but from the market to the Bank.

2.

One of the most important causes of the French sterilisation lay in the policy of the French Treasury, and not in the policy of the Central Bank. Immediately after the *de facto* stabilisation of the currency and the balancing of the budget, free capital began to accumulate in France on a large scale. The repatriation of French capital which, during the inflation period, had gone into investments abroad, contributed to this in large measure. On the other hand, with the system of taxation which existed at that time in France, the outflow of surplus capital

in the form of long-term credits to foreign countries was rendered difficult and almost impossible. This taxation amounted to nothing less than an export duty on capital which effectively prevented a free exchange of capital between the French market and the other countries of the world.

France thus became an island of cheap money in the ocean of dear money. Having more liquid capital than was needed, the market seldom appealed to its Central Bank, which, in spite of an inflow of foreign exchange—and, later on, an inflow of gold—could not utilise its increasing reserves for credit expansion for the simple reason that the market was not in need of credit. Therefore, the passive sterilisation of gold became a vital necessity under the conditions caused by the fiscal embargo on the export of capital.

This circumstance will doubtless remind the reader of another fact—namely, that in some quarters in the City of London, and on Wall Street, in 1930, the opinion was expressed that the chief cause for the acute phase reached in the economic crisis was to be found, not in the shortage of gold, but in the mistaken policy of the chief money markets. Without discussing whether or not this was in fact the case, we can, and undoubtedly should, state that, in the absence of a *free international exchange of capital, the distribution of gold is subject to disturbances*. The difficulties which lie in the path of international economic exchanges do not facilitate a reasonable distribution. From this point of view, local sterilisation is rather the effect than the cause of the evil—rather the symptom than the source of the disease.

The distribution of gold in the world is still far from perfect. America possesses more than 40 per cent of the total reserves of monetary gold of the world. She accumulated her reserves partly during the war and partly in the years immediately following. Similarly the neutral States, such as Spain, for instance, accumulated during the war excessive reserves in relation to their economic requirements. The endeavours of America in the summer of 1927 to give back part of her surplus gold ended in failure in the course of less than a year. The policy of cheap money which was then initiated caused speculation on the Stock Exchange instead of the rise in the general level of prices, which would have led to an outflow of gold not soon likely to return. As a result, America was obliged, in the summer of 1928, to embark on a policy of dear money, in consequence of which she soon regained the gold she had previously lost.

Simultaneously, France began to act as a magnet for gold. In the first place, she did not abolish the barrier which was checking the free outflow of capital. Having at her disposal a large amount of foreign exchange, she also benefited by her privileged position on the gold market because gold arbitrage under these conditions could be more lasting and effective than on other markets. Abnormal conditions caused an abnormal accumulation of gold.

The redistribution of gold has thus proved, in practice, more difficult than was generally anticipated. It could not have been otherwise, however, because a reasonable distribution of gold requires a free international economic turnover. This is the *conditio sine qua non*. The international movement of gold cannot proceed smoothly when the movement of other economic values is hampered by artificial impediments. This applies, not only to the exchange of capital, but to all other goods and services, and constitutes the *essential* point of the question. Nevertheless, it is too often asserted, both verbally and in print, that the better distribution of gold depends on the goodwill of Central Banks. It is frequently argued that countries which have gold in abundance should "put their surplus at the disposal of the rest of the world". "Put at the disposal" sounds delightful; but is it enough? Does it mean that someone else can promptly possess himself of the gold and take it home?

No one receives gold gratis. It must be purchased, paid for. If an inflow of gold is desired by a country it must obtain a surplus of income in its transactions with other countries. The

capacity to attract gold thus depends not so much on the production of gold in the world as on a favourable balance of foreign payments, which itself depends primarily on *a sound national economy*. With an adverse balance of payments, an inflow of gold is possible only in the form of foreign loans. These loans, however, must in time be repaid. In this case also, therefore, an excess of revenues over expenditure must sooner or later be secured.

The same applies, as we have already seen, to the home market. The amount of credit based on the gold reserves of a Central Bank depends, not only on the issuing capacity of the Bank and its willingness to discount commercial paper, but also on the ability of the market to utilise this credit. With a large trade turnover, the number of bills increases, but, when commercial transactions are small, it diminishes. The volume of trade turnover, however, depends not only on the amount of gold in a Central Bank and on the increase of industrial and agricultural production under the influence of larger credits, but also on the buying capacity of the home market. When this lags behind the increase of production, temporary and relative over-production is bound to ensue, and prices begin to fall in proportion to the liquidation of stocks.

The volume of trade turnover then diminishes, and at the same time decreases the production of commercial bills, and the bill portfolios of the Central Banks begin to shrink independently of the state of their reserves. We have seen this happen in 1930. This year, Europe has sterilised part of her reserves in gold and foreign exchange, not because she wished to do so, but because she was compelled.

It is also too often forgotten that the credit of a Central Bank, based on gold, is a means of *financing production and not consumption*. If the increase of production, stimulated by the inflow of credit, outruns the increase in the purchasing power of the ultimate consumer, the equilibrium of production and consumption will be upset to the disadvantage of the producer. Supply then exceeds demand, prices begin to fall, and trade stagnation sets in. Under these circumstances, neither a large increase in the production of gold nor a faster inflow of gold into the Central Bank can be used as a *direct* means of alleviating the situation. When the Bank is obliged to sterilise part of the gold reserves which it has at a given moment, it is naturally obliged to sterilise any new inflow of gold also.

Relative over-production cannot be cured by giving more credit to production.

The assumption that the present crisis is a result of the shortage of gold is partially based on the illusion that we buy goods and services with money. In reality each of us buys goods out of his income, and money—*i.e.*, gold—is only the measure in which this income is expressed.

The amount which we can buy on credit is also limited by our income, the size of which determines our capacity to pay. A person who buys more than his actual income permits must incur debts. A person who incurs debts exceeding his capacity to pay, as fixed by this actual income, is bound to become bankrupt.

Credit does not make income larger, but constitutes a burden on it.

Income is not a monetary phenomenon, although it is expressed in terms of money. The income of an individual is a fraction of the national income, and the size of this fraction in a given year, like the size of the total national income, is not a monetary phenomenon, although it is expressed in terms of money.

The size of the national income and its proper distribution depend primarily on *a sound national economy*. Bad economy cannot be directly cured either by a change in the rate of gold production or by a change in the rate of gold inflow.

Prices play the part of a regulator of the process of restoring equilibrium between production and consumption. In this respect, no better mechanism has so far been invented. Opinions

are not lacking that the present crisis can be cured only by a fall in prices, sufficiently large to increase real purchasing power to the point where demand would equal the present supply. The question arises, however, whether the fall in prices which has taken place in the last few years has in fact simultaneously raised the real purchasing power of the mass of consumers—in other words, whether the index of retail prices has fallen as rapidly as the index of wholesale prices.

Our experience has been quite the contrary. The index of retail prices, which determines the real value of individual incomes, has shown a strong resistance to the decline. The fall in retail prices has everywhere been belated and very moderate, and, in some places, it has not taken place at all. In the past few years, the value of gold as measured by the index of wholesale prices has shown a different tendency from that displayed by the value of gold as measured by the index of retail prices. It has even happened from time to time *that the value of gold has increased for the producer and simultaneously diminished for the consumer*. It would be difficult to find a more eloquent paradox.

This is an indication of the complexity of the post-war world economic situation. The theory that the alleged shortage of gold is the chief cause of the evil does not suffice to explain the present situation, while references to the sterilisation of gold explain it even less.

8.

The example of France affords proof that the impediments which hamper the free exchange of capital exercise an adverse influence on the international distribution of gold. Nor is the distribution facilitated by the obstacles which hamper the international exchange of commodities and services in general. We live in a period of widespread protectionism. Even in the City of London, the fortress of free trade, opinions are ever more frequently expressed in favour of the adoption of a policy of protection. Barely four years have elapsed since the publication of the famous Bankers' Manifesto of October 1926, and we are already awaiting a new manifesto and a new diagnosis of the situation.

A revision of the views expressed four years ago has become necessary on account, not only of the recent considerable increase of Customs duties in America, but also of other experiences acquired in the course of the past few years; for economic developments have refuted the diagnosis established by the manifesto four years ago.

The diagnosis ran as follows: "The return to prosperity is retarded by the extent to which tariff barriers, special licences and prohibitions since the war have been allowed to interfere with international trade". This applied particularly to trade barriers "jealously guarded by the new countries". "The breakdown of great political units in Europe dealt a heavy blow to international trade." As a result "*prices have risen, artificial dearness has been created, production as a whole has been diminished*". In view of such consequences, "the breaking-down of the economic barriers may prove the surest remedy for the stagnation which exists". The diagnosis and the remedy so formulated constituted the leading principles of political and economic ideology in the past four years.

What answer, however, has the experience of these last four years given?

The statistics published by the League of Nations in its Memorandum on Production and Trade for the years 1923 to 1928-29 reveal that in the years 1926-1928 the total population of the world increased by only about 2 per cent, whereas the production of foodstuffs and raw

materials increased by 8 per cent, and world trade by 11 per cent. Production and trade continued to increase up to October 1929, in which month a widespread economic recession began. More interesting, however, are the figures which refer to Europe alone. The production of foodstuffs in Europe (excluding Russia) during the period 1926-1928 was greater than elsewhere. As regards the rate of increase in the production of raw materials, Europe ranked second, South America taking the first place. The expansion of international trade for the whole of Europe was less than for Africa and South America, *but the indices for Eastern and Central Europe were the highest in the world.* The rate of increase of production and trade in Europe was more rapid than in North America, although in that country also the year 1928 brought new record figures.

The above statistics reveal in the first place that the group of countries situated in Central and Eastern Europe showed the highest level of commercial expansion during the period 1926-1928. The world's record figures were registered in the territories where "the breakdown of great political units" had previously taken place. As a result, German exports stood first in 1929 as regards their rate of growth.

Exports from Germany in 1928 to the new countries which were created out of the territories separated from pre-war Russia compensated for the large decline in German exports to that part of pre-war Russia included in the Soviet Union. Exports from Germany to the Succession States already exceeded in 1925 the imports from Germany into Austria-Hungary in 1913. On the other hand, German exports to the western countries with which Germany had been at war did not reach pre-war figures until the end of 1928.

I do not make this statement to defend the position of the new States but to show by an example that the opinion which has been formed under the influence of the Bankers' Manifesto is not justified by facts and figures. The consequences of protectionism are by no means such as were anticipated in the Bankers' Manifesto. We have seen: (1) that, in spite of very high tariff barriers, the new States are increasing the scale of their imports at a rate not less fast, and in some cases even faster, than the old States whose tariff barriers are said to be lower; (2) that world production "as a whole" not merely has not diminished, but has increased to such an extent that the world is suffering from relative over-production; (3) that wholesale prices not merely have not risen, but have, in the last few years, shown even a pronounced downward tendency, and (4) that not merely is "artificial dearness" not noticeable, but the real value of salaries and wages has increased.

We are confronted with a paradox.

Protectionism applied in the past ten years by the old and new States has led to relative over-production, to the decline of world wholesale prices and to the lowering of the cost of living. This is just the contrary to what was expected. Prices instead of rising are falling, the cost of living instead of going higher tends even to be lower, and production "as a whole" increased to such an extent during the period 1926-1929 that, in 1930, the whole world is passing through a period of a relative over-production and a general economic crisis.

The most striking feature of the situation is the fall in the world level of prices. The general race in raising tariff barriers has not only not secured a raising of the general level of prices, but has not even succeeded in protecting it against the downward influences which have been apparent since 1925. Were we to calculate the percentage increase in the rates of the Customs tariffs in the various countries and, on the basis of these fiscal coefficients, correct the corresponding price indices of those countries, we should arrive at the conclusion that the fall in world prices was in reality much greater.

We have thus another paradox.

The protectionism of the period 1925-1930 rendered the fall in prices less acute, and thereby tended to diminish the proportions of the economic crisis. In view of this fact, it is obvious that protectionism neither is nor was the source of the malady; it is only one of its symptoms.

This does not mean, however, that protectionism should be accepted as a principle.

By hampering the free exchange of commodities, protectionism makes the reasonable distribution of gold more difficult. Although America puts her gold at the disposal of the other countries, Europe is not able to retain the gold it purchases. Nor is it less true that protectionism has an undesirable effect on the investment of capital. The world is suffering to-day, not from a shortage of gold, but *from a scarcity of long-term capital, and protectionism must be held in large measure responsible for this scarcity*. It is not, however, the sole cause, because the effects of this system in practice are contrary to what was anticipated. The paradox that lies in the fact that protectionism diminished the rate of the decline of prices during the period 1925-1930 compels us to regard the present policy of protection as *one of the symptoms*, and not as the essential root of the trouble.

The present crisis cannot be satisfactorily explained either by an absolute shortage of gold, or by the relative shortage caused by sterilisation, or by protectionism. Deeper causes must exist, both for protectionism and for the illusion that there is a shortage of gold.

4.

From the theoretical point of view, the production of a given country is equal to its national income. Our purchasing power is as large as our production. From the ideal point of view, the adjustment of production to consumption must sooner or later be reached. Absolute over-production can never exist, but from time to time a relative over-production develops when the apportionment of production, which is equivalent to the apportionment of the national income, is not carried out in the proper way. Not only the production, but also the distribution of goods, is governed by definite laws.

Whether we have equilibrium or disequilibrium in the exchange of goods depends on the way in which this distribution proceeds; in other words, on the question whether the road which leads from the producer to the ultimate consumer is a short or a long one, and whether it is a smooth road or one made difficult by impediments.

The year 1930 affords an excellent example of this. Millions of unemployed are suffering from hunger, while in North America, the Argentine, Australia and Europe agricultural countries are hard hit by the low prices of agricultural products. Cuba is full of sugar, Brazil of coffee. Nor is the situation better as regards the raw materials which are necessary for industrial production.

Where is the chief cause of such large disturbances in the distribution of goods to be found?

On the home market it is not the total national income which plays the part of the consumer but the fractions of that income which are in the hands of individuals. It is the *dynamic* function of individual incomes which is of chief importance in the exchange of goods and services.

The relevant statistical data do not give a clear picture at first glance. In the majority of countries the indices of production have considerably increased as compared with 1913. The value of foreign trade per head of population is also higher at present. In the majority of cases the aggregate national income, as well as the average income per head of population, has likewise shown an increase. According to these indices one would not expect to find that the increase in

demand has lagged behind the increase in supply, especially in those countries which show a considerable increase of national income per head of the population. Nevertheless, the economic crisis exists, and it is not a purely local but a world phenomenon. There must be some serious defects in the dynamic rôle of national income which are responsible for the fact that the actual consumption capacity of the market is still lagging behind the actual supply.

This is, in fact, the case. The army of unemployed continues to be a heavy burden. Although the total number of unemployed in the whole world may be lower than that registered ten years ago, the progress made in the last five years cannot be regarded as satisfactory. If we take the average number of unemployed in England in 1924 as 100, we shall get the figure 105 for the year 1927 and 107 for the year 1929. The same is noticeable in Germany and many other countries.

We should, moreover, include in these calculations the number of partly employed workmen and their families, and take into consideration that at present, in the majority of European countries, the labour of Government officials is not paid for as it should be, and that the standard of living of the non-manual worker has not yet reached the pre-war level.

The same applies to the rentier class. In the countries which passed through a period of inflation, although savings have increased considerably, they have not yet reached the pre-war level. The income which the investor receives from his capital is, in most countries, a relatively small part of the total national income, and the part which it plays in consumers' markets is of proportionately lesser importance.

Finally, there is a third factor which exercises a retarding influence on the rate of progress in rebuilding consumption. It is the resistance of the index of retail prices and of the cost of living to any decline. In the advantages which come with a fall in wholesale prices, the salaried class of the population does not participate to any but a very moderate extent, and to the small extent to which it does participate the participation is considerably delayed. We observe this clearly in the last four years. During the period from April 1925 to the end of 1929 the indices of wholesale prices and the indices of the cost of living showed the following changes :

	Wholesale Prices Index	Cost of Living
England	— 22.5 %	— 5.2 %
United States of America ...	— 18.5 %	— 0.6 %
Germany	— 6.1 %	+ 11.5 %
Sweden	— 25.1 %	— 5.6 %
Switzerland	— 18.3 %	— 4.7 %
Netherlands	— 12.8 %	— 6.7 %

For the countries which have stabilised their currencies since 1927, a similar comparison, covering the period from the end of 1928 to the end of 1929, gives the following picture :

	Index of Wholesale Prices	Cost of Living
France	— 10.9 %	+ 1.9 %
Belgium	— 6.7 %	+ 5.6 %
Italy	— 9.4 %	+ 1.4 %

The resistance of the cost of living to any reduction is striking. In England, the difference between the wholesale price index and the cost of living in 1925 amounted on the average to

14 points, whereas, in 1929, it amounted to 26 points, the margin having thus increased by 12 points. For Germany, the corresponding figures are 1.5 in 1925 and 17.2 in 1929. In Netherlands, the difference between these indices increased from 6 points in 1925 to 10 points in 1929. For Sweden the corresponding increase was from 15 to 29 points; for Switzerland from 7 to 20 points.

These facts show that the mechanism of prices, which operates as a regulator of the relation between supply and demand, is not working as it should. The fall in wholesale prices and particularly the fall in the prices of raw materials does not exercise its due effect on retail prices, and it is these latter which are of the greatest importance to the ultimate consumer. In consequence of this, the buying capacity of the ultimate consumer does not increase, because the real value of his income does not increase in the proportion in which the index of wholesale prices falls. As a result, the economic crisis is bound to become protracted and complicated to the extent to which the index of retail prices lags behind the index of wholesale prices.

The difference between the level of wholesale prices and that of the cost of living in some European countries is alarming. We have seen in the table above, that, in Germany, during the period from April 1925 to the end of 1929, the index of wholesale prices fell by 6.1 per cent while the index of the cost of living rose by 11.5 per cent. During the year 1929, the index of wholesale prices in France fell by 10.9 per cent, while that of the cost of living rose by 1.9 per cent. In Belgium, in the same year, wholesale prices fell by 6.7 per cent while the cost of living rose by 5.6 per cent. Italy registered a fall of 9.4 per cent in wholesale prices, with a simultaneous rise of 1.4 per cent in the cost of living. In these four countries, which play an important rôle in the world's economic life, the value of gold was increasing for the producer and *decreasing* simultaneously for the ultimate consumer.

My readers will at first be astonished when I tell them that the cause which first checked the fall of retail prices was *the too rapid transference of American industrial methods to Europe*. I refer to the use of large sums of capital for the technical rationalisation of industrial undertakings. The idea of lowering costs of production, by producing in large quantities is both correct and sound. There is, however, a reverse side to the medal. Mass production requires mass sales, and only with mass sales can the cost of production of an individual article be lowered.

Technical rationalisation calls for large investments of capital. Owing to this, the coefficient of interest due and amortisation of capital tends, in the calculation of costs, to increase in proportion to the coefficient of the cost of labour, raw materials and subsidiary materials. Before rationalisation, costs representing interest paid and amortisation of capital constituted a smaller item in the total costs of production. Since rationalisation, these costs are higher and moreover they constitute a *fixed* item. Thus, the coefficient of the varying costs of production diminishes in proportion to the coefficient of the fixed costs.

If a firm manufactures its articles more rapidly and in larger quantities owing to technical improvements, and can easily sell this extra production, the higher costs for interest and amortisation of capital are spread over the large number of articles sold, and a reduction in costs of production is obtained. The situation is different, however, when the sale of the extra output is impossible, for, in that case, the additional goods contribute only to increase of stocks.

Then the increased fixed costs—interest paid and amortisation—constitute a heavy burden on that part of the output which is sold. The reduction of costs proves, in practice, a failure, and cannot be expressed in the form of a lowering of prices to the consumer. As one of the German economists (Dr. F. Pinner) rightly observed, the reduction of costs thus becomes an *expansion* of costs.

Side by side with technical rationalisation, there has taken place a concentration of industrial undertakings in the form of cartels with the object of jointly fixing selling prices. In those countries in which not only a rationalisation but also a concentration of industrial undertakings has taken place, the prices of industrial goods show a still larger resistance to any decline.

As a result, the volume of business done on the home market does not expand sufficiently under the influence of the fall in the prices of raw materials. Trade does not increase, and, as a consequence, the fixed costs of production, which have been increased by technical rationalisation, become a burden on the articles which are sold, for their number is not sufficient to reduce the costs of production. We repeat once more what we said at the beginning. The reduction of costs of production and retail prices is possible only *with an increased turnover*. When the volume of business done diminishes, the reduction of costs becomes illusory, and the reduction of prices is rendered difficult.

Technical rationalisation requires, not only a full or an almost full employment of the machinery, but also mass sales. It is clear, therefore, that the transfer of American methods to Europe can, in practice, bring about a reduction of costs only when mass production is accompanied by mass sales.

America embarked on this policy after the war, having high wages, an extensive home market cheap investment capital, and a favourable trade balance with the rest of the world. Europe, began recklessly to imitate the American methods, utilising money borrowed at high rates in America, despite the fact that she had lower wages, disorganised home markets, and an adverse balance of payments with the rest of the world. With different general conditions, the application of the same methods could not, and could not be expected to, give the same good results.

In the light of the above arguments, it is possible to understand the resistance shown in the past few years by the prices of industrial articles to any decline. The same resistance was also displayed by the cost of living to the ultimate consumer, although agricultural production has suffered the greatest fall of all in wholesale prices.

In Europe, rationalisation and amalgamation were effected in a far lesser degree in agricultural production than in industrial production. Agriculture, by its very nature, cannot be easily adapted to American industrial methods. In spite of this, the index of the cost of living rose in Germany in 1929 from 154.1 to 155.7, in Austria from 119 to 123, in France from 109 to 118, and in Italy from 140 to 144. The cost of living to the ultimate consumer in many countries increased simultaneously with a heavy fall in wholesale prices for the agricultural producer.

This riddle is easily understood if we take into consideration the second cause of the resistance of retail prices—namely, *the excessive burden of taxation*, which is imposed, not only on industrial production, but also on all other branches of national economy. It is not only the production of goods but also that of services, not only industrial production but also agricultural production, trade, transport and finance, that have to bear this heavy burden. Even consumption is not exempt, for more numerous Customs, excise and monopoly duties are imposed on it, than before the war.

The increased pressure of taxation is raising the fixed costs of the production of goods and services. In commercial calculations, the fiscal factor plays an even more important part than the factor of the service of the loans which represent the borrowed capital. These two factors taken together tend to raise the fixed costs in commercial enterprises above a reasonable level.

When trade turnover diminishes, as long as variable costs constitute the greatest part of the costs of production, and industrial undertaking can more easily cut down expenses by reducing the variable costs of production. This was the case before the war. The situation

has changed to-day. Where fixed costs tend to be as great as variable costs, the reduction of the latter cannot give sufficiently favourable results to permit of a substantial reduction of selling prices. *The calculation of costs is deprived of its elasticity.* We are then confronted with another paradox. Workers' wages in Europe have begun to be relatively too high, although they are still below the American level. In many European countries where the real value of wages is still lower than before the war, the level of wages is considered by the producer to be excessively high.

We are thus in the presence of a very dangerous phenomenon. The excessive increase of the fixed costs of production (1) prevents industrial producers from *adjusting their prices* to the diminished trade turnover during an economic crisis, and (2) renders it more difficult to *raise wages* during periods of prosperity in order to increase the national market.

5.

The excessive weight of taxation is everywhere noticeable and is the subject of constant criticism. Nevertheless, I feel that it may be useful to quote some figures to illustrate the comparison between the burden of taxation and the average national income per head of population. As basis for this comparison, I shall take the years 1913 and 1928 and the corresponding figures in dollars.

In England the average national income per head of the population increased by 65 per cent, while the annual budget revenue showed an increase of 346 per cent. In France, income per head of population fell by 6 per cent while the total budget revenue increased by 82 per cent. In Germany the corresponding figures are + 43 and + 142 per cent; in Italy, — 8 and + 145. Even in the United States they are + 121 and + 458 per cent.

In the above estimates I have taken into account only the weight of taxation imposed by the Governments. We know, however, that the taxes paid to local authorities and for social insurance showed an equally pronounced increase in the same period.

This unusual increase of taxation is the outcome of a reckless expansion of public expenditure. In the countries which I have mentioned above, the increase of expenditure in 1928 as compared with 1913 amounted in England to 344 per cent, in France to 82 per cent, in Germany to 134 per cent, in Italy to 130 per cent and in America to 434 per cent. The expenditure of local authorities in England increased at the same time from 169 million pounds sterling in the fiscal year 1913-14 to 519 millions in the period 1926-27. The total expenditure of the Government and local authorities in England increased by more than one billion pounds. In Germany the expenditure of the central Government, the States forming the Union, and the local authorities reached the sum of 19 billion marks in 1927, while, in 1913, the corresponding total was only 7 billions.¹

¹ F. K. Mann, in his pamphlet ("Finanzwissenschaftliche Forschungen", Gustav Fischer, Jena, 1930), states that the fiscal burden in leading countries constituted, in the year 1928, from 20 to 25 per cent of the total national income in that year. In 1913 in the same countries the fiscal burden varied only from 10 to 14 per cent. The increase of the public share in the national income rose by about 100 per cent. Calculations for Germany made by Edbert Münzer ("Dynamischer Staatshaushalt", Gustav Fischer, Jena, 1931) reveal a still more striking ratio. Total fiscal revenue of the Federal State, States forming the Union and municipalities represented 30.1 per cent of the national income in 1928, whilst in 1913 it was only 16.2 per cent. If we add to the above also revenue collected by all other public bodies in Germany, the total share in the total national income was 53.3 per cent in 1928! More than 50 per cent of the national income in Germany was absorbed by all public authorities and bodies in 1928!

In the majority of cases, expenditure connected with post-war reconstruction had been incurred in the first five years following the war. In spite of this, Governments, as well as local authorities, continued in the following years to increase their budgets. With such a policy, it is not astonishing that the accumulation of liquid capital in Europe is not making sufficiently rapid progress, and that the indices of retail prices show too great a resistance to decline during periods of economic depression.

When, with diminished trade turnover and falling wholesale prices, budgets do not show any diminution, the percentage share of the State in the national income increases. Owing to lower prices and diminished trade turnover, taxation becomes relatively heavier even when tax-rates remain practically unchanged. In Europe, the real pressure of taxation on national incomes is everywhere increasing at present, thereby more and more effectively checking the domestic accumulation of capital.

If the State were to take only half the amount which it is taking at present, the remaining half would constitute a reserve fund for productive purposes. This is not the case, however, and it is precisely for this reason that, in periods of economic recession, States are so often compelled to play the part of creditors, which is not one of their primary functions. Since the war, the importance of State Banks has considerably increased, and budget funds are frequently used for industrial investments.

The State, taking too large a part of the national income, is obliged to perform some of the functions which had hitherto been left to private initiative. This unsound practice cannot be neutralised by the fact that, by increasing its expenditure, the State thereby directly increases its purchases on the home market and indirectly increases the purchases made by Government officials, who live on salaries paid out of public funds; for if its functions steadily expand, the State is not able to remunerate its officials adequately for their labour. In the majority of European countries, public service is not paid for as it should be, nor can it be otherwise. With the present system of increasing expenditure, an excessively large part of the national income is used *for the production of services at the expense of the production of goods*: An increasingly large part of the national income is absorbed by the expansion of the functions of the State, and that part which is left for the further development of production diminishes relatively, inasmuch as *it increases less rapidly than the part allotted to the production of public services*.

The amount spent on public services is increasing more rapidly than the average individual income. *Every citizen receives more and more assistance and protection from the State at the expense of the production of daily bread*. By checking the rate of increase of the accumulation of capital, the State checks the growth of the national income. *By checking the growth of the national income the State checks the rate of increase of consumption capacity*. If the accumulation of capital were not checked by excessive taxation, private initiative would have a better chance to develop, *the distribution of income among individuals would be more reasonable*, and the consumption capacity of the home market would increase more quickly.

In the past five years, Governments have encouraged their home industries to carry through technical rationalisation by means of money borrowed abroad at high rates. They have thus encouraged an increase of production and brought about a situation in which a large home market and large trade turnover have become more and more indispensable. Simultaneously they have increased the size of their budgets, using a larger and larger part of the national income for the production of public services at the expense of the production of goods. *By thus checking the rate of accumulation of home capital they have checked the rate of increase of the national income*

and hindered its proper distribution. While with one hand they have encouraged an increase in supplies, with the other they have checked the increase in purchasing power.

Thus there exist simultaneously two divergent trends. *The conscious fostering of the increase of supply has been accompanied by the unconscious checking of demand.* With such a policy an economic crisis *was bound to be created.* And, in the future, *short boom periods will continue to be followed by protracted periods of depression,* if such an unsound policy, involving so many contradictions, continues to be pursued.

To give a true diagnosis of a malady so complicated as the world economic depression is by no means easy. Whether my arguments are sufficiently strong and have exhausted the matter may be open to question. I believe, however, that I have succeeded in pointing out the chief cause of the present difficulties. Undoubtedly this cause is to be found in the excessive way in which public expenditure has expanded since the war. If this be true, *the reduction of public budgets appears to be our most urgent and important task.*

Without a reduction of public expenditure, it will be impossible to lighten the excessive burden of taxation which hinders the domestic accumulation of capital and thereby checks the rate of increase of individual incomes. *As long as we do not accelerate the rate of increase of individual incomes, we cannot accelerate the rate of growth of consumption capacity.* This is the central problem of the present economic situation in Europe. Unless this problem is understood, we cannot delude ourselves with this belief that the fight against protectionism will bring about practical results, and that a further technical rationalisation of production will restore the equilibrium between supply and demand.

Protectionism is neither the cause of the trouble nor a remedy for it. In this respect, both the supporters and the opponents of high tariff barriers are wrong. With the present steadily increasing scale of public expenditure, the lowering of tariff barriers will have to be compensated for by the raising of other forms of taxation, and it will, therefore, bring about no practical results, because an increase in the burden of taxation, or even its stabilisation at its present levels, will continue to check the rate at which the accumulation of capital increases, and thereby the rate of increase of incomes, by which consumption capacity is in large measure determined. I personally believe that customs tariffs should be lowered. I do not believe, however, that such action will have a good effect unless it is *preceded* by a reduction of public expenditure, without which we cannot expect any reduction of taxation.

My thesis is clear and simple. *The reduction of public expenditure is indispensable to any effective reduction of tariff barriers.* To attack the tariff barriers while still tolerating the present scale of public expenditure would be fruitless.

The same can be said of the technical rationalisation in Europe. I am just as great a supporter of rationalisation as I am an opponent of protectionism. I believe strongly, however, that the effectiveness of rationalisation, as of the reduction of tariff barriers, depends *primarily* on their being *preceded* by a reduction of public expenditure. Without that it will be impossible to reduce taxation, and this is indispensable if *the ratio of fixed to variable costs in commercial undertakings is no longer to move in a direction detrimental to the ability of the undertaking to adapt its selling prices to its diminished turnover.*

I now return again to my main thesis. My diagnosis is as follows. *Too large a part of the national income is used for the production of public services at the expense of the production of daily bread.* In checking the domestic accumulation of capital by excessive taxation, public bodies thereby reduce the rate at which income increases. *With incomes increasing at a slow rate, we cannot expect a rapid rate of progress in the rebuilding of consumption capacity. For buying capacity*

depends primarily on the size of income. In the light of what has been said above, it cannot be doubted that the most important problem facing the world at present is to secure a *sounder ratio between that part of the total income allotted to the production of public services and that allotted to the production of goods.*

6.

Let us now suppose, for example, that the State takes the whole net profits produced during the period of a year in a given country, so that nothing remains to be added to the total of productive capital. The inhabitants of that country will not be able to raise their standard of living or to save. The individual income will not increase, and, at the same time, real purchasing power on the home market will remain stationary.

It cannot be questioned that a State which takes more, also spends more. *Instead of its citizens having a higher standard of living, more is spent on public life.* This is not, however, a satisfactory compensation for what is lost by such a distribution of the national income.

The State does not purchase all kinds of goods, but only special kinds. In this respect, it does not possess a great elasticity. The State spends money primarily to pay labour in return for services. As a producer of goods, the State confines itself to producing war material, means of communication, and other types of goods which possess a special public importance. The State does not produce bread, clothing, machinery, luxuries, etc. Therefore, if the State takes from its citizens their entire net profits, it is to spend this money for the production of public services, or of a limited selection of goods, possessing a special public importance. Then the production of public services and goods of public importance will increase *at the expense of other goods of normal everyday consumption.*

When it hampers the domestic accumulation of capital the State does not compensate for the deficit which it causes by accumulating capital itself. The State spends money; it does not save it. Only under the pressure of an economic crisis, when the industrial structure must be saved from bankruptcy does the State give credit out of public funds. This is relief credit and not normal credit. Thus the results cannot be the same as when the market is fed by capital drawn from the savings of the community. The object of Government credits is then to preserve the existing state of affairs, not to promote progress.

The machinery by means of which the State collects its share of the national income is taxation. Direct taxes reduce the nominal income of its citizens. Indirect taxes reduce their real income by raising prices. The longer the road which a commodity has to travel from the factory to the hands of the ultimate consumer *the greater is the influence of taxation on the retail price of that commodity.* It is generally known that the effect of Customs tariffs is the same; but it is forgotten that protectionism exercises only a limited influence. The resistance of the index of retail prices to reduction in spite of a fall in the prices of raw materials which are free from import duty or benefit by preferential rates shows very clearly the extent to which the pressure of taxation, together with the Customs, which is only one of its elements, exercises a disturbing influence on the circulation and exchange of goods.

If, in taking the country's total net profits, the State were to use them in large measure to raise the salaries of its officials, their standard of living would rise, the demand for goods on the home market would receive a stimulus, commercial turnover would increase in the following year, and both agricultural and industrial production would find partial compensation in increased

returns. If, however, instead of a rise in salaries and wages a further expansion of public services takes place, the standard of living of the officials will not rise, the demand for goods will not be stimulated, and commercial turnover will not show any appreciable improvement. To-day, this latter condition prevails. The level of Government officials' salaries systematically lags behind the increase in State budgets. No wonder, therefore, that the volume of demand, the volume of real purchasing power, does not rise in proportion to the increase of rationalised production.

The above picture, based on the hypothesis that a country's total net profits in a given year are confiscated, is clear. The consequence of this confiscation is that a disturbing influence is exercised on the circulation and exchange of goods by the excessive pressure of taxation. The situation is no different—in principle—when the State takes, not the total net profits, *but too large a part of the national income*. The effects of this policy make themselves felt in the same way. The accumulation of capital cannot proceed with sufficient rapidity, the level of individual incomes does not rise in proportion to the growth of production, and the *absorption capacity* of the increasing population diminishes.

In the summer of 1930, the total number of unemployed in the world reached about 11 millions. Add to this number of unemployed workers their families, as well as the total number of partly-employed workers and their families, non-manual workers, and Government officials, whose labour in the majority of countries is not sufficiently well paid, as their salaries and wages are raised at a slower rate than that of the increase of the burden of taxation. These figures show only too clearly that *world economy is suffering from an undue increase in public budgets, and from the resulting shortage of capital*. This evil is the origin of the disproportion between the rate of increase of production and the volume of real purchasing power, as a result of which a serious crisis in the exchange of goods was bound to come.

No wonder, therefore, that under these conditions the first post-war decade has been one of short periods of prosperity and long periods of recession or depression. The situation will not improve in the second decade if public expenditure and the excessive burden of taxation which results from it continue to grow. After short periods of improvement we shall again witness protracted periods of recession or depression.

7.

If we bear this in mind, it is clear that the abnormal distribution of the supply of gold cannot be cured unless the errors of world economy are corrected previously, or at the same time. The distribution of gold is the result of the general world economy. Bad economy creates bad distribution. Good economy causes good distribution. When neither the exchange of capital nor the exchange of human labour enjoys freedom of movement in international relations good economy is lacking. In certain countries, taxes hamper the movement of capital. Customs duties everywhere hamper the exchange of goods. Immigration restrictions prevent the free circulation of people from one country to another. Is it to be supposed, then, under such conditions, that gold abnormally distributed as it is now in consequence of the war, can be reasonably redistributed?

America, where more than 40 per cent of the world's reserves of monetary gold are concentrated, continues to enact more and more rigorous immigration restrictions, and has raised her Customs barrier to an unusually high level. At the same time, she demands that Europe should pay off her huge war debts. In what way can Europe make this payment, when she is finding

more and more difficulty in exporting her goods and labour? Under such conditions it is meaningless to state that America has put her gold "at the disposal" of the world. Europe cannot make use of this offer, for she cannot buy this gold in such a way as to ensure that it will remain in Europe and will be reasonably distributed. Up to the present France alone, out of the whole of Europe, has been able to withdraw gold from the American reserves, and it may be doubted whether in the long run this will prove lasting.

Such a policy may bring about a gradual decline in the American standard of living to the European level instead of the reverse. Until this has been done, the repatriation of European gold from America cannot be successful and permanent.

By raising loans in America and changing part of these loans into gold, Europe can from time to time create the illusion of repatriation. But this is not a lasting repatriation, for, later on, Europe is compelled to give back the gold, the inflow of which was artificial and premature.

To sum up, *the period 1925 to 1930 was marked in particular by an excessive expansion of public budgets.* Protectionism was only the most obvious symptom of this unsound economy, and the difficulties which prevent a better redistribution of the gold supply are among its consequences.

The fall of prices during this period was not the result of the shortage of gold—still less of the sterilisation of gold on the part of some Central Banks. Were the sterilisation policy the cause of the present crisis, a change in that policy would promptly change the situation. *A whole year, however, of a cheap money policy has not brought any positive results.* Nor could it be otherwise, because the credit granted by Central Banks does not finance consumption, but production. *Relative over-production cannot be cured by financing production more generously. Credit does not in itself increase the borrower's income; on the contrary, it creates an additional burden on that income.* Therefore, the possibility of increasing the demand on the home market in the long run does not depend on the volume of debts, which constitute a burden on income, but on the size of the income.

The period of declining prices from 1925 to 1930 does not mark the beginning of a long downward trend of prices, possessing a secular character, and due to the present shortage of gold. It is not the shortage of gold that is the cause of the depression but an unsound world economy which, through excessive public expenditure and too heavy taxation in all its forms, is responsible for the fact that the rate of increase of income, which determines the buying capacity of the home market, lags behind the rate of increase of production. It is not surprising that, under these conditions, the general level of prices is subject to such changes as it would be subject to if a shortage of gold did in fact exist.

State Socialism, *increasing the production of public services at a rate which is not commensurable with the accumulation of capital for the production of the necessaries of life,* has become the predominant doctrine throughout the world. To check, and especially to reduce, the expansion of State budgets will not be an easy task, in spite of the painful experiences of the present crisis. If State Socialism continues to dominate world economy in the future the influence of the decline in the production of gold which is anticipated in a few years on the general level of prices will be doubly strong.

With an unsound general economy the danger of a scarcity of gold is *twofold.* From this point of view, economy in the use of gold for monetary purposes is of *primary and decisive importance* to the future of the world.

CHAPTER V.

ECONOMY IN THE EMPLOYMENT OF GOLD.

1.

A shortage of gold has a depressing effect on prices. To-day, even before the falling-off in the production of gold has begun, a similar influence is being exercised by excessive public expenditure, and the allotment of too large a proportion of the national income to public bodies. Exaggerated public expenditures makes periods of prosperity comparatively short and periods of business recession and depression comparatively long. There will be no change for the better, either now or in the future, if the mistakes which are being made in world economy are not rectified. The later the reform of public budgets is begun, the greater will be the depressing effect of the weight of taxes and Customs barriers on trade cycles.

If, with such conditions existing, gold production should begin to fall off, the general level of world prices will be caught between two fires. The depressing effect of great public expenditure will be added to by the depressing effects of the shortage of gold. At the same time, the consequences of the shortage of gold will be aggravated by the depressing influence of great public expenditure. The danger arising from an insufficiency of gold is doubled, and economy in the employment of gold for monetary purposes becomes a problem requiring prompt attention.

We have seen in Chapter I, when dealing with the changes in the structure of the gold standard, that, during the first ten years after the war, reforms were effected of which some were consistent with the principle of economy and some were not. The former should be *consolidated and improved*, and the latter *abolished*, if the world is to avoid serious disturbances in the general level of prices and in its further economic development.

Among the changes consistent with the spirit of economy, there stand out the reduction in the circulation of gold coin, and the concentration of gold at the Central Banks. The reduction in the amount of gold coin in circulation has its good and bad aspects. The greater importance of the good aspects, however, is so apparent that detailed discussion of this subject seems superfluous. The public has lost the habit of using coin, and now increasingly prefers modern means of payment. Even the use of notes in lieu of coins is gradually giving way to the use of cheques, which are circulating more and more widely. Consequently, attempts to return to a gold coinage are, it is plain, not only harmful from the standpoint of economy in the use of gold, but also illogical. If the development of the technique of payments leads to a more widespread use of cheques at the expense of notes, any attempt to return to the circulation of coin can only be considered a backward step.

This would be an anachronism, inconsistent with the progress of civilisation in the monetary sphere. Consequently, it is probable that the promise to exchange notes for coin contained in the latest Statutes of the Central Banks of France and Switzerland will remain a dead letter.

Similarly the effort to bring gold coin into circulation which was contemplated in Italy in 1930 will also probably fail, as did an earlier attempt in the Netherlands. These attempts are echoes of past times which will never return; they are a tribute to old traditions.

A similar anachronism is the circulation of gold certificates fully covered by gold, a form of currency greatly employed in the United States of America. Any further postponement of the gradual extinction of this form of gold circulation is indefensible. The circulation of gold certificates is tantamount in practice to that of gold coin, and the concentration of gold at the Central Banks is therefore incomplete to the extent to which there are gold certificates in circulation. If America were an isolated island, she could afford to continue to maintain this costly form of monetary circulation. But as she is not, she should, in her own interest, withdraw these certificates as rapidly as possible, in order to co-ordinate her bullion policy with that of the rest of the world.

The concentration of gold at the Central Banks by the withdrawal of gold coin and gold certificates from circulation, and by the liquidation of the gold reserves of commercial and State banks and public treasuries, is a sound policy. As a result of this policy, gold coin is more and more being replaced in international transactions by gold bars. This form is more convenient, and it already plays a predominant part. If, in addition, a uniform standard of fineness were adopted, the technique of international transactions would be further improved. The greatest advantage which results from the concentration of gold at the Central Banks, however, is the bank's increased ability to expand credit.

A concentration of gold does not, of course, increase the gold holdings of a country, but it ensures its more effective employment for credit purposes. The supply of gold does not increase, but the rôle it plays in the market gains in relative importance. In the face of the threatened falling-off in the world production of gold, however, this reform would be insufficient if it were not accompanied by further reforms relating to the demand for gold. The scope for possible reforms in this direction is greater, and their consequences are more far-reaching, than in the sphere of gold concentration.

In the matter of economy in the demand for gold, the primary factor is the gold exchange standard. Under this system, the Central Bank includes in its fundamental reserve not only gold, but also, and as an equivalent, foreign exchange convertible into gold without limitation as to amount. The foreign exchange purchased is [not spent on importing gold, but remains abroad, placed to the credit of an account with a foreign bank. This system has both advantages and drawbacks. The chief advantage is that the bank which purchases the foreign exchange neither converts it into gold nor brings it home. The change into gold is postponed, and the demand for gold is thus temporarily reduced. If, however, a bank employs the foreign exchange which forms part of its fundamental reserves as short-term capital for operations on foreign markets, then the situation becomes unsatisfactory. This kind of capital may easily be transferred in large amounts from one market to another, and may interfere with the discount policy of foreign Central Banks, and this in turn may provoke undesirable disturbances in money markets.

The movement of such foreign exchange from one country to another does not, however, have the same effect on the level of prices as the movement of gold. When a Central Bank purchases foreign exchange it increases the amount of its note issue, but at the same time there is no shrinkage in the credit structure of the country from which the foreign exchange flows out. The movement of foreign exchange has a one-sided influence on the credit structure, while the movement of gold has a reciprocal effect, credit being increased in the country receiving

gold and reduced in the country from which it is taken. As a result of this fundamental difference, the movement of foreign exchange also has a one-sided influence on the level of prices, for it cannot even up differences in price-levels to the same extent as can a movement of gold. This is undoubtedly a disturbing factor on the international market.

The most visible adverse influence of the gold exchange standard is its influence on the gold market. The steady accumulation of foreign exchange creates a potential demand for gold which constitutes a burden on those markets in which the foreign exchange deposits of Central Banks have been accumulated. The postponement of the acquisition of gold through the inclusion of foreign exchange in the reserve is subsequently compensated for by the accumulation of foreign exchange and the demand for larger amounts of gold. This potential demand has during the past few years exercised a particularly disturbing influence on the world gold market.

In my memorandum on the reform of the gold exchange standard, published by the League of Nations in connection with the Interim report of the Gold Delegation, I dealt in detail with the disadvantages of this system. I shall confine myself here to quoting the paragraphs of that work in which I proposed the reform of the present practice.

“ The most vital problem with which we are confronted is, in the first place, to reform the gold exchange standard in such a way as to impart to it the character of a permanent system, and so to remove the apprehensions which it causes at present. . . . This purpose could be achieved if the Central Banks which apply the gold exchange standard included in their fundamental reserves only gold and demand deposits held on non-interest-bearing account with foreign Central Banks.”

Instead of the present practice of Central Banks lending the foreign exchange which they purchase to foreign commercial banks, it would be advisable in the future for all such sums to be placed in the form of sight deposits held on non-interest-bearing account with the Central Bank of the country issuing the currency in question, with the reservation, however, that the foreign Central Bank would not employ for credit purposes the funds which it holds in this type of account. It would be desirable, indeed, that the Central Banks should show these accounts as a separate item on the liability side of their balance-sheets.

“ With such a system, if the Bank of Belgium buys a cheque on the Chase Bank in New York and orders the purchased amount to be placed to its own special non-interest-bearing account with the Federal Reserve Bank, the amount of purchasing power in America will in reality shrink and will counterbalance the simultaneous increase of the credit structure in Belgium.”

A similar process takes place in the reverse situation.
We obtain then an important result :

“ The exercise of the ‘ rights to receive gold ’ would be adjourned, without, however, its being possible to employ these rights to gold on two markets simultaneously.”

In this way, the inflationary factor which to-day causes disturbances in world prices, on the money markets and on the gold market would be eliminated from international economic life.

The healthy features of the gold exchange standard could be maintained, while all that is unsound could be removed. Thus modified, the system could become permanent and smooth-working, and would cease to be temporary and transitory as it is to-day. The pressure exercised on the gold market by the potential demand would be lessened.

The statutes of certain Central Banks permit the inclusion in the fundamental reserves of foreign exchange exclusively in the form of deposits to their credit with other Central Banks. Greece and Bulgaria, where the statutes of the Central Banks were drawn up in accordance with the recommendations of [the Financial Committee of the League of Nations, are examples of this. There is, however, a difference between such local practice and the system which I propose for universal application. The greater part of the foreign exchange held by Central Banks is placed with commercial banks, and if it were to be suddenly withdrawn and transferred to the Central Banks, such action might cause a disturbance of a deflationary kind, followed by undesirable consequences.

If the banks employing the gold exchange standard were to conclude a convention providing for the inclusion in their fundamental reserves of only those sums which are deposited with other Central Banks, they would have to arrange that this plan be carried out gradually. A convention of this kind is indispensable, because no Central Bank is prepared to renounce the profits accruing to it in the form of interest on foreign deposits, which profits frequently represent important items in the nation's balance of payments, unless other Central Banks are prepared to do the same. If a convention of this sort were to be concluded, then it should be carried out in such a manner that all purchases of foreign exchange would be deposited with another Central Bank, while all sales of foreign exchange would be made from the holdings in commercial banks. The influx of fresh foreign exchange would become part of the new system, while the reserves of foreign exchange deposited with commercial banks would gradually be liquidated. In this way, any sudden disturbance of the money market would be avoided.

An exception to the general rule should, however, be made for the International Bank at Basle. This Bank, although it is not a bank of issue, constitutes a centre of permanent and regular co-operation between Central Banks. This will become particularly apparent when the International Bank puts into practice Article 24 of its statutes, which provides for the creation of a separate group of deposits for banks of issue alone in order to facilitate gold clearing and the conversion of assets from one currency into another.

Deposits in gold will not cause any particular difficulty in the organisation of a clearing-house for sales and purchases of gold between the Central Banks. Much greater difficulties will arise in connection with the second category of deposits, those which are not paid in gold but in foreign exchange, as when a bank paying, for instance, in dollars receives the right to draw against that deposit in any other currency or, what is of the greatest importance, in gold.

Let us assume that such a system of foreign exchange deposits has been adopted. In this case, the International Bank, in order to avoid the risk of exchange losses, will have to re-deposit this class of deposits exclusively with the Central Banks in accordance with a special agreement concluded in advance, whereby the difference between selling and buying rates would be reduced to nothing. We will return later to this subject. For the time being, we shall confine ourselves to the statement that foreign exchange deposits of the class which come under Article 24 can be included in the fundamental reserves without difficulty, because they would have to be re-deposited with the Central Banks and not with commercial banks.

The problem is more complicated in the case of those deposits which do not come under Article 24. Even now, normal deposits of this class represent a considerable item in the balance-sheet of the International Bank. A portion of them is probably already re-deposited with Central Banks. The greater part of these holdings will, however, be deposited with banks which are not banks of issue. If the gold exchange standard were reformed as proposed above, these deposits would be eliminated from the fundamental reserve of the Central Bank. This

appears to be advisable from a purely theoretical standpoint. However, upon close analysis of the working of this class of accounts, cases will be found in which exceptions to the general rule may be held justified.

The International Bank has the right to invest its funds in any market, *but only with the approval of the local bank of issue*. If the local Central Bank regulates the inflow of funds from the International Bank with a view to reducing its portfolio of bills, compensation may follow. The whole deposit held with the International Bank, or a portion thereof, returns to the country in question, where it reduces the portfolio of the local Central Bank to a corresponding degree, or checks any further expansion thereof. Mathematically, these two kinds of transactions will not balance each other, but the average result for the whole world might be such that there could be no suggestion that the deposits held with the International Bank were leading to inflation. At the very least, this tendency would be considerably reduced. This influence would be neutralised by the other advantages accruing to world economy as a result of continuous and regular co-operation between the Central Banks and the International Bank.

One of the reasons why the demand for gold is so strong to-day is the destruction of capital during the great war and the subsequent period of inflation, and the slow progress which has been made in the accumulation of capital during the last few years. As a consequence, in the majority of countries, especially in Europe, industry and agriculture depend to a far too large extent on the credits granted by the local Central Banks. There are not everywhere commercial banks which have at their disposal sufficient funds for the economic activities of the country. The Central Banks have hitherto played too great a part on the credit market. Instead of being the ultimate reserve, they are, in the majority of cases, a direct source of credit. Such a situation is neither proper nor normal. The position may be changed by degrees as capital reserves are built up, commercial banks become better organised and larger deposits and savings than hitherto are made. The Central Banks may then resume their proper functions. Instead of furnishing credits for the daily needs of the market, they will gradually become, as formerly, institutions granting credit in cases of necessity.

As long as the Central Banks supply credits direct and on a large scale, their holdings of bills tend to increase excessively. This corresponds to an undue expansion of the note issue or of sight deposits. With over-expanded liabilities, the Central Bank must increase its fundamental reserve. Herein resides one of the supplementary causes for the great demand for gold.

Central Banks, even those applying the gold exchange standard, provide in their statutes for a minimum gold reserve. A typical instance is the Reichsbank, the basic reserve of which must be composed of gold to the extent of 75 per cent and of foreign exchange only to the extent of 25 per cent. If its liabilities increase quickly, its demand for gold must also increase. There is some relation between the increase in bills discounted and the demand for gold. The increase in bills discounted is accompanied by a simultaneous increase in calls for gold in order that the enlarged liabilities may still satisfy the legal requirements regarding gold cover.

Despite the steady rebuilding of capital, it is not yet as abundant as it was before the war. Conditions on the gold market would become easier if the International Bank were to replace the local Central Banks to a much larger extent in giving credit assistance to local commercial banks. If local commercial banks were given rediscount facilities at the International Bank, their call for credits on local Central Banks would diminish. The discounted bills of the local Central Banks would increase at a slower rate, and the demand for gold would be lessened because the banks' liabilities would increase less quickly.

If the discounted bills of the Central Banks increase, their liabilities must grow. If, however commercial banks receive foreign credits, the inflow of foreign exchange does not necessarily increase the note issue to an equal extent. The foreign exchange borrowed is included in the total foreign exchange reserve already held by the commercial banks. The banks may sell the whole or a portion of their foreign exchange without changing it for notes at the local Central Bank.

Deposits paid in by the Central Banks to the International Bank have now been returned to a greater or lesser extent to the markets of their origin. Under this system the activity of the International Bank not only levels up the interest rates ruling in the different markets, but may also check the growth of the liabilities of the Central Banks. These two advantages justify the exception to the general rule that deposits of Central Banks forming part of their fundamental reserves should be kept exclusively with other Central Banks.

From the theoretical point of view such exceptions must necessarily give rise to some misapprehensions. But, in practice, these theoretical imperfections are offset by the indirect advantages resulting from regular and close co-operation between Central Banks. The mere levelling-up of excessive differences in the rate of interest should lessen disturbances on the money markets, for the transfer of short-term money from one market to another will be a less speculative operation. Such a levelling-up, together with a decline in the rate of expansion of liabilities at the Central Banks, must sooner or later exercise a beneficial influence on the intensity of the demand for gold.

In summing up, we come to a conclusion of fundamental significance—namely, that *the accumulation of home capital helps to lessen the demand for gold*. A quick rebuilding of capital protects the Central Banks against undue expansion of their sight liabilities. This is the first and foremost advantage. A rapid increase in the accumulation of capital has an equally beneficial effect on the circulation of cheques. When capital is readily available, confidence on the market is enhanced, and all classes of credit documents circulate easily. When, on the other hand, there is a shortage of capital, payments are made with difficulty, and the circulation of cheques is thus impeded. There can be no doubt that the rapid expansion of the cheque circulation, and, in general, the expansion of the system of non-cash payments, also lessens the expansion of the sight liabilities of the Central Banks. It is possible, therefore, that this may also contribute towards a decline in the demand for gold.

Beyond question, too much anxiety is expressed about the production of gold and too little attention is given to the question of the accumulation of home capital, which tends to reduce the demand for gold.

2.

The concentration of gold at the Central Banks and the gold exchange standard constitute methods already in use for economising the gold which is employed for monetary purposes. To consolidate and improve these methods in a manner corresponding more or less to the opinions expressed above would not be very difficult. During the last ten years, however, reforms have been adopted which are contrary to the spirit of economy. Reforms of this kind should be changed or, at least, their influence on the gold market should be lessened.

This problem is more complicated. It involves, first of all, changes in the requirements regarding the minimum reserve to be held against notes in circulation and sight liabilities. As we have seen in Chapter I, minimum reserve requirements have become more rigorous since the great war. In an atmosphere of anxiety for the future of gold production, the statutory minimum reserve requirements have been raised instead of being lowered.

Before the great war the statutes of the majority of Central Banks required minimum gold reserves amounting only to one-third of the note issue. Other sight liabilities were included in the calculation of the reserve ratio only in exceptional cases. Since the war, the reverse process has taken place and it has become the rule for sight liabilities to be included. At the same time, the statutory reserve requirements have in many cases been increased from one-third to 40 per cent. Some banks even maintain a reserve ratio exceeding 40 per cent. The general result is that the legal requirements as to the minimum reserve are stricter to-day than before the war, although the falling-off in the production of gold at that time did not give rise to any such anxiety as to-day.

At the end of 1928, the grand total of notes in circulation plus other sight liabilities of all Central Banks in the world was about 24 billion dollars. The note issues amounted to 18 billions, while the balance of 6 billions represented other sight liabilities. The increase of the average minimum reserve in gold and foreign exchange from 33 to 40 per cent corresponds to an increase of about 1,700 million dollars in requirements of gold.

The minimum gold cover, if we eliminate foreign exchange, has remained practically at the pre-war level of about 33 per cent. It is, however, calculated not only on the amount of notes in circulation, but also on the other sight liabilities. The new method is much stricter. The result can be measured in figures. At the end of 1928, when sight liabilities totalled 6 billion dollars, gold requirements rose to one-third of that amount, or about 2 billion dollars.

Let us assume that Central Banks conclude a convention and reduce their minimum statutory reserve to the pre-war level. In that case, the amount of gold required for the existing note issues would drop by over 1,200 million dollars. The requirements for note issues together with the other sight liabilities would fall by about 1,700 million dollars. The first sum would be six times as large as the annual influx of new gold for monetary purposes (which is approximately 200 million dollars), and the second would be more than eight times as large as the annual influx. Whether the first sum or the second be taken, a substantial remainder is obtained, which could be used in the future for making good the deficit in the production of new gold, should this begin to decrease.

The danger of a shortage of gold would then disappear for several decades to come. Instead of being apprehensive of a lack of gold, it would be more reasonable to consider for a period the danger of an excess of gold. In the event, however, of the Central Banks concluding a convention as outlined above, they would without difficulty find means to protect the world from inflation.

The raising of the statutory reserve requirements is sometimes justified on the ground that gold is no longer in circulation. As long as there were large amounts of gold coin in circulation, the reserve at the Central Bank was a real reserve which could be drawn upon in case the balance of payments became adverse. The outflow of gold from the Central Bank was preceded by the export of coin from the local market. At present the reserve held by the Central Bank is not only the last but also the first and only reserve. The whole burden of any deficit in the balance of payments is now borne by the Central Bank, which lacks the protection formerly afforded it by the circulation of gold coin. It must also be taken into consideration that at that time coin was issued by the Mint and not by the Central Bank. The note issue of the Central Bank was in no way linked with the issue of coin. The gradual decline in the amount of coin in circulation has now radically changed the position in this respect. By concentrating gold, the banks have increased their note issue, [and, in consequence, the volume of their sight liabilities has also risen.

From the above standpoint, the more rigorous statutory reserve requirements seem to be justified. Greater liabilities call for greater reserves. Such reasoning appears to be logical and justified by figures. The total gold reserves for monetary purposes in Europe in 1913 amounted to about 24.8 billion marks, of which the reserves at the Central Banks represented only about 14.8 billion marks, the remaining 10 billion marks being gold coin in circulation. Now that the statutory reserve requirements have been raised, the demand for gold does not stand in so high a proportion to those reserves as the pre-war coin circulation stood to the reserves at the Central Banks.

The logic of such reasoning is illusory. It is based on a confusion between the idea of a fundamental and that of a minimum reserve. It is true that a smaller circulation of gold coin justifies the maintenance of a larger fundamental reserve. But this is quite a different question from that of the necessity of increasing the minimum reserve. By concentrating gold for monetary purposes since the war, the banks have increased their fundamental reserves. By replacing with foreign exchange the gold which found its way to America, the European Central Banks had greater reserves in 1929 than in 1913.

Taking the world as a whole, the actual gold and foreign exchange reserves held against the total note issue and sight liabilities amount to about 50 per cent. In relation to the note issue alone, excluding sight liabilities, the actual ratio of the reserves in gold and foreign exchange comes to about 67 per cent, or about 34 per cent more than the 33 per cent required as a minimum reserve ratio before the war.

If the pre-war reserve requirements had been maintained, the present situation would not have been any the worse. The gold and foreign exchange reserves would have been the same and their rôle in the stabilisation of currency would not have been altered. The working reserve, that is, the excess of gold and foreign exchange over the 33 per cent minimum, would have amounted to 34 per cent. With the raising of the statutory requirements for the minimum reserve, the working reserve—*i.e.*, the excess over 40 per cent of the note issue and sight liabilities, has now dropped to about 10 per cent. This fall not merely does not facilitate, but actually hampers, the work of the Central Banks.

The withdrawal of gold coin from circulation makes it necessary that the liquid, or working, reserve be maintained at a higher level than before the war. The increase in the statutory minimum reserve requirements has led to a diametrically opposite result. The volume of the liquid, working reserve—that is, the excess over the minimum reserve, *has decreased instead of increasing*—a most paradoxical result.

Those in favour of a higher minimum reserve may reply that the Central Bank has now the right to lower its minimum reserve, on condition that it pay a graduated penalty tax to the Treasury. Certain Central Banks, besides paying the penalty tax, must increase their rate of discount. The object of these measures is to permit the minimum reserve to be reduced below 40 per cent in exceptional circumstances. These measures, it is claimed, are both transitional and exceptional. In this way, the minimum reserve has been made more elastic. Before the war, it was smaller, but not as elastic as at present.

But this elasticity of the minimum reserve exists only in theory. In practice, the Central Bank never reduces its reserve below the statutory level. Even during the difficult period through which the Reichsbank passed in May 1929, the reserve ratio was not allowed to drop below the statutory minimum level. The Reichsbank preferred to adopt an exceptionally drastic discount policy, rather than avail itself of the right to reduce the minimum reserve below 40 per cent. Whether the statutes permit the reduction of the reserve ratio below 40 per cent or not, the

actual practice of Central Banks is the same : *the minimum reserve is untouchable*. The banks endeavour to operate with only the excess amount which they hold over the minimum reserve. This is the only real working fund.

What such a policy leads to is clearly shown by the example of the Bank of Poland in July 1925. The reserve ratio fell to 81 per cent. The minimum reserve required by the statutes was 80 per cent. In order not to find itself in an "illegal" situation, the Bank of Poland reduced its sales of foreign exchange, with the result that the zloty depreciated. This took place at a time when the foreign trade balance was improving, and when it seemed possible to stop the outflow of foreign exchange. After a period of 10 months the zloty was again stabilised, without the help of a foreign loan. This proves conclusively that in the summer of 1925 the economic situation of the country showed signs of a coming improvement. In spite of this, the Bank of Poland reduced its sales of foreign exchange and allowed the zloty to depreciate, because it had no right to go below the minimum reserve ratio fixed by the statutes.

The doctrine of the minimum reserve was adhered to. The country paid for it by sustaining the losses which resulted from the depreciation of the currency. A portion of the costs was also borne by other countries, for owing to the depreciation of the zloty the purchasing capacity of Poland diminished and her foreign trade dropped by half.

It is difficult to justify the views held to-day regarding minimum reserves, either from the point of view of the liquidity of the assets of a Central Bank, or from that of the necessity of possessing a special emergency reserve for unforeseen contingencies such as war and other catastrophes.

Before the great war, when notes were redeemed in gold coin, it may have appeared necessary that Central Banks should hold a certain minimum amount of coin which constituted their ready cash reserve, and was at the same time essential to assure them the unlimited ability to pay gold coin for bank-notes. This reasoning was based on the analogy with private banks, which were required by law or by custom to keep a portion of their funds in the form of ready cash so that they might at any time be able to repay deposits. The cash reserves held by private banks fluctuated between 10 per cent and 15 per cent of their deposits. One might try by analogy to justify the Central Banks maintaining a minimum reserve at 15 per cent. Another 15 per cent might be added to cover the possible necessity for unlimited sale of gold and foreign exchange in payment of foreign liabilities. In this manner, a minimum reserve amounting to one-third of the note issue appeared to be justified before the war.

This reasoning does not withstand criticism. The liquidity of a Central Bank, both before the war and at the present time, is gauged principally by the extent of the country's foreign rather than domestic business. A predominantly agricultural country requires greater reserves than a predominantly industrial one. The volume of the reserves required also depends on whether the country as a whole is a debtor or creditor. The difference in the position of various countries makes it impossible to fix the same reserve for all irrespective of whether they are predominantly agricultural or industrial, debtor or creditor. For some countries a minimum reserve amounting to 80 per cent may be too large, for others too small.

The situation is only aggravated by the fact that the minimum reserves of the Central Banks have been and are, both according to law and in fact, untouchable, a practice quite contradictory to the idea of liquidity. *The liquidity of the bank's funds cannot be increased by the creation of untouchable reserves*. It is inconsistent to seek to ensure the liquidity of a bank's assets and at the same time to require it to hold an untouchable minimum reserve. This is the more true since liquidity cannot be increased by an increase of the untouchable reserve.

Nor is the practice justified when the minimum reserve is regarded from the point of view of war requirements. The outbreak of war immediately results in the suspension of payments by the Central Bank. Unrestricted sales of gold and foreign exchange are stopped. Then the sound of the printing press is heard. If the Central Bank prefers not to increase its note issue, the State Treasury has to issue its own paper money. In either case the part played by the minimum reserve is in reality reduced to a minimum. The gain in time of war is too small to compensate for the cost of hoarding in time of peace.

The most eloquent argument against the theory that the minimum reserve should be untouchable is afforded by the experience of the Bank of France. The statutes of this bank from its establishment up to 1928 did not even provide for a reserve ratio. The law determined the maximum note issue, while the extent of the reserve was left to the discretion of the bank authorities. It was the duty of the authorities to operate with the gold reserve in such a manner as to ensure the convertibility of the notes into coin at all times without limit. The statutes of the Bank of France took no cognisance of a fixed minimum reserve. In spite of this, the franc was held stable and no one in France or elsewhere had any doubts in this respect.

The example of France solves the problem, at least in theory. A currency may be stable without any legally fixed minimum reserve. Confidence in a currency may exist and increase even though the statutes of the Central Bank do not require that a fixed part of the reserve be held as an untouchable minimum. In view of this, authoritative persons are more and more frequently expressing the opinion that the provisions concerning the reserve ratio and in particular those dealing with the minimum reserve which exist at present should be removed. Professor Sprague is certain that "it cannot be too strongly emphasised that there is no particular ratio between the gold, on the one hand, and credit and currency, on the other, that is required to support and to give strength to the credit structure".¹ Professor Cassel² goes further, and simply calls all statutory reserve requirements "thoughtless" traditions.

From the theoretical point of view it is difficult not to agree with these critics of the reserve ratio and the fixed minimum reserve. As far as the liquidity of the funds at the Central Banks is concerned, the minimum reserve does more harm than good. In case of war, the part played by the minimum reserve is so small that it does not cover the cost of hoarding it in time of peace. The example of the Bank of France before the war shows that, for the stability of the currency and in order that the people may have confidence in it, it is not necessary that it be secured by a fixed reserve.

It must, however, be admitted that the case of the Bank of France was exceptional. The great majority of Central Banks followed the principle of the reserve ratio, and their statutes provided for the maintenance of a minimum reserve. The public has grown accustomed to this and has come to believe that the minimum reserve is indispensable, and that its violation may prove exceedingly harmful to the stability of financial life. This, however, is nothing more than a popular tradition. It cannot be justified in theory. Nevertheless it must be recognised that it is deeply rooted in public opinion and plays an important part as far as the confidence in a currency is concerned.

It is easy to prove that the very idea of a minimum reserve is out of date. It is more difficult to uproot the traditional view on this subject, because the public, which employs the currency and

¹ "The Working of the Gold Standard under Present Conditions", in the *Proceedings of the Academy of Political Science* for January 1930.

² "Wandlungen in Wesen de Goldwahrung", 1930.

has its own views on the matter, is not composed of financial experts. For this reason, we must admit that the abolition or reduction of the statutory requirements regarding the minimum reserve appears to be premature under the present conditions. It is not so much the size of the minimum reserve that is an anachronism, as *the faith in its inviolability*. Before public opinion becomes sufficiently educated to permit of the abolition of the reserve ratio, *the public faith in the inviolability of the minimum reserve must be shaken*. The idea of inviolability is undeniably out of date, and compels the banks to create excessively large reserves of gold, despite the menace of a future shortage.

In reality, the situation is paradoxical. Nevertheless, it is impossible to ignore the views held on currency matters by the man in the street, who is not an expert and takes little interest in expert opinions.

A compromise between theory and practice is indispensable. Such a compromise might be reached on the following lines: *a minimum reserve should continue to be required by the statutes, but only a portion thereof should be legally tied up in such a way that the bank authorities cannot employ it without amending the statutes*. The minimum reserve would then cease to be uniform, as it is to-day. It would be *divided into two separate parts—the one violable, under certain conditions as defined by the statutes, and the other inviolable without amending the statutes*. The man in the street would not be abruptly and entirely deprived of his fetish, while the bank authorities would have greater freedom in employing the portion conditionally available.

Under the present system of a uniform minimum reserve, the bank has the right to reduce it on condition that it pays a graduated penalty tax and increases the discount rate correspondingly. In theory the authorities of many Central Banks have the right to reduce the minimum reserve to nothing as long as they pay the penalty tax and increase the rate of discount. In practice, however, this is impossible: the penalties are too severe. For this reason no bank is willing to touch the minimum reserve, for such action would give rise to general anxiety, criticism and loss of confidence.

The creation of a fictitious elasticity has not eliminated the dogma of inviolability. This is understandable. As long as the man in the street, burdened with his traditional faith in the inviolability of the minimum reserve, does not have a portion thereof legally fixed as untouchable he will continue to consider the *whole* minimum reserve as untouchable.

In the first place, the minimum reserve must be split up by the elimination of the untouchable portion, so that the whole of it will no longer be considered as inviolable. The psychology of the man in the street, which cannot be changed from day to day, calls for this step.

If a convention aiming at the reform of the present minimum reserve requirements were to be concluded on the above principles, it would not be too difficult to find a half-way solution. The minimum reserve might be reduced to its pre-war level of 88 per cent, and, at the same time, the legally untouchable portion of the reserve might be fixed at 20 per cent of the note issue and sight liabilities. A reduction of the reserve below 88 per cent might be permissible on condition that the rate of discount be raised on a graduated scale. *The penalty tax should be discontinued, or at least made less severe*. The portion of the reserves which lies between 88 and 20 per cent would thereby be made more useful. The portion up to 20 per cent would remain legally untouchable. The amount above 88 per cent would constitute a working reserve, greater than that which at present exists, and more effective, since it could be reduced to below 88 per cent. The demand for gold and foreign exchange would decline in proportion to the reduction of the minimum reserve.

At present, the fundamental reserve is composed of two parts: the minimum and the working

reserves. Under the new system there would be *three parts instead of two namely, the untouchable, the conditionally—available, and the working reserves.* Their relationship to each other might be fixed in various ways. One of these has already been mentioned—namely, to decrease the minimum reserve to 33 per cent and, at the same time, to fix the untouchable portion at 20 per cent, and to increase the ability of the bank to make use of the part between 33 and 20 per cent. This is, however, not the only possible combination. The figures, of course, do not matter; what is essential is the principle on which they are based. This principle is as follows: *The untouchable part of the minimum reserve must be fixed by law in order to facilitate the use of the rest of that minimum reserve.* The adoption of this principle will make it easy to effect a compromise between theory and practice, and to fix the proportions more accurately than above.

There are reasons for believing that the output of gold will begin to decrease. In anticipation of this, the old stocks of gold accumulated at the Central Banks should be mobilised. To achieve this, the statutory requirements concerning the minimum reserve should be amended. The complete abolition of these requirements would set free an excessive quantity of the old gold, and might cause a glut. At the same time, it would weaken confidence in general. A less radical reform, representing a compromise between theory and practice, would be safer. Before the minimum reserve requirements are completely abolished, the ground must be prepared by splitting the minimum reserve into two parts, of which one should continue to be untouchable so as to ensure greater freedom in the employment of the other.

3.

The reduction of the minimum reserve from 40 to 33 per cent would automatically increase the working reserve. If, at the present time, the actual reserve in gold and foreign exchange against the notes and sight liabilities for all the Central Banks in the world is taken to be about 50 per cent, then the working reserve, which at present amounts to about 10 per cent, would be increased to 17 per cent. In this manner, the liquidity of the Central Banks in their international relations would be enhanced, while, at the same time, their capacity to supply discount credits to the internal market would increase. This good result could be still further improved if, when decreasing the minimum reserve to 33 per cent, the Central Banks could, at the same time, return to the pre-war method of calculating the reserve ratio exclusively in relation to the note issue, regardless of sight liabilities.

From a theoretical point of view, the addition of sight liabilities to the note circulation appears to be quite proper. Holders of sight deposits at the Central Bank may, at any time, withdraw them, and the volume of the note circulation is then automatically increased. Such deposits originate in notes which the bank had previously placed on the market. These notes, although they return temporarily to the bank in the form of deposits, continue to act as a means of payment, and therefore, in the same way as the notes which are in circulation, they influence the level of prices. Payment effected by a cheque on a Central Bank has the same economic significance as payment in cash.

In practice, however, this problem is more complicated. Deposits with Central Banks have special functions, different from those of deposits with commercial banks. They represent a mechanism for facilitating non-cash payments. There is a strict relation between what happens in the clearing house and the total of sight deposits at the Central Bank. The transfer of funds from one account to another decreases the amount of ready cash required. This system is

advantageous not only to the bank, but also to all who keep their accounts there, and for that reason it never happens that all depositors decide to liquidate all their accounts at the same time.

The surface of the mass of sight liabilities is constantly moving, but the bottom remains intact.

The ratio of the changeable stratum to the constant stratum depends on various circumstances, and is difficult to express accurately by a percentage formula. But one thing is certain, and that is that the total of sight deposits never falls to zero. Complete liquidation would be impossible, for it would mean the destruction of the whole clearing mechanism, and non-cash payments would be made impossible. The idea that a time may come again when all payments will be effected in cash is fantastic. For this reason, it is doubtful whether the addition of the total of sight liabilities to the note issue is as well justified as it appears at first glance.

The pre-war system of eliminating sight liabilities when calculating the reserve ratio gave rise to doubts which were theoretically justified. The post-war method of adding the total sight liabilities to the note issue gives rise to doubts which are practically justified. The most logical arrangement would be a compromise system under which *only a portion of the sight liabilities would be added to the note issue*. The changeable upper stratum of these liabilities, if we may use this expression, should be added, while the lower stratum—that is the amount below which the sight liabilities never fall under normal conditions, should be excluded. The determination of the ratio between the two portions is a matter of secondary importance.

There may be several more or less justified combinations from which one could be chosen according to local conditions. The problem requires detailed investigation. It may be that it would be practical to adopt the same percentage as the statutes of the banks fix for the minimum reserve. Where the reserve amounts to 83 per cent, 83 per cent of the total sight liabilities might be eliminated from the calculation of the reserve ratio, the remaining 67 per cent being added to the notes in circulation.

The application of the same figure of 83 per cent in both cases would have the advantage that if the minimum reserve requirements were reduced, the amount of sight liabilities added to the note issue would be automatically increased. While the requirements were diminished in one direction, they would simultaneously be increased in another. The one would compensate for the other, and the compromise between theory and practice would be both logical and practical.

With the present system, under which notes and sight liabilities are regarded as identical, the sum total of these liabilities is not subject to rapid fluctuations. When deposits increase the note issue shrinks, and vice versa. One roughly compensates for the other. This being so, the requirements for gold are not being increased any more rapidly, now that the practice of adding both classes of liabilities together is well under way, than they would have been had it not been introduced. The difference is a matter of only a few per cent.

The situation was, however, very different during the period of transition from the pre-war to the post-war system. On the day when the banks began to add sight liabilities to the note issue, the demand for gold and foreign exchange showed a sudden increase. At the end of 1928, the total of the note issues of all the Central Banks in the world exceeded 18 billion dollars. The sight liabilities amounted to 6 billion dollars. Against the first liability only, the gold reserves held by the Central Banks at the end of 1928 represented a cover of about 56 per cent. With the sight liabilities added, then, the same gold reserve gives a cover of only about 50 per cent. The fall comes to 6 per cent, and means an increase in the demand for gold amounting to about 1,500 million dollars. How is it possible to reconcile this practice with the necessity for gold economy?

4.

Together with the raising of the statutory reserve requirements after the war, silver began to be eliminated from the fundamental reserves. All the currency reforms effected in post-war years are marked by an attitude hostile to silver. The increase in the minimum reserve requirements has increased the demand for gold, and, at the same time, the actual value of the fundamental reserves has been reduced by the elimination of silver.

In these circumstances, it is no wonder that the demand for silver for monetary purposes has fallen off. At the same time, the output of silver has increased. In 1919, the production of silver amounted to 179,849,940 ounces, and in 1929 it had risen 255,000,000 ounces. As a result of this increase in its supply, added to the simultaneous fall in its demand for monetary purposes, silver has dropped in price. The year 1930 was marked by a catastrophic fall.

The Asiatic countries which had a silver standard found themselves in such a difficult position that they felt compelled to accelerate the change-over to the gold standard. The first step was taken by India, which has been followed by Persia. China intends to do the same. These steps have unfavourably affected the gold market. They have also had an adverse influence upon international trade. The fall in the price of silver resulted in a considerable decrease in the purchasing capacity of the countries employing a silver standard.

This is undoubtedly one of the factors which have contributed to the seriousness of the present economic crisis.

The opponents of silver are desirous of maintaining the gold standard in its strictest form. The question, however, arises whether, before the war, when silver was included in the fundamental reserves, the purity of the gold standard suffered thereby. There is no question of making silver a medium of exchange on the same level as gold. There is no question of returning to bimetallism. The question is whether silver cannot be included in the fundamental reserves at its current value in gold. Silver would in that case be employed as a commodity and not as a standard.

The rôle of gold in international relations is to make up the deficits in the balance of payments. If a country has more liabilities than assets, the adverse balance is covered by gold. For this reason, every country has a special store-house containing stocks of gold to be used in case of necessity. This store-house is the Central Bank. From the point of view of the international market, the Central Bank's store of gold is a commodity which, owing to its technical advantages and rarity, settles balances in the exchange between countries better than can other commodities.

The number of grammes of gold which forms the legal monetary unit in a given country is a matter of indifference abroad. The amount and quality of gold are the sole decisive factors in international relations. For this reason, a foreign bank will accept a gold bar more readily than gold coin, which complicates the account.

Silver as a metal much resembles gold, and it may also act as a means of payment in international relations. It is easily stored, transported and sold. From a theoretical point of view, it is no less useful than gold in equalising deficits in the balance of payments. If to-day it does not serve in this way, it is because its price is subject to frequent fluctuations. Why is the price of silver subject to these fluctuations? Because it is not used as a means of payment in international commercial relations. If it were, its price would remain more or less stable, as it was before it came to be despised by the Central Banks.

When they eliminated silver from their reserves, the Central Banks ceased to accumulate it for effecting payments on the international market. The result has been a fall in its price, accompanied by speculation. This is a natural consequence of the exclusion of silver from the reserves of the Central Banks. The fluctuations in the price of silver are the result of this exclusion, not its cause. One cannot, therefore, justify it by pointing to the price-fluctuation.

The value of the silver produced in 1927 amounted to 135,270,000 dollars. To-day it is much less, owing to the catastrophic fall in price. Let us assume, for the sake of illustration, that the Central Banks on the gold exchange standard will each year employ the revenue from their foreign deposits in purchasing silver. In that case, they would be able to buy silver to the value of at least 50 million dollars yearly. These purchases would raise the price of silver in one year to a level at which the Central Banks would like it to be stabilised. For this purpose it would be sufficient to come to an understanding with the International Bank in order to concentrate with it the whole of the trade in silver for the accounts of the Central Banks. By buying and selling such large amounts, the Bank would thus control the price of silver.

Any tendency in the price of silver to move above the desired level could be checked by the larger amount offered, while any tendency downward would be offset by a greater demand. Acting in agreement with the Central Banks, the International Bank could easily control the situation in such a manner that the price of silver would fluctuate only within the desired limits. During the first year of the operation of such a system, the price of silver would rise rapidly. In the following year, the price would be stabilised, provided that the reserve stock of silver acquired during the first year were at all times at the disposal of the International Bank to be used for intervention on the market if and when necessary.

Each succeeding year would strengthen the position of the International Bank on the silver market, which would guarantee the price of silver being practically stable. Small profits and losses would compensate each other without exposing the Central Banks to risk. To ensure greater security the banks could establish a separate reserve of profits made on silver transactions, which would be employed for covering possible losses.

In calculating their reserve ratios, the Central Banks to-day add their sight liabilities to their note issues. Even if this system were to be modified in the manner outlined in the foregoing chapter, some portion of the liabilities would still be added to the note issue. The demand for gold would remain increased in this proportion. It is in the interest of economy in the use of gold that this surplus of demand should be offset by the reintroduction of silver into the fundamental reserves.

Let it be assumed that 5 per cent of the note issue plus a portion of the sight liabilities could be covered by silver. In that case, the fundamental reserve could be composed of gold, foreign exchange, and silver to the extent of 5 per cent. This figure is not excessive. If, however, the Central Banks concluded a convention envisaging a gradual creation of such a 5 per cent reserve, the demand for silver would increase sufficiently to raise its price and stabilise it at a desired level. The creation of a 5 per cent reserve in silver, however, would require a number of years. At the present time, 5 per cent represents an amount of more than one billion dollars. Such a silver reserve could be accumulated only gradually, but, even at the beginning, the price of silver could be raised and possibly stabilised.

The key to the situation is in the hands of the Central Banks, for they, by excluding silver from their reserves, caused the fall in its price, and they only, by including it again in their reserves, can restore its price and stabilise its gold value.

In view of the fact that a fall in the production of gold is expected, the old reserves of gold

should be made more liquid. Fundamental reserves never fall to zero. There are, in the vaults of the Central Banks, large quantities of gold which never appear on the market, and which are lost to international exchange. If it were decided gradually to establish a 5 per cent silver reserve over a number of years, the amount of liquid gold on the international market would be increased to that extent. *At the bottom of the vaults there would be silver instead of gold.* This would represent a considerable economy. The possibility of this plan being carried through depends entirely on co-operation between the Central Banks and the International Bank.

It may be observed that Sir Josiah Stamp rightly drew attention in one of his lectures to the question of subsidiary metals, chiefly silver, as one of the chief preoccupations of the International Bank.

5.

Since the war, a clause has been introduced into the statutes of some of the Central Banks whereby at least two-thirds of the gold reserves which form a part of the minimum reserve must be kept in the bank's own vaults, and not more than one-third may be deposited with foreign banks. As long as gold clearing remains at its present low level, these stipulations will possess no practical significance. But should gold clearing increase, a Central Bank which is bound by such a statutory regulation would be hampered in its activities.

The problem becomes all the more interesting in view of the establishment of the International Bank. Article 24 of the statutes of this Bank contains the following passage :

“ It may arrange with Central Banks to have gold earmarked for their account and transferable on their order, to open accounts through which Central Banks can transfer their assets from one currency to another.”

It has been shown in Chapter 2, which deals with the changes in the functioning of the gold standard, that the number of international transactions in gold, as well as the amount of gold which enters into these transactions, is increasing. In the course of a year, continually larger amounts of gold pass from one country to another, and it is worthy of note that a considerable quantity of the metal makes seasonal movements, returning quickly to its place of origin. The transport of gold is not effected gratuitously. It is burdened with the cost of freight, insurance, losses of interest on the capital invested in the consignment, and numerous other less important expenses. In view of the growth of transactions in gold, the total expenses borne by the different countries also increase. These expenses are particularly unnecessary in respect of seasonal movements of gold.

Suppose the Bank of France has a gold deposit in New York, and is desirous of transporting it to Paris. At the same time, the Reichsbank is compelled to sell a portion of its gold holdings to America. Instead of despatching gold to New York, the Reichsbank might send it to Paris and sell it to the Bank of France in exchange for the gold of the Bank of France deposited at New York. Clearings of this kind would ensure a considerable reduction in costs. Instead of sending gold from Germany to America and importing French gold from America, it is sufficient to transport gold from Berlin to Paris. A transaction of this nature took place in 1929, and constitutes a classic example.

Should the International Bank carry out Article 24 of its statutes in full and organise a clearing house for transactions in gold between Central Banks, the cost of the transfer of gold would be reduced almost to nothing. The banks participating in the clearing system would deposit a portion of their gold with the International Bank. It would not be necessary to transport the

gold to Basle and to deposit it physically in the vaults of the Bank. The Central Banks would simply set aside a portion of their gold reserves which they would place at the disposal of the International Bank, the latter accepting as deposits the amount of gold thus set aside.

The International Bank would obtain a certain amount of gold from each of the Central Banks belonging to the clearing house. Under these conditions, orders for the sale and purchase of gold would be as far as possible concentrated at Basle, and, instead of gold consignments being despatched from one bank to another, transactions would be confined to the transfer of the equivalent sums from one account to another. When giving a purchase order, the Central Bank would indicate the place of delivery. The international transfer of gold would thus become less expensive and easier to make. Gold clearings, which are rarely practised to-day, would then become a normal daily routine.

On the publication of the statutes of the International Bank there was considerable criticism of Article 24, and of the intention to create regular and constant gold clearings. A German economist, Lansburgh, adopted a particularly hostile attitude. In his opinion, gold clearings would do more harm than good to the gold standard. The cost of transporting gold establishes the so-called "gold points", above or below which arbitrage does not pay. The gold points are not only indications of the cost of gold shipment, they are indispensable to the proper functioning of the gold standard. With the present margin between the gold points, the movement of gold becomes a necessity only when other means of regulating the rate of exchange fail. If gold clearing is introduced, there will be no cost of transport, in consequence of which the margin between the gold points will disappear. In this event, every change in the rate of exchange of a currency must cause a movement of gold from one country to another, and there would be no opportunity for the employment of other means to influence the rate of exchange.

Physical movements of gold will be reduced to a minimum. Even now they are relatively rare, and take place when the upper or the lower point is exceeded, whereas in the future the number of gold movements will increase at the International Bank, but only from one account to another. There will be a saving in cost, but simultaneously there will be an increase in movements of gold, which will become a daily occurrence. With the disappearance of the gold points and the protection they afford, the whole burden of regulating rates of exchange will fall on the gold reserves of the Central Banks.

Let us assume that the Central Banks begin to sell gold to private clients, not from their own vaults, as is done to-day, but from their deposits held abroad. If, in such transactions, the Central Banks did not make any charge for the cost of transport, which would normally be borne by the buyer exporting gold abroad, the margin between the gold points would disappear. In that case, Lansburgh's criticism would be justified, for every variation in the rate of exchange of the currency would at once provoke a movement of gold. However, the statutes of the International Bank have in view the organisation of gold clearing only for the Central Banks, which does not include arbitrage transactions effected by commercial banks. These clearings would be confined to special transactions, and would not be possible for arbitrage transactions.

The margin between the gold points in the case of special transactions is not as important as in the case of arbitrage transactions. On becoming members of the clearing house, the Central Banks could easily come to an understanding as to the price of gold bought abroad. That price would be based on the mint parity, while the cost of transport would be borne by the purchasing bank if the gold were actually to be transported to its vaults.

If, in the future, the practice of selling gold to banks or other private clients from the deposits held abroad, instead of the present-day method of selling from the bank's own vaults, were to

develop to any great extent, the danger foreseen by Lansburgh could in this case also be easily overcome. The Central Bank would simply charge the buyer the same cost of transport that he would have to meet if he were to transport the gold himself. The gold point system could be maintained together with the gold clearing system. The one does not eliminate the other. To-day, in arbitrage transactions, the commercial bank itself exports gold, and takes the risk of smaller or greater cost according to the circumstances. Under the system which I suggest, when the Central Bank sells gold from deposits held abroad, the client will pay the cost of transport, although he will not himself export the gold.

The Central Bank will arbitrarily establish the gold points, modifying them from time to time according to the changes in the cost of freight, insurance, credit, and various small services connected with transport.

Fears that gold clearing may interfere with the functioning of the gold standard are by no means justified. Clearing is a better and more advanced form of gold transfer. It constitutes a step forward in modern monetary technique. Is it possible, however, for clearing in gold to lead to any marked economy in the employment of gold for monetary purposes?

It should be fully realised that, while clearing may be an economy as far as the cost of transport is concerned, this is so only in the case of special transactions between the Central Banks. The savings effected in the cost of transport for private arbitrage transactions would be comparatively small, because the maintenance of the gold points is of paramount importance to the gold standard. Neither in the case of special nor in that of arbitrage transactions *would clearing effect an economy as regards the quantity of gold*. Clearing would improve the mode of transfer, for a book-keeping entry would take the place of actual transport, but it could neither reduce the demand for gold nor increase the supply.

6.

More interesting possibilities are to be found in Article 24 of the statutes of the International Bank, which permits the Bank "to open accounts through which Central Banks can transfer their assets from one currency to another". There is no question here of the ordinary right to effect purchases and sales of foreign exchange, because this right is given to the Bank by Article 22. If a Central Bank having a dollar deposit abroad desires to purchase pounds sterling for those dollars, it does not need any assistance from the International Bank. This is an ordinary every-day operation which is transacted by every commercial bank. If, therefore, Article 24 deals specially with the above-mentioned type of account, and is limited exclusively to relations between Central Banks, there must be some other aim in view.

The accounts referred to in Article 24 can have a *raison d'être* only when a Central Bank which makes a deposit of, say, one million dollars obtains the right to draw on this account, not only in dollars, but also in any other currency. Instead of selling dollars and buying, say pounds sterling, the Central Bank could draw a cheque in sterling, although its account was in dollars. This would be a new and so far unpractised type of transaction, and for this reason the statutes of the International Bank rightly confine these operations to Central Banks. It is obvious that if Central Banks may pay into an account in one currency and draw from it in any other currency, they are being given facilities of far-reaching importance.

But what bank would run the exchange risks which are inherent in transactions of this kind? If a bank pays in dollars to-day, and draws sterling in a month's time, the difference

between the rates of exchange at which the two transactions were made compared with the rates ruling on the day on which the account was opened may be considerable.

The taking of this risk by the International Bank would necessarily entail considerable losses. Central Banks would draw in whatever currency was most profitable. The International Bank would then, as a rule, suffer losses, and the Central Banks make a profit. Nobody could think seriously of introducing such a system. The meaning of the accounts referred to in Article 24 can only be explained when it is *assumed* that the International Bank will make the opening of these accounts conditional on the following agreement with the Central Banks :

The banks participating in this scheme will give gold on request for their bank-notes and will make no difference between the selling and purchasing prices of gold.

In these circumstances the *difference between the currency and gold would no longer exist*. The nominal value of a dollar would be absolutely equal to the amount of gold which it theoretically represents. The same would be the case with the pound sterling, the franc, and all other gold currencies admitted to this system. The system would be based on the principle of the Mint parity, and not on the principle of the market price of a currency at a given moment.

As may be seen, for the introduction of Article 24 a convention between the International Bank and the Central Banks will be necessary whereby the difference between the purchasing and selling prices of gold will be done away with. Suppose such a convention has been concluded. It will then be possible to take a further step forward. A Central Bank which pays in dollars may obtain the right to draw not only in any of the currencies forming part of the system, but *also in gold*. The bank will have the right to pay in dollars and draw in bullion. With the differences between the purchasing and selling prices of gold done away with, this will be possible in practice, while, at the same time, the exchange risks will disappear.

From a theoretical point of view, exceptionally interesting prospects are opened under the system, conceived on these lines. Having the right to draw in bullion, a Central Bank which possesses an account of this kind with the International Bank may purchase gold with that account. A Central Bank which has, say, one million dollars in such an account may assume that it has one million dollars in gold, because it may at any time demand the quantity of gold which this million dollars represents.

The deposit of one million dollars would be equivalent to the purchase of a corresponding amount of gold *for future delivery*, at a date to be fixed later. This would *amount to buying ahead without fixing the date of delivery*. That date would be the moment at which the Central Bank decides to draw against the credit of this account.

The consequence of such a system would be that that portion of the foreign exchange which is paid to the International Bank on these conditions would have a new special character as compared with the remaining foreign exchange in other accounts. *The foreign exchange deposited within the meaning of Article 24 will become the equivalent of that quantity of gold which it represents*, because the very fact of payment on that account will mean a purchase of gold to be delivered at an unspecified date. Besides the gold held in the vaults and the gold earmarked abroad, there will appear a new form of monetary gold : *gold purchased for delivery at an unspecified date*. There will be considerable difference in character between one million dollars deposited at the Federal Reserve Bank of New York and one million dollars held at the International Bank in the special account provided for in Article 24. The Central Bank can draw on the Federal Reserve Bank only in dollars, while, in the second case, it will have the right to draw in any currency and, what is of greater importance, also in gold.

The difference is apparent, and it has a special significance not only in theory, but also in practice. For the sake of accuracy, the Central Bank should show separately in its balance-sheet that portion of the foreign exchange which is paid to the International Bank to the account referred to in Article 24. This foreign exchange will have a special character. It will be a new form of monetary gold, a form of gold purchased with an undetermined date of delivery, *a form of gold owed by the International Bank to the Central Bank*. Let us call it "*credited gold*". If this form of monetary gold were shown separately in the balance-sheet of the Central Bank, that would certainly make the balance-sheet clearer.

If the gold actually earmarked abroad and the "*credited gold*" were to be added to the gold kept in the vaults, the total holdings of monetary gold at the disposal of the Central Banks would be larger than the actual gold reserves. They would be larger by the amount of the "*credited gold*". This seems paradoxical; and, in fact, it is, but it would be useful. With the certainty of being able to obtain gold by drawing on the International Bank, Central Banks would not be in a hurry to purchase actual gold for their own vaults. *Possessing a reserve of "credited gold", the banks would moderate their demand for actual gold*. This would be a step in the direction of greater economy in the employment of gold for monetary purposes.

The history of the Gold Standard shows that it was the excess of the demand for gold over its supply on the internal market that necessitated the issue of bank-notes constituting a title to gold. *There are always more titles to gold than there is actual gold in the country*. The circulation of these titles had the effect of eliminating on the internal market the disproportion between the actual gold reserves and the demand for gold.

The world should pass through a *similar evolution* as far as the international trade in gold is concerned. The international circulation of titles to gold has already been begun in the form of foreign exchange included in the fundamental reserves of Central Banks. Another step forward would be the establishment of the new form of "*credited gold*" if the International Bank would put Article 24 into practice *on the basis of a convention doing away with the difference between the purchasing and selling prices of gold*. Whether, when and how this will be done by the International Bank, it is impossible to say at the present time. But one thing is certain. Theoretically, Article 24 has considerable possibilities as far as economy in the employment of gold for monetary purposes is concerned.

The project here put forward is not a practical suggestion, but a theoretical illustration of those theoretical possibilities.

CHAPTER VI.

GOLD CLEARING STANDARD.

1.

The pre-war, uniform system of the gold standard has been split into three forms : The gold specie standard, the gold bullion standard and the gold exchange standard. There is, however, no close co-ordination between these three systems. This applies particularly to the gold specie and gold bullion standards on the one hand and the gold exchange standard on the other.

The banks which apply the pure gold standard—in other words, those which do not include foreign exchange in their fundamental or secondary reserves—enjoy a higher prestige than those which apply the gold exchange standard. The former are regarded as a higher, the latter as a lower type of bank. The belief prevails that the first class has greater power and greater resources.

Such a classification is devoid of scientific justification. Nevertheless it exists, and the Central Banks must reckon with it. As a result of it, banks tend to abandon the gold exchange standard as soon as the economic position of the country has improved and as soon as fairly large reserves have been amassed for the support of the currency. Thus the gold exchange standard is regarded as a transitory system, and Central Banks which have already accumulated considerable foreign exchange reserves endeavour to increase their stock of gold in order to raise their prestige thereby. Frequently, they do this without any real need.

The demand for gold originating in the desire of a given bank to raise its prestige would not be difficult to lessen by way of the co-operation of Central Banks and the exertion of moral pressure on the authorities of the bank in question.

A greater danger, however, lies in another result of the splitting of the gold standard into three systems. It is *that the position on the gold market of the banks which apply the gold exchange standard is a privileged one in relation to those banks which apply the pure gold standard.* For the banks which have foreign exchange reserves at their disposal benefit by more favourable conditions as regards gold arbitrage.

Imports of gold by commercial banks can last longer and assume larger proportions when these banks have support in the foreign exchange reserves of their Central Banks. When the rate of exchange of the German mark reaches such a level that it is profitable to buy gold in London and ship it to Berlin, the commercial banks begin their arbitrage transactions. Then their own reserves of bills on London diminish in proportion to the imports of gold from London. Should the Reichsbank have no reserves of sterling bills on London, the commercial banks *would exhaust their own reserves*, and the demand for sterling *would rise in proportion to the imports of gold.* Within a short period of time the increase of the demand for sterling would raise the

rate of exchange to the normal level, at which gold arbitrage in favour of Berlin would cease to be profitable.

A similar process would take place in the reverse case—*i.e.*, when the rate of exchange of the German mark reached a level at which it would be profitable to ship gold from Berlin to London. Should the Reichsbank possess no foreign exchange reserves, gold arbitrage transactions in favour of London might assume considerable proportions. With the existence of such reserves, however, they *cannot take place at all*, because the Reichsbank will sell sterling bills on London without limit. The demand for foreign exchange, therefore, can be easily met, and the rate of exchange of the German mark in relation to the pound sterling be improved *more rapidly* than could have been the case under pre-war conditions.

The above examples are not abstract cases, but are taken from well-known experience. Gold arbitrage in favour of Berlin is to-day easier than in favour of London or New York. The same applies also, to some extent, to arbitrage effected in favour of Paris. It cannot be questioned that, on the gold market, the position of banks which possess foreign exchange reserves is stronger than that of banks which do not. The conditions of competition are not equal. The chances of the banks which apply the pure gold standard are less. In consequence of this defect in co-ordination, the gold standard works in such a way *that the distribution of gold among the various countries is subject to disturbances*. Of this, the continued accumulation of gold by the Bank of France affords a striking example.

The importance of a reasonable distribution of gold is a generally recognised fact. The privileged position on the gold market of banks which have foreign exchange reserves at their disposal constitutes one of the most serious impediments to the redistribution of gold in the world. This is not desirable and should be done away with sooner or later, if the gold standard is to function normally and smoothly.

Equality of chances on the gold market could be secured if the banks which apply the gold exchange standard would continue to sell foreign exchange at a pegged price, equal, for example, to the parity price of the dollar. This would be, however, a dollar standard, instead of the gold standard. It would be more practical *to stop selling foreign exchange on the gold-losing country* when the gold-importing arbitrage transactions begin. This, however, would be only a partial remedy, for whoever wanted pounds could buy them for dollars obtained from his Central Bank. The most thorough solution would be for the Central Banks on the gold exchange standard not to sell foreign exchange at all, but *to confine themselves exclusively to selling gold*. With the present system the Central Banks buy and sell foreign exchange without any limit. The rate of exchange of the inland currency in countries on the gold exchange standard is at present regulated by the purchase as well as by the sale of foreign exchange. The difference between this and the above solution would be *that banks of this class would continue to purchase foreign exchange and include it in their fundamental reserves, but would sell only gold*. Thus the rate of exchange of the inland currency would be regulated by the purchase of foreign exchange and the sale of gold.

The most important feature as regards economy in the use of gold—namely, the purchase and accumulation of foreign exchange, which is tantamount to the postponement of the purchase of gold to a later period—would not be affected by the change. As its liabilities increased, a bank would, from time to time, buy gold at the expense of its foreign exchange reserves, in order to maintain the minimum gold reserve at the level required by the statutes. Such gold transactions would be special transactions between Central Banks effected either direct or through the intermediary of the Bank for International Settlements.

At the same time, though the bank would buy foreign exchange, *it would cease to sell it.* Instead of foreign exchange it would sell only gold. As it sold gold it would reduce its foreign exchange reserves through purchases of new gold by means of special transactions. *Thus it would purchase that which it had previously sold.* Instead of a one-sided acquisition of gold by the banks which apply the gold exchange standard, we should have a reciprocal movement, for banks of this class would not only purchase gold, but would also sell it. Instead of an official hoarding of gold by these banks, we should have an increase in the liquidity of their metallic reserves. *The amount of monetary gold available for international exchange would rise considerably.* This factor alone speaks in favour of the compromise here proposed between the present and the future system, which will permit the Central Banks on the gold exchange standard to continue to buy foreign exchange, but will prohibit them to sell it.

2.

The adoption of such a system presents certain technical difficulties. If the Central Bank continues to purchase foreign exchange and ceases to sell it, the local commercial banks will require gold more often, because they will not be able to get the necessary foreign exchange. If the Central Bank confines itself to buying foreign exchange and ceases to sell it, a hoarding of foreign exchange for itself, instead of the hoarding of gold, will ensue. All surplus foreign exchange on the money market will be absorbed by the Central Bank, not immediately to return, when the demand for foreign exchange will exceed the reserves in the hands of the local commercial banks. Under such conditions, the rate of exchange of the inland currency will reach the gold export point oftener than heretofore. The demand for foreign exchange, not being met on the open market, will change into a demand for gold, and the export of gold will take place more frequently than at present.

This difficulty is, however, more apparent than real. From the point of view of the Central Bank there is no material difference between the outflow of gold and the outflow of foreign exchange. In either case, the fundamental reserve is reduced in the same way. If the bank sells foreign exchange, an outflow of foreign exchange is registered. If, however, the bank abstains from selling the foreign exchange which it has withdrawn from the market, it must sell gold. Apprehensions that the proposed system will weaken the position of the Central Bank are illusory. At present, when the demand for foreign exchange on the open market exceeds the reserves in the hands of commercial banks, the Central Bank is bound to give back part of its reserves. If it does not wish to sell foreign exchange, it will be compelled to sell gold. *Thus the amount of gold which will leave the country will be equal to the outflow of foreign exchange which would otherwise have taken place.* In either case, the Central Bank's reserve will be subject to the same reduction.

The situation is different, however, from the point of view of the local commercial banks. The system here proposed would be less desirable for them than the present system. At present, if an excess of the demand for foreign exchange over the supply on the market is noticeable, the commercial banks purchase the necessary cheques or cable transfers from their Central Bank. From the technical point of view this is a simple and easy operation. If the Central Bank were to refrain from selling foreign exchange, the commercial banks would be obliged to buy gold in order to cover the excess of the demand for foreign exchange over the supply. Gold exports however, are not as convenient as the export of cheques or cable transfers. Therefore, the,

technical difficulties of commercial banks, as well as their difficulties in calculating profits, will increase in proportion to the increase of transactions involving an export of gold.

Should the Central Banks which apply the gold exchange standard change their methods of effecting gold transactions in such a way as to make it more similar to their method of effecting transactions in foreign exchange, it would be possible to do away with the difficulties mentioned above. If we accept the principle that the Central Bank should cease to sell foreign exchange, we ought to be consistent and demand likewise that it should make the form in which they sell gold similar to that in which they sell foreign exchange.

As long as the Central Bank sells gold exclusively on the spot in its vaults, the commercial banks are obliged to resort to actual gold exports. If, on the other hand, the Central Banks were to *begin to sell gold out of their deposits held abroad*, the commercial banks would not be compelled to export gold.

The sale of gold *would then become similar to the sale of foreign exchange*. A commercial bank would be given the possibility of buying from its Central Bank a cheque or a cable transfer on a foreign Central Bank, equivalent to the amount of gold required by the purchaser of that cheque or cable transfer. *Instead of the sale of gold from the vaults of the Central Bank itself, we should have a sale of gold from the vaults of a foreign bank*. Thus the purchaser of such a cheque or cable transfer would not send abroad effective gold, but a slip of paper which would pay off his debts just as well as the actual export of gold.

The danger of the circulation of such cheques drawn on gold deposited abroad can be easily guarded against. Such a cheque (1) should be issued in terms of units of weight of gold and not in money units, (2) should be drawn on the Central Bank, with which a gold deposit is held, (3) should be limited as regards validity to a few days for transactions within Europe, and to, say, a fortnight for transactions between Europe and America. If these three conditions were fulfilled, the danger of the circulation of such cheques would be removed. Properly speaking, these documents would not be cheques in the strict sense of this word, but *gold certificates*. Moreover, if the banks, instead of issuing such gold certificates, were also to sell cable transfers for the payment of gold out of their deposits held abroad, the danger of the creation of a circulation of international currency, which might prove a serious competitor to the inland currency, would be minimised.

It goes without saying that a Central Bank should pay a different price when buying these certificates from that fixed for their sale. The difference between the purchase price and the selling price would be approximately equal to the present difference between the gold points. In selling gold out of its deposits abroad, the Central Bank *should add to the statutory price of gold the costs of the actual transport*, which the purchaser of such a certificate *would be compelled to bear should he export gold himself*. The gold points, so important to the normal functioning of the gold standard, *would remain as effective as to-day*. The costs of freight and insurance and the loss of interest on capital invested in the exports of gold would be arbitrarily estimated by the Central Bank. If anyone could export gold in a cheaper way, he would have the possibility of buying gold on the spot, instead of buying it abroad. This would be, however, an improbable case, as the Central Bank would change the price at which it would sell gold from its deposits abroad in accordance with probable changes in the costs of actual transport.

With such a system the statutory price of gold would remain as stable as at present, and the costs of transport, which would be added to it, would vary in the same way as to-day.

3.

If the Central Banks which are to-day on the gold exchange standard were in the future to have at their disposal gold deposits on all the most important markets, the new system would work smoothly. The holding of gold on deposit with a foreign bank is practised fairly frequently to-day. It is not, however, a general practice. These deposits are concentrated, for the most part, in London and New York. In exceptional cases they are held in Paris or Amsterdam. They possess the character of temporary deposits which have no special function to perform. They are often held merely for the purpose of postponing the transport of gold until the costs of transport fall. The goal to be aimed at is, therefore, (1) to increase the number of banks with which such deposits are held, (2) to hold gold deposits continually on the most important markets, and (3) to restore the freedom of gold exports in those countries in which a legal or moral embargo on gold exists.

The creation of a permanent set of foreign deposits would not require large and costly movements of gold at the moment of putting this plan into actual practice. A given bank could simply set aside a certain quantity of gold out of its stock and place it at the disposal of a foreign Central Bank in the form of a gold deposit. Reciprocally, the foreign bank in question would do the same by setting aside an equal amount of gold out of its stock and by placing it to the credit of the first bank, also in the form of a deposit. The amount of gold in both banks would not thereby be reduced, but would merely be divided into two parts—the part held in the vaults of the bank and the part held under earmark abroad. In addition, each of the banks which belong to the system would hold gold earmarked on behalf of foreign banks.

The transactions would be effected by means of book entries, without actual transport. As the system developed, the amount of gold deposited abroad would vary, but each of these changes would be compensated without difficulty by book entries. Actual movements of gold would be called for only in rare cases, when it became necessary to settle larger and more lasting deficits in the balance of foreign payments.

The above system would make it possible to utilise the metallic reserves better than at present, for they would become more elastic and liquid. Thus the clearing of gold would work smoothly and become a lasting and economical system of effecting international transactions. Gold transactions between Central Banks could, as a rule, be effected by direct clearing, or by indirect clearing through the Bank for International Settlements.

4.

It is not easy to foresee to-day whether and when it will be possible to put such a system into practice. The adoption of this system is, however, not an absolute necessity for the reform of the gold exchange standard.

The banks which apply the gold exchange standard may continue to purchase foreign exchange, accumulating it in the form of deposits held with foreign Central Banks. Although they have opened accounts with foreign Central Banks, they are not compelled to hold gold deposits abroad, because they can purchase gold at any time from the bank with which they have an account. If they wish to hold a deposit of gold with that bank, they can change part of their foreign exchange reserves into bullion. This is a special transaction, which creates a gold reserve deposited with a foreign bank for future needs.

When the exchange situation encourages arbitrage transactions and a gold certificate is

sold, this certificate, or cable transfer, is placed to the debit of the gold deposit account with the bank on which it is drawn. If, however, the bank which sells the gold certificate does not at the moment possess a deposit of gold with a foreign bank, not having prepared such a deposit in due time, this transaction can be effected in the following way :

When selling a gold certificate to its client, the selling bank will simultaneously purchase a corresponding amount of gold from the bank on which the certificate is drawn.

The bank which issues the gold certificate will pay for the gold which it purchases out of the funds deposited with the foreign bank for its account.

I pass now to one of the most important points in the reform of the gold exchange standard. Gold arbitrage can be technically so regulated that at the foreign Central Bank at which the gold certificate is presented the two transactions take place at the same time : *the foreign bank sells a certain amount of gold to the bank which has issued the certificate, and, at the same time, buys the same amount of gold from the bearer of the certificate.* The import and export of gold will thus be combined in one double operation.

The balance-sheet of the bank which honours a gold certificate issued by a foreign bank and presented to it will not show any change in its gold reserves on account of this double operation. The synchronising of the purchase and sale of the same amount of gold permits the metallic reserve to be maintained at the same level. Only the account of the foreign bank which has issued the certificate diminishes, because part of this account is used to purchase the gold to cover the certificate.

The owner of the certificate, as soon as he receives the amount of gold due, sells it, of course, to his Central Bank, which in this way is compensated for its previous sale of gold to the foreign bank that issued the certificate. Thus the metallic reserve of the bank which honours the certificate does not change. Its liabilities, however, diminish by the amount which was paid by the foreign bank that issued the certificate. *The synchronising of both transactions, the purchase and the sale of the same amount of gold, permits the entire operation to be effected by means of book entries.* Thus gold arbitrage is possible without actual movements of gold. It becomes a *clearing operation*. In addition to gold clearing in the case of *special* transactions, this even more important form of gold clearing — namely, that in the case of *arbitrage* transactions—appears.

The gold standard will be more modernised, and its technique will be simplified. Moreover, the banks on the gold exchange standard will no longer have the privileged position in the gold market by which they benefit to-day. Equality of opportunity on the gold market will be restored. A more reasonable redistribution of the world's gold reserves will become possible. The atmosphere on the gold market will become quieter, and the spirit of competition will give way to the spirit of co-operation.

5.

The gold exchange standard has not only good but also bad qualities. A weak point in the system which is of the greatest importance is the present practice of using the foreign exchange included in the fundamental reserves as short-term capital, which is lent to private commercial banks and transferred in large amounts from one market to another according to the ruling interest rates. Such a practice renders the discount policy of the Central Banks more difficult on those markets where credits of this kind are accumulated. A second weak feature of the present system is to be found in the privileged position held on the gold market by the banks which have foreign exchange reserves at their disposal. Gold arbitrage to these banks is easier and more advantageous than to those which apply the pure gold standard.

The first defect can be remedied by the adoption of the principle that foreign exchange included in the fundamental reserve should be held solely on deposit account with other Central Banks. Deposits held by Central Banks at the Bank for International Settlements form the only permissible exception to this rule. The second defect can be remedied by the adoption of the principle that the banks which apply the gold exchange standard should be deprived of the right to sell foreign exchange. The right to purchase foreign exchange should remain as it is, while the right to sell it should be replaced by the obligation to sell gold.

Under such a system, *the conversion of foreign exchange into gold would take place only in case of real need*. These transactions would be of two sorts: first, those special transactions which have as their object the maintenance of the minimum reserve at the statutory level; and, secondly, arbitrage transactions based on a synchronising of the purchase and sale of the same amount of gold. In either case, the demand for gold would be reduced, because it would be better regulated than at present.

The potential demand for gold which is represented by the accumulated foreign exchange would cease to be a painful burden on the gold market as it is to-day. Equality of opportunity would be restored. It would be possible to bring about a more reasonable distribution of gold, because gold arbitrage would not offer, as it does to-day, such one-sided advantages to the banks which have a reserve in foreign exchange. This would not of itself, however, secure a better redistribution of the world's reserves of gold, *because this redistribution depends also on other factors, among which are the excessive growth of public budgets and exaggerated protectionism*. In spite of this, the improvement of the machinery of arbitrage transactions will undoubtedly exercise a favourable influence on the gold market.

May the system so reorganised still be called the gold exchange standard ?

The obligation to redeem notes in foreign exchange constitutes the essential feature of the gold exchange standard. If, under new statutes, Central Banks were not allowed to sell foreign exchange, notes would be redeemed exclusively in gold. Whether this would be a sale of gold from the vaults of the bank or a sale out of deposits held abroad would be immaterial from the point of view of the legal definition of the obligation on the bank to redeem its notes.

It is not the right to buy foreign exchange, but the right to sell it, that determines whether or not the system is the gold exchange standard. The purchase of foreign exchange is the acquisition of a title to foreign gold. Whether the bank realises this title immediately or postpones the realisation to a later period is a question of convenience. It does not affect the *legal* character of the system.

By introducing a new system under which the statutes of the Central Banks will in future prohibit the redemption of notes in foreign exchange, we transform the gold exchange standard into a new form of gold standard. The redemption of notes would be effected exclusively in gold, and almost exclusively in gold held abroad. The sale of gold from the vaults of the bank would be a rare exception. *The usual practice will be to synchronise the purchase and sale of the same amount of gold by means of book entries*.

Special transactions with the object of maintaining the minimum reserve at the level required by the statutes would also be carried out simply by book entries.

The legal obligation to redeem notes would contemplate *redemption exclusively in gold*, but the actual redemption would be almost always a *clearing operation*. A system so organised may, therefore, be called *the gold clearing standard*. It will no longer be possible to call it the gold exchange standard, although the banks which apply it will continue to buy and to accumulate foreign exchange.

6.

A general return to the pre-war form of the gold standard is neither possible nor desirable. Instead, therefore, of forcing a unification of the three present forms of the gold standard, we should confine ourselves to bringing about a *better co-ordination* of them. This can be done by *transforming the gold exchange standard into the gold clearing standard*. All Central Banks would then sell gold only, and the advantage held on the gold market by the banks which have considerable foreign exchange reserves at their disposal would be done away with. By concentrating the foreign exchange reserves exclusively in deposit accounts with Central Banks, it would be possible to remove the impediments to the control of the money market by the respective Central Banks. Instead of unification, we should have a better co-ordination between the three forms of the gold standard.

With this better co-ordination it will be easier to develop and strengthen the co-operation between Central Banks, because the competition on the gold market will become less strong owing to the regulation of the demand for gold. Both special transactions and arbitrage transactions will be effected only *in case of real need*, and in a way more convenient from the technical point of view.

It is not impossible that after a certain period of experience the confidence of the nations in the gold clearing standard will so increase that they will abandon their present traditional systems, the gold specie and gold bullion standards, in favour of the new system. Such a unification is not, however, indispensable for the smooth working of the gold standard. Whether the gold clearing standard will ever prevail over the other systems is immaterial to-day. From the point of view of the present situation it is only important that : (1) *it be possible to work out a better co-ordination between the three forms of the gold standard*, and (2) that the working out of this co-ordination *should make co-operation between Central Banks easier*.

Much is being said and written at present about the need for economy in the use of gold for monetary purposes. The central point of this propaganda is the reduction of statutory reserve requirements. In the atmosphere, however, of sharp competition on the gold market, co-operation between Central Banks cannot yield satisfactory results. It would be difficult, therefore, to expect to-day that the Central Banks should conclude a convention to lower their statutory reserve requirements.

The order ought to be reversed. The competition on the gold market should be reduced first, and it will then be easier to reach a convention reducing statutory reserve requirements.

The Central Banks are not, however, sovereign bodies. Such a convention would have to be an international convention among Governments in order to strengthen the new system and make it independent of political influences in the various countries. If the spirit of international co-operation develops, it is not impossible that some day such an international convention will be concluded. The conference which draws up such a convention will be faced with two principal tasks : (1) to formulate more economical principles regarding the reserve to be held against notes; and (2) to guarantee the immunity, in case of war, of gold and foreign exchange deposits held abroad by Central Banks.

We do not know to-day whether or when the world will be able to carry through such a convention. The transformation of the gold exchange standard into the gold clearing standard may to a certain degree prepare the ground for it; for the new system will lessen the competition on the gold market and thus facilitate co-operation between Central Banks.

A gold clearing standard is not only possible, but may prove a blessing to future generations.

CHAPTER VII.

THE STABILISATION OF THE PURCHASING POWER OF GOLD.

1.

In examining the changes which have taken place in the structure and in the functioning of the gold standard, we were confronted with two problems : (1) Will the world have sufficient reserves of gold to restore and maintain the smooth functioning of the gold standard? and, (2) Will the Central Banks be able to exercise such a control on the general level of prices as to ensure the stabilisation of the purchasing power of gold? The first of these problems has already been discussed. It remains now to discuss the second.

As long as economists believed in the automatic functioning of the gold standard, the problem of the stabilisation of the purchasing power of gold did not play, as it does to-day, the most important part in this discussion. For, according to the doctrine of automatic functioning, changes in the general level of prices were bound to appear before any changes in the movements of gold could take place. Thus, the changes in the general level of prices and the changes in the movements of gold were dependent on each other. As long, therefore, as the changes in the general level of prices were believed to be essential to the normal functioning of the gold standard, the problem of stabilising the general level of prices did not command much attention.

The situation to-day is different.

The direction of gold movements depends more often on changes in interest rates than on changes in the general level of prices. Thus, the doctrine of automatic functioning has become an anachronism, because, in practice, little relationship exists between changes in the general level of prices and changes in the direction of gold movements. The relationship between the two has become looser than it was. Because of this, Central Banks will now more probably be able to regulate the general level of prices independently of the movements of gold.

The Central Banks have a free choice. They can increase the volume of their credits in the face of an outflow of gold, or reduce it in the face of an inflow of gold. This is the policy adopted sometimes even by the Bank of England. The Central Banks have now ceased to be a passive registrar of the movement of gold. The gold standard no longer functions automatically; it has become a managed standard. Under these conditions, it is natural to ask whether the Central Banks, which to-day are able to influence the general level of prices by the manipulation of credit, can improve this manipulation to such a degree as to ensure to mankind stability in the general price-level.

To this question, Cassel, in his latest work,¹ replies in the affirmative. According to his

¹ "Wandlungen im Wesen der Goldwahrung", 1930.

opinion, the general level of prices can be kept wholly under the control of the Central Banks, since their discount policy, by reducing or expanding the note circulation, can ensure the stabilisation of the purchasing power of gold. He says, for instance, that the fall of prices is "exclusively the result of an insufficient supply of the means of payment". To look for "other causes" is "absolutely inadmissible". To those who believe that Central Banks are not able by means of their discount policy to maintain the stability of the general level of prices, Cassel replies as follows. Let us suppose, he says, that the Central Bank puts its discount rate down to nil and discounts bills without any limit "for nothing". No one can doubt that, under these circumstances, the prices of commodities would rapidly increase. Similarly, no one can doubt that prices would fall if the Central Bank were to raise its discount rate to 10 per cent or 20 per cent. "The most elementary logic accordingly compels the conclusion that, at any given moment, there is a discount rate to be found between these two extremes, which will leave the general price-level unaltered".

Now, suppose that, in a given year, the world's agricultural production diminishes by 20 per cent, and that this is brought about by causes independent of the Central Bank's discount policy. The supply of foodstuffs in the world will suddenly be reduced by 20 per cent, while the demand will rise on account of the increase of the population. What is the policy to be pursued then by the Central Banks?

According to the doctrine of stabilisation, credit ought to become so costly as to prevent a rise of the general price-level as a result of the rise in the cost of living. In the reverse case—*i.e.*, when in a given year agricultural production increases by 20 per cent—credit ought to be made so cheap as to prevent a fall of the general price-level resulting from the lowering of the cost of living.

In either case, the Central Bank ought to manipulate the cost of its discount credit in such a way as to neutralise changes—even extraordinary changes—in the volume of the supply of goods on the home market.

A similar policy should be adopted if, in a given year, a number of countries, which play an important rôle in international trade, raise or lower their tariff barriers to any considerable extent.

If the Central Bank does not neutralise the influence of such a raising or lowering of the tariff barrier, the general level of prices will change. If, however, the Central Bank fulfils its functions as postulated by the doctrine of stabilisation, and effectively neutralises the consequences of the new Customs tariff, the new tariff will be deprived of economic importance, since it will not bring about the desired change in the relationship between the national and foreign price-levels. But the question then arises whether the Governments concerned will allow the Central Banks in such a case to act in a way which conflicts with their own commercial policy.

The above examples prove, in the first place, that prices are shaped, not only by the influence of conditions prevailing within a country, but also by the international situation. The greater the economic progress of the world, the greater the importance of world prices in shaping the internal price-level. The prices of raw metals, crude oil, coal, cotton, coffee, tea, special machines and so on depend on the geographical situation and the progress of technique in the countries in which they are produced, as well as on the level of the Customs tariff, the costs of transport, etc. These factors, taken as a whole, determine the cost of imports, and thereby, to a certain degree, the cost of production in the importing country. Under such conditions, it is clear that the stabilisation of the general level of prices within a country cannot be achieved independently of the situation existing in other countries. The problem of the stabilisation of the general level of prices is not, therefore, and cannot be, a local problem.

Consequently, there arises the difficulty of reconciling local interests. What level of prices ought to be chosen as the normal one? Ought we to regard as normal the price-level existing at the beginning of the attempt to regulate it, or some other level, to be first artificially created and later on stabilised? Suppose, however, that an agreement has been reached and that some general level of prices has been indicated as the desired level for stabilisation. A new difficulty will then arise. Price-indices are calculated and published *post factum*. A Central Bank will not be able to wait passively for the publication of the index showing changes which have already occurred, because, in that case, no material difference would exist between the present and the future system. As it is, the Central Banks endeavour to correct the larger divergences in the general level of prices, when such divergences have already become manifest.

The policy of stabilisation will differ from the policy followed at present, in that the Central Bank will be bound to hinder fluctuations before they have manifested themselves on the market. The chief purpose will be to *prevent*, in general, any material change in the price-index adopted as the measure of the purchasing power of gold.

What, then, will be the rôle of the Central Bank confronted with such a task? If the rate of exchange of the inland currency encourages the inflow of gold, the bank will be obliged to neutralise the imports of gold lest a considerable increase of circulation should raise the general level of prices. With an outflow of gold the bank will be likewise obliged to manipulate with its discount rate, so as to prevent a fall of prices. This is not a theoretical assumption. The international movements of gold will not disappear owing to the stabilisation of the general level of prices, because they will still be, as they are now, a result of the differences in interest rates.

The chief feature of the doctrine of stabilisation is that a Central Bank, *by changing the price of money, will protect the general level of commodity prices from changes*. The price of money will change quite as often as to-day. From time to time, moreover, when the Central Banks neutralise extraordinary changes in the supply and demand of goods, the changes in interest rates *will display a range of fluctuations even greater than to-day*. For this reason the international movements of gold not only will not disappear, but are bound to become more frequent and assume larger proportions. In what manner can this be reconciled with the stabilisation of the general level of prices?

Suppose the Central Bank does not prevent gold from exercising its full influence on the market. Then the stabilisation of the general level of prices may be upset. Under these circumstances, the Central Bank will not be able to wait for the publication of the index adopted as the measure of the purchasing power of gold, because this index, when it is published, will reveal a change which has already taken place, whereas the chief task of the Central Bank is to prevent such changes. The Central Bank cannot be guided by such an index, since it will be obliged to act *before the index is compiled and published*. If the price of a certain category of commodities falls, the prices of other commodities are bound to rise; or else the general level of prices will display material changes. Therefore, if the Central Banks wish to maintain the stability of the purchasing power of gold, they will not be able to permit gold to exercise its full influence on prices.

The necessity of neutralising the effects on the price-level of considerable gold movements from one country to another will create a situation in which the Central Banks will be obliged, as a rule, to increase their credit when gold flows out and to reduce it when gold flows in. If we wish to stabilise the purchasing power of gold, we must abandon the idea that gold movements should be left free to exercise their influence on prices.

The pre-war gold standard system consisted in abstention from any interference with the influence of gold movements on price-levels. It is necessary to realise clearly that, in advocating the stabilisation of the general level of prices by means of the discount policy of Central Banks, we are declaring ourselves opposed to permitting gold movements to exercise their influence freely on prices—which is tantamount to saying we are against the gold standard in the pre-war sense of the system.

Cassel is consistent when he says that the gold standard is already to-day a managed standard, whose purchasing power is artificially maintained on an equality with the purchasing power of gold. Undoubtedly, the stabilisation of the purchasing power of gold cannot be reconciled with the spirit or practice of the pre-war gold standard.

2.

During the period from 1923 to 1929, the wholesale-price index in the United States of America showed an astonishing stability. We know, however, that this stability could not, in the long run, be maintained. It broke down in October 1929 with the collapse of the speculation on the Stock Exchange. The example of America, therefore, is very instructive as regards the problem of stabilising the purchasing power of gold. The advocates of this stabilisation used regularly to refer to the stability of the wholesale-price index in America as proving that such a stabilisation was possible.

The period from 1923 to 1929 in America was a period marked by great economic prosperity, and production showed an unusually rapid expansion. The advocates of price stabilisation regarded this development of production as a blessed fruit of the credit policy of the Federal Reserve Banks, the aim and effect of which (it was argued) was to prevent considerable fluctuations in the general level of prices. It should be added that another striking factor of this period of stabilisation of the general price-level in America was a simultaneous rapid increase of national income.

Production registered every year new records; but what was the distribution of this record production? Who was enriched by this annual increase of production?

Taking the year 1919 as 100, the index of industrial production in America was 129 in the year 1926, 126 in 1927, 133 in 1928 and 142 in 1929. In the branches of industry which worked in a large measure for export, this index reached a still higher level. The index for the electric industry¹, for example, rose in 1929 to 164, and the index for the motor-car industry reached a level of about 200. Simultaneously, the index of wholesale prices, if we adopt the same basis—*i.e.*, the year 1919 = 100, amounted for the years 1923 to 1928 to 72.5, 70.7, 74.6, 72.1, 68.8 and 70.4 respectively. During the same years and on the same basis the index of the cost of living was 94, 95, 98, 98, 95 and 94 respectively. Both indices show a relative stability, if we omit certain minor divergences in the years 1925 and 1926. Whether we adopt 1926 as the basic year or 1919, we have the same picture in either case—namely, production increasing rapidly and reaching record figures, with wholesale prices, and even the cost of living, remaining at a relatively stable level.

In the light of these figures, let us now examine the wages paid to workmen. If we adopt

¹ Owen D. Young. Address delivered in 1930 at the fifty-third Conference of the National Electric Light Association.

the same basis (1919 = 100), the index of wages paid to workmen during the period 1923 to 1929 amounted to 118, 121, 123, 126, 127, 128, and 127 respectively. In 1929, the index of production reached the figure 142, while the index of wages reached only 127. *Thus, we have a difference of fifteen points to the disadvantage of the working-classes.* This difference will be still more striking if we compare increase in the productivity per person. Index for the output per person in the same period 1919-1929 rose to 153.1, while that for hourly wages only to 127. We find the same picture if we examine the figures compiled by Mitchell for the period 1921 to 1926 in regard to the percentage share of the working-classes in the general income of the country.

In 1921, the total monetary income in America amounted to 55.4 billion dollars. In 1926, it increased to 82.1 billion dollars. The increase thus amounted to 26.7 billions. In these same two years the total payments to employees amounted to 34.7 and to 44.5 billion dollars respectively. The increase thus amounted to barely 9.8 billions. The percentage share of the working-classes in the national monetary income *decreased in this way from 63 per cent to 54 per cent.* Therefore, both in the year 1926 and in the following years, we see that the share of the working-classes in the national income did not improve to the extent to which industrial production increased from year to year.

In spite of a considerable rise of wages, this rise did not keep pace with the development of production. This explains, to a certain degree, the fact observed by Willford J. King¹ that, during the period 1918 to 1926, the number of persons possessing a yearly income of from 5,000 to 25,000 dollars, as well as the number of those possessing an income exceeding 25,000 dollars, increased at a more rapid rate than the number of persons possessing an income of 5,000 dollars or under. The figures referring to the subsequent years, 1926 to 1929, would show this still more vividly.

These figures prove that, with relatively stable prices, the distribution of the increase of production *was defective.* The owners of a stable money income did not participate in the distribution of the increase of production, because with stable prices of commodities the real purchasing power of a stable income does not change. This applies, in the first place, to holders of fixed-interest-bearing securities. The working-class, no doubt, was in a better situation than before. It participated in this distribution to a certain extent; but, nevertheless, the rate of the increase of wages lagged behind the rate of the increase of production. The lion's share of the yearly increase of production continued to enrich the owners of industrial undertakings. Hence the increase in the profits of industry and the dividends derived from it.

In the first half of 1929, American industry reported net profits 83 per cent higher than those of the first half of 1928 and 47 per cent higher than those of the first half of 1927. In the light of these figures it is easy to explain the record increase of the index of share quotations. Taking 1919 as 100, the index of share quotations during the years 1923 to 1928 is 92, 96, 122, 138, 162 and 213 respectively. During 1929, this index increased still further, and declined sharply only in the autumn of that year. The great increase in the profits derived from industry, owing to the irrational distribution of the increase of production, was bound to make itself felt somewhere. But, instead of having its effect on the commodity markets, it fell with all its burden on the stock market.

It could not have been otherwise. The accelerated accumulation of profits was responsible

¹ "The National Income and its Purchasing Power."

for the fact that the credit requirements of industry not only did not increase, but even, to a certain degree, diminished. The index of credit requirements¹—taking 1919 as 100—decreased by the year 1928 to 87.6. For this reason the dependence of the money market on the Federal Reserve Banks decreased on the one hand, and on the other hand there appeared an increasing tendency to larger and larger investments. Industry was not only able to accumulate profits but could easily attract new capital from the market by means of new issues of capital, as the dividends paid to shareholders were unusually attractive. In this way production was powerfully stimulated and continued to increase until such time as the disproportion between the rate of the increase of production and the rate of the increase of consumption became apparent as it was bound to do when once the defective distribution of the increase in production began to exercise a checking influence on the increase in the income of the ultimate consumer.

The diminution of credit requirements on the part of industry facilitated the increase of the supply of liquid funds available for other purposes. The excessive amount of liquid funds on the money market not being available for a further increase of commercial credits, was bound to be used in other forms of credit.

Loans against securities and investments were free to increase more and more rapidly, and the stock exchange speculators were able to draw their funds from abundant sources, the plethora of home capital being still further enriched by a considerable inflow of foreign funds.

The market felt at the same time that the owners of fixed-interest-bearing securities were not participating in the profits derived from the yearly increase of production, since the general level of prices did not undergo any change. The speculators therefore devoted their attention chiefly to the stock market, to the neglect of bonds.

Such were the consequences, the inevitable consequences, of rapidly increasing production with a relatively stable level of prices and a faulty distribution of the national income.

The moment of the decline of American economic prosperity was for a certain time postponed by the widespread prevalence of the system of instalment selling. Credit, however, does not increase income; on the contrary, it hampers the accumulation of income. Neither the rentier-class nor the working-class can increase their income by making use of the system of instalment buying, for the process of piling up debt has its limits, which neither the debtor nor the creditor can overstep without running the risk of bankruptcy. Consequently, the American system of instalment selling, which made such rapid progress under the influence of an increasingly liquid money market, could not permanently bridge the evergrowing gap between the rate of the increase of production and the rate of the increase of consumption. *The growth of consumption is determined by the growth of individual incomes. The rate at which individual incomes increased in the United States was, however, less than the rate at which production increased.* With stable commodity prices the rentier-class did not participate in the distribution of the increased production, and the working-class participated in it only to a limited extent.

We are led, therefore, to the conclusion that the stabilisation of the general level of commodity prices in America was effected only at the expense of a defective distribution of the increase of the national income. The rapid accumulation of profits in the hands of industrialists led to an over-liquid money market, since the stabilisation of commodity prices was accompanied by the stabilisation of the requirements for commercial credits. As a result, the commodity markets did not display any signs of inflation; but the superabundance of free funds could not

¹ *The Chase Economic Bulletin*, B. M. Anderson, Jun., Volume IX, May 1929.

be done away with. It found an outlet on the market of *other economic values outside the market of goods*, and, most conspicuously of all, on the stock market.

Under such conditions the counter-measures of the Federal Reserve Banks were bound to be to a considerable extent neutralised partly by the diminished dependence of the market on commercial credits furnished by the Federal Reserve Banks and partly by the inflow of foreign funds attracted by the possibility of earning profits on the Stock Exchange. The world learnt that, at a time when no inflation was noticeable on the commodity market, it was possible for inflation to develop in the case of other economic values. *The American Stock Exchange speculation was the direct consequence of such an inflation.* As a result, the Federal Reserve Banks were bound to resort to the policy of dear money, although the index of the prices of commodities did not show any tendency to increase.

The advocates of the stabilisation of the purchasing power of gold limit the field of this stabilisation to the commodity markets. *America's experience does not furnish an argument in favour of this view.* If the discount policy of a Central Bank is to be its sole weapon, the efficiency of this weapon *depends on whether, with a stable general level of prices, the distribution of the increase of production is carried out in such a way as to prevent an excessive accumulation of profits at the expense of the working-classes.* In America, the situation was quite different. As a result, the abnormal amount of liquid funds brought about excessive independence of the market from the Federal Reserve Banks. The longer the stabilisation of the general price-level lasted, the more difficult became the problem of discount policy.

Under certain circumstances, the discount policy of a Central Bank may lead to the stabilisation of the general price-level. When such a stabilisation, however, has been maintained for a sufficiently long period, the ability of the Central Bank to maintain it still longer by means of its discount policy may be lessened. Such is the situation when the stabilisation of the general level of prices *is accompanied by defective distribution of the increase of production*; for then the Central Bank is obliged, sooner or later, to resort to a policy of dear money, *in spite of the stability of the general price-level of commodities.*

In this way the very foundation of the stabilisation of the general price-level is upset.

3.

Even if the figures referring to America during the period from 1923 to 1929 were regarded as not sufficiently accurate and convincing, it would be clear that, with a defective distribution of surplus production, the price-level on the commodity markets could not, in the long run, be kept stable. The stabilisation of the general level of prices does not check economic progress. If, however, the yearly increase of production chiefly enriches the industrialists, their income increases more rapidly than that of other classes of the community.

Under such conditions, the stabilisation of the general level of prices is bound to be accompanied, sooner or later, by the *destabilisation of the prices of other values.* Viewed in this light, speculation on the markets of these values appears unavoidable. In such an atmosphere of speculation, the distribution of the national income is complicated even more, and the Central Bank is compelled to take part in the struggle. Its discount policy must then be changed, in spite of the fact that the general level of commodity prices is stable. Under the pressure of the changed discount policy, however, not only the speculation on the stock market, but also the stabilisation of the general level of prices on the commodity markets is bound to break down.

This argument must not be taken to lead to the conclusion that the stabilisation of the

general level of prices is not, in principle, possible. If the defective distribution of the increase of production is the factor which prevents the stabilisation of the level of commodity prices, an improvement in distribution would make such stabilisation possible.

Sir Henry Strakosch, therefore, was right when he stressed this side of the question¹. He has shown that, with the level of commodity prices stable and production increasing at 3 per cent per year, practically the whole of the increase in the national income goes to enrich the industrialists and the working-class. This is only fair, since these classes of the community, and not the others, created the increased production by their own labour.

There remains, however, the question of the proportion in which the yearly increase of production should be divided between the employer-class on the one side and the working-class on the other. We have seen that, in America, during the period 1923 to 1929, this relation shifted to the advantage of the employers and to the disadvantage of the working-class. This was primarily responsible for upsetting the stabilisation of the general price-level then existing in America. Sir Henry Strakosch does not directly discuss this question. He touches upon it indirectly, however, for, in his table illustrating the distribution of national income, he uses the expression "the constant proportions of the original account". This means that the working-class should receive every year its "due" share of the increase of production.

Theoretically, it appears, then, that the stabilisation of the general level of commodity prices can be maintained, in spite of the annual economic progress, since the income of employers and workers will increase *at the same rate*. The working-class will participate in the yearly increase of production according to a constant proportion.

In this way the mistake of an unreasonable distribution of the increase of production is avoided. This object is attained, however, at the cost of *systematically raising the workers' wages*. It will be seen from the table compiled by Sir Henry Strakosch that, in the course of thirty years, provided the price-level is stable and the rate of economic progress is 3 per cent per annum, the standard of living of the working-class will be doubled. With a stable level of prices, this doubling will mean an increase of 100 per cent in wages, because "that increased production does not reach the wage-earner unless money wages are increased accordingly". The raising of wages, however, will be easier in that it will be provided for out of funds derived from the increase of production.

Sir Henry Strakosch is of the opinion that, under these conditions, there would be not so many occasions for conflict. "Besides, in conditions of stability, it should not be beyond the wit of man to devise a system by which the wage-earner's due proportion of the increased production is currently—almost automatically—transferred to him." *Thus, the yearly raising of wages in proportion to increased production constitutes a conditio sine qua non for maintaining the stability of the general level of prices.* The best solution of this problem would be to increase wages automatically.

Wages constitute one of the most important costs of production. By increasing wages automatically every year, the costs of production would also be increased automatically. Theoretically, the possibility of industry not being able to bear this increase cannot be totally excluded. If every year the productivity of labour—in other words, the number of commodities produced per worker—increases, it will be possible to continue to raise wages for a certain period; for, in spite of a raising of wages, production will not cease to be profitable. But can such a process go on *ad infinitum*? Will not such a continuous raising of costs of production sooner or later

¹ "Gold and the Price-Level", Memorandum for the League of Nations.

compel manufacturers to raise the price of their goods? I do not propose to discuss this question in detail. There is, however, one branch of production which, from this point of view, is of particular importance in regard to the problem of stabilising the purchasing power of gold. I refer to the *production of gold*. What will be the consequences of the stabilisation of the purchasing power of gold on the production of gold?

The production of gold is the basis of the gold standard. What will become of this basis when the general level of prices is kept stable and when the condition which is indispensable for this stabilisation—namely, the automatic raising of wages—is realised? Can the wages of workers who produce gold be raised every year as national income increases?

The prospects for the future production of gold are not satisfactory, so that we must reckon rather on a decline than on an increase. If, however, the output of the mines declines continuously, it would not be reasonable to keep on raising the wages of the workers every year. Under such a practice, gold production would rapidly become less profitable and would lose much of its attraction as a field for further investments of capital. Thus, nothing would accelerate the falling-off in gold production so much as the stabilisation of the purchasing power of gold, if carried through in conformity with this theory.

Economic progress is a necessity. A yearly increase of national income is the chief aim of economic policy. If, however, national income increases and the general level of prices is artificially kept stable, a yearly increase of wages will be the indispensable condition for the continuance of this state of stability. For, otherwise, the unreasonable distribution of the increase of production will, in the course of a few years, undermine the stability of commodity prices by an excessive destabilisation of other economic values. If we do away with the unreasonable distribution of the increase of production by automatically raising wages, we shall create a situation which will render impossible the production of gold. Thus, by avoiding one danger we shall fall into another.

If the stability of the purchasing power of gold is maintained, a detrimental effect will be exercised on the production of gold. Its decline will gradually become more rapid, because, with the fall in the output of the mines, *the margin of profits will shrink more rapidly than in those branches of production in which the productivity of labour continues to increase*. As a result, either the stability of the purchasing power of gold will be shaken, or the maintenance of the gold standard will become impossible and, in the long run, the system will have to be abandoned.

Those who believe in stabilising the purchasing power of gold promise mankind beneficial results from this action. In their calculations they use, as a measure of the purchasing power of gold, the wholesale-price index.

To use this index is a method which is too simple, as Keynes has definitely proved in his latest work¹, which is unusually rich in statistics. Keynes is an adherent of the doctrine of stabilisation. His criticism of the wholesale-price index as the sole measure of the purchasing power of gold, therefore, puts an end to the discussion on this subject. He does not, however, deal with the question whether the stabilisation of the general level of prices is desirable or possible.

The adversaries of this stabilisation point to the technical difficulties which attach to it. They have some doubt whether the Central Banks will be able to maintain such a stabilisation by means of their discount policy. The same kind of argument also underlies the opinions expressed in the majority of the memoranda sent to the League of Nations on this question.

¹ "A Treatise on Money", 1930.

While I share these views as regards their general aspect, I shall confine myself here to discussing one side of the question only, namely : Can the stabilisation of the purchasing power of gold be reconciled with the gold standard system?

Summing up my thoughts on this subject, I come to the following general observations :

(1) If the Central Banks are to endeavour to keep the general level of prices stable, they will be compelled to counter the effects which any inflow or outflow of gold would have on prices before the effects are produced by means of the influence which they can exercise on the volume of the monetary circulation.

(2) If the Central Banks neutralise gold movements, this will mean that these movements will not be able to exercise their full influence on the commodity markets.

(3) If we suppose that the rate of economic progress is constant, then the efficiency of the policy of a Central Bank will depend on the manner in which the yearly increase of production is distributed.

(4) If the distribution of the yearly increase of production is bad, in the sense that the lion's share of profits enriches industrialists at the expense of the working-classes, then profits will accumulate unduly.

(5) The undue accumulation of profits by one class of the community will sooner or later render unstable the prices of other values outside the commodity markets.

(6) If this instability lasts for a sufficiently long period, a situation is created which is conducive to speculation, particularly on the Stock Exchange.

(7) The increasing boom on the Stock Exchange leads still further away from the best distribution of the increasing national income and compels the Central Bank to change its discount policy, in spite of the fact that the general level of prices shows no material change.

(8) The change in the discount policy, although caused by abnormal circumstances in other branches of the national economy, is bound, sooner or later, to affect the stability of commodity prices adversely.

(9) Attempts to avoid this danger by a fairer distribution of the increase of production must unavoidably lead to the systematic raising of wages.

(10) With stable prices, the policy of systematically raising wages is bound, sooner or later, to lead to such a rise in costs of production as will make production unprofitable.

(11) Those branches of production which are capable of increasing their output, as calculated by the number of commodities produced per workman, will be better able than the others to support such a system.

(12) But in those branches in which it is impossible to increase output freely, the system is bound soon to end in failure.

(13) The moment at which any further rise in wages becomes impossible will mark the beginning of a crisis, because the equilibrium between production and consumption will be upset.

(14) The situation will not be materially changed, if, instead of wages being raised, the State begins systematically to raise the taxes on production in order to prevent an excessive accumulation of profits in the hands of industrialists.

(15) Even though there may be some doubt as to the apprehensions expressed under (13) and (14), no doubt whatever can exist as regards the production of gold, which, for material reasons, cannot be increased indefinitely.

(16) With a stable price-level and a constant rate of economic progress, the production of gold will come, at an earlier date than the other branches of production, to a point when it will not be able to support this systematic raising of wages.

From the above observations we can draw a conclusion which is of decisive importance as regards the problem of stabilising the purchasing power of gold—namely, that, even with a reasonable and just distribution of the increase of the national income, the stabilisation of the purchasing power of gold cannot be reconciled with the gold standard system, *because it would lead to a falling-off in the production of gold*. He who advocates stabilising the purchasing power of gold advocates the creation of conditions in which the production of gold is bound to decline, not only for material reasons, but also *because this production will cease to be profitable*. The prospect of the systematic, and especially of the automatic, raising of wages is disastrous for the production of gold, and, therefore, for the maintenance of the gold standard.

The purchasing power of gold cannot be stabilised as long as there exists a gold standard *based on the production of gold*. In view of this fact, the advocates of stabilisation ought to be consistent and demand that the gold standard be changed into a paper currency *separated from gold*. Then it will be possible to discuss the advantages which the stabilisation of the general level of prices will bring to mankind. This will not, however, take the form of a stabilisation of the purchasing power of gold, but of the purchasing power of some future paper currency based on a special index of prices and managed by Central Banks which will no longer be hampered by the condition of their gold reserves. Gold reserves will, in general, be no longer necessary. In other words, the world will be freed from apprehension as to the future production of gold.

Is it, however, possible to carry through such a reform? That is another question, and one which is outside the scope of this chapter.

CHAPTER VIII.

THE FUTURE OF THE GOLD STANDARD.

1.

The history of money covers a period which is some thousands of years longer than that covered by the history of the gold standard. This fact alone seems to prove that the gold standard is not a necessity to economic civilisation, and that it is possible to do without it. As there have in the past been periods in which the gold standard was not known, it is not impossible that there may in the future be others. This does not mean, however, that, in case of a decline in the production of gold, mankind will be obliged to return to silver or to a bi-metallic system.

When we speak of the possibility of abandoning the gold standard, we do not think to-day of replacing gold by some other precious metal. Pessimists as to the future of the gold standard foresee the introduction of a pure paper standard not linked with gold, and managed by Central Banks in such a way as to maintain the rates of exchange stable despite the absence of regulations regarding a minimum reserve.

It is the ideal of the science of money to stabilise a paper currency without the help of gold. The believers in this ideal seem to be of the opinion that the creation of satisfactory methods of credit manipulation is not beyond the power of the human brain.

While refraining, for the time being, from deciding whether such an ideal is in practice attainable, we must state that, in any case, this aim cannot be achieved by a sudden transition from the present gold standard to a paper standard, devoid of any cover and not compulsorily convertible into gold. Even were such an ideal attainable, it could only be the fruit of a relatively long evolution.

As a first stage on the way to this goal, we can imagine a transitory system under which the monetary units of the various countries would continue to be determined as a fraction of one kilogramme, or of one ounce, of gold, but with all reserve requirements abolished. The role of gold in this monetary system would thus be reduced to that of a means of facilitating international settlements, because each monetary unit would continue to be determined by a strictly fixed fraction of one kilogramme, or of one ounce, of gold.

Under such a system the existing gold reserves of Central Banks would be deprived of their present monetary significance, and would be simply stocks of goods which could be exported as easily as any other goods. The Central Banks would no longer be under the obligation to accumulate gold in proportion to their liabilities. The requirement to do this would disappear, and the banks would be left with the free option of selling or buying gold, as is the case to-day in some countries as regards silver or platinum.

As long, however, as the various monetary units are determined as a fraction of one kilogramme, or of one ounce, of gold, the Central Banks will be obliged, in a certain degree, to act as storehouses of gold for external use. The abolition of the regulations strictly determining the amount of the minimum reserve will not remove this necessity, for, since one monetary unit is fixed as a fraction of one kilogramme, or of one ounce, of gold, the purchasing power of a monetary unit is bound to be more or less equal to the purchasing power of the quantity of gold it represents. If, therefore, the rate of exchange of a currency shows a decline abroad, it will be essential to support it by means of gold exports.

On the other hand, it would not be essential, at least in theory, to adapt the credit policy to the volume of the gold reserves.

International transactions consist in an exchange of goods and services. The balance of this exchange depends on the relation between the volume of consumption and that of production in the individual countries. If this balance is adverse, it is gold which, in the last instance, restores the lost equilibrium. Gold movements thus result from disturbances in the equilibrium between consumption and production. The balance of the exchange of capital is another factor. If gold is exported from a given country, this proves (1) that the balance of the exchange of goods and services has become unfavourable, with consumption exceeding production, and (2) that the deficit is not being made good by movements of capital. To-day, under such conditions, we usually say that the monetary circulation should be reduced by means of a policy of credit deflation, which, by reducing consumption, will restore the lost equilibrium.

Such a policy becomes a necessity, not because gold is being exported, but because the equilibrium between production and consumption has been upset, in consequence of which the balance of international transactions has become adverse. The outflow of gold is only a symptom, an index, which *post factum* reveals the real state of affairs.

With this in mind we may visualise the possibility that statistics may be so improved as to enable us to learn *ante factum* what is the actual relation between the volume of production and that of consumption, and what are the chances of covering an anticipated deficit by the movement of short-term capital or long-term securities. If such ideal indices were available, the Central Banks could change their credit policy before an outflow or an inflow of gold had taken place, instead of afterwards as is the case to-day.

Gold movements as an index of position would be replaced by more accurate indices, which would inform us *ante factum* what the general trend of economic development is and what the balance of foreign payments is likely to be. It is clear that, under such conditions, minimum reserve requirements would be of little value, for gold would be taken in and disposed of, at the discretion of the management of the Central Bank, only as a last resort in emergency.

I need not say that we are far from such an ideal. It would even be difficult to say to-day whether or not in the future such a group of ideal economic indices could be compiled. Even granted that statistical methods should attain such a degree of perfection, caution will oblige us to continue for a certain period to maintain the system of minimum reserve requirements. At the same time, the Central Banks would be able to carry on their credit policy independently of this reserve ratio. Without abandoning the old system prematurely, the Central Banks would learn to apply the new system while being well protected.

Only when a fairly long trial had sufficiently shown that both systems were equally useful and equally solid would the old system, based on minimum reserve requirements, be replaced by the new system, free from any regulations with regard to the reserve ratio and directed exclusively by the aid of economic indices based on improved statistics.

A new type of gold standard would thus be created—the gold-index standard.

In reality, however, the indices which we have at present are as far removed from the indices which this system would require as the sailing boats of a century ago are from modern steamers

2.

The gold-index standard, mentioned briefly in the first part of this chapter as a theoretical possibility, would be no less a gold standard, despite the complete abolition of the present regulations with regard to the minimum gold reserve; for a monetary unit would continue to be determined as a fraction of one kilogramme, or of one ounce, of gold. The Central Banks would likewise continue to accumulate gold to be used in the event of extraordinary disturbances in the international balance of payments. The banks which apply the gold exchange standard at present would accumulate, in addition to gold, foreign exchange convertible into gold; but neither the gold nor the foreign exchange would constitute a statutory reserve. The credit policy of Central Banks would, in short, not be hampered by any reserve requirements.

The expansion or contraction of the monetary circulation would be determined by the accurate indices of economic development. Since all data concerning the production of goods and services, the volume of consumption, the accumulation of home capital and the upward or downward trend of the general level of prices would—with ideal statistics—be available beforehand, the Central Banks would be able to adhere to their discount policy without regard to the condition of their gold and foreign exchange reserves and irrespective of the direction in which gold and foreign exchange might be moving.

Should the above system work satisfactorily over a fairly long period of time, it is not impossible to imagine a moment at which mankind would be able to abandon gold as the basis of monetary systems. Monetary units would then cease to be fractions of one kilogramme, or of one ounce, of gold, and the storing of gold would become superfluous. It would never be possible, however, to cease to store foreign exchange.

Foreign exchange would then assume another character. It would not be convertible into gold, and it would be expressed in terms of nominal monetary units. In adopting the new system, all countries would be obliged to maintain the existing rates of exchange between their respective currencies. For example, one pound sterling would be equal to 4.86 United States dollars, to 123 French francs, and so on. The rate ruling at the moment of transition from the gold standard to a paper standard would have to be maintained.

Instead, however, of monetary units expressed in terms of gold, we should have monetary units which would be *abstract units of account* linked together in an international system of exchange.

This would be a paper-exchange standard.

Under the gold standard, the basis of monetary circulation is increased by the inflow of new gold from the mines as well as by the accumulation of foreign exchange and the discounting of domestic bills of exchange. Under the paper-exchange standard, the basis of monetary circulation could be increased only by the accumulation of foreign exchange or by discounting domestic bills, which would be done to a greater or lesser extent according to the indices of economic development. The stability of the rate of exchange of a currency in international relations would be regulated by means of the purchase and sale of foreign exchange, but the condition of foreign exchange reserves would not be a factor in determining the volume of credits granted by a Central Bank. This volume would be determined on the basis of highly perfected economic indices.

The above picture is doubtless interesting from the theoretical point of view. The possibilities, however, of the smooth working of such a system in actual practice are not so promising. Within the boundaries of one country it might well be made to function, but to secure its smooth working in international relations would be much more difficult.

Deficits in international transactions are covered to-day by means of gold. Even if we do not export actual gold, but instead make payments in foreign exchange, we do in reality make payments in gold, because foreign exchange is a title to receive gold, and the foreign exporter who receives foreign exchange can buy gold for it, and for this reason accepts it instead of gold. If, however, we abolished the gold standard, we should obtain, instead of foreign exchange which represents a title to receive gold, a new form of foreign exchange which would represent the right to use the amount of money thus obtained for the purchase of goods and services of various kinds. Thus the foreign exporter would not receive in exchange for his goods any right to purchase gold at a fixed price, but instead would be given the possibility of purchasing goods and services at the current market price. This would be the essential difference.

Now let us suppose that there are two countries which exchange goods and services among themselves on the basis of a paper-exchange standard—that is to say, in both countries the Central Banks buy and sell foreign exchange and in this way regulate the exchange rate of their currencies. If one of these countries had a favourable balance in this trade, it would accumulate a larger reserve of foreign exchange issued in the currency of the country which has the unfavourable balance of foreign payments than that country would have.

The country accumulating foreign-exchange would become a creditor; the country losing it a debtor. It could not be otherwise, because the deficit on the exchange of goods and services has been covered by a paper currency which is not convertible at the Central Bank. Although the importers settled their accounts with the foreign exporters, the balance of foreign payments was settled purely artificially by means of a credit granted by the creditor country to the debtor country.

In other words, a transaction which to-day, under the gold-exchange standard, is an exception, under the paper-exchange standard would become the rule. It would never be possible to settle the deficits of international exchange effectively—*i.e.*, by means of gold exports—for, instead of being covered by gold, a deficit would constantly be covered by a credit granted by the creditor country to the debtor country. A paradoxical situation would then follow, in that, although the citizens of both countries met their obligations punctually, their mutual exchange of goods and services would never be balanced in its entirety. Although the citizens of the country with the adverse balance would have no debts, the country as a whole would be a debtor country.

When and in what way the debt of that country would be paid off would depend on the manner in which the creditor country used the accumulated foreign exchange reserves. If it used them for the purchase of goods from the debtor country, the deficit in the foreign payments of the latter would be actually covered by the increased exports of these goods. If, however, the said country did not make these purchases and kept the accumulated reserves of foreign exchange in bank accounts, the balance of foreign payments would not be actually settled.

In this way, the accumulation of foreign exchange in Central Banks would act as an index of the degree in which the balances of international exchange were not actually settled. The larger these reserves of foreign exchange in Central Banks were, the greater would be the mutual international indebtedness. Under these conditions, the task of maintaining the rates of exchange stable would require increasing caution on the part of Central Banks in their discount policy.

On the one hand, the indices of economic development would have to be very promptly and accurately compiled, lest the management of the bank should choose a wrong policy; on the other hand, mutual confidence, based on very lasting foundations, would be essential if the whole system was not to be endangered by unexpected disturbances. Is this possible?

In that it would lead to an increasing international indebtedness, the paper-exchange standard system would prove to be a very fragile one. Paper never was, nor can it ever be, as solid a foundation as gold. If the rate of exchange of one paper currency were shaken, all creditors would endeavour to get rid of this currency. Foreign exchange issued in it would be thrown on the market by all banks, and each in doing this would try to get ahead of the others. The attack would be stronger than the defence, because the simple fact that the rate of exchange of a given country's currency was no longer stable would indicate that the Central Bank of that country possessed insufficient foreign assets. In such a situation the export of securities would not help much, for prices also would fall in the atmosphere of a depreciating currency.

Should the rates of exchange of several other currencies begin at the same time for political or economic reasons to show strong fluctuations, the general disturbances in the structure of international indebtedness would become acute. Could the possibility of such disturbances be excluded in practice?

The paper-exchange standard can function only in an atmosphere of full confidence and peace, and in normal economic conditions. *An ideal currency will require ideal conditions.* If confidence is lacking, or if the world is suffering from an economic crisis similar to the present, it will be more difficult to maintain the rates of exchange of the respective currencies stable under the paper-exchange standard than under the gold standard. A structure based on paper will show less resistance than a structure based on gold.

If the structure were once shaken, countries would endeavour to protect themselves, to do which they could find no better means than to create special reserves in gold, silver or other commodities which are easily marketable and easily stored. Central Banks would again become special stores of these reserves of commodities. This would be a step back from the point of view of theory, but a step forward from the point of view of practice.

Is it, then, worth while to abandon gold, when it is probable that we should only return to it again?

The idea of a paper currency, based on an indefinitely increasing mutual indebtedness, which is, moreover, a short-term indebtedness, will not withstand the test of practice. Too much cannot be built upon paper, if the structure is to be a lasting one.

8.

Let us suppose for the moment that a pessimistic attitude regarding the possibility of the paper-exchange standard functioning satisfactorily is premature and unjustified. There will remain, however, the fact that the possibility of the paper-exchange standard functioning satisfactorily will depend entirely on the existence of perfect indices giving information about the tendencies of economic life. The same applies to the possibility of the gold-index standard functioning well.

We do not know to-day whether the creation of such ideal indices is in practice possible. Nor do we know how long mankind will be obliged to wait before statisticians have compiled such indices, if indeed they will be able to do so. As long, therefore, as we do not possess such indices

and are not certain whether it will even be possible to compile them, both of the proposed schemes are scientific speculations without practical significance.

There is, moreover, another argument against the above-mentioned projects—namely, that they are both based on faith in the omnipotence of Central Banks. The discount policy of Central Banks is an important instrument, but its potency has its limits. When national economy is not carried on as it should be, the credit policy of a Central Bank may mitigate the consequences of this mistaken economic policy, but it cannot prevent these consequences altogether. The same applies to an unsound fiscal policy on the part of Governments. The Central Bank can help the Government, but it cannot take the Government's place. It is immaterial, in this respect, whether the country has a gold standard or a paper standard.

In view of this, one should limit oneself, in discussing the future of the gold standard, to considering the manner in which the system works at present. The economic indices which we have to-day are still not very accurate, and it would be premature to make them the sole basis of the credit policy of Central Banks. Gold movements from one country to another will continue for a long time to act as a barometer indicating the state of economic pressure. In consequence, the ratio of gold and foreign exchange reserves to total sight liabilities will not cease to be the object of public attention, and Central Banks will not be able to abandon this traditional index until statisticians have compiled better ones. This would simply mean throwing away the oars before entering on a swift current.

The system based on minimum reserve requirements has still a long life before it, and for this reason the future of the gold standard will depend for a long time on the production of gold and on the rate of inflow of new gold. Prospects in this respect, however, are not, as we have seen, very bright. A gradual decline in gold production is more probable than a continued increase. In view of this fact, a downward tendency of prices, of a secular character, could begin in the immediate future, but for the fact that there exist already to-day some methods of economising in the employment of gold for monetary purposes. The possibilities which exist along this line have as yet not been used as fully as they might be. We are only at the beginning of the road to this goal.

A big step forward would be made were the present minimum reserve requirements to be lowered. A no less important step would be the better co-ordination of the gold-exchange standard with the two forms of the pure gold standard. The introduction of the gold-clearing standard, described in Chapter VII, would be perhaps the simplest solution of this problem. The lowering of the minimum reserve requirements, however, as well as the introduction of the gold-clearing standard, requires closer co-operation among Central Banks and increased mutual confidence.

Those who take a pessimistic view of the future of the gold standard lay too great stress on the estimates of the future output of gold-mines. The rôle of a prophet in this domain is a thankless one. Kitchin experienced this when he was obliged to revise his estimates made several years ago and to rectify them in accordance with less pessimistic opinions. Thus, pleasant surprises are not out of the question. This is not, however, the centre of gravity of the problem, which lies in improved ways of economising in the employment of gold. This is the more true since other factors may enter into play which may also influence the decline of the demand for gold for monetary purposes.

One of these factors is the change which is making itself constantly more evident in the rate of increase of the population of Europe. Germany, which before the war had a rapidly increasing population, has begun to show a quite different trend in that respect. In Russia, the destruction

of family life, the new Soviet principles of morality, and the nationalisation of landed property on collectivist lines may lead in no distant future to a reduction in the rate of the population. The closing of the doors to immigration and the steady decrease in the area of unoccupied land can also contribute to reduce the rate of increase of the population in some other countries. Although in other countries the trend may be in the opposite direction, which will compensate in a certain degree for the reduction in the rate of increase in the first group of countries, yet the reduction in the leading countries will have a greater significance than the increase in countries which have a weaker economic structure. From the point of view of the demand for gold, the changes in the first group will be of greater importance than those in the second group.

Should a scheme for the federation of European nations be realised, this would constitute a further factor which would tend to reduce the demand for gold. The realisation of a Pan-European Union might, in a large measure, compensate for the decline in the production of gold, for a system of federal banks could then be created, similar to that existing in the United States of America, which, with smaller gold reserves, would permit of their better utilisation. *Instead of a movement of gold from one country to another, we should then have a movement of gold from one bank to another through the intermediary of a clearing fund modelled upon that existing at Washington.* This would doubtless secure a considerable economy in the use of gold for monetary purposes.

The production of gold depends not only on our will, but also on physical conditions. No human genius can find a remedy for the exhaustion of mines. It depends, however, on our goodwill to organise the political situation in such a way as to facilitate economy in the use of gold for monetary purposes. For in an atmosphere of lack of confidence and of the ever present danger of war, neither the co-operation of Central Banks nor the clearing system based on mutual deposits of gold and foreign exchange can be fully developed and consolidated.

In the meantime, the costs of the great war are proving too great a strain on State budgets. On the one hand we have inter-allied debts, on the other hand the reparations to be paid by the Central European States. At the same time, Governments are still bearing the large expenses for armaments because the great war, which was proclaimed "a war to end war", did not lead to the desired goal. As a result, State budgets are excessively high and taxation is too heavy. Too large a part of national income is laid out every year in unproductive public expenditure. This checks the accumulation of capital.

We exaggerate our apprehensions as to the future shortage of gold and underestimate the importance of the fact that *since the war we have been suffering from a shortage of capital.* Moreover, the international exchange of capital does not proceed in a reasonable way because it is hampered by a general lack of confidence. Accumulated funds amounting to billions of dollars are obstinately kept on the money market, instead of passing to the capital market and providing the material for long-term investments.

In countries which are poor in capital, economic progress is too slow, because the inflow of capital from abroad is not sufficient. In countries which possess an excess of capital, this surplus, kept at home through fear of risks connected with investments abroad, leads to excessive investments on the home market and—what is worse—to speculation. In the latter case, the losses are real, whereas the losses on investments abroad are only hypothetical.

This lack of confidence is thus a very costly business. We need only estimate the losses borne by the public in the United States and in France during the last two years. No losses, however great, borne in the country will encourage foreign investments in an atmosphere of political unrest. There is only one remedy for lack of confidence: *an increase of confidence.* And this can be achieved only by the victory of pacific ideas throughout the world.

The future of the gold standard *depends only in part on the production of gold*. It depends to a far larger degree on:

- (1) *The development of methods of economy in the employment of gold; and,*
- (2) *On the normal accumulation of capital and smooth movement of capital from the countries which possess it in excess to the countries which suffer from a shortage of working funds.*

Economists can work out schemes for furthering economy in the employment of gold. Economists can also indicate the causes which check the accumulation of capital and hinder the movement of capital from one country to another. But to put into actual practice methods of economy in the employment of gold, and to reduce fiscal burdens in the interest of a better accumulation of capital, are things which do not lie exclusively in the hands of economists. Nor can they remove the lack of confidence which hampers a reasonable distribution of capital in the world.

Thus, in the last instance, the future of the gold standard depends on the good will of nations and of their political leaders.

It happened by chance that the last stage of the preparatory labours on international disarmament coincided with the investigations carried through by the League of Nations into the causes of the fluctuations in the purchasing power of gold. This coincidence is a very interesting one for those who are able to take a broad view of the situation.

Whether mankind will be able to avoid economic disturbances resulting from a shortage of gold *will depend more on the political co-operation of nations than on the co-operation of Central Banks*, which can develop only in an atmosphere of increasing confidence and aided by the victory of pacific ideas.

War has been and is the greatest enemy of the gold standard.

For several centuries yet, mankind will not be able to do without the gold standard. The rôle of gold, instead of diminishing, will increase, because, in no distant future, the production of gold may begin to decline. Only a lunatic can imagine that the revision of political treaties by means of war, murder and destruction could facilitate the solution of the problem of the purchasing power of gold, which is of decisive importance to the future of the world.

Modern history gives no example of a lasting solution of political difficulties being secured by means of war. Each revision of political treaties brings with it the seeds of a new war and a new revision of treaties. As long as the economy of the world was not so complicated, the interdependence of the various countries was less pronounced, *and as long as the problem of the purchasing power of gold in its present form did not exist*, war was not so harmful to world economy, and its wounds were easier to heal. The situation everywhere to-day, after the world war, is plain to every eye. One more war of the same magnitude will suffice to ruin altogether the capitalistic system based on the gold standard. It will find its end in an historical record.

The future of the gold standard is the future of peaceful relations between nations of good will.

Warsaw, December 1930.

[Distributed to the Council
and the Members of the League.]

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Geneva, June 1932.

LEAGUE OF NATIONS

REPORT

OF THE

GOLD DELEGATION

OF THE FINANCIAL COMMITTEE

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PREFACE BY THE FINANCIAL COMMITTEE.

The Gold Delegation was appointed in the summer of 1929 by the Financial Committee, with the approval of the Council of the League of Nations, to "examine into and report upon the causes of fluctuations in the purchasing power of gold and their effect upon the economic life of the nations".

The Delegation held its first meeting in August 1929, and has since held six further sessions, in June and November 1930, January and August 1931, January and May 1932.

It has issued two Interim Reports, the first dealing with the production of and the demand for gold, and the second with the distribution of gold reserves. In addition, it has issued three supplementary volumes containing a selection of the documents prepared by independent authorities for its consideration, and a fourth volume summarising the existing legislation governing the monetary uses of gold in different countries.¹

The present Report sets out the final conclusions of the Delegation.

It should be emphasised that the Delegation was not constituted with the primary purpose of studying the present economic and financial depression. The Delegation was appointed before that depression made itself apparent. The considerations which led to its nomination are set out in the Report of the Financial Committee of May 1928. It will be observed from the following extract from that Report that its appointment was a logical development from the work of the Financial Conferences held at Brussels (1920) and Genoa (1922) :

"The attention of the Financial Committee has been called to the recommendation of the Economic Consultative Committee of May 19th last, with reference to the detrimental effect upon industry, agriculture and the conditions of employment of undue fluctuations in the purchasing power of gold. The Financial Committee recognises the great importance and interest of this subject. The financial resolutions of the Conference of Genoa were referred in 1922 to the Financial Committee by the Council, which invited the Committee to consider the methods best suited to foster monetary stability. These resolutions dealt not only with problems arising from currency fluctuations in relation to gold, but also with undue fluctuations in the purchasing power of gold itself. They contemplated, as a first stage, the stabilisation of currencies in relation to gold.

"Very great progress has been made in this direction in the last few years, some countries stabilising by independent effort, others with the aid of international co-operation, whether through the League or not ; and this first stage may now be regarded as nearing its conclusion. This gives special interest to the problems connected with undue fluctuations in the purchasing power of gold, and makes the moment opportune for a study of it. The Committee would be glad therefore, if the Council so desires, to consider to what extent and in what way the League, whose efforts have necessarily been concentrated hitherto on a contribution to the first stage of the world's post-war monetary problem, could now most usefully assist in the study and solution of the problem in this second stage." ²

¹ (i) *Interim Report of the Gold Delegation of the Financial Committee*, Geneva, September 8th, 1930 (document C.375.M.161.1930.II).

(ii) *Second Interim Report of the Gold Delegation of the Financial Committee*, Geneva, January 20th, 1931 (document C.75.M.31.1931.II).

(iii) *Selected Documents submitted to the Gold Delegation of the Financial Committee*, Geneva, September 8th, 1930 (document C.374.M.160.1930.II).

(iv) *Selected Documents on the Distribution of Gold submitted to the Gold Delegation of the Financial Committee*, Geneva, February 12th, 1931 (document C.102.M.38.1931.II).

(v) *Legislation on Gold*, Geneva, September 8th, 1930 (document C.373.M.159.1930.II).

(vi) *The Functioning of the Gold Standard*, by Dr. Feliks Mlynarski (document F.979 [F. Gold-67(1)]).

² Financial Committee : Report of 31st Session (May-June 1928) (document C.292.M.82.1928.II).

Since this was written, however, as is indicated in the opening sections of the Delegation's Report, the situation has radically changed. The currencies of many countries have become divorced from their par value; those of others are being maintained at par (sometimes nominally) only by the most rigorous methods of exchange rationing and control. There are only some half-dozen countries in the world applying the gold standard without special restrictions. The Delegation has thus been forced to take into consideration the wider problems to which these circumstances have given rise.

LIST OF THE MEMBERS OF THE GOLD DELEGATION.

When drafting the present report, the Gold Delegation of the Financial Committee was composed of :

M. Albert JANSSEN (*Chairman*),

Professor at the University of Louvain, Vice-President of the " Société belge de banque ", formerly Minister of Finance.

Professor M. J. BONN,

of the Handelshochschule, Berlin.

Professor Gustav CASSEL,

of the University of Stockholm.

Comte DE CHALENDAR,

Managing Director of the " Compagnie d'Assurances générales sur la Vie ", formerly Financial Attaché to the French Embassy in London, formerly Inspector of Finance.

M. Guido JUNG,

President of the " Istituto Nazionale per l'Esportazione ", Rome.

Sir Reginald MANT, K.C.I.E., C.S.I.,

Member of the Council of India, Member of the Royal Commission on Indian Currency and Finance 1925-26.

Dr. Feliks MLYNARSKI,

Professor of Banking at the Academy of Commerce in Warsaw, formerly Vice-Governor of the Bank of Poland.

Dr. Vilem POSPISIL,

Governor of the National Bank of Czechoslovakia.

M. George E. ROBERTS,

Vice-President of the National City Bank of New York, replaced at the last session by his son :

M. George B. ROBERTS,

Economic Adviser of the National City Bank of New York.

Sir Henry STRAKOSCH, G.B.E.,

Member of the Council of India ;
Chairman of the Union Corporation, Ltd., London.

Dr. L. J. A. TRIP,

Governor of the Nederlandsche Bank.

Also took part in the work of the first sessions :

Professor Alberto BENEDEUCE,

President of the Credit Institute for Public Works, Rome.

Professor O. M. W. SPRAGUE,

of the Bank of England, formerly Converse Professor of Banking and Finance at the Graduate School of Business Administration, Harvard University.

REPORT OF THE GOLD DELEGATION.

PART I. — THE GOLD STANDARD SINCE THE WAR.

I. INTRODUCTORY.

1. The present Report sets out the final conclusions of the Gold Delegation. It is arranged in two parts, the first dealing with the practical problems that have arisen as a result of the recent abandonment of the gold standard by many countries ; the second with the more general problem of fluctuations in the purchasing power of gold.

2. When the Delegation began its work in the summer of 1929, the currencies of the great majority of countries in the world had been re-established on a gold basis after the immediate post-war period of inflation, the exchanges were being kept successfully within gold points and commodity prices in terms of gold had been relatively stable for a period of six or seven years. The task before it was to study the functioning of this restored gold standard. The Delegation had barely been constituted, however, before the instability of the economic situation began to be revealed. As the subsequent economic depression has proceeded, it has not merely afforded a sharp illustration of the importance of " fluctuations in the purchasing power of gold ", but has undermined the gold standard itself. At the moment of writing its final report the Gold Delegation is faced by a situation in which over the greater part of the globe the gold standard has ceased to function : the Argentine and Uruguay suspended gold payments in December 1929, and their exchanges were allowed to depreciate ; Canada introduced temporary restrictions at the end of 1929, and in 1930 the exchanges of Brazil, Chile, Venezuela, Paraguay, Peru, Australia and New Zealand fell and remained below export gold point. In September 1931, the United Kingdom abandoned the gold standard. Before the end of October, all the British Dominions excepting South Africa, the rest of the British Empire, and the three Scandinavian countries, as well as Portugal, Egypt, Bolivia and Finland had departed from gold. Japan followed in December 1931, Greece in April 1932, Siam and Peru in May 1932.

3. Meanwhile nearly all the countries of Central and Eastern Europe introduced restrictions on dealings in foreign exchange in the course of the summer and autumn of 1931 and the same course has been pursued by a number of countries in other continents.

4. In these circumstances the Delegation is faced at the outset of its final report with a broader problem than that originally submitted to it. Instead of formulating its considered conclusions concerning the causes of fluctuations of the purchasing power of gold, upon the assumption that the great majority of important trading countries are operating with currencies based on the gold standard, it must consider a situation in which the gold standard is effectively maintained in some half-dozen countries only.

5. The most immediate and practical question which presents itself, therefore, concerns the policy to be followed in the near future, not only by the countries which still maintain the gold standard, but also by those countries now on an inconvertible paper standard and by those which have maintained the nominal value of their currency by exchange restrictions.

II. THE FUNCTIONING OF THE GOLD STANDARD.

6. The gold standard is not a fixed and rigid mechanism, but a system of monetary and credit policy which has gradually developed in the light of experience and has adapted itself to the needs of changing economic conditions. It may, perhaps, help to an understanding of

its working in recent years if we trace very briefly the major changes that it has undergone since its general adoption in the second half of the nineteenth century. But in tracing these changes or in describing the system as it existed at any moment of time, the picture which is presented — unless given in laboured detail — must necessarily simplify, and to that extent distort, the facts. For never in history has the gold standard been simultaneously applied in exactly the same manner in all the countries which are roughly classified as adhering to it. In practice, very different credit policies have been pursued. At no time have all countries been prepared to accept to a like extent all the responsibilities which devolve from an international monetary system. The account we give, therefore, in the following paragraphs is rather an abstract description of leading tendencies than an exact reflection of the complex and intricate evolution of events.

7. The normal features of the gold standard in its simplest form would be the acceptance of gold without limit by Governments at a fixed price for minting into coin, the free circulation of gold coin as full legal tender and the unrestricted import and export of gold.

8. Were gold the only medium of exchange, its movement from one country to another, whether in the original stages of distribution from the mines, or later as redistribution becomes necessary between trading countries, would in itself produce local changes in the quantity of money in circulation and hence would have a direct effect upon prices. The influences of gold movements in such circumstances may perhaps best be described by means of an imaginary illustration. We may imagine a country the value of whose exports, owing to an unusually abundant harvest, appreciably exceeded that of her imports. The excess of exports, we may assume, was paid for by an import of gold. This gold would then pass into circulation in the country receiving it, and conditions would be created likely to result in an increase in the total money income of the population of that country, and, in consequence, in the demand for (and the prices of) the goods upon which this income was expended. This increase in domestic prices would have made foreign goods, the prices of which had not risen proportionately, more attractive to buy, and the domestic goods less attractive to the foreigner. The commodity imports of the country would therefore tend to increase and its commodity exports to decrease. This process might continue until a new equilibrium between imports and exports was established. If it continued beyond that point, the excess of imports would have to be paid for (failing temporary loan accommodation) by an export of gold. The original gold influx would thus set in motion a train of events leading to a new equilibrium of values and to a reverse movement of gold.

9. Meanwhile, in the country from which the gold had been received a contrary sequence of events would have been started; money incomes and prices would have been reduced, exports have been stimulated and imports checked. The influence of gold movements in such circumstances would thus be, not only automatic, but also reciprocal.

10. We give this illustration in the hope that it may help to an understanding of the fundamental forces at work. It is, however, as we have stated, imaginary and abstract. In fact, a primitive gold standard, under which gold was the only form of currency in use, has never existed among more advanced nations as an international system. In all countries which adopted gold as the basis for their currency during the nineteenth century, some system of banking was already in operation and some medium of payment other than metallic coin in use. But, although the existence of other means of payment and of an elaborate credit structure modifies the sequence of events and renders it at once more complex and more subject to deliberate control, it does not fundamentally alter the forces at work.

11. Actually, in almost all the gold-standard countries of the world before the war, payments could be effected either by means of coin or notes or cheques drawn against deposits in banks. The proportion in which these different classes of means of payment were actually employed differed greatly from country to country, but the amount of notes which could be issued was, in almost all cases, restricted by law in such a way as to link them, directly or indirectly, to the gold held in reserve by the note-issuing institutions. Similarly, a certain relationship was established between the volume of sight deposits and that of other media of exchange by the cash ratios which the commercial banks were in the habit of maintaining — by cash being understood either gold or notes or deposits with the Central Bank. In these circumstances, when gold was imported by any country, part of that gold might go directly into circulation, part into the reserves of

commercial banks and part into the reserves of the Central Bank. The influence which any addition to the gold stock could exercise on the total monetary circulation would then depend, in the first instance, on the manner in which it was divided between these various possible uses. If all the gold imported went straight into circulation and none into reserves, the addition to the circulation would be equal to the amount of that gold and no more. If, on the other hand, the gold went direct to a Central Bank, which was empowered to issue notes up to three times the amount of its gold reserve, and commercial banks, employing notes as cash, were in the habit of maintaining a cash reserve of, say, 15 per cent against their deposits, the maximum theoretical limit to the expansion of purchasing power was obviously a very wide one. In practice, this theoretical limit would, of course, not be reached, because, first, the Central Bank would, in all cases, require to keep some surplus reserve in excess of its legal minimum; secondly, the commercial banks, so long as gold was the legal tender mainly employed, would be compelled to keep part of their cash in coin; and, finally, the public would expand their individual holdings of coin as total currency increased, though not necessarily in exact proportion to that increase.

12. The influence of any influx of gold on the available purchasing power of the community receiving it was thus not automatic and direct. It depended upon the amount which went into circulation, or into commercial or Central Bank reserves respectively, upon the law or custom which determined the cash ratios of commercial banks, the legal regulations determining the reserve systems of banks of issue, and, finally, the policy which these central institutions adopted at any moment in regard to the expansion or contraction of their reserves within the limits set by the law.

13. Secondly, the effect of an increase in money or bank credits (discounts, advances, etc.) on prices would not be automatic, but would depend upon the manner in which that credit was employed.

14. The effect of the introduction of additional purchasing power into any highly organised economic community will depend, therefore, not only on the action of the body responsible for its introduction, but also on the behaviour of the aggregate of individuals who go to make up the community's power of spending, of saving and of investment. That behaviour, moreover, may modify the velocity of the circulation and hence the amount of purchases which a given quantity of money may effect in a defined period.

15. In such circumstances, it is clear that neither the effect of an influx or efflux of gold upon the total media of payment, nor the effect of changes in that total upon prices, is automatic or inevitable. An influence may be exerted directly on the first of these effects and indirectly on the second by banking policy, and more especially by central banking policy. Before the war, the instrument of control generally employed by Central Banks — though some had others at their disposal — was their discount rate. By varying their rates, banks were able to exercise a potent influence, varying with circumstances, at once over the effects of inward and outward movements of gold on the domestic credit structure and on the volume of those movements themselves.

16. In countries (to take a simple example) where commercial banks normally increase their cash reserve by rediscounting paper at the Central Bank, a rise in bank rate would tend to increase market rates also, and thus raise the price of credit facilities and restrict demand. In this way, the total volume of loans and advances, and of the deposits in which those advances were duplicated, could be influenced.

If, in such circumstances, prices tend to fall, this is due to the effect which the higher rates exercise on the domestic demand for credit and ultimately for capital. On the one hand, they render saving more attractive by increasing the interest earned on such savings; on the other hand, they tend to check the demand for capital and induce liquidation by increasing the cost of borrowing. Prices tend to fall, which renders the country a favourable market for foreign purchases and the balance of payments is affected in the manner described above. At the same time, the higher rates obtaining in the market where the rate had been raised would render it advantageous to lend in and thus attract short-term capital from abroad, and restrict loans made by it to foreign countries. This change in the relative attractiveness of home and foreign lending and borrowing would, moreover, result in an inflow of gold, which in its turn would increase the basis of credit and promote conditions favourable to a rise in prices. It was possible,

therefore, for Central Banks by means of their discount rate to influence both the balance of commodity imports and exports and the balance of foreign lending and borrowing.

17. Before the war, there was a tendency for the changes in bank rate to be more or less automatically dependent on the changes which took place in gold reserves. The rate was raised when these reserves fell, through the export of gold, below a certain amount or certain percentage ratio to notes ; and the rate was lowered when they rose above a certain point. But, even so, this tendency towards automatic alterations of the bank rate was neither absolute nor universal ; nor did the majority of countries enforce the gold standard in such a way as to allow the free export of gold whenever their balance of commitments was such that it was cheaper to export gold than to buy foreign exchange. By the reservation of the right which some possessed to offer silver instead of gold in exchange for notes, or by other means, certain Central Banks frequently exercised a controlling influence over gold movements without having recourse to alterations in their rates. Others, again, kept reserves so large that they were able to suffer the loss of considerable quantities of gold before the necessity to change their discount rates arose. In such a case the effect of gold movements was largely one-sided.

18. But the general result of the system as it was actually applied was to allow gold, by its direct influence and its indirect influence through the bank rate, to act as a corrective to any disturbance in the international equilibrium.

19. Even in this simplest form, however, the gold standard was never in any country a self-contained and self-acting mechanism, but rather an integral part of the monetary, and indeed the whole economic, organisation. The use of banknotes and other forms of paper money was well established before the gold standard was widely adopted as the principal mechanism of international payments and valuation. It has always functioned in this setting ; and, as the historical discussions concerning its working amply demonstrate, recognition has always been given to the interaction of the monetary mechanism and non-monetary factors such as the volume and nature of production and the balance of commodity trade. The nature, direction and extent of international trade, credit, investment and monetary policies, rates of interest, levels of prices and the gold market must be regarded as interdependent and interacting factors functioning within the general framework of particular economic systems. The importance of this basic conception was perhaps less obvious, and the need for emphasising it less striking, in earlier periods, when free competition played a greater part in economic life than it now does. Before large-scale organisation, both of capitalist enterprise and of labour, and an increasing degree of governmental regulation and economic intervention rendered rigid large elements of the price structure; monetary forces could be relied upon to correct disequilibria either nationally or internationally more rapidly and effectively than to-day. It might well be argued that a regime of free competition is indispensable for the smoother and semi-automatic working of the gold standard in this simple form. The gradual stiffening of resistance to changes in certain ranges of commodity prices, in wage-rates, in social service costs and the increase in the charges on industry fixed by contract, place a strain upon the working of the gold standard, especially when, as periodically happens, the economic situation requires drastic measures of readjustment. On the other hand, the increasing complexity of the credit devices by means of which the gold standard functions, while adding much-needed elasticity and delicacy to its operation, has called for new qualities of understanding, insight and judgment in those to whom important decisions, not only of monetary, but also of investment and economic policy are committed. In proportion as the working of the gold standard has been extended and refined for the purposes of the more complex modern problems, has it become more difficult to manage.

III. RECENT CHANGES IN THE GOLD STANDARD.

20. The characteristic mechanism of the gold standard towards the end of the nineteenth century and in the early years of the twentieth century was one under which the aggregate means of payment consisted of gold coin, banknotes, and sight deposits, to which were added various forms of subsidiary coin. Gold drifted into and out of bank reserves from the free circulation. In their reserves, a number of countries held also minor quantities of silver and foreign exchange.

21. The more important changes which were effected before the recent breakdown of the system over large areas of the world may be enumerated as follows :

(a) In most countries gold coin had been effectively withdrawn from circulation, and monetary gold had been concentrated largely in the vaults of Central Banks.

(b) For the obligation of Central Banks to convert their notes into gold coin, there was substituted in most countries an obligation to convert them into either (i) gold bullion, or (ii) foreign gold exchange, or (iii) either the one or the other at their option.

(c) Banks empowered to convert their notes into sight claims on gold were allowed by the new banking laws to keep the whole or a part of their reserve in the form of such claims. There is no necessary connection between these two provisions. Some Central Banks which were obliged to redeem their notes in gold have the right to keep part of their reserves in foreign exchange.

(d) In consequence, banks enjoying this alternative were in the habit of holding in their reserves gold exchange on certain international monetary centres, principally New York and London, which collectively have amounted to very considerable sums.

(e) In most cases, whether such foreign gold exchange was allowed to constitute a part of the gold reserves or not, the total reserves required by the new legislation were expressed as a definite percentage of total notes outstanding or notes plus Central Bank sight liabilities. Although this percentage reserve system is by no means new, it became, in recent years, more generally adopted than before the war, and frequently in a more rigid form.

22. In addition to these changes, which resulted directly or indirectly from the new legislation introduced, the functioning of the gold standard was affected by certain changes in bank practice and in general financial conditions — such, for instance, as the development of open-market operations, more especially in London and New York, the growth of New York as a major lending centre and the narrowing of the gold points in certain cases.

23. The result of the collection of gold in Central Bank reserves and the withdrawal of gold coin from circulation was at once to effect an economy in its use and to increase the potential influences of any gold movement. Under this system, all accessions of gold may be made to exercise a maximum influence on the total volume of currency, for they inevitably accrue to the foundations of the whole credit structure — the reserves of banks of issue. At the same time, the power of Central Banks to influence the situation was enhanced, as they were no longer subject to the risk that gold might be absorbed into the internal circulation, though it has been withdrawn recently during periods of panic in the form of bullion for hoarding.

24. The holding of foreign gold exchange instead of gold for reserve purposes likewise rendered possible an economy in the use of gold, though not to the extent which is sometimes believed. To the country holding such assets the economy was absolute. But the country on which such gold exchange constituted a claim might well consider it necessary to maintain a larger gold reserve in order to meet possible demands resulting from the conversion of these claims into gold.

25. The generalisation of this so-called gold-exchange-standard system had other results of some importance. It somewhat complicated the mechanism of the international system by distorting, in certain cases, the reciprocal effect of the transference of Central Banking reserves. We have shown above that an export of gold from one country to another used to set in motion reverse sequences of events in the exporting and in the importing countries. If the reserve consists of foreign assets, however, such reciprocal changes need not necessarily take place at the same time. The exact effect of a transfer of the claims which such assets represent will depend on how those assets are held and between what countries the transfer takes place.

26. Thus, if a Central Bank keeps its foreign assets in the form of a sight deposit in a foreign commercial bank in a gold centre and sells its claims on that bank to a trader who has obligations to meet in that market, conditions will be created tending to compel it to curtail credit at home. But no reciprocal conditions will be created in the country in which the commercial bank is situated. The commercial bank may find that the only change in its position is a substitution of a domestic for a foreign depositor. Moreover, the Central Bank in this country

may have remained unaware of the transaction and be deprived therefore of the means of obtaining immediately information which might prove important for the conduct of its policy. If the deposit, on the other hand, has been held in the Central Bank of the country in question, the result might have been to change that Bank's foreign sight liability into a commercial bank "cash" deposit with it and thus to create conditions tending to a partial — though not equivalent — expansion of credit. In any case, it would have enabled that Central Bank to ascertain the facts on which its policy should be based.

27. The effects of such operations are again different if the transfer is made by the country holding foreign assets to any country other than that in which those assets are held. In such circumstances, if both parties hold assets in the same country and the transfer is made between their respective accounts, there is reciprocity of effect between them and no effect on the country in which those deposits are held. If the transfer is made by the conversion of those assets into gold and the shipment of that gold to the country to which payment is due, there is a triple influence which may bear no relationship to the actual balance of payments between the country in which the deposit is held and any other.

28. As we have already pointed out, gold-exchange methods, as outlined in the preceding paragraphs, did secure an important economy in the use of gold; but, at the same time, the functioning of the gold standard was rendered more complicated, and an important element on which Central Bank authorities had to base their policy did not come immediately under their control.

29. In the post-war period, many more countries than formerly adopted the percentage reserve system in their Central Banking legislation. Moreover, in certain cases the gold reserve of the Central Bank has now to be calculated as a percentage, not merely of the note issue, but of other sight liabilities. In addition, there were a number of cases in which the legal minimum ratio was increased.

30. Central Banks operating under such legislation naturally desired to maintain a surplus of gold reserves above the legal minimum, in order to have a "cushion" against possible drains of gold. Without such a "cushion", they might be faced with a drain reducing their reserve below the legal minimum, in which case a multiple contraction of the note circulation by a restriction of bank credit would become necessary. In consequence, banks working under this system have endeavoured to keep reserves substantially greater than the legal minimum which in many cases had, as we have pointed out in the preceding section, been raised. The demand for gold for Central Bank reserves was therefore considerably increased by the extension of this type of Central Banking legislation.

When the legislation permitted a part or the whole of the reserves to be maintained in the form of foreign assets, the strain thus caused on the world's gold resources was alleviated; but the need for a large safety margin in gold or foreign assets was not reduced.

31. Post-war legislative changes thus tended, in part, to economise gold and, in part, to enhance the demand for it. Certain of the means by which economy was achieved were such as to necessitate a more deliberate control on the part of Central Banks. Their powers had been increased by the withdrawal of gold from circulation and restricted by the practice of depositing foreign asset reserves with commercial banks. Their task had been rendered more difficult by certain of the changes in the monetary and banking situation not due to new legal stipulations. Thus, the narrowing, in certain cases, of the gold points rendered the monetary systems of the countries concerned more sensitive to international disequilibria, for a slighter change in the relative value of any two currencies than was formerly required (a smaller departure from international equilibrium) rendered a purchase or sale of gold profitable to those who have commitments abroad to meet.

32. On the other hand, in certain countries during the last few years the independence and power of commercial banks and other financial institutions tended to increase, so that control by the Central Banking authorities was rendered more difficult. In recent years, the quantity of liquid capital — that is, of savings which have not by investment been converted into permanent claims on fixed capital goods — has been abnormally large. Owing to the feeling of uncertainty which existed and still exists, money has remained in the liquid capital market instead of being absorbed as long-term capital.

33. This post-war system, more direct in some ways than that which functioned successfully earlier in the century, more sensitive in some ways, but complicated and partially rendered insensitive by the gold-exchange standard, has broken down. We trace the immediate causes of its failure in the next section and we return to them in a later section of this Report dealing with the effects of variations in the purchasing power of gold, but some reference should be made here to certain more specifically monetary causes related to the manner in which the gold standard has been operated in recent years.

34. The successful operation of any banking system, whether Central or commercial banking, must depend upon the acceptance of certain common principles and conventions by all its members. Thus, if an important commercial bank decides suddenly to modify its average cash reserve ratios, it may force on the whole system an inflation or deflation of deposit currency proportionate to the extent of that change and to its own importance in the banking community. In Central Banking, the greatest influence is exercised by the banks of those countries which are large exporters of capital, for they are able to influence both the flow of funds to or from, and the rates of interest in, other money markets. In recent years, this power has rested mainly with the United States of America, the United Kingdom and France.

35. But the Central Banking institutions — although in many ways they have co-operated more closely than before the war, or, indeed, than was then possible — have enforced the gold standard on widely different principles.

36. Central Banking policy since the war may be divided into two main periods. In the first period, before the introduction of the German Rentenmark in 1924-25 and the restoration, in 1925, of the British currency to its former gold parity, the United States was the only important commercial country on the gold standard. In this period, great quantities of gold were received by the United States which, in the early stages of the movement, were used largely by the member banks to help liquidate their indebtedness to the Reserve Banks, incurred in 1919-20. Thus, while the inflow of gold at this period did not result in an actual expansion of credit, it paved the way for later expansion by putting the banks in a more favourable position for extending advances to their customers. During the two years 1923 and 1924, the Federal Reserve Banks followed a policy of alternately minimising and enhancing the influence of gold imports, in keeping with the credit tendencies of those years which, in 1923, called for a firm money policy to restrain incipient over-expansion, and in 1924 an easy money policy to check a tendency towards recession.

Restoration of the gold standard in many countries brought with it opportunities for closer co-operation between Central Banks. Notable instances of such co-operation occurred in 1924 and 1927, when the cheap money policies adopted by the Federal Reserve Banks in those years were intended, not only to influence the domestic situation, but also to assist the European Central Banks first to restore and then to maintain the gold standard.

37. Early in 1928, however, it became evident that there was difficulty in reconciling the national and international factors in monetary policy. Great Britain had returned to gold parity under conditions which necessitated a fall in domestic price-levels. In fact, however, certain groups of prices and wages in Great Britain proved to be particularly rigid, so that, as commodity prices slowly declined in world markets, the export trade fell off and unemployment increased. British banking policy therefore was constantly on the economic defensive after 1925, and, unless interest rates were kept low abroad, there was always the possibility of a drain of gold depleting the comparatively small gold reserves of the Bank of England.

This possibility was enhanced by the policy pursued by Great Britain in lending freely abroad.

In the United States, on the other hand, the cheap-money policy initiated in 1927, partly to relieve the depression which had developed in the preceding year, partly to check the threatened drain of gold from Europe, led to a credit expansion which caused the Federal Reserve Banks to raise their rediscount rates in an endeavour to check the growing speculation in the security and real estate markets.

In France, the situation was different from that of the other two countries. For many reasons, particularly the habit of saving which has always been strongly marked in that country, France has always remained a creditor country. But, until the franc was stabilised, this

surplus on the balance of payments was allowed to accumulate abroad instead of being used for the importation of gold. Since stabilisation, however, the balances on French account held abroad have been partially repatriated in the form of gold imports, which were particularly heavy in 1930 and 1931. Moreover, since the franc was stabilised at a comparatively low level and since security prices rose in France, the repatriation of capital was rapid during the years following stabilisation, when foreign lending was still hampered by fiscal policy.

The Bank of France has endeavoured to limit imports of gold, which were disturbing the equilibrium of certain foreign markets. It did not, like the Federal Reserve Bank of New York, have recourse to open-market operations which, owing to the special structure of the French market, would have had no appreciable effect upon the volume of credit and the level of prices. The only method of preventing this influx of gold would have been to increase French investments abroad. Many steps have been taken in that direction. The Bank of France has maintained its discount rate at a low level. It has taken other steps to favour short-term foreign investments — in particular, by encouraging the development of acceptance credits. The French Government, on the other hand, has considerably reduced taxation on foreign securities in order to encourage foreign issues in France.

But these measures — whose efficacy cannot be denied — have not been able to produce their full effect because of the break in confidence which has occurred throughout the world and has, since 1930, been paralysing international movements of capital. On the contrary, France has become a refuge for foreign capital, which greatly contributed to the entry of gold into France in 1930-31.

38. It is not our purpose in this Report, to criticise either the monetary policies pursued or the general functioning of the economic systems to which those policies were applied. But we wish to insist on the two fundamental facts which have emerged clearly from the history of recent years and recent months — namely, (i) that no international currency standard can work successfully for any protracted period if the principles on which it is conducted vary widely from one country to another ; and (ii) that, whenever the general level of prices in any country important to the whole system is either out of gear with world values or insensitive to monetary influences, there is a danger of a strain being placed on the international monetary standard which it may prove unable to support.

39. It is necessary also to insist upon the fact that it has proved extremely difficult to administer an international monetary mechanism when international trade is so hampered and restricted as it has been in recent years.

40. We would, indeed, go further and urge that a much greater degree of willingness to co-operate is essential in many other spheres of activity before there can be a reasonable prospect of success in the effort to re-create an effective international monetary mechanism.

IV. THE BREAKDOWN OF THE INTERNATIONAL MONETARY SYSTEM.

41. In a later section of this report we have defined the expression “ purchasing power of gold ” as being the purchasing power of “ not simply the metal in its monetary use, but the whole currency of any countries employing the gold standard ”.¹ This interpretation of our terms of reference is fundamental to the whole of the discussion which follows. The “ purchasing power of gold ” is affected by all the complex factors which act and interact upon the demand for its use in various ways, industrial and monetary, and upon the conditions of its supply. Since the various national currency systems, under a gold-standard regime, fix their monetary units in terms of stated quantities of gold, it follows that the purchasing power of gold is conditioned, *inter alia*, by monetary policy and practice. Any analysis of the demand and supply of the precious metal, therefore, leads inevitably to wider considerations of currency and credit policies, and of the economic activities which affect them and are affected by them.

42. This definition is important, not only in an explanation of the normal working of the gold-standard system, but equally in a survey of the events which have led to the abandonment

¹ See below, Section VI, paragraph 85.

of that system by so many countries at the present time. These events are traceable to causes which are partly monetary in the strict sense of the word, and partly of a financial, economic and political character. In the present section we draw attention to some of the major causes of economic maladjustment and instability in the post-war world, in order to recall the fact that the working of the restored gold-standard currencies encountered difficulties of much greater novelty and magnitude than had been known in the pre-war period.

43. Many of these difficulties are directly traceable to the economic consequences of the war of 1914-1918; others are of later origin. The war led to a serious inflation of many currencies, and to a reorganisation of economic life which left troublesome legacies of maladjustment throughout the economic system. The return to the gold standard after the war involved, in many countries, some measure of deflation, which failed, however, to affect certain classes of goods and services, and failed, therefore, to bring about a stable new equilibrium.

44. The first period of deflation after the close of the war was, moreover, succeeded by a renewed expansion of credit which culminated in a boom period of unusual strength and persistence. The breaking of this boom in October 1929 revealed the fact that the necessity for fundamental readjustments in the price-structure as well as in international financial commitments both public and private, had been not merely postponed but aggravated. An enormous strain was suddenly thrown upon the monetary mechanism at this time — a strain which in fact proved intolerable. Moreover, there remained (and remains) after the inflationary experiences of the war period a feeling of anxiety concerning monetary phenomena and monetary institutions. It was this widespread anxiety which was largely responsible both for many of the defects in the post-war system of industrial finance and for the nervousness which, at the threatened approach of a crisis, proved almost uncontrollable. No credit system could survive the wholesale sudden failure of confidence which the world has recently witnessed.

45. In the actual restoration of stable currencies, it had been extremely difficult to gauge accurately the level at which stabilisation should be effected. In considering this problem, many different and often conflicting factors had to be estimated. Any level which might have been chosen in a particular case involved some measure of subsequent readjustment of dependent economic factors. The relation of internal to external prices, the balance of commodity trade, the level of wages in relation to prices both retail and wholesale, were never exactly right at any stabilisation level. The choice actually made, in this country or in that, involved, therefore, the necessity of readjustments which in some cases have proved more difficult than was anticipated.

46. The war had, further, left almost all countries with a vastly increased accumulation of State debt. In certain cases this debt was greatly reduced as the result of inflation, though with offsetting losses in other directions. But there remained, when the inflationary period was over, a very much greater aggregate of debt in the world. In the subsequent reconstruction period further debt, both national and international, has been accumulated, the burden of which has inevitably and automatically increased as prices have fallen.

The great increase of international indebtedness (in which reparations and inter-governmental debts are included) demanded the ultimate transference of wealth from one country to another on an unprecedented scale, and in practice this has been one of the factors which have caused disturbing gold movements.

47. The losses arising from inflation and the adjustments necessitated by stabilisation, together with all those changes in the national distribution and relative importance of different classes of industry to which we allude below, led, in the first instance, to an unwillingness in many countries to save, and in the second to an unwillingness to venture the savings finally accumulated in equities or even in long-term investments. This has resulted, on the one hand, in an increase in the supplies of short-term money which could be moved — and has been moved — rapidly from country to country, and, on the other hand, in an increase in the fixed or quasi-fixed charges of industry, the burden of which became heavier as prices fell. As a result, the system, which in certain parts of Europe was already dangerously prevalent before the war, of financing industry by means, not of the issue of shares, but by the extension of

loans was greatly extended. One of the major defects in the economic organisation to-day is that debt has so largely taken the place of ownership. Further, the very lack of a sense of security and understanding to which this system was largely due has intensified its dangers. It has given rise to the rapid movement of funds — now attracted by a wave of speculative optimism, now taking flight from some alleged danger — which have necessitated large transfers of gold; and those gold transfers themselves have contributed to the fluctuations of the price-level and the risk of the weight of debt being augmented.

48. Never before have such large and frequent but irregular movements of gold been necessary in order to keep the exchanges level. The mechanism has had to work, not by gradual and orderly small rhythmic changes, but by violent fits and starts as the extra weight of these unusual factors has been thrown in one direction or another. In consequence, it has been necessary to provide as far as possible for wider margins of safety in the mechanism and, in particular, central bankers have felt it desirable to build up larger reserves than would otherwise have been needed. There would in any case have been very considerable gold movements as the various countries which, during the inflation, had lost their gold stocks endeavoured to build them up again; but this natural process has been rendered more difficult and its effects have been made more violent than might otherwise have been necessary.

49. The situation has been further complicated by the changes which have taken place in the international demand for capital and the sources of capital supply. The volume of foreign investments has grown and its direction has changed. Very large sums have been invested, not only in the development of countries whose natural resources were largely untapped, but also in European countries where financial reconstruction was necessary. Much of this investment was not carefully controlled. Debts both on short and on long term have been incurred which impose an undue burden, not only on the immediate debtors, but in their aggregate on the whole country in which those debtors reside.

Insufficient care has been taken by lenders to ensure that the credits extended should be employed productively and in a manner to increase the capacity of the borrower to repay. In many cases the examination preliminary to the granting of a credit has been too superficial to distinguish between the capacity of a borrower to repay in boom times, when prices and the demand for products are high, and in ordinary times, when prices and the movement of goods are on a more moderate scale. As a result, debts have been contracted the service of which was dependent upon the maintenance of conditions essentially abnormal. When prices and the volume of trade fell off, the margin of safety in many cases proved to be too slender for the borrowers, and difficulties were inevitable.

50. On the other hand, the flow of capital for foreign investment has become more irregular than it was before the war. Many factors have contributed to this result. The smooth working of foreign investment was greatly facilitated in pre-war days by the regularity and efficiency with which the London Money Market was able to work in a setting of free commodity trade, and by the confidence of French investors in certain types of long-term investment. In the post-war years, profound disturbances have taken place. Violent price changes have discouraged direct investments in productive enterprises of debtor countries; accordingly, a larger proportion of the new investments has been in the form of long- or short-term debts, the service of which has implied an increased actual burden upon debtor countries in times when the prices of their main products have been falling. Further, the instability of a number of currencies, which was a direct inheritance of the war, as well as their subsequent stabilisation at levels which did not correspond to the domestic price-levels in the countries concerned, gave rise to wide speculative movements of short-term capital which were not directly connected with the comparative levels of cost and interest rates in these countries. The share of British investors in the total international movement of capital in post-war years has been greatly reduced and, as the result of losses incurred, the French investor has shown a marked weakening of confidence in long-term investments abroad; the bulk of French capital exports in these years has therefore been in the form of short-term investment. The great amount of outstanding short-term credits, while stimulating economic activity in the borrowing countries, has been responsible for a lack of stability which has been felt particularly at critical moments. Foreign investments

by the United States have become an important factor in international financing, but so far they have proved to be irregular in volume ; in particular, they have been greatly influenced by variations in domestic business conditions in the United States. For some years, particularly after the Dawes settlement in 1924, a very considerable stream of American loans flowed to European and other borrowing countries ; but when the investment boom developed in the middle of 1928 in the United States, that stream was much reduced, as may be illustrated by the following figures for new capital issues for foreign account in the United States ¹ :

	U. S. capital issues for the account of		
	European countries	Canada	Other foreign countries
	§ (000,000's)		
1927 : First half	244	154	283
Second half	333	78	244
1928 : First half	449	115	277
Second half	148	70	191
1929 : First half	101	167	204
Second half	59	124	135

The issues for the account of countries other than Canada, and particularly those for the account of European countries, fell off heavily from the middle of 1928 — that is, at the same time as a heavy reduction took place in French capital exports.

The irregularity in international capital movements which has thus characterised post-war years has had profoundly disturbing effects, not only on the economic development of borrowing countries, but also on the settlement of international balances. ²

51. To these and similar financial factors were added many other factors causing disequilibrium. As examples we may cite the profound changes that have taken place in the structure and localisation of industries, both primary and manufacturing.

52. Thus the recovery of Europe after the war and the restoration of world trade threw the greatly extended wheat areas of North and South America and Australia into sharp competition with the peasant production of that continent. Beet sugar once again competed actively with cane ; the newly established cotton industry of the Far East met the restored exporting power of industrialised Europe ; the production of synthetic nitrates competed strongly with Chilean exports. Examples need not be multiplied in order to drive home the point that very considerable alterations in the geographical structure of industry were required if widespread and ruinous over-production of a large number of basic commodities was to be avoided. But these alterations were not easy to carry out, since they demanded drastic changes in national economy. Reluctance to face them, on the other hand, inevitably threw world trade and production out of balance, with results that are now only too apparent.

53. The geographical changes, however, constitute only one group of the many structural changes that have rendered the post-war economic world so complex and difficult. The industrial organisation has become more elaborate and more rigid ; the processes of manufacture have become more complex ; the success of a few in large-scale production has tempted many to

¹ Source : *Handbook of American Underwriting of Foreign Securities*. The figures refer to the nominal value of the issues ; refunding issues are excluded.

² The following figures, quoted from the forthcoming issue of the League of Nations publication on balances of payments (*Balances of Payments, 1930*), show the net balance of capital exports or imports (capital imports are marked with a minus sign) of the United Kingdom and the United States, calculated indirectly from the trade in goods, services and gold. In the case of the United Kingdom, Government capital transactions have been grouped with services, and the balances accordingly reflect private capital operations only :

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
	§ (000,000's)									
United States	236	— 104	590	642	173	580	1,099	206	196	*
United Kingdom	682	700	380	261	— 127	385	569	574	112	— 340

* Figures not yet available.

over-invest in the more highly mechanised industries, and that over-investment has rendered production more difficult of adjustment to changing demand. This well-recognised development is the more noteworthy because of the opposite fact that, with increasing productivity and wealth, consumers' demand has tended to be transferred to less essential commodities and services, so that demand tends to become more capricious.

54. But, in spite of the destruction and the maladjustment of productive equipment caused by the war, the post-war period has been one of very rapid economic progress. Part of that progress has been caused by the recovery of Europe from its war-stricken situation in 1919. In the years 1925 to 1929 there was a considerable credit inflation, which was superimposed upon the real measure of progress that had been achieved, and introduced many unsound elements into it. These structural problems of instability therefore are problems fundamentally of progress, arising from failure to adapt the mechanism of production and distribution with sufficient ease to the needs of a changing situation.

55. Industry itself has opposed obstacles to reorganisation. The cartellisation of industry and various forms of price control, pools and control boards of primary products, valorisation schemes and their like, have all tended to render the economic system unduly rigid. For the most part, in spite of temporary successes, they have struggled vainly against the tide of economic forces and have in the end been overwhelmed; but not before they have encouraged the continuance, and even extension, of industries exposed to the risk of over-production. In so doing, they locked up large amounts of capital, much of which was ultimately lost.

56. Simultaneously with the growth of large-scale production and concerted control of product and of price, the wages of labour have become less flexible and the semi-fixed charges for unemployment benefits and for social services more costly. Thus the whole catena of prices has become more rigid and resistant. The charges contractually fixed have increased; others have passed up the scale from readily variable to rigid or barely flexible. With this increasing rigidity there has been a loss of tensile strength, and when forces have come into play which have tended to drive down this or that category of values, the whole mechanism has failed to adapt itself, and, because of this failure, has been strained to or beyond breaking-point.

57. Resistance to change has further been stiffened by the resort of threatened industries or other sectional interests to Government support and by economic nationalism. State aid and nationalistic isolation have resulted, perhaps inevitably, from the facts that, under the pressure of war necessity, industries grew up whose economic justification was later challenged, and that during the war industry served the State and depended upon Government support and direction. There can be no doubt, however, that in a great variety of ways they have hindered the wholesome processes of readjustment, prolonged and even aggravated the disequilibrium inherited from the war period, and in many cases operated directly as impediments to the free flow of world trade and investment. Tariffs, prohibitions, bounties, indirect measures of protection by official regulation, the control of foreign exchange dealings, subsidies — the whole apparatus of protectionism — have built up artificial barriers sufficiently comprehensive to balk much of the economic reorganisation that was really needed.

58. Of the remaining unstable elements of the post-war economy, it will suffice merely to select examples. We might follow the chain of causation which led, by way of budgetary troubles and high taxation and of higher wages and costs of production in a period of falling prices and capricious demand, to the squeezing down of business profits to the point where investment fell off and depression ensued. We might dwell on the changes of income distribution which were the result of the growth of indebtedness — changes that rendered vastly more important the effects of the fluctuations in the purchasing power of money which we trace in a later section; or on the discrepancies which developed between price movements of important groups of commodities and between commodities at different stages of manufacture.

59. It is, however, not our purpose in this section to provide any complete analysis of the instability which was present in the post-war period, but merely to illustrate our point that there was instability arising from many-sided maladjustments of economic factors and processes. The war threw the complicated machinery of world production and trade out of gear, wrenching it from its primary economic purposes to serve the purpose of maximising military power. When

the attempt was made to revert to normal running, it was not surprising that it functioned less smoothly than before.

60. It is in this setting of an imperfectly restored world economy that we must consider the working of the post-war gold standard. The speedy restoration of that standard was part of the process by which it was expected that readjustment might be effected ; but other parts of the process, notably those calling for freer world trade, were not carried through and readjustment has proved more difficult than was hoped. It is hardly surprising, therefore, that the gold standard, though as it had functioned adequately before the war, was not equal to the strain imposed on it when the maladjustments of the economic system, prevented by artificial means from working out their own corrective remedies, imposed on it the strain of a financial crisis of unprecedented severity.

61. The events which led up to the final breakdown are sufficiently familiar and need only be recapitulated very briefly. The second period of post-war credit expansion, to which we have alluded above (paragraph 44), culminated in a great industrial and speculative boom, mainly, but not wholly, in the United States. Towards the end of that boom, especially in 1929, the supply of capital available for long-term investments, particularly in the raw-material-producing countries, fell away very considerably. Even before the boom ended, the difficulty of raising new loans placed many countries, particularly those which had borrowed too freely, in a precarious financial position, so that they endeavoured, by every means in their power, to mobilise an active export surplus with which to meet their international obligations. There was a marked increase in the production of raw materials and an accumulation of world stocks. The inevitable result was to create a heavy selling pressure which rendered the price-structure very unstable. Those European countries also which had borrowed heavily in the period of reconstruction after 1925 were affected adversely by the difficulty of raising fresh loans. In order to meet their greatly increased interest obligations, they endeavoured to cut down imports and consume their stocks, thus adding to the price instability.

62. The financial obligations referred to arose from three main sources. Reparation payments and war debts were important, for several reasons. The very large figures that were first discussed and the difficulty of arriving at any settlement led to great political and economic uncertainty. Attempts at settlement necessarily involved a succession of political conferences with all their attendant delays and difficulties ; and in many cases the apparent impossibility of meeting such payments without increased economic productivity led to fresh capital borrowing.

Added to these inter-governmental debts there was, in the second place, a constantly increasing accumulation of long-term loans contracted by Governments and other public bodies through private banks and bankers.

The third source consisted of commercial debts contracted during the boom period, the amount of which was also very considerable.

The service of these various obligations was rendered possible for some years by the inflow of new capital into the borrowing countries. When these new investments fell off suddenly in the later stages of the boom period the commitments could be met only in three ways — by the export of an increasing volume of goods, by the export of gold, or by obtaining short-term credits to tide over the emergency.

63. The financial stringency thus created in the borrowing countries was accentuated by the fact that in this period, and particularly after the stabilisation of the franc, there was a strong movement of short-term balances back to France. ¹

¹ Full information concerning the movement of capital between France and other countries is not available; but the following data, quoted from the forthcoming issue of the League of Nations annual publication on balances of payments (*Balances of Payments, 1930*), reflect the trend of these movements since 1927. The figures are based upon studies by M. P. Meynial, originally published in the *Revue d'Economie politique*. They represent the net balance of capital movements, calculated indirectly from the trade in goods, services and gold. Reparation receipts and the amortisation of war debts are treated as services and are thus not included in the balances

64. The debtor countries in these circumstances used all three methods mentioned in paragraph 61. By dint of serious efforts and sacrifices, they created considerable export surpluses in their commodity trade, thus adding to the selling difficulties on the world's markets.

65. At the same time the pressure on their foreign exchanges forced them below the gold export point and there began a steady outflow of gold to France and the United States. This flow of gold soon assumed such proportions that the currency systems of many countries were imperilled by the loss of their gold reserves.

66. The third possible course of action was also pursued, particularly by the European debtor countries. As their situation became more difficult after the summer of 1929, they contracted large short-term loans to support the currencies from depreciation. These short-term obligations later rendered them particularly vulnerable when the economic depression set in.

67. The collapse of the American stock-market boom in October 1929 greatly accentuated the fall in prices, which was particularly severe in the case of certain raw materials. Stocks had accumulated and in many cases controls had been established. When credit stringency and a marked drop in consuming power followed quickly on the collapse of the speculative boom, the pressure on the price-levels was too strong to be resisted. World markets were demoralised and controls collapsed. A fall of prices, unprecedented in its severity and its persistence, set in which completed the embarrassment of the borrowing countries. As will be seen from the list of countries quoted in paragraph 2 above, many raw-material-producing countries were forced off the effective gold standard as early as 1929 and 1930.

68. The situation became worse when the difficulties of a great Austrian bank, the Creditanstalt, were revealed in May 1931. In many Central and Eastern European countries, both agricultural and industrial developments had for some years been sustained by over-extended credit advances, based largely upon a continuous supply of foreign capital. The stoppage of foreign loans and the heavy fall in agricultural prices from 1929 onwards placed the banking institutions of these countries in a very difficult position. The troubles of the Creditanstalt, which in 1930 had taken over the embarrassed Boden Creditanstalt, signalled the collapse of the over-extended credit structure. The effect of the collapse spread rapidly to other countries, and was reinforced by fear, amounting to panic, for the safety, not only of short-term advances, but also of deposits. The storm-centre shifted rapidly from one country to another. Certain Berlin banks were in difficulties within a few weeks, and it was not long before the international financial relations of all the Central and Eastern European countries were affected.

69. By this time a large part of the world was in fact off the gold standard ; but the panic extended further in the following months. In August and September, doubts were raised of the financial position of Great Britain, which was known to be heavily involved in the short-term investments now locked up in Central Europe and to have serious budgetary difficulties. A heavy and increasing drain set in which rose to the dimensions of an international "run" on London. British securities were heavily sold and short-term balances held in London were drawn upon. Despite assistance from Paris and New York, Great Britain finally suspended the gold standard on September 21st. Almost immediately a large number of other countries also suspended the operation of the gold standard.

70. The panic did not stop even at this point. There were heavy withdrawals of funds from New York in the latter months of the year which caused a large outflow of gold.

shown. The territory considered includes, besides France, her oversea territories with the exception of Indo-China :

	Net capital export	Net capital import
	\$(000,000's)	
1927	504	—
1928	236	—
1929	—	20
1930	—	252

No division between long and short-term capital operations is made ; but it is known that the bulk of the capital exports during the years preceding 1929, as well as of capital imports from that year, has been in the form of short-term operations.

71. Although Japan was the only important country to cease gold payments later, a very important consequence of the shock to credit continued to be evident in the measures taken by many banking systems to liquidate a portion of their foreign balances and build up heavy gold reserves.

72. Outside the banking sphere also, this preference for gold has been paralleled, by private hoarding both of currency notes believed to be of unquestioned value and of actual gold.

73. The recital of these events by which the gold standard has been unable to function is sufficient in itself to indicate that the causes which provoked them lie deep in the economic, financial and monetary instability of the post-war period. In a previous interim report¹ the Delegation has dealt with one phase of the process that has just been sketched — the uneven distribution of gold reserves among the Central Banks of the world. This phenomenon has proved to be an intermediate stage in the development of the instability which had its roots in war and inflationary disturbances of the economic system, and which has finally caused the breakdown of the international monetary mechanism which the world had painfully constructed in the long period of relative peace before the world war.

V. RESTORATION OF THE GOLD STANDARD.

74. In face of the situation which has just been outlined, it becomes necessary to consider the policies to be followed in the immediate future both by those countries which still maintain the gold standard and by those which have abandoned or restricted it. The present position is that, with only some six countries maintaining an unrestricted gold standard, the functioning of that standard as an international monetary mechanism has been greatly restricted. Side by side with it there now exists a variety of other currencies whose exchange relations with the gold countries and with each other are no longer kept in equilibrium by their common relationship to gold, but must be governed by other means. Some of these currencies are on an independent basis of inconvertible paper, a large group of them being maintained at parity with sterling; others are maintained at nominal gold parity by the control of foreign payments and foreign trade.

75. The first effects of the abandonment of the gold standard were reflected in an alteration of the exchange parities. The results of such an alteration have still to work themselves out, but it is already clear that they involve important changes in the relative price-levels of the countries concerned, which, if maintained, will exert a far-reaching influence upon the course of international trade and international payments.

76. The restrictive measures by which many countries are at present maintaining the nominal gold parity of their currencies involve a heavy cost, since the cumulative effect of such restrictions has been to sacrifice a large part of the foreign commerce of the world. This heavy cost should be weighed against the risks of exchange fluctuations and, in some cases, the possibility of a breakdown of the currency system.

77. If a number of the most important commercial countries remain off the gold standard for a considerable period, the major problems of the functioning of that standard will present very different aspects from those which the Delegation was called upon to study at the outset of its work. It is conceivable that the complete process of restoration, if and when it is decided upon, will take a prolonged period to effect.

78. The Delegation, however, records its belief that, at the present stage of world economic development, the gold standard remains the best available monetary mechanism.

It is impressed by the practical difficulties and dangers of regulating currencies which are not on a common world basis, and by the very great desirability of agreement upon an

¹ Document C.75.M.31.1931.II.

internationally accepted standard in order to facilitate the free flow of world trade. Whatever the theoretical advantages that may be urged in favour of other monetary systems, their universal adoption presents very grave, if not insuperable, practical difficulties at the present time. The Delegation is, moreover, of the opinion that, granted the general acceptance of certain guiding principles, the gold standard is capable of functioning in such a way as to achieve most of the advantages of stability and justice claimed for alternative standards more broadly based on commodities other than gold.

79. The alternative to the restoration of the gold standard would appear to be a state of affairs under which many currencies are maintained upon a basis of inconvertible paper money, and fluctuate independently or by groups. In addition to the difficulties of management inherent in such a system, there would arise once again the continually varying foreign exchange rates which the Genoa Conference regarded as so serious an impediment to the restoration and extension of international trade. The virtual elimination of this exchange uncertainty was the main monetary achievement of the last decade. While some degree of exchange fluctuation, and possibly some extension of the area affected, may be inevitable in present circumstances, it would appear desirable to circumscribe that area and limit the duration of this period as much as possible, in order that steady progress towards exchange stability may be resumed at the earliest possible moment.

80. Although it is obvious that the time and level — as well as the particular form of restoration of the gold standard, should that be decided upon — can be determined only by the proper authorities in the countries concerned, the Delegation considers the return, within the shortest possible time, to the international gold-standard system of such vital importance for economic and financial development that it feels its obligation to consider the policy that should, in its view, be followed in order to facilitate the achievement of that aim. That policy depends upon all those measures which can be taken by international co-operation and by national efforts to restore equilibrium in the economic and financial structure of the countries that, for the present, have lost that equilibrium.

81. Among the measures of an international character we mention, in the first place, the restoration of a reasonable degree of freedom in the movement of goods and services. The fulfilment of this condition is essential for the restoration and the maintenance of the gold standard on an international scale. As long as the countries concerned suffer from the narrowing of world markets so that they cannot pay their debts in goods and services, they will be prevented from improving their economic situation sufficiently to enable them to return to the gold standard.

A satisfactory solution for the problem of reparation payments and war debts forms the second desideratum. Although we are not of the opinion that this problem is the main cause of the difficulties with which the world is now faced, we consider its final solution, at the earliest possible moment, an essential factor for a return of the lost confidence in the sphere of international finance. The gradual and cautious resumption of international credit and capital movements, which seems to us of vital importance for the working of the gold standard, cannot be expected before this problem is solved.

In the third place, certain guiding principles in respect of the working of the gold-standard system should be adopted by the Central Banks adhering to that system. The most important of these principles is that, as a general rule, gold movements should not be prevented from making their influence felt both in the country losing gold and in the country receiving gold. Not only should these movements not be prevented from exercising their influence, but their working should be reinforced by other means — especially by changes in the discount rates and by open-market operations — when the disequilibria of which the gold movements give evidence cannot be removed merely by the effects of those movements.

82. In addition to these measures of an international character, we consider it essential that in each individual country the necessary steps shall be taken to restore and to maintain equilibrium in the national economy. This means that the budgets of the State and other public bodies must be balanced on sound principles, and also that the national economic system as a whole, and especially costs of production and costs of living, should be adjusted to the international economic and financial position, so as to enable the country to restore or to maintain the equilibrium of its balance of international payments.

83. It is for the Governments and the Central Banks, in national and international co-operation, to take these measures and to fulfil the requirements and conditions explained in the foregoing paragraphs. The earlier they do so, the sooner the international gold standard will spread its beneficial working over a gradually extending area, and the sooner will be removed the monetary instability which has been so deplorable an effect of the disequilibria we described set out in Section IV and which has now become one of the major causes of further economic deterioration.

PART II. — THE PURCHASING POWER OF GOLD.

84. In the first part of this Report we have examined the situation created by the abandonment of the gold standard on the part of so many countries during the depression. But, after due consideration of this situation, we have concluded that the restoration of the gold standard is desirable. The second analytical part of our Report proceeds, therefore, upon the assumption that the gold standard will be restored and that it is desirable now to ascertain the causes and effects of the variations in the purchasing power of gold, and the conditions under which this standard may be expected to function more adequately in the future than it has in the recent past.

VI. MEANING OF " THE PURCHASING POWER OF GOLD ".

85. The Delegation was appointed to " examine into and report upon the causes of fluctuations in the purchasing power of gold and their effect upon the economic life of nations ".

It is desirable therefore to define what is meant by the term purchasing power of gold. The word gold is employed in this context to embrace, not simply the metal in its monetary use, but the whole currency of any countries employing the gold standard. The importance of this definition has already been stressed in Section IV, paragraph 41, and the relationship between gold and the banking and credit structure based on it has been explained in Sections II and III.

86. The reverse of the purchasing power of any currency is the price-level expressed in terms of that currency. The term variations in the purchasing power of gold is therefore synonymous with the term variations in the levels of prices in countries on the gold standard. The levels of prices referred to are national levels reflecting the purchasing power of the different national currencies. There is no precise meaning that can be attached to the term international level of prices ; but, under the gold standard, the various national levels, being each based on gold, are kept in equilibrium one with another.

87. The commodity gold is used partly for industrial purposes, partly as a store of value in certain countries and partly as a foundation for elaborate monetary systems. The value of a unit of gold is, under the gold standard, fixed at a specific price in terms of the various national currencies, and these currencies are kept in close relationship with one another by the operations of foreign exchange. In order to discover the purchasing power of gold, therefore, we must first ascertain the purchasing power of these currencies in terms of actual commodities and services. In other words, the obverse, and only practical manifestation, of the purchasing power of gold is to be found in the prices of commodities and services.

88. Round the various meanings that may be attributed to the conception of the purchasing power of gold much discussion has centred : we do not think it is necessary for us to enter into these controversies. For our purpose, it is sufficient to state that the term purchasing power of money is used in different senses, of which the principal are its purchasing power over :

- (a) All objects of purchase and sale ;
- (b) All goods and services ;
- (c) Intermediate goods at various stages of manufacture ;
- (d) Consumption goods and services.

89. The term purchasing power of money is popularly regarded as meaning the purchasing power of money income as finally expended — that is, its power to buy the goods and services on which final income is spent. For measuring changes in such purchasing power,

an index of consumption goods and services is required. But the particular sense in which the term is employed must depend upon the particular problem that it is proposed to study.¹

90. After a careful consideration of the various possible implications of our terms of reference, we have selected certain aspects of the problem to which we have thought it desirable to pay special attention. These aspects, as the subsequent discussion will indicate, are not mutually exclusive but are rather cross-classifications. They are :

(a) The relationship between changes in purchasing power and the distribution of income, leading inevitably to a consideration of the effect of these changes on production ;

(b) The relationship between changes in purchasing power and economic booms and depressions ;

(c) The significance and importance of changes in the long-term trend of prices.

91. Our reasons for selecting these particular problems for study are :

(a) That we consider that the most serious ill-effects of price changes arise in connection with their influence on the distribution of income and consequently on production ;

(b) That the most violent movements are those that arise in connection with the recurrence of periods of economic boom and depression ;

(c) That the long-term trends of prices are dominantly influenced by factors which are largely independent of those which lead immediately to these periods of boom and depression. In this connection, we refer to the facts cited in Section VIII, which are important enough to deserve separate consideration even though it is impossible, except in theory, to separate such long-term tendencies from the shorter-term fluctuations out of which they emerge, while, on the other hand, the shorter-term fluctuations may be greatly influenced by the secular trend of the period in which they occur.

92. In order to measure the influence of changes of purchasing power on the distribution of the national income it is necessary to consider the prices of those goods and services on which the shares in that income are expended. It is necessary, therefore, to employ an index of consumption goods and personal services.

93. In a stable society in which the national income and the relative contributions to that income by the different factors of production remain unchanged, alterations in the prices of goods and services caused by monetary disturbances involve automatically alterations in the monetary value of the national income and in the share of each factor of production in that income. Under these conditions, stabilisation of the monetary factors would result in stabilisation both of total income and of income distribution. When, however, the national income is increasing or decreasing, as a result of increased or decreased productivity of the factors of production, stabilisation of those prices will result in a change in the distribution of income. This is obvious for the following reason. Under increasing productivity the quantity of goods (and services) produced rises. If the prices of that greater quantity of goods are prevented from changing, the share of the factors of production in the national income is affected. In such circumstances, a given sum of money will continue to buy the same quantity of goods, but the total quantity of goods constituting the national income has increased. Therefore all persons with fixed incomes will obtain a smaller proportionate share of the total, and the portion falling to those having variable incomes will rise.

94. If, therefore, the purchasing power of money over consumption goods and services is stable when the productivity of the factors of production is increasing, the price-level of goods must fall. If, on the other hand, the prices of goods are stable when productivity is increasing, variable incomes must rise, and, since fixed incomes are unchanged, the distribution of income is affected.

95. These fundamental facts make it evident that the effects of fluctuations in purchasing power will vary widely according to the conception of the term employed.

¹ See the different meanings attached to the term as set out in a paper by Dr. Gottfried Haberler prepared for the Delegation: "Die Kaufkraft des Geldes und die Stabilisierung der Wirtschaft", Schmolli's Jahrbuch, 55. Jahrgang, Heft 6, 1931, Seite 33-63.

We propose, in considering the international aspects of price movements, to employ the term as relating to the purchasing power of gold-standard money over goods sold wholesale (see below, Section XIV). The absence of variation in purchasing power so defined is, it should be remembered, compatible with changes in the distribution of income.

It should be recognised also that such an index fails to take account of many elements of the national price-structures — such as prices of real estate, securities, and so forth — which are of importance in determining domestic credit policies and to which reference is made in Section VII.

96. Our reasons for adopting the definition given above are three : First, an index of wholesale prices measures those fluctuations of the purchasing power of money which, when there is a reasonable degree of freedom of trade, are common to all countries and have a direct international influence. This influence is, in such conditions, exerted by the fact that all countries participate in international trade, and the prices of the commodities which enter international trade not only form a significant part of the domestic price-structures, but, through their effect upon the foreign exchange rates, exert a profound influence upon the volume of credit and therefore upon the level of domestic prices. The only index which measures the price-fluctuations of the commodities which enter into international trade is an index of commodity prices at wholesale. Secondly, the construction of an index of wholesale prices involves less serious technical difficulties than that of any other form of price-index.

97. To the extent to which the problem of the meaning of the term “ purchasing power of gold ” is considered, not simply for purposes of economic analysis, but in connection with the objective of monetary policy, is there a third and determinant reason for employing it in the sense that we have chosen. Changes in the distribution of national income take place under conditions of stable wholesale prices, as we have already indicated, when the productivity of the factors of production changes. An attempt by any country to avoid such changes would be theoretically possible only if (a) the increase or decrease in the productivity of its factors coincided with those of other countries, or (b) it was prepared to abandon the international monetary standard to which it belonged. This theoretical difficulty — we are not at the moment concerned with the practical issues — may perhaps best be explained by means of an illustration.

98. If two gold standard countries, *A* and *B*, both attempted to stabilise, not the prices of goods, but the prices of the factors of production, which is the same as preventing a change in the distribution of income, and in *A* productivity rapidly diminished while in *B* it remained constant, then prices of goods in *A* would rise. This rise in prices in *A* would lead to an export of goods from *B* to *A* and an export of gold from *A* to *B*. Were *A*, in spite of this exodus of gold, to attempt to maintain unchanged the price of the factors of production (*e.g.*, the level of wages), then the export of gold would be continued until ultimately she was forced off the gold standard.

99. The international stability of the prices of goods, so long as those goods are, broadly speaking, such as enter into international trade, does not involve any such paradox. If, however, such stability is the object of monetary policy, a number of theoretical and practical problems in connection with the measurement of prices do arise. With certain of those problems we deal in Section XIV. Here we merely desire to repeat the main conclusions arising out of this preliminary discussion of the fundamental issues (a) that, for the measurement of purchasing power of gold in the popular conception, an index of consumption goods and services is required, but (b) that, if any attempt is made to stabilise purchasing power internationally, efforts must be confined to purchasing power, not over such goods, but over intermediate products, for which purpose a wholesale price-index is necessary, and (c) that by gold we mean the monetary systems based on gold.

VII. THE MEASUREMENT OF FLUCTUATIONS IN PURCHASING POWER.

100. The conception of a price-level, or general level of prices, usually conceived as an average measured by some form of index-number, is the subject of much discussion among economists at the present time.

The various instruments of measure now in use for ascertaining changes in the general level of prices are all constructed on national rather than international bases. They are measures of the purchasing power of different national currencies. The only conceivable international index that might be constructed would be a wholesale price index-number of those comparatively few commodities, mainly raw materials and foodstuffs, which enter largely and steadily into international trade. The technical difficulties of constructing such an index-number would be very great. The commodities which enter into international trade vary from time to time as shifts in prices enlarge or contract the market areas of the commodities concerned, bringing marginal commodities into or excluding them from international trade. Differences in price quotations in different areas are the reason for trading. Selection of specific quotations and, still more, of appropriate weights would be difficult. If such an index were compiled, it would be difficult to know what exactly it measured, since the range of commodities included must be limited. Moreover, since any modification of price-levels can be achieved only through national monetary conditions, there is additional reason for concentrating upon the measurement of variations in national price-levels. Under the normal working of the gold standard, it could safely be assumed that foreign exchange operations would keep the national purchasing power of different countries, not indeed equal, but in equilibrium.

101. The original purpose for which index-numbers of the wholesale prices of commodities were constructed was limited to illustrating, by approximate statistical measurements after the event, the long-term movements in the general level or average of prices. The first index-numbers, constructed in England, showed a fair degree of identity of movement in spite of considerable divergence in their methods of construction, and this fact contributed a good deal to the belief that there was a general level of prices, movements in which, however measured, showed great regularity, being due, in fact, to changes in monetary conditions and especially in the supply of gold. All of these index-numbers, however, were constructed by means of the same sort of wholesale commodity prices, and their identity was most marked when the correlation was between long series of yearly quotations. While such measurements undoubtedly indicate the direction of long-term trends in the general purchasing power of money, they can hardly be taken as measuring with any exactitude the magnitude of these changes, since there are many commodity prices and prices of important services which do not change as rapidly as the wholesale prices of the sort of commodities usually chosen.

102. In recent years, a good deal of attention has been directed by economic statisticians towards devising a measure for changes in general purchasing power. The ideal of such a measure, considered merely as a reflection of changes in the value of money, would obviously be an index of all transactions involving the use of money, including, not only the exchange of commodities, but also such factors as wage-payments, investment in capital goods or real estate. Such an ideal being obviously impossible, efforts have been made to build up a sample index by combining already existing indices, such as those for different sorts of commodity prices, for shipping and railroad freights, wages, etc.

103. If wholesale price-indices are applied to shorter-term movements, technical differences arising from such factors as the different commodities selected, the weights, base period and kind of average used in their construction cause considerable divergences from time to time. In other words, their usefulness in indicating broadly the long-term drifts in average prices is much greater than their precision even in indicating, and still less in measuring, short-period fluctuations of purchasing power as a whole.

104. As economic and statistical knowledge has increased and more abundant data have become available, there has been a notable tendency, not only towards the refinement and broadening of the original instruments of measure, but also towards the devising of special sorts of index-numbers for special purposes. Not only wholesale prices but retail prices are now measured, and within these general categories there are many specific groupings, so that, in many countries, information is available for the comparison of such contrasted groupings as imports and exports, raw materials and finished manufactures, consumers' goods and producers' goods. In addition, the method of index-numbers has been applied to the

measurement of prices other than those of commodities, and to many other economic phenomena. There are index-numbers of freight rates and car-loadings, of stock-market prices, bank clearings, wages, employment, the cost of living and many other series. As a result of this statistical activity, economists, bankers and business men in many countries now have at their disposal a large number of price- and business-indices, for the most part published at brief intervals and kept continuously up to date. One consequence of this rather confusing and often apparently contradictory mass of statistical information has been a clearer revelation of the intricacy of price-movements and relationships.

VIII. THE SECULAR TREND OF PRICES.

105. We define the secular trend of prices as those long-period upward or downward movements of prices over a relatively protracted period of years which persist in spite of briefer and more violent short-term fluctuations. As illustrated in the diagrams on the following page, which are extracted from the memoranda submitted to us by Professor Cassel and Mr. Kitchin and published as Annexes to our first interim report, the evidence of the later part of the nineteenth century and first decade of the twentieth, when the majority of the more important commercial countries of the world were employing some form of gold standard, shows that the curves of wholesale commodity prices and the curves representing the relative supply of gold, and particularly that of monetary gold, moved upward and downward in remarkably close conformity. In so far as gold constituted the basis of money and credit, some such similarity of movement would be expected. The demand for money increases as national wealth grows and if for any reason the production of gold falls behind this rate of increase and is not sufficiently compensated by economies in the use of gold, conditions would be created which would tend to restrict the basis and hence the pyramid of credit and so to depress prices.

106. This period was one of rapid development in all fields of economic activity, and means for economising the use of gold by the development of banking, the use of cheques, the arrangement of clearing facilities, etc., were gradually being improved in one country after another. But, in spite of this, the importance of the gold supply as a monetary factor in the evolution of prices would appear to have predominated during this period.¹

In view of these facts, it is in our opinion important to ascertain whether the supplies of gold in the future are likely to prove adequate.

IX. THE SUPPLY OF MONETARY GOLD.

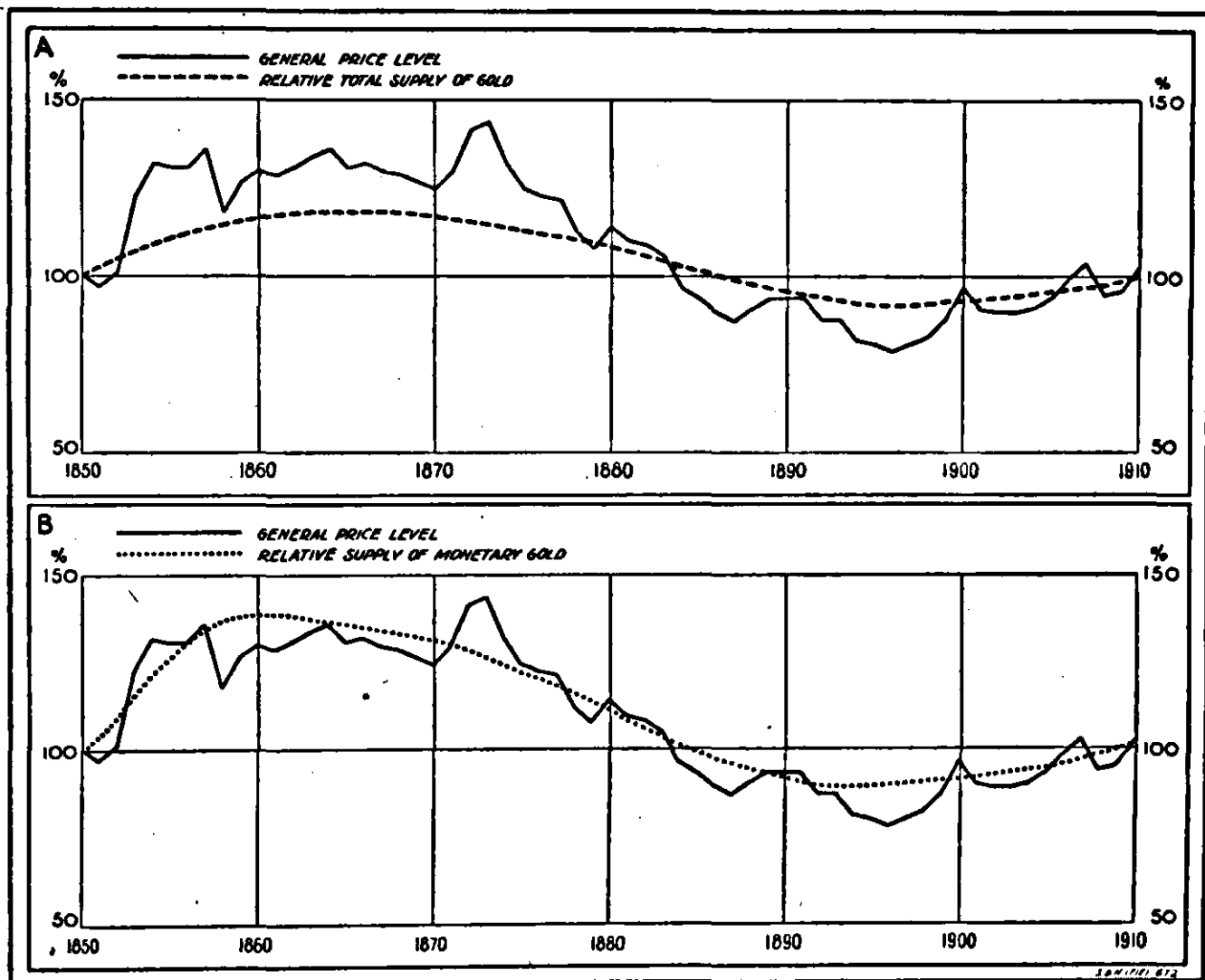
107. In our first interim report we attempted, on the basis of such statistical and other information as was then available, to present a picture giving the more significant features of the situation with regard to the supply of, and the demand for, gold, indicating the manner in which that situation seemed likely to develop in the near future.

108. We then reached the conclusion that, if prices were to be maintained at about the level ruling at the end of 1928, there was some danger of the supply of new gold proving inadequate at a relatively early date unless measures were taken to economise the use of gold for monetary purposes. The evidence seemed to point to a decline in the output of gold in about 1933, to a slight increase in the demand for non-monetary and a more rapid increase in the demand for monetary purposes. There were, however, as we pointed out, certain surplus stocks of monetary gold then available which, if distributed in such a manner as to support a maximum credit structure, might postpone any shortage being felt in the immediate future.

¹ See Annexes X and XI to our first interim report: "Supply and Demand", by Professor Gustav Cassel; and "The Supply of Gold compared with the Prices of Commodities", by Mr. Joseph Kitchin; and "The Functioning of the Gold Standard", by Dr. Feliks Mlynarski (document F. 979[F. Gold 67(1)]).

MOVEMENT IN WHOLESALE PRICES (ACCORDING TO THE SAUERBECK-STATIST INDEX)
COMPARED WITH :

- A. RELATIVE TOTAL SUPPLY OF GOLD (ACCORDING TO PROFESSOR CASSEL) ;
- B. RELATIVE SUPPLY OF MONETARY GOLD (ACCORDING TO MR. KITCHIN).



Note. — The curve for *Relative Total Supply of Gold* shows the changes in the percentage ratio of the actual total stock of gold accumulating from year to year (as calculated by the German *Statistisches Reichsamt*) to the "Normal Stock of Gold" calculated for each year by applying to the initial stock in 1850 the average annual rate of increase over the whole period 1850 to 1910. Similarly, the curve for *Relative Supply of Monetary Gold* shows the changes in the percentage ratio of the actual world stock of gold money in each year (as calculated by Mr. Kitchin) to the stock of gold money as it would have been if it had increased at an even rate throughout the same period. (For further details see First Interim Report of the Gold Delegation, Annexes X and XI, League of Nations, Geneva, 1930.)

109. Before proceeding further in our analysis of the problem of the gold supply, we wish at this point to record our opinion that the world's total stock of monetary gold, apart from any considerations as to its distribution among different countries, has at all times in recent years been adequate to support the credit structure legitimately required by world trade and that the rapid decline in prices, which began in 1929, cannot be attributed to any deficiency in the gold supply considered in this sense. During the six years from the end of 1925 to the end of 1931, the world's central gold reserves increased from about \$9,150 million to about \$11,350 million, or at an average rate of $3\frac{2}{3}$ per cent per annum.¹ Since this rate is not lower than the generally accepted normal rate of growth of production and trade in the gold-using countries as a whole, and since, in addition, certain economies were made in the use of gold, at any rate in the earlier part of the period considered, there seems to be little ground for believing that the total supplies of gold available for monetary use have not been sufficient to meet all reasonable demands.

110. In our first Interim Report we estimated that the gold production in 1930 would amount to just over \$400 million. It was expected to rise slightly above that figure during the next three or four years to some \$410 million, and then to decline comparatively rapidly. The actual increase in gold production in 1930, and more particularly in 1931, was considerably in excess of what was anticipated. The preliminary estimates available suggest that the output in the latter year may have amounted to something between \$445 and \$450 million. It is difficult to judge at present to what extent this increase has been due to the recent rapid fall in prices which has rendered gold-mining a more profitable industry. Canada has contributed substantially to it, and the immediate effect of Canada having gone off the gold standard will be to give a further stimulus to production. South Africa accounts for over one-half of the production of the world, and the output of that country has also increased beyond expectation mainly on account of an increased supply of native labour in the mines consequent upon the depression in agriculture. Even though the collapse in commodity prices may for a time act as a further stimulus to gold production, there can be no assurance that this increase will be maintained.

111. The possibilities of new gold discoveries and of improvements in the technique of extraction from the known resources of relatively low-grade ores must not be overlooked, particularly in view of the inducement to such discoveries and improvements offered by the present appreciation in the value of gold. The evidence at present available suggests, however, that such additions to the world's gold output as may result therefrom are likely to prove insufficient in the long run to compensate the anticipated decline in the output of the sources actually exploited, as the most important of these are gradually exhausted. On the other hand, however, the date at which the anticipated decline in the total gold production of the world will actually set in may, in the given circumstances, be postponed considerably beyond the turning-point suggested by us previously.

112. While the fall in prices has led to an increase in gold output, the non-monetary demand for gold has been seriously affected by the general depression. From time immemorial, the population of India has purchased very considerable quantities of gold. During the war and early post-war years, India was unable to satisfy her needs, and she consequently made exceptionally heavy purchases about 1924-25. In the five years ending March 1930, her average consumption for non-monetary purposes (net imports plus output from her own mines less increases in her central gold reserve) dropped back to somewhat over \$80 million per annum — a rate of consumption rather less than that of the last pre-war quinquennium. In the four years ending March 1930, it averaged somewhat less than \$70 million per annum. As a result of the economic depression, her non-monetary consumption fell in the calendar year 1930 to about \$65 million, and in the calendar year 1931 her exports of gold exceeded her imports by \$96 million, while her central gold reserve increased by \$34 million. As her domestic gold pro-

¹ Total monetary gold stocks (excluding gold hoards in all Asiatic countries and Egypt, but including the approximate amount of monetary gold held outside central gold reserves elsewhere) would appear to have increased in the same period from some \$10,250 million to approximately \$12,500 million, or at an average rate of $3\frac{1}{2}$ per cent per annum.

duction did not exceed \$7 million, India therefore in that year not only failed to make any net addition to her non-monetary gold stocks, but actually surrendered almost \$125 million of her old non-monetary gold primarily for monetary use.¹ Most of the exports took place in the last three months of 1931, when the premium on gold consequent upon the suspension of the gold standard naturally acted as a strong incentive to export. Concomitantly with the appreciation in the exchange value of the rupee in terms of gold since December 1931, a marked slackening of the outward gold movement from India has taken place in the first four months of 1932. If there is a further appreciation in the value of the rupee in terms of gold, the outflow of gold may well dry up, and the risk, furthermore, of India endeavouring to make good her recent losses, when the depression is past, must not be overlooked.

113. In our first Interim Report we drew attention to the fact that the information available concerning the use of gold for industrial purposes was far from complete. After a careful study of all the evidence which had been collected, we reached the conclusion that the total demand for non-monetary purposes, including that of India, China and certain other Oriental countries, and the amounts used for industrial purposes elsewhere, might be estimated at \$180-200 million. Since we wrote, the Director of the United States Mint, who has endeavoured for a number of years to collect evidence on the subject, has revised and somewhat reduced his estimate of gross industrial consumption in recent years. More recent evidence we have received points to the conclusion that a rather greater proportion of old gold than we had previously allowed for has probably been employed. It is possible, therefore, that the aggregate figure put forward by us for total non-monetary consumption for these years should be somewhat reduced. But, of the old gold used in recent years in the arts, a substantial proportion consisted of gold coin previously hoarded. It would appear that the supplies of such old coin were gradually running out before the present depression began, so that an increased demand by industry for new gold was to have been expected. During the depression there has been, as we will show, a very considerable transference of non-monetary gold and unrecorded hoarded coin to the reserves of Central Banks, and we may consequently anticipate that, when industry revives, the older hoards of gold coin will be found to have been very largely depleted and industry will have to rely to a considerably greater extent than heretofore on new gold from the mines.² On the other hand, the use of gold in the arts has naturally fallen off rapidly during the recent exceptional economic depression.

114. The monetary requirements of new gold are determined to-day by the amount of notes and other sight liabilities of Central Banks, by the laws regulating their cover requirements and by the average rate of economic development in gold-standard countries. We showed in our first Interim Report that the minimum legal requirements at the end of 1928 amounted to 29-34 per cent of notes and other sight liabilities of Central Banks, and the actual reserves to 40 per cent. As some margin above minimum requirements must normally be held, the actual stocks were at that date clearly far from excessive.

115. It has been generally assumed that the very heavy fall in prices which has taken place since we wrote has resulted in a large diminution in the monetary demand for gold, and that in consequence the danger of a gold shortage making itself felt is no longer real. It is true that our object was to indicate certain conditions which appeared to us essential to the maintenance of the price-level, and that the failure to maintain that level has affected the hypothesis on which our arguments were based. But unfortunately the assumption that the monetary requirements of gold have greatly contracted is incorrect. On the one hand, the sight liabilities of Central Banks have been less affected by the fall in prices than might have been expected; on the other, as we shall show below, the demand for gold is likely to be materially increased by the influence of recent events on the gold-exchange standard.

¹ By the end of March 1932 the amount of gold thus surrendered by India had increased to about \$180 million. Part of this gold, however, seems in fact to have accrued to hoards or to commercial bank reserves in some of the countries to which it has ultimately gone.

² The gold coin and bullion contained in the recently constituted hoards in certain Western countries will presumably in the first instance find their way to central monetary reserves.

116. We showed in our first Interim Report that the total of notes and other sight liabilities of Central Banks in gold-using countries at the end of 1928 aggregated some \$24,600 million. Excluding the Union of Soviet Socialist Republics, which constitutes a self-contained economic system practically divorced from the rest of the world, the aggregate amounted to some \$22,800 million.

The detailed figures (excluding the U.S.S.R.) for that and subsequent years are :

End of	\$(000,000's)			Wholesale index of U. S. Bureau of Labor Statistics 1926 = 100
	Notes in circulation	Other sight liabilities	Total sight liabilities	
1928	17,275	5,493	22,768	95.8
1929	17,078	5,523	22,601	93.3
1930	16,776	5,669	22,445	79.6
1931	16,456 (17,103) ¹	5,190 (5,476) ¹	21,546 (22,579) ¹	68.6

The wholesale price-index of the United States Bureau of Labor Statistics has been included above for purposes of comparison. While that index, which might to some extent be taken as representative of the general movement of prices in gold-standard countries, dropped by almost 30 per cent between the end of 1928 and the end of 1931, total sight liabilities of Central Banks and other note-issuing institutions (excluding those in the U.S.S.R.) as shown above only contracted by something between 1 and 5 per cent.² On the other hand, the total minimum legal gold requirements of the countries considered increased by somewhat more than 2 per cent in the same period.¹ This discrepancy is explained by the comparatively large legal gold requirements, not only for notes, but also for other sight liabilities in some of the countries where total sight liabilities increased most rapidly.

117. The failure of the sight liabilities of Central Banks to contract to any appreciable extent in spite of the great drop in wholesale prices must be attributed in part to the fact that other values, retail prices, wages, etc., have not dropped in proportion, in part to the fact that the velocity of circulation has substantially decreased, in part, at later stages of the depression, to the hoarding of notes which has taken place on a large scale in some countries and the maintenance by commercial banks of larger reserves with the central institutions.

118. While up to the present, therefore, the depression has had little influence in reducing the monetary demand for gold, a continuance of a lower price-level than existed in 1928 would eventually have this effect, especially when there is a return of notes from hoarding. Unless prices should revert to the 1928-29 levels, it seems inevitable that the volume of sight liabilities of Central Banks will adjust itself downward, in which case there would be less demand for gold, which might postpone for some period the time when a shortage in available supplies of gold would need to be feared.

119. The situation will be influenced also by the following factors : (a) the effect of the depression on the size of the monetary gold stocks (see paragraphs 120-122); (b) the new demand for gold that has arisen for the purpose of converting Central Banks' foreign exchange reserves into gold and, temporarily, for hoarding purposes in certain Western countries (see paragraphs 123-125); and (c) the distribution of gold (see Section X).

¹ In view of the fact that many countries were off gold at the end of 1931, the significance of world figures for minimum gold requirements at that date is, of course, rather formal than real.

² The apparent drop in the total expressed in terms of dollars at the current rate of exchange between 1930 and 1931 is in fact misleading, as it merely reflects the depreciation in the external value of the currencies of those countries which went off the gold standard in the autumn of 1931. Since the internal value of their currencies had changed but little by the end of the year, while their Central Bank sight liabilities were almost identical at the end of 1930 and the end of 1931, it would appear preferable to convert the figures relating to these countries at the former dollar parity in order to obtain a more satisfactory measure of the real volume of Central Bank currency. The world figures for the end of 1931 thus corrected are given in brackets in the statement above, and should be used for purposes of comparison in preference to the uncorrected figures shown for the same date. The increase in total sight liabilities which, according to the corrected figures, took place in 1931 was mainly due to France, the United States, Switzerland, the Netherlands and Belgium.

120. The growth of the world's monetary gold reserves and total stocks in recent years may be estimated as follows :

End of	MONETARY GOLD STOCKS						Increase in total stocks	
	Reserves ¹		Other stocks ¹		Total ¹			
	Excluding U.S.S.R.	Including U.S.S.R.	Excluding U.S.S.R.	Excluding U.S.S.R.	Including U.S.S.R.	Excluding U.S.S.R.	Including U.S.S.R.	
1925	9,054	9,148	1,096	10,150	10,244			
1928	9,919	10,011	1,041	10,960	11,052	1925-1928 p. a.	270	
1929	10,251	10,398	874	11,125	11,272	1929	165	
1930	10,798	11,047	709	11,507	11,756	1930	382	
June 1931	11,122	11,383	695	11,817	12,078	6 months 1931	310	
Dec. 1931	11,021	11,349	

121. The above figures bring out three highly significant facts :

(a) That in the four years 1926 to 1929 somewhat more than \$250 million of gold per annum were added to the visible monetary stocks (including those of the U.S.S.R.), which would suggest that rather less than \$150 million remained for non-monetary consumption. We know, however, that part of the increase in these stocks even during that period was due to supplies of old coin not included in our figures ; the non-monetary consumption of new gold may therefore have somewhat exceeded \$150 million.²

(b) That in 1930 the addition to monetary stocks (including those of the U.S.S.R.) exceeded the total world production of new gold by about one-seventh and in the first half of 1931 by nearly 50 per cent. While the monetary demand for gold as measured by legal minimum cover requirements increased comparatively little between the end of 1928 and the middle of 1931, central gold reserves rose by about \$1,200 million (including the U.S.S.R., by about \$1,370 million). This rise was partly due to the absorption of some \$350 million from other monetary gold stocks.

(c) That in spite of the increase in the gold production and the large amounts of old non-monetary gold which became available for monetary use in the latter half of 1931, the total of the world's central gold reserves was less at the end than in the middle of that year.³

122. Reference has been made above to the fact that the use of gold in the arts has fallen off rapidly on account of the exceptional economic depression since 1929. The available information does not as yet permit of any precise estimate of the magnitude of this decline. But, even if it be presumed that the industrial demand for gold in the eighteen months ending June 1931 was reduced by a-half, not less than \$300 million of old non-monetary gold must in that period have found its way into monetary gold stocks. The provenance of all this additional gold is not definitely known ; but the available information suggests that a large proportion of it was derived from China, where the collapse in silver prices led to an export of a part of the

¹ For details see Annex. The column " Other Stocks " is incomplete, as it ignores altogether the gold hoards in Asia and Africa and certain hoards also in other parts of the world for which no estimate can be made. It only includes stocks actually recorded and, in addition, such other amounts of gold in circulation or with commercial banks in certain countries as may be estimated with a reasonable degree of accuracy. The figures given do, however, reflect the gradual concentration of gold from these stocks into central gold reserves which was taking place up to the end of June 1931. Since that date, the tendency has been reversed, as fear of investment losses has led to new hoarding on a very considerable scale in certain countries. The amount of this new hoarding in the various countries is, however, unknown ; a comparison of the changes in total monetary gold stocks cannot therefore be extended beyond the end of June 1931.

² From the revised figures now available for the industrial consumption of new gold in principal countries, it may be concluded that total non-monetary consumption, including that of India and other Eastern countries, during the period in question probably amounted on an average to something between \$150 and \$160 million per annum.

³ By the end of March 1932, however, aggregate gold reserves had again risen somewhat above the figure for June 1931 (see paragraph 128, below).

hoards slowly accumulated through centuries. While India still attracted gold for non-monetary use in 1930, it began in the first half of 1931 to surrender hoarded gold for monetary use, and gold may have come forward from hoards in other countries as well. The rapid fall in commodity prices since 1929 and consequent rise in the monetary value of gold, combined with the destruction of private fortunes as a result of the depression, must further have acted as an inducement in other parts of the world to return gold from non-monetary to monetary use.

123. Were it not for other factors that have arisen, the threatened shortage of gold to which we drew attention in our first Interim Report might have been averted for some years. When our first Interim Report was published two years ago, a considerable number of countries were operating under the gold-exchange standard under which they were legally entitled to keep a part or the whole of their reserves, not in gold, but in liquid assets abroad. The Central Banks in other countries were also accustomed to maintain considerable foreign assets which in practice they employed to meet demands made on them for foreign currency. To what figure the aggregate of such floating foreign balances of Central Banks amounted we do not know, as in many cases they were not published separately and in full. The published figures alone, which must have been substantially short of the real total, amounted to almost \$3 milliard at the end of 1930. Not all this total was held by countries legally on the gold-exchange standard, but, since several of the other countries which have in the past used foreign assets as additional reserves have also converted a large proportion of these assets into gold in recent months, we quote that figure as an upper limit for the possible additional demand for gold that may ultimately arise from the distrust of foreign currency assets as a substitute for gold. As however the Central Banks, particularly in certain smaller countries, may be expected to continue in some measure to hold foreign exchange in addition to gold, we consider it unlikely that this upper limit will in fact be reached.

124. Although this system was so widely and so largely practised, it had in recent years caused certain misgivings for a number of reasons into which we need not enter here, but more especially because it was felt that it involved on the creditor bank a risk of exchange depreciation in the country where the assets were invested. This risk has proved to be a real one, and there has, as a result, been a rapid conversion of available assets into gold. Unless, when the gold standard is once more put into general and effective operation, some measures are adopted either substantially to lessen this risk or to devise a new system in place of the post-war gold-exchange standard, the additional demands for gold arising from the partial abandonment of the practice of maintaining reserves in foreign currencies may counterbalance the recent abnormal augmentation in the available stocks of monetary gold.

125. Although gold production in the latter half of 1931 may have reached \$225 million, and India alone surrendered some \$105 million of old non-monetary gold in that period, central gold reserves were about \$35 million lower (excluding the U.S.S.R., about \$100 million lower) at the end of December than they were at the end of June. Considering the fact that in other countries important amounts of old non-monetary gold have likewise become available for monetary use, the total sum hoarded in this period is likely to have exceeded \$400 million.

X. THE DISTRIBUTION OF GOLD RESERVES.

126. In our second Interim Report¹ we dealt in some detail with the causes and consequences of the uneven distribution of monetary gold reserves. In the following paragraphs we add more recent information which indicates that the problem has been sharply accentuated in the intervening period.

In considering this question, it is convenient to deal with the gold in the reserves of Central Banks and Treasuries only, and to ignore the estimated amounts of other gold in private hands or in commercial banks.

¹ Document C.75.M.31.1931.11.

127. At the end of June 1931, over 60 per cent of the central gold reserves of the world apart from the U.S.S.R.) were in two countries — the United States of America and France.

CENTRAL GOLD RESERVES

	30/VI/31	Change since 31/XII/28	
		\$(000,000's)	%
U. S. A.	4,593	+ 847	+ 22.3
France	2,211	+ 964	+ 77.4
Total	6,804	+ 1,811	+ 36.3
Rest of world (excluding U.S.S.R.)	4,318	— 608	— 12.3
Grand total	11,122	+ 1,203	+ 12.1

Thus, in the two and a-half years ending June 1931, these two countries received most of the additional monetary gold becoming available either from the mines or from other sources, plus \$608,000,000 from the reserves of other countries.

128. Since June 1931 the situation has greatly changed as is shown in the following statement relating to the end of December 1931 and the end of March 1932, respectively.

CENTRAL GOLD RESERVES

	31/XII/1931	\$(000,000's)		31/III/1932	Change since 30/VI/31	
		Change since 30/VI/31	%		Change since 30/VI/31	%
France	2,683	+ 472	+ 21.3	3,010	+ 799	+ 36.1
Switzerland	453	+ 291	+ 179.6	471	+ 309	+ 190.7
Netherlands	357	+ 157	+ 78.5	353	+ 153	+ 76.5
Belgium	354	+ 154	+ 77.0	350	+ 150	+ 75.0
Total	3,847	+ 1,074	+ 38.7	4,184	+ 1,411	+ 50.9
United States	4,051	— 542	— 11.8	3,985	— 608	— 13.2
Rest of world (excluding U.S.S.R.)	3,123	— 633	— 16.9	3,067	— 689	— 18.3
Grand total	11,021	— 101	— 0.9	11,236	+ 114	+ 1.0

By the end of March the United States had lost over \$600 million¹, while France had received another \$800 million, Switzerland over \$300 million and the Netherlands and Belgium some \$150 million each or, all together, more than \$1,400 million. If the sums retained by commercial banks and private persons be included, the gold acquired by these four European countries probably exceeded \$1,700 million. The rest of the world (apart from the Union of Soviet Socialist Republics) had suffered a further loss of almost \$700 million, or more than 18 per cent of their central gold reserves; in spite of the greatly increased supply of gold for monetary purposes, the total of these reserves was only one per cent greater at the end than at the beginning of the nine months' period considered.

129. We quote these facts in order to show the magnitude of the disequilibrium, and to indicate how rapidly changes in the situation are effected. The growth in the gold reserves of France, Switzerland, the Netherlands and Belgium was in part due to that conversion of

¹ Of the decrease — \$608 million — shown in the table \$41 million in gold coin had flown back into domestic circulation or hoards. An amount of some \$35 million from domestic gold production accrued to the central gold reserves in the nine months ending March 1932. Actual net exports of gold in the same period amounted to \$286 million, while a net balance of \$317 million was placed under earmark for foreign account.

foreign assets into gold to which we have alluded in paragraphs 123-124 above and also to the repatriation of capital by their commercial banks and to the inflow of foreign capital seeking temporary protection from the risk of currency depreciation elsewhere.

130. We do not think it necessary at this point either to trace the history or to analyse the causes of the distribution of gold in the world to which we refer in Section II of this Report ¹. Its importance, so far as the particular problems submitted to us for consideration are concerned, lies primarily in the above-mentioned considerations and in the fact that, in connection with a general and effective restoration of the gold standard, a modification of the present distribution will be required. It may be useful further to illustrate the reciprocal effects of the present depression and the distribution of gold. We show therefore in the diagram on the opposite page the changes that have taken place in the gold reserves of various groups of countries since 1925.

131. Certain of the causes that contributed to the results shown in the diagram are indicated in other paragraphs of this report. We desire here to draw attention to the continuous strain on the monetary systems of the great majority of the countries of the world caused by the disequilibrium in the balance of payments of certain countries which those movements reflect — a disequilibrium which became more serious as prices declined. Since the end of 1928 this strain has grown constantly more intense.

132. We deal incidentally with the evolution of events in Section XII (b), and in the final section of our Report with the principles of monetary and economic policy which, in our opinion, are a condition of the normal working of the international gold standard.

Before these principles can take full effect, a change in the distribution of gold reserves must take place.

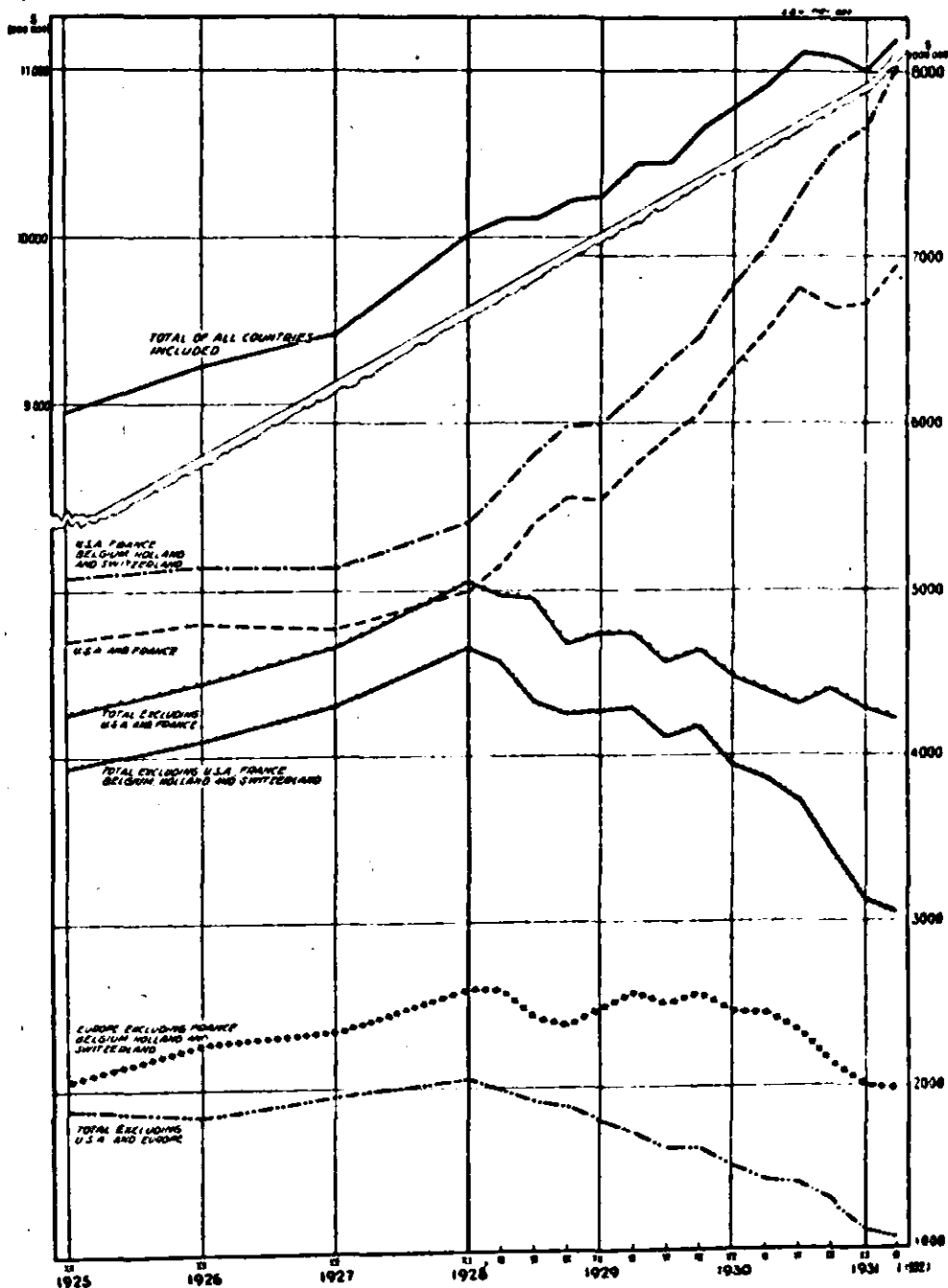
XI. SHORT-TERM FLUCTUATIONS OF THE PRICE-LEVEL.

133. We have pointed out in Section VIII the connection over a long period between the supplies of new monetary gold and the long-term drift or secular trend of prices. In this section we draw attention to the complication of shorter-term fluctuations in the price-level which are often referred to as cyclical. It is disputed whether these shorter-term fluctuations have any direct connection with the monetary supply of gold ; but the available evidence seems to point to the conclusion that the period of declining prices in a business cycle is likely to continue longer if the long-term trend of prices is downward, and, on the contrary, is likely to be arrested earlier if it is upward.

¹ See also "Second Interim Report of the Gold Delegation of the Financial Committee" (document C.75.M.31.1931.II), and "Selected Documents on the Distribution of Gold, submitted to the Gold Delegation of the Financial Committee" (document C.102.M.38.1931.IIA).

CHANGES IN THE GOLD RESERVES OF CENTRAL BANKS¹ AND TREASURIES.

The following countries are excluded throughout : Union of Soviet Socialist Republics, Cuba, Mexico, Central American Republics, Paraguay, the Philippines, Straits Settlements and Turkey.



¹ Including the "Banco de la Nación Argentina", which, although not a bank of issue, acquired a considerable gold reserve in 1927 and 1928 in view of a proposed banking reform; practically the whole of this reserve was subsequently exported.

134. We view the business cycle as a more or less rhythmical oscillation of a very complex price-structure and business activity around a hypothetical norm of stable relationships. The normal position of equilibrium is never reached and never can be realised except upon the theoretical assumption of a static society. The economic arrangements of modern life are a moving process, always in disequilibrium to a greater or less degree. This disequilibrium is the price of progress; it is the manner in which adjustments are constantly being made to new factors, both monetary and non-monetary, which change the pattern of production and trade and alter existing price-relations. The forces producing instability are inevitably complex, so that the resultant price-changes have defied any attempt at simple analysis or explanation. Some degree of cyclical oscillation is probably unavoidable, unless indeed economic society were to become almost static. Moreover, the risk must not be ignored that attempts to control fluctuations in the general or average level of prices may accumulate strains within the price-structure and therefore cause deferred and possibly more violent paroxysms of readjustment eventually. We are, indeed, convinced that the violence of the present crisis, for example, is due in large degree to the fact that readjustments of industry, trade and prices in the post-war period have been thwarted by various forms of control and manipulation. Even in a completely planned economy there would arise the necessity of constant readjustment which would be likely to take the familiar rhythmical form of the business cycle.

135. It is important to recognise the fact that there is little regularity in the recurring cyclical movements, either in time or in much of the phenomena displayed. This fact in itself throws into relief the disparate nature of the disequilibria that must be considered. The short-term fluctuations of industrial activity are built up from shifting combinations of price-movements, which at irregular intervals appear to culminate in situations of great instability. At this point an unwise functioning of the monetary system or a failure of confidence may precipitate a crisis, or, on the other hand, if the fundamental economic situation is strong, confidence is maintained and credit well handled, the strain may pass off with minor effects.

136. It remains to be seen whether, as a result of further experience and further researches into the phenomena of the cycle, a definite and accepted explanation of the initial causes will be found. In the absence of such explanation we do not believe that the avoidance of cyclical movements in the future can be assured. We attach therefore the very greatest importance to the pursuit and organisation of studies on this subject.

137. But, while many issues remain obscure, we believe that much may be done to prevent disequilibria arising through credit policy, if action is taken in time. The primary causal disequilibria giving rise to a period of depression come into being during the preceding period of rising prices and active business conditions and it is while prices are thus rising that the necessary checks must be imposed.

138. Moreover, however deficient our knowledge of the initial causes may be, concerning the secondary and cumulative causes of price-movements and their effects there can be but little doubt. As we show in the following section, the interplay of cause and effect is so close and so constant that the one can in fact not be treated separately from the other.

XII. THE EFFECTS OF FLUCTUATIONS IN THE PURCHASING POWER OF GOLD.

(a) *The Main Types of Fluctuation.*

139. Before entering upon a discussion of the problems set out in paragraph 90 above it is necessary to recognise that fluctuations of purchasing power may be generated in several different ways. There is a sense in which all such fluctuations are monetary in their nature, since they arise from changes in the equation of which the supply of money is one side and the demand for it created by commodity and other transactions is the other. But there is a considerable difference between fluctuations which are produced primarily by alterations in the structure of industry affecting the volume of monetary transactions necessary, and those which are generated primarily by alterations in the supply of money.

140. A further distinction should be drawn between the slow long-term drift induced by changes in the supply of gold available for monetary purposes or the use made of that gold in the credit mechanism, and, on the other hand, the more sudden and violent fluctuations which are induced by currency inflation or deflation.

141. It is obviously difficult in any particular situation, such as the present economic depression, to disentangle the precise influence of the various factors contributing to a marked decline of prices. Certain of us regard the recent deflation as largely the inevitable sequel of previous inflationary movements. Others attribute great importance to the effect of the uneven distribution of gold reserves. There is among economists generally a wide disagreement, both in emphasis of detail and in principle, about these matters. But there is agreement, on the other hand, concerning the undesirable effects of such rapid and great fluctuations in the purchasing power of gold as the world has recently experienced. The following subsections are concerned with a general exposition of these effects.

(b) *The Effects of a Rapid Fall in Prices.*

142. It is convenient to consider first the sequence of events when prices fall, for the consequences of a rapid rise in the purchasing power of money (fall in prices) have never been more clearly exemplified than in the course of the last two years. Moreover, the populations of many countries had scarcely had time to recover from the chaos and tragedy caused by the reverse movement, the war and post-war inflation of prices, when this new ill fell on them. The consequences have been so far-reaching and so disastrous that to describe them may seem superfluous. In spite of the experience of the past and of the present, however, the causal sequence of events is so frequently misunderstood that we believe a service may be rendered by setting out that sequence briefly as we see it.

143. There are two main reasons why such violent fluctuations of the price level are so profoundly disturbing to the economic organisation. The first is the fact that a great part of the economic life of the modern world involves monetary contracts fixed for varying periods. The processes of production involving money commitments are spread over lengthy periods; wage contracts may be weekly, monthly or yearly; rents are likely to be fixed in many cases for terms of many years; loan contracts remain valid during the whole period of the loan and in the case of Government loans this period may be virtually perpetual; life insurance premiums and benefits similarly involve contracts of long duration. These are only some of the innumerable ways in which contractual relationships must be entered into if the modern economic system is to function at all. Moreover, even where the period of contract is not long, there may be great difficulty (as in the case of wage-rates) in altering the scale of payments.

144. In the present depression the fall of prices has been so sudden and so severe that there is the utmost difficulty in maintaining contracts entered into when the level of prices was higher. In particular, the real burden of debt has been so seriously increased that great numbers of debtors, including individuals, companies, local authorities and Governments, cannot meet their obligations. The readjustment of money wages which will be necessary if the present level of prices should continue (or fall further) will have to be so drastic as to be likely to lead to industrial disputes with their attendant economic waste and to involve a serious risk of social disturbances.

145. The second reason why a violent fall in the general price-level is profoundly disturbing to economic life lies in its psychological effect. Once a decline in prices sets in, a further decline is expected. The incentive both to spend and invest is weakened. Uncertainty and insecurity ensue, leading quickly to the undermining of confidence. Potential purchasers await the expected fall and, by waiting, help to cause it. Production is paralysed, unemployment increases, and a vicious spiral is set in motion.

146. There is little need for us to emphasise the way in which this failure of business confidence has developed with alarming rapidity in the present depression. As the prices of individual commodities have fallen, whole trades, and even whole countries dependent upon particular trades, and with them the public finances of the countries concerned, have drifted towards insolvency. This has been the case particularly in the countries which are engaged

in the production of primary products. But the difficulties which are created by falling prices are by no means confined to such countries. Indeed the whole world is afflicted by the fact that the weight of commitments has become intolerable for traders, bankers and Governments alike. The result has been a growing feeling of insecurity. Perhaps the best indication of the extent to which this feeling of insecurity has developed is the marked tendency, even in the countries still on the gold standard, for individuals to hoard gold rather than leave their resources to fructify in the hands of their bankers. This lack of confidence is likely to continue as long as prices continue to fall.

147. It is desirable here to indicate the actual process by which the fall in prices has produced the present difficulties. The immediate effect of falling prices is to change the distribution of the national income. Those who possess claims upon the national income, stated in terms of monetary units whose purchasing power has appreciated, become entitled to a greater share of the goods and services constituting that national income. On the other hand, this greater proportion of the national income (or internationally, of world production) can be provided only by a corresponding diminution of the shares accruing to other groups of the community whose incomes are not fixed in terms of the appreciating currency. In practice the first loss falls upon industry the profits of which are curtailed. When the fall in prices is both sudden and severe as in the present crisis, profits may be wiped out entirely or indeed turned into losses, since debt charges remain fixed and such customary payments as wages and salaries are difficult to reduce quickly.

148. The effect of such a situation is seriously to increase unemployment, the social and economic consequences of which are among the most serious destructive effects of rapidly falling prices. The burden imposed by the price decline, which in the initial stage fell mainly on industrial and business profits, now falls heavily also on those wage-earners and others whose services industry can no longer use. To the extent that the loss of income suffered by the members of the latter group is not compensated from insurance or relief funds, their standards of living are reduced and, if the reduction persists, their industrial efficiency is likely to be seriously affected. Increased unemployment, with its consequent ill effects, has in fact been a characteristic feature of periods of falling prices. The experience both of pre-war years and of the post-war period indicates a general tendency for unemployment to be high when the price-level is falling and to be relatively low when the price-level is rising.¹

149. As unemployment has become general, pressure has been exercised to protect the home markets of almost every country. Indeed, protection in all its forms has gone far towards destroying international trade. A whole new series of devices for excluding foreign goods has been invented and applied. In addition to tariff increases, there are such devices as the rationing of imports, exchange restrictions and special import duties on goods from countries with depreciated currencies. These measures are claimed to be justified by the perilous state of home industries and the prevailing unemployment, but, when applied by many countries, their total effect is to make these conditions very much worse.

150. It will be obvious from what has been said in the preceding paragraphs that the immediate effect of such sudden changes in the distribution of income (the burden of which falls first upon the profits of industry) is a curtailment of the volume of production. The expectation of further price-falls and the contraction of consumers' demand in periods of widespread unemployment would in any case make such a curtailment of production inevitable.

151. Nor is this contraction of consumers' demand fully compensated by the larger real income which is obtained by those whose incomes are fixed in terms of money. For such persons do not increase their consumption proportionately to the benefit they derive from falling prices, and when the fall is especially rapid and practically all classes of business are in financial difficulties, they hesitate to venture upon new investments. They keep their savings on short-term account or even go to the length of hoarding banknotes or gold bullion.

152. A further way in which the abnormally severe fall of prices has crippled economic activity is to be found in its effects upon the public finances of most countries. It is difficult

¹ See "Unemployment and Monetary Fluctuations" in the International Labour Office: *Studies and Reports Series C. No. 16. "Unemployment Problems in 1931"*, Geneva, 1931, pages 97-118.

to make sudden reductions in public expenditure, much of which is fixed in monetary terms — for example, in debt commitments — and much of which also is for the provision of social services which are very reluctantly curtailed. Pending reductions of expenditure, Governments, in order to balance their budgets, have no option but to increase taxation and that at a time when the national income is shrinking, while profits have disappeared and there is a large volume of unemployment. The inevitable result is a further heavy addition to the burdens, particularly of the *entrepreneurs*, and a further crippling of business enterprise.

153. While no country has escaped these consequences, their incidence has been particularly severe upon the debtor countries of the world, the more so since so many of them are mainly dependent upon the production of primary commodities. The fall in the prices of these products in the world market has been especially severe. Agriculture is a slower process than most other forms of production, and supply cannot therefore be adapted so readily to changed conditions of demand. But adaptation is very much slower than the length of the productive process alone would necessitate. Farms cannot be temporarily closed down as can factories; curtailment of production may necessitate reductions of stock or degeneration of culture, which would involve more serious losses than those incurred by temporary sales at unremunerative prices. The supply of agricultural products is difficult to adjust to price-changes, and the prices of those products are in consequence exceptionally sensitive to any pronounced price-movement. On the other hand, the demand, at any rate for foodstuffs, is likewise inelastic. When prices fall therefore, demand is not greatly increased and the agriculturist suffers from his dual inability to reduce his output or to expand demand by lower prices.

154. It is precisely the countries producing primary commodities that have the largest foreign debt proportionately to their wealth. A sharp fall in prices puts a severe strain on their capacity to meet the service of this debt and prevents them from borrowing the further capital which is necessary for their development. At the same time, the necessity of setting aside a larger proportion of their reduced national incomes for debt service reduces their capacity to purchase imports, which are drastically curtailed. If this process is long continued, a breakdown is sooner or later inevitable. It may be averted for a time by allowing the currency to depreciate or by a rigorous control of imports and the artificial creation of an export surplus. But the first of these methods involves the danger of currency inflation, and the second, if widely practised, leads quickly to the drying-up of international trade.

155. The most startling feature of the recent depression has been, not so much the violent readjustments imposed upon the world by the falling price-level, severe and important as they have been, but the far-reaching breakdown of business confidence which they have entailed. One further consequence of this failure of confidence may be added. The widespread reluctance to employ savings in long-term investments has increased the accumulation of short-term funds which are liable to be shifted from country to country at any moment. Any fresh shock to confidence starts a sudden transfer of funds which imposes a strain upon the banking system against which no protective measures can be effective and which has in fact forced many countries off the gold standard. In so far as commercial banks endeavour to accumulate large cash reserves with their Central Banks, or Central Banks to accumulate large reserves in gold, they further depress prices and increase the dangers against which they are trying to guard themselves. There can be no solution of this difficulty until the excess of short-term money is reduced by a renewal of investment on the part of the general public; but this will not come till a measure of confidence is restored.

156. This disinclination to invest is in itself a further contributory cause of falling prices. The result is that national incomes decline, profits disappear, the *entrepreneur's* incentive to take risks is weakened, and the world as a whole is poorer in real wealth produced. Resources remain unutilised, workmen are unemployed, machinery is idle, stocks accumulate, and enterprise fails.

The effects of a fall in prices are thus cumulative. At each stage new forces are brought into play which tend towards a further fall. At what stage these forces will be arrested will depend in part on the monetary policy pursued, but the success of that policy will depend on a variety of other factors, partly economic and partly political, many of which are discussed elsewhere in this Report.

157. A corrective to such a situation is the rate of interest. The decline in prices affects, not only the willingness to invest, but the demand for capital, and above all the willingness to borrow ; for the borrower, so long as that decline continues, will be faced by the necessity of repaying in a constantly increasing quantity of goods and services. Hence interest rates fall and a new set of forces is put into motion. On the one hand these lower rates may render possible conversion operations which will in part offset the effects in the distribution of income described above. The long-term loan contracts are terminated by repayment in full of the sums borrowed, and new contracts are entered into at cheaper rates. The receipts of the *rentiers* as a class are reduced and the income of others increased. On the other hand, this reduction in the cost of capital may induce those to borrow who had previously hesitated, and thus lead to a revival of demand for capital goods. Through the employment of those engaged upon the preparation of these goods the demand for consumption goods will in its turn be stimulated.

158. But when the fall in prices is severe, and when the economic disequilibrium which has contributed to that fall is serious, or enterprise is checked by political or other non-economic influences, these corrective forces may prove too weak to resist the impetus of the general movement. They have proved too weak during the course of the present depression, and the consequences of falling prices are now unfolding themselves before us.

159. These consequences arise largely from the earlier effects of the general movement upon the dispersion of prices. To such a general movement different classes of commodities respond with varying rapidity and in varying degrees. The prices of agricultural products generally tend to fall more rapidly and to a greater extent than do those of other classes of goods, and (largely in consequence) the prices of raw materials more rapidly than those of manufactured goods.

160. This fact leads to a reduction in the demand of the agriculturist for articles of consumption other than his own produce. As in the vast majority of countries of the world more than half the population is engaged directly or indirectly upon agricultural pursuits, the influence of this factor on other forms of production is very great. But its most significant effect is that which we have already alluded to in connection with the international repercussions of a fall in prices (paragraph 154).

161. At this point we desire to emphasise further the harmful effects of falling prices upon international trade.

The extent to which artificial methods of restricting imports by debtor States may ultimately curtail trade and thus defeat their own end must depend on the influence of such measures on the countries to which their debts are owed. The cessation of lending by creditor countries must affect the balance of payments and almost inevitably their balance of trade. The value of their export surplus must be diminished (or import surplus increased) to the extent to which their lending has been reduced. A fall in the prices of the products of their debtors must reduce the quantity of the goods they can export and increase relatively the quantity of the goods they purchase to the extent that that fall exceeds the decline in the goods they sell abroad themselves. If these tendencies are resisted and measures are adopted to stop imports, then world trade must contract and in the end the debtor must fail.

162. Quite apart from such artificial measures for restricting imports, however, falling prices under present-day conditions automatically tend to restrict trade by raising import duties. In the majority of States such duties are expressed as sums of money per unit of goods. When therefore the market price of the goods falls and the duties remain unchanged, the percentage of the total import price which these duties represent — that is, their *ad valorem* incidence — automatically increases and trade is impeded. The greater the fall in price the greater the obstruction to sale, and in consequence the less the possibility of the price-decline being arrested by increased demand. The impediment is automatic and undesigned.

163. But almost inevitably, as experience proves, there are added to it, when prices and economic activity are contracting, additional deliberate obstructions to trade in the form of increased rates of duty, quotas and exchange restrictions. Each country endeavours to protect itself against the repercussions of the depression, and in so doing intensifies them.

164. The world is experiencing to-day exactly this sequence of events that we have endeavoured to trace. A number of States have abandoned the gold standard ; others have

imposed restrictions on the purchase and sale of foreign exchange designed to restrict imports; others have failed to meet their obligations. The natural checks to the fall in prices have not come into play because the fall in the rate of interest which did take place failed to revive the spirit of enterprise or the confidence exhausted, not only by the direct effects of the fall in prices, but by political uncertainty and social unrest.

(c) *The Effects of a Rapid Rise in Prices.*

165. In the foregoing paragraphs we have attempted to trace the influence of a rapid increase in the purchasing power of gold — or a fall of prices. The broad effects of rising prices are the reverse of those described. The distribution of wealth is changed in such a way as to give those with fixed incomes a smaller share in the national dividend. The first and most obvious benefits accrue to the *entrepreneurs* who gain increased profits during the period when the prices of their products are rising, while many of their costs of production, particularly interest and wage-rates, lag for a time. The wage-earners also gain, at first by an increase and greater regularity of employment and later (if the rise in wages exceeds the rise in the cost of living) by higher wage-rates. The growth of profits acts as an incentive to industry and boom conditions of trade are sooner or later reached if the upward movement persists. Such conditions may in the end tend to upset the balance of production. Security speculation sets in as a result of the increasing profits of industry and this speculation encourages the undue expansion of existing enterprises and the promotion of new enterprises which later prove unsound. Security speculation may also encourage higher levels of consumption, particularly of luxury goods, as paper profits are spent. The demands to finance increased consumption, speculation and industrial expansion outrun the available savings. In the end monetary stringency develops, the progress of the boom is ended and prices decline sharply.

166. So long as the gold standard is maintained, a rise in the general level of prices generally takes place through the issue of credit to an amount greater than is needed for the expansion of industry and trade caused by the growth of population and the improvement of industrial efficiency. Such an over-expansion of credit tends to lead to a carelessness in enterprise, over-investment in certain lines of business, the granting of unproductive loans, and advances in the standard of living greater than those warranted by increased productivity and, in the end, to the sequence of events traced in the preceding paragraph.

It is not easy, in the complicated circumstances of modern economic life, to estimate exactly the amount of credit needed for healthy industrial growth, and since, as we have said, profits tend to increase in the first stages of a rise in the price-level, there are always strong influences working for cheap and expanding credit policies. But the seeds of the ills of a business depression are sown during the preceding periods of business activity and rising prices, and it is in those periods that corrective checks can be most effectually applied.

(d) *Influence of the Long-Term Trend.*

167. Concerning the disturbing results of violent short-term price-movements, there is but little division of opinion, though more importance may be attached to one phenomenon than to another. But on the other hand, opinion is by no means united concerning the influence of those long-term upward and downward movements called price-trends.

168. The change in the monetary equation which the trend reflects may be due on the commodities' side to a change in the volume of production caused either by a like change in the quantity of the factors of production (labour, capital, etc.) or by a change in the productivity of those factors. If it is due to the latter cause alone, then the movement of prices will have no influence at all on the distribution of wealth. Thus, if prices fall by an amount that is equal to the increase in the volume of production so that the value of the national dividend remains unchanged and there is no change in the factors of production, then the national income will be divided as heretofore; wages will be unchanged; but all classes of society will obtain rather more goods and services in exchange for their monetary income. In such circumstances there will be no significant change in the division of national income.

169. When the decline of prices is due to improvements in industry and agriculture which have lowered production costs, the decline in prices is, on the whole, beneficial, for it is in this way that the fruits of industrial and agricultural progress are made available to society as a whole. It is true that such lowering of prices may involve difficulties to those producers which for one reason or another do not improve their production methods, but this is inevitable and will not involve serious disequilibria, if prices are permitted to reflect the lowered production costs. It is only when the attempt is made to sustain prices in the face of decreasing production costs that disequilibria occur, for this encourages over-production and causes an accumulation of goods which results ultimately in a breakdown.

170. A long-term upward movement of prices tends to lighten the burden of debt and increase the share of the product of industry which goes to profits and wages. Since rising prices stimulate profits and are accompanied by active business conditions, they lead immediately to greater productivity. While they reduce the real value of fixed monetary claims and therefore affect the *rentier* adversely, restricting his savings and lowering the value of past investments — the total volume of production being greater and that part of it going to profits being increased even more than the total — the replacement of industrial capital is facilitated for a time. Nevertheless, it is an observed fact that the rate of interest, while lagging somewhat behind, follows changes in the price-level, whether they are long and gradual or relatively short and rapid. There comes a time when the savings of the community fall behind and the price necessary to hire them for investment rises to a point where further industrial expansion is checked and prices fall. If the forces causing the long-term upward trend — such for example as increased gold production — continue to operate, the trend may be resumed after such a temporary fall.

171. There is one further aspect of the phenomena of the long-term trends of prices to which we wish to refer. Although the primary effects of such trends may be slight and indeed almost imperceptible, the available evidence seems to point to the conclusion that a declining trend accentuates and prolongs any similar short-period movements that may happen to occur during the period of the trend. The cyclical fall in such circumstances is steeper and more prolonged, and recovery is slower and less complete. When the trend of prices is upward, on the other hand, the cyclical fall in prices is less marked and shorter, while recovery takes place quickly and the periods of active business and rising prices are longer. In other words, when the depression period of the cycle coincides with a downward trend, it is intensified; when it occurs in a rising trend, it is minimised.

XIII. THE PRESENT LEVEL OF PRICES.

172. In the foregoing sections we have endeavoured to set out in analytical form the problems which we were appointed to consider; but we feel it incumbent upon us, in the concluding sections of our final Report, to review some of the practical proposals that have been made for future monetary policy.

173. The first problem that presents itself concerns the implications of the present level of prices, or of the lower levels which will be reached if the deflation of gold prices continues as it has done in recent months. The extent of this deflation may be judged from the following table:

INDEX NUMBERS OF WHOLESALE PRICES
(Average for 1928 = 100.)

	1928	Oct. 1929	Dec. 1929	Dec. 1930	Dec. 1931	Mar. 1932
France	100	95	93	79	65	67
Germany	100	98	96	84	74	71
Italy	100	96	93	75	66	66
Japan	100	95	91	71	67	¹
Switzerland	100	98	96	81	71	68
United States	100	98	96	82	71	68

¹ Japan abandoned the gold standard in December 1931.

174. Our analysis of the effects of such a rapid fall in commodity prices (Section XII, *b*) has drawn attention to two main consequences which we desire to re-emphasise here. It is clear that such a fall involves the necessity of drastic and widespread readjustments of the whole price-structure, affecting not only commodity prices, but also the distribution of income and the rearrangement of production. These readjustments have been proceeding in different ways ; but it would be optimistic to assume that they have been completed even in the countries which have taken the most drastic measures of retrenchment and adjustment, and there have been marked differences between the countries of the world in this respect. Moreover, the continuance of the decline in prices involves fresh readjustments to each new level reached.

175. From the international point of view, the most serious aspect of this situation is the cumulative increase caused by a rapidly declining level of prices in the real burden of financial obligations which have been incurred in terms of gold at a time when the price-level was much higher than it is now. Both private and public debts are affected in this way. If prices remain at their present low levels, or fall to still lower levels, the burden of debt will in many cases become unbearable.

176. On the other hand, a rise from the present level of prices would make the payment of fixed charges considerably easier. The real burden of debts and other fixed money charges would be lessened. We regard such a rise of prices as desirable. We do not look, however, to monetary policy alone to adjust the price-level, which is influenced by many factors of a non-monetary character. But we recognise that monetary policy, expressed through the volume of credit, may, if the general situation permits, play a large part in determining the level of prices. Hence we feel that, where credit contraction for one reason or another has been carried to extremes, it is proper and, indeed, imperative for the Central Bank to take such action, as may be within its power, to check excessive contraction, and in some cases to take the initiative in encouraging a freer use of credit.

There is, of course, a danger that measures taken to expand credit may be undertaken prematurely, thus encouraging the belief that it is unnecessary to seek further correction of fundamental economic maladjustments. They may in some cases even lay the basis for a new expansion of credit which it may prove difficult to control.

That a rise in the price-level will take place when business confidence returns and industry revives is scarcely to be doubted. Meantime, it cannot be too strongly emphasised that, whatever remedial action is undertaken in the monetary sphere needs to be supplemented by evidence of progress in the settlement of such perplexing and disturbing problems as reparations, international debts, disarmament and trade restrictions. Until there is some clearing of the atmosphere of international distrust and a modification of the obstructions to international trade, it will be difficult for that restoration of confidence and improvement in business to take place which is necessary to restore prices and standards of living to more satisfactory levels.

XIV. THE DESIRABILITY OF STABILISATION.

177. When we pass from the problems of monetary policy in the immediate future to the more general problem of securing a measure of stability in the future course of prices, we enter a highly controversial field. There is a general agreement among almost all schools of economic thought as to the desirability of avoiding such violent fluctuations in prices as were experienced during the war and post-war inflation and during the deflation which set in so sharply after 1929. There is, however, disagreement concerning the causes of these fluctuations, and still more concerning the possibility of their control by monetary means. The whole problem is so clouded by lack of clear definition of what is meant by stability of purchasing power, or stabilisation of prices, that we have thought it necessary to preface our conclusions on this subject by a discussion of the main elements of this conception.

178. In this connection we refer again, in the first place, to the distinctions drawn briefly in Section XII between the different types of price-movements which may occur. In the second place, our whole study leads us to emphasise the complication of the price-structure in modern countries. Thirdly, the effects of the recent drastic fall in prices have rendered more obvious than ever the fact that violent price-movements involve serious disturbances in economic

relationships. It follows that any attempt to control or stabilise prices affects economic relationships, and, on the contrary, changes in these relationships must inevitably affect the price-system and any controls which are set up to stabilise it.

179. In the concluding sections of this Report we return to a consideration of the third of these factors of price-stability. Meantime, it is important to repeat here with some emphasis that, in endeavouring to lay down the principles of monetary policy and to define measures of action calculated to cope with disturbing fluctuations in purchasing power, much more is involved than constructive suggestions for monetary reform, difficult as they are. As we have endeavoured to emphasise throughout this Report, we hold the view that the correction and prevention of fluctuations in purchasing power must be sought in more enlightened economic policies generally as well as in the monetary sphere.

180. There is little need to prove in any detailed way the importance of the second consideration advanced in paragraph 178 regarding the complication of the modern price-structures. For instance, as we have shown in Section XII, fluctuations in the general level of prices have a very direct effect upon the distribution of income and, through it, upon production.

181. This consideration becomes more important when it is remembered that the productivity of the factors of production varies from time to time. We have examined the bearing of this fact upon proposals to stabilise the purchasing power of gold in paragraph 93 above.

182. We have commented above (Section VII) upon the difficulty of devising any single index-number which will measure the fluctuations of purchasing power as a whole. The measure which we have proposed to employ (paragraph 95) is an index-number of wholesale commodity prices in the country concerned. It is evident, however, that monetary measures which are successful in stabilising such an index will not necessarily stabilise either the distribution of income, the important series of prices which are not included in the calculation of the index-number, or the relative prices of those commodities which are included.

183. These illustrations serve to raise immediately a fundamental question upon which there is much disagreement. Changes in the purchasing power of gold may originate on either side of the price-equation, from changes in the demand for money or in its supply. There is general agreement that price-disturbances due to monetary factors should be avoided. There are some who would go farther and use monetary policy as an instrument to correct fluctuations in the general level of prices, however they arise. But there are others who consider it neither possible nor desirable, by the application of monetary policy, to correct fluctuations in the price-level due to non-monetary causes. The majority of the Delegation holds the latter view.

184. This consideration leads us back to the first problem raised in paragraph 178 — the distinction between different types of price-movement. In this connection we desire to emphasise mainly the distinction between the long-term trend and the shorter-term cyclical fluctuations. We consider it highly desirable that monetary policy should be directed to an avoidance of violent fluctuations in purchasing power. We devote the next section (XV) to a consideration of certain aspects of the long-term trend ; but we desire first to examine the desirability of measures being taken to reduce the range of the shorter-term cyclical fluctuations of prices.

185. While we attach the utmost importance to every effort being made to attain this object ; while we are firmly convinced that the wide fluctuations in prices and the recurrence of periods of economic depression constitute the greatest threat to the whole economic organism to-day, we desire at the same time to emphasise (1) that we do not consider it possible to avoid all oscillations in the general level of prices and (2) that we are fully aware that even that measure of stability, which we would all wish to achieve, cannot be secured by monetary policy alone. We do not envisage, as an objective, complete stability of any group of aggregate prices ; we do not envisage identical movements in all countries or in all groups of commodities. Identity of movement between, for instance, the prices of intermediate products and those of consumption goods is incompatible with the growth of efficiency. Complete stabilisation and identity of group movements are, indeed, impossible in a dynamic society, and society must either develop or decay.

186. The stability of the price-level which we envisage as being practically possible is a relative, but not an absolute, stability of wholesale commodity prices as measured by their

movement over a long series of years. We do not conceive it as possible to eliminate short-term fluctuations of the price-level, but we believe that these shorter-term fluctuations would be appreciably reduced in severity if the longer-term trend were relatively stable. Nor do we conceive the possible measure of stability as inconsistent with slow movements of the long-term trend either upward or downward. What it is desirable to avoid, as far as possible, are such violent price-fluctuations as the world has recently witnessed. Such a measure of stability, however, can, in our judgment, be achieved only by the development of a flexible monetary and general economic policy which would allow the play of economic forces to bring about minor short-term fluctuations in individual prices and the average level of prices.

187. We consider that monetary policy designed to avoid violent fluctuations of purchasing power should be based upon a variety of considerations which we mention later (paragraph 196), interpreted by the judgment of central bankers and expressed in national policies arrived at after due consideration and co-operative consultation concerning their international repercussions. Movements of the index-numbers of wholesale prices should be used, not as a single determinant criterion of immediate policy, but as one among many factors to be taken into consideration.

The relative stability of these index-numbers of wholesale commodity prices over a term of years will, however, provide a test of the success of the policies that have been pursued.

For this purpose, we consider that the price-quotations to be employed should relate to wholesale transactions in primary or intermediate products. There is a further practical consideration which reinforces our conclusion. We are dealing with an international, not a national, problem. We have to consider the changes in the purchasing power, not of this or that national currency, but of the aggregate of the currencies based on gold. Purchasing power so considered can in practice be correlated only to goods which have a world market, and further, for obvious technical reasons, to goods which are easily defined and identified.

188. This final consideration goes far also to determine the instrument of measure. There are in fact — given existing conditions — only two alternatives: the one is to employ an international index, the other to employ one (or more) national indices relating to the country (or countries) which naturally exercise a determinant influence on world prices. In both cases the indices would require to relate to a carefully selected but adequate list of primary or intermediate products with a world market, and the price-quotations to be taken free of import duty.

189. Were an international index to be employed, it would have to be composed of an adequate list of crude products — such, for instance, as that used by the League of Nations for its index of production — and weighted in accordance with the approximate relative importance of each commodity in international trade. Prices would be quoted either at port of shipment or at the main world market for each staple. In either case, adjustments on account of changes in freight rates might be required.

190. Such an index would, of course, measure accurately the purchasing power of no single currency; it would reflect in a haphazard fashion changes in movements of currencies within the gold points, though, if the quotations were widely enough spread, such variations might be expected to cancel each other out. But, in spite of its conventional character, such an index would, it is believed, in practice reflect adequately the general tendencies both of the trend and of cyclical movements in prices.

191. Were national indices to be employed as tests of international policy, they should be confined to the two or three most important capital markets, should be compiled on principles and composed of elements as identical as possible, though the weights (if weights are employed) should of course be determined by the relative importance of each commodity to the economy of the country in question.

192. None of these indices that we suggest are free from objection. None of them will prove to be perfectly reliable or nice instruments of measure. The national indices will be found to vary within fairly wide limits one from another, and all or any of them may fail to reflect the working of the underlying forces of the economic system until it is too late for adequate action to be taken. Thus the Bureau of Labour Statistics index of wholesale prices in the United States of America actually rose slightly between January or June 1929, and September, and afforded no evidence of the collapse that was imminent. It has been shown that, in the period

1903 to 1914, ten other economic indices reflected the general tendencies of business before the index of wholesale prices was influenced. Further, the evidence available seems to point to the conclusion that the prices of relatively few commodities conform closely to the real changes in business activity. To these facts we attach particular importance.

193. We have suggested that the criterion of monetary and economic policies should be their success over a period of years in maintaining the average level of wholesale prices of important international commodities relatively stable. But this does not mean that wholesale price index-numbers should be used as a sole means of determining when action should be taken to correct economic and monetary maladjustments. On the contrary, we show below that other and more sensitive indicators should be used. As we have already suggested, for action to be effective it must be taken in time. To check a fall in prices after that fall has set in is, we believe, very much more difficult than to prevent it developing. It is obvious therefore that, to be effective, monetary policy must rely upon other guides than those which, after the event, may be used as a test of its success.

194. We are concerned, as we have said, with an international problem and international phenomena. But those international phenomena are the outcome of a complex of national phenomena. It is necessary not only to maintain the various national price-levels in equilibrium with one another, but also to take account of the domestic economic situations affecting the various national price-levels. Any policy designed to maintain the world price-structure in equilibrium, therefore, must necessarily be of a dual character. Those responsible for monetary policy in each country must take account both of domestic and of international considerations, and these may not be easily reconcilable. It is for this reason that we attach particular importance to the development of methods of continuous consultation and co-operative effort to maintain the international equilibrium without sacrificing national interests.

195. In considering monetary policy from the national point of view, the primary index should, in our opinion, be the historic index of the gold reserve. We consider that in recent years too little attention has been paid by monetary authorities to changes in their reserves — to the net imports and exports of gold. There has been, on the one hand, an endeavour to offset gold movements, on the other a belief that, whatever the circumstances, gold movements will produce automatically the necessary effects. Measures to counteract the influence of the movements of gold, though, as we pointed out in our second Interim Report, they may be desirable in exceptional circumstances, are and should be recognised to be fundamentally in contradiction with the gold-standard system. On the other hand, while it may be true that gold movements, if not counteracted, always create their own correctives sooner or later, the rapidity with which the natural reactions take place may vary so widely from country to country as to render some stimulus (not check) to them indispensable.

The first indicator for national policy should therefore, in our opinion, be the gold reserves and the gold movements, and policy should, apart from quite exceptional circumstances, be directed to accelerating the effects which such movements create.

196. With reference to the other indices which should be taken as a guide to monetary policy, varying opinions, in our present state of knowledge, are likely to be held. They are all those indices which reflect business activity — the market rates of discount, the yield of bonds, the prices of different classes of shares, the value of building permits, the debits to individual deposit accounts, the production of various primary products, the international movements of capital, etc. The significance of these will vary from country to country and from epoch to epoch. No set rules for their interpretation can be laid down.

197. The problem of maintaining international equilibrium between the various national price-systems is more difficult. Day-to-day policy is primarily a national problem; but it must be fitted to the general lines of policy designed to check the violent fluctuations of purchasing power by appropriate action taken after international consultation. In the present state of knowledge concerning the causes of cyclical price-movements, it is not easy to discern the early manifestations of conditions leading either to boom or to depression. Action must be based on a common interpretation of all those manifold signs of the times to which we have referred in the preceding paragraph. Obviously, this joint act of judgment presents, and will present, very real difficulties. On the other hand, major booms and depressions never recur at very close

intervals. When business has been active without serious interruption for two or three years, special care and attention should be paid to all signs of disequilibrium arising. As we have already stated, action, to be effective, must be taken in time, and it must be action based on international understanding and co-operation.

198. The normal action will be by alteration of the official discount rate supplemented, in certain cases, by open-market operations. We have already (paragraph 16) traced the processes by which alterations in the discount rate tend to influence market rates of interest, and therefore the volume of credit and ultimately the movement of prices.

199. Such action, however, demands the most carefully planned and closest co-operation between Central Banks. It is necessary for each to consider the object of the whole concerted policy and the relationship of the domestic situation of each country to the world tendencies.

200. In certain countries it is the practice of central banking authorities to supplement discount policy by open-market operations. By this term is understood the direct purchase or sale of bills or securities on the market by the Central Bank with a view to increasing or decreasing the volume of credit. The essential difference between this system and that of raising and lowering the discount rate is, therefore, that in the one case a direct influence on supply is exercised, in the other an indirect influence via price. In both cases the tendency will be to modify the ultimate price of credit to industry and commerce — namely, the market rates.

201. Open-market operations may render a real aid to central banking authorities when, for one reason or another, difficulties arise in making the official discount rate effective. They should, in our opinion, be looked upon as a supplementary, not alternative, lever. They should be employed rather to intensify than to deaden the semi-automatic influence of gold movements.

202. While we attach considerable importance to the last point, we are aware that special circumstances may occur in which counteracting open-market operations may be advisable. Temporary disequilibria may arise through causes over which the country mainly affected has itself no direct control, such, for instance, as a failure of crops or financial difficulties in one of its main export markets. They can be met by temporary gold movements or by the provision of short-term credits. In such cases, if equilibrium existed before these temporary causes made themselves felt and the movement of gold is allowed to affect the general level of values in either the losing or the recipient country, it may be found, after these special causes have ceased to operate, that owing to that change in values a more permanent and serious form of disequilibrium has been caused and that a complete reversal of policy is required.

203. Action taken to influence the volume of credit is facilitated by the fact that great power is vested in the relatively few large exporters of capital. As in each national banking system power is largely concentrated in the Central Bank, so in the international system it lies with those who can furnish the funds required by others. In consequence, Central Banks in dependent money markets may be unable to make their rates really effective. The credit furnished to domestic industry in such markets may be less influenced by the official rate at home than by market rates abroad.

A special responsibility rests therefore upon the monetary authorities of the great creditor countries. It may become necessary at times for the Central Banks in such countries to exercise a direct pressure and suasion upon the commercial banks and issuing houses, in order to discourage excessive or injudicious loan transactions. The experience of recent years has shown but too clearly how real is the danger of ill-considered international credit operations.

204. But, if Central Banks are to bring direct pressure to bear, they must be enabled to follow closely the operations of the market. We have already drawn attention (paragraph 26) to the fact that in recent years many Central Banks were not in possession of full information concerning the possible demands that might be made upon their reserves. The maintenance of currency stability is the chief responsibility of these institutions; but the effective discharge of that responsibility necessitates power to obtain from the market all the information necessary to enable them to take timely decisions as to policy. We attach particular importance to this point. The powers of action entrusted to the Central Banks in most countries are adequate, provided they can obtain the necessary information on which to act. Where they are not adequate, they should be strengthened; but in any case the Central Banks should be enabled, by the voluntary

co-operation of the market, or, if necessary, empowered by legislation, to secure all the information deemed necessary for the discharge of their responsibility in respect of currency stability.

205. While borrowing countries must thus watch and control the volume of their borrowings and assure that the funds obtained are devoted to productive purposes, it is necessary for lending countries to assure that foreign lending does not exceed or fall short of their net active balance on income account. For this purpose, in normal circumstances, the use of the discount rate, reinforced if need be by open-market operations, should prove adequate. But the willingness of the public to invest abroad may be affected by events wholly outside the control of monetary authorities, such, for instance, as the threat of political trouble. In certain countries, also, the machinery for foreign lending is insufficiently developed. Lending must not be impeded by artificial restrictions, such as discriminatory rates of taxation. We believe that any measures designed to improve the mechanism for the issue of foreign loans, or to promote international transactions in existing securities, would contribute to the smooth working of the gold standard, granted the powers of Central Banks to control temporary disequilibria are adequate. We have in mind such measures as the improvement of facilities for foreign investments, the quotation of foreign securities on national Stock Exchanges, the equalisation of taxes on domestic and foreign investments. We also attach particular importance to the discussions now taking place with a view to the solution of the problem of double taxation. The high rates of taxation in certain countries constitute an insuperable barrier to capital movements in cases when, owing to the absence of any international understandings, the owner of foreign securities is liable to be taxed twice on his holdings. We realise, however, that all these various measures designed to facilitate long-term lending and the international purchase and sale of securities will require time for their perfection.

206. Whatever the system finally evolved or created may be, the closest co-operation between central banking authorities will prove to be necessary for any concerted effort to lessen price-fluctuations. A condition of the success of such co-operation is the simultaneous application by Governments of commercial policies compatible with an international monetary system.

XV. THE USE OF GOLD IN THE MONETARY SYSTEM.

207. For the reasons given in Sections VIII-X, we believe that, when recovery from the present depression sets in and a substantial rise of prices occurs, an intensified demand for gold is a possibility to be reckoned with.

208. We therefore consider, in the following paragraphs, a variety of measures which have been suggested for economising the use of monetary gold. We do so, not only because we consider a possible future shortage of gold-supplies as a contingency to be reckoned with, but also because, in our judgment, the general drift of these measures is to render the monetary system more flexible, and therefore more capable of achieving that measure of monetary stability which we have defined in Section XIV.

(a) *The Maintenance of Gold Reserves.*

209. In our first Interim Report we drew attention to a number of means by which the use of gold could with advantage be economised, and suggested, *inter alia*, that the legal stipulations concerning the minimum gold cover required for notes and sight liabilities of Central Banks might be reduced without in any way weakening the general credit structure. Since writing that Report the situation has changed; a number of countries have provisionally abandoned the gold standard; others are enforcing it in a restricted and partial manner only; substantial legislative changes will be required before it is once more revived as an active and effective system.

210. We have already drawn attention (paragraph 29) to the effect of recent banking legislation in raising and making more rigid the reserve requirements of many Central Banks. Under the system most generally in force to-day, many of them are compelled, either absolutely or subject to certain penalties, to keep a minimum ratio between their reserves in gold (or gold

and foreign assets) and their obligations at sight. In practice such banks must always, even in normal times, keep more gold than the minimum ratio demands, for they are under an obligation to sell gold or foreign exchange to any person offering notes (to a certain minimum amount) in exchange. If they kept no margin above the minimum ratio, they would be forced to break the law (or suffer its penalties) on the first occasion that such an offer was made.

The introduction of a so-called elastic clause into the law renders it permissible for the Central Bank to let the reserve fall below the defined ratio, on condition that a tax is paid to the Government and, in many cases, the official rate of discount is raised.

The effect of this whole system in recent years has, in our opinion, been to impose too rigid restrictions upon Central Bank policy. Even when an elastic clause exists (and we consider such clauses desirable), in practice the effect on public confidence of allowing the reserve ratio to drop below the legal (elastic) minimum is liable to be so grave as to defeat the object of the law.

211. In our opinion, this whole system of defined ratios has proved itself in the light of the special circumstances of post-war years to be too rigid and inadaptable. Now that gold coin is in circulation only in a very few countries and an internal drain cannot take place (except in moments of violent panic for hoarding as bullion), the reserves are primarily required to meet possible deficits in the balance of payments. Each country in determining the gold reserve required should therefore consider in the first instance what the range of movement in its balance of payments is likely to be.

In this consideration regard should be had to the circumstances likely in each case to cause sudden and large alterations in the balance of payments. Agricultural countries must provide against the risk of crop failure or a fall in the prices of their products. Those countries where foreign banks are in the habit of keeping large liquid assets, or where there exists the possibility of large withdrawals of capital or sales of bonds and other securities, will require and should maintain a reserve adequate to meet an eventual withdrawal of these assets. Debtor countries will normally require larger relative reserves than creditor countries which, by calling in their short-term loans or merely by a cessation of lending, can improve their balance of payments. On the other hand, countries which, while creditors on balance, may temporarily be placed in the position of debtors on short term should provide against this contingency.

212. We are of opinion that it would be advantageous, as we argued in our first Interim Report, to reduce the reserve ratios from their present high levels. If this were done, the immediate effect would be to free the hands of the Central Banks by enlarging the free margin of their gold reserves which they can use for international payments without endangering the legal minimum ratio. The total of the notes and other sight liabilities of Central Banks and similar institutions (apart from those in the Union of Soviet Socialist Republics) amounted at the end of 1930 to about \$22,450 million, their gold reserves to \$10,780 million and their legal minimum gold requirements to \$7,760 million¹, or some 35 per cent of their sight obligations. The amount of free gold above the legal minimum requirements thus aggregated over \$3,000 million². If, however, these minimum gold requirements were lowered so as to correspond to an average ratio of, say, 25 per cent of total sight obligations, the amount of free gold available for international payments would have aggregated about \$5,170 million at the end of 1930 or about \$5,350 million at the end of 1931. If the average ratio had been 20 per cent, the corresponding figures would have been about \$6,310 million at the end of 1930 or about \$6,480 million at the end of 1931.

In our opinion, the lowering of the minimum reserve ratio could and should be accomplished in such a way as not to endanger the liquidity of the Central Banks.

213. We have considered the suggestion that the system of legal minimum reserve ratios should be wholly abolished; but we do not consider it either practical or advisable. We consider that the reduction which we advocate in the preceding paragraph would give the Central Banks adequate freedom and flexibility in their conduct of credit policy. As we pointed out above,

¹ In the case of the Central Banks which may, under the terms of their national currency legislation, hold the whole of their minimum cover reserve in the form of assets other than gold, it has been assumed in calculating the above figure that the amount of gold actually held by them corresponded to their legal gold requirements.

² About \$2,600 million (at the end of 1931, almost \$2,800 million), if legal minimum reserves were to be held exclusively in the form of gold.

in paragraph 209, substantial legislative changes will now be required in any case before the gold standard is once more restored as an effective system, and we consider that advantage should be taken of this opportunity to reduce the legal minimum reserve ratios required of the Central Banks. Such a reduction should, however, be accomplished more or less simultaneously by prior international agreement among at least the principal countries concerned.

214. Our main reason for rejecting the proposal to abolish the system altogether is that it would, in our opinion, have an undesirable effect upon public confidence in many countries. Moreover, we feel that it would leave both the Central Bank authorities and the public without any guidance as to the conduct of reserve policy. The responsibility that would thus be placed upon the Central Banks is heavy and it is probable that the effect would be to lead those banks to accumulate larger rather than smaller reserves and to use them with less rather than greater freedom. The possibility of governmental or popular pressure upon the Central Banks would also be greatly increased if the latter were not able to rely upon the statutory provisions fixing a minimum ratio below, which they should not allow their reserves to fall.

(b) *The Future of the Gold Exchange Standard.*

215. The essential principle of the gold-exchange standard is, and always has been, that the domestic currency, whether notes or coins, is convertible not — or not only — into gold but into a foreign gold-standard currency (or currencies). It has undergone considerable changes since the war, certain of which were discussed in our second Interim Report. In the period immediately preceding the stabilisation of currencies and the return to the gold standard, especially at the Genoa Conference (1922) the use of methods similar to those which had been worked out in the gold-exchange standard countries was strongly advocated as a measure of economy in the use of gold. The distribution of the world's gold reserves was very uneven and a shortage of gold for monetary purposes resulting in a disturbing scramble for gold reserves was anticipated.

216. The adoption of these new methods took the form in certain countries of new legislation permitting a proportion of the legal reserves of some Central Banks to be held in foreign exchange assets. In addition, there has in recent years been a remarkable extension of the practice by countries not actually on the gold-exchange standard of holding short-term balances in foreign countries. These liquid funds were held by Central and commercial banks and treasuries in such a form that they could readily be shifted from country to country. The existence of such large balances held on foreign account, and liable to be shifted quickly, has been a prime factor in the monetary instability of the post-war period. It is apparent that the world is here confronted with a phenomenon that is new at least in the scale of its operation.

217. It is important to observe that such foreign assets, whether held by countries on the gold-exchange standard, or by countries on the gold standard, were deposited either in Central Banks or in commercial banks forming part of another national currency system. There was no international co-ordination of the practice. There was indeed, as we have pointed out (paragraph 204) insufficient national co-ordination in many cases, so that a Central Bank might not be aware of the full extent of its obligation to furnish gold for export.

218. There were many criticisms of these developments even before Great Britain abandoned the gold standard. Attention was drawn to the danger of making the convertibility of one national currency dependent on the stability of another in which the Central Bank held large foreign assets. From the opposite point of view the vulnerability of certain currencies was increased by the fact that large foreign balances might be withdrawn at any moment. The reality of both these dangers became fully apparent when Great Britain abandoned the gold standard in September 1931.

219. Another serious criticism of the gold-exchange standard methods has been that they facilitated inflation by allowing more than one country to build a superstructure of credit upon the same gold reserve. To the extent that the country in which foreign balances were accumulated kept a higher gold reserve than it would otherwise have done on account of the risk of withdrawal, such inflation was of course avoided.

220. The real point of criticism, in our judgment, is not that the gold-exchange standard (and practices based upon it) achieved in some measure the economy in the use of monetary gold which was one of their avowed purposes, but that in recent experience they have hampered the working of the gold standard. In addition to the inflationary tendencies previously mentioned, such large amounts of short-term foreign balances as were actually built up just before the recent depression created a situation of dangerous currency, instability, since these balances were transferred rapidly from one financial centre to another.

221. We do not, however, regard this development as inherent in the gold-exchange standard, as it was practised, for example, by many countries before the war. We regard the gold-exchange standard in this form as a useful system for many countries, for whom it still remains the most economical and efficient monetary mechanism available.

It is obvious that recent events and particularly the depreciation of sterling upon which so many gold-exchange standard systems were based have entailed heavy losses upon many countries. Such of those countries as are in a position to do so will make every effort to avoid further losses and it is probable that the gold-exchange standard will in the future be much more restricted than it was in the years before 1931. But it still offers the cheapest, and in some cases almost the only, method by which countries which are unable themselves to afford the heavy expense of a gold-standard system, may yet participate in the advantages of stable exchanges which such a system will again offer, if and when it is restored. It is inevitable that those countries which choose, or are forced by circumstances, to retain, or readopt a gold-exchange standard for the regulation of their currency will endeavour so to organise it as to minimise the possibility of once again being faced with heavy losses.

Two possibilities have been suggested. The first is that such countries will choose carefully among the principal financial centres those which offer the greatest promise of future stability. The other is that an endeavour should be made to spread the risks of losses by utilising such an international institution as the Bank for International Settlements as the agency through which the system shall be administered. In the latter case, the reserve assets of the gold-exchange standard country would be deposited with the International Bank which would in turn spread its deposits among its constituent Central Banks.

(c) *Other Methods of economising Gold.*

222. The reduction of the percentage reserve ratios which we have recommended above may or may not suffice alone as a means for economising the use of gold. Its adequacy will depend on the magnitude of the absolute reserves which countries will consider it necessary to keep, upon the conditions under which certain countries return to the gold standard, and upon the readiness which those that have *de facto* ceased to operate the gold-exchange standard show to revive it in its old form.

223. There are a number of other methods of economising gold to which we made reference in our first Interim Report. They may be summarised as follows :

(a) That in all countries where gold is in active circulation or kept in the vaults of commercial banks, it could be withdrawn into the reserves of the Central Banks and replaced by notes.

(b) That in all countries in which banknotes of small denominations are in circulation, these small notes should be withdrawn and replaced by subsidiary coin. The employment of such notes is in the main the accidental result of inflation in certain countries. Notes which were originally of relatively high value have been allowed to continue in circulation after their value diminished. The result has been to increase the strain on gold reserves and, since a gold backing to such notes is required, the cost of subsidiary currency to the community as a whole.

(c) That in countries in which notes are largely used for payments of taxes and salaries, large retail transactions, the transference of money from place to place, etc., the use of cheques, post office banking facilities, transfers, mechanism for clearings, etc., should be developed. Much could be done directly by Governments and municipal authorities in this

connection without legislative action, were they to set the example of accepting cheques whether drawn on commercial banks or on post office savings banks in payment for taxes, public utility services, etc.

224. We consider that the measures enumerated in the preceding paragraph 223 are in themselves desirable. They are not, however, likely to bring about any immediate and considerable economy in the use of gold. For that purpose the solution mentioned in paragraph 212 would be required. We do not consider that this solution could be successfully applied unless it was agreed upon by at least a considerable proportion of the interested countries.

XVI. THE NECESSITY FOR INTERNATIONAL ECONOMIC CO-OPERATION.

225. In the preceding paragraphs we have been concerned with the objectives of monetary policy as we see them, with the guides to that policy that may be employed and with the powers with which those responsible for policy are or may be endowed. But the extent to which the measures adopted are likely to prove effective will depend, not only on their appropriateness, but on a large number of factors of a non-monetary order. Cheap money policies pursued by powerful financial countries may, in certain circumstances, increase both the volume and the velocity of circulation of money and therefore raise the price-level. They may further, by stimulating the issue of foreign loans, as well as by the influence on their own domestic price-level, transfer credit resources from one country to another and so raise price-levels throughout the world. But money is employed in the exchange of goods and services and, if either the flow of those goods and services is itself impeded or if prices of some special classes of goods are artificially controlled, then the best conceived and most strongly supported monetary policy may fail. Thus, if countries with large claims on others place obstructions to the payment of those claims in goods, and, on the other hand, make further loans to their debtors to enable them to pay their interest obligations, and even to expand their consumption of imports from the creditor countries, they will in the long run create such a condition of instability that a breakdown of the price-structure becomes inevitable; for the borrowing countries use the new loans only partly to increase industrial productivity (for which, however, it is difficult to find markets). Some part of the loans goes into wasteful and unproductive uses and some into maintaining relatively high standards of living. Meantime, the interest burden mounts cumulatively and faster than either the productivity of the borrowers or their capacity to transfer payment by means of an export surplus. Thus inevitably a disequilibrium is created which may prove too persistent for any monetary policy to resist. Moreover, the search for means of payment may lead to an export of gold from the debtor countries which cripples their banking structure and nullifies international effort to avert depression.

226. Similarly, if in any country one set of prices, such for instance as wages, proves resistant to those changes which are an indispensable condition of all progress, monetary policy may be stultified. If again in any country the burden of fixed charges is so great that small price-changes involve very considerable changes in the distribution of the national income, forces may be loosened which monetary policy is unable to check.

227. If measures are to be sought in the domain of monetary policy designed to lessen the amplitude of the periodic fluctuations in business activity, they must be accompanied by appropriate measures of general economic policy. The trade cycle is to-day an international phenomenon. Countries cannot hope to escape its effects by self-isolation. They can only hope collectively to lessen them. To this end they must permit an adequate freedom in the flow, not of credit alone, but of goods. In our opinion it is imperative that the restrictive commercial policies adopted by Governments to-day should be radically changed. Adherence to an international monetary standard at once implies and necessitates adherence to an international economic system. To impose artificial restrictions on the movement of goods is the negation of such a system.

228. The efficacy of monetary policy will depend, however, not only on Government action in other fields of economic activity, but also on the varying sentiment of the general

public. Thus, to take a single example, the even flow of capital exports cannot be guaranteed by monetary policy alone. Conditions may and do arise under which the willingness of the public to venture their savings abroad undergo sudden — frequently inconsequent — changes. The public estimate of the risk element may be such that it cannot be influenced by the relatively narrow variations in rates that may be enforced by banking policy.

229. We are impressed by both the responsibilities and the difficulties of those in control of monetary policy. The guides to policy at their disposal are uncertain and inadequate. The assessment of the relative importance of the various factors at play demands exceptional powers of insight and judgment. The most accurate forecast may be nullified by accidental, physical or political events. The measure of purchasing power is a rough and insensitive mechanism which can be relied upon neither to function with precision nor to function at all without repair. Action appropriate for the more important issues demands the closest co-operation, goodwill and mutual understanding, and it often seems to demand some measure of immediate national sacrifice for a common ultimate benefit.

230. We emphasise these facts, because we consider that measures should be adopted, not only with a view to lessening the degree of variation in the purchasing power of gold, but to making the whole economic and financial system more adaptable to such fluctuations, if and when they recur. As we have pointed out in Section XII, one of the main causes of the disastrous effects of falling prices lies in the automatic increase in the burden of debt. A weakness of the financial system in many countries to-day is to be found in the excess of debts at fixed interest — whether governmental or private, short or long. The difficulties imposed upon industry are increased during periods of falling prices, if industry has been financed by the incurrence of debt rather than by the placing of shares.

231. We conclude our survey of monetary problems, therefore, by emphasising once more the dependence of monetary upon general economic policy. It is evident that there is need for measures, both monetary and non-monetary, which will render the economic organisation more flexible. We attach the greatest importance to the consideration, not only of steps to solve the present crisis, but also of more permanent measures to improve the banking and currency organisation of the world, and equally its trading and productive systems.

232. We are deeply conscious, however, that such improvements depend largely upon the restoration of international confidence and goodwill. There can never be any hope of establishing a monetary system that will function smoothly and efficiently in the promotion of economic co-operation between the nations until the nations are prepared to co-operate. The fundamental necessity for the creation of a more effective international monetary system is the re-establishment, not so much of the technical processes of monetary interchange, as of the willingness to use these processes. The working of an international monetary system such as the gold standard presupposes the interdependence of nations. If, however, political conditions are such that nations hesitate to commit themselves to too great interdependence one upon the other, but impose rigid restrictions upon international trade in their effort to attain economic self-sufficiency, there will be little scope for any international monetary mechanism. We do not desire to enter into the political aspects of this problem; but we do desire to record our conviction that, without some measure of political settlement leading to renewed confidence in international economic and financial relations, there can be no secure basis for the restoration and improvement of world trade and finance.

Addendum I.

NOTE.

By Professor M. J. BONN.

The presentation of a quasi-unanimous report by the Delegation, the members of which disagree on some fundamental questions necessarily, involves a certain amount of verbal concessions, which may lead to misunderstandings, as did some statements in our First Interim Report. For that reason, I should have preferred separate reports expressing the views of the majority and of the minority.

As I have stated my opinions in a memorandum on "The Effect of the Fluctuations in the Purchasing Power of Gold on the Economic Life of Nations", written for the Delegation by Dr. Tismer and myself, I need not safeguard myself by the enumeration of such points where I would have preferred greater outspokenness to avoid possible misunderstandings.

I desire, however, to dissociate myself from the conclusions drawn from the reproduction of the diagram in Section 105. The parallelism between gold supply and price movements which it suggests might furnish an interesting starting-point for a detailed enquiry into the causes which have brought it about. In the absence of such an enquiry, a mere formal juxtaposition cannot be taken as an explanation.

There is, moreover, one point on which I must express a definite dissociation here. In paragraph 81 of the Report, the phrase occurs "Although we are not of the opinion that this problem [the problem of reparation payments and war debts] is the main cause of the difficulties with which the world is now faced . . ." ; I could only subscribe to this phrase if the word "main" were altered to "only".

Addendum II.

NOTE.

By M. G. B. ROBERTS.

I am in general agreement with the discussion and conclusions set forth in the report. I have, however, several observations to make :

Notwithstanding the qualifications given in the text, there is still, in my opinion, a certain degree of over-emphasis upon the importance of wholesale commodity prices used as either (1) a measure of the purchasing power of gold, or (2) as a test of the success of monetary policy. It will be admitted that, in considering the price structure, particularly for purposes of international comparisons, a wholesale commodity price index will probably prove most useful, but it should not be overlooked that the price structure is composed also of many elements not included in such an index. This is brought out in various paragraphs of the report, but it has to be borne constantly in mind, else there is danger that the conception of prices will prove to be unreal and lead to errors of monetary policy. Clearly in 1928 and 1929, for example, the Federal Reserve Banks had to give consideration to security price movements and the condition of inflation existing in real estate in the United States, and any monetary policy directed solely to the maintenance of the stability of prices of wholesale goods during this period would have failed to meet the requirements of the situation.

My acceptance of the proposition stated in paragraph 200 that " the relative stability of these index numbers of wholesale commodity prices over a term of years will, however, provide a test of the success of the policies that have been pursued " would depend upon the meaning of the words " term of years ". The fact that there was relative stability in wholesale prices in the period 1925 to 1929 would hardly justify the claim that monetary policy during that period was free from criticism. The success of that policy must be judged also in the light of what happened after 1929.

In paragraph 125, I question the use of the figure \$3 milliards as suggesting possible maximum demands in additional gold resulting from the abandonment of the gold-exchange standard. Of this total, the amount of foreign balances held by countries on the gold-exchange standard is calculated at approximately \$1 ½ milliards. It is only with these latter countries, where the foreign exchange has been counted part of their necessary basic reserves (thus enabling the same gold to serve as a basis of credit in two countries), that the abandonment of the gold-exchange standard necessarily leads to additional demand for gold. It is true that withdrawal and conversion of foreign assets into gold by countries not on the gold-exchange standard may involve large and disturbing movements of gold, but, since this gold has not done double duty as a basis of credit, the problem is quite different and involves rather the question of the maldistribution of existing gold stocks than that of providing for a sudden shrinkage in the credit base such as is involved in the reversion from the gold-exchange standard to the pure gold standard.

Addendum III.

NOTE.

By Mr. Guido JUNG.

I wish to emphasise that with a view to arriving at a unanimous report a certain amount of mutual concessions has been necessary.

I must point out that neither the first nor the second interim reports have been signed by my predecessor in the Gold delegation, Professor Alberto Beneduce, who resigned after the first session of the Delegation.

I participated for the first time in the work of the Delegation in January 1932 and my line of thought is summarized in my letter dated 8th of January to the Chairman of the Gold Delegation, in which I wrote :

“ I consider that present conditions are quite different from those specifically mentioned in the report of the Financial Committee of May 1928, on the basis of which we were given our terms of reference, and I do believe that conditions then existing were the pre-requisites of such terms of reference. Whilst therefore even at that stage political and economic factors had in my opinion a predominant importance, still the monetary problems which were specifically referred to us could appear of immediate interest, whilst they may seem purely academic in the light of the present situation.

“ I do believe that it was not the intention of the Financial Committee that we should report on the political and economic causes of a crisis which broke out long after we were given our terms of reference. But on the other hand, in my opinion, it would be disastrous to the reconstruction of the world if in a report of ours we were to give to the people at large the impression that there exists a monetary witchcraft, which can, by its own force, work miracles and avoid the necessity of facing firmly and solving the political and economic problems, which have brought the world to its present conditions.”

If we are to discuss on a political and economic plan and not confine ourselves to monetary policy which my colleagues of the minority have considered as all powerful all through the discussions in which I participated, I would like, as my own opinion, to state the pre requisites of a restoration of the world's economic well being in a much more definite form.

I would say that :
in order to overcome the world crisis, which by now has more political and ethical than economic aspects it is necessary :

- (1) To solve the reparations and interallied debts problems by wiping out reparations and cancelling debts ;
 - (2) To suppress restrictions upon international trade exchanges before such restrictions strangle the trade of all countries.
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NOTE OF DISSENT.

By M. Albert JANSSEN, Sir Reginald MANT and Sir Henry STRAKOSCH.

While signing this report, we desire to make it clear that there are certain fundamental issues on which we are unable to accept the views of our colleagues as expressed in the report.

I. CAUSES OF THE BREAKDOWN OF THE GOLD STANDARD.

In the first place, we must dissociate ourselves entirely from Section IV of the report, headed "The Breakdown of the International Money System", in which an analysis is given of the causes which led to the recent abandonment of the gold standard by so many countries. This analysis suggests that the crisis was the direct result of various economic maladjustments arising from the war and from war and post-war inflation. In support of this view our colleagues refer to profound changes in the structure and localisation of industry, to its elaborate and rigid organisation, to cartelisation, attempts at price control, pools, valorisation schemes and the like, and to tariffs, prohibitions and bounties. It is claimed that these conditions caused maladjustments in economic factors and processes and that there resulted a general instability which the international gold standard was not able to withstand. Hence its breakdown.

No concrete evidence of any kind — statistical or otherwise — is adduced in support of this analysis ; in particular, no evidence is adduced to show that these factors were of so exceptionally intense a character as not to be amenable to the self-righting forces of economic life and particularly to the potent forces of adjustment which the operation of the gold standard of necessity imposes upon the countries adhering to it. Nor does the report attempt to describe the process by which these disequilibria brought about the violent rise in the value of gold in recent times. Many of the factors enumerated existed and were strongly developing in the quarter of a century preceding the war — a period of great economic progress — yet in that period the international gold standard functioned with complete smoothness and efficiency. Indeed, such disequilibria are continually arising in every progressive society and may be regarded as a necessary condition of economic progress.

We recognise, however, that the war and the developments immediately following it accentuated some of these disequilibria and created others of a special character, but we cannot accept the view that they were the major cause of the catastrophic fall in the general level of prices and, consequently, of the breakdown of the international gold standard.

Our reasons for rejecting this view can be briefly stated :

One of the most remarkable features of the monetary developments of the post-war period was the rapidity with which practically the whole of the civilised world re-established the gold standard within the year and a half following the return to that standard by Great Britain in the early part of 1925. The restoration of the gold standard involved, as a condition precedent to it, a substantial adjustment of major disequilibria — economic, financial and monetary. In fact, a return to the gold standard without such prior adjustment of major disequilibria would not have been possible, and, *a fortiori*, without such adjustment it would not have been possible to maintain it in the years that followed. In point of fact, the gold standard, as an international monetary system over the greater part of the world, was successfully maintained until the early part of 1930. Its maintenance during these four years over so wide an area must inevitably

have tended to reduce, and not to accentuate, such disequilibria as remained to be adjusted. For it is in the very nature of the gold standard to compel the countries adhering to it to adjust, through the operation of their exchanges, their price structure to that of other gold-standard countries and so to maintain economic equilibrium. Indeed, there is abundant evidence to show that the period from 1925 to the latter part of 1929 was one of remarkably steady economic progress. That progress could not have been achieved if there had been accumulating in an intensified form all the maladjustments which our colleagues claim to have finally caused the rapid rise in the value of gold at the end of that period.

The volume of the world's production of primary commodities (foodstuffs and raw materials) and that of the world's international trade are reliable indices of economic progress.

During the period in question, the volume of the world's production of foodstuffs and raw materials increased at almost precisely the same rate as it did in the quarter of a century immediately preceding the war — that is, at a rate of about 3 per cent per annum — as the following table (compiled from League of Nations figures) shows :

Year	Volume at 1925 prices	
	\$000,000	1925 = 100
1925	61,851	100
1926	62,582	101
1927	64,829	105
1928	67,333	109
1929	68,650	111
1930	66,181	107

The volume of the world's international trade (imports plus exports of merchandise) increased during that period at a remarkably steady rate of nearly 5 per cent per annum, as will be seen from the subjoined table (which again reproduces statistics compiled by the League of Nations) :

Year	Value of world trade (imports and exports of merchandise)		Volume of world trade Value = $\frac{\text{Value}}{\text{gold prices}}$ 1925 = 100	
	\$000,000	1925 = 100	Gold prices 1925 = 100	
1925	64,702	100	100	100
1926	61,887	96	93.5	103
1927	65,142	101	91	111
1928	67,380	104	90.5	115
1929	68,460	105.5	88	120
1930	55,365	86	(77) ¹	(111) ¹

Striking as these figures are, their significance becomes even more apparent when presented graphically in a setting which portrays some of the other relevant developments of the period. In the chart on the following page are grouped together lines showing the monetary gold reserves : (a) of United States of America and France; (b) of the world as a whole (excluding U.S.S.R.); (c) of the world (excluding United States of America, France and U.S.S.R.); (d) the average bank rate of the seven principal money centres of the world ; (e) and (f) the movement of wholesale commodity prices ((e) compiled from United States of America Bureau of Labor index, and (f) from the League of Nations index for world trade) ; (g) the volume of the world's production of foodstuffs and raw materials ; and finally (h) the volume of the world's international trade (imports plus exports of merchandise).

It will be seen from line (b) that the monetary gold reserves of the world as a whole increased steadily over the whole period at a rate of about 3 per cent. But when these gold reserves are

¹ The figures in brackets are provisional.

CHART.

On Ratio Scale.

Monetary Gold Reserves.
End-year figures to 1927, June 30th, 1928, and thereafter end-month figures.

- (A) U.S.A. and France.
- (B) World excl. U.S.S.R. (half-scale).
- (C) World excl. U.S.A., France and U.S.S.R.

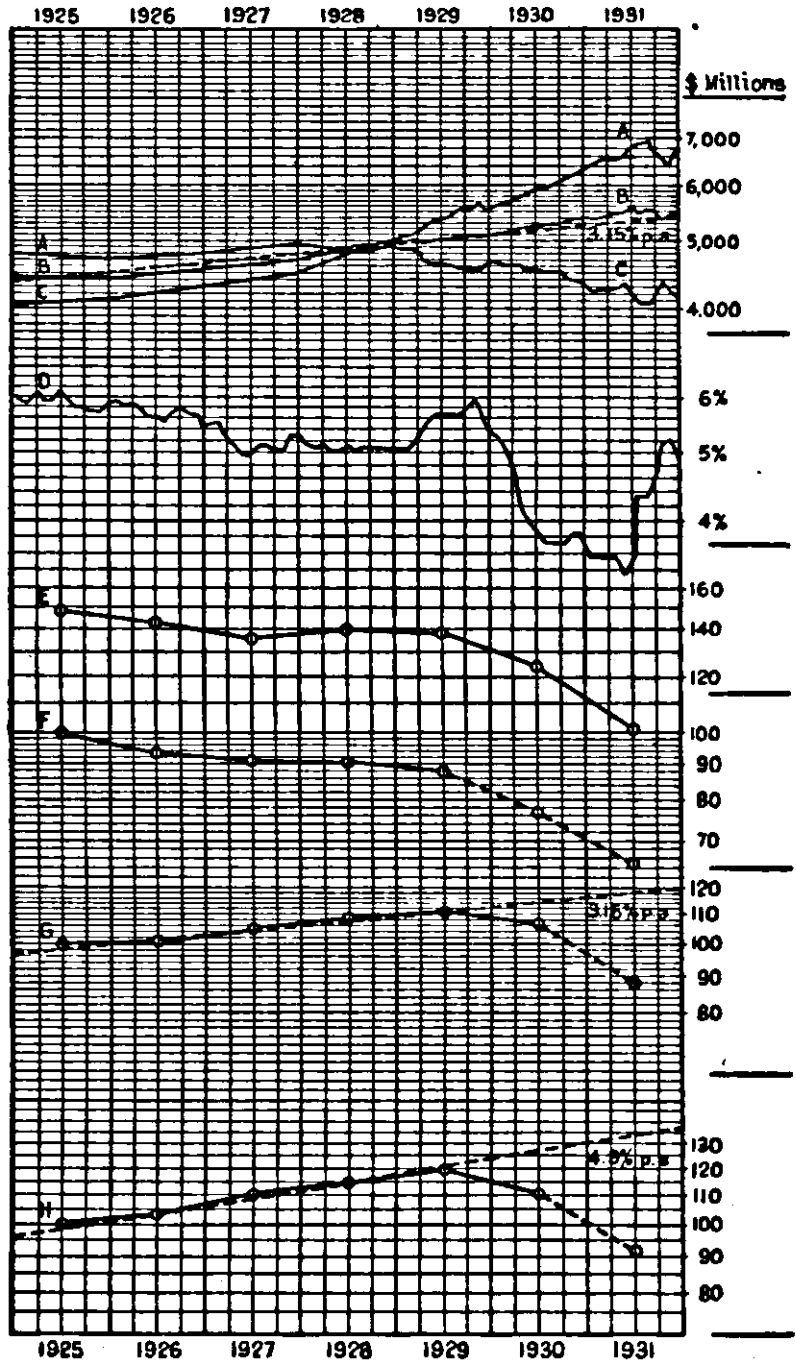
(D) Average Bank Rate (7 countries).
Monthly Averages.

(E) Wholesale Commodities Price Index.
Annual Averages.
U.S.A. Bureau of Labor.

(F) League of Nations Gold Prices for
World Trade.

(G) Volume of World Production of
Foodstuffs and Raw Materials.
By Years.

(H) Volume of World's International
Trade (Imports plus Exports).
By Years.



Sources :

- (A), (B) and (C) Federal Reserve Bulletin.
- (D) League of Nations Monthly Bulletin, Bank rates of the following countries averaged U.K., France, Germany, Italy, Japan, Netherlands and U.S.A.
- (E) U.S. Bureau of Labor.
- (F), (G) and (H) League of Nations Memorandum on Production and Trade.

segregated into the two groups — viz., (a) United States of America and France on the one hand and (c) the rest of the world on the other, it becomes at once apparent that while, in the period from 1925 to the end of 1928, the rest of the world absorbed gold at a slightly greater rate than the rate at which gold was added to the gold reserves of the world as a whole, the reverse was the case in a very marked degree in the period from the early part of 1929 to 1931. Coinciding with this latter movement we find — what in the circumstances was to be expected, indeed was inevitable — a sharp rise of the average bank rate. The Central Banks of the “rest of the world”, finding their gold reserves being drawn upon heavily by the United States of America and France, applied the orthodox measures of protection. They raised their bank rates to make credit dear, and so to compel debtors to hasten the repayment of loans by the sale of commodities and securities. This process of liquidation naturally reacted at once on the level of wholesale commodity prices and, indeed, we find closely coinciding with the rise of bank rates the beginning of the steep fall of prices which has persisted ever since. Again, closely coinciding with the fall of prices, a sharp deviation from the trend of economic progress sets in. Both the volume of the world's production of primary products and that of international trade not only cease to increase steadily as they did in the previous years, but are reduced at a growing rate as the process of deflation develops.

In the face of these and other relevant facts, we are quite unable to associate ourselves with the view that the sharp fall in the level of commodity prices and the consequent breakdown of the international gold standard are primarily due to the various economic maladjustments enumerated by our colleagues. The dominant cause in our view is the maldistribution of monetary gold reserves which began in the early part of 1929. We dealt with the causes of this maldistribution in a report which we and Professor Gustav Cassel felt it our duty to present to our Chairman in January last and from which we quote the following¹ :

“ While there are still some half-dozen countries endeavouring to maintain the gold standard, the international gold-standard system has broken down. In such circumstances, we feel bound to concentrate our attention upon the remarkable alteration in the value of gold during the last two years. We therefore propose first to trace the main causes of the recent violent fall in prices and the consequences which this fall has produced.

“ We desire to point out that in this report we do not attempt to deal with all the problems involved in the terms of reference of the Gold Delegation which were reserved for the final report of the delegation. We confine this document to the matters that we regard as of urgent importance in the present emergency.

“ We further desire to make clear that we do not consider it our task to make a complete analysis of all the factors which have contributed to the present economic depression. This would go beyond our terms of reference, which were directed to the causes and effects of fluctuations in the purchasing power of gold to the exclusion of other factors which may also affect the general situation. Accordingly, our analysis is limited to the question of the causes and effects of the violent appreciation in the purchasing power of gold which has taken place since the third quarter of 1929. It will be clear, however, from the course of our argument that we have come to the conclusion that this appreciation in the value of gold is the fundamental cause of the present depression.

“ The immediate cause of this appreciation is the shortage of gold for monetary purposes which has been experienced in the great majority of the countries of the world. The extent of this shortage is made apparent by the figures relating to the distribution of monetary gold which we set out below.

“ Although the production of gold in the post-war period has only been sufficient to increase the world's total stock of gold by a little more than 2 per cent per annum, a greater proportion of the world's gold has been devoted to monetary purposes, so that, in the period between the end of 1925 and the middle of 1931, the monetary gold stocks have increased with fair regularity at a rate of somewhat more than 3 per cent per annum. This increase in the stock of monetary gold corresponded approximately to the normal pre-war rate of economic progress which was resumed from 1925. This stock, therefore, if properly

¹ Certain of the figures in that report have been slightly modified as a result of recalculation of some of the factors. The new figures are embodied in our quotation.

distributed, should have sufficed to support a volume of credit adequate to maintain the existing level of prices. In fact, the gold price level was fairly stable in the period 1925-1929. After 1928, however, a situation arose in which by far the greater part of the new gold available became concentrated in two countries, while the remaining countries of the world, apart from U.S.S.R.,¹ so far from increasing their stocks of monetary gold, lost no less than 16 per cent of their monetary gold between January 1st, 1929, and June 30th, 1931.

"The table below shows the sudden and radical change which the distribution of the world's monetary gold underwent after the beginning of 1929.

*" Distribution of the World's Monetary Gold Stocks.
(In millions of dollars.)*

	1.1.29	30.6.31	Change	Percentage
France	1,271	2,211	+ 940	+ 74
United States	4,141	4,956	+ 815	+ 19½
Rest of world (excl. U.S.S.R.) about	5,550	4,650	— 900	— 16
Total	10,962	11,817	+ 855	8

"The world's total monetary gold stocks (excluding those of U.S.S.R.) increased in the period covered by the above table by 8 per cent. The holdings of France increased by no less than 74 per cent, and those of the United States by 19½ per cent, or, if the stocks of those two countries are combined, their increase is 32½ per cent. The stocks of the rest of the world, on the other hand, decreased by 16 per cent. These stocks should normally have increased by roughly 3 per cent per annum, so that the real deficiency at the end of the period considered amounted to about 23 per cent. The loss of free gold reserves in excess of legal minimum requirements was, of course, relatively much greater. Thus the countries concerned found it impossible to maintain the level of prices obtaining at the end of 1928. In order to defend their gold reserves, their Central Banks had to apply the normal measures of deflation. The process of deflation thus set in motion gathered momentum when it became apparent that contraction of credit and falling prices in the gold-losing countries failed to re-attract gold to their depleted monetary reserves, but that, on the contrary, the flow of gold to France and the United States continued unabated. The result was a further pressure upon commodity prices in the gold-losing countries, increased competition in world markets, and, in consequence, a world-wide fall in prices.

"As a further consequence of this disastrous and continuous fall in the price level, most of the gold-losing countries were, in the end, forced to abandon the gold standard. They found it practically impossible to adjust their internal levels of prices and wages, and particularly the burden of debt which they all carried, to the lower international price level, and they had no alternative but to abandon the gold standard and so to sever the link between their internal prices and gold prices.

"It is clear from the figures given above that the recent drastic fall in prices has been caused by a maldistribution of monetary gold rather than by any shortage of the world's monetary stocks of gold as a whole. When we examine the causes of this maldistribution, we find it obvious that the power of the United States and France to attract the abnormally large proportions of the world's gold which they have absorbed is due to the fact that they have had a surplus in their balance of payments. Up till 1928, this surplus, which is, of course, not a new phenomenon, had been adjusted by a corresponding export of capital by the United States mainly in the form of long-term investments and by France mainly on short term, but from that year onward this export of capital began to dwindle. At the same time, both these countries placed new obstacles in the way of the inflow of commodities. The result has been that the only way in which the debtor countries could meet this gap in the balance of payments was by sending gold to the creditor countries.

¹ U.S.S.R. constitutes a self-contained economic system practically divorced from the rest of the world.

“ The surplus in the balance of payments by means of which so much gold has been attracted to these two great creditor countries is intimately bound up with the fact that the two countries in question have received very substantial payments in respect of reparations and war debts. The following table will show the connection between the payment of inter-governmental indebtedness and the increase of gold reserves in the receiving countries :

“ *Gold Movements and Inter-Governmental Payments.*
(In millions of dollars.)

	Reparations and war debt receipts	Increase of gold reserves ¹	Increase of gold reserves less than (—) or in excess of (+) reparations and war debt receipts
January 1925 to December 31st, 1928 :			
France	557	+ 294	— 263
United States	807	— 457	— 1,264
	<u>1,364</u>	<u>— 163</u>	<u>— 1,527</u>
January 1st, 1929, to June 30th, 1931 :			
France	343	+ 940	+ 597
United States	555	+ 743	+ 188
	<u>898</u>	<u>+ 1,683</u>	<u>+ 785</u>
Total, January 1925 to June 1931	2,262	+ 1,520	— 742

“ In the first period, one of stability and ordered progress, the United States, as already indicated, lent abroad, mainly to Germany, sums more than sufficient to make gold movements in settlement of reparation and war debt payments unnecessary, while France accumulated large short-term balances abroad. In the second period, one of profound disturbance on the other hand, France and the United States together not only collected the whole of the reparation and war debt payments in gold, but also converted balances accumulated abroad during the earlier period into gold and withdrew them. As the table shows, it may be said with truth that reparation and war debt payments collected from January 1925 till 1931 (amounting to about 2,262 million dollars) have, over the whole period, been received in gold, with the exception of about 742 million dollars, since the increase in the total gold stocks of these two countries derived from foreign supplies of gold during the period amounted to somewhat more than 1,500 million dollars. Had these two countries not received reparation and war debt payments, they would obviously not have been in a position to draw these sums of gold to themselves. No doubt a country's balance of payments is the combined result of all the factors entering into this balance. But if factors of an extraordinary character enter into the balance and if, in consequence, a surplus result, which must be settled in gold, then it is reasonable to conclude that these extraordinary factors are the cause of this result. Thus, it may truly be said that the payment of reparations and war debts has been the basic cause of this one-sided distribution of gold. In the normal course of international trade and in the absence of these abnormal influences, such a surplus in the balance of payments could never have arisen.

“ Reparation and war debt payments had, in fact, laid such an enormous burden on the gold-standard system of the world that it was impossible for this system to carry it, and therefore the system had to break down.

“ It may be asked why the strain did not prove intolerable until 1929. The answer is that in the preceding years Germany had been enabled to pay reparations, mainly because of the steady receipt of large loans from the United States. After 1928, there

¹ Excluding gold delivered to the Central Banks from domestic hoards and from domestic gold production.

was a notable shrinkage in these loans, partly because the development of a stock-exchange boom within the United States itself kept resources in that country and even attracted them from other countries, and partly because Germany had practically exhausted her borrowing power and doubts were beginning to be felt concerning the safety of the loans previously made. With the falling away of these loans, reparation and war debt payments had to be made in gold.

"Of course this abnormal movement could have been prevented if the countries ultimately receiving the reparations and war debt payments had been prepared to receive them in goods and services. But this they were not willing to do. In order to prevent a great invasion of German goods, they raised their Customs duties and took a number of other protectionist measures, not only against Germany, but against the rest of the world, thus preventing payments in goods even by way of triangular trade.

"The breakdown of the gold standard must therefore be regarded as the combined result of the obligation to pay reparations and war debts on the one side, and the unwillingness of the receiving countries to receive payment in the form of goods and services on the other.

"It remains to be explained why this huge accumulation of gold did not produce an increase in the supply of means of payment and therefore a rise in internal prices in the receiving countries. According to the classical doctrine of the functioning of the gold standard, such a rise in prices would have been the automatic effect of the inflow of gold, and this effect would have checked the inflow and eventually caused a reversal of the movement. However, both in France and the United States, the gold was not used for any such purpose, but was simply buried in the vaults of the Central Banks. Not only was the level of prices of these countries not raised but was actually lowered as the price level fell in the rest of the world.

"It is a widespread belief that the present crisis is merely a phase of a cyclic movement of business activity — a crisis, therefore, which has to be regarded as the inevitable result of the forces of instability assumed to be inherent in the present organisation of the world's economy. This belief stands in the way of a true analysis of the development that has led to the catastrophe in which the world is now involved. It prevents those who hold it from appreciating the real causes of these disastrous developments. We think it is of the highest importance to discard such vague conceptions and thus to clear the ground for an objective investigation of the present situation in the light of distinct and clearly traceable facts."

To put the matter very briefly, we hold that the fall in the general level of prices has been the fundamental cause of the present depression, and that that fall was the result of the obligation to pay reparations and war debts combined with the unwillingness of the receiving countries to accept payment in goods and services, so that payment had to be made in gold.

II. THE OBJECTIVE OF MONETARY POLICY.

The second important issue on which we differ from our colleagues is the objective of monetary policy. They define this objective (paragraph 186) as "a relative, but not an absolute, stability of wholesale commodity prices as measured by their movement over a long series of years", and they add that the measure of stability which they envisage is not inconsistent with slow movements of the long-term trend either upward or downward. We are not clear what is intended by the reference to relativity, but we understand that our colleagues would aim merely at restricting the range of short-term fluctuations of prices, and would not attempt to influence the long-term movement by monetary policy, though this seems hardly consistent with other parts of the report, which stress the desirability of economising the use of gold, the most potent factor in determining the course of long-term movements. But whatever may be the meaning of our colleagues' recommendation, we think it desirable to make it perfectly clear that, in our view, the prime objective of monetary policy should be stability in the general level of wholesale commodity prices. It is stated in paragraph 169 of the report that "when the decline in prices

is due to improvements in industry and agriculture which have lowered production costs, the decline in prices is, on the whole, beneficial, for it is in this way that the fruits of industrial and agricultural progress are made available to society as a whole"; and that "it is only when the attempt is made to sustain prices in the face of decreasing production costs that disequilibria occur, for this encourages over-production and causes an accumulation of goods, which results ultimately in a breakdown".

There appears to be some confusion in this argument between the general price level and the prices of particular commodities or groups of commodities. No one will deny that the lowering of the costs of production of a particular commodity should tend to lower the price of that commodity or that the maintenance of the price of a particular commodity at an artificially high level may lead to its over-production. But this consideration does not apply to the maintenance of stability in the general price level, which is in no way incompatible with the fall or rise in the prices of individual commodities.

We are aware that some economists would regard a gradual fall in prices as beneficial if it is commensurate with an increase in the efficiency of the factors of production. But it seems to us that the arguments in support of this view, if valid at all, would apply only to a self-contained economy, which does not exist under modern conditions. We are concerned with world movements in prices which affect all countries on the same monetary standard, and the rate of growth of the efficiency of the factors of production varies widely from country to country. Under such conditions, the practical question is whether it is better for the world at large to keep commodity prices stable and let producing classes in the more rapidly progressing countries reap the benefit of their increased efficiency or to let prices fall *pari passu* with that increase in efficiency and thus to force a dislocation in the distribution of income in the less progressive countries. Our study of the economic effects of a fall in prices, in regard to which we are in full agreement with our colleagues, leaves us in no doubt that the former is the preferable alternative.

The third main point of difference is the extent to which it is possible for monetary policy to achieve its objective. The difference here is to some extent one of emphasis and degree, for we are all agreed that monetary policy is not all-powerful and can be thwarted by political and fiscal policies. But the degree of potency that is attributed to the monetary factor is none the less important. Our colleagues express the view (paragraph 183) that "it is neither possible nor desirable by the application of monetary policy to correct fluctuations in the price level due to non-monetary causes". To take first the question of possibility: it is clear from the context in which this passage occurs that it refers only to the level of prices in terms of gold. In the case of a country which is on a paper standard, it is obviously possible by expansion of currency and credit to raise national prices to any extent, as so many countries in Europe have learned by bitter experience. To take a recent instance, the United Kingdom, since it went off gold, has maintained its wholesale price level considerably above gold prices and, in fact, at a much more stable level than the purchasing power of gold. In the case of countries on the gold standard, the factors at work are essentially the same, though more limited in their scope. Broadly speaking, the general price level is determined by the ratio between the supply of money (*i.e.*, means of payment) and the demand. So long as supply keeps pace with demand, the price level will remain stable. The level may be disturbed by an alteration on either side of the equation — *i.e.*, either (a) on the supply or monetary side or (b) on the demand or non-monetary side. The latter is what we understand our colleagues to mean by non-monetary causes. Now, so far as the ratio is concerned, it makes no difference from which side of the equation the disturbance comes and, assuming that monetary policy can control the supply, it is clear that it is possible, theoretically at least, to maintain prices stable. The power of any individual country to influence gold prices is, of course, limited by practical considerations. It could not keep on the gold standard if its monetary policy were widely at variance with that of the other gold-standard countries, but this only means that gold prices cannot be kept stable without co-operation between the principal countries on the gold standard, a desideratum in regard to which we are all agreed. Another limitation is imposed by the amount of gold available for monetary purposes, but our colleagues do not base their argument on this limitation; in fact, it is expressly stated in paragraph 109 of the report that the rapid decline in prices, which began in 1929, cannot be attributed to a deficiency in the world's total stock of monetary gold. When this is admitted, it seems clear that, given international co-operation, it is both theoretically and practically possible to restore gold prices to a suitable level and to maintain them stable at that level.

When we turn to the *desirability* of correcting fluctuations in the price level by the application of monetary policy, we find an equally profound divergence between our view and that of our colleagues. We have defined the objective of monetary policy as stability in the general level of wholesale commodity prices, we have tried to show that it is possible to attain that objective, and it follows that we hold it to be desirable to direct monetary policy to that end. We cannot endorse the view expressed in paragraph 134 of the report that "attempts to control fluctuations in the general or average level of prices may accumulate strains within the price structure, and therefore cause deferred and possibly more violent paroxysms of readjustment eventually". We believe, on the contrary, that a readjustment of industry, trade and of relative prices is likely to proceed with far less strain if fluctuations in the general level of prices are avoided, for such fluctuations necessarily superimpose upon the price structure the additional strain which arises from the consequent redistribution of incomes and from all the reactions which such redistribution has on production, trade and finance.

We feel, moreover, that our colleagues are both unduly apprehensive of injurious effects from credit expansion and unduly mistrustful of the power of monetary authorities to control that expansion. We wish to dissociate ourselves from the implications of paragraph 176 of the report in which it is said, *inter alia*, that "measures taken to expand credit . . . may in some cases even lay the basis for a new expansion of credit which it may prove difficult to control". We can hardly believe that our colleagues intended to imply in this part of the report that it may be impossible to control expansion of credit by appropriate monetary and budgetary policy. Such a conclusion would indeed come strangely from a delegation of the Financial Committee, seeing that, on the advice of that Committee, so many European currencies have been stabilised under the ægis of the League, and the results have amply demonstrated that it is possible to get inflation under control even at an advanced stage. We lay stress on this point because we consider that it would be most undesirable for the monetary authorities to be deterred by the bogey of inflation from taking the steps necessary to check and reverse the disastrous fall in gold prices. In our view, the prime need of the world to-day is a concerted policy of expansion of credit by the principal gold-standard countries, and we see no reason whatever to fear that such a movement may be incapable of control. In particular, we wish to record our opinion that the attempts at present being made to expand credit in the United States are a move in the right direction.

III. REMEDIES FOR THE PRESENT CRISIS.

The fourth main point of difference between ourselves and our colleagues is in regard to the possible remedies for the present economic crisis. Seeing that we differ as to (a) the causes of the crisis, (b) the objective of monetary policy, and (c) the possibility and desirability of stabilising prices by means of monetary policy, it was only to be expected that we should disagree regarding remedies. In this vital matter, the report offers very little guidance to a hard-pressed world. The general impression which it will give is that our disorders are the inevitable result of the war and of war and post-war inflation, possibly aggravated by the malignant influence of some "business cycle", the nature of which is said to be not fully understood, and that it is useless and even dangerous to attempt to put matters right by the instrument of monetary policy.

Our own recommendations are given in detail in our January report, from which we quote the following :

"We feel that this report would be incomplete if we did not summarise the salient conclusions that naturally follow from our analysis of the causes and effects of the recent appreciation of gold. We are the more impelled to do so because the very phenomena of the present depression, which we have reviewed, convincingly demonstrate how urgently necessary it is that a concerted and well-thought-out plan should be prepared at the earliest possible moment for the restoration of the world's monetary affairs.

"The gold standard, as an international monetary system, may be regarded as destroyed, owing to the inordinate appreciation of the purchasing power of gold. There are still half a dozen countries who maintain the convertibility of their currencies into gold and may therefore be regarded as still being on the gold standard, but the functioning of that system is restricted to a comparatively small area of world trade. It is clear that the gold standard

in this restricted sphere is something quite different from the gold standard as it existed before the war, when the general adherence to this standard and a comparative freedom of trade gave it a certain measure of stability. The impediments to international trade, which the abandonment of the gold standard in the majority of countries has produced, subjects the value of gold to the possibility of even wider fluctuations in its purchasing power. The truth is that an international economic system, as we knew it, is impossible without a tolerably stable international monetary system and, conversely, that an international monetary system is impossible without a tolerably stable international economic system. The absence of either must inevitably lead to a very substantial reduction of production and trade which will make it impossible for the world to support its present population and may even threaten the very existence of our civilisation.

“ It must therefore be the aim of statesmanship to restore stability to both the monetary and economic systems of the world at the earliest possible time.

“ This postulates international agreement. No international monetary system is likely to command such wide support as the gold standard ; the restoration of that standard therefore is probably more likely to be acceptable to the nations as a whole than the adoption of any other system. But to restore confidence in the gold-standard system, certain conditions are indispensable.

“ The world catastrophe is due to the steep fall of commodity prices which it has experienced during the last two years — that is to say, to the appreciation of money, which in a gold-standard system is synonymous with the appreciation of gold. The countries which have abandoned the gold standard were forced to do so, because the burden of debt had become unbearable, and a serious and increasing disequilibrium had developed between the level of wholesale commodity prices and other groups of prices, including wages. Those countries that still adhere to the gold standard, while for the time being able to stand the strain, are also undergoing a severe crisis for precisely the same reasons. The strain is increased in cumulative fashion by the progressive decline of international trade and, latterly also, by the almost universal breakdown of credit.

“ If the gold standard is once more to be restored as an international standard, the real difficulties of such a task must be clearly faced.

“ The first requisite for the restoration of the gold standard must obviously be the removal of the forces which have caused it to break down, and with which we have dealt in the earlier part of this report.

“ But the removal of these forces will not in itself suffice. For re-establishing the gold standard as a common standard of the world's trading nations, some essential conditions, relating both to the economic and the monetary side of the problem, have to be fulfilled. There is, indeed, a great danger in premature restoration of the gold standard in one country or another without sufficient safeguards for the stability of that standard.

“ The most important conditions are the following :

“ *First* : Some reasonable settlement of the reparations and war-debts questions must be effected, and this settlement must be of such a character as to make it quite clear that (a) reparations and war debts can be paid and the payments received, and (b) how this can be accomplished without serious interference with the working of the gold standard.

“ *Second* : In international trade, conditions must be restored to some degree of normality, at least so far that it may truly be said that foreign debts can be paid as a rule by an export of goods and services and that such export is not unduly hampered by increased tariffs or other protectionist measures.

“ *Third* : There must be adequate assurance that what is sometimes called the ‘ rules of the game ’ of the gold standard will be observed — that is to say, that gold will be allowed to move freely and will not be unduly accumulated in any country without being allowed to exercise its normal influence in raising the level of prices. No doubt these rules require a thorough-going examination, but it is already clear that a restoration of the gold standard as a worldwide system is impossible if it is going to be subjected to the abnormal strain to which it has been exposed in recent years.

“ Fourth : The world must come to some agreement with regard to a gold-economising policy, involving a deliberate restriction of all monetary demands for gold, with the aim of preventing an unnecessary and indeed disastrous rise in the value of gold.

“ Unless these conditions are fulfilled, a general return to the gold standard is not possible, and, even if it were temporarily possible, it would be undesirable and dangerous. There would be a risk of further deflation and of a consequent aggravation of the present economic depression. It is pretty certain that countries which had returned to the gold standard without the necessary safeguards for its stability would soon be driven off it again. Thus the international gold standard would not offer that security for international trade, the establishment of which is the very purpose of that standard.

“ The most effective measure that could be taken at the present moment in order to pave the way for a restoration of the gold standard as an international monetary system would be to raise the general price level in the gold-standard countries. If, as we believe, the recent fall in prices is the essential cause of the breakdown of the gold standard, a reversal of this disastrous movement is clearly desirable. Thus the objective should be the restoration of the price-level of 1928 or at least the raising of commodity prices to a level that would be in closer harmony with wages and debt-charges and the maintenance of stability at that level. Such a raising of the price-level would not be open to the objections which attach to inflation in ordinary circumstances, because it would merely amount to a reversal of a previous process of pernicious deflation. If such a rise in gold prices were brought about by the countries still on the gold standard, a situation would be created in which it would be easier for the paper-standard countries to return to the gold standard. But, as has already been explained, such a step should clearly not be taken without sufficient safeguards for a rational treatment of the gold standard in the future.

“ At present, the monetary gold stocks of the world amount to a total of about 12 milliard dollars. Of this sum, about 8 milliards represent the legal minimum reserves. Thus there is a surplus of 4 milliard dollars. Some people point to the total of these reserves and say that such reserves disprove the existence of any scarcity of gold. It must be remembered, however, that the so-called surplus reserves are in fact the only reserves that really are at the free disposal of the Central Banks, the legal minimum reserves being immobilised and buried in the cellars of the Central Banks without being of any practical use. The active gold reserves of the world can at the present moment best be increased by abolishing all legal stipulations with regard to minimum gold reserves of the Central Banks.

“ In both the interim reports of the Gold Delegation it was suggested that these stipulations might be modified without in any way weakening the general credit structure. Since these reports were written, the situation has changed in many respects. The system of keeping a part of the reserves of the Central Banks in foreign exchange has become discredited, and consequently there is likely to be a larger demand for gold for reserve purposes in the future. This makes it all the more necessary to economise the use of gold as far as possible. Moreover, it is an anachronism to maintain a gold reserve against notes under the conditions prevailing in most countries — *i.e.*, when notes are not redeemable in gold coin and when therefore an internal drain cannot take place (except in moments of panic, for the purpose of hoarding of bullion). The reserves in these altered conditions are primarily required to meet possible deficits in the balance of payments. The criterion determining the size of these reserves should rather be the amounts that are likely to be required for meeting demands on the Central Banks for foreign payments.

“ In view of these considerations we are of opinion that the legal regulations of percentage reserves should be abolished and that it should be left to each Central Bank to consider what amount of gold it thinks appropriate to meet the demands which are likely to arise.

“ If all nations, or at any rate the leading nations, could agree at once to take this step, the active gold reserves of the world would have been trebled and would therefore be amply sufficient to support prices at the level we have suggested.

“ If in this way the necessary freedom of movement is given to the Central Banks, it ought no longer to be beyond their power to accomplish a more reasonable distribution

of the world's monetary gold supplies, provided, of course, that the present political causes of maldistribution are removed. Thus the way would be paved for the restoration of an international gold standard.

“ Meanwhile we suggest that the highly developed countries that have been forced off the gold standard should aim at securing a certain degree of stability of internal purchasing power for the paper currencies in which a great part of the world's trade has now to be carried on. If restoration of the gold standard is to be the ultimate aim, this involves tasks the accomplishment of which will require great efforts and much time. An indispensable preliminary will be a certain degree of stabilisation of the paper standards in terms of commodities. Without waiting for a solution of the gold question, therefore, those countries which are now on a paper standard must try to make the best of their situation. For this purpose, a collaboration between paper-standard countries is at present urgently to be desired. Each of the countries should make it its aim to give a certain stability to the internal purchasing power of its own currency. The fact that a country, under present conditions, has abandoned the gold standard should not be regarded as involving uncontrolled inflation. It simply means that the particular country found itself unable to submit to the deflation that had already taken place and still less to the further deflation that the gold-standard countries may have to experience as a consequence of their continued struggle for gold. A common declaration by the paper-standard countries that the objective of their policy is the stabilisation of their commodity price levels would be of great value and go a long way towards restoring confidence.

“ However, before adopting a policy of stabilisation, the paper-standard countries will find it necessary to raise their general level of wholesale commodity prices in order to re-establish a reasonable equilibrium between prices, wages and debt-charges. It will then be desirable to determine in advance what the final level of stabilisation is to be, and to make it clear that monetary and financial policy will be steadily directed to that end.

“ Assuming that a series of paper-standard countries had agreed on such a stabilisation scheme, the problem arises how they could attain mutual stability between their respective currencies. This problem can obviously only be solved if Great Britain takes the lead by a definite stabilisation of the internal purchasing power of the pound sterling. If this were done, the other countries could make it their programme to keep the rates of exchange on London stable. Their monetary policy would then practically be the same as it used to be in the pre-war history of the gold standard, when a gold-standard country only had to look to the stability of its sterling exchange. This programme would not therefore involve these countries in any new or experimental task. Assuming Great Britain to take the responsibility for the stability of the purchasing power of the pound sterling, we could reasonably expect the new paper-standard system to work well.

“ For the success of this plan it is essential to restore freedom in foreign exchange dealings. This should also apply to dealings in exchanges for forward delivery, and such dealings should be actively supported by the Central Banks.

“ By co-operating in the plan outlined above, the paper-standard countries would doubtless be able to create an international monetary system based on principles so sound that it would soon acquire the necessary confidence and thus furnish the basis for the development of a new prosperity. This is probably the best way of preparing the ground for a general return to the gold standard.”

It will be seen from the above that the immediate measures which we consider necessary to restore the world's economic well-being fall under four main heads :

1. An early settlement of the question of war debts and reparations ;
2. The removal, as far as possible, of restraints on international trade ;
3. A concerted attempt by the principal gold-standard countries to restore wholesale commodity prices, as measured in gold, to the level prevailing in 1928 ; and
4. A similar attempt by the paper-standard countries, under the leadership of sterling, to stabilise their internal price levels.

The third of these measures is largely dependent on the first two, and may therefore take longer to accomplish, but events are moving quickly, and, if the Governments concerned cannot agree on a solution of the reparations and war-debts problems, they will soon be driven to yield to the inevitable logic of economic forces. The countries which have claims to reparations and war debts will be forced either to remit them or to accept payment in goods or services, because their debtors will be unable to obtain the gold required to discharge their debts. Already the receiving countries have accumulated most of the available monetary gold in the world, and, when they have got it all, if they still demand payment in gold, their debtors will have to buy gold from them to pay their debts, and will only have goods and services to offer in exchange for the gold. But long before this point is reached, the resultant deflation will have produced a still further fall in gold prices, and the strain on the world's economy, which is already hardly tolerable, will have reached breaking-point, not only in the debtor countries, but also in the receiving countries. We again urge therefore the vital necessity of an early settlement of this question.

Meanwhile the paper-standard countries might do much to restore more stable conditions to a large part of the world. Having cut themselves free from a degenerating gold standard, they have regained a large measure of freedom and need no longer allow their internal price levels to be dragged down by the continued fall in gold prices. As we pointed out in January, mutual stability between their respective currencies can only be secured by a common policy of internal price stabilisation. If Great Britain will give a lead, as we have suggested, by a clear declaration of its policy, including the level of commodity prices at which it proposes eventually to stabilise the value of sterling, we may expect to see a growing measure of stabilisation among the countries whose currencies are at present more or less closely linked to sterling, and probably the accession of a number of other countries to the sterling area. The parts of the world on a sterling standard would comprise a larger area and population and a greater volume of trade than the countries remaining on the gold standard. In this large sterling group there would be mutual stability of exchange and consequently greater freedom of trade, and to that extent it could afford to disregard fluctuations in its exchanges with the gold-standard countries.

In this connection we think it desirable to add that we do not endorse without qualification the statement in paragraph 45 of the report that "at the present stage of world economic development the gold standard remains the best available monetary mechanism". We would only go so far as to say that the gold standard is the best mechanism *if properly managed*. As indicated in our January Report, we only advocate a general return to the gold standard if and when there is adequate assurance that the "rules of the game" will be observed.

In conclusion, we desire once more to emphasise the extreme urgency of remedial measures in the present world crisis. When the Delegation met in January last, we were so strongly convinced of this urgency that we felt constrained, contrary to the views of our colleagues, to submit a report to the Chairman and to ask that it should be made public at the earliest possible moment. Since that report was written, the process of deflation has continued at an accelerated rate and in consequence the economic situation of the world has still further deteriorated with alarming rapidity. The wholesale gold prices of commodities have fallen by 7½ per cent and there has been a further drastic curtailment of world production and of international trade. The continued fall in prices has stimulated protectionist measures and given rise to various devices for controlling the foreign exchanges. All these restraints on the international movement of goods tend to force payment in gold, and thereby to produce further deflationary effects, which are only aggravating the evil. It may truly be said that international trade is being gradually strangled to death; if the process continues, millions of people in this economically interlocked world must inevitably die of starvation, and it is indeed doubtful whether our present civilisation can survive.

MEMORANDUM OF DISSENT

By Professor Gustav CASSEL.

After having carefully studied the final report of the Gold Delegation, I find it impossible for me to sign this report. Right and wrong are mixed up in it in such a bewildering way that it is extremely difficult to state all the reservations to which an endorsement of the report would be subject. Important work has hindered me from taking part in the last meeting of the Gold Delegation, and I have therefore been unable to enter upon a detailed criticism of the final report. Some of my colleagues, Sir Reginald Mant, M. Albert Janssen and Sir Henry Strakosch, have undertaken such a criticism in a note which I think to be of great value. With the general views of these members of the Delegation, I am in complete accord.

Although I very much appreciate much of the research work of the delegation, I strongly feel that the whole matter ought to have been presented to a world in the utmost distress in such a way as to let the essential features of the gold problem stand out in full clearness. Since the appointment of the Gold Delegation, actual developments have brought two questions into the foreground : the first is the cause of the breakdown of the world's gold-standard system ; the second is the possibility of a restoration of an international monetary system. It is necessary now to concentrate upon these two questions.

The way in which the Gold Delegation presents the causes of the breakdown of the gold standard seems to me entirely unacceptable. What we have to explain is essentially a monetary phenomenon, and the explanation must therefore essentially be of a monetary character. An enumeration of a series of economic disturbances and maladjustments which existed before 1929 is no explanation of the breakdown of the gold standard. In fact, in spite of existing economic difficulties, the world enjoyed up to 1929 a remarkable progress. What has to be cleared up is why the progress was suddenly interrupted. A minority of the Gold Delegation, including myself, presented in January of this year an analysis of this question, which gave a clear exposition of the principal lines of causation of the breakdown of the gold standard. I still think that this exposition ought to have formed the basis for the report of the Delegation.

It may be desirable that I should, on this occasion, very briefly summarise my views.

It had been made clear during the course of the last decade that the gold standard could be maintained only by the aid of a systematic gold-economising policy aiming at such a restriction of the monetary demand for gold as would prevent a rise in the value of that metal. To a certain extent, this programme had been carried out with the most beneficent result. From 1928 onwards, however, this policy was completely frustrated by extraordinary demands for gold which brought about a rise in the value of gold of unparalleled violence. The fundamental cause was the claim of reparations and war debts, combined with the unwillingness of the receiving countries to receive payment in the natural form of goods and services. This underlying cause became effective when France, in 1928, entered the gold-standard system and began to draw gold to herself on a large scale, and when, at the same time, America ceased that export of capital which previously had served to maintain equilibrium in her balance of payments. The consequence was such a drain on the gold reserves of other countries as to cause the breakdown of the international gold-standard system. The sudden increase in the value of gold meant a corresponding fall of the general level of commodity prices, the effect of which was a general distrust and unwillingness to invest savings in production and a widespread incapacity of debtors — private and public — to meet their obligations, causing a further destruction of confidence. As the fall in commodity prices was felt in the different trades as a result of increased competition, a general desire to protect oneself against this extraordinary competition arose and led to a wave of ultra-protectionism, with the most destructive effects on international trade.

This, in a few words, is the true exposition of what has happened and of what, in a period of some years, has brought the world's economy to a crisis threatening to develop into a complete catastrophe. In such a situation, it is of the utmost importance that the world should see clearly what are the essential causes of a development leading to such disastrous effects. This is, of course, particularly important if we want to find a way out of the muddle. The analysis here given proves that reconstruction work must begin with a restoration of sound monetary conditions.

Turning our attention to this problem of the future, we have first to observe that the value of gold has become exposed to so many incalculable influences that it is impossible now in any true sense to speak of gold as a fixed standard of value. The destruction of the old gold-standard system has, in fact, gone much further than a temporary abandonment of the gold standard by some few countries would denote. We are faced actually with the complete destruction of the essential quality that made gold an acceptable standard of value for an international system of money. It is necessary to keep this fact in mind, if we want to form a clear judgment on the possibility of a restoration of an international gold standard system. Such a restoration would, at any rate, require the fulfilment of a number of essential conditions, among which the following should be mentioned here : a great reduction in the value of gold, a radical redistribution of the world's gold reserves, the resumption of a systematic gold economising policy, cancellation of all claims on reparation and war-debt payments, definite guarantees against the repetition of such extraordinary demands for gold as have occurred during the last few years and, finally, restoration of a reasonable freedom of international trade and of international capital movements.

Whatever the prospects of such reforms may be, it seems quite clear, at the very best, several years must elapse before a restoration of an international gold-standard system can be seriously contemplated. Any premature attempt to use an occasional opportunity for a formal restoration of the gold standard, without the necessary safeguards for its stability, would be extremely dangerous and must be expected to lead to new disasters. If we want to construct a new gold-standard system, we must take care that the foundations are laid with sufficient solidity.

In the meantime, we have to make the best of our existing currencies. The countries off the gold standard have to secure the greatest possible stability for the internal purchasing power of their paper currencies. Before doing this, however, they must first raise their price level at least some half-way up to the price level of 1929. Thereafter, the stabilisation should be carried out. In order to secure the greatest possible stability to the exchanges between the paper currencies, it seems necessary that Great Britain should take the lead with the aim of creating a " Sterling Group ". The different currencies of this group should be regulated so as to remain in a certain parity with sterling. Within such a " Sterling Group ", it would be possible to develop a sound international trade of some stability.

For the countries remaining on the gold standard, the most urgent aim is to force down the value of gold. They could do this themselves by reducing their monetary demands for gold, and the paper-standard countries could contribute to that end by selling gold which they have no longer any reason to keep.

It is an open question whether it will be possible in the future to restore the gold standard as an international monetary system. It is quite possible that the difficulties will prove insuperable, and that the paper-standard system will attain such a stability as to become generally acceptable. Even if we believe in the restoration of the gold standard, and are prepared to make the most serious efforts and sacrifices to this end, the creation of a group of paper standards of the highest possible stability is a preliminary stage which cannot be omitted. For the moment, the paper countries must concentrate their attention entirely upon this aim. Their agreement on such a policy would at once open possibilities for a new development of trade and production and should therefore be the most immediate concern of the economic policy of these countries.

From this analysis, it is clear that the problem of monetary reconstruction has now taken an aspect which places it far beyond the domain of the questions which the Gold Delegation was called upon to examine. The world's monetary problem will henceforth have to be discussed on far broader lines.

ANNEXE

STOCKS MONDIAUX D'OR MONETAIRE

(Tableau extrait de l'*Annuaire Statistique de la Société des Nations 1931/32*, Genève, 1932.)

ANNEX

MONETARY GOLD STOCKS OF THE WORLD

(Table extracted from the *Statistical Year-Book of the League of Nations 1931/32*, Geneva, 1932.)

Annexe. STOCKS MONDIAUX D'OR MONÉTAIRE, exprimés en millions de dollars.
 Pour observations générales et renvois, voir pages 35-37 et 62-65.

Pays	XII. 1925			XII. 1926			XII. 1927			XII. 1928		
	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total
AFRIQUE.												
Congo belge	1	—	1	1	—	1	1	—	1	1	—	1
Egypte	17	—	17	18	—	18	19	—	19	18	—	18
Maroc	—	—	—	—	—	—	—	—	—	3	—	3
Union Sud-Africaine	48 ¹	* 12	60	47 ¹	* 18	65	50 ¹	* 16	66	48 ¹	* 33	81
Total	66	* 12	78	66	* 18	84	70	* 16	86	70	* 33	108
AMÉRIQUE DU NORD.												
Canada ¹	226	—	226	230	—	230	229	—	229	191	—	191
Etats-Unis d'Amérique	3,985 ²	414	4,399	4,083 ²	409	4,492	3,977 ²	402	4,379	3,746 ²	395	4,141
Total	4,211	414	4,625	4,313	409	4,722	4,206	402	4,608	3,937	395	4,332
AMÉRIQUE DU SUD.												
Argentine	436 ⁴	23	459	436 ⁴	23	459	461 ⁴	79	540	473 ⁴	146	619
Bolivie	8	—	8	9	—	9	9	—	9	8	—	8
Brsil	54	—	54	56	—	56	101	—	101	149	—	149
Chili	34	2	36	10	2	12	7	2	9	7	2	9
Colombie	15	2	17	18	3	21	20	3	23	24	3	27
Equateur	5	—	5	5	—	5	2	—	2	1	—	1
Paraguay	3	—	3	3	—	3	3	—	3	1	—	1
Pérou	21	1	22	21	1	22	23	1	24	21	1	22
Uruguay	57	1	58	57	1	58	68	1	69	72	1	73
Venezuela	16	—	16	15	—	15	16	—	16	18	—	18
Total	649	29	678	630	30	660	710	86	796	774	153	927
AMÉRIQUE CENTRALE, MEXIQUE ET ANTILLES												
	29	* 122 ⁶	151	18	* 136 ⁶	154	17	* 154 ⁶	171	14	* 166 ⁶	180
Total de l'Amérique	4,889	* 565	5,454	4,961	* 575	5,536	4,933	* 642	5,575	4,725	* 714	5,439
ASIE.												
Etablissement des Détroits	2	—	2	2	—	2	2	—	2	2	—	2
Inde (britannique)	109	—	109	109	—	109	119	—	119	124	—	124
Indes néerlandaises	74	—	74	75	—	75	72	—	72	68	—	68
Japon ⁶	576	—	576	562	—	562	542	—	542	541	—	541
Philippines	3	—	3	3	—	3	3	—	3	3	—	3
Turquie	—	—	—	—	—	—	—	—	—	—	—	—
Total	764	—	764	751	—	751	738	—	738	738	—	738
U. R. S. S.⁶												
	94	—	94	84	—	84	97	—	97	92	—	92
EUROPE (sans U. R. S. S.).												
Albanie	—	* 5	5	—	* 5	5	—	* 5	5	—	* 5	5
Allemagne ⁶	303	* 13	316	452	* 12	464	460	* 11	471	666	* 10	676
Autriche	2	—	2	7	—	7	12	—	12	24	—	24
Belgique	53	—	53	86	—	86	100	—	100	126	—	126
Bulgarie	8	—	8	8	—	8	9	—	9	10	—	10
Danemark	56	—	56	56	—	56	49	—	49	46	—	46
Dantzig	—	—	—	—	—	—	—	—	—	—	—	—
Espagne	490	—	490	493	—	493	502	—	502	494	—	494
Estonie	3	—	3	3	—	3	3	—	3	2	—	2
Finlande	8	—	8	8	—	8	8	—	8	8	—	8

¹ Estimation ou chiffre provisoire.

⁶ Estimate or provisional figure.

Annex. MONETARY GOLD STOCKS OF THE WORLD, \$ (000,000's omitted).
For general observations and detailed notes, see pages 35-37 et 62-65.

XII. 1929			XII. 1930			VI. 1931			XII. 1931	Country
Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	
1	—	1	1	—	1	1	—	1	2	AFRICA.
19	—	19	20	—	20	21	—	21	21	Belgian Congo.
3	—	3	3	—	3	3	—	3	4	Egypt.
46 ¹	* 32	78	41 ¹	* 34	75	36 ¹	* 34	70	43 ¹	Morocco.
										Union of South Africa.
69	* 32	101	65	* 34	99	61	* 34	95	70	Total.
										NORTH AMERICA.
151	—	151	194	—	194	157	—	157	144	Canada ² .
3,900 ²	384	4,284	4,225 ²	368	4,593	4,593 ²	363	4,956	4,051 ²	U. S. A.
4,051	384	4,435	4,419	368	4,787	4,750	363	5,113	4,195	Total.
										SOUTH AMERICA.
405 ²	40	445	411 ²	9	420	349 ²	9	358	252 ²	Argentine.
5	—	5	2	—	2	2	—	2	2	Bolivia.
150	—	150	11	—	11	—	—	—	—	Brazil.
8	1	9	8	1	9	8	1	9	8	Chile.
22	2	24	17	2	19	10	2	12	9	Colombia.
1	—	1	1	—	1	1	—	1	1	Ecuador.
1	—	1	1	—	1	1	—	1	1	Paraguay.
21	1	22	18	1	19	16	1	17	12	Peru.
68	1	69	61	—	61	58	—	58	53	Uruguay.
18	—	18	15	—	15	15	—	15	15	Venezuela.
699	46	744	545	13	558	460	13	473	358	Total.
										MEXICO AND CARIBBEAN.
17	* 162 ²	179	11	* 155 ²	166	10	* 150 ²	160	10	Total America.
4,767	* 591	5,358	4,975	* 536	5,511	5,220	* 526	5,746	4,558	
										ASIA.
2	—	2	2	—	2	2	—	2	2	Straits Settlements.
128	—	128	128	—	128	151	—	151	162	India
56	—	56	56	—	56	46	—	46	45	Dutch East Indies.
542	—	542	412	—	412	424	—	424	234	Japan ² .
3	—	3	3	—	3	3	—	3	3	Philippines.
—	—	—	—	—	—	—	—	—	4 ²	Turkey.
731	—	731	601	—	601	626	—	626	450	Total.
										U.S.S.R.²
147	—	147	249	—	249	261	—	261	328	
										EUROPE (excl. U.S.S.R.).
—	* 5	5	—	* 5	5	—	* 5	5	1	Albania.
560	* 9	569	544	* 8	552	354	* 5	359	251	Germany ² .
24	—	24	30	—	30	30	—	30	27	Austria.
163	—	163	191	—	191	200	—	200	354	Belgium.
10	—	10	11	—	11	11	—	11	11	Bulgaria.
46	—	46	46	—	46	46	—	46	39	Denmark.
—	—	—	—	—	—	—	—	—	4	Danzig.
495	—	495	471	—	471	468	—	468	434	Spain.
2	—	2	2	—	2	2	—	2	2	Estonia.
8	—	8	8	—	8	8	—	8	8	Finland.

¹ Estimation ou chiffres provisoires

² Estimate or provisional figure.

Annexe (suite). Stocks mondiaux d'or monétaire, exprimés en millions de dollars.

Pays	XII. 1925			XII. 1926			XII. 1927			XII. 1928		
	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total
EUROPE (sans U. R. S. S.) (suite).												
France	800 ¹⁰	178 ¹⁰	978	800 ¹⁰	178 ¹⁰	978	799	178 ¹⁰	977	1,247	24 ¹⁰	1,271
Grèce	13	—	13	13	—	13	15	—	15	7	—	7
Hongrie	10	—	10	30	—	30	34	—	34	35	—	35
Italie	221	—	221	223	—	223	239	—	239	266	—	266
Lettonie	5	—	5	5	—	5	5	—	5	5	—	5
Lithuanie	3	—	3	3	—	3	3	—	3	3	—	3
Norvège	39	—	39	39	—	39	39	—	39	39	—	39
Pays-Bas	178	*11	189	166	*14	180	161	*15	176	175	*15	190
Pologne	26	—	26	27	—	27	58	—	58	70	—	70
Portugal	11	—	11	9	—	9	9	—	9	9	—	9
Roumanie	46 ¹¹	—	46	47 ¹¹	—	47	48 ¹¹	—	48	49 ¹¹	—	49
Royaume-Uni et Etat libre d'Irlande	704	*110 ¹⁰	814	735	*110 ¹⁰	845	742	*100 ¹⁰	842	746	*90 ¹⁰	836
Suède	62	—	62	60	—	60	62	—	62	63	—	63
Suisse	90	*51 ¹⁰	141	91	*51 ¹⁰	142	100	*39 ¹⁰	139	103	*36 ¹⁰	139
Tchécoslovaquie	27	—	27	27	—	27	30	—	30	34	—	34
Yougoslavie	15	—	15	17	—	17	17	—	17	18	—	18
Total	3,173	*368	3,541	3,405	*370	3,775	3,504	*348	3,852	4,245	*180	4,425
Océanie.												
Australie ¹⁰	128	151	279	107	125	232	105	115	220	109	114	223
Nouvelle-Zélande ¹⁰	34	—	34	34	—	34	34	—	34	32	—	32
Total	162	151	313	141	125	266	139	115	254	141	114	255
Total général	9,148	*1,006	10,244	9,408	*1,088	10,496	9,481	*1,121	10,602	10,011	*1,041	11,052

* Estimation ou chiffre provisoire.

* Estimate or provisional figure.

NOTE GÉNÉRALE.

Les sommes indiquées sous la rubrique *Réserves* représentent, en principe, tout l'or que possèdent effectivement les Banques d'émission et les Trésoreries, y compris, le cas échéant, les montants de faible importance, qui ne servent pas légalement de couverture des billets et autres exigibilités à vue. L'or « earmarked » à l'étranger est toujours compris dans le chiffre du pays pour le compte duquel cet or est ainsi réservé, et exclus du chiffre indiqué pour le pays où il est déposé.

En règle générale la nature des *autres stocks d'or*, dont les chiffres sont donnés pour certains pays, est indiquée dans les notes détaillées ci-après. Dans le cas des pays au sujet desquels il n'y a pas de note spéciale, les sommes indiquées sous cette rubrique représentent l'or en circulation, y compris l'or détenu par les banques commerciales. Sauf dans le cas des pays de l'Amérique du Sud et de l'Australie, pour lesquels les « autres stocks » se rapportent exclusivement aux stocks d'or enregistrés des banques commerciales et autres institutions similaires, les montants indiqués constituent plutôt des évaluations. Les totaux sont d'ailleurs évidemment incomplets car l'or thésaurisé en Asie

GENERAL NOTE.

The sums shown under the heading *Reserves* represent in principle all the gold in the actual possession of Banks of Issue and Treasuries, including such minor amounts, if any, as do not legally serve as cover for notes or other sight liabilities. Gold held under earmark abroad is in all cases included in the figure for the country for whose account it is earmarked and excluded from the figure for the country where it is deposited.

The character of the *Other Gold Stocks* shown for certain countries is in most cases indicated in the detailed notes below. In the case of those countries for which special notes are not given, the sums shown under this heading represent gold in circulation including gold holdings of commercial banks. Except in the case of South American countries and Australia where other stocks relate exclusively to recorded gold holdings of commercial banks and similar institutions, the sums shown are rather of the nature of estimates. The totals are admittedly incomplete, as gold hoards in Asia and Africa are left entirely out of account and hoards not accounted for are known to exist, or to have

Annex (continued). Monetary Gold Stocks of the World, \$ (000,000's omitted).

XII 1929			XII 1930			VI 1931			XII 1931	Country
Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	Autres stocks d'or Other Gold Stocks	Total	Réserves Reserves	
1,631	10 ⁰⁰	1,641	2,099	—	2,099	2,211	—	2,211	2,683	EUROPE (excl. U.S.S.R.) (cont.). France. Greece. Hungary. Italy. Latvia. Lithuania. Norway. Netherlands. Poland. Portugal. Roumania. United Kingdom and Irish Free State. Sweden. Switzerland. Czechoslovakia. Yugoslavia.
8	—	8	7	—	7	6	—	6	11	
29	—	29	29	—	29	20	—	20	18	
273	—	273	279	—	279	283	—	283	296	
5	—	5	5	—	5	5	—	5	6	
4	—	4	4	—	4	4	—	4	5	
39	—	39	39	—	39	39	—	39	41	
180	* 15	195	171	* 14	185	200	* 15	215	357	
79	—	79	63	—	63	64	—	64	67	
9	—	9	9	—	9	9	—	9	13	
55	—	55	55	—	55	53	—	53	58	
711	* 80 ⁰⁰	791	722	* 70 ⁰⁰	792	800	* 65 ⁰⁰	865	590	
66	—	66	65	—	65	64	—	64	55	
115	* 36 ⁰⁰	151	138	* 42 ⁰⁰	180	162	* 45 ⁰⁰	207	453	
37	—	37	46	—	46	46	—	46	49	
18	—	18	19	—	19	27	—	27	31	
4,567	* 155	4,722	5,053	* 139	5,192	5,113	* 135	5,247	5,864	
89	96	185	75	—	75	74	—	74	51	OCEANIA. Australia ¹⁴ . New Zealand ¹⁴ .
28	—	28	29	—	29	29	—	29	28	
117	96	213	104	—	104	103	—	103	79	Total.
10,398	* 874	11,272	11,047	* 709	11,756	11,833	* 695	12,078	11,849	Grand Total.

* Estimation ou chiffre provisoire.

* Estimate or provisional figure.

et en Afrique est entièrement laissé en dehors des évaluations, et on sait également qu'il y a, ou qu'il y avait, de l'or amassé par le public dans d'autres parties du monde et dont on n'a pas tenu compte. C'est qu'il est impossible d'évaluer avec une précision raisonnable l'importance de cette thésaurisation.

Jusqu'au milieu de 1931, on a assisté à une concentration graduelle d'or provenant des « autres stocks » (y compris certains de ceux dont il n'est pas tenu compte dans le tableau) dans les réserves centrales d'or. Toutefois, une tendance contraire s'est manifestée au cours du second semestre de l'année, la crainte de pertes sur les placements ayant entraîné, dans certains pays, une nouvelle thésaurisation dans de très grandes proportions. Malgré un certain déclin dans la consommation industrielle d'or nouveau et une augmentation considérable de la production mondiale de l'or, et également en dépit du fait que des quantités très importantes d'or en provenance de stocks thésaurisés dans l'Inde et d'autres sources non monétaires sont devenues disponibles pour l'usage monétaire, le montant total des réserves centrales d'or a effectivement baissé entre la fin de juin et la fin de décembre 1931. Comme on ignore le montant des nouvelles thésaurisations dans les divers pays, aucun chiffre pour les « autres stocks » n'est donné pour la fin de 1931.

existed, also in other parts of the world. These hoards, however, cannot be estimated with any reasonable degree of accuracy.

A gradual concentration of gold from other stocks (including some of those not accounted for in the table) into central gold reserves was taking place up to the middle of 1931. This tendency was, however, reversed in the second half of that year, as fear of investment losses has led to new hoarding on a very considerable scale in certain countries. In spite of a decline in the industrial consumption of new gold and a considerable increase in world gold production, and although very important amounts of gold from Indian hoards and other non-monetary sources became available for monetary use, total central gold reserves actually dropped between the end of June and the end of December 1931. As the amount of the new hoarding in the various countries is unknown, no figures for other stocks are given for the end of 1931.

¹ *Union Sud-africaine.* — Y compris l'or détenu en Rhodesie et dans le Sud-Ouest africain par les succursales des banques de l'Afrique du Sud. Dans les statistiques officielles, on ne fait pas de distinction entre l'or et les pièces divisionnaires en ce qui concerne les réserves détenues en dehors de l'Union. Toutefois, aux fins du présent tableau, on a évalué cet or sur la base de la proportion qui existe entre l'or et les pièces divisionnaires dans les réserves détenues à l'intérieur de l'Union.

² *Canada.* — Y compris l'or détenu à l'étranger par les « Chartered Banks » (qui sont des institutions émettant des billets de banque), ainsi qu'une faible proportion de monnaies divisionnaires qui ne sont pas indiquées séparément des réserves détenues par ces banques à l'intérieur du pays.

³ *Etats-Unis d'Amérique.* — Y compris l'or détenu en contrepartie des certificats-or.

⁴ *Argentine.* — Y compris l'or conservé dans les légations argentines à l'étranger, mais non compris l'or détenu par la « Banco de la Nación », qui n'est pas une banque d'émission. L'or de cette banque figure sous la rubrique « autres stocks ».

⁵ *Mexique, Amérique Centrale et Antilles.* — Evaluation de la circulation d'or (y compris l'or dans les banques commerciales) principalement au Mexique et à Cuba.

⁶ *Japon.* — Stocks d'or détenus à l'intérieur du pays par la Banque du Japon et le Gouvernement. On croit que les stocks d'or japonais détenus à l'étranger étaient assez importants au cours des premières années de la période envisagée, mais les statistiques existantes ne les séparent pas des autres avoirs étrangers.

⁷ *Turquie.* — Réserve-or de la nouvelle Banque centrale de la République, qui a commencé ses opérations en octobre 1931.

⁸ *Union des Républiques soviétiques socialistes.* — Au cours de la période envisagée, des quantités importantes d'or russe ont été exportées ou mises en gage à l'étranger. On ne peut pas conclure des renseignements dont on dispose si, et dans quelle mesure, cet or s'est incorporé aux réserves des autres pays tout en continuant à figurer dans les chiffres des réserves russes.

⁹ *Allemagne.* — Les « réserves » comprennent, en plus de l'or de la Reichsbank, l'or détenu par les banques dites *Privatnotenbanken*. Les chiffres indiqués sous « autres stocks d'or » en 1925 représentent le montant total d'or acheté au public par la Reichsbank pendant la période 1925-1931. Ces achats figurent dans les rapports de la Banque en plus des importations d'or en Allemagne. Etant donné que la Banque n'a procédé pendant cette période à aucune vente d'or à l'intérieur du pays, si ce n'est pour des buts industriels, on peut admettre que tout l'or ainsi acheté existait en Allemagne en dehors des banques d'émission en 1925. Pendant la seule année 1931, la Reichsbank a acheté plus de 8 millions de dollars d'or provenant des stocks nationaux, on a admis que la plupart de ces achats avaient été effectués au cours de la seconde moitié de l'année. Les chiffres indiqués excluent pour toute la période de l'or qui peut encore avoir existé en dehors des banques d'émission à la fin de 1931, et peuvent par conséquent être trop bas.

¹⁰ *France.* — En 1925 et 1926, le chiffre indiqué pour la réserve comprenait une somme de 89 millions de dollars d'or mis en gage à l'étranger. Cet or, bien qu'il n'était pas inclus dans les stocks d'or des autres pays, ne constituait pas une réserve « libre » de la Banque de France. Il a été libéré en 1927. La somme indiquée pour les « autres stocks d'or » en 1925 représente le montant approximatif des anciennes pièces d'or achetées au public, en France, par la Banque centrale, au cours de la période 1926-1930. On admet que la totalité de cet or existait en France en 1925. La diminution subséquente des chiffres indiqués reflète ainsi une concentration de l'or de la « circulation » dans la réserve centrale. L'or effectivement retiré au cours de 1926 et 1927 n'a été incorporé dans la réserve officielle qu'en 1928. Jusqu'à ladite année, il est donc maintenu sous la rubrique « Autres stocks ». Durant toute la période envisagée, les chiffres indiqués ne tiennent pas compte des pièces d'or qui pouvaient encore se trouver thésaurisées par des particuliers en France à la fin de 1930 (dont une partie a pu être achetée par la suite au public) et sont, par conséquent, probablement trop bas.

¹¹ *Roumanie.* — Y compris l'or déposé à Londres pour un montant d'environ 19 millions de dollars.

¹² *Royaume-Uni et Etat libre d'Irlande.* — Les chiffres indiqués sous la rubrique « Autres stocks d'or » représentent des évaluations grossières du montant d'or monétaire dont on admet l'existence en dehors de la Banque d'Angleterre, c'est-à-dire ou bien dans d'autres banques (y compris les banques d'émission écossaises et irlandaises) ou bien thésaurisé par les particuliers. On sait qu'une concentration graduelle de cet or dans la réserve centrale a eu lieu depuis 1926. Les évaluations faites aux fins du présent tableau ont été basées sur la présomption que le taux de concentration a été uniforme, mais, en fait, des variations considérables ont pu se produire d'une année à l'autre. Une partie des « autres stocks d'or » indiqués pour la fin juin 1931 a été transféré à la réserve centrale pendant la seconde partie de ladite année. Quelque 40 millions de dollars de l'or qui se

¹³ *Union of South Africa.* — Including gold held in Rhodesia and South West Africa by the branches of South African joint-stock banks. This gold is not shown separately from subsidiary coins in the official statistics, but has been estimated for the purpose of the present table on the basis of the ratio of the joint-stock banks' gold reserve in the Union to their holdings of subsidiary coin in the Union.

¹⁴ *Canada.* — Including gold held abroad by the chartered banks (which are note-issuing institutions) and a small proportion of subsidiary coin not shown separately from their domestic gold reserves.

¹⁵ *United States.* — Including gold held against gold certificates.

¹⁶ *Argentine.* — Including gold held at Argentine legations abroad, but excluding the gold held by the Banco de la Nación, which is not a bank of issue. The gold of this bank is included under "other stocks".

¹⁷ *Mexico and Caribbean.* — Estimated gold circulation (including gold in commercial banks) mainly in Mexico and Cuba.

¹⁸ *Japan.* — Domestic gold holdings of the Bank of Japan and the Government. Japanese gold holdings abroad were believed to be of some importance in the first years of the period considered, but were not shown separately from other foreign assets in available statistics.

¹⁹ *Turkey.* — Gold reserve of the new Central Bank of the Republic, which began operations in October 1931.

²⁰ *Union of Soviet Socialist Republics.* — In the course of the period considered, important amounts of Russian gold have been exported or pledged abroad. It does not emerge from available information to what extent, if any, such gold has become incorporated in the reserves of other countries while still being included in the Russian reserve figures.

²¹ *Germany.* — Reserves include the gold held by the so-called *Privatnotenbanken* in addition to that held by the Reichsbank. The figures shown for other gold stocks in 1925 represent the aggregate amount of old monetary gold bought by the Reichsbank from the public in Germany in the years 1925 to 1931. In the reports of the Bank, these purchases are indicated in addition to the annual gold imports into Germany. As no domestic sales of gold, except for industrial use, were made by the Bank in this period, it may be assumed that all the gold thus purchased existed in Germany outside the banks of issue in 1925. In 1931 alone, the Reichsbank bought over \$8 million from domestic stocks; it has been assumed that the greater part of this gold was bought in the second half-year. The figures shown ignore throughout the gold that may have still existed outside the banks of issue at the end of 1931 and may therefore be too low.

²² *France.* — In 1925 and 1926, the reserve figure includes an amount of \$89 million of gold pledged abroad which, although not comprised in the recorded gold stocks of other countries, did not constitute a free reserve of the Bank of France. This gold was released in 1927. The sum shown as other gold stocks in 1925 represents the approximate amount of old gold coins bought from the public in France by the Central Bank in the period 1926 to 1930. All of this gold presumably existed in France in 1925. The subsequent decline in its amount reflects the withdrawal of gold from circulation into the central reserve. The gold actually withdrawn in the course of 1926 and 1927 was not incorporated in the recorded reserve until 1928 and is therefore maintained under other stocks up to that year. Throughout the period considered, the figures shown do not take account of the amount of gold coins which may have still remained in private hoards in France at the end of 1930 (part of which may have subsequently been bought from the public), and are therefore probably too low.

²³ *Roumania.* — Including gold deposited in London amounting to about \$19 million.

²⁴ *United Kingdom and Irish Free State.* — The figures shown for other gold stocks represent rough approximations to the amount of monetary gold believed to exist outside the Bank of England — i. e., either with other banks (including the note-issuing Scottish and Irish banks) or in private hoards. A gradual concentration of such gold into the central reserve is known to have taken place since 1926. The estimates made for the purpose of the present table assume an even rate of concentration, but considerable year-to-year variations may in fact have occurred. A certain proportion of the other gold stocks shown for the end of June 1931 accrued to the central reserve in the latter half of that year. Of the gold remaining in private hoards at the end of 1931 some \$40 million was collected and exported in the first quarter of 1932.

trouvait encore chez des particuliers à la fin de 1931 ont été retirés et exportés pendant le premier trimestre de 1932. En admettant que l'estimation des « autres stocks d'or » n'ait pas été trop basse pour toute la période, il ne serait par conséquent resté dans le pays, au début du second trimestre de 1932, que relativement peu d'or thésaurisé par les particuliers.

¹³ Suisse. — La circulation de l'or à la fin de 1925 et de 1926 a été évaluée, en ajoutant au total des monnaies d'or suisses en dehors de la Banque nationale, en 1927 (calculé par la Banque nationale), le montant des autres pièces d'or de l'Union latine versées à la Banque depuis le 8 février 1927, date de leur démonétisation. Pour les années ultérieures, le montant des nouvelles pièces d'or frappées par la Monnaie suisse et détenues en dehors de la Banque nationale, ainsi que le montant approximatif de l'or monétaire (monnayé ou en lingots) importé de l'étranger et détenu en dehors de la Banque nationale, ont été ajoutés au chiffre pour 1927. Une partie des pièces suisses non détenues par la Banque nationale, et plus particulièrement de celles qui ont été frappées avant 1927, peut avoir été fondue pour des fins industrielles ou autres, et une autre partie peut avoir été détenue à l'étranger. Toutefois, la surestimation de la circulation d'or à l'intérieur du pays qui en résulte, peut se trouver plus que compensée par la sous-évaluation résultant du fait que des quantités considérables de pièces d'or d'autres pays de l'Union latine étaient encore, au milieu de 1931, entre les mains du public et de certaines banques privées. Par conséquent, on peut considérer que les chiffres fournis jusqu'à cette date constituent des évaluations approximatives du montant total des pièces d'or, suisses et étrangères, et de l'or en lingots conservé en Suisse, en dehors de la Banque nationale. On a tout lieu de croire que, par la suite, les stocks d'or thésaurisés en Suisse se sont considérablement accrus.

¹⁴ Australie. — Les sommes indiquées sous la rubrique « Autres stocks d'or » représentent l'or détenu par les banques commerciales, ainsi que par le Département bancaire général de la Banque du Commonwealth. (Celles qui figurent sous la rubrique « Réserves » représentent uniquement l'or dans le Département d'émission.) Les banques commerciales ne distinguent pas les pièces divisionnaires de l'or dans les chiffres de leurs réserves, tels qu'ils sont publiés. Toutefois, aux fins du présent tableau, on a estimé que leurs stocks de ces pièces divisionnaires représentaient la même proportion, par rapport au montant total de leurs réserves que dans le cas des banques de Nouvelle-Zélande (dont la plupart sont des succursales de banques australiennes) et on les a calculés par déduction des chiffres d'ensemble publiés.

¹⁵ Nouvelle-Zélande. — Les banques commerciales émettent des billets. Leurs stocks de pièces divisionnaires, qui ne sont pas séparées de l'or dans les chiffres publiés de leurs réserves, ont été évalués sur la base de renseignements officiels fournis spécialement et se rapportant à des dates légèrement différentes. Les montants ainsi évalués ont été déduits des chiffres des réserves métalliques non spécifiées publiés par les banques elles-mêmes.

The estimate of other gold stocks is not too low throughout the period considered, comparatively little gold would thus have remained in private hoards in the country at the beginning of the second quarter of 1932.

¹⁶ Switzerland. — The gold circulation at the end of 1925 and 1926 has been estimated by adding to the sum of Swiss gold coins outside the National Bank in 1927 (as calculated by the National Bank), the amount of other Latin-Union gold coins paid into the Bank since February 8th, 1927, the date of their demonetisation. For subsequent years, the amount of new gold coins struck by the Swiss Mint and retained outside the National Bank as well as the approximate amount of monetary gold (either in coin or bullion) imported from abroad and retained outside the National Bank have been added to the figure for 1927. Part of the Swiss coins not held by the National Bank, and particularly of those struck before 1927, may have been melted down for industrial or other purposes and part may have been retained abroad. But the consequent overestimate of the domestic gold circulation may be more than offset by the underestimate resulting from the fact that considerable amounts of gold coins of other Latin-Union countries were still, by the middle of 1931, held by the public and certain private banks. The figures given up to that date may therefore be taken as rough approximations to the total amount of Swiss and foreign gold coins and gold bullion held in Switzerland outside the National Bank. Subsequently the private gold holdings are believed to have been considerably increased.

¹⁷ Australia. — The sums shown under "other gold stocks" represent gold in commercial banks and in the General Bank Department of the Commonwealth Bank (those shown under "Reserves" represent gold with the Issue Department only). The commercial banks do not separate subsidiary coins from gold in their published reserve figures. For the purpose of the present table, however, their holdings of such coins have been estimated to bear the same proportion to total holdings as in the case of the banks of New Zealand (most of which are branches of Australian banks) and have been deducted from the joint figures published.

¹⁸ New Zealand. — The commercial banks issue notes. Their holdings of subsidiary coin, which are not shown separately from their published gold reserves, have been estimated on the basis of specially furnished official information referring to slightly different dates. The amounts thus estimated have been deducted from the unspecified metallic reserve figures as published by the banks themselves.