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PREFACE

THE substance of the present volume was embodied in a series of articles written some four years ago, and the treatment of the subject-matter has been influenced by the form in which these articles appeared. In more recent years a number of important changes have occurred in the structure of monetary and banking systems, and an attempt has been made to incorporate some reference to these changes in the revised text. Again, during the time of the revision of the original text further changes were taking place. In September, as a result of a series of crises in Europe, Great Britain departed from the gold standard, and similar action was taken by a number of other countries. A new concluding chapter has, therefore, been written for the purpose of providing a brief account of more recent developments, but that account must necessarily be incomplete in so far as the future monetary policy of a number of countries is still uncertain.

D. T. JACK.

THE UNIVERSITY,
ST. ANDREWS.
November, 1931.

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CURRENCY AND BANKING

CHAPTER I

THE MEANING AND FUNCTIONS OF MONEY

IN these pages a number of problems will be discussed which have assumed considerable practical importance within recent years. After 1914, all countries experienced very violent changes in prices, and in some cases, as in Germany and Russia after the war, paper money ultimately became quite worthless. This does not mean that price movements of a similar kind did not occur in earlier periods, but as a rule and apart from special causes of disturbance the price movements which occurred were less conspicuous. Thus in the case of the United Kingdom, in the period from about 1830 to 1914, the changes in prices which occurred were so gradual that the ordinary person might perhaps have been excused for supposing—falsely as it happened—that the value of the pound sterling was always the same. But since 1914 it has been a common observation that “the pound is not now worth what it used to be.” There is the idea that the pound “would go further” in 1913 than it “goes” in 1931, and that it “goes further” now than it “went” in 1920. This illustrates one of the problems which will have to be considered in this volume, but a number of preliminary conceptions must first be worked out. What is meant by “money”? What is meant by “the value of money”? Why do

prices rise and fall, and when general price movements occur what social and economic reactions take place in consequence? What are the characteristics of a sound monetary and banking system? To answer these and other questions it will be necessary to examine what is called the "theory of money," and this will lead us to a discussion of the principles of banking. This present chapter, however, will be concerned with a number of elementary ideas bearing on the general subject.

Most writers of economic textbooks are in the habit of training their readers to think of economic processes apart from the monetary medium in and through which they occur. They show in what way industrial development in its essence is the outcome of division of labour and how specialization leads to the emergence of skilled groups of craftsmen, merchants, and of those who render "professional" services. This specialization is a prime condition of greater efficiency and the production of more wealth per head of population. But this complex division of labour has as its counterpart the exchange of goods and services against other goods and services, and in discussing the "theory of value," the textbooks again train their readers to think of exchange value apart from ideas of money and price. Such an approach to the subject is of great importance not merely as a general aid to clear thinking, but also because, as will be seen later, it is possible for the prices of two or more articles to rise or fall together in such a way that their exchange values in terms of each other remain substantially unchanged. Exchange value and price must not, therefore, be confused. On the other hand, only under very primitive conditions is it at all probable that individuals will exchange goods and services directly against other goods and services in the form of barter. And historically it is found that even very

primitive communities do not as a rule altogether follow this method of direct exchange. What happens is rather that goods and services are exchanged for some other article which in turn can be offered in exchange for other goods and services. This other article is something which is "generally acceptable" for the purpose. It passes from hand to hand in ordinary transactions of sale and purchase. It circulates. It is something which is not necessarily desired in itself, but which is employed for the purpose of overcoming the obvious difficulties which would arise under a purely barter economy. Hence it is called a *medium of exchange*, and in its widest sense the term "money" may be taken to include all those instruments which perform this function.¹

This introduction to the subject is frequently treated historically. It is known that different articles have been used by different peoples at different stages of their history to serve in this way. Some pastoral communities used to employ cattle. Cubes of rock salt were used in Abyssinia, and tea and tobacco were employed in Russia and Virginia. These articles all have the same characteristic that where they were used as money they were "generally acceptable." But later, the articles which were used for the purpose came to be narrowed down to a group of metals, such as tin, platinum, silver and gold—and to the last two of these metals in particular. These metals were durable, and

¹ Cf. Marshall, *Money, Credit, and Commerce*, pp. 12–13. "The terms 'money' and 'currency' are used sometimes narrowly, sometimes broadly . . . there are some inquiries in which it may with advantage be used narrowly, and others in which a broad use of it is appropriate. There is, however, a general, though not universal, agreement that, when nothing is implied to the contrary, 'money' is to be taken to be convertible with 'currency,' and therefore to consist of all those things which are (at any time and place) generally 'current,' without doubt or special inquiry, as means of purchasing commodities and services, and of defraying commercial obligations."

they were used for other purposes apart from the purely monetary. In this connection, gold was recognized as having special attractions.] It was easily recognizable. [It was one of the "precious" metals and small quantities of it were of high value.] Thus it came to possess the additional qualification for its use [as a monetary medium, that a considerable value in gold was easily portable, certainly much more so than silver, which was more plentiful and less valuable, [weight for weight.]] The use of paper money in the form of notes issued by a government or a bank will be considered in detail in a later chapter. It will be found that subject to certain conditions a note issue yields important advantages, but that it is open to grave abuse. It is clear that paper money can be easily manufactured, and if the issue is excessive it may happen that the notes which are issued are no longer acceptable as means of payment. This point will be clearer when the other functions of money are discussed.

Money is not used merely to facilitate exchange transactions. It plays a part in the ordinary system of accounting. [The values of different articles are not usually expressed in terms of one another but in terms of the unit of money, and in the form of price.] People do not ordinarily speak of one ton of coal as being worth four quarters of wheat, or a barrel of oil or three loads of wood. Rather do they speak of these quantities of coal, wheat, oil, and wood as being worth so much money. That, however, only expresses the point loosely. The important point is that what is required is a convenient standard for the measurement of economic or exchange values in the same manner in which other standards for the measurement of weights and lengths are employed. [It is in this sense that money may be regarded as the "measuring rod" of value, and having

fixed on the standard of value it becomes possible to express the values of other articles in terms of this selected standard. This practice gives rise to the phenomena of prices—the price of an article being its exchange value as measured by and expressed in terms of the selected standard of value.)

'The second function of money is thus to serve as a *standard of value*.' But there is a difference between certain media of exchange and the monetary standard. Bank-notes in this country are employed in ordinary transactions, but they do not constitute the standard of value. Similarly, where banking facilities are developed, money payments are frequently made by means of cheques drawn against bank deposits. Nevertheless, these notes and cheques are expressed in terms of the monetary standard, and it is this standard which is of primary importance.

A third consideration is also of practical importance. The fact that transactions are often spread over time, and involve contracts and deferred payments, makes it important that the standard of value should be stable over a period of time. (One of the advantages commonly claimed for gold as a standard of value was on account of the high degree of stability of value which it seemed to possess,) but even in pre-war years it did not provide a perfectly stable standard. The analogy may be drawn between an unstable standard of value and an elastic yard-stick. It is not difficult to see what confusion would arise if the standard of length or of weight in a country were unstable, and similar confusion arises when the standard of value is unstable. The gold standard in the form in which it has always been adopted has contained this kind of defect, and different proposals have been made with the object of giving to it a greater measure of stability. Later it will be

necessary to consider how great this instability in the value of gold has been ; for the present it will be sufficient to recognize the fact itself.

Theoretically, in selecting a standard of value there is an infinite choice. J. S. Mill, quoting Montesquieu, tells of some African tribes which had a standard of value which did not represent any real thing. It was called a "macute" and represented merely a conventional unit of account, and the practice was to speak of the value of an article as being so many macutes. Most communities, however, have preferred to employ concrete standards. In this country, the "pound" which is the standard of value and unit of account was originally a pound weight of silver, but in the course of centuries this weight was reduced, and in 1816 the gold standard was formally adopted, the standard of value becoming a fixed weight of gold. By law, the standard of value is the gold sovereign represented by a gold coin containing 123·2744 grains of standard gold, with a standard of fineness of eleven-twelfths ; i.e. eleven parts of pure gold to one part of alloy. Thus there are 113 grains of pure gold in the sovereign. But it is not necessary that there should be gold sovereigns in actual circulation. It is a matter of indifference whether the gold standard in this country be described as a gold coin of specific pure gold content or merely as a certain weight of gold, coined or uncoined. Before the war, gold sovereigns were in ordinary circulation, but after 1914 these were withdrawn and they have not reappeared. In fact, when this country returned to the gold standard in May, 1925, the Act of that date was partly designed to prevent gold coins from returning to circulation as formerly. It is no longer possible to take a five pound Bank of England note to the Bank and exchange it for five gold sovereigns. But it is possible

to obtain uncoined gold from the Bank of England in minimum quantities of 400 oz. troy, and to do so at a price per ounce which corresponds to 113 grains of pure gold to the pound sterling.

It is important, however, that while the standard of value may not itself circulate, other forms of money which do circulate should effectively represent the standard. In other words payments may be made with paper notes, but under an effective gold standard it should be possible to purchase with a pound note exactly what could be purchased with a gold sovereign. If the pound note would buy less than could be bought with a gold sovereign, the value of the note would be depreciated in terms of gold.'

The importance of monetary stability has been indicated in a general way, but its fuller implications involve a discussion of the phrase "the value of money." Economic or exchange value is not an intrinsic property of commodities. 'It expresses simply a quantitative relationship, and signifies as between two articles the quantity of the second which is exchanged for a given quantity of the first. When one of these articles is money, the relationship which is expressed is one of price.) In the case of two commodities, such as coal and wood, if it is found that one ton of coal exchanges for four loads of wood, it can be said that the value of a ton of coal in terms of wood is four loads.' But if coal becomes relatively scarce, or wood becomes relatively more plentiful, the value of coal in terms of wood will rise and a greater number of loads of wood than before will have to be offered for the same quantity of coal. The same point may be expressed by saying that the value of wood in terms of coal has fallen. { More generally, if the value of one article in terms of a second rises, the value of the second in terms of the first falls. } Money

units may now be substituted for wood in the example just taken. In this case, if the value of coal in terms of money rises—i.e. its price rises—the value of a unit of money in terms of coal has fallen.

The important point is that the value of money cannot be expressed in terms of itself. It can only be expressed in terms of its power of purchase over other things. It might happen, however, that while the prices of coal and wood had risen the prices of wheat and cotton had fallen. Thus while the value of money had fallen in terms of coal and wood, it had risen in terms of wheat and cotton. But under other conditions it might happen that the prices of all commodities moved in the same direction. In such a case a general change would have taken place in the value of money, and that is what is meant when people speak generally of money as “not going so far” or as “going further” at one date as compared with another. It is an instance of the proverb: “Money is that money does.” In economic language, the value of the pound (or the dollar, or the franc, or the mark) rises when it will buy a greater quantity of goods and services than before, and falls when it will only buy a smaller quantity of these things than before. And since it will buy more or less of these goods and services if their prices are low or high, any reference to the value of money in general is at the same time a reference to the “general level of prices.” But there is this difference—that the one is the inverse of the other. The value of money is high when the general level of prices is low, and low when the general level of prices is high.) ✓

“High” and “low” are, of course, relative terms, and for purposes of measurement some standard for comparison must be selected. There is probably less difficulty now than formerly in understanding the means

employed for measuring general price changes. The use of "index numbers" has now become less academic, and though there are practical difficulties to be overcome in constructing satisfactory index numbers, the general principles may be indicated. The prices of a number of articles are recorded at the same date, which is known as the "base" date, and each price is indicated by the number 100. At other dates the corresponding prices of the same articles are recorded, and these prices are expressed in the form of other numbers which show the proportionate change in price which has occurred as compared with the corresponding price at the base year or month. The following example based upon fictitious figures may illustrate the procedure—

	T ₁		T ₂	
	Price	Index	Price	Index
Coal (ton)	s. 20	100	s. 25	125
Wheat (bushel)	5	100	6	120
Wood (load)	10	100	12	120
Oil (gallon)	3	100	4	133
<i>Average</i>		100		124½

Thus it might be said that in respect of this group of four articles, between the two dates there had been a general rise in prices of 24½ per cent.

In constructing a series of index numbers to show movements of this kind, a number of practical considerations must be observed. The prices to be compared must be the prices of the same articles. For example, there are different grades of coal; but it would not be valid to compare the price of "Best Derby Brights" at one date with the price of "steam coal" at

another date. Then again a satisfactory index number requires that account be taken of a large number of commodity prices, otherwise the index may give undue weight to influences which had affected particular articles as distinct from influences which have affected the prices of all articles. Thus the index number of wholesale prices published monthly by *The Statist* is a continuation of an earlier index first devised by Mr. A. Sauerbeck, and includes 45 commodities. Other index numbers constructed along similar lines are published by *The Economist*, *The Board of Trade*, and *The Times*. These index numbers all refer to wholesale prices, and the articles included in them are for the most part staple food-stuffs and raw materials for which there are international markets. But mention must also be made of the *Cost of Living* index which is published monthly by *The Ministry of Labour*. This index is designed to measure changes in the cost of maintaining a certain standard of life, and is based upon an examination of the average distribution of expenditure in 1,944 urban working class family budgets collected by *The Board of Trade* in 1904. The items included in the construction of this index fall under five heads: (1) Food-stuffs—beef, mutton, bacon, fish, flour, bread, potatoes, tea, milk, butter, margarine, cheese, and eggs. Information is obtained of the retail prices of these articles from as many as 630 towns and villages in different parts of the country; (2) rent—information obtained under this head relates to unfurnished dwelling-houses of the type usually occupied by working-class families, account being taken of local rates; (3), (4) and (5), the remaining groups, relate respectively to retail prices of clothing, fuel and light, and miscellaneous items.¹

¹ This last includes soap, soda, domestic ironmongery, brushware, and pottery, tobacco, fares, and newspapers.

The general index of the cost of living is not, however, a simple average of the indices for each item or group of items. Account has to be taken of the importance of each article and group of articles in the general family budget. Accordingly the method of constructing a *weighted average* is adopted. The *weights* adopted for the five groups are as follows: Food, $7\frac{1}{2}$; rent and rates, 2; clothing, $1\frac{1}{2}$; fuel and light, 1; miscellaneous items, $\frac{1}{2}$; total $12\frac{1}{2}$. The general index, therefore, is based on the assumption that of the total family expenditure 60 per cent is in respect of food-stuffs, 16 per cent in respect of rent and rates, 12 per cent in respect of clothing, 8 per cent in respect of fuel and light, and 4 per cent in respect of miscellaneous items.

Many of the criticisms which are levied against this particular index are based upon misconceptions. Necessarily, any index must attempt to measure price changes in respect of a standard collection of commodities. But any particular family may not consume the different articles in exactly the assumed proportions. Thus even within the same social grade, the proportion of income spent in rent varies widely. Among working-class families, the proportion will be much greater than 16 per cent when the family income is very low, and much less than 16 per cent when the family income is relatively high. Again, the proportions of family expenditure represented by each group will be influenced by the composition of the family. There are also likely to be seasonal changes in expenditure of which the index takes no account. Thus more eggs and milk may be consumed in summer when the prices of these articles are relatively low than in winter when their prices are seasonably higher. But subject to these limitations, the cost of living index appears to provide a valuable clue to retail price changes as

distinct from wholesale price changes affecting food-stuffs and the raw materials of industry.¹

Different index numbers are constructed for different purposes. In addition to those which have been mentioned there are index numbers of *import* prices and of *export* prices. And it will be found that important problems may arise from one-sided price movements. All the index numbers of prices which are in use are specialized in that they relate to particular groups of commodities, and it may happen that for special reasons a rise or fall in the prices of one group may be greater or less than the rise or fall in another group over the same period of time. The following table illustrates this point in respect of different countries—

	1930 (Average)
<i>U.K.</i> —	
Wholesale prices (Board of Trade) (1913 = 100)	119
Cost of living (Ministry of Labour) (July, 1914 = 100)	158
Import prices (Board of Trade) (1913 = 100).	118
Export prices (Board of Trade) (1913 = 100).	152
<i>U.S.A.</i> —	
Wholesale prices (Bureau of Labour) (1913 = 100).	124
Cost of living (July, 1914 = 100)	152
<i>Germany</i> —	
Wholesale (Official) (1913 = 100)	125
Cost of living (July, 1914 = 100)	149

It will be noticed that in all three countries an appreciable difference exists between the rise in wholesale prices and the rise in the cost of living. Frequently this disparity is the subject of popular comment, and the suggestion is made that the cost of living is kept up

¹ In July, 1931, the cost of living index showed an increase of 45 per cent above July, 1914; for each group the percentage increase was as follows: Food, 30; rent, 49; clothing, 95; fuel and light, 70; miscellaneous items, 75 per cent. It is clear that for a family which spent less than 60 per cent of its income on food-stuffs, the increase in the cost of living would be rather greater than the 45 per cent recorded by the *Ministry of Labour*. But the difference would not necessarily be great.

in some artificial manner by such things as profiteering. The previous discussion may throw some light on the limited significance of the disparity. The cost of living index does not measure the retail prices of the same articles which enter into the wholesale price indices. Many of the articles included in the latter are industrial raw materials which do not directly affect the articles included in the former. And even those articles of food-stuffs which do enter the wholesale price indices are recorded in their raw material form before they are prepared for final consumption, while in the preparation of them for final consumption certain additional costs have to be incurred, e.g. in respect of transport, labour, etc., and these additional costs will influence their final retail prices. Thus it is clear that a simple comparison of wholesale and cost of living index numbers may easily be the occasion for false and hasty conclusions.¹

The fact that different index numbers are in use, and that these may show different price changes over a given period of time presents a difficulty in relation to the application of the general theory of money. When it is said that changes in the value of money are to be measured by index numbers of prices, and different index numbers give different results, can any particular index number be said to be valid for this purpose? Hitherto, common practice has mainly employed wholesale price indices for the reason that others were not available. But, since these index numbers relate for the most part to raw materials with a world market, they are open to criticism as measures of

¹ It is interesting to notice that if the wholesale and retail prices of the *same articles* are compared, there is a much closer correspondence, especially after a certain interval of on the average three months, than is suggested by the simple comparison of wholesale and cost of living index numbers.

changes in the value of money *within* particular countries. Such commodities will be subject to influences operating in the world market which may not be representative of conditions in the local markets of the different countries. This criticism has been much in evidence since the war, when monetary systems displayed very considerable degrees of instability. Hence the later tendency was to employ cost of living index numbers rather than the usual wholesale index numbers for the purpose of estimating the value or purchasing power in each country of its own currency. In many respects the cost of living index number is superior for this particular purpose, but its practical superiority is due in some measure to the lack of a better index. For the purpose of measuring changes in the *general* value of money in any country what is desired is what may be called an index of *general prices*. An index of the general purchasing power of money, argues Mr. J. M. Keynes, "should include, directly or indirectly, once and once only, all the items which enter into final consumption (as distinct from an intermediate productive process), weighted in proportion to the amount of their money-income which the consuming public devote to them."¹ Such an index would relate to what Mr. Keynes calls a *consumption standard*. The cost of living index numbers, while superior to the wholesale index numbers, are open to criticism under two main heads: (1) They relate directly to one section of the community; and (2) they take insufficient account of the prices of services as distinct from commodities.

On the basis of these defects in the existing index numbers of prices it would seem to be desirable that a new index number should be constructed so as to make possible a more accurate measure of changes in the

¹ Keynes, *A Treatise on Money*, Vol. I, p. 57.

general value or purchasing power of money. So far no official attempt has been made to construct an index number of that type, but an American statistician—Mr. Carl Snyder—has endeavoured to construct an index of general prices by combining four special index numbers with certain weights. The four index numbers taken for the United Kingdom are: (1) the *Board of Trade's* wholesale price index; (2) the *Ministry of Labour's* cost of living index; (3) Prof. Bowley's index of wages, and (4) the index of rent, as included in the *Ministry of Labour's* cost of living index, and it is suggested that these four should be combined with the respective weights of 2, $3\frac{1}{2}$, $3\frac{1}{2}$ and $\frac{1}{2}$. Mr. Keynes¹ has compared the *consumption index* calculated in this way with the *Board of Trade's* index of wholesale prices for the period since 1919, and the results of that comparison are shown in the following table. A similar comparison of the calculated *consumption index* with the *Ministry of Labour's* cost of living index is also given—

	Con- sumption Index	Wholesale Price Index	Cost of Living Index	Ratio of (1) to (2)	Ratio of (1) to (3)
	(1)	(2)	(3)	(4)	(5)
1913 .	100	100	100	% 100	% 100
1919 .	215	258	215	83	100
1920 .	257	308	249	83	103
1921 .	223	198	226	113	99
1922 .	181	159	183	114	99
1923 .	170	159	174	107	98
1924 .	172	165	175	104	99
1925 .	172	159	175	108	99
1926 .	169	148	172	114	98
1927 .	166	142	166	117	100
1928 .	164	140	165	117	99
1929 .	162	126	164	128	99
1930 .	145	119	158	122	92

¹ *Ibid.*, p. 62.

Mr. Keynes concludes that "the wholesale index, whilst it exaggerated the fall and rise in the purchasing power of money in the post-war boom and slump, tends over the whole period since 1913 progressively to underestimate its fall."¹ (Cf. column (4) of the Table.) On the other hand, the calculated consumption index over the period agrees very closely with the cost of living index. (Cf. column (5) of the Table.) For practical purposes, therefore, and in the absence of an officially constructed index number of changes in the general purchasing power of money, it would seem to be more satisfactory to employ the cost of living index.

¹ I.e. exaggerated the *rise* and *fall* in the general level of prices during the post-war boom and slump, and progressively underestimated the *rise* in general prices throughout the period.

CHAPTER II

THE QUANTITY THEORY OF MONEY

THE general theory of value is applicable to the case of money as to other commodities, and it is necessary to consider the value of money as being governed by conditions of demand and supply. Later it will be necessary to examine the component parts of a developed monetary and banking system, but in order to simplify the present discussion it may be supposed that the only money in circulation consists of uniform tokens in metal or paper. It may also be assumed that the article which is used as money is employed solely for the purpose of facilitating exchange transactions, and that the demand for it is only for monetary purposes. †

Under these conditions the total demand for currency will depend upon the numbers of the population and upon their habits. One way of looking at the matter is to examine what considerations will determine the amount of money which a person will find it convenient to hold on the average, or carry with him. A person whose wealth increases will tend to carry with him a greater number of money tokens, and to that extent his demand for currency will increase. But, as a result of the general development of banking facilities, it may be possible for that person to hold on the average a smaller amount of money units than before, in which case his demand for currency will have been reduced; and these banking facilities will be said to have effected economies in the use of money. But changes in social organization may also be responsible for changes in the demand for currency. Dr. Cannan has pointed out that with the breaking-up of families during the war—with the

drafting of men into military and naval service, and the drafting of women into munition works—the aggregate demand for currency increased “because the number of families, when separated, found it convenient to keep much more currency by them in the aggregate than when they were living at home and together.”¹ Similarly, a person who is paid a salary quarterly would, other things being equal, tend to hold on the average a larger amount of currency than a person who had the same annual income, but who received that income in weekly instalments. In the same way, the aggregate demand for currency will tend to grow as population expands, though the effect of this may be partially offset by the development of new economies in the use of currency through the credit system as a whole. On the other hand, a great plague—such as that which swept England in the fourteenth century—which destroyed half the population would have the opposite effect of reducing the aggregate demand for currency. Under normal conditions, the habits of a people in the use of currency change slowly. But if confidence in the value of money is shaken, the total demand for it will be reduced. On several occasions this has been an important factor even before the great collapse of certain European currencies after 1918. If prices generally are rising so rapidly that public confidence in the future value of the currency is undermined, people will become unwilling to hold stocks of that currency, since its value will fall during the period in which the stocks are held. Thus a person in Germany in 1922 might have been paid a million marks at the end of the week, but a week later if prices had doubled that million marks would only have half the purchasing power over goods and services which it had when first received. Experience

¹ Cannan, *Money*, p. 75.

under those conditions would teach such a person to purchase goods as quickly as possible, and not to hold any large quantities of depreciating currency units; and if such a "flight from a currency" became general, the total demand for currency would be considerably reduced, thereby causing the value of the currency to fall still lower. On the other hand, if prices were falling rapidly, the demand for money to hold would increase, thereby precipitating a further rise in the value of the currency. In general, therefore, the demand for currency depends upon the extent to which public confidence in its value is satisfied. But given that condition, the total demand will depend upon the size of the population and upon its habits in the use of money.

If the general conditions of demand for money are given, the value or purchasing power of a unit of money will depend upon the supply of money units. If the supply is increased while the demand remains the same, the value or purchasing power of each unit of money will fall; i.e. prices will rise. If the supply is reduced under the same conditions of demand, the value or purchasing power of each unit of money will rise; i.e. prices will fall. Expressed in more general terms, with a given demand for money the value or purchasing power of money will vary inversely with the supply of money; i.e. the general level of prices will vary directly with the supply of money.

So far it has been assumed that the general conditions of demand were given, but it might equally be supposed that the conditions of supply were given. In that case, the value of the unit of money would vary directly with the demand for money. If the demand should increase, the value of money would rise; i.e. prices would fall. If the demand should diminish, the value of money would fall; i.e. prices would rise. This

expresses the *quantity theory of money* in its simplest form. In some respects the name of the theory is misleading, for it suggests that the *quantity* of money alone determines its value. Such an interpretation involves the fallacy which is inherent in those general theories of value which ignore demand and concentrate entirely upon supply. In a general statement of the theory it should be recognized that changes in the value of the unit of money may proceed either from the side of demand or from the side of supply. Moreover, in interpreting the "quantity" of money it is necessary to distinguish between the total amount of money in existence and the effective supply. The latter may be considerably less than the former, especially where there is a tendency for money to be hoarded. Hoarded money is money which is taken out of circulation, and as such it does not form part of the effective supply of money which influences the general level of prices.

It will be convenient to give to the quantity theory a somewhat more definite expression. For this purpose certain simple algebraical formulae have been employed, and these are useful not because they prove the theory, but because they correlate the different influences which operate upon the general level of prices. The problem may be approached in two ways: (1) The first formula is associated with the name of Prof. Irving Fisher.¹ Let M represent the number of money units, and T the "volume of trade," in the sense of the volume of goods and services to be exchanged for money. Over a period of time, however, each unit of money will serve to carry through several transactions, so that the total of money payments is equal to the number of money units multiplied by the average number of payments made by each unit of money. This average number of

¹ Cf. Fisher, *Purchasing Power of Money*.

payments is known as the "velocity of circulation," and may be represented by V . The total of money payments is therefore MV , and the quantity theory can be expressed in the form—

$$MV = PT, \text{ or } P = \frac{MV}{T},$$

where P is the general level of prices. In short, the total of money payments must equal the number of exchange transactions multiplied by the price at which each is effected. For some purposes it is convenient to extend the formula. The quantity of means of payment may be separated into two parts—that represented by coin and notes, and that represented by bank deposits which can be operated on by cheques. Representing these two parts by M and M^1 respectively, and their respective velocities of circulation by V and V^1 , the formula may be written—

$$MV + M^1V^1 = PT, \text{ or } P = \frac{MV + M^1V^1}{T}$$

This quantity theory has been criticized on the ground that it expresses what is merely a truism. It has been described as "a serviceable but dowdy platitude." Even so, it is important as expressing simply and clearly the relationship between the various relevant factors. It is to be observed that in terms of the above formula, the level of prices will only vary proportionately with the quantity of money if the other factors remain the same. It is no disproof of the theory to show that over a given period of time prices have risen (or fallen) more rapidly than the quantity of money has increased (or diminished). If the velocity of circulation increases at the same time that the quantity of money increases (as may happen during a period of extreme currency inflation), the rise in the price level may be

more than in proportion to the increase in the quantity of money.]

In interpreting the "quantity" of money for the purpose of the theory, the distinction has already been drawn between the total quantity and the effective supply. A similar point arises with regard to the interpretation of bank deposits. The distinction there may be drawn between what the Americans call "demand deposits" and "time deposits," or what in this country correspond with "current accounts" and "deposit accounts." Strictly speaking, only the first of these can be operated upon by cheques. "Time" deposits represent a form of short-term investment on which interest is paid, and frequently notice has to be given to the bank before such deposits can be withdrawn. For the purposes of the quantity theory it is only desirable to take account of that part of total bank deposits which represents demand deposits. In the United States, banking statistics have normally made this distinction, but in this country no such distinction has been made until recently. The proportionate division of total deposits between the two categories, moreover, may vary over a period of time. Since the war the proportion of current accounts to total deposits has fallen in England but has risen somewhat in Scotland¹—

	1919	1930
Ten London Clearing Banks—		
Total Deposits	£1,511 m.	£1,741 m.
Current Accounts.	1,016 „	921 „
Proportion of Current Accounts to total .	67·2%	52·9%
Six Scottish Banks—		
Total Deposits	88 m.	175 m.
Current Accounts.	29 „	65 „
Proportion of Current Accounts to total .	32·9%	37·1%

¹ Cf. *Report of Committee on Finance and Industry*, 1931, Cmd. 3897, Appendix I.

It will be noticed that in the case of the ten London clearing banks while total deposits increased over the period, the total of current accounts diminished. It may, therefore, be very misleading for the purpose of the quantity theory to refer to aggregates of bank deposits without analysing their character./

(2) The second formula, which represents a different approach to the problem, is associated with the writings of the Cambridge school of economists. The ordinary public will tend to keep a certain definite proportion of their real resources in the form of money or ready purchasing power. The proportion which is so kept will depend upon what is regarded as necessary for convenience.¹ It is not that the public want to hold a certain number of money units, but rather a quantity which "is determined by the amount of *purchasing power* which it suits them to hold or to carry about, and by nothing else. 'The amount of this purchasing power depends partly on their wealth, partly on their habits.'² Suppose the total real resources of the community are expressed in terms of wheat, and that the total real resources so expressed are represented by R . Suppose also that the community decide to keep a ready command in the form of money over a proportion k of their resources. If then there are M units of money, the value of each unit of money in terms of wheat will be $\frac{kR}{M}$. This formula² indicates that provided k and R remain constant, the value of money will vary inversely with M . But if k and R change while M changes the effect on the value of the unit of money will not, of course, be proportionate to the change in M . }

¹ Keynes, *Monetary Reform*, p. 76.

² Cf. Pigou, *Essays in Applied Economics*, p. 176.

The two formulae which have been cited express the same ideas but in different forms. In the Fisher formula, P represents the general level of prices. In the second formula, $\frac{kR}{M}$ was equal to the value of the unit

of money, and it has been shown that the value of the unit of money is the inverse of the general level of prices. Hence, comparing the two formulae—

$$\frac{kR}{M} = \frac{T}{MV}, \text{ or } kV = \frac{T}{R}$$

And since $\frac{T}{R}$ will be constant under given conditions,

kV will also be constant. In other words, if k increases—i.e. the proportion of the community's real resources over which it chooses to keep a ready command in the form of money— V , the velocity of circulation, will decline in proportion. For most purposes, however, it is a matter of indifference which of the two formulae is employed.

The value of money or the general level of prices is, therefore, the resultant of several forces. Theoretically it is not valid to place special emphasis on one of the factors to the neglect of the others. It is necessary to draw attention to this point because the theory has frequently been criticized on the ground that price movements do not occur exactly in proportion to changes in the quantity of money. Properly stated, however, the theory is not exposed to this criticism.

CHAPTER III

EFFECTS OF CHANGES IN GENERAL LEVEL OF PRICES

DURING the late war and in the years which followed, the general level of prices rose in all countries. In some countries which experienced large-scale inflation, prices rose to quite unprecedented heights. More recently, the trend of prices throughout the world has been downwards. It is to be observed that changes in general prices are not to be associated merely with periods of currency disorganization, though during such periods the magnitude of the price movements is likely to be much larger. Even under so-called normal conditions, similar movements have occurred, and though they may occur on a smaller scale their consequences may nevertheless be important.

In the case of the United Kingdom, four distinct price movements may be distinguished in the period from the end of the Napoleonic Wars to the beginning of the late war.¹ Throughout that period, the currency system of the country was based upon the gold standard. These changes, however, were gradual and were spread over fairly long periods of time so that they tended to pass unnoticed except by academic investigators. Between the first half of the 'twenties of last century and the second half of the 'forties, prices fell by 25 per cent from an index of 154 to 116. From the latter period up to the first half of the 'seventies the index rose by 20 per cent to an average of 138. The third period,

¹ Cf. Layton, *Introduction to the Study of Prices*, p. 23 ff.

which extended to 1894-98, witnessed a more rapid downward movement, and prices fell by 40 per cent to an average index of 82. The fourth period extended to 1909-13, when the average index was 108, or an increase of 32 per cent. By way of comparison with these gradual pre-war movements, each of which was extended over a period of approximately a quarter of a century, the Sauerbeck index number increased by 195 per cent between 1913 and 1920, fell by 50 per cent between 1920 and 1926, and fell by a further 24 per cent between 1926 and 1930.¹ These changes express changes in wholesale prices, and as measurements of the changes which occurred in the value of money over the period, are subject to the qualifications referred to in Chapter I. At this stage, however, it is not necessary to place stress upon the precise magnitude of the changes which occurred.

In examining the effects of general price movements it is necessary to consider the rapidity or otherwise of the response of money incomes. An important distinction must be drawn, for example, between *money* wages and *real* wages, the latter representing the goods and services which can be purchased with the nominal or money wages.² For the purpose of measuring changes in real wages resulting from price movements it is desirable to employ a cost of living index or, in the absence of such an index, to employ an index of retail prices as distinct from wholesale prices.³ Index numbers of nominal wages and of retail prices have been constructed, and these enable general comparisons to be

¹ On the basis of yearly averages.

² Real wages must also take account of any payments in kind and incidental advantages connected with an occupation, but these may be set aside for the purpose of the present discussion.

³ The Cost of Living index of the *Ministry of Labour* does not go back beyond July, 1914.

drawn.¹ The following table summarizes the changes in the sixty years ending in 1910—

Average	(1850 = 100)		
	Average Money Wages	Average Retail Prices	Real Wages of Those in Work
1850-54 .	105	104	101
1870-74 .	145	117	124
1890-94 .	162	90	180
1900-04 .	176	91	193
1906-10 .	180	96	187

The table indicates that money wages continued to increase throughout the period, but retail prices, after an initial upward movement, fell between the early 'seventies and the early 'nineties, and then moved slowly upwards during the first decade of the present century. Real wages increased throughout the entire period from 1850 to the end of the century, but were subject to a slight decline from 1907. Moreover, the rapid rise in real wages during the second phase was in large measure due to falling prices, while the check to the upward course of real wages during the first decade of the present century was the result of an upward movement of retail prices, which proceeded rather more rapidly than the increase in nominal wages.

For the post-war period the position may be summarized in the next table, which shows the *Ministry of Labour's* estimated average percentage increase in weekly full-time rates of wages generally compared with July, 1914, together with the changes in the cost of living since the same date².

¹ Cf. Layton, *op. cit.*, Appendix F, Table I.

² Data taken from the *Twentieth Abstract of Labour Statistics*, 1931, Cmd. 3831.

	Money Wages	Cost of Living	Real Wages
July, 1914 . .	100	100	100
Dec., 1918 . .	195-200	220	89-91
Dec., 1920 . .	270-280	269	100-104
Dec., 1923 . .	165-170	177	93-96
Dec., 1925 . .	175	177	100
Dec., 1930 . .	170-174	155	110-113

It will be seen that up to the end of 1918 money wages did not rise as much as the cost of living, though during the post-war boom ending in 1920 they increased more rapidly than did the cost of living, and real wages on the average recovered to the pre-war level. During the collapse of the post-war boom money wages fell more rapidly than the cost of living and real wages witnessed a certain decline. During the period of falling prices since the end of 1925, however, real wages for those in employment rose appreciably owing to the more rapid fall in the cost of living.

The position as regards the effect of general price changes on the wage-earner may be summarized in general terms. During such periods of changing prices, money wages tend to move in the same direction, but there may be a time-lag between the two movements—price changes preceding changes in money wages. Consequently there is a tendency for the real wages of those in employment to fall when prices are rising and to rise when prices are falling.

Moreover, during periods of rapid price changes the number and magnitude of industrial disputes will tend to increase, thereby generating social friction and discontent. When prices are falling the same nominal wages will mean, in the absence of a proportionate increase in labour efficiency, higher *real* labour costs

of production, and under competitive conditions, employers will press for reductions in money wages. Such reductions, if proportionate to the fall in prices, would leave real wages unchanged, but the reductions are likely to be resisted. Similarly, during periods of rising prices, demands will be made for wage increases not on the grounds of the enhanced efficiency of labour, but on the grounds of the diminished value of money. Disputes and stoppages of work which result in this way are necessarily wasteful.

More generally, the more flexible a money income is, and the more quickly it can respond to changes in general prices, the less will it be affected in real values by general price movements. When money payments are fixed for long periods of time the effects on the recipients are most pronounced. This will be apparent in the case of money payments made in connection with long-dated debts, whether public debts incurred by governments or private debts in the form of mortgages, debentures, etc. If prices rise after such an indebtedness has been contracted the *real* burden of the debts to the debtor is reduced, and increased if prices fall. The same money interest payments mean smaller *real* payments when prices are rising and greater *real* payments when prices are falling. This is what is meant when it is said that during rising prices debtors gain at the expense of creditors, while during falling prices creditors gain at the expense of debtors. In extreme cases of currency inflation, such as occurred in Germany after the war, long-dated debts, of which public debts are perhaps the most important, are virtually extinguished. The following concrete example may illustrate the point. In June, 1923, the Berlin Civil Court was called upon to decide the issue in respect of a loan of 50,000 marks (say £2,500) which had been made in 1907, repayable

in 1917, but renewed to 1922. In 1922, the monthly average of the *Frankfurter Zeitung's* index number of wholesale prices was 205,417 as compared with 100 in 1914, so that, even assuming that prices had not changed between 1907 and 1914, the 50,000 marks originally loaned, if repaid in 1922, would only have been worth about 24 marks (say 24s.) in terms of 1914 prices. It was natural, therefore, that the creditor should demand a large sum in compensation for the loss incurred through the depreciation of the mark.

In the case of the British national debt, the bulk of the debt was contracted at different dates during the war, and repayments of this debt at the end of the war would have meant real payments to the subscribers to war loans of smaller amounts than these persons subscribed when the loans were raised. Since then the position has been changed, and with the later fall in prices repayments of this debt will involve larger real payments than were made when the debt was contracted, unless, of course, prices should rise from their present levels to a level nearer to that at which the debt as a whole was contracted.

With regard to the effect of price movements on production, the tendency is for rising prices to stimulate business activity and for falling prices to impose a check on this activity. It is always easier to sell goods on a "rising" market. Producers will find that stocks appreciate in monetary values, and demand is stimulated by the eagerness of purchasers to buy before prices rise further. Many of the producers' costs will have been incurred when prices were lower with the result that unexpected money profits will be secured. On the other hand, when prices are falling, producers will experience unexpected losses. The effect of price changes, therefore, is to introduce a special and extraneous element

into business risks, minimizing them when prices are on the up-grade, and intensifying them when prices are on the down-grade. This problem of the "time-lag" has an important reference to agriculture, where the bulk of the working costs have to be incurred several months before the products are sold. A farmer's costs begin to be incurred at the autumn sowing, and end with the harvest in the following year, but the crop may not be sold till Christmas, in which case the expenditure in respect of the crop would commence fifteen months before sale. If prices throughout that period are rising, a special gain is likely to be incurred on account of the long time-lag between expenditure and receipts; while if prices are falling a special loss is likely to be incurred for the same reason. It is to be noticed that in agriculture it is less easy to adjust the rate of output quickly to changes in market conditions.

CHAPTER IV

PROBLEMS OF COINAGE

It is not easy in these days to appreciate the difficulties which were formerly experienced through defective coinage systems, or even to understand that a coinage such as we know it to-day is of comparatively recent development. It has already been shown that various articles were employed as standards of value, and that these were gradually reduced in number to certain of the metals, and in particular to the precious metals. The significance of a metallic standard is simply that a given weight of the metal is made to constitute the standard, and it is worth noticing that it is the weight that is fixed rather than the value. Thus, prices become the values of goods and services in relation to the *value* of a given weight of the selected metal.

In its origin, metallic money passed by weight. The earliest use of gold money in India, for example, is said to have taken the form of gold dust, made up in bags and passing by weight. It was in Lydia, about the seventh century B.C., that coins were first put into circulation, and in time the practice of coining spread over the whole of Greece. A system of coinage means that metallic money passes "by tale" rather than by weight, i.e. the authority which issues the coins will issue pieces of money, stamped for recognition purposes, and carrying some guarantee as to the weight and quality of the metal. This implies that technical methods of minting have been developed, and also that there are recognized systems of weights and measures. In this respect the earliest coins were defective, and

these defects were not eliminated until comparatively modern times. In Lydia, for example, there were two systems of weights in use, the Babylonian and the Phoenician, and two sets of coins on these different standards were issued. These coins, moreover, were made of a combination of silver and gold, known as electrum, and the proportions of the two metals varied very considerably.

The manner in which the invention of coinage occurred was probably a development of the ancient practice of affixing seals to objects for the purpose of signifying ownership or possession. These seals were also imposed to ratify agreements, and in this form they still survive. But underlying all these uses of the seal there is the idea of authority without which such an impress would be of no significance. "When a ruler first undertook to certify the weights of pieces of metals, he naturally employed his seal to make the fact known, just as, at Goldsmiths' Hall, a small punch is used to certify the fineness of plate."¹ A further condition of a satisfactory coinage was thus the existence of a strong central government. For many centuries, therefore, there were multitudinous issues of coins by different authorities, each supreme within its own district, and the coins issued lacked uniformity both in respect of weight and quality. The so-called Dark Ages, for example, with their relapse into semi-barbarism and the break-up of stable forms of government, witnessed a decline and in some cases a complete disappearance of monetary standards. The chief difficulty in that connection was not merely the collapse of authority and confidence, but also the disappearance of effective standards of weight. No proper system existed whereby the weights of different coins could be measured, and

¹ Jevons, *Money*, p. 56.

there were no longer any legal codes to enforce whatever standards might have survived. The result was a certain relapse to conditions of barter. Coinage traditions, however, survived among the Arabs, whose influence latterly spread far west into Europe, and it was Charlemagne, in the ninth century A.D., who succeeded in confirming and enforcing the existing coinage systems. New methods of minting were introduced, and for the first time the issue of coins was made a royal prerogative and no longer the private privilege of bishops and barons.

When a coinage system has been established, contracts which involve payment will be expressed in terms of coin rather than in terms of weight of metal. But so long as there existed different types of coinage based on different systems of weight, contracts would have to make a further specification of the particular coin in terms of which payment was to be made. As late as 1762 we find that Frederick the Great was obliged to make the following declaration: "It is a general principle of law, based upon its essential justice, that every debtor must repay the debt in the same type of currency in which he received it." Further difficulties arose with "the debasement" of the currency. This was not always a deliberate act of fraud. It must be remembered that minting methods remained crude. Of a number of new coins issued by the Mint, some would be heavier and thicker than others, although nominally they were all alike. This, however, provided an opportunity for clippers and filers to select the good-weight coins, reduce their weight, and sell the clippings which they obtained. Extensive clipping could easily be undetected if the coins issued from the Mint were badly struck. The debasement of the coinage, however, was frequently practised either by reducing the weight of

the coin or by increasing the mixture of alloy. In England the pound weight of standard silver was originally coined into twenty shillings. In the reign of Edward III it was coined into twenty-five shillings; in 1464 into thirty-seven shillings and sixpence. In 1543, under Henry VIII, the standard of fineness of the silver coins was reduced from $\frac{37}{40}$, at which it had remained for centuries, to $\frac{5}{8}$ and later to $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$. In 1547 the pound weight of silver was coined into £7 4s. It was one of the tasks of Elizabeth to complete an important currency reform, and the original standard of fineness of $\frac{37}{40}$ was restored.

The later sources of confusion were somewhat involved: (a) In those countries where there was no single uniform coinage, but several coinages with different standards, there was no legal connection between the different types of coin. In Germany there were gold gulden and gold ducats, silver dollars and silver gulden, and the types of these different coins varied with the time and place of coining. (b) The crudeness of minting processes led to the practice of clipping, and this, together with abrasion, or wear and tear, resulted in reducing the metallic contents of the coins considerably below their nominal and legal contents. In the period of the Middle Ages traders dealt in money not by tale but by weight, and the early banks of deposit, founded from the sixteenth century, conducted their operations not in terms of coined money but in terms of the weight of the precious metals in the coins actually deposited with them.

So long as minting methods remained backward, the debasement of the coinage through wear and tear and clipping was bound to be rapid and considerable, and the actual coinage could only be maintained at a high standard by frequent recoinages, which were extremely

costly. These difficulties, however, have now been removed. With improved technique in the manufacture of coins it was easily possible to detect defects in the metallic circulation, and governments came to place a legal limit to the amount of abrasion tolerated in legal tender metallic currency. Thus, if the weight of the coin fell short of the standard content of that coin by more than a certain amount, the coin was no longer legal tender.

At this stage the phenomenon which has come to be known as Gresham's Law may be noticed. One form of this law, that "bad money drives out good money," tended to make its appearance when the actual coins in circulation varied considerably from the standards of weight and fineness which were prescribed. The good coins were more valuable for foreign trade operations, where money passed by weight rather than by tale; consequently, they tended to disappear from current circulation where bad coins predominated.

A system of "free" coinage is said to obtain when anyone is at liberty to take any amount of the metal of a coin—e.g. silver or gold—to the Mint and have it coined. Under these conditions, and assuming that the State makes no charge for the cost of minting, the monetary value of a coin must equal the value of its metallic contents. If, for example, a gold sovereign was worth more as metal than as coin, actual gold sovereigns would be melted down into bullion; the supply of sovereigns would be contracted, while that of gold metal would be increased, and forces would be set in operation to restore a uniformity between the metallic and the monetary values of the coin. Conversely, if the sovereign was worth more as coin than as metal, the opposite process would occur, and the result would be the same. By the Coinage Act of 1816 (56 Geo. III,

c. 68), the Mint price of gold in this country was virtually fixed at £3 17s. 10½d. per standard ounce; and since a standard ounce is $\frac{11}{12}$ fine—i.e. eleven parts pure or fine gold and one part alloy—this corresponds to a price of £4 4s. 11½d. per ounce troy of pure or fine gold. Suppose now that the market price of gold metal rose to £4 10s. per fine ounce, there would be a profit of 5s. per fine ounce in melting gold sovereigns into bullion and selling them as such. That is virtually what happened during the late war, but legislation was introduced to make it a penal offence to melt down gold coins, and they were, in fact, largely withdrawn from circulation.

A government, however, may make some charge for the expense of coining. If it is determined to charge an amount just sufficient to cover the cost, it is said to charge a “brassage” or “mintage”; if it charges more than that cost, the excess, which is a profit to the State, is called “seigniorage.” For example, the Mint price of gold is £3 17s. 10½d. per standard ounce, and the State bears the entire cost of minting. If the cost of minting were 5 per cent—i.e. roughly $\frac{3}{11}$ per standard ounce—and the State decided to charge this, the Mint price would be reduced to £3 13s. 11½d. If it further desired to make a profit by charging a seigniorage of $2\frac{1}{2}$ per cent, the Mint price would be further reduced to £3 12s. per standard ounce. In other words, anyone who took a standard ounce of gold to the Mint would receive £3 12s., although that standard ounce was, in fact, coined into £3·894 sovereigns—i.e. the equivalent of £3 17s. 10½d.

It has been shown that the effect of a charge being levied to cover the cost of minting coins is to create a difference between the number of coins actually minted out of a given weight of metal and the number actually received by the person who takes the metal to the Mint

for conversion into coin. It is just as if a housewife took all the ingredients of a cake to a baker and paid him for his services by allowing him to keep so many slices of the cake. Under the existing Mint Laws in this country, 934 sovereigns and one half sovereign must be coined out of every twenty troy pounds weight of standard gold. Suppose now that the State charged £34 10s. for minting such a weight of gold, anyone who took gold to be minted would only receive £900 in gold sovereigns in exchange for twenty troy pounds of standard gold. Under these conditions it would not be worth while for anyone to take gold to the Mint for this purpose so long as the market price of standard gold exceeded £900 per twenty pounds troy. In other words, for every standard ounce of gold taken to the Mint 3.75 sovereigns would be received and 3.894 would be made. And, since a standard ounce of gold, as already indicated, is $\frac{1}{2}$ fine, the market price of gold metal would have to be not more than $\frac{81}{10}$ per fine ounce, if gold was to be forthcoming at the Mint.

Suppose now that the market price of gold metal was below $\frac{81}{10}$ per fine ounce, there would be a definite inducement to take gold to be coined. Under that condition the value of the coin would be greater than the value of the metal contained in the coin by fully the amount of the seigniorage. But the demand for gold for minting purposes would increase, and the market price of gold metal would rise until equilibrium was reached in relation to the Mint price of gold. On the other hand, if the market value of gold exceeded the value of gold as coin, gold coins would be melted down or exported. Such a position would occur if the market price exceeded $\frac{84}{11\frac{1}{2}}$ per fine ounce, which, as shown earlier, corresponded to $\frac{77}{10\frac{1}{2}}$ per standard ounce, and which also represented the number of gold coins actually

made out of an ounce of metal. But in this case, the melting down of existing coins would tend to lower the market price of gold until further meltings were unprofitable. In short, under the conditions given, the value of the sovereign as money would never fall outside the limits of its metallic value on the one hand, and, on the other, the value of its metallic contents plus the charge made by the State for minting. To sum up, if the market price of gold was below 81/10 per fine ounce, gold would be taken to be minted; if the market price was above 84/11½ per fine ounce, gold coins would be melted down. And the market price might fluctuate within those limits without occasioning any definite movements as regards the circulation of gold sovereigns.

The foregoing analysis is largely of academic interest in so far as in this country before the war the State bore the entire cost of minting gold coins. But it serves to bring out an important point in relation to the silver and copper token coinage. The effect of a seigniorage or brassage is to raise the value of the coin above the value of its metallic contents by the amount of the brassage or seigniorage. On the assumptions of the above

paragraphs, the sovereign would be worth $\begin{matrix} 934.5 & 1869 \\ 900 & \text{or} & 1800 \end{matrix}$

of the gold metal which it contained. And the value of the coin is raised above the value of its metallic contents by the effect of the seigniorage or brassage in limiting the supply of sovereigns.

For several centuries there was a free coinage of both gold and silver, and the relative monetary values of the two metals were fixed by decree. That represented the double or bimetallic standard. But there was always the difficulty that the legal ratio of the values of the two metals might not coincide with the ratio of their commercial or market values. And whenever there was any

appreciable disparity between the legal and the market ratios of the two metals, one of the metals would be overvalued as money when compared with its value as metal, while the other would be undervalued as money. Under these circumstances the metal which was undervalued as money would tend to pass out of circulation; the good pieces would be melted down into bullion, and no supplies of that metal would be forthcoming to the Mint for coinage. On the other hand, the circulation would tend to become more and more dependent upon supplies of the other metal which was overvalued as money. It was, therefore, quite possible for the nature of the actual circulation to change as a result of changes in the relative values of the two metals. If, at one time, the legal ratio overvalued gold, silver would pass out of circulation; if, at another time, the legal ratio overvalued silver, gold would pass out of circulation, and be replaced by silver. Here, then, is another example of Gresham's Law that "bad money drives out good money." In this case the "bad money" is the monetary metal whose value is falling, because under a bimetallic system, if there is no alteration in the legal ratio of the two metals, that metal whose value is falling will tend to be overvalued as money, i.e. it will be worth more as money than as metal; and the other undervalued metal will tend to be driven out of circulation.

The practical difficulties occasioned by bimetallism are of historical interest, and need not be elaborated further. In this country, as elsewhere, these difficulties had been experienced for centuries. They were particularly acute in the seventeenth and eighteenth centuries. Gold was overvalued as money, and the silver currency diminished in quantity and also in quality through clipping. The actual circulation was largely made up of golden guineas and defective silver coins,

and in 1774 it was enacted that for sums greater than £25 silver would only be legal tender if calculated by weight at the rate of $5\frac{1}{2}$ per ounce. An important change, however, occurred during the last decade of the eighteenth century. Silver began to be offered at the Mint, and there was a danger of gold being largely withdrawn from circulation and replaced by the inferior metal. The reason was that silver had fallen greatly in value, and whereas during the 'seventies one ounce of gold had been worth 14·64 ounces of silver, in the 'nineties it was worth more than 15·2 ounces, which was the legal ratio. In other words, as a result of this change in the market values of the two metals, gold was worth more as metal than as coin, and, therefore, the gold circulation was in danger of being melted down.

In 1798 it was decided to suspend the free coinage of silver, and the former condition has never in fact been restored. The practice which obtains is that the Mint will sell silver coins if these are required for purposes of small change, and will sell them at the rate of 20 shillings to the pound sterling. The supply is limited to the needs of business; it is not dependent upon the value of silver as metal; and this strict limitation of supply enables the token silver coins to pass from hand to hand at a valuation which is considerably higher than their metallic values. The same principle obtains with regard to copper coins. These token coins are only legal tender up to limited amounts; but that is not the point of first importance. There is a demand for token currency to meet ordinary commercial requirements in the way of small change. Provided the supply of these token coins is limited, their values will be maintained at fixed ratios to the pound. Suppose, for example, that silver token coins were issued in excess of commercial requirements. If the Mint did not "take back" the

redundant supply, nothing could prevent the values of these coins from falling below their nominal values.

The single Gold Standard is said to have existed in this country since 1816. Under this arrangement there was a free coinage of gold only, and the sovereign replaced the guinea as the standard coin of the realm. The position, therefore, was that the price of an ounce of standard gold was fixed at $77/10\frac{1}{2}$, and with free mintage the market price of gold bullion could never deviate materially from the Mint price. If the market price exceeded $84/11\frac{1}{2}$ per fine ounce gold coins would be worth melting down; if the price was below $84/11\frac{1}{2}$ it would be worth while to have gold bullion minted. The essence of the Gold Standard, indeed, may be said to consist in the fixing of the price of gold. It makes no real difference whether we say that the gold sovereign of 113 grains of pure gold constitutes the standard of value and unit of account, or that one ounce of standard gold serves the same purpose. The one is merely a fixed division of the other. What happens is that the price of one commodity is fixed, that commodity being a given weight of gold.

In 1816 also it was decided that in respect of the silver coinage 66 shillings should be coined out of one troy pound of standard silver, and the supply of silver coins as already indicated was limited to the requirements of trade. For more than a century this meant that the nominal value of a shilling was greater than its metallic value. In the last decade of the nineteenth century the average price of silver was 34d. per ounce; in 1915 it fell to about 24d., but thereafter rose rapidly and reached 88d. in January, 1920. So long as the price remained below 66d. per ounce, the Mint, in manufacturing silver coins, could meet the requirements of trade and profit by it. But with this rise in the price of

silver the metal in silver coins was worth more than the nominal values of the coins, and a definite inducement would have existed to melt down silver currency. Consequently, a Bill was hurriedly passed through Parliament authorizing the reduction of the standard of fineness of silver coins to one-half ; i.e. one-half of the weight of the new coins was to be alloy. The new coins issued under this regulation were notoriously inferior to the old coins and soon acquired a dirty yellow appearance. Though the Act has not been repealed, the defects are now less apparent through the adoption of new minting methods and the survival of large amounts of pre-1920 mintage. The problem itself quickly disappeared. The average price of silver in 1920 was under 62d. per ounce ; in 1921 it was 36 $\frac{7}{8}$ d., and by June, 1931, it had fallen to 12 $\frac{1}{2}$ d. per ounce.

CHAPTER V

NOTE ISSUES

THIS chapter is concerned with an important element in all modern monetary systems—that of paper notes and the conditions governing their issue by banks or governments. It has already been shown that, as regards the coinage, that came in time to be made a royal prerogative. The paper note, on the other hand, did not originate as part of any such prerogative, though it has now come to be carefully regulated by Acts and Decrees. It may be useful to describe briefly the historical origin of this medium of exchange.

The chief difference between standard metallic currency and paper currency is that standard coins have a value as metal whereas the same does not hold good of paper notes. Thus we might say that a paper note has a value which is acquired because it represents something else. But it is better first to think of the value of a note as governed by conditions of demand and supply, and secondly to consider the factors which are important on both of these sides. On the demand side notes came to be accepted because of their convenience in the handling of large sums, and also because of the defective conditions of the coinage in the seventeenth century.

The introduction of the note in this country is associated with the goldsmiths, who were originally dealers in gold ware and foreign coins. In 1560 we find that certain of their number were appointed judges of the quality of coins, and in the reign of Henry VIII, when the coinage was debased, the goldsmiths assumed

the rôle of money-changers. That was a function which had been introduced by Henry I as a royal prerogative, though it was occasionally farmed out, as in the reign of King John. In 1539 the Royal Exchangers were abolished on the advice of Sir Thomas Gresham, but Charles I revived the office in 1627. On the death of Charles the office was again abolished, and it was during the interval from 1539 to 1627 that the goldsmiths assumed their new rôle, which they continued to fulfil after the death of Charles.

The practice gradually developed that people with considerable quantities of metallic coins found it expedient to take these to the goldsmith, who would certify their metallic worth. That practice would be obviously encouraged when the goldsmiths were money-changers, since coins used for international trade transactions passed at their metallic rather than at their nominal values. At the same time there was a growing tendency to use the goldsmiths as banks, or as places where valuables and money could be safely deposited. It was, therefore, but a short step to the next stage, viz. that the goldsmiths as part of their ordinary business should receive deposits of coin and give the depositor a certificate entitling him to the sum so deposited whenever he should desire to withdraw it.

That was the origin of the bank-note. It was first a certificate to the effect that the person named on it was entitled to receive so much coin on demand from the goldsmith. Hence it has been described as a simple "promise to pay." In course of time these promissory notes came to circulate freely, because if a person, holding some of these notes made out in his own name, had certain debts to meet, instead of taking the notes to the goldsmith, cashing them, and then paying his creditors, he might simply transfer the notes to the

name of his creditor. Later the promissory note which had originally been payable to the person named on it was issued payable to "bearer," and in that form it corresponds to the bank-note of to-day.

It is worth noticing that there is a certain convenience attached to notes which may increase the public willingness to accept them, provided they are properly issued. A large quantity of metallic money is bulky and difficult to handle, while notes for large sums occupy little bulk. That is an advantage which would have been obvious apart from the defects in the coinage which existed at the time of their introduction.

If the goldsmiths, however, had merely provided facilities for the safe keeping of valuables they would have required to have made a charge for their services. Instead of that they actually gave an inducement for people to deposit sums of money with them by offering interest on deposits. The usual tradition is that prior to the Civil War it had been the practice for cashiers in London who were responsible for the running cash of their firms to lend their balances to the goldsmiths at fourpence per day in interest. During the Civil War many of these enlisted, and, according to certain reports, took with them the money with which they had been entrusted. Thereafter, merchants came more freely to adopt the practice of depositing balances directly with the goldsmiths for their safe keeping. We have, therefore, to find a reason why the goldsmiths paid interest on deposits of coin instead of charging for their services in taking charge of these deposits.

The explanation is that the goldsmiths, having attracted deposits of coin, could lend out part of these deposits to other borrowers, and their profit would be the difference between the interest which they charged for loans and the interest which they paid on deposits

plus whatever expenses were incurred in the conduct of this banking business. Experience would teach them that if public confidence were maintained, the note-holders would not all wish to cash their notes at the same time, so that there was always a considerable deposit of unused coin in their vaults. They might, therefore, lend out part of the idle coin to borrowers against suitable security, taking care to keep a sufficient stock of coin to meet probable demands for the repayment of notes. Alternatively, they need not actually have lent coin, since if the use of notes were established borrowers would be willing to accept notes, so that the bankers could make larger loans in the form of notes against the coin which had been deposited with them.

Notes which are issued in the manner which has been described are said to be "convertible," i.e. the holders of the notes can require that the bank of issue shall redeem or repay in gold the notes when presented. But the important point is rather that people are willing to accept these promises to pay in the course of ordinary business transactions. It might be said, of course, that people will only be willing to accept such notes if they are convertible, but that statement is incorrect. Inconvertible paper has, in fact, circulated on different occasions, and while it is true that experience has taught us rather to associate inflation with inconvertible paper currencies issued to excess, nevertheless it is still possible for an inconvertible paper currency to circulate and to remain stable in value. Where that obtains it implies that the supply of paper is properly adjusted to the demand for notes at a given level of prices.

To return to the discussion of the issue of convertible notes, it will be apparent that under the conditions cited, the quantity of circulating currency will have

been increased since the bank has found it possible to issue notes in excess of the gold deposited with it. But the banking principle tends to have the same effect even on the assumption that no notes are issued. Let us suppose that only gold is deposited and that deposits are subject to withdrawal on demand. If there are a large number of depositors it is unlikely that all will wish to withdraw their balances at the same time. The receivers of rents and quarterly salaries, for example, will increase their deposits at the beginning of each quarter and will make gradual withdrawals over the following three months, as they have debts to pay. Other customers will have balances which show regular monthly movements; others will show weekly movements; others, again, will be very uncertain in their movements. Some customers will only keep their idle balances on deposit, others will be saving until they have large enough sums to invest in industry and trade. But in the aggregate many of these movements will tend to cancel one another, and the concentration of idle balances in the bank renders them more effective. When the bank lends part of these balances to suitable borrowers, it therefore acts as an intermediary between a group of lenders—the depositors—and a group of borrowers. Otherwise it would be difficult for the potential borrowers to get in touch with the potential lenders. By specializing in this work, the bank is able to judge as to the real security of the potential borrowers, and so serves both sets of customers. But for the present the point to notice is that, as a result of this banking function, idle balances are made more effective. They are made to work. The quantity of actual circulating currency is increased in relation to what it would have been if the idle funds were merely deposited with the bank for their safe keeping. The issue of notes

makes possible a further addition to the actual volume of circulating currency.

The tendency is for this increase in the actual circulation to exercise some influence in an upward direction upon the general level of prices. It is, therefore, important to consider how far this movement can go. It should be remembered that we are still concerned with convertible note issues, and that the bank must hold in reserve a stock of gold adequate to the possible demands for the redemption of notes. That fact, in itself, places a certain limit to its power to issue notes. But it is important to understand the significance of this gold reserve against notes. Demands for the repayment of notes will, of course, increase suddenly if confidence in the bank of issue is shaken. But, apart from these abnormal occasions, the tendency, as has been shown, is for the increase in the quantity of circulating currency to raise prices. That will mean that there may be a greater demand for coin in actual circulation for the purpose of discharging those debts which are not usually settled in notes, and that increased demand for coin will be supplied by presenting notes for repayment at the bank of issue. Thus the gold reserve of the issue bank will tend to fall. A second drain on the gold reserve is concerned with the foreign exchanges, which will be discussed later. As prices rise, imports from abroad will be encouraged while exports will be discouraged, and there may result a certain adverse balance of indebtedness which will involve an outflow of gold to countries abroad. Thus the rise in prices caused by the increase in the note issue may occasion a double drain upon the gold reserves of the issue bank. Such an event would be a warning to the bank that further issues should not be made and that some restriction was called for.

It has already been indicated that under certain conditions a demand may arise for a paper circulation, because of advantages and economies which are thereby secured. Given a demand for such forms of currency, coupled with a supply of notes, the paper which is issued will command a definite value or power of purchase over goods and services in general. It has also been shown that notes which were issued were originally promises to pay coin on demand, and that character of convertibility has survived, although with important exceptions. It is necessary at this stage to consider in more detail what influence this convertibility, or lack of convertibility, has upon the value of paper money.

There is, first, the influence exercised upon the existing coinage by a note issue which is either convertible or inconvertible. If the use of paper money merely replaced coins already in circulation, the demand for coins would be reduced to the extent to which notes were issued. On the other hand, some reserve against the notes issued would probably be kept. It is possible that some displacement of coin does occur, but the greater convenience of paper money under normal conditions may have the result that individuals keep a larger amount of currency, including both coin and notes, than they would otherwise do. In that case the displacement of coin by notes may be smaller than might be expected. What is important, however, is that whatever displacement of coin does occur as a result of a note issue tends to reduce the demand for coin, and so tends to lower its value. In consequence, the metal of which the coin is made may also be affected. Thus the tendency among continental countries in recent years to replace silver token coinages by inferior metals and by paper has been one among

several factors which have contributed to the rapid fall in the value of silver.

The same result obtains as regards coin into which the paper currency is convertible. The reduced demand for coin will lower its value and tend to raise prices, but unless this occurs on a large scale and in a number of countries together, the effect on the value of the metal is not likely to be great in practice. So far we have been concerned with paper note issues in general. Where a note issue is maintained under conditions of convertibility, the value of the note will still be held at the value of the coin which it represents, provided the coin which is obtainable can be melted down or freely exported. Thus a convertible paper issue only raises prices to the extent to which it reduces the demand for coin. The proviso which has been given above is of some importance. Although not generally known, British Treasury notes issued during the war were convertible into gold sovereigns at the Bank of England. An appearance of legal convertibility was, therefore, preserved. But the gold sovereigns obtained could neither be melted into bullion nor exported, so that in practice the currency note issue could be made under conditions which were virtually those of inconvertibility. An excessive issue of currency notes, therefore, could raise prices and depress the value of these notes below the value of the coin which they represented.

The extent to which coin will be displaced by notes will depend upon the denominations issued. The Bank of England, for example, from 1826 until 1928 was not allowed to issue notes for amounts less than £5, and prior to 1906 the German Reichsbank could not issue notes below a denomination of 100 marks (£5). Under these conditions a circulation of actual gold coins was important, but in Sweden, where the National Bank

could issue notes for as little as five crowns (about 5s. 6d.), the actual gold circulation was negligible. The minimum denominations, moreover, are generally fixed by the legislature, even where the bank of issue is not a State bank. Since the War, however, the tendency has been to authorize note issues for small amounts, so that some permanent displacement of gold from circulation is likely to be effected. For reasons which will be discussed later, a general return to pre-war practice as regards circulation of gold coins does not seem to be probable. In 1928 when the Bank of England issue and the Treasury note issue were amalgamated the restriction imposed on the Bank of England by the Act of 1826 was removed.

Provided full convertibility is maintained, the value of a note must equal the value of the coin which it promises to pay. Under pre-war conditions, if through excessive supply, the value of a Bank of England £5 note fell below that of five sovereigns, notes would have been taken to the Bank to be cashed, and this would have continued until equivalence was again restored, or the issue was paid off, or the Bank had failed. The possibility in the case of inconvertible notes is greater. It is, of course, true that an inconvertible issue may be maintained at par value with the coin which it represents without any adverse effects, provided it is strictly limited in supply. Suppose, for example, that there is an issue of convertible paper, and that the Government suddenly intimates that the notes which have been issued are no longer convertible into coin on demand. If no other change occurs, the value of the notes may remain unaffected. But inconvertible notes can be issued to excess, and so raise prices that the value of the unit of money is depressed below the metallic contents of the standard of value.

What form will this take? It might be suggested that under the conditions mentioned a paper pound would only pass for, say, 16s., i.e. the note would pass at a discount in relation to the gold sovereign; or, alternatively, the gold sovereign might pass at a premium, i.e. it might pass for 23s. in comparison with the paper pound which passed for only 20s. What is more probable is that the gold coins would disappear from circulation. It has been shown that the Mint price of gold in this country was fixed at £3 17s. 10½d. per standard ounce, and that that was equivalent to practically £4 5s. per fine ounce. If the market price of pure gold rose above this latter figure it would be profitable to melt gold sovereigns into bullion for sale as metal. Now where there is a convertible paper issue and where also gold coin can be melted down or exported freely, a rise in prices will not affect the price of bullion, because any tendency for the price of bullion to exceed £4 5s. per fine ounce would be followed by a redemption of notes for sovereigns, and the coin obtained would be sold as bullion for the larger sum obtainable. The supply of money would thus be reduced and prices would tend to fall.

With inconvertible notes the position is different. An excessive issue of these will raise prices, *including* the price of bullion, and it is that fact which would tend to make gold sovereigns disappear from circulation. They could be sold as metal for a higher price than they would obtain as money, and legislation restricting the melting of coins or their export would hardly be effective in preventing the movement. It is probable, however, that the influence of excessive issues of inconvertible paper money will be disputed when they are first made. The rise in prices may be small in the first instance, and, since the excessive issue will probably have been made under abnormal conditions, such as those which prevail

in war-time, attempts will be made to explain whatever price movement does occur by reference to factors on the side of commodities. These factors, however, will diminish in importance as the direct influence of the increased supply of money becomes more apparent. As the "inflation" proceeds and prices rise definitely and more rapidly, it frequently happens that a vicious circle is generated. Thus, when prices are found to have risen, it is said that still more money is required to enable people to transact business at the higher level of prices. But it is never explained why a fall in the value of a commodity should *require* that the supply of that commodity be further increased, and if this particular argument of the inflationists is true, "money" must be taken as obeying economic laws which are not applicable to other commodities. "Money," however, is no exception, but the confusion of the inflationist argument is such that its application may lead to the ultimate collapse of a currency system. The fall in the value of an inconvertible paper issue which is issued to excess becomes greater and more rapid as the process is repeated, and in the end, as has happened in history, there may be a public unwillingness to hold amounts in paper money which will depreciate during the short period in which it may be held. Such an unwillingness will be the forerunner of a general collapse of the monetary system.

Such collapses have been numerous. In France, outstanding examples occurred in 1720 and again during the Revolution with the issue of *assignats* which, in 1796, became quite worthless. Elsewhere in Europe and also in America during the War of Independence examples were to be found, and during the late war many of the Continental currencies became totally disorganized through the over issue of inconvertible paper,

and in Germany, Russia, and Austria in particular paper money became altogether worthless.

The value of an inconvertible note issue thus comes to depend in large measure upon the restraint with which it is issued. Clearly there is no check to its issue apart from that exercised by the discretion of the government or bank which is responsible for the issue. This is true no matter how large a metallic reserve may exist against the inconvertible issue. In respect of such an issue a metallic reserve is of no moment, and it is a mistake to imagine that the value of a paper issue is somehow derived from the size of that metallic cover. To all purposes such a reserve is non-existent. Nevertheless as late as July, 1926, the Bank of France was authorized by an Act to purchase gold coin and bullion, and to increase its note issue for that purpose. Prior to 1819 the Bank of England did the same thing. But the increased supply of notes will tend to lower the value of each still farther, while the new demand for gold will tend to raise the value of the metal still farther. Thus, instead of bringing the value of the note and the value of gold closer together, the action which has been described tends to have the opposite effect of driving them still farther apart. The desired result would be obtained by adopting precisely the opposite method of selling whatever gold is held and purchasing notes, which might then be destroyed.¹ The supply of notes would then be reduced and the value of each would rise. The effect of the sale of part or all of the gold reserve would probably be small, but its tendency would be to lower the value of gold bullion, and in any case the gap between the value of the note and the value of gold would be reduced.

¹ Cf. Cannan, *Money*, Fourth F

CHAPTER VI

THE REGULATION OF NOTE ISSUES

It was shown in the last chapter that a metallic cover to an inconvertible note issue cannot guarantee the value of that issue. What is important is the limitation to the supply of notes, and if the issue is subject to no checks its value cannot be maintained. A metallic reserve in the case of a convertible note issue, on the other hand, is active provided the coins which are obtainable are themselves convertible into bullion and exportable. And it has already been shown that under these conditions of convertibility, the value of the notes issued will not fall below the value of the coin which they represent. But precisely how much of a metallic reserve should be kept cannot easily be determined. If there were no legal regulation the issuing body would have to rely upon experience to suggest what amount would suffice to meet probable demands for the payment of notes in coin.

The general tendency, however, has been for definite regulations to be devised and embodied in Acts of Parliament for the purpose of prescribing what metallic cover shall be held against the issue of notes. This practice was adopted after there had been experience of "free" banking, when small private banks of issue became numerous and ill-regulated, and when many of them collapsed and caused considerable hardship and distress. The right to issue notes was then restricted, and the principles under which the issues were made were definitely prescribed. In this chapter certain of the chief forms of regulation in practice will be described.

At the outset there is a general consideration—that the amount of the cover which is held governs the amount of economy in the use of metal which the note issue secures. If a convertible note issue is fully covered by gold there is no economy except in so far as a gold circulation would be subject to wear and tear. The smaller the cover required, the greater the economy, but the net reduction in the world demand for gold resulting from a lowering of the amount of gold required would not be important unless the change was on a large scale and affected many countries. The future prospects of a diminishing world gold production which would lead to a rise in the value of gold have brought this point into prominence, and it is frequently argued that in the interests of monetary stability every effort should be made to effect economies in the monetary use of gold. These economies might be secured in several directions, but it would be desirable that central banks should not accumulate larger gold reserves than were necessary for the purpose for which these reserves existed.

The note issue of the Bank of England remains largely regulated by the provision of the Bank Act of 1844, which is generally associated with the name of Sir Robert Peel.¹ The purpose of this Act was to give greater security to the issue of these notes and to limit note issues by other banks in England and Wales. Its provisions may be summarized. A complete separation was to be made between the Issue department of the Bank and the Banking department which was concerned with ordinary banking business. The Issue department was to be charged solely with the conduct of the note issue. Other provisions concerned the regulation of the

¹ The real authorship, however, is claimed for Mr. Jones Loyd, afterwards Lord Overstone.

note issue. Experience had suggested that under no circumstances was the existing circulation of Bank of England notes likely to fall below a total of £14,000,000. Such an amount under the Act might be covered by Government securities, and this became the basis for the fixed fiduciary issue. Notes issued in excess of this amount had to be fully covered by gold and silver in the form of coin or bullion, but not more than one-fifth of the metallic reserve to be held in silver, i.e. the silver holding was not to exceed one-quarter of the gold holding.¹ The fixed fiduciary issue might, however, be expanded under certain circumstances. The Act forbade any person who was not already legally issuing bank-notes from doing so, but if any existing banker with the right of issue ceased to issue notes, the fiduciary issue of the Bank of England might be increased to the extent of two-thirds of the lapsed issue. Eleven Orders in Council brought the fiduciary issue under this provision to a figure of £19,750,000. The last of these Orders in Council occurred in 1923, when the Bank absorbed its quota of the lapsed issue of Messrs. Fox, Fowler & Co.,² which amalgamated with Lloyds Bank in 1921.

A further provision made the Bank a channel through which the public might convert gold bullion into cash without going directly to the Mint. In the latter event, gold sovereigns would be received after a period at the rate of £3 17s. 10½d. per standard ounce. The Bank, however, was authorized to purchase all gold offered to it at the fixed price of £3 17s. 9d. per standard ounce, the difference of 1½d. per standard ounce corresponding

¹ No silver was held in this form after 1853.

² This was the last of the private note-issuing banks in England. The fiduciary issue of the Bank of England under the Act of 1844 had, therefore, reached its maximum by 1923. In 1844 there were some 280 private banks of issue with an authorized issue of £8,631,647.

to the loss of interest as a result of the delay before the actual minting process was completed.¹

In 1928 the Bank of England and Currency Note issues were amalgamated, and since the bulk of the latter issue was fiduciary in character it became necessary to revise the terms of the Act of 1844 relating to the fiduciary issue of the Bank of England. But the principle of the fixed fiduciary issue was retained subject to certain provisions which will be mentioned. In order to make possible the amalgamation of the two issues the new fiduciary issue of the Bank was fixed at £260,000,000. But the Act of 1928 also provided that the Treasury might permit the Bank to increase or reduce its fiduciary issue when, for special reasons, this appeared to be desirable. In August, 1931, use was made of this proviso to enable the Bank to increase its fiduciary issue by £15,000,000 for a period of three weeks. The occasion of this was the financial crisis in Germany which gave rise to large withdrawals of gold from the Bank of England for foreign account, and this drain coincided with the seasonal increase in the internal demand for notes during the holiday period.

The following is an example of the weekly return of the Bank of England relating to the issue department, prior to the passing of the Currency and Bank Notes Act, 1928, the return given being that for 28th December, 1927—

ISSUE DEPARTMENT			
Notes issued	£171,218,435	Government Debt .	£11,015,100
		Other Securities .	8,734,900
		Gold Coin and Bullion .	151,468,435
	<u>£171,218,435</u>		<u>£171,218,435</u>

The item of "Notes issued" requires no explanation.

¹ The Gold Standard Act of 1925 confined the right to take gold to the Mint for coinage to the Bank of England.

On the right-hand side of the return the first two items will be found to amount to £19,750,000, which was referred to earlier as the fiduciary part of the note issue. The first item of "Government Debt" represents the total of a series of loans made by the Bank to the Government from the formation of the former in 1694. There is no Government Stock corresponding to this item; the debt is simply a book-debt on which interest is paid at the rate of $2\frac{1}{2}$ per cent per annum. But the State may be said to guarantee £11,015,100 of the Bank's note issue. The remainder of the fiduciary issue is covered by interest-bearing securities for which the issue department is itself responsible. The third item on the assets side of the return represents the gold cover for every note issued in excess of the fiduciary maximum.

The new form of the weekly statement of the Issue department of the Bank of England may be illustrated by the following return which relates to the week ending July 1, 1931—

<i>Notes issued—</i>		£		£
In circulation	.	£357,429,453	Government Debt	. £11,015,100
In Banking Department	.	65,842,287	Other Government Securities	. 231,356,921
			Other Securities	. 13,534,998
			Silver Coin	. 4,092,981
			Amount of Fiduciary Issue	260,000,000
			Gold Coin and Bullion	163,271,740
		<u>£423,271,740</u>		<u>£423,271,740</u>

It is to be noticed that the net profit to the Bank from its note issue is not represented by the interest received on the Government Debt and Other Securities. Against that income must be set a payment of £180,000 which the Bank must make annually to the Government for the privileges extended to it under the Act of 1844. And under the Currency and Bank Notes Act, 1928, the Bank has now to pay to the Treasury a sum equal to the profits arising in each year in the Issue department.

Notes issued against gold deposited with the Bank bring in no profit. In fact, so far as the Issue department is concerned, its working is quite automatic. Anyone taking gold to the Bank must receive notes at the prescribed rate, and the Bank is obliged to purchase all gold offered to it at that rate. Similarly, so long as the Act of 1844 remained in operation, when notes were taken to the Bank and cashed for gold, the notes were cancelled and there was an equal reduction on both sides of the return. Under the Gold Standard Act of 1925 a certain modification of this regulation was introduced. Section 2 of that Act declared that the Bank would remain under the obligation to sell gold at the fixed purchase price in legal tender,¹ "but only in the form of bars containing approximately four hundred ounces troy of fine gold." The reason for this change, which will be discussed more fully in a later chapter, was to discourage the immediate return to a gold circulation. In practice, therefore, gold is only obtainable from the Bank in minimum lots of £1,700.

The Bank of England, then, is not a free agent in the supply of notes. Its ability to issue more notes depends upon its power to attract more gold to serve as cover for these notes. The mechanism which enables the Bank to attract gold in this manner cannot be described until the other features of the banking system have first been analysed. Between 1844 and the outbreak of the late war, the Act of 1844 was suspended on three occasions—in 1847, 1856, and in 1866. These were years of crisis, and it was found that some temporary relaxation of the provisions of the Act was necessary to enable the crises to be handled. By so doing the Bank was enabled to issue notes in excess of its legal powers as ascertained by its fiduciary issue and its gold holding, but only in

¹ Bank of England notes have been legal tender since 1833.

1856 did the Bank actually make use of the privileges of the suspension of the Act.

In Scotland the note issue was regulated by an Act of 1845, which gave to the existing banks of issue the right of continuing this function, but no subsequent banks were to enjoy that privilege. For each existing bank of issue an "authorized" circulation was determined, and notes issued in excess of this amount were to be covered by gold. For the eight banks of issue the aggregate "authorized" circulation amounted to £2,676,350, whereas the average circulation in 1845 was £3,020,000. At the end of 1926 the actual circulation amounted to fully £21,000,000. In comparison with the English banks, the Scottish banks enjoyed special favour.

The note issuing functions of the latter were not affected by amalgamations, and, whereas the country banks of England had to surrender their issue rights if they opened offices in London, no such restriction obtained in the case of the Scottish banks.

It will be convenient at this stage to indicate the nature of the influences which moulded English banking in its peculiar form. In 1708 the Bank of England's Charter was renewed, and a clause was inserted which gave to the Bank a monopoly of joint-stock banking in England. Under that clause it was not lawful "for any body politic or corporate whatsoever, created or to be created (other than the said Governor and Company of the Bank of England), or for any other person whatsoever, united or to be united in covenants or partnership, exceeding the number of six persons, in that part of Great Britain called England, to borrow, owe, or take up any sum or sums of money on their bills or notes, payable at demand, or at a less time than six months from the borrowing thereof." At that time it was supposed

that a note issue was essential to a banking business, but there developed a tendency for deposit banks to emerge without such powers, and the clause in the Charter of 1708 did not appear to make illegal such institutions. In Scotland there was no such restriction, and joint-stock banks of issue predominated. From 1793 and throughout the first quarter of the nineteenth century a series of financial crises occurred, in the course of which many of the country banks in England collapsed. There was the war with France, accompanied by inflation, and in 1797 the suspension of cash payments by the Bank of England. In the thirty years up to 1819 no fewer than 300 country banks in England failed, of which 147 occurred in the seven years from 1810 to 1816. During this period the movement in favour of joint-stock banks was growing. One of the leaders of this movement was Thomas Joplin, who wrote in 1822¹—"While England and Ireland are continually subject to disasters of this kind, it seems an extraordinary fact that Scotland is totally free from them: the Scotch banks rarely, if ever, either failing or losing money. . . . The true cause of the difference is to be found in the nature of their respective banking establishments, the Scotch banks being joint-stock companies, while the English banks are private partnerships." The reasons given by this writer for the failure of the private banks were (1) careless management, (2) speculation, and (3) the granting of loans to large local concerns through personal ties and without real security. Such influences were less likely to occur in the case of large corporate bodies governed by boards of directors who would be chosen annually at the meeting of stockholders.

¹ *Essay on the General Principles and Present Practice of Banking in England and Scotland* (Sixth Edition, 1827, p. 6).

The series of crises which occurred undermined confidence in both the private banks in England and in the Bank of England itself, and opinion was growing in favour of some method of State regulation for note issues.

In 1818, Mr. Vansittart, then Chancellor of the Exchequer, brought forward a Bill to compel bankers to provide greater security for their notes, but under opposition from the country banks the Bill was withdrawn. Three years later, however, an Act was passed to alter the Charter of the Bank of Ireland in order to enable a greater number of partners to form banks outside a radius of 50 miles from Dublin. In the following year the Government offered to extend the privileges of the Bank of England to 1843, provided the Bank agreed to the terms of an Act which made it legal for any number of persons in partnership in England and conducting banking business outside a radius of 65 miles from London to issue notes payable on demand. But, although the Bank agreed to this restriction of its privileges, no action was taken till 1826.

In 1824 and 1825 there was another speculative boom followed by the crisis and panic of the latter year, when seventy private banks failed within a period of six weeks. The Government attributed this panic to the "rash spirit of speculation, which has pervaded the country for some time, supported, fostered, and encouraged by the country banks." It was clear that the official policy of the Government was being moulded in the direction of some change in the existing legal position of banks. Greater security was being demanded, and the bank was offered the alternative (1) of taking advantage of its joint-stock monopoly to establish branches over the country, or (2) of losing its exclusive privileges outside a certain area round London. The

Act¹ of 1826 followed. Under the terms of that Act joint-stock banks could be formed outside 65 miles of London, provided they had no London offices, and these banks could issue notes payable on demand. The same Act prohibited the issue of notes for less than £5.² This latter provision was intended as a protection to the poorer members of the community in the event of failure, although experience in Scotland showed that £1 notes were generally acceptable and occasioned no danger, provided the issuing bank was well conducted and enjoyed a good reputation.

In 1833 a further change was made. Joint-stock banks were allowed to exist within the 65-mile radius, but the Bank of England retained its monopoly of note issue inside that area. Moreover, banks formed under the Act of 1826 were allowed to issue notes payable in London although not issued there, and to have London agents. In 1834 the London and Westminster Bank was formed, in 1836 the London Joint-Stock Bank, and in 1839 the Union and London and County Banks. Of the present-day "Big Five" only the Westminster Bank had its origin in London. The Midland Bank, Lloyds, Barclays, and the National Provincial Banks had "country" origins.

But the London joint-stock banks were still unfavourably placed. The Act of 1826 applied only to banks formed outside the 65-mile radius, and the London banks could neither sue nor be sued. They were refused admittance to the Clearing House, and were opposed by both the private banks and the Bank of England. The latter, for example, refused to grant the Westminster Bank a drawing account except on

¹ An Act for the better regulating co-partnership of certain bankers in England. (7 Geo. IV, c. 46.)

² For the vicissitudes in the Government's policy on this point, cf. Clapham, *An Economic History of Modern Britain*, p. 264.

prohibitive terms. This opposition was also directed against the joint-stock issue banks which were authorized by the Act of 1826, and the Bank of England adopted a policy of refusing any bill bearing the endorsement of a joint-stock bank. The hostility, however, gradually broke down as the "new" banking conducted by joint-stock institutions without note-issuing powers developed. In 1844 the legal disability of the London joint-stock banks was removed, enabling them to be sued and to sue. From 6th May, 1844, all banking partnerships of more than seven persons had to be incorporated under letters patent, and in 1857 the joint-stock banks were granted limited liability.

The preceding paragraphs relate to the development of banking and of the note issue up to the late war. By the Currency and Bank Notes Act of 8th August, 1914, a new form of paper money was introduced. The conditions under which that issue was made will be examined later; for the present it is sufficient to notice its nature. The amount of the issue was left to the discretion of the Treasury, and no requirements were prescribed as to the amount of metallic cover to be held. To some extent, however, the Treasury Notes were substituted for gold sovereigns and half-sovereigns which were withdrawn from circulation, and to that extent they did not involve an increase in the total circulation. But the amount of notes issued greatly exceeded the amount of gold coin withdrawn. The withdrawal of gold from circulation enabled the gold reserves of the country to be mobilized so that they could be employed more effectively if required. Treasury notes were legally convertible into gold at the Bank of England, but the free use of gold by the public was restricted. Gold coins could not be melted into bullion nor could private persons export gold abroad.

The Currency Note Commissioners, moreover, were not obliged to hold the equivalent of the sovereign in gold for every pound note which they issued. In part there was a metallic cover together with Bank of England notes and deposits at the Bank of England, both of which could be exchanged for gold. But the bulk of the Currency Note issue was covered simply by Government securities. To that extent the notes were issued upon the nation's credit. Thus at the end of August, 1926, of £303,000,000 of Currency Notes and Certificates issued, £240,000,000, or fully 79 per cent, were covered by Government securities. As we have seen, the Currency Note issue was amalgamated with that of the Bank of England in November, 1928.

Other countries¹ have adopted different methods of regulating their issues. In the United States the Federal Reserve System, which was instituted in 1913 and which reorganized the entire banking system of the country, was an attempt to provide an elastic note issue, and provision was made that the reserve banks should hold a gold reserve of at least 40 per cent of their notes, but this might be temporarily relaxed upon payment of a graduated tax on the amount of the deficiency. In France, where the Bank of France enjoyed a monopoly of issue from 1848, a different method was followed. Legal maxima were periodically determined, and these were revised as circumstances warranted. In June, 1928, a proportional reserve system was adopted, 35 per cent of the issue being backed by gold. In Germany, the Reichsbank is obliged to hold 40 per cent of its note issue in the form of specie and foreign bills of exchange, at least 30 per cent being in actual gold; the remaining three-fifths may be held in the form of good bills. Provision was made, however, which enabled the

¹ See also Chapter 'XI.

legal maximum circulation to be exceeded upon payment of a graduated tax on the amount of the deficiency. In other countries different proportions of the note issue to be covered by specie have, therefore, been adopted. It can be seen, however, in what way a system of proportionate cover gives rise to a more elastic note issue than that which prevails in this country. In this country an increase or decrease in the gold holding of the Issue department of the Bank of England means an equal increase or decrease in the note issue. If, on the other hand, the prescribed gold cover was one-third, then an increase in the gold holding would enable the note issue to be increased by three times as much, while a decrease in the gold holding would involve a contraction by three times that amount in the note issue.

CHAPTER VII

DEPOSIT BANKING

IN the outline which has already been given of the development of joint-stock banking in England reference was made to the growth of institutions without powers of note-issue. That points to the existence of a type of banking, generally known as deposit banking, which is particularly characteristic of this country and the United States. Its growth is associated with the "invention" of the cheque, and it is necessary at this stage to analyse this aspect of the general banking system.

Some general idea as to the nature of banking has already been given. If we set aside the task of simplifying and regularizing the circulating currency of the country—a task which is now either performed or controlled by the State—banks may be said to exist for the purposes of receiving deposits from the public and granting loans to borrowers against suitable security. In addition, they render facilities for the convenient transfer of funds between persons resident either within the one country or in different countries. Much of that work, given the integrity of those engaged in the business, will be straightforward and of comparative simplicity, but careful judgment has to be exercised in the matter of loans since for the most part the bank is a trustee acting on behalf of its depositors in respect of sums so lodged.

At the outset it is worth while to consider the lending function performed by banks. The borrower desires a certain amount of purchasing power to supplement

what he already has in order to extend his business, or purchase raw materials, or pay wages and other expenses of production. Or it may be that he has already sold goods to customers under an agreement that payment will be made one, three, or six months later. In that case he will hold bills, or promises to pay, signed by his customers and payable at some date specified. But if he has payments to make beyond his immediate liquid resources he will desire to convert those dated bills into ready money, and he will approach his bank to that end. The first case represents a direct loan by the bank to the borrower against suitable security. The second represents a "discount," i.e. the bank purchases the commercial bill from the holder of it in exchange for ready money. The difference between a loan and a discount is technical. For a loan, a bank will charge a given rate of interest on the principal of the loan. But when a bill is discounted at a bank the original holder of the bill receives its face value *less* the interest on the amount of the bill at the current rate of discount. Thus, if a bill for £100, payable in three months, is discounted at the rate of 4 per cent per annum, the bank will pay over £99 to the holder who desires to discount it; the difference of £1 representing the interest on £100 for three months at 4 per cent per annum. If the rate of discount fell to 3 per cent per annum the bank would pay over £99 5s.; if it rose to 5 per cent per annum the bank would pay over £98 15s.

The bank, having discounted the bill for its customer, has conducted what is virtually a purchase, and when the bill falls due at the end of the stated period the bank will be entitled to receive £100 from the person on whom the bill is drawn. If the first holder of the bill endorsed it before presenting it to the bank for discount, he would be liable to honour its payment to the bank in the

event of the default of the person on whom it was drawn. To that extent there is an apparent similarity between the loan and the discount. A more complicated case arises where the customer offers for discount a bill which he draws upon himself and secured by another bill drawn on a customer or by stocks or other pledges. Variations of this kind, however, only affect the details of the transaction and not the banking principle.

Having received a loan from, or had a bill discounted by, the bank, the customer becomes entitled to draw from the bank an agreed sum of money. The bank can then be said to have placed that sum of money to the credit of the borrower, and if the customer already has a deposit account with the bank the credit which has been received will be added to his deposit in the books of the bank. It has to be remembered that the transaction is an exchange between the bank and its customer. By adding to the customer's deposit, the bank has increased its liability, but by purchasing the bill it has added an equal amount to its assets. In the case of a simple loan, the result is the same; some form of security will appear on the assets side of the bank's balance sheet to correspond with the increased liability in respect of deposits; and the balance sheet remains balanced. The transaction which has been effected is an exchange of rights, the bank giving a right to receive money now in exchange for a right to receive money at some date ahead.

It is in that sense that loans and discounts are sometimes spoken of as "creating deposits," although the phrase is perhaps an unhappy one. But deposits also arise apart from such loans. It has already been shown that banks originated as places for the safe keeping of money and valuables which were not required at once

by their owners. In that case a deposit will arise when a customer lodges "idle" money with his bank. The customer is entitled to draw that money on demand; his deposit is a liability of the bank; the money lodged is an asset.

It is now possible to understand the manner in which bank-notes pass into circulation. It has been shown that the bank-note is by its nature a promise to pay a certain sum on demand. Banks which are allowed to issue notes can, therefore, grant loans or discounts in the form of notes, provided these notes are acceptable by their customers. The process implies further that other people are willing to accept the bank's promises to pay so that they circulate as money substitutes. The notes issued then become liabilities of the bank which issued them, but in this case the procedure does not involve any addition to deposit liabilities. The difference, however, is again one of form and not of essence. The extent to which either method is adopted is one of custom and usage, which varies as between different countries.

It will be apparent, therefore, from what has been said that if deposit banking is to be conducted without the right of note-issue there must be some mechanism which will enable the deposits to be operated. It has already been indicated in the historical account of the development of joint-stock banking in England that it was long supposed that banks could not exist without the right of note-issue. Since then the use of the cheque has rapidly developed. The origin of this practice is not known. It is referred to in the *New English Dictionary* of 1774, but was in use much earlier.¹ And it was with the extended use of this instrument that deposit banking developed. By means of the cheque a customer of a

¹ The oldest cheque on record is dated 14th August, 1675.

bank can liquidate a debt to another customer without actually drawing money. A cheque thus constitutes an order by the drawer of it to the bank on which it is drawn to pay the amount stated to the person named. If the latter is a customer of the same bank and pays the cheque received into his "current account," the final result is that the amount specified is transferred from the deposit of the debtor to the deposit of the creditor. By this simple expedient a settlement of the indebtedness is effected under conditions of safety and convenience.

An arrangement of this kind makes it less necessary for persons with bank accounts to carry with them as much ready money as would otherwise be the case. To that extent an economy in the use of gold is effected, and the economy secured is of considerable importance. But it cannot be measured. "We may know," says Dr. Cannan,¹ "that we keep an average of £10 a head in currency now, when we have banks, but we cannot form the wildest guess how much we should keep if there were no banks. Some of us would probably never have been born: the whole situation of the world would be different."

The simple case of the settlement of a debt by cheque cited above assumed that debtor and creditor were customers of the same bank. But it might happen that the creditor who received the cheque was a customer of some other bank. Where there are several banks and large numbers of cross-payments of this kind, a final settlement is effected through the Clearing House. Let us suppose that bank A has had paid into it in the course of a day cheques to a total of £100,000 drawn on bank B, and that the latter has received cheques to a total of £80,000 on bank A. A certain cancellation of mutual

¹ *Money*, Fourth Edition, p. 80.

indebtedness can then be effected, and on balance a payment of £20,000 is due from bank B to bank A. In this country, all the banks keep deposits with the Bank of England, so that the final settlement can be effected if bank B draws a cheque on itself in favour of bank A to the amount of the final balance due, and by two book entries that sum will be transferred from B's account to A's account at the Bank of England.

In the early days what happened was that the banks sent out clerks with all the claims which they had received on other banks, and these clerks called on the other banks and received payment. Then some of the clerks developed the habit of meeting in Change Alley in London for the purpose of exchanging cheques, leaving only the balances to be settled in notes or gold. Then about 1775 it was suggested that a room should be hired for the purpose. This was done, and from that time the Clearing House developed into an important institution.

In Scotland, however, a clearing system existed rather earlier. By 1752 there was a clearing for the notes of the Bank of Scotland and the Royal and British Linen Banks. In London the Clearing House only existed for the private banks up to 1854, when the joint-stock banks were first admitted. We can now distinguish Town, Metropolitan, Country, and Provincial Clearings. The Town Clearing is the original one in London. The Metropolitan was instituted in 1907, and was created for the clearing of cheques, etc., on various branches outside the City of London proper, but still within a certain radius of Lombard Street. The Country Clearing was instituted in 1858, and deals only in cheques drawn outside of London on the London banks. Then there are a number of Provincial

Clearing Houses in the larger towns, and these deal with local business.¹

To turn to the Banking department of the Bank of England, the following table gives the return for the week ending 1st July, 1931—

BANKING DEPARTMENT

	£		£
Proprietors' Capital . . .	£14,553,000	Government Securities . .	32,930,966
Rest . . .	3,449,351	Other Securities—	
Public Deposits* . . .	11,490,117	Discounts and	
Other Deposits—		Advances . . .	£34,319,360
Bankers . . .	£99,401,807	Securities . . .	28,746,172
Other Accounts . . .	34,091,264		63,065,472
	133,493,071	Notes . . .	65,842,287
Seven-day and other Bills . .	2,494	Gold and Silver Coin . .	1,149,368
	£162,988,033		£162,988,033

* Including Exchequer, Savings Banks, Commissioners of National Debt, and Dividend Account.

The item of "Proprietors' capital" has remained unchanged since 1833, having been repeatedly raised from its original figure of £1,200,000 in 1694 when the bank was instituted. The "Rest" consists of undistributed profits, but for many years it has been part of the bank's policy not to allow this item to fall below the figure of £3,000,000. The amount in excess of this figure provides the source of the half-yearly dividend to stockholders. "Public deposits" consist of funds of the various Government departments held with the Bank, together with balances of the Secretary of State for India and other "official" accounts. It is an item which reflects definite seasonal movements. From the end of the calendar year on to March of the following year,

¹ The total clearings effected through the Clearing Houses of England and Wales in 1929 amounted to £46,495 millions, but this figure does not represent the total of cheque transactions, since it does not include *internal* clearings within each bank. Mr. Keynes suggests that, in order to estimate the total of cheque transactions, an addition of at least 35 per cent should be made to the total recorded clearings. To include Scotland, a further addition of about 10 per cent would probably be necessary. (Cf. Keynes, *A Treatise on Money*, Vol. II, p. 32.)

Government receipts from taxation are large, and these are paid into the Bank, so that this item increases, and a similar movement occurs in July and August when the second instalment of income tax is payable.

“Other deposits” constitute the largest single item in the balance sheet. They include the deposits of all the customers of the Bank apart from the Government. Of these other customers the other banks are of most importance, for the Bank of England acts as a bankers’ bank as well as a bank for the Government. Each of the clearing banks keeps an account with the Bank of England, and in the case of a clearing settlement as already described, that settlement is made by the particular bank which draws a cheque to the amount of the settlement against its deposits at the Bank of England and in favour of the other bank to which the settlement is due. The item of “Seven-day and other bills” is of small and declining importance. At the end of 1890 they amounted to £178,000; now they are about £3,000. They consist of bills issued to customers free of stamp duty and commission, not payable on demand but generally seven days after sight. They were originally issued in the early eighteenth century, when highway robberies were frequent, so that in the event of such a robbery occurring to the mails the proprietor might have time in which to give notice.

On the assets side of the balance sheet there are four items. The first is “Government securities,” and includes the Bank’s holding of Consols and other Government stocks, together with Ways and Means and Deficiency Advances which the Government may secure as temporary overdrafts to cover periods when incoming revenue is inadequate to meet outgoing expenditure. “Other securities” include all the investments in stocks

apart from Government securities, together with the Bank's holding of discounted bills and advances to customers on security. "Notes" and "Gold and Silver coin" make up the cash reserve of the bank, and the ratio of this cash reserve to the deposit liabilities is closely watched. Before the war it varied from 30 to 50 per cent, but since the war it has been much lower, and in the statement cited above the proportion was approximately 46 per cent.

A typical balance sheet of a joint-stock bank is given on page 79.

The "Capital" specified is the paid-up as distinct from the nominal capital subscribed by the stockholders or proprietors of the bank, and the uncalled portion of the capital subscribed may be regarded as a special reserve or security for the customers of the bank. The "Reserve Fund" is of a somewhat similar character. It represents profits which the bank has not divided among the stockholders and corresponds to the "Rest" in the weekly returns of the Bank of England. Frequently the Reserve Fund of a joint-stock bank is kept at an amount approximately equal to the paid-up capital, and for practical purposes both may be included under the head of the bank's capital. The third item—"Current, deposit, and other accounts"—indicates the total liability of the bank to the public. Greater information as regards its composition is now available. There is the distinction, for example, between what might be called "time" and "sight" (or "demand") deposits; time deposits representing sums which can only be withdrawn after a specified period of notice, and sight deposits being withdrawable at any time on demand by the depositors. In America these two items have to be specified separately, but in this country no definite published information showing

their respective movements has been available till recently. Dr. Leaf,¹ however, points out that whereas in Scotland and Ireland the deposit accounts generally exceed the current accounts, in England the contrary generally prevails. But the magnitude of the deposit accounts—i.e. deposits which earn interest and often withdrawable only on notice—will be affected by changes in the rate of interest obtainable.

Still greater obscurity prevails as to the "Other" accounts which are included in this general item of liabilities, and Dr. Leaf suggests that they include mainly hidden reserves, "including whatever provision has been made for bad and doubtful debts, for depreciation of investments, and for various funds of the nature of insurance against eventualities which every prudent banker keeps in hand. Moreover, there are wrapped up under this head, to be produced only at the annual stocktaking, the profits which are accumulating during the year."

The last item on the liabilities side of the balance sheet is that of "Acceptances, endorsements, etc.," and it will be noticed that a corresponding figure appears on the other side of the balance sheet. These acceptances represent part of the bank's activity in respect of foreign trade where certain foreign bills have been guaranteed by the bank in question. There are, therefore, two contra accounts. If the person or firm liable to meet the bill when it falls due fails to do so, the acceptor of the bill (in this case the bank) will be liable. What has probably happened is that certain customers of the bank have been allowed to import goods from abroad, and the foreign exporters were instructed to draw bills upon the bank against the dispatch of the goods. But since the war the joint-stock banks have

¹ *Banking*, p. 124. Cf. also p. 22 *supra*.

conducted a growing volume of forward exchange business, and part of the accountancy of that business is included under this head. Actual practice, however, varies considerably as between the different banks.

<i>Liabilities</i>		<i>Assets</i>	
	£. m.		£. m.
Capital (paid-up)	12	Cash in hand and balance with the Bank of England . . .	35
Reserve fund	8	Cheques in transit	8
Current, deposit, and other ac- counts	366	Money at call and short notice .	25
Acceptances, endorsements, etc.	14	Investments	62
		Bills discounted	35
		Advances to customers . . .	210
		Liability for acceptances . .	14
		Investments in affiliated banks .	5
		Bank premises	6
	<u>£400</u>		<u>£400</u>

On the assets side, the first item—"Cash in hand and balance with the Bank of England"—is the liquid cash reserves of the bank against its deposit liabilities. "Cheques in transit" are cheques which have been returned from branches, but which have not yet been passed through the clearing. "Money at call and short notice" represents sums advanced for short periods up to fourteen days either to bill-brokers or to members of the Stock Exchange. This item constitutes a second line of reserve in respect of liquidity. The security against which these loans are made is very high, and the shortness of their duration enables the banks to have ready money at early call should they require to supplement their holding of cash in hand. The item of "Investments" consists mainly of Government securities purchased and held by the bank. From this item an important source of income to the bank may be secured, and in normal times these securities are readily realizable, but in time of crisis they may not be so readily saleable except at some loss in capital values.

"Bills discounted" represents bills of exchange which the bank has discounted for its customers and which it

holds until maturity. The next item—"Advances to customers"—constitutes the largest single item on the side of assets. These loans are for trade purposes apart from the discount of foreign bills, and relate mainly to domestic trade. It is here that the discriminating function of modern banking is perhaps chiefly in evidence. The bank in granting loans to customers must have regard to the preservation of its solvency, and cannot, therefore, afford to "tie up its money" in highly speculative enterprises or in forms which do not afford reasonable security and straightforward repayment. But there is always the temptation to lend too freely since the bulk of the bank's profits are earned in respect of advances to industry. There are, therefore, two opposite sets of influences—the one urging to caution and the other to liberality.

In a general sense it may be said that a developed banking system facilitates the transfer of capital into those avenues of employment where it is most wanted. It leads in the first instance to the collection of idle funds which individuals and business concerns have for the time being, and these resources are concentrated and made available for suitable borrowers. The supply of capital for the business needs of the community is increased, and trade and industry enjoy the advantage that loans and discounts can be obtained at rates of interest which are lower than would otherwise be possible. It is a general observation that interest rates are higher in those countries where the credit system is unstable or undeveloped.

In addition to this advantage of comparative cheapness, the credit system involves a saving of time in industrial and commercial enterprise. Apart from such a system, a business which contemplated some new development would require to postpone that undertaking

until it had saved the necessary capital. But if facilities exist whereby the necessary capital can be borrowed either in whole or in part, the new development may be commenced with considerably less delay. And this may be of importance where much depends upon the seizing of an immediate opportunity.

The provisional view of banking implied that the banks obtained resources through the deposit by customers of idle funds which supplemented the capital subscribed by the stockholders. These deposited resources will have been placed at the disposal of the banks because of the greater convenience obtained, together with the inducement of an interest payment and the facilities of the cheque system. This command over real resources may then be transferred to borrowers in the form of loans. But experience shows that the cash reserves of the banks may be more than sufficient to meet the probable demands for withdrawals, and to that extent loans may be increased. The point of difference is that whereas in the first instance deposits lead to loans, in the second loans lead to deposits. In earlier times a banker granted a loan to a customer by handing over his own notes; in modern times the borrower secures a credit and his deposit account is increased accordingly. In the books of the bank the operation is reflected by an increase under the head of "Advances" and a corresponding increase under the head of "Deposits." But the borrower does not borrow without the intention of employing his loan in making purchases. He may do so either by drawing cheques or by drawing coin and notes. If he does the latter the cash holding of the bank will be reduced, but the cash withdrawn may in time be returned to the banks as a whole by shop-keepers and others to whom these notes and coins have been paid. If the borrower

draws cheques these will be paid by those who receive them into their bank accounts. The original borrower will find his deposit reduced, but those who receive payment from him will find their deposits increased.

In point of law in this country the issue of notes is strictly limited, but there are no legal limits to the extent to which the banks can make loans by adding to checkable deposits. The limits which do exist are not of a legal order. But, before considering these limits in practice, certain implications of the common statement that "every loan creates a deposit" may be considered. The statement cited is in some respects a dangerous type of half-truth. When a bank grants a loan to a customer in the manner described, it does not follow that there has occurred a net increase in the volume of credit. If a loan creates a deposit, a repayment of a loan destroys a deposit. Thus, A may borrow £1,000 from his bank, pay that sum by cheque to B, who in turn pays off a debt which he had already contracted with his bank. To that extent the new loan is offset by the liquidation of an old loan.

There is a danger also that the statement cited may be so misinterpreted that it is taken to mean that if deposits increase that is the result solely of increased loans by the banks. Such an interpretation is without warrant. It might be, for example, that the banks had not increased their loans or discounts but increased their investments. Thus, if a bank decided to purchase securities, it would do so by giving the sellers of these securities the right to draw cheques against an increased total of deposits. The purchase of £100,000 of securities will be reflected by an increase in the books of the banks as a whole under the head of "Securities" and a corresponding increase under the head of "Deposits." Again, deposits may be increased as a result of gold imports.

Thus, an importer of gold might sell that gold to the Bank of England and pay the proceeds into his own bank account. In general, therefore, the relationship between loans and deposits is much less simple than might at first be imagined.

It has been said that in this country there are no legal limits to the extent to which banks can make loans, provided these loans are not in the form of notes. Important practical limits nevertheless exist. A bank which increases its deposit liabilities in the manner which has been described does not by the same process increase its cash reserves. And if loans are made too freely the ratio of the cash reserve to the deposit liabilities will decline. In fact, a bank in following its ordinary policy is attracted in two opposite directions. The more it lends the larger will its profits tend to be. That is the influence which makes for easy lending. But prudence requires the maintenance of adequate cash reserves in relation to deposit liabilities. That is the restricting influence. The actual ratio will be arrived at through experience in the working of the banking system.

It will be found that as regards the large joint-stock banks in this country it is usual for a ratio of cash reserves to deposit liabilities of from 11 to 12 per cent to be maintained. But this is not a rigid figure. Some banks find it prudent to maintain a somewhat larger ratio. Much will depend upon the nature of the liabilities. The cash reserves so maintained by the banks are somewhat composite. They include what might be called "till money," but they also include sums held on deposit at the Bank of England, and these sums are included in the total of "Other deposits" in the weekly balance sheet of that Bank.

In the same way the Bank of England keeps a cash

reserve against its deposit liabilities and that reserve consists, as already indicated, of notes and gold and silver coin. The Bank of England, however, keeps a larger ratio of cash to deposits than do the other banks.

The questions then arise as to why a reserve in cash should be important, and how a satisfactory reserve is arrived at. The answer to the first question is that while people may largely make payments by means of cheques, they are still entitled, if they so choose, to draw cash, i.e. "to cash cheques." In other words, deposits are convertible into cash. In point of fact only a certain demand for cash will be made, but there are some transactions and payments for which people only employ cash, and to that extent the banks must hold a sufficient cash reserve to meet these calls.

The second question is more complicated. Following an example of Mr. D. H. Robertson, in his *Money*, we might suppose the case of a perfectly uniform banking system which pays out regularly each day a certain amount of cash to one set of customers and receives equally regularly an equivalent amount of cash from another set of customers; i.e. there is a regular and steady circulation. Under these conditions the outflow and inflow of cash would be uniform and equal in amount, and the bank would not require to hold any standing reserve of cash idle in its vaults.

But since these conditions hardly obtain in practice it is expedient for the banks to hold some cash reserve, although the amount might possibly vary. Thus, if there were seasonal movements—in some seasons more cash being paid out, in others more cash being paid in—there might be seasonal variations in the ratio of cash to deposits. In practice, no such seasonal movements in the ratio occur, except, perhaps, for "window

“dressing” purposes at the end of the financial year when the ratio is somewhat raised. The actual ratio adopted is a compromise. It is probably larger than is actually necessary.

It is not as large as would be necessary if all deposits were cashed at once. And it depends also upon public confidence. If the public should consider the cash reserves to be too low, confidence in the bank would be weakened and cash would be withdrawn on a scale which would show that the reserves in cash were too low. But provided banking habits are established and confidence is preserved, quite low ratios are possible.

The banks clearly cannot manufacture cash; consequently there is a limit to the extent to which they can make loans to trade and industry. But they will be inclined to keep cash reserves at as low a level as is expedient in the interests of prudent policy. As already shown, moreover, they have a second line reserve in the form of “money at call and short notice.” In most cases, the English practice of leaving the ratio of cash to deposits to the free judgment of the banks is adopted. But there is an important exception in the case of the United States. Under the Federal Reserve system, which dates from 1913, the Federal Reserve Banks are obliged to hold a minimum reserve in legal tender of 35 per cent of their demand deposits, and other member banks must hold minimum reserves (of smaller proportion) on deposit with the Federal Reserve Banks. This practice has been criticized on the grounds of its rigidity. If a minimum reserve of 35 per cent is prescribed, banks may tend to adhere to that minimum and to do so closely. If the actual reserve is just at the minimum even a small demand for cash will reduce the ratio below the prescribed amount, and a drain on

these cash reserves may involve a sudden and severe credit restriction. Partly for these reasons, therefore, supplementary arrangements have been devised for enabling the rigid ratio to be ignored under certain circumstances, and on payment of a tax by the bank.

CHAPTER VIII

THE FOREIGN EXCHANGES

COMMERCIAL and financial transactions between individuals in different countries give rise to an elaborate network of debits and credits. The individual in Lancashire who buys raw cotton from America will require to provide funds to pay for his purchase and the payment is likely to be required in dollars. The German merchant who imports British coal will require to provide payment in pounds to the British exporter. The underlying economic conditions which give rise to international trade are similar to those which give rise to domestic trade. It remains to consider the means whereby debts arising from these and other international transactions are liquidated. That is to introduce the very complicated subject of the foreign exchanges which concerns the mechanism whereby one currency may be exchanged for another. The rate of exchange is simply the price of one currency in terms of another. For example, if the dollar exchange is quoted at \$4.86 that means that in the foreign exchange market anyone who wanted \$486 could obtain them on that day for £100. And the question which arises is: How is that price determined?

We may answer the question first by referring to gold standard countries. The Cunliffe Committee, which was appointed in 1918, gave the following summary definition of the gold standard and its implications—

The essence of such a standard is that notes must always stand at absolute parity with gold coins of equivalent face value, and that both notes and gold coins stand at absolute

parity with gold bullion. When these conditions are fulfilled, the foreign exchange rates with all countries possessing an effective gold standard are maintained at or within the gold specie points.

This quotation does not fully answer the question which has been raised, but in the light of the earlier chapters it points the way.

Gold may be said to be the only international currency, and it may be used to liquidate debts due to other countries. It is possible, however, to devise means of economizing in the use of gold for this purpose. We have found that in gold standard countries the standard of value is a fixed weight of gold, not always the same weight, but still a fixed weight. Once we know these various weights we can determine for any given weight of gold its equivalent value in terms of some other currency. For example, the British sovereign weighs 123.274 grains of standard gold, eleven-twelfths fine, while in the United States a ten-dollar piece weighs 258 grains of standard gold, with a standard of fineness of nine-tenths. Consequently, there is the same weight of pure gold in the sovereign as in \$4.86 $\frac{2}{3}$. By the same method it would be found that there was the same weight of gold in the sovereign as in 20.429 marks. Under gold standard conditions these constitute what are called the "mint pars of exchange," or "gold parities"; and they represent the normal exchange rates ruling in the market.

The general mechanism of the foreign exchanges is perhaps best and most simply described in terms of foreign bills. It may be supposed that as between France and Germany, a French importer, A, buys coal from a German exporter, B, worth so much gold, and a German merchant, C, buys silk from a French merchant, D, worth the same amount of gold. If payment was

actually made in gold, the same amount of metal would have to pass from France to Germany and back again to France. As it happens, A owes B, and C owes the same amount to D. But A and D are in the same country with the same local currency, and B and C are in the same other country with another local currency. Consequently, there will be a saving in trouble and expense if A pays D in France and C pays B in Germany. How is this to be done?

Suppose B in Germany, who has sold coal to A in France, draws a bill on A to the value of the consignment. The Bills of Exchange Act of 1882 defines a bill of exchange as "an unconditional order in writing, addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand or at a fixed or determinate future time a sum certain in money to or to the order of a specified person, or to bearer." The bill is then sent to A, who "accepts" it or has it accepted for him by his bank, and returned to B who may sell it to C in Germany. C, who has a debt due to D in France, sends the bill to D in payment, and D on presenting it on maturity to A in France receives payment. Thus, the two debts are settled without the actual transfer of gold between the two countries.

The foregoing represents the underlying principle apart from complications of technique and mechanism. But it may be well at this stage to indicate the more important instruments which are actually employed for the purpose and their implications. The "foreign bill" is a generic term. It may include such different instruments as cheques, demand drafts, and long drafts. It also includes bonds and coupons used for the same purpose.

Anyone who has travelled abroad in recent years

knows that it is often convenient to carry a certain number of British bank-notes which may be converted into foreign currency at the principal banks. Alternatively, a letter of credit may be used. In that case the individual secures such a letter from his bank for a certain sum which he pays in sterling, and on presentation at the corresponding banks abroad he obtains foreign currency. The amounts thus obtained are deducted from his credit as indicated by the letter, and on his return to this country any unused balance may be liquidated. This method has the advantage that it provides security against the possible loss or theft of bank-notes.

But these are hardly the principal instruments for effecting payments abroad. The foreign dated bill was chiefly used until quite recent years, and most of the exchange rates were quoted for bills due sixty days or three months after sight. That means that the person who drew the bill, or his agent, is due to receive payment from the person on whom the bill is drawn, or his agent, sixty days or three months after sight of the bill, plus the usual period of three days' grace. If, in the meantime, the holder of such a dated bill desired cash before the bill matured, he could discount the bill with a bank, i.e. he would sell the bill to the discounting house and receive the face value of the bill less an amount representing the rate of discount on the sum advanced.

More recent developments, however, have given greater importance to the foreign draft and telegraphic transfer. A foreign draft is similar to an ordinary cheque as used in this country. It is issued by a British bank to a customer who requires to make payment abroad, and it is in effect an order addressed by that British bank to its foreign correspondent (or it might be simply to a foreign branch of the bank) authorizing that

correspondent to pay the amount stated in foreign currency to the person named on the draft. The customer who obtains the draft pays the British bank in sterling and sends the draft to his creditor abroad, who obtains payment from the issuing bank's foreign correspondent, and that foreign correspondent deducts the amount from the issuing bank's account.

A telegraphic transfer, or T.T., is quicker. Most banks keep credit balances with their agents abroad, and these are known as "Nostro" accounts. A customer of a British bank desiring to make quick payment may, under these conditions, instruct his bank to authorize payment, say, in New York, and the British bank instructs its New York correspondent by cable or telegram in code to pay over the amount to its customer's creditor and debit the amount to the Nostro account of the British bank.

It is evident that these various instruments have different characteristics. The length of the bill may vary and a usual distinction is that drawn between "long bills" and "short bills," the latter being bills with not more than thirty days to run before maturity, the former having a greater number. In the case of commercial bills, i.e. bills drawn by commercial houses on commercial houses or banks abroad, another distinction is drawn between "clean" and "documentary" bills. A documentary bill is one which carries with it bills of lading and other certificates, such as insurance, and the bill of lading is in effect a title to the ownership of the goods which have been shipped. A clean bill has no such documents attached to it. The holder of a documentary bill, therefore, has the additional security that if the bill is not met when it is due the consignment in respect of which the bill was drawn becomes the property of that holder. In some cases, however, the

drawer of the bill arranges that when the drawee has accepted the bill he shall receive the bills of lading, and the bill is then described as an "acceptance bill." But in other cases, the bills of lading will only be surrendered to the drawee after the draft has been paid, and the bill is then described as a "payment bill." The use of the one or the other will depend clearly upon the financial standing of the drawee in the opinion of the drawer of the bill, because if the bill is not honoured the bank will have recourse upon that drawer.

The price of a bill will also depend upon its quality, and when the price of any class of bill is quoted that quotation refers to the best type of bill of that class, i.e. a prime bill. A documentary bill drawn by a mercantile house of high standing will fetch a better price than a similar bill drawn by a house which is little known. In the case of bank bills there is less variation, but there will be a variation in respect of bills of different lengths. Suppose, for example, it takes a week to send a banker's sight draft from London to New York, then a purchaser of such a draft in London pays sterling at once, but the bank's credit in New York is not affected until the draft has arrived in New York and is presented. During that period the bank continues to earn interest on its money as distinct from what would happen had a cable transfer been used. Consequently, the bank will charge less to its customer for a sight draft than for a cable transfer. In the same manner, and within the same grade of dated bills there will be differences in price according to the varying lengths of the bills. If a sight draft is used the bank does not make payment for, say, a week as in the above case. If a three-months-after-sight bill is used the bank has the use of its money for a still longer period, so that again a long-dated bill will be cheaper to a purchaser than a short-dated bill.

The previous discussion may have served to elucidate the mechanism through which actual rates of exchange are determined. The foreign exchange market itself may be said to be a clearing house for international debts, and some idea has already been given of the various instruments which are employed to effect these transactions. It was also indicated that as between gold standard countries there were fixed gold parities, and that these constituted the normal exchange rates under gold standard conditions. But are these normal rates the actual rates at any time?

The individual in London who wishes to remit francs to Paris may go to his London bank and purchase a telegraphic transfer or a sight draft. The meanings of these terms were explained in the preceding paragraphs. They are, in effect, promises to pay francs on the part of the bank. But the individual in question will not use this method of remittance if a cheaper and alternative method is available. He might, for example, have bought gold from the Bank of England at a fixed price by offering Bank of England notes, and sent this gold to his Paris creditor. This would involve a certain cost for insurance and freight, but under certain conditions it might be cheaper to adopt this method than to purchase a bill of exchange. Suppose now that it costs 50 centimes per £ to send gold either from London to Paris or in the reverse direction. In that case, the London debtor who has to remit to Paris would not be willing to buy a draft at a rate of exchange below 123·71 francs to the £—i.e. the mint par minus 50 centimes. If the rate for a telegraphic transfer was, say, 123 francs, it would be cheaper to send gold in payment of the debt. In the same way, if a London creditor held a draft in francs he might either sell it in London at the rate for drafts, or he might take the trouble to send the draft to

Paris, convert the proceeds into gold and ship the gold to London for sale in the bullion market. Obviously, the latter alternative would not be adopted unless there was an advantage in so doing. But there would be an advantage in adopting the alternative if the rate of exchange rose above 124·71 francs to the £—i.e. the mint par plus 50 centimes.

Actual shipments of gold are not likely to be made in normal times by individuals, but financial houses have greater facilities for the purpose. But the general principle is not invalidated. What we have found is that under gold standard conditions there are two points on either side of the gold par of exchange, and these are likely to constitute the outside limits to fluctuations in the actual rate of exchange. These are what are known as the “gold points” or “specie points” and they are determined by the cost of sending gold from one centre to another. Provided the cost of sending actual gold in the two directions remains unchanged, the price of bills will be limited in its variations by these two points. In respect of any gold standard country there is an “import gold-point” and an “export gold-point.” We are, therefore, now in a position from which we can begin to see the significance of gold movements as between two financial centres. If the rate of exchange or the price of bills of exchange tends to exceed the narrow limits set by the gold points, some gold movement from one country to another is likely to occur.

At any given moment there is a certain amount of indebtedness due by the inhabitants of a country to the inhabitants of other countries, and a certain amount of indebtedness due to the inhabitants of the first country by the inhabitants of other countries. In other words, in any financial centre there will be a demand for bills

and a supply of bills, and the price or rate of exchange will depend upon the relative magnitude of these two forces. If the demand in London for dollars exceeds the supply of dollars in the foreign exchange market the price of dollars in sterling will rise, i.e. a given number of pounds will buy a smaller number of dollars than before. If the supply of dollars exceeds the demand the price of dollars in sterling will fall, i.e. a given number of pounds will buy a greater number of dollars than before. Thus, in relation to the gold par of $\$4.86\frac{2}{3}$, the actual rate of exchange in the first case might fall to, say, $\$4.85$, and in the second it might rise to, say, $\$4.89$.

The question which next suggests itself concerns the composition of the demand for and the supply of a currency in the foreign exchange market. In that connection too much attention is often devoted to what is called the "balance of trade" as interpreted by the values of imports and exports of goods. It is frequently assumed that if our imports of goods from America exceed our exports of goods to America, we will owe to that country more than that country owes to us, the demand for dollars will exceed the supply of dollars, and the rate of exchange will move against us, i.e. the pound will be worth less than before in terms of dollars. Such a narrow interpretation of the country's trading position is quite invalid. The visible items of trade are not the only important items, and a mere reference to these visible items is generally misleading. The main consideration is that there are different amounts of indebtedness to be settled as between the two countries, and it does not matter to the foreign exchange market in what way and in respect of what items that indebtedness has arisen.

But even if we avoid the "balance of trade" fallacy

and make reliable estimates of the "balance of indebtedness," the problem is not completely solved. The element of time is very important, and what is true over a long period may throw little light upon the immediate position. On any day in the foreign exchange market the rate of exchange will depend upon the demand for and the supply of bills on that day and not upon the aggregate demand and supply over the period of a year. Moreover, fluctuations in the rate of exchange give rise to certain types of readjustment. As in other cases, changes in the price of a foreign currency affect the amount which is demanded.

Suppose, for example, that on any day the demand for dollars exceeds the supply of dollars in London. The rate of exchange will move against this country and in favour of America, i.e. the actual quotation will fall below the gold parity. That means that anyone in this country who has to remit dollars to America will find that owing to the fall in the rate it will cost him more in sterling to make the remittance. Consequently, a fall in the rate of exchange will make imports from America dear to British purchasers, and such imports will be discouraged. On the other hand, exports from this country will become cheaper to American purchasers, and these exports will be encouraged. Thus, if we suppose that when the rate of exchange is \$4.86 an American article costing \$486 can be bought for £100, if the rate falls to \$4.84 the same article would cost approximately 8s. more. A British article, in the same way, which cost £100 might be bought for \$486 when the exchange was at \$4.86 and for \$484 when the exchange was at \$4.84. Conversely, a rise in the rate of exchange will encourage imports to this country and discourage exports from this country. But, more generally, if the rate of

exchange has fallen owing to an excess of indebtedness by this country to America, the fall in the rate will set forces in operation which will tend to transfer resources more quickly to America in settlement of the adverse balance.

The exchanges will tend to be adverse to this country if the amount owed by this country abroad exceeds the amount owed to this country from abroad. That situation might occur if the banks in this country had been extending credit too freely, so that prices in this country rose above the level of world prices, for under these conditions this country would be a good place for foreigners to sell in and a bad place for them to buy from. Suppose now the exchanges became so adverse that the export gold-point was reached. Some gold would then flow abroad. If that continued for some time there would be two effects: (1) The export of gold itself would serve to liquidate part of the outstanding balance of indebtedness; but (2) the main function of the gold efflux is to introduce forces which will act as a corrective and restore a position of equilibrium. The export of gold will exercise some drain upon the reserves of the banking system and necessitate some contraction in credit and a fall in prices. At the same time, the inflow of gold to other countries will initiate an opposite movement and tend to raise prices in these countries. In short, the inducement for foreigners to sell in this country will be diminished since prices have fallen, and the inducement for foreigners to buy from this country will be increased, since prices elsewhere have risen. And in that way the adverse balance of indebtedness will be liquidated.

It is in the second sense that gold movements are really important, and it is rather misleading to adopt

the common view that "an adverse balance of indebtedness is paid in gold." These gold exports may only represent a small fraction of the actual adverse balance. The adverse balance, if it exists, is ultimately settled by an export of goods and services, and the real function of gold movements is to adjust the price levels at home and abroad in such a way that this liquidation is accomplished.

CHAPTER IX

GENERAL VIEW OF THE BRITISH MONEY MARKET

CERTAIN of the preceding chapters have been concerned with special branches of banking in its wide sense. It will, therefore, be convenient at this stage to give some account of the general structure of the system. Viewed in this way, the impression which is gathered is one of complexity and organization. Several different types of agencies undertake specialized forms of activity, but these activities are inter-related and an important power of regulation lies in the hands of the Bank of England itself.

The idea of the Bank of England as a central bank is not old. From its foundation in 1694 it has been closely associated with the Government. But in addition it acts as a bank for the other banks, which keep the bulk of their reserves on deposit with it, and hence the reserves of the banking system have come to be centralized. This line of development has greatly added to the responsibilities of the Bank of England, whose directors, as Bagehot pointed out, "are in fact, if not in name, trustees for the public, to keep a banking reserve on their behalf." In the early seventies of last century, when Bagehot made this remark, the implications of this responsibility were not fully recognized even by directors of the Bank. It was still imagined that the Bank of England was no more than one bank among other competitors, so that as regards reserves there was no reason why larger proportions should be preserved than prevailed with other similar institutions. What was overlooked was the fact that other institutions were not exactly

similar. The other banks, by depositing their reserves with the Bank of England, placed upon the latter the responsibility for meeting sudden demands. In times of crisis or panic, moreover, the Bank of England held the key to the situation. By an injudicious use of its reserves, or even a show of extreme caution, it might endanger the whole fabric of credit. By a bold use of its reserves it might successfully allay the panic. Nevertheless, the public duty of keeping the reserve of the banking system was not deliberately imposed upon the Bank. It was embodied in no resolution of Parliament, nor was it mentioned in the Bank's Charter of Incorporation. Bagehot showed that the responsibility was one which had evolved. And while no explicit statement of this duty has even yet been formulated, the older notion has been abandoned and a definite tradition now exists which regards the Bank as a national institution with a definite and unique function to perform.

Next in order must be considered the ordinary joint-stock banks and some small private banks. In 1930 twenty-eight such banks in Great Britain had capital and reserves amounting to the sum of £178,000,000, and deposits amounting to £2,260,000,000. The "Big Five" accounted for 66 and 75 per cent of these totals, respectively. The other banks are the institutions which undertake the ordinary banking business for the community. It is significant also of the important change in ideas regarding the Bank of England that the ordinary banks now recognize the leading rôle which falls to the central bank to perform. Definite relations are now preserved between the Bank of England and the clearing banks, and this tends to ensure the greater co-operation of the ordinary banks with the policy adopted by the central bank.

Overseas and foreign banks with offices in London constitute another important group. Next come a number of specialized institutions, such as accepting houses and discount houses. The former are mainly private businesses which work with their own capital and do not undertake ordinary deposit banking business. The names of Rothschild and Baring also point to the foreign influence which is marked in this line of business. In the seventeenth century Amsterdam was the mercantile and financial centre of the world, but for various reasons the importance of that city diminished, and from the beginning of the eighteenth century the centre of influence passed to London, where it has since remained.

Some idea of the nature of acceptance business has already been given. Where goods are sold abroad and bills of exchange are drawn upon the foreign importer, the latter is entitled to obtain possession of the goods on arrival, provided the bills are met. But it may happen that this arrangement would be inconvenient to the importer and that he requires credit for a certain period. On the other hand, it would not be satisfactory for the exporter in one country to grant credit directly to an importer in another country without some special knowledge which he is not likely to possess. Hence the specialized function of the accepting houses. These houses have representatives in all the important mercantile centres, and they have a specialized knowledge of both importers and exporters. What therefore happens under the conditions which have been described is that the exporter arranges to draw his bill not directly on the importer in the other country, but on the accepting house which has undertaken to guarantee the bill drawn by the exporter. The foreign bill having been accepted in

this manner by a house of high standing then acquires a quality which it would not have possessed had it been accepted simply by the relatively unknown importer. And in virtue of this quality of acceptance the exporter may sell his bill for ready money before it actually matures. The bill is then a recognized negotiable instrument and may be employed to liquidate debts as between different centres.

The accepting houses perform a special type of banking function, but they are not banks in the ordinary sense. Sometimes they are actual trading houses, but they do not accept deposits repayable on demand. They are also frequently concerned in matters relating to the issue of foreign government loans in London, but it is only with their acceptance business that we are here concerned. When the bills which they have accepted mature, they honour them and collect the amounts involved from the persons or firms on whose behalf the bills were accepted. What they do is to lend their names. The lending of money on the security of the accepted bills is a separate function. The part played by the discount houses or bill brokers must, therefore, next be considered.

A bill drawn on London as the "financial centre of the world"—whether on a bank or accepting house—is said to be "as good as gold," and much of the international trade of the world, even though this country is not directly one of the parties to that trade, is financed by means of bills drawn on London. Goods may be sent from India to Japan against such bills.

It has already been indicated that the ordinary joint-stock banks do a certain business in discounting bills for their customers. Such bills, as a rule, remain in the possession of the banks until maturity. But there is a large volume of bills which are drawn on

London and which ultimately come to London for acceptance and discount, and these form the trading material of a specialized discount market. The business of the bill broker is to buy and sell bills of exchange, and this calls for specialized experience. He has to be familiar with the standing and prospects of large numbers of houses, and this is work which the ordinary banks do not undertake directly. For this purpose the discount houses obtain funds partly from their own capital, partly from deposits which they accept from the public at a rate of interest slightly higher than that offered by the joint-stock banks, and partly from short-term loans obtained from the banks. These short-term loans may be made for periods of a week, and they are advantageous to the banks since they are constantly maturing so that the banks' resources are kept liquid, and at the same time these resources are earning assets. The margin of profit available to the bill broker is thus small. The banks have to pay interest on deposits, and therefore will not charge a lower rate for loans to brokers; they will rather charge a slightly higher rate. The broker again makes his profit out of the difference between the rate of discount which he receives for buying bills and the rate of interest which he has to pay for short-term loans. And there is an upper limit to the price which he can charge for discounting bills. That upper limit is the Bank Rate of the Bank of England, which is the minimum rate which the Bank of England is willing to charge for discounting approved bills of exchange with not more than fifteen days to run. Consequently, if the market rate of discount exceeded the Bank Rate, those who had bills to sell would go to the Bank of England rather than to the bill brokers.

The bill brokers may therefore be regarded as

intermediaries between those who have bills to sell and those who, like the banks, have supplies of floating capital available for short-term investment. Commercial bills, moreover, have special attractions from the standpoint of the banks which have funds to invest in them, since such investments can be so arranged that there are always bills maturing. A factor of new importance, however, since 1914, has been the large volume of Treasury Bills issued to the discount market in minimum denominations of £5,000. This system of enabling the Government to borrow sums for short periods of three months was introduced in 1877 by Sir Stafford Northcote, then Chancellor of the Exchequer, but the method was suggested by Walter Bagehot. It was at a time when the Government had occasion to borrow considerably for certain immediate purposes, but for purposes which did not warrant an addition to the long-dated indebtedness of the country. These bills are offered for tender in minimum lots of £50,000, and the banks and discount houses compete with one another to secure holdings. The competition is keen, and, with good security, rates are kept at a low level. Between December, 1914, and December, 1916, the volume of Treasury Bills outstanding rose from £99,000,000 to £1,116,000,000. Since 1923 the amount outstanding has fluctuated round about £700,000,000. No satisfactory estimate is possible of the amount of trade and bank bills circulating in the discount market at any time.

It has previously been shown how a bank will distribute its resources between different uses. In so doing there are two conditions to be fulfilled: (*a*) that the bank should be immediately solvent, and that implies that its invested resources should be capable of quick realization without serious risk of loss, and

(b) that so far as possible the resources of the bank should be earning assets. It will, of course, be expedient for the bank to keep some cash reserve, which includes "till" money and balances with the Bank of England, and on that reserve no interest is earned. Next, there is a second line of reserve consisting of "money at call and short notice," which comprises short-term loans to discount houses, as described on pages 103 and 104, loans to the Stock Exchange, etc. At the end of 1930 the "Big Five" had £120,500,000 of their assets in this form, or about 6 per cent of their total assets.

It is a matter for banking experience to decide how much can be loaned in this way. It is not in the interest of the banks to keep larger idle reserves than are necessary for their safe working. Part of their resources may be in the form of "call money," which means that the loans made have to be repaid whenever required. Another part may be in the form of seven-day loans; and if the banks still find that they can invest a further amount for, say, two months, they may purchase bills from the bill brokers, provided the bills purchased mature at the end of that period. It might appear as if the banks would find it more convenient to buy bills direct from their holders rather than through the brokers. But, as already indicated, the work of dealing in bills is specialized and the discount house may vouch for the quality of the bills which it sells, and this is an advantage to the bank which desires to purchase bills.

Taking the balance sheets of the three main discount houses in 1930, the total of bills discounted was £125,600,000, and bills rediscounted, i.e. sold to the banks, amounted to £40,500,000. The total of loans and rediscounts was £138,100,000, or 94 per cent of their aggregate liabilities. The question, therefore,

arises as to how the discount houses can employ funds, which are mainly withdrawable either immediately or on short notice, in the purchase of bills which may mature on the average three months later. The operation is a species of borrowing short and lending long. It is necessary to distinguish between different sets of conditions. Under normal conditions, if one bank requires to "call" certain of its loans, i.e. requires their repayment, another bank may find that it can lend more at call, and the position evens itself out. Moreover, it is unlikely that all the loans so made will be suddenly "called," and since the discount houses so arrange their business that there is a steady flow of bills always maturing, ordinary demands for the repayment of loans can usually be made out of the proceeds of maturing bills. But this is not invariably the case. It sometimes happens that the "calls" are heavier than can be met in this way, and when that happens the discount houses will be obliged to seek loans from the Bank of England or rediscount a certain volume of their bill-holdings at the Bank of England.

That leads to a consideration of discount rates. The Bank Rate or official rate of discount is the minimum rate at which the central bank will discount first class bills with usually not more than fifteen days to run. Normally the Bank will not discount bills with an outstanding maturity of more than ninety days. But the Bank Rate as thus defined is not necessarily the actual rate of discount by the Bank of England. Since 1878 it has been willing to discount bills for its own customers at the market rate of discount, to which reference will shortly be made, and this market rate is below the Bank Rate. The Bank of England's dealings in this connection, however, are not important. It

is the Bank Rate which is important for the discount houses who may require financial assistance. It is the minimum rate which they would have to pay in order to get bills rediscounted at the Bank. On the other hand, instead of rediscounting bills with the Bank of England the discount houses might borrow directly from the Bank. But the Bank will only grant loans for minimum periods of seven days, and at a rate of interest $\frac{1}{2}$ per cent above the official Bank Rate. When such a position occurs and assistance from the central bank is required, the market is said to be "in the Bank."

The market rate of discount is the rate charged in the open market by joint-stock banks, bill brokers, and discount houses for discounting bills, and it is subject to fluctuation in accordance with the relative strengths of the forces of demand and supply in the short loan market. If the demand for accommodation rises relatively to the supply of funds seeking short-term investment, the market rate will rise; if the supply of funds relatively to the demand for accommodation rises, the market rate will fall. Now there is no apparent reason so far indicated why the Bank Rate and the market rate should be connected. Nevertheless, in practice the former does influence the latter. But this is not invariably the case. A rise in Bank Rate may lead to a rise in market rates, and if this happens the Bank Rate is said to be "effective." If no such accompanying change occurs the Bank of England can adopt measures which will ensure the effectiveness of its own official rate upon the market rates.

The first bond of connection between the two rates is the deposit rate of the joint-stock banks; for this rate rises and falls with the Bank Rate. Before the war

the difference between the Bank Rate and the deposit rate was $1\frac{1}{2}$ per cent, and at an earlier period the difference was only 1 per cent; since the war it has been 2 per cent. Thus, at the time of writing, Bank Rate is 6 per cent and deposit rate 4 per cent. Consequently, if the joint-stock banks have to pay a higher rate of interest on deposits through a rise in Bank Rate, they will tend to charge a higher price for the loans which they make to the market. Nevertheless, all deposits with joint-stock banks do not carry a rate of interest. There are large sums on current account on which no interest is paid, and to that extent a rise in deposit rate does not mean that the banks have to pay more on all their deposits. If all deposits carried a rate of interest the inducement for the banks to raise the rate for loans as a result of a rise in deposit rate would be greater than it now is. On the other hand, a rise in deposit rate may induce a certain transfer of funds from current account to deposit account in order that the higher rate may be obtained.

It still remains that Bank Rate changes do tend to be accompanied by changes in the same direction on the part of the various market rates. But, as already indicated, it might happen that the Bank Rate was not effective in the sense explained, and it may be necessary to the Bank of England's policy that market rates should rise, or fall, as the case may be. The Bank may then induce these movements by what are known as "open market" operations. If it desires to bring about a rise in the market rate of discount, and a rise in its own rate has been insufficient for the purpose, it may conduct operations which will reduce the supply of funds seeking investment in the short loan market. To do that it might sell Consols for cash and so attract to itself a certain volume of floating funds. The effect

of this would be that those who bought Consols from the Bank would pay by cheques on their own banks, and when the transactions were completed, the total of "other deposits" at the Bank of England would be reduced. And since these "other deposits" are included in the cash reserves of the joint-stock banks, the fall in their cash reserves would oblige them to raise their rates for loans and discounts. Alternatively, the Bank of England might affect the position by selling bills of exchange which it holds itself.

In the other case, a fall in Bank Rate might be ineffective in causing a similar movement in market rates, and in that case the open market operations would be the reverse of those described above. Instead of selling Consols or bills of exchange the Bank would enter the market as a buyer, and by buying Consols it would set forces in operation which would increase the cash reserves of the joint-stock banks and thereby the funds available for investment in the open market.

The question now arises as to the function of Bank Rate and the reason why the Bank of England should be anxious to secure corresponding movements in market rates. Before the war the Bank of England rate fluctuated much more than the Bank Rates in continental centres, and for several reasons. The Bank of England relied almost entirely upon its own rate to exercise its influence over the credit position, and, because of the position of London as a financial centre, gold movements in and out of London had a special significance. The official rate of the Bank of England is its instrument for protecting its gold reserve. If, for any reason, such as one of those described in an earlier chapter, the exchanges moved against this country and fell below the gold export point, gold would flow

abroad, the gold reserve of the Bank of England would decline, and the ratio of its reserve to its liabilities would fall. Under these conditions a rise in Bank Rate would be called for, and the object of such a rise would be to change the underlying conditions which give rise to the drain upon the gold reserves of the Bank. These changes will be considered in more detail in the next chapter. In the following table the average Bank Rates are given for certain of the chief central banks of Europe since 1850—

	Bank of England	Bank of France	Bank of Holland	Reichsbank
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1850-59 .	4 - -	4 3 10	3 - 9	4 8 3
1860-69 .	4 6 8	3 18 5	3 15 8	4 9 3
1870-79 .	3 7 5	3 17 6	3 10 6	4 8 -
1880-89 .	3 6 1	3 3 6	3 - 5	3 18 2
1890-99 .	2 19 2	2 10 2	2 18 9	3 17 2
1900-09 .	3 12 6	3 1 6	3 9 3	4 9 -
1910-19 .	4 11 1	4 5 6	4 7 9	4 18 11
1920-26 .	4 16 -	5 16 4	4 4 6	11 7 11
1927-30 .	4 10 4	3 14 10	4 2 9	6 4 4

CHAPTER X

THE CONTROL OF CREDIT

It was indicated in the previous chapter that the Bank Rate is used by the central bank in order to protect its gold reserve when that has become subject to heavy drains. It is also the main instrument for regulating the volume of credit, although it may on occasion be supplemented by the adoption of open market operations in the manner already described. The general principles involved in this control of credit have been implied in different parts of the previous discussion, but it is now possible to correlate these in a more general account.

Under gold standard conditions the object which the central bank has in view in pursuing its credit policy is to ensure the stability of the monetary standard, and it is a condition of success in pursuing this policy that the banking system should be so centralized that the policy of the central bank can be made effective. Apart from the importance of maintaining adequate cash reserves against their deposit liabilities, the ordinary banks have no direct inducement to restrict credit facilities. By doing so they would reduce their own profits. Theirs, indeed, is not the primary responsibility for maintaining the stability of the monetary standard, and it may happen that they so grant credit facilities that prices rise and important reactions follow. If that happens, imports from abroad will be encouraged, while exports will be discouraged and the exchanges will tend to become unfavourable. If some efflux of gold occurs the drain will be felt upon the reserves of the Bank of England

and a similar internal drain may occur since the rise in prices will call for more legal tender for purposes of circulation. Under these conditions some corrective will be called for and Bank Rate will be raised.

It may be assumed that this rise in Bank Rate is effective in inducing similar movements in market rates since, if necessary, it can be made effective by the sale of bills or securities for cash. Thus the effect of a higher Bank Rate is to make the price of loans dearer than before, so that new borrowing will be discouraged. When prices are rising and loans can be secured at low rates, merchants will have some inducement to accumulate stocks, but if they have to pay a higher rate of interest for their loans that inducement may be removed and they may be obliged to realize their stocks. In addition there is the psychological influence. A moderate rise in the price of loans to merchants may not be sufficient in itself to make it unprofitable to borrow in order to hold stocks of commodities, but there is the knowledge that it can be carried further if necessary. Even a moderate rise in the price of loans is interpreted as a warning, and the prospect of a still further rise indicates that the period of rising prices is not going to continue. The rise in Bank Rate will therefore tend to reduce the demand for goods and encourage the liquidation of stocks, and in that way the tendency will be for prices to fall. Moreover, the fall in prices which is generated will serve to remove the former inducement for imports to increase, and the lower prices will encourage exports.

With regard to the foreign exchanges, the underlying considerations have already been mentioned. Certain more technical points still remain. If the market rate of discount rises, those who have bills to sell will have a greater inducement to refrain from

discounting them since they will receive less than they would have received under the previous rate of discount, and the longer the period of the bill the greater will be the reduction. Consequently, a rise in the market rate of discount will mean that foreigners will be less inclined to send bills to London for discount. On the other hand, balances which are free to move from one financial centre to another may be attracted to London in order to earn the higher interest rates which are there prevailing. This, of course, will only occur if the interest to be earned in London exceeds that which would be earned in the other centres where the balances were already lodged. But where such a movement occurs it will mean a new foreign demand for sterling. The foreign investment in bills in London will increase because bills there become cheaper to buy as the rate of discount rises. In other words, bills will be worth less to sell and worth more to buy, and the new foreign demand for sterling will tend to bring the exchanges back from their low level.

The same influences affect the prices of securities. Stock Exchange securities, including gilt-edged Government stocks, are frequently purchased on borrowed money, and if the price of loans rises, borrowing for this purpose will be checked, and those who have already borrowed for this purpose may be obliged to realize certain of their holdings. Consequently, a rise in Bank Rate may cause the prices of such securities to fall, and this fall in stock prices may attract purchasers from abroad, and in that way induce a new demand for sterling which will improve the exchanges.

In these various ways the outflow of gold occasioned by a fall in the exchange rates to below the gold-export points is brought to an end, and an inflow may

be initiated. If, on the other hand, the reserve proportion is large, the opposite set of forces may operate. If the exchanges are persistently favourable and gold flows in from abroad the reserve proportion will rise, Bank Rate will be reduced, market rates will be low, credit will be expanded, and prices, including the prices of securities, will tend to rise. The low level of discount rates will lead to increasing quantities of bills of exchange being sent to London for discount, and this means an increased import of securities, so that this country will owe more abroad. The low interest rates ruling in London will tend to discourage further foreign investment in bills and securities in that centre, and funds so invested will tend to be withdrawn, while floating balances in London may seek investment in other centres. In these ways, coupled with the growing encouragement to imports from abroad resulting from rising prices and the discouragement to exports, the foreign exchanges which were above parity will tend to fall towards the par level and perhaps below it.

These considerations of mechanism lead to a general summing-up. Under the normal working of the gold standard the exchanges are maintained close to their gold parities, and there is secured a high degree of exchange stability which is an important factor in commercial intercourse. Under that system, moreover, the internal price level tends to adjust itself to the level of world prices, since a relative rise or fall in the former above or below the latter will set forces in operation which will tend to remove the disparity. Thus exchange stability is seen to involve a tendency for the value of gold to be uniform as between different gold standard countries. The object of the central bank's use of its discount rate is to ensure this stability.

At this stage some reference may be made to certain regulating influences affecting the exchanges, which so far have not been mentioned. The first of these consists of "arbitrage operations," which take advantage of any difference in the price of the same commodity in different parts of the market by buying where the price is cheap in order to sell where the price is dear. The effect is to remove price differences. Thus we may suppose the case of a dealer A in London and his agent B in New York, and suppose that the sight rate is \$4.80 in London and \$4.85 in New York. That would indicate that the buying of dollars in London had forced up the price of dollars in London, and the buying of sterling in New York had forced down the price of dollars in that centre. A then instructs B to draw a cheque on London for, say, £10,000, which he sells in New York for \$48,500. Simultaneously, A in London draws a draft on New York for \$48,500 and sells at the current market rate in London of \$4.80, thus realizing £10,104 3s. 4d. There is thus a margin of £104 3s. 4d. to the London dealer to cover his expenses and yield a profit. But the effect is to equalize rates in the two centres, for such dealings will increase the supply of dollars in London and so make them cheaper, and increase the supply of sterling in New York, and so make pounds cheaper in that centre. Arbitrage operations vary greatly in complexity and often involve dealings in three centres at once, but these complications cannot be examined here.

Another regulating influence is exercised by dealings in "forward exchange." What that means is that a person who has to remit, say, dollars at some future date may buy dollars now for future delivery. He therefore secures himself against the risk of an

adverse movement in the exchange rate. Similarly, a person who is due to receive dollars at some future date may sell them forward. In both cases the business man reduces his risks, but that does not mean that the risks have been destroyed. It only means that the risk has been transferred to the bank which sells or buys forward from its customer. The bank takes the risk of being able profitably to fulfil its future obligation. Such transactions tend to have a steadying influence upon exchange rates. If there were no forward operations and a sudden demand for a particular currency developed, the price of that currency would rise sharply. But if a bank sells currency forward to one customer and the amount involved is large, it will simultaneously buy that currency forward from another customer. Both operations of buying and selling will tend to be spread over a longer period of time, and in this way undue fluctuations in the "spot" rate may be avoided. The actual forward rate for a currency will depend primarily upon conditions of demand and supply, and it may be either above or below the "spot" rate. This type of business has greatly developed since the war. Before the war forward business was confined to long bills between countries where the exchanges showed seasonal movements.

CHAPTER XI

FOREIGN BANKING SYSTEMS

THE monetary and banking systems of France differ from those of this country both as regards form and history. Certain general distinguishing features may be mentioned. The first of these concerns the relatively small use of the cheque, and, as a result, banking business is almost entirely conducted through the medium of notes. Thus, in France, a borrower from a bank uses his advance or discount by drawing notes instead of, as in this country, by drawing cheques against the amount placed to his credit. For that reason, also, the method of regulating the note issue is more elastic than that employed in this country under the Acts of 1844, 1845, and 1928. It is commonly said—and sometimes it is regarded as a defect—that the British system of note regulation is inelastic, but even if this were theoretically true the operation of the Acts has not in practice raised this difficulty, and the explanation is to be found mainly in the development of deposit banking with the use of the cheque. But on the Continent more elastic systems of note regulation have been adopted. In France, since June, 1928, notes may be issued without limit provided 35 per cent of the issue is covered by gold. Prior to this, the Bank of France had a legal limit placed on the amount of its note issue and, since these notes (before the war) were convertible, it was the duty of the Bank to maintain adequate metallic reserves. This legal limit was periodically revised and a new maximum was decreed when that appeared to be warranted.

A second feature of the system in France concerns the rôle of the State. Historically, many of the difficulties which have occurred in French banking may be traced to the heavy demands made by the Treasury on the banks of the country. But the part played by the State also concerns the management of the central bank. In fact, the Bank of France may be described as a private bank with the State participating in its management and in its profits. The governor and two deputy-governors are appointed by the Minister of Finance, and this arrangement provides the State with an opportunity for guiding the policy of the Bank, an arrangement which, if wisely used, may afford advantages, but which, if not, is a source of weakness and instability.

The history of the Bank of France dates from the year 1800. Prior to that year there had been a classic example of extreme inflation with the issue of assignats during the Revolutionary period, and in time these notes became quite worthless. The Bank of France was formed in the period of monetary reconstruction which followed 1796. Between that year and 1800 four banks had been founded in Paris, and when the Bank of France was formed it was by fusion with one of the earlier Paris banks. At the outset the Bank of France had no monopoly. It was simply one bank among others, except that it kept the Government's account. Three years later Napoleon effected a re-organization and granted to the Bank a monopoly of note issue in Paris, and it was also decreed that no other issue bank should be founded in the provinces without the consent of the Government. From that time the importance of the Bank rapidly increased. In 1806, following a severe crisis in 1805, the organization of the Bank and its relation to the State were made more

explicit. Its capital was doubled (90,000,000 francs),¹ and its privileges were extended in 1843.

The general plan of Napoleon's policy was to develop a centralized banking system for the whole country, and for that purpose the bank was authorized in 1808 to establish branches in the departments. Very little progress, however, was made in this direction, and in 1817-18 a change of policy was introduced. The Bank's branches were closed and replaced by independent banks of issue. Later the two rival policies were modified. More independent banks were authorized on the one hand, while, on the other, the Bank of France was permitted to open branches in fifteen provincial towns, in each of which it was given a monopoly of issue. But the execution of the two policies was intermittent, and little progress was made prior to the Revolution of 1848.

At that time there were in France nine independent issue banks in addition to the Bank of France with its fifteen branches. But there was no effective interchange of notes between the various issue banks, and even among the branches of the Bank of France one branch would only accept the notes of another branch at pleasure. A further reorganization was then effected. The independent issue banks were made branches of the Bank of France, making twenty-four in all, and thus since 1848 the Bank has had the sole right of issue in the country. The subsequent history of the Bank of France is mainly concerned with details which need not be discussed here. There remain some points concerning the banking system as a whole. The other banks in the country are banks of discount and deposit. These are few in number, but there are also a large number of private banks specially adapted to the needs of

¹ In 1857, its capital was fixed at 182,500,000 francs

particular industries. In a sense these might be described as financial houses, although the term "bank" is commonly used. Many of them are mortgage banks which raise capital by the issue of their own bonds in order to lend that capital to municipalities and industries for long periods on the mortgage of real property. That arrangement is typically continental, but it can only be established where a bank is not obliged to maintain resources in a liquid form so as to meet recurring demand liabilities. It is an arrangement, however, which is suited to the inclinations of the average continental investor, who prefers an investment with a fixed but certain income to an investment which offers a higher but uncertain yield.

As regards the banks of discount and deposit, in 1914 there were only twelve banks of deposit with individual deposits exceeding 10,000,000 francs (£400,000), and the aggregate deposits of these twelve banks were 5,084,000,000 francs (£203,000,000), while four alone accounted for 4,000,000,000 francs. The bulk of the operations of these banks take the form of discounts, and when notes are required these banks may obtain notes from the central bank either by the process of rediscounting or by depositing gold. By law, the Bank of France can only discount bills which bear three signatures except in the special case where there is collateral security of a specified kind, when two signatures will suffice. The third signature may be provided by the commercial bank when it rediscounts an ordinary bill at the Bank of France. To that extent, the commercial banks act as intermediaries between their own customers and the central bank. Incidentally a method is provided whereby notes can be obtained by these banks from the central bank of issue. But the Bank of France is also a commercial bank and not

exclusively a central bank, so that the other banks are frequently reluctant to have resort to the rediscounting method of replenishing their cash reserves lest they should lose business by taking bills to a competitor. During 1930 and 1931 the increased note issue of the Bank of France was secured mainly by the commercial banks in exchange for gold which they lodged with the Bank of France.

With regard, however, to the Bank Rate in France there is a peculiar complication. Taking as an example the fifteen years to 1913, there were only fourteen changes in Bank Rate in France as compared with sixty-two in Germany and seventy-nine in this country, and incidentally the average rate tended to be lower in France. In short, France has been able to regulate its monetary and banking system with a relatively lower and more stable Bank Rate. The explanation is to be found partly in the place of France in the international money market. Although France was an important lender of capital abroad on long-term investment, she was not important in the short-loan market. London, on the other hand, was the "financial centre of the world" and was largely concerned with the discounting of bills for all parts of the globe. Gold movements in and out of London were relatively of much greater importance. These gold movements, moreover, were entirely free from restriction.

In France, on the other hand, the gold market was only imperfectly free. Two modifications may be noticed: (1) Formerly, the monetary standard in France was a given weight of gold, but the silver 5-franc piece was also full legal tender. Consequently, if for some reason the Bank of France was anxious to preserve its gold reserve it could exercise its option to

make at least some of its payments in silver. In practice, the Bank's policy was rather to restrict any gold efflux to what it considered to be "really necessary to the legitimate needs of international trade." (2) Its method of so doing was known as the device of the "gold premium." This arrangement differed from the British method where gold was obtainable from the central bank at a fixed price. In France, what happened was that if the Bank of France considered gold payments to be inexpedient if made freely, it would raise its price, i.e. it would give gold in exchange for notes but at a certain premium, and this meant that there was a partial restriction on the freedom of the gold market.

The circumstances under which this method was employed varied considerably. Frequently there would be a fear of European hostilities, when each country would adopt a more than usually conservative policy with regard to its metallic reserves. But more generally the aim was to restrict gold exports to the minimum which was consistent with normal trade stability. It is also doubtful how far the gold premium policy was really successful, for there remained an alternative method by which gold for export might be obtained without drawing directly upon the central bank. That was by the withdrawal of gold coins from circulation and remitting them abroad either as coin by weight or else in the form of specie. This alternative was in fact employed, but it would be an inconvenient method where large sums were involved. More generally the adoption of a gold premium policy is one which calls for careful management on the part of the central bank, and it may be admitted that in the case of France before the war that management was well conducted. But it has been one factor

which has deprived France of a place which she might otherwise have held as a short-term lender of capital abroad.

The modern monetary and banking systems of Germany are of recent origin and date only from the general organization accompanying the formation of the Empire in 1871. Hitherto the position had been confused and unsatisfactory. As between the different States there was no uniform coinage. Each had a silver standard, but in some the unit was the "thaler" and in others the "gulden." In respect of paper notes there was a similar lack of co-ordination. There were many banks of issue, but their charters varied greatly according to the State or city from which they were derived, and with four exceptions each State had its own issue of Government paper. It was this general arrangement which was reconstructed by a series of enactments from 1871 to 1875.

First, there were the coinage laws of 1871 and 1873, which unified the coinage system with the mark as the unit and substituted a gold standard for the silver standard which had hitherto prevailed. Next, the law of 1874 substituted an imperial note issue for the Government issues of the various States. In this way the Government note issue was unified and the new notes, although not possessing legal tender status, were convertible into gold at the Imperial Treasury. Finally, the legislation of 1875 imposed a common system on the various issue banks. In this process of reconstruction it was desirable to institute a central bank, and the Bank of Prussia, which was formerly a State bank, was utilized for the purpose and became the Reichsbank. There still remained, however, some thirty-two independent issue banks, and for all the issue banks a uniform method of regulation was

introduced. The new system might be summarized as follows—

1. The right of issue was henceforth to be held only by the Reichsbank and the existing issue banks, and any right of issue surrendered by the latter was to be transferred to the former. Out of thirty-two independent banks of issue, sixteen immediately surrendered their rights of issue, and these were transferred to the central bank. 2. A maximum fiduciary issue for all the issue banks was fixed at 385,000,000 marks (£19,250,000), and this aggregate was allocated between the various banks to determine the fiduciary issue of each. 3. Notes issued in excess of the fiduciary amount were to be fully covered by cash, and for this purpose "cash" included coin, bullion, imperial treasury notes, and notes of the other banks, but the limit of note issue thus determined might be exceeded on payment by the issuing bank of a tax of 5 per cent per annum on the amount of the excess. 4. Then there was another provision that the amount of the cash reserve (exclusive of the notes of other banks) should not be less than one-third of the note circulation. The remaining two-thirds might be covered by three-month discounted bills.

The tax method of regulation gave to the note circulation a certain measure of elasticity by providing a method whereby the circulation could be increased if necessary beyond the normal limits and without the necessity of special legislation. At the same time it served as a deterrent to the free use of the privilege obtained, since an issue bank would suffer a loss if it exceeded the limit above which the tax was payable and if at the same time its discount rate was less than 5 per cent. In practice, the Reichsbank was frequently obliged to pay the tax on its excess issue, and it

sometimes did this while its rate of discount was below the rate of tax. In fact, it appears that the Bank's discount policy was not determined primarily with any direct reference to its possible liability to pay the tax on an excess issue.

In later years there was generally some part of the note circulation of the Reichsbank which was subject to tax, and it was frequently urged that the original fiduciary limit had been fixed at too low a figure. Partly for that reason it was raised to 450,000,000 marks in 1889 and to 550,000,000 in 1909. In the latter year, moreover, a novel feature was introduced in the special provision made for those seasonal movements in the demands for cash which are of regular occurrence. Thus, at the end of each quarter the demand for cash is generally greater than at other periods, and so it was provided that the fiduciary limit should be raised to 750,000,000 marks for the last week of each quarter. This arrangement gave a still greater measure of elasticity to the note circulation. Then, as regards the other issue banks, it had been intended that these should ultimately be induced to surrender their privileges in order that the Reichsbank might become the sole bank with the right of note issue. By the end of the century the number of independent issue banks had been reduced to four, and these were of small importance.

Certain other features of German banking remain to be mentioned. The use of the cheque was little developed, although before the war it had made some headway. In the main, however, it was confined to local payments. For more distant payments there was the "giro" system operated by the Post Office, the Reichsbank, and the larger banking houses. Under that system a person with a distant payment

to make might draw on a special "giro" account at his bank, and the latter undertook to make the final payment of the amount on his behalf to the distant creditor.

The relations between the joint-stock banks and the central bank were also somewhat different from what obtained in this country. In Germany a joint-stock bank might replenish its cash reserve by discounting bills with the Reichsbank, this being a reflection of the current practice in the use of notes and discounts. Then as regards the gold market, that in Germany was probably more free than the market in France, but there were still some minor barriers. The gold premium policy employed in France was not often employed in Germany. What in fact was happening before the war was that Germany endeavoured to build up a large gold reserve and also a secondary reserve in the form of large holdings of foreign bills which could be converted into gold in other countries.

It is not possible here to discuss in detail the depreciation of the mark during and after the war and its final collapse in 1923. But some final reference may be made to the present Reichsbank as reorganized by the Bank Law of 1924 and amended in 1926. Before the war the Reichsbank was closely connected with the State. It was, in fact, a privately-owned institution, publicly controlled. The new Reichsbank, on the contrary, is a "bank independent of Government control" but with the State participating in profits. This was in accordance with a resolution of the Brussels Financial Conference of 1920, that "banks and especially a bank of issue should be freed from political pressure and should be conducted solely on the lines of prudent finance." The reconstruction of

the Reichsbank occurred after there had been widespread experience of unsound financial policies by the governments of Europe culminating in extreme inflation, and confidence in the State control of central banks was greatly shaken. The new Reichsbank has the exclusive right to issue notes in Germany for a period of fifty years subject to the rights possessed by four other independent but unimportant banks. The note issue of these latter is fixed at a maximum of 194,000,000 R.M., whereas the circulation of Reichsbank notes at the end of October, 1931, was 4,746,000,000 R.M. Against its note issue the Reichsbank must keep a reserve of 40 per cent in gold or "devisen," i.e. bank-notes and bills of exchange, or cheques payable in foreign currency by a bank of known solvency, but of the reserve thus held three-quarters must be in gold at home or abroad. The tax method of regulation is also maintained, except that the tax payable on an excess issue is now graduated, whereas before the war it was a flat rate. Thus, if the ratio of reserve to notes falls to from 37 to 40 per cent the tax payable is 3 per cent per annum; if the ratio falls to from $33\frac{1}{3}$ to 35 per cent it is 8 per cent. And if the ratio falls below $33\frac{1}{3}$ per cent, the tax payable is 8 per cent plus 1 per cent for every 1 per cent by which the gold cover is below $33\frac{1}{3}$ per cent. Moreover, if the actual ratio falls below 40 per cent, and some tax is payable, the bank rate must be at least 5 per cent, and if the tax is payable, the discount rate is to be raised by at least one-third of the tax payable. Further provision is made for maintaining a reserve of at least 40 per cent against other demand liabilities apart from notes.

One characteristic of German banking remains to be noticed, viz., the practice among banks of using

part of their resources to finance new industrial and commercial enterprises. That, in fact, was the purpose for which the early deposit banks in Germany were primarily established, and it was only later that the more usual forms of deposit banking business were developed. The original characteristic, however, still remains. A new industrial project with good prospects might succeed in securing financial backing from a bank which has at its command technical experts in the various branches of industry, who can report on the probable success of the venture. In the new company the bank might provide the bulk of the necessary capital, and later, when the concern was established, a public issue might be made, the bank disposing of part of its interest, although, perhaps, retaining a controlling influence. Such an arrangement clearly gave to the German banks an influence in the moulding of industrial organization which was not possessed by banks in the United Kingdom, and the German tendency towards cartelization was not infrequently inspired by banking circles. In this country the German example has sometimes been quoted with approval, but it has not always been appreciated that a financial house is not prepared to lock up its resources for long periods in industry without securing control of the management, and it is doubtful whether an extension of the practice to this country would be generally approved. In the United Kingdom commercial banking is kept quite distinct from the functions of finance houses. British banks do not provide capital for new ventures. They do not tie up their resources in long-term and risky investments, and they do not participate actively in the management of trade and industry.

The present banking system of the United States of

America represents a comparatively new and somewhat unique form of organization. Its historical development has followed rather different lines from those which were indicated in the case of this country, or in the cases of France and Germany. The Federal Reserve System, which was created by the Act of 1913, came into being during a period of great financial difficulty and instability. Its formative period coincided with a world war which, in the end, involved the country for which it directly functioned. It has now, however, become firmly established, and within this comparatively short period of time it has gone far both to demonstrate its stability and also to acquire what is almost a dominating position in international finance. Such an achievement is admittedly without parallel in banking history. The magnitude and importance of this achievement can only be seen by comparison with the earlier period, which was notoriously unstable. It is necessary to picture a country with a population three times as large as that of England and Wales, scattered over an enormous territory, and possessing a much more diversified economic structure than is commonly known in Europe. The forty-eight States of the Union have separate governments with powers which are carefully guarded against encroachment by the Federal authority. The banking system which developed under these conditions was unlike those which evolved in other simpler and smaller communities, and it found expression in a particularly large number of independent banks. In 1914, for example, there were 24,668 independent banks, exclusive of 2,100 savings institutions. Branch banking, as that is known in this country, was not developed, partly as a result of the force of opinion, which was unfavourable, and partly

as a result of legal hindrances. In seventeen States, for example, branch banking was definitely prohibited, while in others it was only partly allowed. This great multiplicity of independent banks might be classified under three heads: (a) There were the State banks which derived their charters and their powers from the State legislatures; (b) there were the National banks, established first in 1863 amid the strife of the Civil War and subject to Federal legislation. In 1914 these numbered about 7,000 in all; and (c) there were a number of trust companies undertaking banking business. Of these three groups, the first and third developed most rapidly during the first decade of the present century, and the number of State banks more than doubled in the period from 1900 to 1914. The National banks, however, although they only represented about one-quarter of the total number, were amongst the strongest institutions, and possessed about one-half of the total banking resources of the country.

The regulations which governed the second group were more stringent than those which applied to the first. National banks, for example, were not allowed to make loans against real estate, while in most cases State banks could do so for periods up to five years. The National banks, again, were not permitted to incur single liabilities of amounts greater than 10 per cent of their capital and surplus; they had to place to surplus reserve 10 per cent of their net earnings until they had acquired a reserve equal to 20 per cent of their capital, and they had to preserve prescribed minimum cash reserve ratios against their deposit liabilities. The corresponding regulations applicable to State banks varied as between the different States, but they were less rigorous. The reserve requirements

imposed upon the National banks were somewhat complicated.

The three cities of New York, Chicago, and St. Louis were designated as central reserve cities, and the National banks in these cities were known as central reserve city banks. About fifty towns with populations of not less than 50,000 persons were specified as reserve cities, and the National banks in these towns were known as reserve city banks. The remainder of the National banks were known as country banks. For the central reserve city banks a 25 per cent minimum reserve against deposit liabilities was prescribed; for the reserve city banks a 25 per cent minimum was also prescribed, but one-half of that reserve might be held on deposit with a central reserve city bank. In the case of the country banks, the reserve prescribed was 15 per cent, of which 60 per cent might be on deposit either with reserve city banks or with central reserve city banks.

Under these conditions there was nothing of a central bank as that is known in Europe. The banking system was highly decentralized, and the reserves were not concentrated in a manner which enabled them to be most effectively employed in time of emergency. Another feature of difference may be noticed. It is usual in Europe to think of the central bank as also being the bank for the government of the country. The Bank of England, for example, is the bank through which the Treasury operates. In the United States, on the other hand, the Treasury deposited its funds in nine sub-treasuries and in a number of National banks, and what virtually happened was that not merely did these National banks come to look to the Treasury for support, but large sums came to be hoarded in the sub-treasuries, where

they remained inactive. Thus at periods when Treasury receipts greatly exceeded disbursements, money tended to be "tight," and when disbursements were relatively large, money tended to be "easy," and this gave rise to unnecessary forms of instability in the money market. It was also said that the reserve requirements being rigid tended to restrict the best use of credit facilities, since, if a bank had reached its minimum ratio, it was unable to accommodate a customer even though that customer could offer adequate security.

Unlike the banking system which was partly under Federal control and partly under State control, the currency system was entirely under Federal control. The standard of value and unit of account was the gold dollar, although there was no actual coin of that denomination. Gold currency consisted of quarter eagles, half eagles, eagles, and double eagles—the eagle being a \$10 piece weighing 258 grains of gold, nine-tenths fine. There was also a circulation of standard silver dollars, but these were no longer issued, and the total outstanding had diminished; and there was a token coinage. The note circulation was more complicated. First, there was an issue of gold and silver certificates, issued by the Treasury against deposits of gold and silver bullion. Second, there were the "greenbacks," first issued during the Civil War and made convertible into gold in 1879. The amount in circulation was not large and it had not increased. Third, there were the Treasury notes of 1890, but these had almost disappeared. And, fourth, the National banks were allowed to issue notes against the deposit of specified Government bonds. A fifth addition concerns the issue of Federal Reserve notes, of which mention will be made later. But prior to the

introduction of the new system in 1914 the note circulation was inelastic. In the case of the National banks the procedure was that such a bank could lodge prescribed bonds with the United States Treasurer, and obtain from the Comptroller of the Currency notes equal in amount to 90 per cent of the current market value of the bonds lodged, but not exceeding the part value of the bonds. The prescribed bonds were limited in amount, the demand for them was large, and their market price generally stood at a premium. This system was found to be defective, because the inducement to issue such notes depended upon the price of the collateral bonds rather than upon variations in the demand for currency. The magnitude of these various kinds of money may be summarized. At the end of June, 1931, the total money in circulation amounted to \$4,820,000,000, of which \$361,000,000 consisted of gold coin, \$997,000,000 of gold certificates, \$1,708,000,000 of Federal Reserve notes, \$648,000,000 of National bank-notes, and \$1,106,000,000 of U.S. notes, silver certificates, and all other kinds of money.

The earlier history of United States currency and banking is a continuous series of crises. There was first the period of "free" banking, when note issues were unregulated, and the Act of 1863 was intended to change the line of development. The State banks were not prevented in law from issuing notes, but they were prevented in fact by the imposition of a heavy tax upon any notes which they might issue. Dr. Leaf has remarked that the new system instituted in 1863 was "erring on the side of rigidity as much as the old erred on the side of laxity." There was no provision for the seasonal movements in the demand for currency arising from the movements of the grain and

cotton crops. Moreover, under the National banking system much of the reserves of the member banks was on deposit with the central reserve banks. At the panic of 1907 the deposits of the National banks in New York City amounted to about \$1,000,000,000, of which fully \$465,000,000 represented reserves of other banks. The result was that a large demand, say, by a group of country banks upon their reserves, would set in motion a series of strains on the other banks of the system. Especially in New York, moreover, the central reserve city banks employed a large part of the funds deposited with them to finance stock speculations, and in times of crisis their reserves could not be quickly mobilized. The case for some reorganization became imperative after the crisis of 1907.

The idea of creating one central bank for the whole of the United States did not seem to be workable. Under the Act of 1913 what happened was that the country was divided up into twelve districts, in each of which a Federal Reserve bank was instituted. Each of these twelve banks may be regarded as a central bank for its district. They are bankers' banks in a double sense. Their customers are other banks which are members of the system, and under the Act all National banks were obliged to become members, while State banks were given the option of joining. At the end of 1930 the membership consisted of 7,033 National banks and fully 1,000 State banks, leaving 14,700 banks which were non-members. Nominally, that represents only about one-third of the total banks in the country, but in reality the non-member banks are small and of little importance. The Federal Reserve banks, however, are bankers' banks in another sense, in that the member banks provide the necessary capital. Each member subscribes 6 per cent of its own

capital and surplus towards the capital of the Federal Reserve bank, and of the nine directors of each Federal Reserve bank six are appointed by the members.

Instead, therefore, of one central bank for the whole country, there are twelve. But these twelve are not independent of one another. They are joined together in a federation by the creation of the Federal Reserve Board. This Board is not a bank, but a co-ordinating body of eight members, consisting of the Secretary to the Treasury and the Comptroller of the Currency, who are *ex-officio* members, and six others, who are appointed by the President. These six are intended to be representative of different territorial and commercial interests. The influence of the Board extends in several directions. It appoints three directors to each of the twelve Federal Reserve banks, and it exercises a regulating influence over the discount rates and policies of these banks. It will be seen, therefore, that a certain measure of Government regulation is introduced. In addition, the distributable profits of each Federal Reserve bank are limited by law to a rate of 6 per cent (cumulative) on capital, and if any surplus remains one-half goes to a special reserve fund and the other half to the United States Treasury. This may well be important in relation to the pursuit of policies of credit regulation.

Reference was made in a previous paragraph to the legal minimum reserves which had to be held by National banks against their deposit liabilities. Under an Act of June, 1917, the prescribed ratios were reduced. In central reserve cities, members had to hold a minimum reserve against demand deposits of 13 per cent, and this minimum reserve had to be held with the Federal Reserve bank of the district. In the

case of reserve cities the minimum reserve ratio was 10 per cent, and elsewhere it was 7 per cent. In this way the reserves of the banking system were more concentrated. Member banks may, of course, hold larger proportionate reserves, but it is only reserves held on deposit with the Federal Reserve banks which count for the purpose of satisfying the minimum legal requirements. Then, in turn, the Federal Reserve banks must also keep a minimum cash reserve of 35 per cent of their deposit liabilities, and this reserve must consist of gold, gold certificates, and other notes which are convertible into gold.

Like other central banks, the Federal Reserve banks have also been given powers of note issue. It has already been indicated that the former currency system was inelastic. The new arrangements were designed to introduce a greater measure of elasticity. The notes which are issued are of two kinds. The first, which is of small importance, consists of Federal Reserve bank-notes, and these are intended merely to replace gradually the old issue of national bank-notes. The others are of greater importance. These are Federal Reserve notes, and against these notes there must be held a minimum gold reserve of 40 per cent. These notes are not legal tender, but are convertible into gold at the United States Treasury or into lawful money (i.e. gold or notes convertible into gold) at the bank of issue. In the last resort they are obligations of the United States Government, although they are immediately the liabilities of the issue banks, and they are obtained by the issue banks from the Comptroller of the Currency in exchange for gold or eligible paper consisting of bankers' acceptances and trade bills which are eligible for rediscount. In addition, provision is made for relaxing the reserve

requirements on payment by the Reserve bank of a graduated tax.

It is now possible to indicate the more important changes introduced by the new system. Under the old system, credit was generally obtained by customers taking promissory notes to the bank for discount, but if the bank was fully "loaned-up," i.e. if its reserve ratio was at the legal minimum, no further credit facilities could be granted. As it happened, it was common for banks to work up to the legal minimum, so that credit facilities were inelastic and discount rates fluctuated sharply both in the same place and as between different districts. But under the new system a member bank can obtain short loans from the Federal Reserve bank, or it can rediscount with the Reserve bank certain of its customers' notes. New arrangements have thus been introduced to facilitate the process of rediscount, which formerly was not possible. The supply of credit is, in consequence, made more elastic by the introduction of central banking, and this elasticity is further developed by the possibility of open-market operations which the Federal Reserve banks can undertake.

The character of the co-operation effected between the various Federal Reserve districts under the new system may be noticed. The credit facilities available in one district are not independent of those available in other districts. A certain mobility of credit is made possible. Thus, if the reserves of one Federal Reserve bank are low while those of another are plentiful, the first may sell securities to the second and so replenish its reserves. And the Federal Reserve Board possesses certain powers which enable it to bring pressure to bear upon one area to assist another area. Under Section 11 of the Act the Board may "permit, or, on

the vote of at least five members, require, one reserve bank to rediscount the discounted paper of another at a rate of interest to be fixed by the Board."

The operation of rediscounting has already been mentioned. What it means is that if a bank has discounted paper for a customer and finds that it requires additional cash, it takes the discounted paper to the Federal Reserve bank, endorses the paper under the original endorsement, and secures the necessary rediscount. It is the discounting at a bankers' bank of paper already discounted by a member bank for a customer. But now, if the average rate of rediscount is compared with the average rate of discount charged by member banks to customers, it is found that the latter exceeds the former by about 1 per cent. It might, therefore, be supposed that member banks could start a vicious circle of credit inflation by taking customers' paper to the Federal Reserve banks to be rediscounted at lower rates than the member banks had themselves charged to the customers, employing the proceeds to discount more paper, and again rediscounting with the Federal Reserve banks. In point of fact, however, such an automatic process does not prevail. "It is a banking tradition that member banks should only borrow in emergencies. The Federal Reserve banks strongly disapprove a policy by which individual banks might increase their profits by utilizing the combined reserves of all the banks, and if any bank borrows heavily under ordinary circumstances the fact reflects unfavourably upon its standing in the financial world. Moreover, if many banks pursued such a policy they would only be able to find fresh customers by reducing rates, which are strongly competitive, and thereby reduce the margin between the member bank rates and the official rate to such a

degree as to render any further expansion of credit unprofitable. Already, in financial centres, the margin is so small that such a policy would quickly defeat its own end.”¹

There are certain points of difference which may be noticed between the English and the American systems. In this country the joint-stock banks make loans to customers in the form of overdrafts and advances. But these operations of lending on the part of the banks do not produce negotiable instruments which the banks can discount at the Bank of England. In the United States, on the other hand, when a member bank makes a loan to a customer it receives a promissory note from that customer, and that note may in turn be discounted by the member bank with the Federal Reserve bank of the district. It is at this stage that some confusion has arisen, mainly as a result of the differences in mechanism. Sometimes the market rate of discount in London has been compared with the discount rate of member banks in New York, and it has been pointed out that whereas in London the market rate of discount is below the Bank Rate, in New York the member bank rate is above the Federal Reserve Bank Rate. The comparison is misleading, because the same things are not being compared. In both cases the rate of interest charged by ordinary banks to customers for loans and advances is higher than the rate of discount officially charged by the central bank. On the other hand, if we take the market rates for the most liquid forms of short-term paper, we find that in both cases the rates are below the official rates of the central bank. Thus, in June, 1931, the discount rate of the Federal Reserve bank of New York was $1\frac{1}{2}$ per cent,

¹ J. H. Jones, *The Federal Reserve System*, p. 26.

while the rate for "prime bankers' acceptances, 90 days" was 0.88 per cent and the rate for Treasury Certificates was 0.55 per cent. In the same month the Bank of England rate was 2.5 per cent, while the rate on bankers' acceptances, three months, was 2.09 per cent and the rate on Treasury Bills, three months, was 2.10 per cent. The apparent differences between the two systems need not, therefore, be taken to signify fundamental differences in principle.

Now it is both interesting and important to notice that the conditions under which the new system came into operation were abnormal and in a sense unsuited to the proper testing of the banking reform. The World War was in process, and although the United States did not become an active participant till 1917, the country was affected by war conditions elsewhere. In the first place, the reserve ratios imposed upon the member banks had been reduced so that the same actual reserves could be held against a larger volume of credit facilities to their customers without forcing the member banks to apply to the Federal Reserve banks for rediscounts. In addition, there was a large gold movement to the United States. This was sent partly in payment of supplies purchased by the Allies from the United States and partly as the basis for loans to be raised in the United States, and net gold imports amounting to about \$1,000 millions (say, £200,000,000) were received in the period up to the entry of the United States into the war. That gold was added to the reserves of the member banks, so that they were able to increase their credit facilities still further without having recourse to the Federal Reserve banks for rediscounts. The result, therefore, was that credit was both cheap and ample, and prices tended to rise.

It was only later that conditions were so far altered that it became necessary for the member banks to resort to the practice of rediscounting on a large scale, and it was in that period that the real testing time for the new system emerged.

CHAPTER XII

THE GOLD EXCHANGE STANDARD

It has already been indicated that the object of the gold standard in its simplest form is to maintain the currency of a country at par with gold, and the chief means of ensuring that result is to allow freedom to convert currency into gold and gold into currency. But even the gold standard itself has two rather distinct forms. In one, which is generally called the *Gold Specie Standard*, there is a free coinage of gold, and paper money is convertible on demand into gold coin. In the other, which is generally called the *Gold Bullion Standard*, there is no actual gold circulation, but the central bank is placed under an obligation to buy and sell gold bullion at fixed prices in terms of the local currency. The Gold Standard Act of 1925 was based upon this idea. The particular advantage of this second form is that since there is no actual gold circulation, there is a considerable economy in the monetary use of the metal. And, in fact, under these conditions, when gold is wanted and is obtained from the central bank, it is mainly for export and for purposes connected with international trade. Thus, if the exchanges become so adverse that the gold export point is passed, a certain drain will be felt by the central bank upon its gold reserves; and, as has been shown earlier, that sets forces in motion which go to counteract the causes which led to the adverse exchanges.

But now there is a third form, known as the *Gold Exchange Standard*, and it is with that form that this

chapter is specially concerned. And that represents an attempt to economize still further in the monetary use of gold. The point may be expressed first of all in quite general terms. Gold is an international means of exchange. It affords one way of exchanging one currency for another. Thus pounds can be converted into gold, and gold into dollars. But when a person wants to export gold from one country to another, it is in order that he may do something with it in the country to which he exports it; he wants to convert it into some means of payment in that country. Therefore it will serve his purpose equally well if he goes to the central bank in the first country, and that central bank provides him with the means of payment which he desires in the other country. And so, in order to do that, the central bank in question would require to hold liquid assets in the other country, so that it could sell part of these liquid assets for the benefit of its customer.

To make the position more concrete, suppose the United States to be a gold standard country, as, in fact, it is. Its currency is convertible into gold. There is another country which does not possess a gold standard in that sense, but the central bank in that country is prepared to buy and sell dollars at fixed prices in terms of its own currency. In that case the local currency of that country is not directly convertible into gold, but it is convertible into another currency which *is* convertible into gold. That, in a simple form, is what is meant by the gold exchange standard.

The best known example of this arrangement before the war was found in India. The local currency there consisted mainly of silver rupees, but the gold value of the rupee was maintained at the rate of 15

rupees to the pound sterling, i.e. the rupee was worth 1s. 4d. The actual silver rupee which was in circulation, however, did not contain silver which would fetch 1s. 4d. as metal. How, then, was it possible to fix the gold value of the rupee at that rate? The position was briefly as follows: (a) In 1893 the free coinage of silver had been withdrawn; henceforward people were not able to take silver to the mints to be converted into rupees. And the rupee came, in fact, to be a token coin; its supply was limited, and its value as coin rose above its value as metal. (b) Then in 1898 the gold exchange standard was properly adopted. The Secretary of State for India undertook to buy and sell rupees at certain fixed rates. He was prepared to sell bills of exchange on India at a maximum rate of 1s. 4½d. per rupee, and he was prepared not to sell below a minimum rate of 1s. 3⅔d. per rupee.

Suppose now that there was an increased demand for rupees in London. That would tend to raise the value of the rupee in terms of sterling, but the fact that the Secretary of State was prepared to sell rupees without stint at the maximum rate of 1s. 4½d. prevented the rate from rising above that figure, since, obviously, no one would pay more than that price for rupees if he could obtain all that he wanted at that figure. On the other hand, if there was an increased demand in India for sterling, that would tend to raise the value of sterling in terms of rupees; but the fact that the Secretary of State was prepared to sell sterling at the rate of 1s. 3⅔d. prevented the actual rate from passing below that level.

But now, in order to do this, the Secretary of State had to have resources both in India and in London. Persons in London who wanted rupees in India paid for them by means of cheques in favour of the Secretary

of State, who, in turn, paid out rupees in India. These cheques in London, however, were convertible into gold. Similarly, if people in India wished gold or sterling in London, they paid for it in rupees in India, and the Secretary of State released gold or sterling in London. Suppose now that prices in India rose, trade became over-active, and imports were so far increased that there was an adverse balance of indebtedness. The Indian demand for sterling would then be increased, but the Secretary of State sold sterling freely in exchange for rupees in India. And that meant that the circulation of rupees in India was contracted, credit was restricted, and prices in India tended to fall. In other words, the essentials of the position were similar to what has been described for the different monetary and banking mechanism of the United Kingdom.

A rather earlier example of much the same thing occurred in the case of Russia after 1894, and instead of building up a large gold reserve she accumulated a smaller gold reserve and supplemented it by a reserve of other gold standard currencies in other centres. And that supplementary reserve took the form of bills of exchange and other securities which were immediately convertible into gold. Thus the Russian Government obtained in Berlin a credit in gold marks, and with that credit in Berlin it could sell marks to those who required them at a fixed rate of exchange in terms of roubles. Consequently, a Russian trader who might otherwise have required to have obtained gold for export to Germany was now able to secure a credit in Berlin at a fixed price, and that credit was convertible into gold.

Such an arrangement had certain advantages. It meant that a smaller actual gold reserve could be held

than would otherwise have been necessary, and the supplementary reserve in the form of foreign bills convertible into gold was a reserve which, unlike an actual gold reserve, earned interest. Thus, if the plan was extensively adopted, it meant a considerable economy in the monetary demand for gold. But it was a plan which required careful management. And the important point is that whether a currency authority undertakes to buy and sell gold at fixed prices, or whether (under the gold exchange standard) it undertakes to buy and sell gold exchange at fixed prices, it must take steps to check a drain on its reserves, if that drain is likely to be lasting.

In recent years the gold exchange standard has become of even greater importance than it was before the war. During the war period practically all currency systems were disorganized, and it was one of the urgent post-war problems of reconstruction to reorganize these currency systems with a view to restoring more stable conditions. And the general movement has been to link them once more to gold, because—as was declared at the Genoa Conference in 1922—gold was “the only common standard which all European countries could at present agree to adopt.” The various particular problems involved in “the return to gold” cannot properly be dealt with at this stage, but one more general problem may be mentioned. The world value of gold in terms of commodities depends upon conditions of demand and conditions of supply; and if demand tends to increase relatively to supply, the value of gold will tend to rise, or—what is the same thing—the level of world gold prices will tend to fall. Now at the Genoa Conference that was what was rather feared if there should be a general and rapid return to gold standard conditions,

and if the various countries endeavoured to accumulate large gold reserves. And the fear was that this might lead to a fall in world gold prices to an extent which would be damaging to world trade. Consequently, among other things, the Genoa Conference recommended that efforts should be made to economize in the monetary use of gold so far as that was reasonably possible. And one way in which economy might be exercised in this direction was by a fuller use of the gold exchange standard.

Now this suggestion has been widely adopted, and in many of the reconstructions affecting central banks it is prescribed that part of the reserves held against notes and other immediate liabilities may be held in the form of gold exchange. In Germany, for example, notes issued must be covered to the extent of 40 per cent by gold or "devisen"—i.e. notes, bills, or cheques payable in foreign gold standard currencies; and of this 40 per cent three-quarters must be held in gold, but one-quarter may be held in the form of gold exchange. And a similar clause was introduced in the case of Belgium. In Austria a cash reserve of one-third is prescribed against notes and immediate liabilities, and this cash reserve may include gold exchange. Similarly with Hungary, Czechoslovakia, and other countries. But over and above what has been prescribed by law there has been a growing tendency for central banks to hold reserves in foreign currencies. Thus in the *Federal Reserve Bulletin* for June, 1927, it was estimated from the published balance sheets of some thirty central banks that in March of that year these banks held liquid foreign assets of fully \$1,600 millions, say £320,000,000; and about one-half of that sum was held in conformity with legal requirements, while the other half was held as a matter

of policy. The question for the future is whether this tendency is likely to be permanent, or whether in time these central banks will tend to replace their reserves in foreign currencies with reserves in actual gold. If that should happen on an appreciable scale, the full economies from the adoption of the gold exchange standard over a wide area would not altogether be realized.

CHAPTER XIII

INFLATION

DURING the war period the gold standard was almost everywhere abandoned. Conditions of convertibility were removed, gold movements were restricted, the belligerent countries in particular came to issue inconvertible paper money, and they did so on a large scale. Strictly speaking, the term "inflation" is not easily defined.¹ But the phenomenon appears to be distinct and recognizable, and for broad general purposes it will perhaps serve the purpose at present if it is described as an excessive supply of money in relation to the amount of work which that money has to do, leading to a general rise in prices. The difficulty is that inflation is often associated with inconvertible paper currencies, and so the question arises as to how we are to regard a general rise in prices under gold standard conditions, due, for example, to large new gold discoveries. In essence, of course, there is no real difference except that serious inflation is less likely to occur under gold standard conditions, even although the problem may under certain conditions be one of some importance.

The general problem as it arose under war-time conditions was briefly that State expenditure was suddenly and very greatly increased, while taxation was not increased on the same scale. This is not the place to consider how far ordinary tax revenue might

¹ Cf. Pigou's article on "Inflation" in *Economic Journal*, Dec., 1918.

have been increased more than it was. The point is that in fact it was not, and in any case the problem was not a simple one. It was really one which was bound up with the possible reactions which might result, and it was inexpedient that anything should be done which might prove damaging to production at a time when every productive effort was essential. As a part alternative, the Government under these conditions could resort to loans, but even these proved to be insufficient to cover the balance of expenditure, and since it was necessary to meet that additional expenditure, further resort was generally made to another device. (The Government might, of course, simply have printed more paper money, and paid the balance of its expenditure with this new money.) That would have been inflation in perhaps its simplest and crudest form. So far as this country was concerned the actual procedure was more complicated. It is explained in the *Interim Report of the Committee on Currency and Foreign Exchanges*, 1918, somewhat as follows: Suppose that in a given week the Government obtains so much from taxation and ordinary loans, but still requires a further £10,000,000 to meet its expenditure. Resort is then had to the Bank of England for an advance to that amount, and the Bank places by a book entry the amount of £10,000,000 to the credit of the Government under the head of Public Deposits. In time the Government draws cheques against that sum, and these cheques are paid out to those to whom the Government is indebted, and these creditors in turn pay the amounts received into their own accounts with their own banks. Ultimately, therefore, when the cheques are cleared, the sum of £10,000,000 stands to the credit of the other banks with the Bank of England, and so is transferred

from Public Deposits to Other Deposits; "the effect of the whole transaction being to increase by £10,000,000 the purchasing power in the hands of the public in the form of deposits in the joint-stock banks, and the bankers' cash at the Bank of England by the same amount. The bankers' liabilities to depositors having thus increased by £10,000,000, and their cash reserves by an equal amount, their proportion of cash to liabilities (which was normally before the war something under 20 per cent) is improved." Accordingly the banks were in a position to increase their loans to the public or to the Government directly, or to the Government indirectly through the public.

This credit expansion would naturally be expected to lead to a rise in prices. Under normal gold standard conditions that rise in prices would have set in motion both an external and an internal drain upon the cash reserves of the central bank, and compelled that institution to raise its discount rate and check the inflationary process. But under war-time conditions these normal checks were not allowed to operate. With rising prices there was a greater call for legal tender currency, and if the conditions of the Act of 1844 had been maintained this could not have been met. In fact, it was to meet this requirement that currency notes came to be issued in increasing quantities.¹

It is not possible here to elaborate the mechanism of inflation further. In different countries the actual method of procedure varied. (But the general result was the same, and prices rose by different amounts

¹ During the war period, machinery was devised to "peg" the exchanges by mobilizing foreign securities held in this country and selling them abroad when necessary. On this point, reference may be made to Gregory, *Foreign Exchange*, Chapter V; or to Clare and Crump's *ABC of the Foreign Exchanges*, Chapter XXII.

according to the extent of the inflation in each country. To take some examples, the index number of wholesale prices in the United Kingdom averaged fully 300 in 1920 as compared with 100 in 1913; in France it averaged fully 500; in Italy 624; and in Austria and Germany the increases came to be many times greater. But now it may be noticed that inflation tends to generate what is really a form of vicious circle, because having originated with budget difficulties it tends to intensify budget difficulties in the future. That result follows because with rising prices Government expenditure also increases, whereas the *real* value of money taxes imposed earlier is reduced through the fall in the value of the unit of money. Thus, for example, the German government might impose taxation to yield 1,000 million marks, but if prices are continuing to rise, the 1,000 million marks of taxes when they are received will not have the same real value which the same sum possessed when the taxation was imposed. And so the tendency is for there to be a further deficit which is again met by more inflation. This result is more particularly probable where inflation is proceeding at a rapid rate, and it is found that the value of the unit of money falls more rapidly than the quantity of money increases. In terms of the quantity theory this result is quite understandable, because confidence in the value of money is shaken, people are unwilling to hold it, the velocity of circulation is increased, and so its value falls with still greater rapidity until in the end it may become quite worthless.)

Some of the effects of inflation have already been mentioned in an earlier chapter of the present volume. It remains to consider in what way the foreign exchanges are affected. In the first place it will be

remembered that under gold standard conditions the foreign exchanges are stabilized and movements in the actual rates are confined within narrow limits. Under these conditions, with free gold movements, the value of gold will tend to be uniform as between different gold standard countries. With the abandonment of the gold standard this general link no longer existed. There were now many independent currencies, based upon inconvertible paper, the value of each depended upon the degree of inflation, and the extent of inflation varied from one country to another. Exchange rates in consequence seemed to have no stable foundation. The question which then arises is whether there is any normal rate of exchange between two depreciated currencies.

To that question the following answer might be given. When a person is willing to buy an amount of some foreign currency it is because that foreign currency has a power of purchase over goods and services in its own country, and the amount which he is willing to pay in his own currency really represents a certain purchasing power over goods and services in his own country. The normal rate of exchange between two such currencies, therefore, comes to depend upon the respective purchasing powers of the two currencies in their own countries. Suppose, for example, that under a set of stable conditions the rate of exchange between francs and sterling is 25 francs to the £. Suppose next that in France prices are doubled while in this country they have remained stable. In that case, £1 would now be worth 50 francs, because it will now take twice the number of francs to buy what could be bought with £1 in this country. Suppose next that in this country prices have also doubled. In that case £1 will still be worth 25 francs,

although the value of the pound in this country and the value of the franc in France have both been reduced by one-half. More generally, if there are two countries, A and B, and inflation occurs in A, the value of A's currency in B will fall; if inflation also occurs in B the value of A's currency in B will not fall so low as it would had no inflation occurred in B. The new normal rate of exchange has been called the *purchasing power parity*, and the position has been defined by Professor Gustav Cassel as follows: "When two currencies have been inflated, the new normal rate of exchange will be equal to the old rate multiplied by the quotient between the degrees of inflation of both countries."¹

To illustrate the position, suppose that in France the index of prices rises from 100 to 600, and in this country over the same period the index rises from 100 to 200. The new normal rate or purchasing power parity would be 75 francs to the £. Thus—

$$\begin{array}{rcl}
 600 \text{ present francs} & = & 100 \text{ pre-war francs} \\
 & = & 4 \text{ pre-war pounds} \\
 & = & 8 \text{ present pounds} \\
 \therefore 75 \text{ present francs} & = & 1 \text{ present pound}
 \end{array}$$

The next problem is to consider how far actual rates of exchange tended to correspond with the purchasing power parities as calculated in this way.

Rates of exchange, like all prices, express a relationship. Under a normal set of conditions the rate of exchange between two currencies expresses the fact that after allowing for tariffs, transport costs, etc., a certain number of currency units in the one country has the same real purchasing power over commodities in general as another number of other currency units has in the second country. This holds good both under gold standard conditions and under paper standards,

¹ Cassel, *The World's Monetary Problems*, p. 32.

provided conditions are stable. And that is what is involved in the conception of a purchasing power parity between two currencies. (The purchasing power parity may be defined as "the rate of exchange at which either currency would possess the same purchasing power in both countries.") Now under stable conditions the actual rate of exchange will tend to coincide with the parity which is normal to these conditions. Otherwise, if the actual rate of exchange differed appreciably from the normal parity, the products of one of the countries would be cheap to purchasers in the other, while the products of the latter would be dear to purchasers in the first; and the conditions of trade between the two would be so altered that forces would be set in motion tending to bring the actual rate into line with the normal parity.

To take an example, suppose that the calculated parity between francs and sterling on the basis of the relative price levels in the two countries is 100 francs to the £, and that the actual rate of exchange is 120 francs to the £. In that case the franc would be undervalued abroad. French products would be cheap to British purchasers and British products would be dear to French purchasers. A British merchant by spending £100 could obtain 12,000 francs in the foreign exchange market, and by spending that sum in France he could obtain goods which would be worth £120 in Britain. In the same way, a French merchant who had to pay 12,000 francs to obtain £100 could only purchase British goods to the value of 10,000 francs in France. As a result, British imports from France would be encouraged; British exports to France would be discouraged; the British demand for francs would rise relatively to the supply of francs; the value of the franc in terms of sterling

would rise; and that would continue until the actual rate of exchange settled down at about 100 francs to the £.)

But the practical application of these principles raises a number of difficulties. In the first place, the question arises as to whether it is possible to calculate accurately the normal parities for depreciated currencies. In the previous discussion the method was to compare the relative movements in prices in the two countries as measured by index numbers. But most index numbers are constructed in a way which gives special weight to particular classes of commodities, and while all prices may have risen some may have risen more than others. And so the question arises as to which index numbers should be used in the comparison. That raises a number of statistical points which cannot be examined here. But it may be stated that it cannot be hoped to arrive at complete accuracy by this method. The use of index numbers for this purpose only provides a rough guide to the true position.

But, in addition to that, other things may have altered. New one-sided restrictions may be imposed upon international trade, and these also may affect the position. As between two countries there may be new fiscal barriers or prohibitions, which obstruct trade in one direction more than in the other. And the currency of that country whose exports have been relatively restricted will fall in value in terms of the other country's currency, and it may fall below the purchasing power parity. Professor Cassel has pointed out¹ that in the early years of the war, prices rose further in Sweden than in the U.S., and so the purchasing power parity between the krona and the

¹ *Money and Foreign Exchange after 1914*, p. 147.

dollar should have been expected to be above the pre-war gold parity of Kr. 3.73 = \$1. But as it happened, American exports to Sweden were subject to special restrictions, while exports from Sweden were not handicapped to the same extent, and the actual rate of exchange was lower than the old parity, and much lower than the new normal or purchasing power parity as calculated on the basis of price index numbers. In 1917 the rate fell as low as Kr. 2.55 = \$1. In other words, the value of the Swedish currency in terms of dollars was held at an abnormally high level owing to the special one-sided trade restrictions. Or, to put the matter in another way, the dollar was undervalued for the time being in terms of Swedish currency.

Passing now to some other difficulties, it may be noticed that when currencies are depreciating the purchasing power parities are not stable parities like the gold pars of exchange; they are parities which fluctuate with relative changes in price levels. And that is important because, when currencies are depreciating, there is an additional element of uncertainty attached to exchange rates, and that makes trading operations between countries more precarious. Again, in the case of such currencies there is nothing which corresponds with the gold points between which actual exchange rates are confined under gold standard conditions.

But now, when the actual exchange rates are examined in respect of a country whose currency is depreciating, it is found that these tend to undervalue that currency abroad. If prices are rising in one country while they remain stable elsewhere, it is to be expected that a greater number of the currency units of that country will have to be given for the

same amount of foreign currencies as before. But what tends to happen is that the external value of a depreciating currency, as measured by the rate of exchange, falls more rapidly than the internal value as measured by the rise in internal prices. And it has been shown that during such a period internal prices may rise more rapidly than the quantity of money increases. For example, in the case of France, between January and July, 1926, the note circulation increased by 11 per cent, wholesale prices rose by 32 per cent, and the average sterling exchange rose by 53 per cent. Now the question arises as to why the external value should fall more rapidly than the internal value. To explain that result account must be taken of a number of psychological factors. The foreign exchange market is specially sensitive to future prospects, and if these point to a continuance of inflation, that further inflation is likely to be anticipated before it actually occurs. Political uncertainty, among other things, will be important here. During 1922, although inflation was proceeding rapidly in Germany, the mark exchange was subject to certain psychological cross-currents.

Then apart from these cross-currents there are two other factors, also psychological in character. The first is that a new element of speculation is introduced. The second is the more important, and consists of what has been called the "flight" from the currency. The position is that as the currency has been depreciating, confidence as to its future value is shaken, and instead of holding stocks of it as usual, people will rush to convert their holdings into stable foreign currencies. And that means a new demand for these foreign currencies, and the value of the depreciating currency falls more rapidly.

The general result is that when a currency is depreciating rapidly it tends to become undervalued abroad, i.e. its value outside the country is lower than its value inside the country. And that is manifested by a growing disparity as between the actual rate of exchange and the purchasing power parity as calculated on the basis of relative price levels.

That may be illustrated by reference to the case of France in the period which culminated in the crisis of July, 1926. The following table shows the average dollar rate of exchange in the months mentioned, and also the purchasing power parity as calculated from the French index number of wholesale prices, and the U.S. Bureau of Labour's index of wholesale prices—

	Average Dollar Rate	P.P.P.
Jan., 1925 . . .	18.54 francs	17.01 francs
July, 1925 . . .	21.30 „	18.44 „
Jan., 1926 . . .	26.61 „	21.50 „
July, 1926 . . .	40.49 „	29.32 „

This table shows how during the period of crisis there was a growing disparity between the actual rate of exchange and the purchasing power parity, as measured by the relative price levels in the two countries.

Now such a disparity, for reasons which have already been indicated, should act as a stimulus to French exports and as a handicap to French imports. And provided conditions remained stable, these forces would tend to rectify the balance. But the position of a *depreciating* currency is different from that of a *depreciated* currency, in that the downward

pull exercised by the continuance of the inflation and by the prospects of its further continuance is more important, so that the disparity may not be of short duration only. It is from that position that the phenomenon of *exchange dumping* proceeds. For example, suppose the purchasing power parity between marks and sterling is 6,000 marks to the £, i.e. 6,000 marks in Germany have the same purchasing power as £1 has in Britain. And suppose, also, that the actual rate of exchange is 7,500 marks to the £. Suppose, next, that certain goods cost 600,000 marks to produce in Germany and £100 to produce in Britain. In that case, and neglecting transport costs, the German goods could be sold in Britain for £80, and to that extent it would be possible for German exporters to undercut British manufacturers in the British market. In practice, however, this advantage is often exaggerated. It is often forgotten that the same disparity which gives an advantage to German exporters also makes German imports very dear, and in cases where raw materials have to be imported the one would to some extent be neutralized by the other.

CHAPTER XIV

MONETARY RECONSTRUCTION

IT has already been shown in what way the process of inflation was bound up with the disorganization of the national finances during and after the war. It has also been shown that as inflation became more rapid it tended to generate a type of vicious circle, in so far as unbalanced budgets led to inflation and inflation led to unbalanced budgets and to more inflation. The problem of monetary reconstruction in one of its aspects, therefore, was one of securing real budget equilibrium and thus of breaking the vicious circle. In this country, the *Cunliffe Report*, 1918, made as one of its chief recommendations that the practice of Government borrowing, which was a main element in the mechanism of credit inflation, should be stopped, and that the national finances should be so arranged as to secure a normally balanced budget. In cases where inflation had only occurred on a comparatively moderate scale, that result might be achieved by cutting down public expenditure on the one hand and by increasing taxation on the other; but where inflation was more acute, the problem was less simple. In certain of these latter cases it required some form of outside financial assistance to bring about the desired result quickly; and as regards Austria and Hungary, that foreign financial assistance was provided under the auspices of the League of Nations. In fact, this represented a new type of international collaboration which presented many difficulties, since the working of it was liable to endanger

the independence of the State which was to receive the assistance, and that had to be avoided. The Austrian scheme may, therefore, be cited as an instance of what took place. The plan was finally drafted in October, 1922. In the first place, the "territorial integrity and the sovereignty of Austria" were guaranteed. Secondly, Austria undertook to effect a series of financial reforms which were calculated to bring about an unaided budget equilibrium by the end of 1924. But until these reforms could be completed, the balance necessary to secure budget equilibrium without resort to further inflation was to be provided for by foreign loans guaranteed by certain foreign governments. And, finally, Austria agreed to the appointment of a Commissioner-General to supervise the administration of these loans and the execution of the necessary reforms.

But if the attainment of real budget equilibrium was a condition of the cessation of inflation, it did not exhaust the problem of monetary reconstruction. It was sometimes argued that the problem of the budget might be approached from the other end, by first stabilizing the currency. In any case, that aspect of the problem had also to be dealt with. Financial reform remained incomplete without currency stabilization. And the form of stabilization which was generally desired was that which was associated with the gold standard. Theoretically, of course, that was not inevitable. Stabilization might have been effected on the basis of inconvertible paper, but the experience of earlier years was not likely to inspire much confidence in the attempt to accomplish that result. The problem of the "return to gold" has, therefore, to be considered.

For convenience, we may take, first of all, the cases

where inflation had been on a moderate scale. For various reasons the value of gold itself had fallen, and it became customary—since the U.S. had remained on the gold standard—to measure the depreciation in the value of gold by the rise in American prices. Under these conditions, if another country desired to return to the gold standard at the old gold par of exchange, it was necessary for that country to adopt a policy of deflation so that its price level was reduced to the level of prices in the U.S. Now, in cases where the previous inflation relatively to the depreciation of gold had not been excessive, that deflation might be accomplished without insuperable difficulty; and it was, in fact, the method adopted by such countries as the U.K., Holland, Sweden, Denmark, Norway, and Switzerland. Nevertheless, it was a method which, even for those countries, presented difficulties. It could not have been completely pursued in France, Italy, Germany, Austria, etc., without invoking complete disaster.

The alternative was to stabilize the currency on a new gold basis by the method of “devaluation,” and that meant stabilizing the currency at a new gold par of exchange lower than the old par. To put the matter in another way, it meant making the paper currency of the country convertible into a smaller quantity of gold than before, i.e. reducing the weight of gold which constituted the standard of value. Suppose, for example, that as compared with 100 in 1913, prices in the U.S. were represented by an index of 140, while prices in the U.K. were represented by an index of 170. Assuming that a true purchasing power parity could be calculated from these indices, the new normal rate of exchange would be £1 = \$4 instead of £1 = \$4.86, as it was before the war; i.e.

sterling would have shown a fall to 82·2 per cent of its old value in terms of dollars. If the new conditions remained stable, the actual rate of exchange would tend to settle round about £1 = \$4. A new gold parity could then have been established to coincide with the new normal purchasing power parity, and that could be done by reducing the weight of gold, which constituted the British standard of value, to 82·2 per cent of its old value, i.e. the sovereign, which formerly contained 113 grains troy of pure gold, would now only contain 92·88 grains. The dollar, on the other hand, would remain as before, equivalent to 23·22 grains. The practical objection which is generally urged against the method of devaluation is that it implies a form of repudiation which is damaging to the reputation of a country. In point of fact, however, it is the previous inflation which constitutes the real repudiation, and formal devaluation would be little more than an acknowledgment of the fact. Deflation, on the other hand, may bring some form of compensation in cases where earlier inflation had meant repudiation; but it brings other difficulties in its train and, like inflation, it is very unequal in its incidence. The net balance of advantage as between the two methods is not easily determined.

It is not possible in this volume to do more than indicate some of the major problems which are involved in monetary reconstruction. For a fuller analysis, reference may be made to other sources, some of which are mentioned in the Bibliography. But reference may be made here to one of the important problems of readjustment which arise. In an earlier chapter it was indicated that when a currency is depreciating, its external value may be lower than its internal value. In the same way, when a currency is

appreciating—as during deflation—its external value may be higher than its internal value. Such a difference gives rise to a problem of readjustment, so that there will be a real equilibrium.

Where there is such a disparity, stabilization may be attempted at one or other of the two values, leaving the other value to be brought into equilibrium. The various possible types of readjustment may be summarized as follows: (1) If the external value of the currency is lower than its internal value, stabilization on the basis of the external value means a further fall in the internal value, i.e. a further rise in internal prices; (2) if the external value is lower than the internal value, stabilization on the basis of the internal value means a rise in the external value; (3) if the external value is higher than the internal value, stabilization on the basis of the external value means a rise in the internal value, i.e. a fall in internal prices. (4) if the external value is higher than the internal value, stabilization on the basis of the internal value means a fall in the external value.

To fix these points, let us suppose that U.S. prices (which represent gold prices) are represented as before by an index of 140 as compared with 100 in 1913. Suppose also that British prices are represented as before by an index of 170, and that from these indices true purchasing parities can be ascertained. In that case, the purchasing power parity would be £1 = \$4. But if the actual exchange was \$3.60, the external value would be lower than the internal value. If, then, it was decided to stabilize at the lower external value, British prices would have to rise to an index of 189. (Case I.) If, on the other hand, it was decided to stabilize at the higher internal value, the sterling exchange would have to rise to £1 = \$4. (Case II.)

Suppose, on the other hand, that the actual exchange was \$4.40, while the purchasing power parity remained at £1 = \$4. In that case the external value would be higher than the internal value, and if it was decided to stabilize at the higher external value, British prices would have to fall to about 155. (Case III.) And if it was decided to stabilize at the lower internal value, the sterling exchange would have to fall to £1 = \$4. (Case IV.)

These examples, of course, simplify the problem, and they are introduced only for the purpose of illustrating the type of readjustment which is involved. They still leave two questions to be considered. The first concerns the practical problem of effecting the stabilization. The second concerns the reactions which follow the subsequent readjustment between the two values of the currency.

The usual procedure was to endeavour to stabilize the external value of the currency, i.e. to maintain a certain fixed rate of exchange. But this was precisely what constituted the difficulty. If a currency authority was to be able to prevent the external value of the currency from falling further, it had to have a stock of gold or foreign stable currencies which it could sell at the fixed ratio in terms of its own local currency. In some cases there were gold reserves which were capable of being employed in this way, but in the case of France the central bank was very reluctant to use its gold reserves in this manner, so long as there remained the almost certain probability that budget equilibrium would not be reached and that further inflation would occur.

The previous discussion has indicated certain of the readjustments which were necessary before the process of monetary reconstruction was completed,

and as regards the mechanism of stabilization, mention has just been made of the possible use of gold reserves by the currency authority; but mere intervention in the foreign exchange market is insufficient and must be accompanied by financial reforms which affect the budget. It has to be emphasized that financial reconstruction and currency stabilization are two aspects of the same problem, and that the second aspect in particular depends upon a successful approach to the first. In those cases where there was not a sufficient gold reserve available for exchange intervention, or where there was an unwillingness to employ what gold was possessed, the alternative was to secure a stock of foreign stable currencies by way of external loans. But it was not always easy to secure such loans. When the currency of a country has been subject to heavy and rapid depreciation, confidence is undermined both inside the country and in other countries, and loans may only be forthcoming subject to special conditions and guarantees. The case of Austria has already been cited. In the case of Germany, financial assistance was procured under the working of the Dawes Scheme, which also dealt with the annual payments to be made for reparations. In the case of Belgium, foreign loans were raised without the assistance of the League of Nations; and in the case of France, private arrangements were made with large foreign financial houses. Even the United Kingdom in 1925 made arrangements for two American loans, amounting to \$300,000,000, to be available as a reserve for exchange operations in connection with the return to the gold standard.

Curiously enough, provided the internal financial reform was satisfactory, the attempt to stabilize the external value of the currency frequently turned out

to be a matter of comparative simplicity. In some respects, indeed, it turned out to be the simplest part of the process of reconstruction. Reference has already been made to what was called the "flight" from a rapidly depreciating currency, and that "flight" tended to depress the external value of the currency still more rapidly. But once this external value was successfully "pegged" in the manner which has been described, the currency inspired new confidence, and those persons who in panic had converted their funds into stable foreign currencies tended to reconvert them into their own currency. In this way the currency authority in the stabilizing country was able to build up a larger holding of foreign currencies. In fact, it might almost be said that once the foreign assistance was obtained, it was hardly necessary to employ it, or at least to employ the whole of it. But this, of course, does not mean that the foreign assistance was superfluous.

The stabilization of the European currencies was generally effected in relation, first, to the dollar, and that was virtually a return to the gold standard or the gold exchange standard. But in most cases this return was effected at a new gold parity by the method of devaluation. That meant that in the stabilizing country the weight of gold which constituted the standard had to be redefined. Sometimes the old unit of account was retained when devaluation was effected. That was the case in France and Italy. In France the weight of gold which constituted the new gold franc was only about one-fifth of its pre-war weight; in Italy it was rather more than a quarter of its pre-war weight. And so instead of the old gold parity of 25·22½ francs or lire to the pound sterling, there are new gold parities of 124·21 francs and 92·46 lire to the

pound sterling. In the case of Germany, the old gold parity was preserved, but before this was done a new currency was issued to be exchanged for depreciated marks at the rate of one new mark for one million million depreciated marks. In other cases a new unit of account was introduced in addition to devaluation. Thus in Austria, at the end of 1924, the schilling was substituted for the crown, and the new gold parity became 34.585 schillings to the pound sterling instead of 24.02 crowns as before the war.

These, however, are points of mechanism. The readjustments which have been described in a general way above, were only effected over a period of time, and they tended to have certain important effects upon trade and industry. Provided the external value of a currency was less than its internal value, exporting trades in the country tended to enjoy a certain relative advantage over foreign competitors in countries with stable currencies. When, however, the external value is fixed and, during the period of readjustment, the internal value falls until it comes into equilibrium with the external value, the amount of the relative advantage enjoyed by the exporting trades diminishes, and these trades will experience more acute competition. At the same time there may be a short-lived boom in the home industries under the influence of the rise in internal prices. But this artificial stimulus will only last during the period of readjustment. And if the boom tends to give rise to a certain measure of over-expansion, there is likely to occur a crisis when the two values of the currency are brought into equilibrium. On the other hand, if the currency were stabilized at the higher internal value, the consequent stimulus to trade would not occur. There would be no artificial boom in the home

trades of the country and the relative advantage of the exporting trades would be suddenly removed. The choice between the two methods from this point of view is not a choice between having and not having a subsequent strain and probable crisis; it is rather a choice between a less immediate and a more immediate strain and probable crisis.

The problem is also worth considering from the standpoint of those other countries where before stabilization the external value of the currency was *higher* than its internal value. If the external value is chosen as the rate of stabilization, some fall in internal prices must occur, and this fall is likely to be accompanied by some amount of industrial depression. Complaints are also likely to be heard that "sheltered" prices are high relatively to "unsheltered" prices. These terms cannot be defined with scientific precision. At best, we can think of unsheltered prices as the prices of goods which enter into international trade and which are subject to keen world competition. Sheltered prices, on the other hand, will be the prices of goods produced internally and in the main for domestic markets, or which are not subject to the keen pressure of world competition. Sheltered prices may affect the money costs of the exporting trades, and if these sheltered prices fall only slowly, the exporting industries will find their difficulties increased. Stabilization under these conditions is likely to have immediate difficulties. This, in fact, was the experience of the countries of Scandinavia and also of the United Kingdom. Then, finally, there is the possible case where the currency was stabilized at the lower internal value. In this case the external value would have to fall until a position of equilibrium was reached, and this would mean that the burden under which the

exporting industries suffered through the "external overvaluation" of the currency would be removed. As regards the exporting industries, the question to be considered in every case is how the money receipts and the money costs will be affected during the process of readjustment. And, as has been shown, that depends upon the previous relation between the two values of the currency and also upon the rate of stabilization.

The chosen rate of stabilization has also another aspect in relation to the public finances. The real burden of a debt depends upon the level of prices, and if the currency is stabilized at a low value, the subsequent real burden of the debt will remain relatively low; but if the currency is stabilized at a higher value, the subsequent real burden will be increased. It is necessary, of course, to take account of the various price levels at which different amounts of the public debt were raised. As regards the United Kingdom, the rise in the value of money in recent years has materially increased the real burden of the indebtedness contracted during the war. In other countries some rise in the value of the local currency would have served to restore to debt-holders some part of what they had lost through extreme currency depreciation. Thus in France, in 1926—the year of extreme crisis for that country—the index number of wholesale prices averaged 703 as compared with 100 in 1913, and reached their highest point at 854 in July of that year. Since that date, however, prices have fallen, and during the year 1930 the index number averaged 554. As compared with 1926, the real burden of the French debt has increased, but the present price-level is still higher than it was in any year apart from 1926. It may, therefore, be concluded that the

real burden of that debt is still less than it was when the debt was contracted.

One further point may be mentioned. It has been indicated that for some countries it was possible to return to the gold standard at the old par of exchange by the method of deflation. That meant that in those countries the level of prices had to be brought down to the level of prices in the United States, which remained throughout on the gold standard. Now that process would have been rendered easier for those countries if gold prices in the United States had risen, i.e. if the value of gold had fallen. And in point of fact, at the time when this country returned to the gold standard, in May, 1925, some such process was in operation. The *Bureau of Labour's* index of whole-sale prices in the United States rose by approximately 10 per cent between the second quarter of 1924 and the first quarter of 1925. But that movement was not continued. Since then the value of gold has tended to rise, and the fall in the level of world gold prices may not unnaturally have contributed to the difficulties which have since been experienced. Between 1926 and the first half of 1931 (on the basis of monthly averages) the *Bureau of Labour's* index fell by fully 27 per cent. Now at a time when prices are falling, trade difficulties tend to increase. To that extent it may be said that the difficulties which have attended British trade since 1925 have been intensified not merely by the process of readjustment consequent upon the return to the gold standard, but also by the tendency for the value of gold itself to rise. And that points to what is likely to be one of the important problems of the future, viz., the problem of so improving upon the gold standard that it provides an even more stable standard of value than it has done in the past.

CHAPTER XV

THE VALUE OF GOLD

IN the last chapter it was indicated that it was possible to argue that the difficulties which had confronted trade and industry since 1925 had been intensified, although not created, by a general fall in the level of world prices, i.e. by a rise in the value of gold. That, in fact, points to a problem of considerable importance. In an earlier chapter it was shown that in the century from the end of the Napoleonic Wars to the outbreak of the late war, the general level of prices in this country (which was throughout the period on the gold standard) had experienced four definite movements; and although these movements were gradual and were spread over fairly long periods, and although they were small in comparison with the movements which occurred in all countries in the years after 1914, they might nevertheless be regarded as possessing a real significance. In the post-war years, the more immediate problem was that of restoring the various currency systems which had become disorganized, and the general movement towards that objective took the form of a general return to gold standard conditions. Such a return to gold can be said to possess definite advantages. When the mechanism is working freely it ensures a high degree of stability of exchange rates, and that is an important factor in the actual conduct of international trade. The various currencies have, indeed, a common basis; they are "tied" to gold, and if the value of gold itself alters it tends to alter at the same

time and in the same direction for all gold standard countries. But, as already suggested, there remains another problem. It might, in fact, be said that the gold standard as we know it gives stability over space, but not necessarily stability over time. If the general price level rises or falls it alters the real relationship between creditor and debtor, and it introduces into the working of businesses a new element which may in turn be responsible for much social friction and discontent, which is undesirable.

It is perhaps of some significance that there is now a greater recognition of the importance of this problem. Professor Irving Fisher has compared the gold standard as we know it with an elastic yard-stick. It takes a fixed weight of gold as the standard of value, but that fixed weight need not always have the same value or purchasing-power over goods and services. And he has put forward a scheme whereby the gold standard would consist not of a fixed weight of gold, but of a weight of gold which would be alterable in such a way that its value or purchasing-power over goods and services remained stable. The late Dr. Lehfeldt put forward a different scheme whereby the output of new gold would be controlled in such a way that the value of the metal tended to remain more stable. The details of these schemes cannot be examined here, nor can their difficulties be fully considered. Again, in 1922, at the Genoa Conference, it was recommended that when the various countries had returned to the gold standard in some form the central banks should co-operate with one another in endeavouring to prevent undue fluctuations in the value of gold; because what was feared at that time was that the general return to gold standard conditions would lead to a greatly increased demand

for gold, that its value would tend to rise, i.e. prices would fall, and that would be a detrimental factor in the recovery of world trade. In that co-operation it was suggested that the Bank of England should take the lead, and in 1926 it was indicated by representatives of that institution in evidence before the Royal Commission on Indian Currency and Finance that before long some attempt would be made to put into operation that particular recommendation of the Genoa Conference.

The Genoa Resolutions rather feared that the value of gold would tend to rise, i.e. that prices would tend to fall. As one means of checking the increase in the demand for gold it was recommended that fuller use should be made of the advantages of the gold exchange standard. Under that arrangement it would be unnecessary for the various countries to return to internal circulations of gold coins, and the use of gold on the monetary side could be confined to the purpose of settling balances as between countries or to the purpose of facilitating the machinery by means of which such settlements are made. To that extent an important economy in the monetary use of gold would be effected. That recommendation, moreover, has been widely followed, but it will have to be considered how far full advantage of the result is likely to be made.

To begin with, however, it may be worth while to consider whether or not this country has any special interest in securing stability in the value of gold, or at any rate in preventing a rise in its value. It has been argued that there are reasons for supposing that this country would be particularly handicapped by a fall in the level of world prices. There are three main reasons which may be advanced for supporting that view. (1) A falling price level makes trade more

difficult, but it tends to handicap foreign trade more than domestic trade, and as regards this country the proportion of foreign trade to total trade is particularly great. (2) The *real* burden of the national debt increases if prices fall, and "the national debt expressed in fixed gold terms is a higher proportion of our total production than in the case of our competitors." Even now the position is that the present level of prices is lower than the average price level at which the domestic debt of this country was contracted. Under the Dawes Scheme for German reparation payments it was provided that Germany's obligations should be adjusted if any change should occur in the value of gold either in an upward or in a downward direction. But no such principle was introduced in the case of this country's indebtedness to the United States. The Young Plan, which replaced the Dawes Scheme, did not retain these provisions for adjusting the amounts of Germany's payments, but the schedule of annual payments was reduced. Presumably, the authors of the Plan did not anticipate any further substantial change in world prices. (3) If prices fall that may call for reductions in nominal wages, and these will be difficult to secure except at a heavy cost through friction and industrial strife, which would be damaging to the national income. Thus in the interests of industrial peace it may be important that the value of gold should not rise appreciably.

We can now turn to the question of the policies which have been pursued by the various central banks in the light of the recommendations made at Genoa in 1922. Most central bank charters provide that a gold reserve shall be kept amounting to a certain minimum proportion of the notes issued, the usual proportion being from 30 to 40 per cent. Some

again, as in the cases of the United States and more recently in France, also require that a gold reserve of 35 per cent shall be kept against deposit liabilities. But gold is still being kept out of ordinary circulation, and the requirement to keep a certain minimum gold reserve against notes in circulation is equivalent to putting that amount of gold into "cold storage." It is locked up and is not available for effective use. In other words, the effective gold reserve becomes the amount of gold held in excess of the minimum requirement which is prescribed by law. Consequently, the higher the legal reserve the smaller the effective reserve, and if that effective reserve is small then central banks will endeavour to secure greater safety by increasing their gold holding. Under such conditions the danger is that several central banks may indulge in a scramble for gold simultaneously, and that would have detrimental effects on world trade in so far as the value of gold was raised.

The world's monetary stock of gold before the war was estimated at about £1,600,000,000. The present figure is probably in the neighbourhood of £2,300,000,000. Before the war, the monetary gold stock of the United States was about £380,000,000; by June, 1920, it had reached £540,000,000, and by September, 1931, it had increased to £970,000,000. Before the war, the United States held about 24 per cent of the world's monetary gold stock; it now holds about 42 per cent of an increased total. This altered relationship in the distribution of the gold stock of the world is of considerable importance.

In the early years of the war there were greatly increased demands from the belligerents in Europe for foodstuffs and munition supplies which the United States could provide, and these supplies were paid

for, to some extent, by the sale of American securities held in Europe, by loans raised in America, and by shipments of gold. That continued till 1917, when the United States entered the war, and from that time gold imports from Europe ceased. But then from 1920 the movement continued on a still larger scale, and it is in that connection that a point of some importance emerges. The monetary gold stock of the United States has increased by about 80 per cent since the middle of 1920. Under ordinary circumstances that would be expected to lead to a form of "gold inflation," i.e. to a rise in gold prices. But no such corresponding movement occurred. The United States *Bureau of Labour's* index number of wholesale prices fell from 247 in May, 1920, to 141 in July, 1921. On the basis of yearly averages that index number rose gradually from 144 in 1922 to 158 in 1925, and thereafter declined to 124 in 1930. Readers who are interested in this "gold paradox" will find in Dr. W. Randolph Burgess's *The Reserve Banks and the Money Market* a more detailed discussion of the particular American problem than is possible here. In that book it is shown in what way Federal Reserve credit served to act as a "cushion" to break the impact of gold movements upon the volume of bank credit, and therefore upon the level of prices. But the point of significance lies in the possibility of neutralizing the effects of gold movements in such a way that the value of gold is rendered more stable. If, in fact, the great post-war influx of gold to the U.S. had been allowed to serve as the basis of a proportionate increase in the volume of credit, the level of United States prices would have risen very considerably. On the other hand, the fact that the gold influx to the United States was not made the basis for a corresponding

expansion of credit meant that the United States could afford to lose a very considerable quantity of its gold holding without being obliged to effect any important restriction of credit.

The discussion which has now to be concluded has been concerned generally with the monetary system which is based either directly or indirectly upon the gold standard. It has been shown in what way there has been a general return to this type of arrangement after the disorganization which occurred during the war and post-war years. It has been shown also that this arrangement had certain definite advantages. It gave stability of exchange rates as between different gold standard currencies. In addition, the tendency was for the value of gold to be uniform as between such countries. But the chief defect of the gold standard in the form in which it is generally known is that it does not ensure perfect stability in the level of gold prices. That instability, of course, has been relatively small in comparison with the type of instability which experience has associated with paper standards. But it does give rise to a type of problem the importance of which is now receiving growing recognition, and, while it is not possible to examine it in great detail, there are certain aspects of it which may be mentioned.

This instability in the level of gold prices should not be identified with the instability which is associated with what is known as the trade or credit cycle. It rather represents a secular trend of prices over a fairly long period of time, and on which are superimposed the normal trade cycles which may be spread over shorter periods of from eight to ten years. Thus there may be several trade cycles manifesting themselves during a single secular trend in the value of

gold. To that extent, it does not follow that if the attempt to eliminate the secular trend is successful, the attempt to eliminate the credit cycle will also be successful by the same action. The present problem is concerned with the secular trend of gold prices.

In that connection there is a question which may be fairly asked. As Mr. Robertson¹ puts it: How, if we were perfectly free to choose, would we like the value of money to behave? The answer to that question is at least not an obvious one. The drift of the previous discussion in this volume would be to suggest that it would be desirable for the value of money to remain stable. But, as is shown by the writer already mentioned, there are other possible considerations. In the first place, the effect of inventions is to lower the real costs of producing commodities, and, other things being equal, a series of inventions in the wide sense might be expected to act, through the greater plentifulness of commodities, upon the general level of prices, i.e. upon the value of money. On the other hand, economic conditions may be such that real costs are tending to increase, and, other things being equal, an opposite effect might be exerted upon the value of money. If prices fall under the first set of conditions and rise under the second, those who are in receipt of fixed money incomes will share in the real prosperity or adversity of society. It is at least possible to argue that this is desirable.

There are other considerations, however, which have the appearance of being somewhat more practical. When prices are rising, trade and industry tend to be artificially stimulated, and so it is natural, perhaps, for business men, especially at a time of trade depression, to invoke the inflationary stimulus.

¹ *Money*, Second Edition, p. 134.

But, of course, the real danger, which seems to be insuperable, is to prevent this from developing into a vicious circle, which leads in the end to chaos and disaster. Inflation is like a drug which when once taken sets up a craving for more. On the other hand, a period of falling prices tends to be associated with industrial difficulties, and business men are naturally inclined to be opposed to such a movement. Without examining the problem in more detail, it may be said that under normal conditions there is a certain presumption in favour of securing stability in the value of gold over the long period.

One aspect of that question is necessarily concerned with the probable future position. In other words, with a general return to gold standard conditions, is the value of gold likely to rise or fall? On that question opinions have differed widely. The problem is clearly a complicated one, and there are so many uncertain factors that the discussion must necessarily remain tentative. Certain aspects, however, may be noticed. Before the war, Professor Cassel estimated that in order that the value of gold should remain stable the world's monetary stock of gold should increase at the rate of about 3 per cent per annum. Now, as already shown, the present monetary gold stock of the world is about £2,300,000,000, and the annual production of new gold is about £84,000,000, of which rather less than one-half is added to the monetary gold stocks of the world. On the basis of that estimate, the annual addition to the monetary gold stock of the world is approximately 2 per cent of the total existing monetary gold stock, and that is less by 1 per cent than what Cassel thought was necessary in the pre-war period in order to secure stability in the value of gold. In addition to that, technical authorities have

been anticipating for some years that in the absence of important new gold discoveries, the world's gold production would show some decline; but, so far, that check has failed to manifest itself. In any case, the suggestion which is conveyed by these estimates is that it might be reasonable to expect that the value of gold would tend to rise, i.e. the level of gold prices would tend to fall. But there are other considerations. The rate of increase of population has declined as compared with the pre-war period, and new and important economies in the monetary use of gold have been effected. It therefore seems reasonable to suppose that if before the war the world's monetary gold stock had to increase at the rate of 3 per cent per annum in order to ensure stability in the value of gold, a smaller rate of increase would now be sufficient for the same purpose. In fact, the late Dr. Lehfeldt, in a discussion of the probable future value of gold apart from any special regulative action, concluded that normal commercial requirements could be met by an annual addition to the world's monetary gold stocks of 2 per cent per annum, and that is about the rate of increase which now actually obtains.

The problem is also complicated by the distribution of the gold stock of the world and its particular concentration in the U.S. and France. But the element which is probably of greatest uncertainty lies on the side of national policies. Any action on the part of central banks generally to add considerably to their existing gold reserves might provoke a serious rise in the value of gold. Upon that consideration depends the extent to which the possible economies in the monetary use of gold will be secured.

Of course, any change in the value of gold would be expected to have some effect upon the gold-mining

industry. A rise in the value of gold would stimulate production, and a fall in the value of gold would serve to check production. But the influence thus exerted must necessarily be slow, since new gold production only represents a very small proportion of the world's total gold stocks. It is for that reason that it seems to be desirable, where possible, to endeavour to regulate more effectively the value of gold in the interests of stability.

One way of stabilizing the value of gold would be to control and regulate supply in accordance with changes in demand so that the value of the metal remained stable. Another way would be to operate on the side of demand. The Genoa Resolutions approached the problem from this second side, and recommended that there should be continuous co-operation between the central banks of the different countries and that there should be an international Convention which would so "centralize and co-ordinate the demand for gold, as to avoid those wide fluctuations in the purchasing-power of gold, which might otherwise result from the simultaneous and competitive efforts of a number of countries to secure metallic reserves." Co-operation of this kind would seem to be more possible now than formerly. Central banks have collaborated with one another in facilitating reconstruction schemes in Europe since the war. The question is whether co-operation can be further developed along the lines suggested at Genoa in 1922. There are, of course, many difficult problems of technique which arise, but what is important is that it should be recognized that the central banks can, and should, perform functions of this kind, and that banking policy should not be dictated solely with reference to the state of the gold reserves. Already

the Federal Reserve banks have done some pioneer work in this connection. Instead of allowing their greatly increased gold holdings to lead to a proportionate expansion of credit, it was decided to initiate a policy of stabilization. Since 1923 the general policy has aimed at "maintaining a steadying influence on credit conditions," and in pursuing this policy account was taken not merely of index numbers of prices, but also of indices of production and trade activity. But the important point arises that a central bank is only free to pursue a policy of this kind if its actual gold reserves are more than it really needs. If, then, actual gold reserves do not afford to the central banks which possess them a sufficient margin over their minimum requirements, it becomes a matter of some urgency that the fullest possible use should be made of economies of the monetary use of gold. In any case, the problem is one which is no longer of merely academic interest, and students of monetary problems should be prepared to give to the subject a greater amount of consideration than was done in the past.

CHAPTER XVI

THE MONETARY CRISES OF 1931

AFTER 1924 all countries which had abandoned the gold standard during the war period effected a return to gold standard conditions, mainly in the form either of the gold bullion standard or the gold exchange standard. The years which followed were not without difficulty for these countries, and important readjustments of the kind described in Chapter XIV had to be effected. Moreover, as has already been indicated, these difficulties were increased by the downward trend of world gold prices, and from 1929 that downward movement became particularly severe. Between 1926 and the first half of 1931 (on the basis of monthly averages) the Board of Trade's index of wholesale prices in the United Kingdom fell by fully 30 per cent. In the United States, the corresponding fall was 27 per cent, and the bulk of that decline occurred in the period from the beginning of 1930.

In 1931, a number of crises occurred in Europe, and these culminated in the abandonment of the gold standard on the part of a number of important countries. The first of these crises took place in Austria in May with the failure of an important bank. The second crisis occurred in Germany in July. The third occurred in the United Kingdom in September. These three occurrences were not independent of one another. The main features of the British crisis were the certainty of a large Budget deficit, the possibility that resort might be had to inflation, and the unfavourable position of the balance of payments. These various

influences precipitated very large withdrawals of foreign balances which had been lodged in London, and in that way caused the rates of exchange to fall below the gold export points. Certain efforts were made to safeguard the position of sterling by the adoption of measures to secure that the Budget would be properly balanced, and by the arrangement of foreign credits in New York and Paris to protect the sterling exchange. But, despite these measures, the pressure on sterling continued, the foreign credits were soon exhausted, and gold continued to flow abroad. In the period of ten weeks between the middle of July and the middle of September fully £200,000,000 of foreign balances were withdrawn from London. That withdrawal was met by drawing upon the foreign credits amounting to £130,000,000 in New York and Paris, and by the sale of gold and foreign currencies.

The German crisis was only in part due to the difficulties connected with the German public finances. For various reasons the financial position of the German Federal Government had been unstable for a considerable period of time. In five out of six years from 1925 Budget deficits had been realized, but from the middle of 1930 several emergency measures had been taken to secure that the finances would be re-organized in a manner which would avoid a recurrence of similar deficits. The deficits in the German balance of payments were of greater importance. These deficits had been covered by the large amounts of foreign loans which Germany had been able to borrow. Moreover, many of these loans were of short duration and subject to sudden withdrawal. The element of weakness in that position is obvious, since a sudden shock to confidence is liable to precipitate such withdrawals on a large scale, and that in fact is what happened.

Furthermore, many of these foreign loans had been employed in Germany for purposes from which they could not be withdrawn without inflicting damage to the working of the internal economy. During the first half of 1931, withdrawals of foreign short-term funds from Germany were large, and the reserves of the Reichsbank in gold and foreign currencies were severely depleted. So great was this pressure, that in June, 1931, an amount of temporary financial assistance was provided by the joint efforts of the Bank of England, the Bank of France, the Federal Reserve Bank of New York, and the Bank for International Settlements, while at the same time the President of the United States proposed a moratorium for a year on public international debts resulting from the war, and after some preliminary difficulty that proposal was accepted. In the following month, as a result of the Seven Power Conference held in London, further assistance was provided for Germany, and in August arrangements were made with representative short-term creditors of Germany whereby these existing credits, or the bulk of them, should not be withdrawn, at least, for a period of six months as from the 17th September. In that way, the German situation was temporarily relieved, though a permanent solution was not effected.

Meanwhile, the uncertainty abroad as to the German position had its reactions in London, because it was known that London was an important creditor of Germany, and if the latter should default the liquid position of London as a financial centre would be embarrassed. Moreover, there was the further element of uncertainty in so far as the Budget for the year was certain to reveal a very large deficit, due, not merely to the effect of depressed trade on the public

revenues, but also to extremely lax provisions which had been submitted to, and passed by, Parliament. The extent to which the withdrawal of foreign balances from London took place has already been indicated. In September, a new Budget was prepared with proposals to effect a proper balance between revenue and expenditure by imposing additional taxation and by effecting economies on the side of expenditure, but even these measures did not check the withdrawal of foreign funds, and on the 21st September the gold standard was formally suspended. The Bank of England was thus relieved of the obligation to deliver gold on demand at a fixed price, and rates of exchange with other currencies ceased to be tied closely to the gold parities of exchange and were free to fluctuate in the open market.

Within a week, a similar decision had been taken by the three countries of Scandinavia, by Finland, and by the other countries of the British Empire, excepting Canada and South Africa. Meanwhile, the external value of sterling in terms of gold standard currencies had fallen by 20 per cent, though it was subject to considerable fluctuation. The immediate effect of that fall in the exchange was to make imports from abroad dearer to British purchasers, and, at the same time, to make British exports cheaper to foreign purchasers. In fact, with the exchanges uncontrolled, forces were in operation which tended automatically to restore the balance of payments to a position of equilibrium. If British payments due abroad exceeded the payments due from abroad, the sterling exchange would fall, and that fall would stimulate exports and discourage imports until a balance was effected. It is significant that the main exporting industries immediately received a stimulus from the lower exchange

rates. On the other hand, imports increased, and that increase seemed to be a contradiction of orthodox theory. The increase in imports, however, was partly seasonal in character, and partly the result of an attempt to anticipate the new tariffs, which seemed likely to be imposed on foreign goods entering the United Kingdom. The result of the General Election in October appeared to make tariffs politically inevitable, although the abandonment of the gold standard had really rendered any form of emergency tariff unnecessary, and in view of that position imports were rushed into the country to avoid the new duties which were certain to be imposed. The increase in imports since the abandonment of the gold standard was not, therefore, a contradiction of orthodox theory, but was the result of special factors.

The amount of the stimulus to exports provided by the lower exchange depended upon a number of considerations. Where an exporting industry used imported raw materials, the same fall in the exchange would make these imports dearer, and the increase in that item of cost would partially, though not wholly, offset the advantage obtained from the lower exchange when the finished products were sold abroad. Again, the greater the number of other countries which attached their currencies to sterling as distinct from gold the smaller the relative advantage enjoyed by the British exporting industries, especially where these other countries possessed industries which competed with the main exporting industries of the United Kingdom. On the other hand, while the relative advantage of the United Kingdom in that way would be diminished, the disadvantage of the remaining gold standard countries would increase, for these latter countries would be exposed to new forms of severe

competition, not from one country only, but from a large *bloc* of countries enjoying an exchange advantage. A further point arises in so far as the advantage to the exporting industries of the United Kingdom would depend upon whether other countries increased their tariffs against British goods, and that in fact is actually what has happened in the cases of France, Italy, and Canada. And, finally, the advantage conferred by the lower sterling exchange is dependent upon the assumption that internal prices and costs, including wages, do not rise in proportion to the fall in the exchange. In so far as the lower exchange makes imports dearer, the cost of living is likely to rise, but not necessarily in proportion to the fall in the exchange, since imported food-stuffs, etc., are mainly raw materials which have to be worked-up to the stage of final consumption, and, in that process, other costs are incurred which are not directly affected by the fall in the exchange.

The future monetary policy of the United Kingdom remains uncertain. Three possibilities present themselves: (a) a return to the gold standard at the old par of exchange; (b) a return to the gold standard at a lower par of exchange by the method of devaluation; and (c) the permanent abandonment of the gold standard. The last of these might form a part of a monetary policy which aimed at stabilizing the internal price level while leaving the exchanges to fluctuate. On purely theoretical grounds there is much to be said for such a policy, but tradition and public sentiment in the United Kingdom would appear to be unfavourable to a policy which did not involve, sooner or later, a return to gold standard conditions. It has also to be recognized that for such a country as the United Kingdom, which has a large foreign trade and which

possesses the chief financial centre of the world, fluctuating exchanges are a certain disadvantage. On the other hand, a return to the gold standard at the old par of exchange would present immediate difficulties. It would involve a period of sharp deflation, which would intensify the industrial and commercial depression at home, and the forcing-up of the external value of sterling would involve a recurrence of the special handicaps which were felt by the exporting industries after 1925 when the gold standard was restored. Under the conditions prevailing at that time, the return to the gold standard involved a rise of 10 per cent in the external value of sterling to the gold parity, but it was difficult to effect the corresponding rise in the internal value of sterling, and the subsequent rise in the value of gold itself made the readjustment more difficult. Under these conditions, the return to the gold standard in May, 1925, imposed special handicaps upon the exporting industries of the United Kingdom, and the apparent stimulus experienced since September, 1931, may be attributed in part to the removal of whatever disadvantages still remained. But it would be doubtful wisdom to attempt to reimpose these special handicaps by endeavouring to restore the gold standard at the old parity of exchange. The other possibility—that of returning to the gold standard at a lower parity by the method of devaluation—requires more consideration than it has so far received. It would tend to avoid certain of the difficult problems of readjustment, which would otherwise have to be encountered. But if it led to a form of competitive devaluation on the part of a number of countries a period of monetary uncertainty and instability would follow, and that would be detrimental to the recovery of world trade. Under the

conditions which prevail at the moment, it would probably be unwise to decide immediately whether to adopt this method or at what rate the devaluation should take place. Until some settlement is reached with regard to the German position on the one hand and to the gold policies of France and the United States on the other, a return to the gold standard by the United Kingdom and the other parts of the British Empire would merely encounter the risk of a further suspension, which would be damaging to the monetary and financial positions, not merely of the United Kingdom, but also of other important countries throughout the world.

BIBLIOGRAPHY

- Cannan: *Modern Currency*.
 Cannan: *Money*.
 Cassel: *Theory of Social Economy*.
 Dunbar: *The Theory and History of Banking*.
 Einzig: *The Bank for International Settlements*.
 Feavearyear: *The Pound Sterling*.
 Gregory: *The Foreign Exchanges*.
 Gregory: *British Banking Statutes and Reports, 1832-1928*.
 Hawtrey: *Trade and Credit*.
 Hawtrey: *Currency and Credit*.
 Jack: *The Economics of the Gold Standard*.
 Jack: *The Restoration of European Currencies*.
 Jack: *International Trade*.
 Jack: *The Crises of 1931*.
 Keynes: *Monetary Reform*.
 Keynes: *Indian Currency and Finance*.
 Keynes: *A Treatise on Money*.
 Kisch and Elkin: *Central Banks*.
 Lawrence: *Stabilization of Prices*.
 Marshall: *Money, Credit, and Commerce*.
 Marshall: *Official Papers*.
 Robertson: *Money*.
 Stamp: *Papers on Gold*.
 Spalding: *The London Money Market*.
 Spalding: *The Foreign Exchanges*.
 Whale: *Joint Stock Banking in Germany*.
 Withers: *The Meaning of Money*.
 Withers: *Money Changing*.
 Hearings before the Committee on Banking and Currency.
 (U.S. House of Representatives, 1928.)
 "Report of the Committee on Finance and Industry, 1931."
 Cmd. 3897.
 "The International Gold Problem. Collected Papers."
 (*The Royal Institute of International Affairs*.)

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