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IN THEORY AND PRACTICE

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THE GOLD STANDARD IN THEORY AND PRACTICE

BY

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PREFACE

THIS book is composed of four lectures, which were delivered for the Institute of Bankers in November and December, 1926. They appeared in the Institute's Journal for January-April, 1927, and are here reproduced without material alteration.

Currency is better explained in terms of credit than credit in terms of currency. That is so in theory, in practice and in law. I have here expounded the gold standard in close relation to the theory of banking and credit.

Much of the ground covered is the same as in parts of my books, *Currency and Credit* and *Monetary Reconstruction*, but I have shortened and simplified the treatment, and, where it seemed desirable, have followed somewhat different lines.

The first two chapters are theoretical ; the third is historical ; the fourth deals with the problems of the present day.

R. G. HAWTREY.

May, 1927.

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CHAPTER I

IN examining the nature and purpose of a Gold Standard, our first step ought to be to form a clear idea of what is meant by a *Standard*, that is to say, a *Monetary Standard*.

Money is very commonly defined to be a medium of exchange. A commodity, it is said, is chosen for this purpose, and people who come to market avoid the inconvenience and complication of bartering one product against another by selling one product for an agreed quantity of the chosen commodity, which they then use to buy whatever they require. The chosen commodity is the standard. It becomes a generally accepted measure of value as well as a medium of exchange.

The precious metals have been generally chosen by mankind as the most suitable commodities for this purpose. Economists have been inclined to teach that this usage is so firmly established that it approximates to a moral principle, as if the use of a metallic currency were somehow essential to honest dealing.

Credit, it is said, is a means of economising gold and silver. A right to receive gold serves as well as the gold itself, if all that is required is a medium. A dealer in cotton who buys cotton only to sell it

again need not enter into physical possession of any actual cotton ; he can buy the right to receive cotton of specified quantity and quality, and can re-sell his right to someone else. It is only when the right to receive cotton is acquired by a manufacturer that actual cotton has to be handed over to be spun into thread.

In the same way, so long as gold is needed only as a medium of exchange, the right to receive gold fulfils the requirements, and it is only when the right is acquired by a manufacturer of plate, jewellery, gold leaf or fountain pens, or by a dentist or anyone else who wants to use it as a material of industry, that the right need be exercised, and metal handed over.

This account of the nature of money is familiar to everyone. It has the great advantage of being intelligible and self-consistent, and it has often proved useful as a practical guide. Unfortunately although it is an *approximation* to the true theory of money, it is by no means perfect or exact, and I propose to approach the subject from a different angle.

If we turn to the actual institutions by which the money of a civilised country is governed, we shall find that the foundation is always a law prescribing by what means *a debt may legally be discharged*. The law never says what may or must be used as a medium of exchange. Anyone is free to use anything as a medium of exchange. The idea of money is derived from the idea of a debt.

At first sight that conclusion may appear to be the merest pedantry or sophistry. For if the idea of money is derived from the idea of a debt, is it not equally true that the idea of a debt is derived from the idea of money? Can a debt have any other meaning than an obligation to pay money? To separate the debt from the money with which it is payable seems as transcendental an operation as to separate the grin from the Cheshire Cat.

And yet it is in practical life even more than in theory that the separation requires to be made. So long as all goes smoothly, it is convenient and legitimate to think of a debt as meaning nothing but an obligation to deliver a specified quantity of gold or silver. But in practical life, and especially in that part of it which is concerned with currency, smoothness is the exception. We study the theory of currency in order that we may be qualified to deal with the perpetually recurrent jolts and swerves by which monetary history is disturbed.

The law prescribes the means by which a debt may be discharged. A debt is one of the fundamental concepts of economics. It must not be thought of as arising only from the borrowing of money or from the postponement of payment. Every sale of goods or service rendered gives rise to a debt. The debt may be immediately discharged, but that does not affect its nature from the point of view of the means of payment. If a hat is offered for sale at 15s. and I buy it, I become indebted for 15s., and the law determines by what

means I can pay the debt whether I pay on the spot or at a future date.

Now debts are not in practice discharged only with legal tender money. A debt can be paid *by being set off against another debt*. The process can be seen in its simplest form where two traders are both buying from and selling to one another. Each records his debts and credits in his books, and they settle periodically by paying the net balance, which may be quite small in comparison with the total. Often this net balance may be carried forward repeatedly from one account to the next. All debts cannot be settled so, because anyone's debtors are usually a different set of people from his creditors. Nevertheless, this method of settlement can be indefinitely extended if there is some third party to whom creditors can assign their rights against their debtors, and upon whom they can then draw to pay their own debts.

This is the place filled by a banker. He is primarily one who offers facilities for clearing or setting off debts. It is convenient to combine with this function that of short-term lending. The banker is the debtor of his depositors, and short-term debts such as bills and advances are the most convenient assets to hold (along with money) against these liabilities. But where the two functions are separated, it is the clearing of debts, not the short-term lending, which distinguishes the banker.

A depositor can pay his own creditors by assigning to them a portion of the bank's indebtedness

to himself. A cheque is an instrument for assigning a debt. The debt is due from the banker to the drawer, and the drawer assigns his rights in it to the payee. When the payee endorses it and pays it into his own banking account, he is assigning it to his banker, who thereupon becomes indebted to him for an equal amount, and settles accounts, through the clearing, with the banker on whom the cheque was drawn. The clearing itself involves the payment of net balances from bank to bank, but these balances need not be paid with legal tender money. The banks may all keep balances with a central bank, such as the Bank of England, and draw cheques for the payment of their clearing balances.

Under normal conditions the central bank undertakes to pay its obligations in money, so that any of the debts settled at the clearing can readily be paid in money. And where payment in metallic money has not been maintained, the central bank's own notes have usually been made legal tender, and have thus themselves become "money" in the eye of the law.

But this is not necessarily or always so. In 1797 the Bank of England suspended gold payments, and was forbidden by law to pay its notes in money. Nevertheless the notes were not made legal tender. A Bank of England note remained nothing more than documentary evidence of a debt due from the Bank, with the attributes of a negotiable instrument. When the notes depreciated, gold coin ceased to circulate, and the

business of the country was carried on for some years without any standard money at all. Debts in fact were settled by being set off against other debts. In those days, it is true, payment with credit money was effected by means of bank-notes much more than by cheques. But a bank-note, like a cheque, is a means of assigning a debt due from a banker from one creditor to another, and bank notes were cleared in much the same way as cheques. Under this system the means of paying any debt was another debt ; the debts possessed an existence independent of money.

In this case indeed convention took the place of law, and the Bank of England note became a customary standard. But other cases have occurred where bank credit has become temporarily divorced from money, and no central bank has existed as a rallying point. The great financial crises from which the United States suffered from time to time, before the Federal Reserve Act of 1913 set up a system of central banks, afford examples. One feature of the crises of 1907, 1893, 1873 and 1857 was that the banks suspended payment of their depositors in cash, and, while a premium on legal tender money appeared, the use of cheques continued and the machinery of clearing remained in operation. Depositors with credit balances could discharge their liabilities with cheques, but, if they wanted money, had to buy it as if it were a commodity. On some occasions even wages were paid by cheque. It was a noteworthy feature of the crisis of 1873 that there

were *three* different media of payment. Inconvertible paper was still the principal form of legal tender money ; gold, which was used in foreign trade transactions, was at a premium over paper ; and paper was at a premium over bank credit.

It would not be correct to say that people attributed value to bank credit solely or even mainly because they expected that at some future time the bankers would resume payment of their debts in money. All that people were concerned to ascertain before they accepted cheques was that the cheques would be honoured through the clearing house, that their own accounts would be credited with the amount, and that they in turn could then draw cheques and use their credit as a means of payment. The inability to get money save at a premium was felt not as something which struck at the foundations of the monetary system, but merely as a rather vexatious practical inconvenience.

Bank credit has become the principal medium of payment. Money, even standard money of unlimited legal tender, is no more than a subsidiary medium. Currency notes, like silver or bronze coins, are used for the smaller payments, for which cheques are not convenient. The banks supply currency notes, and used to supply sovereigns, to their customers for this purpose, just as they supply silver coin. The legal right of their customers to demand notes or gold coin for any amount in excess of £2, and the legal right of the banker to pay in silver up to £2, and no more,

whatever his customer asks, are not ordinarily of practical significance. It is only at a time of crisis that people even begin to think about these rights.

We have seen that bank credit *can* exist without money. That does not mean that this is a desirable state of things, but it enables us to understand the proposition that the idea of money is dependent on that of a debt, while that of a debt is not dependent on that of money. A debt, it is true, is reckoned, like money, in pounds, shillings and pence. But that is because money, being essentially that with which debts can legally be discharged, must be reckoned in the same units as debts. These familiar units form what is called our "money of account." The money of account in any country may be defined as the units in which debts are reckoned ; it is the basis of all book-keeping. A sovereign is a coin, but a pound is not. The Coinage Acts value a sovereign at a pound. That means that they prescribe that a debt of a pound may be discharged with a sovereign. The Currency and Bank Notes Act gives the same debt-paying power to a one-pound note. The note differs from the sovereign in that it has no name independent of its value in terms of the money of account ; nevertheless the distinction between the note with which we pay a debt and the debt we pay is just as valid. The word shilling is ambiguous, meaning equally a twentieth part of a pound and the coin with which a debt of that amount may be paid.

It may be pointed out that a Bank of England

note differs from a currency note in that it itself represents a *debt*. A currency note is merely money ; it is legally on just the same footing as a coin, and does not represent an *obligation* from the Government or the Bank of England or anyone else. The bank-note represents a debt due from the Bank of England, and delivery of the note assigns the rights in that debt from one person to another, just like payment by cheque. The Bank of England note has been legal tender ever since 1833. That means that a debtor may legally discharge his obligations by assigning to his creditor the rights against the Bank of England represented by the notes. But a Bank of England note is not legal tender in payments by the Bank of England itself.

All payments could be made with bank credit, provided that the solvency of the banks were adequately safeguarded, and that bank notes of small denominations were put in circulation for the smaller payments. But if the banks were left free to create credit as they pleased, there would be nothing to maintain any semblance of constancy in the value or purchasing power of the monetary unit. If they increased the supply of the means of payment, they would cheapen it. The wealth value of the monetary unit, that is to say, its value in goods and services, would fall, or in other words the prices of goods and services would rise. Likewise if the banks restricted credit and brought about a scarcity of the means of payment, prices would fall.

When we speak of prices rising or falling in this way, we mean that an influence is at work to raise or lower *all* prices, apart from any changes in the supply or demand of particular commodities. A price expresses a relation between monetary units on the one hand and a commodity on the other. A change in the price may be traceable to an increase or decrease in the supply of the commodity or to an intensification or diminution of the consumer's desire for it. Or on the other hand the change may arise from the other term of the relation, the monetary unit. If people are in a position to offer more monetary units for a given supply of goods and services, prices will rise. If they have fewer monetary units to offer, prices will fall.

The amount of monetary units which people have to offer is the total of their incomes. The national income of this country is estimated at £4,000 millions, or say £11,000,000 a day. That means that the total demand for goods and services of all kinds averages £11,000,000 a day. But, it may be asked, do not people save a part of this? Indeed they probably save something like £1,500,000 out of the £11,000,000. But what they save is directly or indirectly *spent*. For money invested is spent on fixed capital, such as houses, railways, industrial plant, etc. The output of such things must be included in the supply upon which the £11,000,000 a day is spent.

Now if this daily expenditure of £11,000,000 were increased by 10 per cent., while production

of all kinds remained unchanged, prices would very soon rise by about 10 per cent. Of course the amount spent day by day may easily vary more than 10 per cent. A purely temporary increase in spending would not affect prices. It would be met by sales of goods already in stock at existing prices. For a time even a more sustained increase in spending might be so met, but the effect would be to deplete traders' stocks of goods, and presently they would be driven to raise prices to check this process.

In currency theory the total of incomes expressed in terms of money is so fundamental that it is convenient to have a name for it. I call it the "consumers' income," and the expenditure from it I call the "consumers' outlay."

It should be clearly understood that when the currency depreciates in any country, that really means that the consumer's income is increased, or at any rate is increased relatively to the volume of production. If our national income is now £4,000 millions and in 1913 was only £2,250 millions, that does not mean that we have become richer in that proportion. Nearly all the apparent increase is due to a general rise in all prices, that is to say, to a fall in the value of the pound relative to real wealth.

Changes in the consumers' income and the consumers' outlay are inseparably bound up with another factor, that is, the total stock of the means of payment in the hands of the community. This I call the "unspent margin." It is the total

of money and bank credit in the hands of everyone who receives and pays money, whether individuals, businesses, public bodies or any others; it is so much of their money receipts as they have at any time retained unspent. But it is also the aggregate of the money and bank deposits in the community, and is found by adding together the deposits shown in the bankers' books and the money issued into circulation and not withdrawn.

It is obvious that for every individual there is a relation between his balance of money and bank credit and his income. Though his balance varies rapidly up and down, it does not usually exceed a limit representing the maximum amount that he is content to see idle. When that limit is passed, he will invest a part of his balance. The casual variations between this maximum and zero will have a fairly constant average. The existence of such an average for each individual results in a sufficiently constant relation holding between the unspent margin, which is the total of balances, and the consumer's income, which is the total of incomes.

Increased lending on the part of the banks increases the unspent margin, for lending actually creates cash. The due proportion between incomes and cash balances is thereby disturbed and has to be restored. The total of bank deposits may be compared to a reservoir, into which is being poured the daily amount lent by the banks, and out of which flows the daily amount repaid to the banks. If these two streams are equal, the

amount of deposits remains unchanged. If the stream of lending is increased, the additional money lent is quickly used by the borrowers in the production of goods, and becomes the income of those who take part in producing the goods. Traders' profits are increased, at first by more rapid sales, then by higher prices. Wages follow. In fact the consumer's income is increased.

Next the recipients of these additional incomes spend them. In so far as they buy goods, they enable the traders who sell them to repay a corresponding part of their indebtedness to the banks. In so far as they buy securities, they enable the dealers in the stock markets likewise to reduce their indebtedness. Thus when the stream of lending is increased, there ensues an increase, though probably a smaller one, in the stream of repayments. The actual increase in the contents of the reservoir in any period is equal to the excess of lending over repayments. The flow through the reservoir is increased by the additional lending and borrowing, and this stream in the course of its passage takes the form of an addition to the consumer's income.

In the same way the banks, by restricting the amount they lend, can diminish the flow through the reservoir, and curtail the consumer's income.

We shall return later on to this matter of the effect of an increase or decrease in lending, an expansion or contraction of credit as it is called, upon incomes and expenditures and prices. The essential thing to observe is that the action of

the banks in accelerating or retarding their lending has an immediate effect upon the volume of incomes and of spending, and prices must soon respond. To keep the variations of prices within reasonable limits, the banks must somehow be prevented from lending either too much or too little.

While a portion of the unspent margin is composed of bank deposits, the rest is composed of money. If the money portion is limited, the credit portion cannot be indefinitely increased. That is so even when, as in England or the United States, the credit portion is far the greater. It is possible, by regulating the supply of money, to control indirectly the supply of bank credit.

And here is one of the principal functions of the gold standard. The supply of gold is limited, and if money is gold the supply of money is limited. Paper money, if it is issued in unrestricted quantities, can do nothing to keep the lending operations of the banks within limits.

It is often supposed that the excessive issue of paper money only occurs when the power of issue is abused by Governments. The most sensational cases of over-issue and collapse have originated in this way. But over-issue may also occur, and does occur, through excessive lending by banks to traders. There is always a temptation to lend too much. Lending is the source of the banker's profit, and he seeks to lend as much as he can, unless there is some definite reason to the contrary, such as a shortage of cash reserves. And whenever the banks do succeed in increasing their

lending, the effect is felt in a stimulation of sales by traders. A vicious circle is then set up, for the bigger and more profitable their business, the more the traders want to borrow, while the more the bankers lend, the greater the stimulation of trade.

Therefore people who carry on the business of banking for profit cannot be expected to exercise a check upon lending. If there is to be such a check, there must somewhere be an influence at work which does not depend on profit-making. This influence is to be found in the authority which issues money.

If paper money were the only legal tender, the authority, whether the Government or a Central Bank of Issue, which issued the paper money would have absolute control over the situation. It could at any time cut short the supply of money and put pressure upon the ordinary banks to curtail their lending, or if need be it could stimulate them to lend by issuing abundant supplies of money.

This power places a heavy responsibility upon the note-issuing authority. It is sure to be difficult to decide in any particular set of circumstances whether there is a danger of credit being unduly expanded or contracted and whether any countervailing action is called for.

The gold standard may be regarded as a device for enabling the authority through which money is issued to solve this problem in a rough and ready way. The classical form of the gold standard

is that based on the free coinage of gold. Legal tender money consists of gold coin (supplemented by a limited amount of subsidiary token coin of silver and base metal). The money-issuing authority is a Mint, which does not issue notes, but undertakes to turn gold bullion into coin free of charge for all comers. The gold coin is simply an ingot of gold of which the weight and fineness are certified by the Mint which produced it. It is not a manufactured article but a piece of raw material suitably graded and branded. In order that it may pass as such, there must be freedom to melt and export the coin. If that condition is fulfilled, the commodity, gold, is really established as the means of payment. Every debt has become an obligation to deliver gold. All discretion on the part of the money-issuing authority has been completely eliminated; the process has become mechanical. The supply of money is simply the supply of gold; it is increased by the output of the mines and possibly by the melting down of plate and other gold manufactures, and is decreased by the industrial demand for gold and by wear and tear.

The value of the monetary unit is equated to the value of a specified quantity of gold, and the value of gold is determined, like that of any other commodity, by free dealings in a market.

The use of gold coin for this purpose is by no means a perfectly efficient device. Indeed currency history up to the invention of bank notes and paper money was mainly a record of the

shortcomings of coin as a basis for a metallic standard, whether gold or silver. It was impossible, till modern mechanical methods were introduced, to achieve exactitude in the manufacture of coin. The certificate of weight and fineness given by the Mint was therefore only reliable within a certain degree of approximation. Moreover coins in circulation are exposed to a gradual loss of weight through legitimate wear and tear, which increases the inequalities. And finally the value of even small quantities of the precious metals is such as to lead people to clip or sweat the coins which pass through their hands, that is to say either to cut little fragments off the edge, or to wash them with chemical solutions which remove a little metal from the surface. These latter practices are in nearly all countries made illegal or even criminal, but till the practice of manufacturing coins with milled edges was adopted, were difficult to detect or prevent.

So long as there is a demand for an increasing supply of money in circulation, these imperfections and malpractices do not affect the value of the monetary unit. The demand can only be satisfied by bringing gold to the Mint, and the Mint will only issue coin in exchange for the gold at the prescribed price. This is so even if the coin is imperfect. Eight hundred ounces of gold, $\frac{1}{11}$ fine, ought to be coined into 3,115 sovereigns. If they are in fact made into 3,116 sovereigns, the Mint will not for that reason give more than 3,115.

But if for any reason there is no demand for gold bullion to be turned into coin, but on the contrary people want to turn coin into bullion, any deficiency in the gold contents of the coin becomes a matter of consequence. The demand for gold bullion can be met by melting the coin, and it is of the essence of the gold standard that it should be so met. It is for that very purpose that the money is composed of gold at all. So long as the coin can be melted, the value of the monetary unit in gold is kept up, or in other words the price of gold is kept down. But if those who seek to procure gold find the coin imperfect, so that they get less gold than they anticipated, the price of gold will rise—the monetary unit will depreciate. All the coin will not be equally imperfect, and it will only be profitable in the first instance to melt the heavier coins. It will be easy to weigh each of the coins from any batch destined for melting, and to select those above a certain limit of weight, leaving the others to be passed on as coins. Nevertheless it will not be worth while to take this slight amount of trouble unless the price of gold is *already* above the coinage price. In other words the monetary unit must already have been depreciated below its value in gold prescribed by the gold standard.

This state of things used constantly to occur with the silver standards of the Middle Ages. It occurred with the English gold coinage prior to the re-coinage of 1774, and it was on the point of occurring prior to the re-coinage of 1891. It

cannot be completely guarded against, but if coins are not allowed to be legal tender when below the prescribed weight by more than a certain small fraction, and if those which have been worn below this limit are regularly withdrawn from circulation at the public expense, the evil is reduced to a minimum.

Sovereigns are current so long as their weight is not below the proper amount by more than $\frac{1}{8}$ per cent. The actual deficiency of weight in an average batch of sovereigns at any time between 1891 and 1914 was far less than this. Nevertheless there was always some deficiency except in the consignments of sovereigns direct from the Mint which had never been in circulation. It is an interesting feature of the Gold Standard Act of 1925 that sovereigns have now become convertible at the Bank of England into gold bullion at parity on the same terms as currency notes, and it is therefore no longer necessary to melt them except when small quantities of gold are required.

In addition to all the unavoidable imperfections of coin, a charge for the cost of coining or even for the sake of Mint profits or seignorage is also sometimes made. In England there is no actual charge, but nevertheless under the régime of free coinage, which existed till 1925, anyone who brought gold to be coined suffered a small loss in respect of the interest on the value of the gold for the period of at least three weeks required for the process.

The price at which the Bank of England buys gold is fixed by statute at £3 17s. 9d. per standard ounce. That is 1½d., or 1.6 per mille, less than the coinage price, and would be equivalent to interest at 3 per cent. for a period of about 20 days, or at 5 per cent. for 12 days. In practice people always preferred to sell their gold to the Bank rather than take it to the Mint. Even had it ordinarily been otherwise, any special pressure for coin would quickly have increased the period of delay before delivery of the coin, and the cost of interest would soon have exceeded the margin in the Bank of England's buying price. In fact, the limited capacity of Mints and the consequent delay in the execution of large orders necessarily make the "free" coinage of gold a very relative expression. If there were so urgent a need of currency that a few weeks' delay would destroy the utility of any source of supply, there might for a short time be a high premium on coin.

The essence of the gold standard is that the price of gold, the value of gold in monetary units, is fixed by law, and this determines the value of the monetary unit itself. The use of gold coin, notwithstanding its imperfections, provides a fairly close approximation to this ideal. Apart from some such restriction the value of the monetary unit would be free to vary indefinitely. Once the price of one commodity is fixed, this freedom ceases. The value of the monetary unit can only vary with that of the commodity to which it is tied.

Let us assume for the moment that gold coin is the only money of unlimited legal tender. The banks are bound to conform their operations to this condition. Their obligations have become obligations to pay gold. For payment of wages, for retail dealings and for many other transactions coin will be required. Even if small bank notes suitable for such payments are allowed to be issued, people may still prefer coin. Every bank must be prepared to pay out coin to those depositors who ask for it. It can only do so if it maintains a reserve of cash on hand sufficient to meet all probable demands.

And every bank has somehow to provide for meeting its liabilities to other banks. The daily clearing of cheques and bank notes will leave balances due from some banks to other banks. If no other arrangement were made for paying these balances, they would have to be paid in coin, and a reserve of gold would have to be held for the purpose by every bank.

Now the maintenance of a cash reserve is dead loss to a bank. A great part of its profit is derived from its loans, advances, bills and investments, and the cash holding is maintained at the cost of a corresponding diminution of these earning assets. Clearing balances are subject to large and fortuitous fluctuations impossible to foresee, and if they had to be paid in money, the reserves required would be large and burdensome. To escape the loss, the device of pooling the reserves has been evolved.

That means the creation of a Central Bank, with which the other banks can deposit their reserves. If they simply deposited their reserves for safe-keeping, and gained no other facilities, this might be a convenience, but would not enable them to diminish the amount of the reserves and the resulting loss. The advantage arises from the fact that a Central Bank is a *lender*. A bank which can borrow at need from the Central Bank can get on with smaller cash reserves ; by borrowing it can draw upon the pool. That is the main purpose of pooling.

Suppose that a group of 100 banks in any community, with deposits aggregating £200 millions, maintain cash reserves of £40 millions, having no Central Bank to resort to. On an average every bank has £2,000,000 of deposits and holds £400,000 of cash. That is because the payments it has to make in cash may at any time be of such a magnitude as to reduce any smaller reserve to inconveniently low limits. For example if a bank sometimes has to meet balances of as much as £200,000 at the clearing, a reserve of £400,000 would then be reduced by half by a single payment. But suppose that the banks can get accommodation from a Central Bank. The cash they actually keep will be limited to till money, for which purpose 5 per cent. of the deposits or £10,000,000 would probably be quite enough. The rest of their reserves, amounting to £30,000,000, can be deposited with the Central Bank, and, in view of the possibility of borrowing,

the total can be reduced substantially below that sum. A bank with deposits of £2,000,000, having to make an unforeseen payment of £200,000, can obtain an advance or the re-discount of bills to that amount from the Central Bank. The banks to which it makes the payment will very likely repay former advances made by the Central Bank. All those casual and temporary payments by one bank to another which appear at the clearing thus become practically book-keeping transactions at the Central Bank. A steady drain of debit balances against a particular bank is another matter. It is probably a sign that that bank is lending too freely to its customers. The peccant bank, unless it returns to more moderate courses, will find its indebtedness to the Central Bank growing, and its supply of securities suitable to be pledged or re-discounted with the Central Bank will eventually be exhausted.

The assets of the Central Bank will be composed partly of cash, and partly of the advances and re-discounts made in favour of the other banks. Its liabilities will be the balances kept with it by the banks. We are assuming for the present that gold coin is the sole legal tender, and we will suppose that the Central Bank does not issue notes.

We assumed that the banks held £10,000,000 out of their £40,000,000 of reserves as till money, which must be in coin. Suppose that, in view of the facilities they can obtain from the Central

Bank, they can reduce the remainder of £30,000,000 by half. Their total reserves will then be £25,000,000 or one-eighth of their deposits, instead of one-fifth. The balances deposited with the Central Bank will be £15,000,000. But against these balances the Central Bank will not hold gold pound for pound. A portion will be covered by discounts and advances.

How is this portion to be determined? We have supposed coin to be the only medium of payment other than credit. Banks can pay one another by drawing on their balances at the Central Bank, but, when their customers need more money for those purposes for which credit is unsuitable, they must supply coin. If there is a drain of coin from the banks into circulation, the immediate effect is to reduce their till money. But we have assumed their till money already to be at the lowest convenient figure, and they will make good the loss by taking coin from the Central Bank, and borrowing from it if necessary to maintain their balances. Suppose that the Central Bank keeps £10,000,000 of coin against £15,000,000 of deposits, the other £5,000,000 being covered by advances and discounts. Suppose further that £1,000,000 of coin is taken by the public into circulation, reducing the till money of the other banks to £9,000,000. They will restore their till money to £10,000,000 by taking £1,000,000 in coin from the Central Bank, and will keep up their balances with the Central

Bank to £15,000,000 by borrowing £1,000,000 from it. The Central Bank will then hold only £9,000,000 of coin and £6,000,000 of advances and discounts against its £15,000,000 of deposits.

Thus the other banks look to the Central Bank as the sole source of legal tender money. They keep their reserve balances there just because it is prepared to assume this responsibility. But that puts an end to any ideal of an automatic currency. For the banks and the public do not trouble themselves about the interchangeability of gold and credit. That is the affair of the Central Bank alone. Anyone can sell the Central Bank as much gold as he likes and can procure from it as much gold as he chooses to pay for. The Central Bank is in the gold market as both buyer and seller in unlimited quantities at a fixed price.

But, it may be asked, is not this an impossible position? The dealers in any commodity can have only a limited stock on hand; when demand becomes too insistent, they defend their stock against depletion by raising the price. A Central Bank is not free to do this; it is bound to deal at a fixed price.

Now a fixed price means a fixed number of monetary units, and, if the number may not move, the value of the monetary unit in commodities can. The mountain will not come to Mahomet, but Mahomet can go to the mountain.

We have already seen that the value of the monetary unit in commodities depends upon the

action of the banks in creating credit. That action the Central Bank is in a position to control. For the one limitation on the creation of credit is the supply of cash, and the supply of cash is in the hands of the Central Bank. When more cash is needed, the banks procure it from the Central Bank by borrowing, and the Central Bank can charge what it pleases for its loans and discounts. If the banks have been lending too freely, more cash will sooner or later be required for circulation. Those banks which have been most lavish in lending will be the first to increase their borrowing from the Central Bank to make good their cash. If the Central Bank raises the rate of interest or discount which it charges, what is commonly called Bank rate, these imprudent banks will find that their additional lending is unprofitable, unless they charge as much in turn to their customers. A rise in Bank rate is quickly reflected in a rise in the market rates for loans and discounts, and thus deters traders from borrowing. The creation of credit is thereby damped down, and the value of the monetary unit in commodities is raised.

Similarly the Central Bank by lending freely can increase the cash reserves of the other banks and stimulate them in turn to lend, and the value of the monetary unit is then lowered.

The raising or lowering of the value or purchasing power of the monetary unit by these methods is a much more roundabout process than the raising or lowering of price quotations in an

ordinary market. If the banks have been lending too freely, and trade has become active, it is impossible for traders to cut down their borrowing at a moment's notice. They have entered into commitments extending some time into the future, and in many cases cannot proceed without borrowing in the interval before they deliver the goods and receive payment. And, on the other hand, if the banks have restricted their lending too far, traders will have been deterred by unprofitable markets, and it takes time to induce them to resume enterprise and take advances even on the most tempting terms.

Confined to these indirect methods of influencing the market for gold, the Central Bank must adapt its stock in trade, the gold reserve, to the possible demands upon it. A dealer in any other commodity can raise the price he asks at a moment's notice to any level necessary to prevent the exhaustion of his stocks. The Central Bank must be prepared to suffer a heavy loss of gold in the interval after the initiation of a restriction of credit before the restriction becomes fully effective.

The demand for legal tender money comes mainly from the wage-earning classes, and others, whose financial transactions are too small for them to have banking accounts. It may be that these classes receive only half the national income or less, and they certainly possess only a very small fraction of the national resources. It is also true that their share of the total stock of the means of

payment, taking money and bank credit together, is small. But their share in the total stock of legal tender money is large. All their cash is in the form of legal tender money, while the people with banking accounts only retain a comparatively small sum as pocket money. Those with banking accounts are few, while the others are many, and the amount of pocket money which the former carry varies little between good times and bad. The cash resources of the working classes vary widely. In times of distress they are compelled to draw upon their reserves of money, and in times of prosperity they reconstitute them slowly. At a time of activity working class earnings are at a maximum. That does not mean that their cash holding is at a maximum. Far from it, for it is their absorptive power that is at its height. A credit restriction may influence the outlook and intentions of traders immediately. Production will none the less continue for a time unchecked till existing commitments have been worked through, and the absorption of cash will continue not merely till a check to production begins to be felt, but till the consequent reduction of working class earnings has proceeded so far that the dissipation of cash by those in distress offsets the accumulation of cash by those who are still employed at good wages.

Therefore we see that while it is true that business is very sensitive to a restriction of credit, the demand for legal tender money only responds very tardily.

Up to this point we have assumed that coin is the only money, and that no other medium is available for wages and small retail payments. That means that if the cash reserves of the Central Bank are drained dry, no more money will be available at all. But the exclusive use of coin is not essential to the gold standard. We have already mentioned the possibility of bank notes of small denomination, which would of course be payable in gold coin just as much as other forms of bank credit. To the unrestricted issue of small notes by the banks there are objections, into which it is not necessary to enter here. But these objections do not apply to the issue of small notes by a Central Bank. Such notes need not be legal tender. The Federal Reserve notes in the United States are not legal tender. The notes of the Central Bank will be accepted in payment by everyone, whether they are legal tender or not.

The right of issuing small notes will enable the Central Bank to supplement the supply of money without drawing on its cash reserves, and so to avoid the breakdown which the exhaustion of those reserves might otherwise threaten. So long as the notes are freely convertible into gold coin, the monetary unit is fixed in terms of gold and the gold standard is maintained.

The demand for gold coin as a medium of payment within the country can be fended off by the issue of small notes, but that does not dispose of the demand for gold *as a commodity*. We

have already shown that the Central Bank is a dealer in gold at a fixed price, and that since it cannot raise the price it can only avoid selling gold too cheap by taking measures to raise the purchasing power or wealth value of the monetary unit.

In what sense can gold be sold *too cheap*?

The demand for gold in industry might be stimulated if it were cheapened relatively to other commodities. But the industrial demand in any one country is likely to be too insignificant to trouble the Central Bank. The vital fact is that gold is a commodity with a world market, and therefore with a world price. It is this world price to which the Central Bank has to conform.

A world price is by no means a simple conception. A price is a value relative to a monetary unit. But there is no world monetary unit. A commodity with a world market has a different price in every country, reckoned in the country's own unit. A world price only exists because the different monetary units are related together by the foreign exchange market.

CHAPTER II

THE foundation of the gold standard is the tying of the value of the monetary unit to the value of gold by the fixing of the price of gold. Inasmuch as gold is a commodity with a world market, it has a world value, and therefore the gold standard gives a world value to the monetary unit itself.

This world value of the monetary unit can only be made effective through the foreign exchange market, and our next task will be to elucidate the mysteries of that market.

The major payments of business are made with bank credit, and the banking system enables them to be cleared or set off against one another. The foreign exchange market is an organisation by which payments to be made *in different monetary units* can be cleared against one another. The indispensable condition of that process is that the different monetary units should be valued in terms of one another. A pound is one thing and a dollar is another. But if £1 can be bought and sold for \$4.86, a debit of £10,000 can be set off against a credit of \$48,600.

International trade and other international transactions give rise to debts from people in one

country to people in another. Each creditor wants ultimately to receive payment in the currency of his own country, but a debtor can in general pay only in that of *his* country. In the course of his dealings a trader may both receive and pay foreign currencies, but in the end every country's products have to be paid for in its own currency.

Therefore in general anyone who becomes entitled to a sum of foreign currency will seek to sell it for his own currency. His title will be embodied in a credit instrument. His debtor may have authorised him to draw a bill, or may have sent him a cheque. Such instruments can be transferred from one holder to another, and they form a great part of the subject-matter of dealings in the foreign exchange market.

The dealers in the foreign exchange market buy and sell foreign currencies in these and other forms, and it is the function of the market to make a price for every foreign currency. The dealers are for the most part banks. In the first place the banks do business for their own customers, buying foreign currencies from some and selling them to others. A bank is left day by day with a debit or credit balance in each foreign currency, which it endeavours to settle by buying or selling that currency in the open market. The various dealers are brought together by the market as buyers or sellers of any such currency, and thereby the credit balances of some are disposed of at the market price to meet

the debit balances of others. But there will in general remain a residue, a net debit or credit balance, which cannot be so dealt with.

Dealers in foreign currencies must hold as their stock in trade a supply of these foreign currencies or of assets which can at need be turned into them. The immediate effect of a debit or credit balance of any foreign currency in the market as a whole is to reduce or increase the stock of that currency in the dealers' hands. If the pre-existing stock be supposed normal, they will tend to correct the disturbance by quoting a higher price if the stock has been reduced, a lower if it has been increased.

But at the same time dealers in the foreign exchange markets at other centres will have been dealing in the same currency and will have been left in the same way with debit or credit balances. Those with debit balances will all tend to quote a higher price for the currency, and those with credit balances to quote a lower. The result will be that the credit balances will be offered to the centres with debit balances and the price differences will be obliterated. Thus the foreign exchange markets of the world form a single international organisation, which clears all the international transactions in the currency of any one country.

Nevertheless in the end the debits and credits in a country's currency at all the centres of the world will not exactly balance; there will still be a residue. This will take the form partly of

an increase or reduction in the stock of that currency held by foreign exchange dealers at other centres, and partly in a contrary change in the stocks of *other* currencies held by the bankers and other dealers in foreign exchange in the country itself.

For example, if the dealers abroad hold too much of the country's currency, they will offer it cheap. But that means equally that other currencies will be dear in terms of this currency. For if the price of one currency in another goes down, that is another way of saying that the price of the latter in the former goes up. The rise in the prices of foreign currencies will be an inducement to the banks of the country under consideration to sell some of them and to hold less.* They will thereby relieve to some extent the redundancy of their own currency in the foreign exchange market. They cannot properly be said to increase their stock of their own currency, for it is they themselves who create the supply of that currency in the form of bank credits.

They can only replenish their stock of foreign currencies by buying them with their own currency, and the shortage of the former is thus equivalent in its effect upon the market to a potential redundancy of the latter. In the same way, if the banks of the country have an excess supply of foreign currencies, they can only get

* I leave out of account the speculative tendency, which often sees in a rise or fall the prospect of a *further* rise or fall.

rid of the excess by selling it in the market for their own currency, of which they will thus cause a shortage.

In any market dealers regulate prices by the state of their stocks. A decline in their stocks means that demand is overtaking supply, and points to a rise in price; a growth of stocks means that supply is overtaking demand and points to a fall in price. This is true of the foreign exchange market; the dealers regulate the price of any currency by the state of their stock of it.

In a commodity market a rise of price checks demand and stimulates supply, while a fall of price checks supply and stimulates demand. This is equally true of the foreign exchange market. If the value of the currency of any country in terms of foreign currencies is raised, the effect is to make commodities at world prices cheaper to consumers in that country, and to stimulate imports; at the same time the cost of production of exportable products is increased in comparison with the cost of the same products abroad, and exports are checked. The increase in imports increases the demand for foreign currencies, while the decrease in exports decreases the supply. Likewise a reduction of the value of the country's currency in terms of foreign currencies would stimulate exports, and check imports. In each case the alteration in the price of the currency tends to bring about a state of equilibrium.

An excess or deficiency in the supply of any

currency in the foreign exchange market may be purely casual and temporary, and, if the dealers believe it to be so, they will make little or no change in their quotations. But if a persistent tendency in either direction makes itself felt or is anticipated, the dealers will make the appropriate change in quotations, and it is in their power thereby to correct the tendency.

Now as between any two countries which both use the gold standard this procedure will not work. For it presupposes that the price of the currency of either in relation to that of the other can vary indefinitely. If both currencies are fixed in gold, this is not so.

If there is a bullion market in any financial centre, the dealers there will be prepared to buy gold in any part of the world. The price they quote will depend upon the place at which the gold is situated. They would naturally quote all the prices in the currency of the centre where the bargain is made, and all the prices would thus be comparable with one another, without reference to the foreign exchange market. A bullion dealer in London would quote a price in sterling for gold in Montreal and another price in sterling for gold in New York. The two prices would not differ by more than the cost of transporting gold between New York and Montreal. If they did, a seller of gold at the place for which the lower price was quoted would not offer it there, but would accept the higher price quoted for the other place, and would send the gold thither.

Thus the lower price would be purely nominal, and only the higher would be operative.

It follows that the prices in any one currency of gold in different places cannot differ by more than the cost of transporting gold between the two places. This cost is usually a very small fraction of the value of the gold. Between Montreal and New York it is between $\frac{1}{8}$ and $\frac{3}{16}$ per cent. Even between the most distant centres it does not much exceed 1 per cent.

But in a country with a gold standard the value of gold is the value of the monetary unit. The price of the currency of one gold standard country in terms of that of another is the value of gold in the former in terms of the value of gold in the latter, and can only vary from parity by a fraction representing the cost of transporting the gold from one country to the other. By "parity" we mean a price expressing exactly the relative quantities of gold in the two units. A pound is the price of $113\frac{1}{3}$ grains of fine gold, and a dollar is the price of 23.22 grains. The parity of $\$4.86\frac{1}{2}$ to £1, is the ratio of these two quantities of gold.

It follows that the dealers in foreign exchange, when they are short of the currency of another gold standard country, cannot raise the price of that currency to any appreciable extent. The fractional rise which will suffice to start movements of gold thither will not be great enough to have any considerable effect on its exports or imports of goods. The scarcity of the currency

in question cannot be corrected by that stimulation of imports into the country and discouragement of exports from it, which any considerable rise in the exchange value of the currency would have accomplished. The excess of exports and deficiency of imports continue, but equilibrium is nevertheless restored by imports of gold which make up the balance.

When a gold standard country finds one of its neighbours absorbing gold in this way, it has to find the gold which it is compelled to export from the reserves of the Central Bank. And now we can see the practical significance of the Central Bank's defence of its gold by regulating the value of the monetary unit in terms of wealth. In a world in which the gold standard predominates, the market for gold is simply the market for gold standard currencies. In other words it is coincident with that section of the foreign exchange market which deals in gold standard currencies. The Central Bank's task is to keep the value of the monetary unit in the foreign exchange market as near as possible to par with other gold standard currencies. Any considerable failure in accomplishing this purpose will involve it in a gain or loss of gold both larger and more sudden than any movement to or from internal circulation. In settling the amount of the gold reserve these international movements must be the main consideration. Obviously a loss of gold is a much more serious matter than a gain. If the Central Bank receives an abnormal amount of

gold, it suffers a diminution of profits and possibly a loss of control over the market in discounts and short loans. But the loss of control, leaving the community free to borrow and lend, will tend to cheapen the currency and to restore equilibrium, and the restoration of equilibrium will itself enable the Central Bank to get rid of the superfluous gold.

On the other hand a loss of gold may exhaust the reserve altogether, and incapacitate the Central Bank from discharging its duty of selling gold at a fixed price. That means an actual lapse from the gold standard, and a reversion to the system of maintaining equilibrium in the foreign exchange market by letting the rates of exchange vary.

Therefore it is essential to the gold standard to guard against the exhaustion of the reserve. The reserve ought normally to be great enough to meet all the demands for gold likely to arise in the interval between the initiation of a contraction of credit and its final taking effect in the restoration of the exchange. The extent of these demands for gold will depend partly on the discrepancy between exports and imports that has to be met, and partly on the length of the interval. The length of the interval will depend upon the sensitiveness of the credit system to the measures taken.

The use of the gold standard gives a new significance to the conception of the foreign exchange market as an organisation for the

clearing of debts. Without the gold standard the clearing process is incomplete. As we saw, there is continually a residual balance due to or from any country which cannot immediately be cleared, in the sense of being cancelled against a contrary balance. The market can only deal with the residual balance by so adjusting its quotations for the currency in question that the balance will be absorbed by a suitable modification of exports and imports. But with a gold standard different currencies become approximately commensurable with one another. The residual balance can be paid in gold. For example, if at any time there is a residual balance due from England to Holland, a quantity of gold can be taken from London, where it is equivalent to pounds sterling, and transported to Amsterdam, where it becomes equivalent to guilders. Thus a clearing balance due from the sterling-using banks of England to the guilder-using banks of Holland can be paid in the international currency, gold.

These international movements of gold furnish an instructive analogy to the payment of clearing balances between banks within the limits of one country. In any clearing system a bank which lets its lending outstrip its deposits begins to lose balances at the clearing. In the same way in an international system the country which creates credit too freely loses gold. Its banks create credit by lending to their customers, and thereby put at the customers' disposal additional means

of payment. 'So long as the means of payment are fixed in value, the people who acquire them are enabled to draw upon the supplies of goods in world markets in competition with purchasers in other countries. The additional supplies of goods have to be paid for, and hence the exports of gold.

This does not mean simply that if £10,000,000 be added to the total of bank deposits, £10,000,000 will thereupon be exported in gold in exchange for foreign goods. The process is much more complicated, and we have already had something to say about it in the first chapter. The total of bank deposits we then compared to a reservoir, into which is being poured the daily amount lent by the banks, and out of which flows the daily amount repaid to the banks. If the stream of lending is increased, the additional money lent is quickly used by the borrowers in the production of goods and becomes the income of those who take part in producing the goods. This increase in income is felt in an increase in demand for goods in general. A part of the new demand will be applied in purely internal markets, and will enable the sellers of goods in those markets to increase their repayments to their bankers. But a part will be applied to buying imported goods and goods which might have been exported. This part will have to be exported in gold. Finally a part of the additional income received by people engaged in production will not be spent at all, but will be retained by them in balances.

This part represents the increase in bank deposits and cash in circulation (the unspent margin).

The process can be made clearer by illustrative figures. Take a country with a national income of £10,000,000 a week or £520,000,000 a year. Let the total of bank deposits be £200,000,000 and let the banks lend £5,000,000 a week and let an equal weekly amount be repaid.

Now suppose that the weekly amount lent by the banks is increased from £5,000,000 to £6,000,000. For a few days the extra £1,000,000 will accumulate in the hands of borrowers, and there will be an increase of a few hundreds of thousands in the total of deposits without any other change. Then these deposits will begin to be paid away, practically at the rate of £1,000,000 a week. The money may be applied in the first instance in payments by one merchant to another for finished products, but directly or indirectly it will go to producers, swelling the total of profits and wages by approximately £1,000,000 a week.

If the increase in lending occurs at a time when industry is not employed up to capacity, these additional wages and profits will be partly or even wholly represented by additional production. But production takes time, and in the interval before the new output comes on the market, the additional demand will be felt in sales of finished goods from stock.

The merchants and dealers who sell these goods will seek to replenish their stocks. Those who

deal in home-produced goods will do so partly by ordering fresh supplies from the producers, and partly by diverting to the home market goods which might have been sold abroad. Those who deal in foreign-produced goods will order fresh supplies from abroad. We may suppose that of the £1,000,000 a week of additional income, say, £600,000 is spent on home-produced goods, £200,000 on imported goods and £200,000 is held unspent in balances. And of the £600,000 worth of home-produced goods perhaps £100,000 might be on goods which would otherwise have been exported.

Actual weekly figures would fluctuate irregularly, and all these illustrative figures must be supposed to be averages. If they are averages for a period of 10 weeks then at the end of that period imports will have been attracted to the amount of £2,000,000 and there will have been a shortage of exports amounting to £1,000,000. £5,000,000 will have been spent on home-produced goods other than those which would have been exported. This sum of £5,000,000 may be assumed to have been applied directly or indirectly by the people who sold the goods to reducing their indebtedness to their bankers. They may have increased their cash balances instead of reducing indebtedness, but we have already assumed a separate estimate of the average increase in balances. That we put at £200,000 a week, or £2,000,000 in all.

It will be seen therefore that, with our assumptions, cash balances, the unspent margin, will

have increased by £2,000,000, and there will have been an adverse balance of trade of £3,000,000 which will have been met in gold. Probably little of the £2,000,000 of cash balances will have been taken in money. It will be mainly an addition to deposits, which will thus have been increased by about 1 per cent. The national income will have been increased during the ten weeks by £1,000,000 a week or 10 per cent. This is an increase in its *money* value. The real wealth of the community will not have been increased in the same proportion. Some increase there will probably have been, because the orders given to producers by the dealers whose sales have been stimulated will probably have increased production. But orders given to producers who are already employed up to capacity do not increase production; they only force up prices. There will be a rise in the prices of goods produced for the home market, both on this account and because of the depletion of dealers' stocks. On the other hand, the prices of exportable and importable goods (which may conveniently be called "foreign trade products") are governed by prices in world markets, which are fixed in gold.

We have supposed the increase in the weekly amount lent by the banks to be a given quantity—£1,000,000. This, like the other figures, must be regarded as an average. It is subject not merely to fluctuations but to a *progressive* tendency. At the start we must suppose the banks

to encourage traders to borrow more by offering to lend at a lower rate of interest and by other methods. As soon as the additional borrowing has begun, the other tendencies we have just been examining are set going. The increased orders to producers, to make good the depleted stocks of the dealers, involve the producers in *further* borrowing, and, unless the banks take some preventive action, this new demand for loans will bring about a further increase in their lending. We might indeed assume that the banks do take preventive measures, that they just so far diminish the encouragement they are giving to borrowers as to keep their lending to a fixed weekly amount of, say, £6,000,000. But what is much more likely to happen in practice is that the additional lending will start at a relatively small amount, say, £500,000, and will gradually grow, say, to £1,500,000, all the other consequential quantities growing in the same proportion. The loss of gold would then start at £150,000 a week and rise to £450,000 a week. In the early stages the loss of gold would not appear as an export of metal, but as a reduction in the banks' holdings of foreign currencies, and an increase in the amount of the country's currency held by foreign exchange dealers abroad. What is called an unfavourable exchange, that is to say, a rise in the prices of foreign currencies, would follow, and this would soon cause the export of gold.

It would be possible to follow out in the same way in a numerical illustration the consequences

of a contraction of credit, including a fall of prices, a diminution of production and an importation of gold.

Thus with a gold standard, either an expansion or a contraction of credit must be checked before it proceeds beyond a certain limit, or the loss or gain of gold will become excessive. But that is only so on the assumption that an expansion or contraction of credit does not occur in other gold standard countries. If there were a general and simultaneous expansion of credit in all other gold-standard countries, then a country which did not participate in the movement, but kept credit steady, would receive gold from all of them, just as if it had instituted a contraction of credit on its own account. Similarly if there were a general and simultaneous contraction of credit, the country which kept credit steady would lose gold as if it had had an expansion. The gold standard requires all countries that adhere to it to keep pace in their credit movements but, so long as they do so, it does not *prevent* such movements.

A general credit expansion would eventually involve an increase in the circulation of money in all the countries which experience it. If the money takes the form either of gold coin or of paper money backed by gold, this increase in circulation will mean a demand for gold. But whereas a country which fails to keep pace with the credit expansions and contractions of its neighbours almost immediately suffers the

consequences in an importation or exportation of gold, the increase in the circulation of money in any one country, and therefore equally in all countries taken together, takes place very tardily. Moreover this demand for money can be met by the issue of paper money, and if the issue of paper money is limited by some relation to the gold reserve that limitation is an arbitrary one imposed by law or administrative practice.

If we extend our view so as to comprehend all the gold standard countries, we may regard the Central Bank or other authority controlling the gold reserves and currency in each as one of the dealers in the world market for gold. Together they form a body of dealers undertaking to buy and sell gold in unlimited quantities at fixed prices. Their gold reserves form their stock in trade.

We are now in a position to survey the world market in gold, and see how the world value of this commodity, upon which all the most important currency units are or are soon destined to be based, is determined.

Gold is produced in large quantities in South Africa, and in moderate quantities in the United States, Canada, and a number of other countries. The total world output is now about 600 tons, of a value something over £80 millions, of which about half comes from South Africa. For a few years before the war the value exceeded £90 millions a year.

This output exceeds what may be briefly called

the industrial consumption, that is to say, the consumption for all purposes other than currency. The industrial consumption of the world includes, in Europe and America, the use of gold for plate and jewellery, for decoration, for the stopping of teeth and various miscellaneous purposes. It also includes the peculiar Indian demand. The Indian peasants are accustomed to hoard a considerable portion of their surplus wealth in the form of gold ornaments. The result is that the industrial demand for gold is exceptionally large in India in proportion to the wealth of the country, and also that it is very fluctuating, depending as it does upon the surplus resources of an agricultural population whose prosperity varies much from year to year. The absorption of gold by the Indian population has occasionally reached as much as £30,000,000 or £40,000,000 in a single year. But the industrial demand elsewhere is much less, and it is probably true that the total industrial demand of the world for gold nowadays never equals the output, and usually falls short of it by several tens of millions.

That means that the currency authorities of the world are on the whole always buyers of gold. They require reserves to meet possible payments *to one another*, not to meet possible industrial demands.

And the reserves are enormous in comparison with the annual output and industrial demand. The United States holds about £900 millions of

monetary gold, England £150 millions, France £146 millions, Spain £100 millions, Germany £80 millions. Many other countries hold considerable sums. The total of monetary gold cannot be less than £2,000 millions, and all of this, except a quite insignificant amount of gold coin in circulation, is held in reserves.

What a market is this, where the dealers hold a stock in trade equal to 25 years' supply and probably more than 30 years' demand! For generations past the currency authorities have been buying up all the superfluous gold off the market, and this is the result.

The gold standard stabilises the value of the currency unit by fixing the price of one commodity. But the value of that commodity is not the resultant of the free reactions of supply and demand. Its value is in the hands of the currency authorities themselves, who are equally well equipped both to dominate the demand by buying unlimited quantities and adding to their hoards, or to dominate the supply by letting loose a small fraction of those hoards.

The wealth value or purchasing power of gold is determined mainly by the demand for it for monetary purposes. The industrial demand takes quite a secondary and subordinate place. The next question we have to consider is, how the currency authorities use the power which they possess over the gold market. That brings us back to the question we have already referred to, of the amount of the gold reserve.

A gold reserve is held with a view to contingencies, particularly to what we may call an adverse clearing balance against the country in world markets, or, in the more usual phrase, an adverse balance of payments. It is impossible to calculate beforehand the magnitude of these contingencies, and the conclusions arrived at on the subject have everywhere been empirical. They have been picked up from experience with little assistance from theory.

It is natural to think in terms of percentages. The reserve must be in some sense proportional to the transactions out of which adverse balances may arise. Any bank usually aims at a certain proportion of cash reserves to liabilities, to cover both clearing balances and withdrawals of money into circulation. Proportions between 10 and 15 per cent are very commonly adopted by banks which have re-discounting facilities open to them.

A Central Bank of issue, having no re-discounting facilities available, would naturally keep a higher proportion. Accordingly gold reserve laws are commonly enacted requiring the gold held to be not less than, say, 30 per cent or 40 per cent, or $\frac{1}{3}$ of the note issue. The law does not necessarily prescribe a proportion. Another method is to require the whole of the note issue in excess of a certain fixed amount to be covered by an equal amount of gold. But whatever the principle embodied in the law may be, people will criticise it or recommend it from the point

of view of the proportion of gold to liabilities which is found to emerge. The liabilities on which this proportion is taken are those of the Central Bank. Very often only its note issue is taken into account. The deposits, in so far as they are the balances held by other banks, are mainly clearing reserves. The notes represent mainly the requirements of the public for cash. Provided no change is made in the practice of paying clearing balances with cheques on the Central Bank, the deposits will not be turned into notes, though of course both deposits and note issue will be subject to fluctuations.

The justification for basing the gold reserve on the liabilities of the Central Bank is that it is only through those liabilities that gold can be drawn from the reserve. In the numerical example which we used in Chapter I (p. 22) we supposed that £200 millions of banking deposits were supported by reserves of £10,000,000 in cash and £15,000,000 in deposits at the Central Bank. We may modify our hypothesis by assuming that only paper money is used, to the exclusion of gold coin, and that the total note issue is £40,000,000, of which the banks hold £10,000,000, and the balance of £30,000,000 is in circulation. The liabilities of the Central Bank will then amount to £55,000,000, made up of £40,000,000 of notes and £15,000,000 of deposits.

If the Central Bank were required by law to maintain a gold reserve equal to two-fifths of its note issue, this minimum reserve would be

£16,000,000. But in practice it would have to hold substantially more. For if it held only £16,000,000, and any sum in notes, however small, were presented to withdraw gold for export, the reserve would immediately be reduced below the minimum. If notes to the value of £1,000,000 were presented, a reserve of £15,000,000 would remain against a note issue of £39,000,000, whereas the reserve ought to be two-fifths of £39,000,000, or £15,600,000.

If the principle of a fixed fiduciary issue were adopted, if, for example, a fixed amount of £24,000,000 were allowed to be covered by securities, and all notes issued in excess of that amount had to be covered by an equal amount of gold, then the note issue of £40,000,000 would be covered by £24,000,000 of securities and £16,000,000 of gold. If £1,000,000 of notes were presented for gold, the reserve law would be untouched, for a note issue of £39,000,000 would be covered by £15,000,000 of gold and £24,000,000 of securities. This would equally be so if £10,000,000 were presented, for then a note issue of £30,000,000 would be covered by £6,000,000 of gold and £24,000,000 of securities.

But even this system does not exempt the Central Bank from keeping a surplus gold reserve. For besides withdrawals of gold for export it has to meet withdrawals of notes into circulation. If the public need £40,000,000 in notes, then the £10,000,000 of notes presented for gold will have to be replaced. In fact, they will be replaced

among the public by notes drawn out of the banks, whose reserves will be thereby reduced from £25,000,000 to £15,000,000. That will be insufficient to provide for their till money and clearing balances, and they will proceed to make good the shortage in the only way open to them, that is to say by borrowing from the Central Bank.

The Central Bank can, if it pleases, refuse absolutely to lend, or can ration credit so as to keep its lending within a prescribed limit. If it did so refuse, it could keep within the legal limit of its note-issue despite the withdrawals of gold. But long and varied experience of financial crises has shown that it is very undesirable that the Central Bank should absolutely refuse to lend. That way lies panic. We have supposed a sudden and severe shortage of cash to occur, the total notes in circulation being reduced from £40,000,000 to £30,000,000. The effect will be an extreme unwillingness of the ordinary banks to lend, for any bank which lends more freely than the others will have to pay an adverse balance at the clearing, and when their cash holdings are reduced so low, they cannot afford to do so. Borrowers must therefore fall back on the Central Bank. If it will not lend, they cannot get money from anywhere. The least of the harmful results will be the slowing down or stoppage of many businesses for want of working capital. Others, with liabilities to meet, will have recourse to forced sales of goods or securities. Markets will be overwhelmed and

purchasers will be few. The difficulty of selling and the consequent precipitate fall of prices, will send traders with intrinsically sound businesses into bankruptcy.

These disastrous developments can be avoided if the Central Bank will continue to lend. It may insist on good security and may charge a very high rate for its loans. Even a very high rate for a short period is but a slight burden on a prosperous trader in an emergency, and it deters people from borrowing in circumstances where borrowing is not really necessary.

If the Central Bank is to adopt this policy of never refusing to lend on sound security, it must be prepared to make good any shortage in the note circulation by lending. Should it do so at a time when the circulation is already up to the legal limit, then the legal limit will be exceeded. Therefore a necessary consequence of this policy is that the Central Bank should keep a margin of its power of note issue in reserve. Or in other words it must keep a gold reserve exceeding by a suitable margin the amount prescribed by law.

In our numerical example the Central Bank, with £40,000,000 of notes issued and deposits of £15,000,000, is legally bound to keep £16,000,000 against the notes, and must therefore keep a further sum to meet export demands if it is to do so without either breaking the law or cutting down the supply of money in circulation. This is the function that was discharged by the reserve in the Banking Department of the Bank of England

under pre-war conditions, before the position was modified by the Currency and Bank Notes Act of 1914. That reserve was the margin between the actual note-circulation and the circulation legally permissible. It was, as a matter of practice, kept at about 40 per cent of the deposit liability, except at the time of big seasonal increases in deposits. The gold reserve in excess of this margin could not be touched except at the cost either of reducing the circulation or of breaking the law. Reducing the circulation meant in the last resort refusing to lend, and, when confronted with the alternatives, the Bank, reinforced by the authority of the Government, chose to break the law.*

In France there was a maximum limit to the note issue, which was regularly raised by amending legislation if circumstances required, but there was no prescribed gold reserve. Nevertheless, the Bank of France maintained a very large gold reserve, covering a high proportion of the note issue (68 per cent in 1914).

In fact, before the war the prevalent policy everywhere was to keep large gold reserves, and it was this demand for monetary purposes that dominated the gold market. In the next chapter we shall turn for a moment to the history of the gold standard, and we shall then see how monetary policy has affected the world market for gold.

* It should be mentioned that in practice the Bank of England does not lend direct to the Joint Stock Banks, but to the discount houses, from which the Banks can call up money.

Now the accumulation of these huge gold reserves has been the result of caution and even timidity. The authorities, political and financial, that have framed monetary policy have never had any clear idea as to the causes of gold movements or of the manner in which the remedies worked. They have therefore never felt sure that any gold reserve, however great, would be adequate. Since the war there has been a change in this respect, and we shall see in Chapter IV how this change is affecting policy.

Before concluding the present chapter, however, it will be desirable to explain a development which had already begun before the war and has played a more important part since. That is what is called a *gold exchange standard*. The gold exchange standard is a practical device for economising the use of gold in the application of the gold standard. It may be compared to the adoption of the payment of balances between banks at the Clearing House by cheque instead of with money.

Gold is used in international monetary affairs as a medium of exchange. But it is a medium of exchange not between different *commodities* (except indirectly), but between different *currencies*. When gold is sent from London to New York, the bullion market changes pounds into gold and then changes the gold into dollars. The gold has been used as a *medium* for changing pounds into dollars. Now, as has already been pointed out, when gold is used merely as a medium

of exchange and not as a material of industry, the right to receive gold will serve just as well as gold itself.

When Russia succeeded in fixing the gold value of the rouble in 1894, she found the provision of a gold reserve a serious strain upon her resources and her credit. The requisite funds had to be raised by means of large foreign loans, and the interest threatened to be a heavy burden on her budget and on her balance of payments. She therefore accumulated, in place of a part of the gold reserve, a reserve of foreign gold standard currencies in the form of bills and other liquid investments. This reserve was held in the first instance in Berlin and later also in other centres. The Government offered to buy bills on Berlin at a fixed rate of exchange, paying for them with resources which would otherwise have been used to buy gold. Having thus secured a fund of German marks, the Government could thereafter offer to sell marks to all comers at a fixed rate of exchange. To anyone who would otherwise have withdrawn gold for export a cheque or bill on a foreign centre like Berlin would serve just as well, for marks were equivalent to gold in Berlin, and the rate of exchange at which the Russian Government sold marks was so arranged that it would be slightly more profitable to anyone to buy marks than to take gold. Thus this reserve of foreign bills adequately served the purpose of a gold reserve ; and it had two great advantages, in that it yielded interest, and that its increase or

decrease did not unsettle the world market in gold.

This plan was extensively imitated. Austria-Hungary adopted it, and so did India. Many other countries kept small reserves of foreign bills to the credit of their Central Banks, and used them to forestall demands upon their gold reserves.

The possibility of a gold standard country holding a reserve of foreign currencies instead of a reserve of gold introduces a new factor into the gold market. The holding of a reserve in actual metal, when an interest-earning reserve of bills would serve the purpose as well, is a loss and a burden. Since the value of gold in terms of wealth depends to so great an extent as we have seen upon the demand for it for monetary reserves, a method of economising the use of it for that purpose to an almost indefinite extent seriously threatens the stability of its value. This is a topic to which we shall return in the concluding chapter.

CHAPTER III

SO far as Western Europe is concerned, the gold standard is a modern development. In the Middle Ages the Byzantine Empire, which preserved unbroken the great tradition of Roman civilisation, maintained a gold standard, and when this tradition spread during and after the Crusades to the Italian mercantile cities on the fringe of feudal barbarism, the use of gold spread with it. Florence had her gold florins, and Venice her gold sequins or ducats. But gold became and remained only a merchant's medium. The principal standard of value continued throughout Western Europe to be silver.

Gold coin in each country was given by law a determinate value in terms of the money of account and therefore of silver. But different countries were apt to adopt slightly different ratios between gold and silver, and endless troubles resulted. Gold always tended to flow towards those countries where it was valued highest in terms of silver, and these countries found that their silver flowed away in exchange for it. It was an inconvenience to lose the country's whole current stock of gold, for silver was an inconveniently bulky and heavy medium for the larger

commercial transactions; to lose any considerable part of the stock of silver currency was simply paralysing, for silver was the indispensable medium for the transactions of every day. The real facts in regard to foreign currencies, including not only the nominal coinage laws, but also the actual state of the gold and silver coins in circulation, were difficult to ascertain, and this state of confusion was not dispelled till the eighteenth century.

So far as Western Europe was concerned, the gold standard was practically originated in England. The valuation of gold in terms of silver had been modified several times in the seventeenth century. In 1663 Charles II issued a new gold coin called a guinea, officially valued at £1. A troy pound of gold, $1\frac{1}{2}$ fine, was coined into $44\frac{1}{2}$ guineas. As silver, $\frac{3}{4}$ fine, was coined at the rate of 62s. a pound, the ratio of gold to silver (after allowing for the slight difference in fineness between standard gold and standard silver) was 14.485, that is to say, a given weight of fine gold was valued at 14.485 times as much as the same weight of fine silver.

This ratio was too low. Gold was undervalued in terms of silver, in comparison with its value in the European market. But this was a time when the country was undergoing a great and rapid commercial development, and banking facilities were still in a rudimentary state, and almost non-existent outside London. Silver was too bulky a medium to be convenient for mercan-

tile transactions, and gold was almost a necessity. Creditors were willing to accept gold in payment at a premium over its official valuation. Debtors, being entitled to pay, if they chose, in silver, could stipulate for a premium on gold. The result was that guineas were treated as a commodity, the price being determined like that of wheat or iron in a free market. Yet, while their price varied, they were used as a medium of exchange, and merchants were free to make bargains expressly denominated in guineas if they chose.

The premium on guineas had risen high in consequence of the defective condition of the silver coinage, but even after the restoration of the coinage there was still a premium. In 1717, serious inconvenience having been suffered owing to a shortage of silver coin, Sir Isaac Newton, who was Master of the Mint, attributed the shortage to the fact that the current price of 21s. 6d. to a guinea over-valued the gold coin in terms of silver, and therefore undervalued silver in terms of gold. He showed that the ratio at which gold was valued in terms of silver on the Continent corresponded to a price of about 20s. 8d. to the guinea. This was not a case where the statutory valuations of gold and silver coins undervalued silver. The price of the guinea was not an official valuation at all, but a free market price. This is one of those cases where we must distinguish between the money of account, in which debts and credits are reckoned, and the

legal tender money in which debts are payable. The fault was not that the guinea was over-valued, but that the monetary unit of account was itself overvalued in terms of silver by the mint price.

The remedy adopted was to institute a statutory valuation of the guinea at 21s. This was the beginning of our gold standard. For according to Newton's calculations the guinea was still over-valued, and when the credit system of the country had accommodated itself to the new system, it was to the valuation of 21s. to the guinea that the monetary unit was adjusted. Silver was still undervalued, and little of it remained in circulation. It could only remain because it had become so worn that it was no longer profitable to melt or export it. Silver was practically relegated to the position of a subsidiary coinage, though it remained unlimited legal tender till 1774. Gold predominated as the means of payment and the standard of value.

The 21s. guinea represented an increase of 5 per cent over the valuation of 1663, which had made the ratio of gold to silver 14.485. The ratio was thus raised to 15.21, and became higher than in the rest of Europe.

In 1785, however, a new gold coinage was introduced in France. The effect was to raise the ratio of gold to silver in that country to 15½. Owing to a number of causes, into which it is not necessary to enter here, the full effect of this change upon the European gold market was not felt till after the collapse of the assignats, the

paper money of the French Revolution, in 1796.

The coinage price of silver in England was still 62s. to the troy pound of twelve ounces, or 62d. an ounce. The coinage price of gold was 44½ guineas to the troy pound or £3 17s. 10½d. an ounce. The effect of the revised ratio of gold to silver in France was to attract gold to that country in preference to silver, and so to cheapen silver in terms of gold in the European market. The market price of silver in London fell below the coinage price of 62d. an ounce, and silver began to come to the Mint to be coined.

The virtual gold standard to which the English public had become accustomed was founded on nothing but the over-valuation of gold in the coinage system. The temporary limitation on the legal tender of silver had lapsed in 1783. If nothing were done, the country would pass back to a silver standard. In 1798 the decisive step was taken. The coinage of silver was suspended, and it again became legal tender (except by weight) only for payments not exceeding £25.

There followed a period of depreciated paper money, in which coinage laws were of merely academic interest. But before the restoration of the currency to parity, which occurred in 1819, the Coinage Act of 1816 had definitely established the gold standard. The guinea was abandoned in favour of the sovereign of 20s., but the coinage price of gold remained the same as had been adopted in Newton's day. An ounce of gold, 1½ fine, is equivalent to £3 17s. 10½d., and a

sovereign contains a small fraction more than 113 grains of fine gold. An ounce of standard silver is coined into 5s. 6d., but there is no free coinage of silver, that is to say, the Government settles the amount of silver coin to be issued at its discretion.

Meanwhile the coinage system of France, though in other respects remodelled, maintained the ratio of $15\frac{1}{2}$ to 1 between gold and silver, which had been adopted in 1785. Silver was at that time the standard in almost all Europe. In France both silver and gold were equally the standard. That is to say, there was free coinage of both, and both were unlimited legal tender.

This is what is called bimetallism. Provided the ratio adopted in the coinage corresponded to the ratio between gold and silver in the world's markets, gold and silver would both be used as means of payment. The monetary unit would be effectively equal both to its prescribed equivalent in gold and to its prescribed equivalent in silver.

If the gold and silver markets were disturbed, so that the relative prices of gold and silver were altered, this would no longer be possible. Things cannot be equal to the same thing unless they are equal to one another. But it would not be correct to infer that a system of bimetallism is therefore utterly precarious. The bimetallic system itself affects the world market in the precious metals. If the value of silver tends to fall relatively to that of gold, the bimetallic country, offering as

it does a fixed price for silver, finds itself compelled to buy unusually large quantities of it. If the tendency is very marked, it will import so much silver that its monetary unit will begin to depreciate relatively to gold, and the result will be that it will export gold. It will thus become a buyer of silver and a seller of gold, and so long as it continues to discharge this double function the prices of gold and silver in world markets will be at the ratio adopted in the bimetallic system.

There is, however, a limit to this process. The limit is reached when all the gold in circulation in the bimetallic country has been replaced by silver. The fixed price of gold in the bimetallic system then ceases to be effective; the currency ceases for the time being to be bimetallic, and becomes one of silver alone.

In the same way, if gold tends to depreciate, gold is coined and silver coin is melted, till a point is reached at which no more gold can be absorbed, and no more silver can be withdrawn and melted.

The bimetallic country is in the position of a dealer undertaking to buy and sell unlimited quantities of both metals at fixed prices. If the stock of the metals this dealer is prepared to hold is large enough in proportion to the world demand and supply, he governs the world prices of both.

In the first half of the nineteenth century France fulfilled this condition. At that period France contained a larger proportion of the total

wealth and population of Europe than at the present day. And the French have always tended to hold a large supply of the precious metals in proportion to their wealth and population. In the period from 1815 to 1850 gold production was small, and France absorbed silver to the exclusion of gold. Bimetallism does not prevent a small premium appearing on whichever metal is being melted down for bullion, and gold was at a premium in these years. Though the premium would only be just enough to cover the cost of selecting and melting the coins and rarely if ever reached 1 per cent, its existence introduced a slight degree of inconvenience into dealings between countries with a gold standard and those with a silver standard, in that fluctuations in the rates of exchange were to that extent wider than between countries with the same metallic standard. In 1847 Holland, which like France had been bimetallic, adopted a silver standard.

On the other hand, the United States, whose trade was mainly with England, found a silver standard inconvenient. The American standard was nominally bimetallic, but gold was valued at only 15 times the value of silver, and so long as the world market followed the French ratio of $15\frac{1}{2}$, no gold came to the United States for coinage. In 1834 this ratio was revised, but the new ratio was very nearly 16 to 1, and the result was an almost complete displacement of silver by gold in the course of some years.

Just before 1850 occurred the gold discoveries in Australia and California which were to revolutionise the markets in the precious metals. Floods of gold were let loose upon France, and instead of a premium on gold there was a premium on silver. The French franc from a silver unit became a gold unit. The two great financial centres of the world, London and Paris, were both gold centres.

The period of twenty-three years from 1848 to 1871 was one of wars and revolutions, and the result was to drive many important countries into the use of paper money. In 1871 Russia, Austria-Hungary, Italy and the United States were using depreciated paper. In France the notes of the Bank of France had been made inconvertible, though they were not seriously depreciated. Belgium and Switzerland had adopted bimetallism, and had, along with Italy, joined France in the Latin Union of 1865. Throughout Europe the silver standard only remained effective in Germany, Holland and Scandinavia. On the other hand, silver still maintained its position in the East.

It was in these conditions that the first step was taken in an evolution which by 1914 had established the gold standard in nearly all the world.

This first step was taken by Germany. Germany no longer derived any advantage from the silver standard in her trade with Eastern Europe, because silver had there made way for inconvert-

ible paper. The bimetallic currencies of Western Europe had passed from a state of fixity in terms of silver, with a slight fluctuating premium on gold, to fixity in terms of gold, with a slight fluctuating premium on silver. In those days German trade with the Far East was not a decisive factor, and it was moreover financed to a considerable extent through London.

Even if the ratio of gold to silver continued to be stabilised by the bimetallism of the Latin Union, the silver standard might be expected to be a disadvantage to the German financial centres. Austria-Hungary had already been considering the adoption of a gold or bimetallic standard as soon as she should escape from inconvertible paper, and had started coining 8-florin pieces.

The French indemnity paid in 1871 and 1872 supplied Germany with ample resources for carrying out a currency reform. In 1872 was adopted a new currency unit, the mark, which was based on gold. The existing silver unit, the thaler, was valued at three marks, and the amount of gold in the mark was so determined as to make the ratio of gold to silver $15\frac{1}{2}$. The vital change was that henceforward there was to be free coinage of gold and no free coinage of silver. The thaler was no longer to be coined at all, and the coinage of silver was to be confined to subsidiary coins of limited legal tender, issued at the discretion of the Government.

Germany thereupon started buying gold and selling silver on a huge scale. In two years gold

to the amount of a milliard of marks or £50,000,000 had been acquired and coined. This was much more than the world's bullion markets could stand. The price of gold in terms of silver was quickly forced up. Bimetallism was not in full operation at the time. In both Italy and France the paper money had been made inconvertible, and, though in France it was not depreciated, gold could not be freely obtained there. There was nothing to relieve the sudden scarcity of gold, and the price of silver in gold began to fall. But that meant that the currencies of silver-using countries began to depreciate. And in bimetallic countries it meant that silver would take the place of gold as the principal basis of the currency unit, and the same depreciation would occur.

The only remedy was the suspension of the free coinage of silver. This was quickly adopted in Holland, Sweden and Norway and Denmark, and soon afterwards by France and her associates in the Latin Union. Silver ceased to be a standard of value in Europe. Gold became the standard throughout the Continent except in those countries which were using depreciated paper money.

The old standard silver coins remained in circulation. Germany had intended to withdraw the silver thalers, but when the price of silver fell this could only be done at a loss. The five-franc pieces of the Latin Union remained in circulation. The value of the silver in a five-franc piece was soon far below five francs, but

so long as the supply of such coins was not sufficient to meet the needs of the public for metallic currency, gold had also to be in circulation, and that meant that the value of the franc was bound to keep up to its gold equivalent.

Thus the five-franc pieces in France and the thalers in Germany became tokens, like the subsidiary silver coins, but differed from them in being unlimited legal tender. In fact, the suspension of the free coinage of silver made it possible to keep up the value of the silver coins by a limitation of supply, while the free coinage of gold determined the precise point to which their value should be kept up.

As the five-franc pieces were inconvenient to handle, the greater part of them found their way into the bank reserves. The Bank of France had a very large holding of them, and was in a position to stave off inconvenient demands for gold by offering to redeem its notes in silver of unlimited legal tender instead. Such a course would lead to a small premium on gold, but the premium could never become substantial so long as there was a supply of gold coin in active circulation, passing in and out of the other banks, and available for sale as bullion if anyone chose to accumulate it and melt it.

In course of time the stock of these token silver coins of unlimited legal tender was gradually diminished, because they were melted down and used in the production of ordinary subsidiary coins of smaller denomination and limited legal

tender, but at the outbreak of war in 1914 there were still many outstanding, especially in the Latin Union.

In the countries with nominally silver standards, but actually inconvertible paper money, the question of suspending the free coinage of silver arose at a later stage. In Austria Hungary the paper money was found to be at par in 1879. This was due not so much to a rise in the value of the paper as to a fall in the value of silver. Had the free coinage of silver been maintained, the country would have immediately had an effective silver standard. Rather than appear as the one country with a silver standard in a gold-using Europe, the Austrians followed the example set by their neighbours and suspended the free coinage of silver. But for the moment no value was fixed for their paper money in gold, and for some years they possessed a paper standard which was *above* its nominal value in silver. In 1892 they adopted a gold unit, and in 1900 they made it effective.

Russia had a somewhat similar history, having suspended the free coinage of silver in 1893 and soon afterwards adopted a gold unit. Spain, on the other hand, though she suspended the free coinage of silver, never adopted the free coinage of gold. Her currency unit, the peseta, was represented in circulation by paper and token silver. Its value, while much above the nominal silver equivalent, remained below the nominal gold equivalent till after 1914. Otherwise practically

the whole of Europe attained an effective gold standard.

The United States had practically had a gold standard before the Civil War. In 1873, in the midst of the régime of depreciated paper to which the Civil War led, a Coinage Act had omitted the silver dollar from the list of standard coins.

But in 1879, when the paper money had been successfully raised to parity and made freely convertible into gold, protests were heard against this abandonment of silver. The silver-mining interests were politically powerful in the United States. They were suffering from the fall in the value of silver, which had been caused by the sudden cessation of the demand for it as money in Europe, and they objected to their own country joining in a movement so injurious to them. The ratio of 16 to 1, which had been so far above that prevailing in the market as to exclude silver from circulation, no longer overvalued gold. In fact, it undervalued gold to such an extent that the free coinage of silver at the old coinage price would have entirely displaced gold from circulation, and would have placed the country practically on a silver standard. A compromise was arrived at, under which silver dollars were to be coined, not freely and in unlimited quantities, but up to a prescribed annual amount.

In 1893 the amount of silver so coined became a serious embarrassment. The gold parity of the dollar was imperilled. When the great financial crisis of that year broke out, the coinage of silver

dollars was hastily but finally stopped. The question of the currency was brought into the political arena, but the silver interests were decisively beaten at the Presidential Election of 1896, and the Gold Standard Act of 1900 placed the country unequivocally on the gold standard.

The greater part of Latin America had formerly had silver currencies, but had lapsed into inconvertible paper. Those countries which emerged from this state of confusion, such as Peru, Argentina, Uruguay and Mexico, adopted gold. Others, such as Chili and Brazil, were progressing towards a gold standard. None thought of reverting to silver.

In the East controversy had centred in India. The severing of the bimetallic tie between gold and silver was a serious embarrassment to the intimate financial and commercial relations between India and England. After suffering for twenty years from the growing fluctuations in the London price of silver and therefore of silver rupees, the Indian Government decided in 1893 to suspend the free coinage of silver. The restriction of the supply of rupees soon pushed up their value above that of their silver contents. They became token coins, like thalers or five-franc pieces. But for a few years they differed from these coins and rather resembled the Austro-Hungarian paper money in having no fixed gold value.

From 1898 onwards the rupee was fixed at a rate of 1s. 4d., or 15 rupees to £1, by an ingenious

application of the gold exchange standard. Similar measures settled other Far Eastern currencies on a gold basis, till in 1914 China almost alone in the whole world retained a silver standard.

From the foregoing brief summary of the introduction of the gold standard it will be seen that the choice to be made was always between different metallic standards, silver, gold or bimetallic. Inconvertible paper money was common enough, but was not regarded as a possible permanent standard. The controversies between gold and silver or bimetallism are obsolete. The question which is discussed nowadays is whether it is possible to dispense with a metallic standard altogether.

Nevertheless the experience of the hundred years preceding the war is full of valuable lessons.

In the first place the history of bimetallism illustrates in the most convincing way the predominant power of monetary policy over the gold and silver markets. The theoretical bimetallists hoped for an international agreement establishing the free coinage of gold and silver throughout the civilised world. In the period from 1803 to 1871 bimetallism was confined to France and two or three other countries, and yet their monetary demand sufficed to keep the ratio of the world price of gold to that of silver within a fraction of their coinage ratio of $15\frac{1}{2}$. The system stood successfully the strain imposed upon it when the gold discoveries of 1849 and 1850 suddenly raised the annual output of gold, which

formerly had rarely reached as much as £3,000,000, to £20 or £30 millions. In the years following 1870 there was a slackening in the output, but this by itself would rather have favoured than have threatened the continuance of bimetallism. The event which brought it to an end was the adoption of a gold standard by Germany. Here again, therefore, monetary policy was the decisive cause. It was Germany's sudden demand for £50,000,000 in gold that drove her neighbours to suspend the free coinage of silver.

In those days the stock of monetary gold was small compared to that which we see heaped up in the great banks of issue all over the world to-day. In Europe there was no great concentrated stock outside England and France. It circulated in the British Colonies. A moderate amount remained in circulation in the United States despite the use of depreciated paper money. No doubt also a considerable amount of gold was scattered all over the world in countries where it was not the regular standard, being a convenient medium for hoards and reserves. But the total of gold used for monetary purposes in the world cannot have much exceeded £500 millions.

The immediate effect of the suspension of the free coinage of silver in Europe was to concentrate the whole demand for additional metallic currency upon the gold supply of the world. As country after country passed from inconvertible paper to gold, the demand was intensified. The United States, Italy, Russia, Austria-Hungary and many

smaller countries accumulated gold reserves. The annual output of gold was insufficient to meet these demands, and the inevitable consequence was a rise in the value of gold in comparison with other commodities. So long as the bimetallic system was effective, the price of silver had always remained close to that of 60 $\frac{7}{8}$ d. an ounce, corresponding to the ratio of 15 $\frac{1}{2}$ between gold and silver. By 1903 the price of silver had fallen to 22d., corresponding to a ratio of nearly 43 to 1.

The world used two metallic currencies. If their relative value could change to so great an extent, it is certain that they could not *both* be stable measures of value. Their instability was due to changes in currency policy on the part of the principal countries. A great part of the demand for metallic currency had been diverted from silver to gold. The value of gold in silver had been thereby very nearly trebled. One at any rate of the two metals and probably both must have been unreliable in the essential functions of a standard of value.

Since there is nothing in the circumstances of either metal to make it more stable in value than the other, are we to be driven to the conclusion that the precious metals are inherently defective for that purpose? That would be a mistake. The true moral of nineteenth century monetary experience is rather that the defects in gold and silver as standards of value have been attributable to causes within human control. Governments

have been too prone to modify their currency systems without regard to the reactions they might cause in the world markets for the precious metals, and therefore in the currency systems of their neighbours.

The most conspicuous example is the adoption of a gold standard by Germany in 1872. But other instances might have been cited.

On the other hand, it may be contended that there have been big changes in the value of gold or silver due to increases or decreases in production. In order to pursue further our critical examination of the experience of the nineteenth century we must look beyond the relative value of gold to silver, and consider, what is really the essential test of a measure of value, the value of gold in relation to commodities in general.

In such an investigation we must rely on index numbers of prices. We take a representative selection of commodities, and work out the average of the percentages by which their prices have changed over any period. This average may be regarded as measuring the change in the general level of prices. It is, of course, affected by many other causes besides the purchasing power of money, such as changes, whether permanent or transitory, in natural supplies, changes in methods of production, or changes in the uses to which products may be put. To some extent these non-monetary causes will be eliminated in the process of averaging, but that is only so when they are moderate in extent and independent of

one another. If that condition is fulfilled, a change in the level of prices recorded by a price index will demonstrate a change in the purchasing power of money. If on an average the selected commodities have fallen 10 per cent in price, then the purchasing power of money has risen in the proportion of 100 to 90.

Index numbers of prices have been worked out for this country for the whole of the period we are considering, and the results are instructive. If we look at the general tendencies disclosed, we find four clearly marked periods between 1819, when the currency was restored to par with gold, and the outbreak of war in 1914. The first period is one of falling prices, and lasts till 1850. The second is one of rising prices, and lasts till 1873. The period from 1873 to 1896 is again one of falling prices, and finally prices rise again from 1896 to 1914.

It is a fact that the periods of rising prices were periods of large gold production, and those of falling prices of small or relatively small gold production. But the gold production between 1873 and 1890, though slightly less than between 1850 and 1873, was enormously greater than before 1850. It was almost certainly sufficient to sustain a continued rise of prices, though not so rapid a rise as in the preceding period, had conditions remained unchanged. But the suddenly increased demand for gold as currency was more than the supply could keep pace with, and equilibrium necessitated a fall of prices. The fall between

1873 and 1896 amounted to 45 per cent. In the concluding period between 1896 and 1914 the transition to the gold standard had been practically completed, and the output of gold rose far above the highest figure known before. Prices rose about 40 per cent.

The gold standard has been criticised on the ground that these changes in purchasing power make gold unfit to be a standard of value for long-period contracts, such as debentures, leases, and national and municipal debts. Undoubtedly uncovenanted gains and losses do arise in this way between debtors and creditors, but they are spread over long periods and are not formidable in comparison with the other chances of economic life. The prospect of gain or loss from a change in the purchasing power of gold is not a serious motive in the economic actions of individuals, and when it occurs people are hardly conscious of it. They measure all values by money, and are content to regard money as fixed, without testing this opinion by constructing index numbers of prices, so long as they are not confronted with such flagrant variations as may occur with inconvertible paper.

But this is not the whole case. A closer scrutiny of the statistics of prices will show that superimposed on these long-period movements is a series of periodic movements, extending over periods of from seven to eleven years. The price level rises to a maximum, drops again, and from the low point rises to a new maximum, which is

reached regularly from seven to eleven years after the one before. The extent of the movement is large, the maximum often being as much as 20 or 25 per cent above the minimum.

Is this periodic fluctuation in prices a monetary phenomenon? That is to say, are we to interpret it as a change in the value of gold? It certainly seems that we must. If we look for any non-monetary cause, we certainly shall not find it in any periodical changes in the volume of production. There is indeed a periodical fluctuation in production, but production is at its highest just when the price level is at its highest.

If prices rise just when supply is plentiful that must be because demand is increasing. But what is demand? It is simply the money that people have to spend; that which I have called the consumers' outlay. The *relative* demand for different products depends on the relative intensity of people's desires for them. But the total demand for *all* products, whether goods or services, does not depend on people's desires. It is simply the total of their incomes, whatever their desires may be.

Therefore the periodic fluctuation in the value of gold must have been due to periodic fluctuations in the money income of the community. For this purpose the "community" means all the inhabitants of the gold-using countries.

Now we have already seen how this total money income may be affected by credit policy. When the banks begin to lend too freely, people have

bigger incomes to spend, and prices rise. The gold standard regulates their lending and puts a limit to it. Firstly it compels all the gold standard countries to keep pace with one another in expanding credit, for any one of them which outstrips the others loses gold. Secondly, an expansion of credit, with the consequent increase in incomes and prices, leads eventually to more legal tender money passing into circulation. If this legal tender money has to be either gold coin or paper money wholly or partly backed by gold, the effect is to encroach on the available supplies of gold in the gold standard countries, till at last the expansion of credit has to be stopped.

Now we have already seen that the flow of legal tender money into circulation in such circumstances is *very gradual*, and lags far behind the expansion of credit which causes it. The result is that, if the authorities controlling credit are guided in their action by the adequacy of their stock of gold, their intervention is bound to be very tardy. And the expansion and contraction of credit are both likely to be very slow processes in a group of countries which are all made to keep pace with one another by the rather cumbersome expedient of gold movements.

Hence the very slow rhythm of the movements in the price level, which we are now studying. So far as any inequitable disturbance of the relations of long-term debtors and creditors is concerned, these movements matter less than the long-period movements we have already

considered, because the rise and fall compensate one another. But that does not mean that they are innocuous. In fact, the periodic movement of the price level is a part of the trade cycle, which has been the subject of so much controversy among economists and business men.

If the foregoing interpretation is correct, the trade cycle is a credit cycle, and is traceable to a defect in the gold standard as a regulator of credit. Conformity to the gold standard sooner or later keeps a credit movement within bounds, but *not soon enough*. The credit cycle occurs because it takes years for the restrictive influence of gold to make itself felt.

The trade cycle is the source of very serious evils. The greatest is the occurrence of epidemics of unemployment, whenever a prolonged contraction of credit becomes necessary. The unemployment problem in its acute form is a problem of the trade cycle. Outbreaks of unemployment occur from multifarious causes in particular industries. Theoretically, unemployment might be caused in all industries together by wages being fixed above the economic level. But the epidemics of unemployment which actually vex us are caused by the paralysing influence of a credit contraction. The credit contraction works its way by cutting short the flow of purchasing power, and the shrinkage of demand discourages production. The fall of prices follows, and is in itself a relief, but the fall, while in progress, inflicts loss on traders, and so intensifies the discouragement to

production. It is the decline in production thus caused that makes itself felt in unemployment.

The fluctuations in the value of the currency unit which are characteristic of the trade cycle have another very injurious effect upon the labour market, in that wages cannot easily be adjusted to them. Any wage settlement in any industry which does not take account of the trade cycle soon requires revision. In the pre-war period some of the industries most susceptible to the influence of the trade cycle, conspicuous among which is coal mining, had adopted sliding scales of wages, depending upon the selling price of their products. But this is not always possible, and, even when it is, the adjustment is often imperfect. The result is incessant friction.

The trade cycle has also proved extremely detrimental to the interests of traders and capitalists. The great financial crises of the nineteenth century were caused by the collapse of prices that follows a too precipitate contraction of credit. When a contraction begins, all gold standard countries must participate in it, on pain of losing gold to their neighbours. A country which fails to do so and finds its gold reserves depleted, is compelled to adopt a more drastic credit contraction if it is to restore its situation and maintain the gold standard.

Bank rate is put up to a very high rate, and the immediate effect is to make all merchants and dealers in commodities very unwilling to hold stocks of goods with borrowed money. Forced

sales drive down prices, and many traders go bankrupt. Banks which have lent to the insolvent traders are threatened, and panic supervenes.

Apart from the terrors of commercial crises the alternation of feverish activity with depression is detrimental to the interests of producers and traders, in that the most conspicuous changes in their profits are brought about by causes which are not within their control, or even within their knowledge, unless they study economic conditions outside their own business.

Now it would certainly be unwarrantable to argue that the trade cycle or credit cycle is *caused* by the gold standard itself. The active cause is the inherent tendency of credit to expand. The gold standard enters into the matter in the first place as putting a limit to the possible expansion, and necessitating a subsequent contraction, secondly, as imposing a slow pace upon both expansion and contraction, and, thirdly, as allowing expansion and contraction successively to attain a very considerable extent before they are checked and reversed. Of these three characteristics the first two are in themselves desirable, and if the gold standard does not fulfil them altogether satisfactorily that is entirely because of the third. That a limit must be imposed to any credit expansion almost goes without saying. It is hardly necessary to refer to the calamities which have accompanied monetary collapse in so many countries since the war. That credit expansion and contraction, if they occur at all,

should be as slow and moderate as possible is also a proposition that should command general assent, though there may, no doubt, be exceptions to it. The defect in the gold standard is that it gives too tardy a warning that expansion has gone too far. But this defect is not inherent in the gold standard itself. It is rather a characteristic of the practice of the nineteenth century in applying the gold standard. The absorption of legal tender money into circulation, with the consequent encroachment on gold reserves, was relied on as the signal for the contraction of credit. It must be remembered that we are here considering movements which affect *all* gold standard countries together. The export of gold was regarded as a signal for credit contraction in the country which suffered it. But then it was equally a signal for credit expansion in the countries which received the gold, and the only effect was to make all gold standard countries keep pace with one another either in expansion or in contraction of credit.

If an expansion of credit was to be stopped by a shortage of gold, that shortage could only be caused by the absorption into circulation either of gold coin or of paper money backed by gold. It is this absorption which was too slow of action to be a suitable guide in the control of credit.

That is a serious defect in the pre-war currency systems, and we ought to seek for a remedy. But it is not to be regarded as a defect in the gold standard, unless the remedy turns out to be

inconsistent with the gold standard. That is a question to which we shall return in the next chapter, which will be devoted to the developments since 1914, and to the questions of currency policy at the present day.

CHAPTER IV

IT might be said, and, in a sense, with truth, that the currency troubles which have plagued the world since 1914 have been due to the abandonment of the gold standard. But stated baldly and without qualification this statement is extremely misleading.

The war compelled the belligerent Governments to raise colossal sums of money at a time when the investment markets of the world were in a state of utter disorganisation. Such sums as could be raised by taxation were insignificant compared to what was required. France and Germany imposed no additional taxation worth mentioning till the war was half over. For the main portion of war expenditure borrowing was the only resource, and big war loans were floated. But the money raised by these loans was insufficient, and the balance had to be made up somehow. No belligerent could afford to let the national effort be limited to something less than the maximum by a hitch in the financial machinery.

It is fatally easy to create money out of nothing by borrowing from banks and issuing paper money. Belligerent Europe turned to this expedient, not merely to provide the indispensable balance

which might have been needed to fill the gap after every other financial resource had been exhausted, but to escape the unpopularity of heavy taxation and to avoid appealing to the investor at inconvenient moments. Some Finance Ministers found it so surprisingly easy to raise money by the issue of short-term securities like Treasury bills, that they actually seem to have preferred this to other methods. That was particularly so in France, where no long-term loan was issued till fifteen months after the outbreak of war.

Inflationary finance is about as prudent as eating the seed corn. Nothing could so aggravate the difficulties of raising money as a loss of confidence in the currency. The statesmen of 1914 never thought of that. The issue of Treasury Bills, or *Bons de la Défense Nationale*, was the line of least resistance. Compared to the direct borrowing from the Central Banks of Issue it even looked virtuous. The result was inflation, and by the end of the war inflation had in some countries got completely beyond control.

To regard the gold standard as a safeguard against this kind of financial profligacy is a delusion. The gold standard can only be established in a country by legislation. In an emergency it can be swept away at a moment's notice by new legislation. The responsibility for the currency may be formally placed upon an independent Central Bank, free from Government interference, but the most scientifically conceived plan always remains at the mercy of the legislature.

The legislature indeed may not abandon the gold standard at the very beginning as France, Germany, Russia and Austria-Hungary did in 1914, but may keep it going as long as circumstances allow. Convertibility into gold will then stave off the depreciation of the currency unit for a time. It counteracts the effects of inflationary methods of finance. The Government creates new currency to meet its needs, but when notes are converted into gold, and the gold is exported, the amount of currency is diminished. In effect the Government is enabled to finance itself by the sale of the gold instead of by increasing the supply of currency.

This resource depends on the existence of a gold standard not in the country itself, but in the foreign countries to which the gold is exported. The use of the gold would be equally effective in avoiding inflation if it were placed directly at the Government's disposal and turned into foreign credits, without the formality of issuing redundant paper money to be redeemed by it.

But a gold reserve cannot give anything more than a temporary respite from inflation. And all the evil consequences of inflation will follow as soon as the gold reserve is exhausted, or the exports of gold are stopped.

The gold standard can only act as a preventive of inflation by giving the authorities of the country an inducement to avoid inflationary methods. Avoidance of inflation requires courage in imposing heavy taxation and in drastically restricting

lending by banks to traders. A simple objective, such as the maintenance of the currency unit at par with gold, will help all who oppose inflation to make out their case and to rally support. But it will be of little value unless they understand the means by which their objective is to be attained. Nor will they hold their own in controversy if they make a mere fetish of gold ; if they are to withstand the urgent demands of distracted finance ministers for the creation of the means of payment, they must be able to show how disastrous the effects of inflation are likely to be. In fact, the only possible safeguard against inflation is a comprehension by the financial authorities of its consequences. No institutions, however scientific or cunningly devised, can be a substitute for their wisdom and courage.

In 1914 the financial authorities of the world were found wanting. England alone among the belligerents maintained the convertibility of paper money into gold. Even there the export of gold, though legally free, was so obstructed, partly through the inevitable difficulties of transport in war-time and partly through official pressure, that the gold standard ceased to work. The difficulties of war finance were enormously increased by various expedients of an inflationary tendency which were resorted to.

The belligerent Governments sold much of their gold to neutral countries to pay for urgently needed supplies. But the greater part of the gold-using world was at war, and the demand of the

remainder for gold was swamped by the enormous quantity let loose. The result was a great rise of prices in the gold-using countries, that is to say a depreciation of gold itself in relation to commodities. In 1917 the greatest of neutrals, the United States, became a belligerent and prohibited the export of gold, and there ceased to be any semblance of a world gold market. Nor was the market fully reconstituted in the years immediately following the Armistice. In 1919 indeed the United States withdrew the prohibition on the export of gold, and large amounts were exported to countries such as Japan and Argentina, where the gold standard still remained in operation. By May, 1920, the price level in terms of gold, as measured by the American index number, was $2\frac{1}{2}$ times what it had been in 1913, or in other words the value of gold in terms of goods was only two-fifths of what it had then been.

There followed a violent contraction of credit in the United States, which reduced prices by more than 40 per cent in twelve months. Other countries which had till then preserved the gold standard were unable to keep pace with this precipitate movement, and soon the United States was the only country in which the gold standard remained operative. There being no other buyer of gold for monetary purposes, all the surplus gold of the world gravitated thither.

These tremendous changes in the value of gold differed in degree but not in kind from the changes

which we found to have occurred in the nineteenth century. They were due to changes in the monetary demand for gold. First of all a number of countries abandoned the gold standard, and let loose their gold reserves to swamp the market, much as the abandonment of the silver standard swamped the silver market after 1872. Then the United States intervened as a buyer of gold, and raised the value of gold in the world market, just as Germany had raised it in 1873, and other countries by adopting the gold standard in subsequent years.

Attention had everywhere been attracted to the question of the currency, and at a time when the principal nations of the world were looking forward to the restoration of the gold standard as the only escape from chaos, criticism was directed against the imperfections of that standard itself. Not only had recent experience shown that the purchasing power of gold might be exposed to violent fluctuations, but the gold market had for the time being come under the arbitrary discretion of the United States. The market for gold and the market for dollars were one and the same.

In the nineteenth century people had been content to assume that the world market in the precious metals was big enough not to be disturbed by movements originating in any one country. They took it for granted that gold or silver could be bought or sold "abroad," much as an electric current can be directed "to earth,"

and that is the end of it. This was a mistake even in the nineteenth century. The steadying effect of bimetallist France, and the unsteady effect of Germany passing from silver to gold, are outstanding examples to show that the monetary demand of one great country was not small in relation to the world market. And in 1922 the world market in gold was practically coterminous with the monetary demand of one great country.

At the Genoa Conference in April, 1922, representatives from all Europe, and outside Europe from Japan and the British Empire, met together to consider their economic future. The most fruitful section of the Conference, perhaps the only one that produced any enduring results, was that which was concerned with currency. In saying that all countries must avoid inflationary finance and stabilise their currencies, and that stabilisation meant stabilisation in relation to gold, the Conference was merely repeating what had been said often enough before. What was a real step forward was a scheme of reconstruction, which recognised the influence of each country's currency system on the world demand for gold, and therefore upon the monetary affairs of all the others.

The scheme aims at the co-operation of the Central Banks of Issue of the principal countries in the regulation of credit with a view to preventing undue fluctuations in the purchasing power of gold. Before the war each Central Bank used to use its power of regulating the purchasing power

of the currency unit of its own country to keep its gold holdings up to the prescribed amount. The effect was that all the currency units had to keep near gold parity. The value of every currency in relation to every other was approximately fixed, but the value of all in terms of commodities varied, because the value of gold varied. To each country the value of gold appeared as something decided by forces independent of it, but, in fact, these forces were simply the resultant of the monetary demands of the different countries themselves.) If the Central Banks co-operate together, they can control these monetary demands, and the value of gold will conform to the value of the currency units instead of the value of the currency units conforming to the value of gold.

But to control the monetary demand, they must be prepared to buy and sell gold at their respective fixed prices *without limit*. If the consequent increase or decrease in their gold reserves became unmanageable, the plan would break down. Even an excessive increase in gold reserves is not a contingency to be entirely disregarded. The gold holdings of the Federal Reserve Banks in 1924 were very near the point at which the Banks' control over credit would be impaired. But most of the countries now on a gold standard are far from being threatened with a superabundance of gold, and the danger to be more specially provided against is a shortage of gold.

That raises afresh the question of gold reserves.

The gold proportions of the Central Banks have been settled in the past by rule of thumb, with but little regard to the real extent of the probable demands upon them. (What are these demands likely to be in the future and how determined?)

In the first place the money in circulation need not be of gold. In those countries which before the war were the greatest users of gold coin, England, France and Germany, people have become thoroughly used to paper money. Efforts in Switzerland and Holland to reintroduce gold coin into active circulation have failed. Albania is perhaps the only country in which gold coin is really preferred, but the Union of South Africa is endeavouring to follow in her footsteps.

Gold coin is, in fact, an imperfect application of the gold standard. We have already seen how the currency unit may fall fractionally below its nominal gold value, through the imperfection and the wear and tear of the coin. A gold bullion standard, such as has been established in this country by the Gold Standard Act of 1925 is free from these defects. The bullion that is bought or sold by the Bank of England is valued on its exact gold contents, and there is no such variation or uncertainty as is possible with coin.

The use of gold coin in circulation makes a special demand upon the gold reserves, for they have to meet any sudden requirements of the community for legal tender money. It is sometimes recommended as providing a second line reserve in support of the foreign exchanges. But this

second line reserve cannot easily be collected in an emergency, and is far less effective for the purpose than the same amount of gold collected in a central reserve and replaced in circulation by paper money.

If the entire needs of the community for legal tender currency are met by paper money, together with subsidiary token coins, the gold reserve is required solely for the purpose of meeting an external demand. (There may be a statutory requirement that the issues of paper money be covered in whole or in part by gold, but that is merely a device for securing the accumulation of gold to meet external demands.) The crucial question is therefore the probable extent of the external demands to be met.

It has already been pointed out in Chapter II that (international gold movements arise when different countries do not exactly keep pace with one another in the expansion or contraction of credit.) To many people this will sound like a paradox. They have been accustomed to think of (gold movements as caused by) fluctuations in exports and imports, or by (big international payments such as those arising out of external investment.)

But a little consideration will show that these causes, important as they are, do not really conflict with the general principle, but merely modify its application in particular cases. Exports and imports, whether of goods or of capital, are operations carried out *by individuals*, and the

money which passes in consequence of them is the money of individuals. If for example a country suffers a shrinkage of production and a shortage of exports, through a failure of crops or an industrial dispute, the effect will be felt in the diminished incomes of the producers. They will have less to spend, and will buy less imported goods and invest less money abroad. This curtailment of external expenditure might even be sufficient to compensate the shortage of exports so that there would be no tendency for gold to go abroad at all.

Perhaps that is not likely, but it is at any rate true that the disturbance in the balance of payments to be made good by exports of gold is only the difference between the shrinkage in exports on the one hand, and the curtailment in external expenditure on the other, caused both by the same failure of production. In the same way, when increased production stimulates exports, there will be an increase in external expenditure.

What does disturb the balance of payments is an expansion or contraction of credit, which increases or decreases the purchasing power of the population in world markets (without a corresponding increase or decrease in their productive power). Sometimes an expansion of credit arises in connection with the financing of stocks and shares in the investment market. The result is increased external investment, without any corresponding increase in the real resources available for investment. Some of the famous

crises of history have been so caused. That of 1825 occurred when foreign investments were a novelty, and the long list of flotations that led up to it included many that were utterly unsound. Nevertheless, it would be wrong to attribute the crisis to a drain of gold caused by excessive external investment in itself, whether sound or unsound. Had the investment drawn only on genuine savings, representing abstention from spending in other directions, the drain of gold would have been moderate, or might not have occurred at all. The trouble arose because the capital issues were financed with bank credits; the pound was depreciated and gold cheapened by an excessive credit expansion.

The same experience has been repeated again and again. A drain of gold leading up to a crisis has been attributed wholly or partly to over-investment, but on investigation it turns out that the over-investment was based on an excessive creation of credit.

Another common cause of a heavy and sudden loss of gold has been the outbreak of a financial crisis in some other country. The American crisis of 1907 was a striking illustration. The crisis took shape in a rush of panic-stricken forced sales, and a precipitate fall in the prices of commodities. The purchasing power of the dollar suddenly rose, and that of other gold currencies had to be forced up in proportion. The change in purchasing power of the other currencies could not be effected quickly enough,

and in the interval of adaptation huge amounts of gold were sent to the United States.

The right inference from this experience is that, if the gold standard countries all agree to keep the purchasing power of their currencies stable, these sudden discrepancies, which cause exports of gold to those countries whose currencies appreciate, will not occur. That means that a policy of stabilising currencies by concerted international action will itself diminish the probable demands upon gold reserves. The gold standard countries will find it easier to keep pace, if the pace set is *steady*.

Here is a great economy of gold, though one not easily measurable. But the Genoa plan does not stop there. We have already referred at the end of Chapter II to the device known as the gold exchange standard, by which a country can keep its currency on a gold standard by the use of a reserve composed of liquid securities in the currency of another country which is on a gold standard. It can offer to exchange its own currency into that of this other country and back on demand, and so long as the two currencies are thus interchangeable, and one is fixed in terms of gold, the other will be fixed in terms of gold too.

The Genoa Conference recommended that this system should be generally resorted to by gold standard countries, certain among them undertaking the function of being "gold centres," at which gold itself should be freely dealt in. Were that plan followed out to its logical conclusion, all gold reserves except in the gold centres

themselves could be dispensed with, and even in the gold centres the only reserves strictly necessary would be such as would meet any excess of the industrial demand for gold throughout the world over the output of the mines. Since the industrial demand is at present much less than the output, it would seem that practically the whole monetary supply of the world would become redundant.

Now the starting point of the whole scheme is the stabilisation of the value of gold. If the value of gold in relation to other commodities is to remain unchanged, the supply of gold must not be increased in comparison with the demand. It follows that no part of the existing gold reserves, superfluous though they may be, can be sold.

It is easy enough for one country to sell gold to another, provided that the latter is willing to take it for monetary purposes. But what we are concerned with here is a disposal of the stock of gold held by *all* the gold-standard countries in the world for monetary purposes. The gold withdrawn from monetary purposes could only be sold for industrial purposes. But the industrial demand could be stimulated only by reducing the cost of the gold to the industrial consumer, and as the price of gold in currency units is everywhere fixed, that means a depreciation of the currency unit. Gold would then be cheapened not by lowering its price but by raising the prices of all other things.

This being ruled out by the policy of stabilisation, the gold reserves must continue to be held.

And so long as the output of gold from the mines exceeds the industrial demand, the excess must regularly be bought for monetary purposes. It will have to be bought by some of the Central Banks of issue, and added to their reserves.

The absurdity of buying more gold when the existing reserves are already excessive has led Mr. J. M. Keynes to recommend the abandonment of the gold standard. The Genoa policy of stabilising prices is to be carried out through the regulation of credit in each country. The stabilisation of gold is merely a consequence of this. Given that the currency units themselves are stable, the Central Banks stabilise the value of gold simply by undertaking to buy and sell it in unlimited quantities at fixed prices in terms of these units.

The stabilisation of the currency unit, which is the ideal of all monetary systems, is effected quite independently of the use of gold, and gold according to Mr. Keynes will have become a fifth wheel to the coach.

He argues not merely that the holding of £2,000 millions worth of gold in stock and the annual purchase of some tens of millions more to add to the stock are pure waste, but that the use of gold as a monetary standard actually endangers the stability of the currency unit. Those countries, like the United States and Spain, which possess redundant stocks of gold may flood the market and lower the value of gold. Or others which have hitherto been content to work a gold exchange standard with little gold

may start accumulating reserves and raise its value.

The main advantage of the use of a common standard by different countries is that variations of the rates of exchange are kept within narrow limits. This advantage can be secured through the instrumentality of an exchange standard without any metallic medium. Every country can keep a reserve of foreign currencies and make its currency convertible into them.

But Mr. Keynes would not even insist on a stabilisation of the foreign exchanges. If he had to choose between a fluctuation in the price level and a fluctuation in the foreign exchanges, he would choose the latter. He would rather keep the value of the currency unit fixed in terms of commodities than in terms of foreign currencies. But he would hope that if this country succeeded in stabilising the value of the pound sterling in terms of commodities, other countries would be glad to stabilise their currencies in terms of sterling, even if the vagaries of the balance of payments necessitated slight disturbances of their internal price levels.

Mr. Keynes's arguments constitute a formidable frontal attack upon the gold standard, and no supporter of the gold standard can afford to leave them unanswered.

In the first place the argument for saving the expense of accumulating gold loses much of its force on investigation. If a capital sum of £2,000 millions could suddenly be let loose for fruitful

employment the benefit would be great. But this vast sum of gold does not represent economic power in any very useful form ; it is simply an accumulation of a luxury commodity of limited uses. The demand for this commodity could not be so stimulated as to use up so vast a supply even in the course of a generation or more, except at the cost of a tremendous sacrifice of value. During that period the greater part of the gold mining industry would become unremunerative. Indeed the chief economic gain to be anticipated would be the release of productive power from gold-mining for other purposes, a gain to be heavily discounted on account of the waste of skill and of capital involved in a sudden change.

The loss to communities dependent on gold-mining for their economic existence would be overwhelming, and could hardly be left altogether uncompensated. There might be on balance some net gain to the world, but certainly not nearly so great as the figures would at first have suggested, and at the most hardly great enough to be a serious consideration in the problem.

But there are other vested interests to consider, besides those of the gold-producers. The proposal assumes action on the part of the currency authorities of gold-standard countries. It is they who would be offering gold reserves for sale, and it is on them that would fall the sacrifice of value involved in the swamping of the market. When the silver standard was abandoned in the years following 1873, all the countries concerned

soon stopped selling silver when the fall in its price became serious. The same thing would probably happen with gold.

Then there are many pecuniary obligations in the world which are expressed in gold, either in gold alone, or in gold as an alternative to currency. This is sometimes the case with loans floated internationally. In the United States it is a regular practice to make loans (including the National Debt) payable in gold coin of the existing weight and fineness. The war debts to the United States are gold debts. It is a serious objection to a monetary reform that it will impair the basis of an important class of obligations.

All these vested interests would not constitute an insuperable obstacle to the abandonment of the gold standard, if there were no other advantage in its continuance. But in the world as it is, there would be undeniable dangers in cutting loose from it. An exchange standard works very well so long as conditions in the foreign countries in whose currencies the reserves are held are normal, but there can be no certainty that this will always be so. One of the foreign countries may be involved in war, its currency may become depreciated, it may institute a moratorium or a control of the foreign exchanges, so that the credits or securities held there will fall in value and will not be disposable except after an indefinite delay. Or in a less catastrophic emergency the market in which the securities must be realised might become temporarily

disorganised. Even if the securities are not unsaleable, they may still be only realisable at a heavy discount. Or again blunders on the part of the authorities controlling a foreign currency may interfere with the smooth working of the system, and perhaps cause a depreciation of their currency unit at a time when securities expressed in it have to be used.

It is not unnatural that many countries should prefer a system which retains gold as its basis, so that while they keep some foreign balances and securities to work an exchange standard, they may also have a metallic reserve, which is independent of the vagaries of foreign countries.

It may be admitted that, accustomed as so many people are to regard gold as the one fixed standard with which all other monetary standards are to be compared, they may over-estimate the relative advantages of a metallic reserve. (They may forget that a depreciation of the currency unit due to a fall in the commodity value of gold in world markets is just as real as a depreciation relative to gold.)

On the other hand should the scheme for stabilising gold break down, it is always possible for any country which till then has enjoyed the advantages of a stable gold currency, to cut itself loose. During the war the three Scandinavian countries temporarily demonetised gold, in that they suspended the free coinage of gold and the purchase of gold by their Central Banks. The result was that for a time their currencies were at

a premium over gold, but they had no price-stabilisation policy, and this state of affairs did not last.

The preference of most countries for gold is at the present time an indisputable fact, and stability of the rates of exchange on gold standard countries necessitates a gold standard. Stability in the foreign exchanges is valuable to any country, but it is especially important to us, because no country is so widely interested in international short-term indebtedness. The bill on London, with which so much international trade is financed, requires stable exchanges for its effective operation. If *all* rates of exchange were unstable, this business would be seriously hampered, but London would still be at no disadvantage in competing for the business that survived. But if the currencies of other countries were stabilised in terms of gold and therefore of one another, and London were peculiar in having variable exchanges on the gold-using countries, the use of London as a clearing house for international trade would soon become intolerably inconvenient.

At the present time the logic of facts has disposed of Mr. Keynes's proposals. Gold is *de facto* the international currency, and this country must do as others do and adhere to it.

A prominent part has been played by the United States in the reintroduction of the gold standard since the war. The gold standard was reinstated there in June, 1919, with the cessation of the prohibition on the export of gold. The extrava-

gant inflation and precipitate deflation which ensued in the two years that followed turned the attention of the Americans to the defects of gold as an automatic regulator of the currency.

The Federal Reserve Act of 1913, which established the Central Bank system in the United States, conformed to nineteenth century theory, in that the Federal Reserve Banks were to be guided by reserve proportions. They were bound (subject to the dispensing power of the Federal Reserve Board) to keep at least 40 per cent of their note issue in gold and at least 35 per cent of their deposit liability in lawful money.

In the summer of 1921 a year of deflation had raised the commodity value of the dollar by about 75 per cent. That meant that the \$20.67 which were paid by the Mints or the Banks for an ounce of fine gold had been increased by 75 per cent in value in terms of real wealth. The Americans were offering to that extent a higher equivalent for gold in the world's markets, and the result was that they swept up the entire disposable supply. Other gold-standard countries, such as Argentina and Japan, could not compete; they could not stand the strain of forcing up the value of their currencies, and were compelled to abandon the gold standard.

The result was an enormous concentration of gold in the Federal Reserve Banks. In April, 1922, the statutory proportions of note-issue and deposits would have required a minimum reserve of \$1,500 millions; the actual reserves were more

than double that sum. The prescribed proportions had ceased to have any operative effect.

So far as the Federal Reserve Act gave any guidance, the way was open to another gigantic expansion of credit, and in the course of 1923 the Federal Reserve Banks had to make the choice whether they should acquiesce in this prospect or adopt some new principle of credit regulation outside their statutory limitations.

An indefinite expansion of credit was unhesitatingly rejected, and the new principle of credit regulation was found in a policy of stabilisation very similar to that recommended at Genoa, except that the United States, being at the time the only gold-standard country, did not have to arrive at any form of international co-operation. Stabilisation was not interpreted to mean exact adherence to a price level measured by an index number. Indeed it is well recognised that index numbers are so subject to disturbance by non-monetary causes that a rigid conformity to them is not really in accordance with the stabilisation policy. There are other data from which the symptoms of monetary disturbances can be discerned, such as statistics of employment, production, sales, speculation in commodities or investments, etc.

The root cause of the trade cycle, as it was experienced before the war, was that the Central Banks of the world acquiesced in the progress of a credit expansion so long as the state of their reserve proportions allowed. To prevent the cycle

developing, all that is required is timely intervention by the Central Banks in the early stages. A very moderate restriction on credit expansion, exercised at a time when business first threatens to become unduly active, even though there may have been no visible rise of prices, will suffice to keep control and to avoid the need for a more drastic credit contraction later on.

That is the method adumbrated by the Genoa Conference. In America it has been reached by an independent route, and its practicability and effectiveness have been magnificently demonstrated. The experience of the United States in the past five years has shown that there is no conflict between financial soundness and economic prosperity. The apparent conflict arises only when financial soundness requires deflation. Avoid inflation, and deflation is unnecessary.

The practical application of the Genoa plan as an international scheme had to wait for the restoration of the gold standard in England and other European countries. It does not require a universal return to the gold standard, but the problems that the Genoa plan was designed to solve did not arise so long as the purchasing power of gold depended entirely on the action of one country.

England restored the gold standard in April, 1925. We may distinguish three possible forms of gold standard, the gold *specie* standard, depending on the free coinage of gold and the use of gold in the form of coin as a medium of exchange, the

gold *exchange* standard, depending on the convertibility of the currency into a foreign currency which is itself preserved at parity with gold, and finally the gold *bullion* standard, depending on the obligation of the Central Bank of Issue to buy and sell gold bullion without restriction at fixed prices.

The gold bullion standard was the invention of Ricardo, and was adopted in the Act of 1819 for the Resumption of Cash Payments. But it did not on that occasion come into practical operation. The Gold Standard Act passed in May, 1925, revives this form of gold standard. It suspends both the free coinage of gold and the convertibility of Currency Notes and Bank of England Notes into gold coin. But it obliges the Bank of England to sell gold bullion to all comers at the old coinage price of £3 17s. 10½d. per standard ounce, in amounts of not less than 400 fine ounces at a time. The Bank is already obliged by the Act of 1844 to buy gold at £3 17s. 9d. a standard ounce. The free convertibility of gold into credit and credit into gold is thus secured, and the demand for gold for internal circulation is adequately prevented. So long as people are accustomed to use paper money, the existence of a very large supply of sovereigns in other parts of the British Empire, which would be legal tender in England if imported, does not seriously threaten the continuance of this system.

England has a special position in the monetary affairs of the world. London is the City of

Financial Markets. The free working of a market requires that the total daily turnover shall be sufficiently large in comparison with any individual transaction. It is characteristic of a financial market that individual transactions may be very large, and a great concentration of business is requisite to provide a big enough turnover to absorb these large single transactions. Markets of this type with extensive international affiliations have grown up in London. Conspicuous among them are the discount market and the bullion market.

All financial centres have discount markets of a kind, in that banks discount bills for their customers at competitive rates. But the London discount market is peculiar in that it deals in bills divested of the personal relation of banker and customer. Discounting is a form of lending, and the London market lends in this way to all and sundry. London banks and accepting houses stand ready to enable foreign customers as well as British to create sterling bills drawn on London, which can be sold in the London market. London resources are thereby applied to the short-term financing of a great part of the world's trade.

The discount rate prevailing in the London market, sensitive and nicely adjusted to every change in the circumstances of the market, is a factor in the regulation of credit throughout the world. The Bank of England has the power of absolutely dominating the discount market, and is therefore the natural leader of the world in the

regulation of credit. Great as are the wealth and economic power of the United States, it is nevertheless true that internationally the power of London over credit is greater than that of New York.

The responsibility for carrying out the Genoa plan therefore devolves above all upon the Bank of England. The Genoa plan means that in using its power over world credit the Bank must look beyond the simple reserve proportions which satisfied it in the nineteenth century and take into account ulterior effects on the purchasing power of gold currencies throughout the world.

Besides being the credit centre of the world, London is also the principal bullion market. The moratorium of 1914, the obstacles in the way of gold movements during the war, the prohibition on the export of gold from 1919 to 1925, the depreciation of sterling, all these adverse circumstances have been insufficient to disestablish the London bullion market. The gold standard depends on the working of the gold market, and the gold market is an affair of minute calculations applied to many different centres. The stream of newly mined gold has to be distributed to the industrial and monetary users of gold throughout the world. Superimposed on the distribution of new gold are the movements of gold from one monetary reserve to another. The calculations on which these movements depend are intimately bound up with the quotations of the foreign exchange market. Indeed it is this intimate

relation between gold movements and rates of exchange which is the very essence of the gold standard. Here is the special business of the bullion broker and merchant, and London is the principal field of his activities.

Even when gold goes direct from Durban to Bombay without itself passing through London, the transaction is usually part of the London bullion market. The amount of gold in the United States is six times as great as the amount in England. Nevertheless it is in London and not in New York that the needs of the world for gold can be reviewed as a whole, and gold movements co-ordinated with currency policy.

If the Genoa plan can be brought into effective operation in the future, we can count on enormous benefits resulting. The effects of unstable money in the period which has passed since the war have been sensational. But the advantages of the Genoa plan are not confined to the avoidance of these calamities. Even in the golden age before the war the world was suffering unknowingly but severely from the evils of unstable money. These evils showed themselves in the form of the trade cycle, and included more particularly, first the unemployment epidemics characteristic of each succeeding trade depression, secondly the trade disputes incidental to the adjustment of wages to the varying value of money, thirdly the financial crises so often provoked by the sudden drop in prices after the climax of the trade cycle was passed.

So great and outstanding are the evils to be remedied by monetary stability that its advocates are often accused of recommending their policy as a panacea. That is not so. Even with monetary stability economic changes and dislocations will cause occasional unemployment and trade disputes. Imprudent use of credit will occasionally cause panics. But monetary instability is the predominant cause of all these evils, and its removal would enormously reduce their extent, and mitigate their severity.

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