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THE PHYSIOLOGY OF CREDIT AND OF MONEY

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By
OSWALD ST. CLAIR

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PREFACE

IN an article in the *Cape Times*, published at the beginning of 1918, I remarked, almost casually, that Credit does not increase Prices. It was not until after the publication of this article that it occurred to me to refresh my memory of the teaching of the orthodox economists on the point, and to look up the conclusions come to by recent writers. I obtained very little support for my view from either source.

This was somewhat disturbing; but the more I reflected, the more convinced I became that my conclusion was correct. Hence I undertook the preparation of this essay, the more readily as I have not been able to find any really satisfactory and convincing exposition of Money. Most essays on the subject bear frank evidence of the perplexities of their authors.

Whether I have been successful in untying some of the knots which have defied previous writers it is for the reader to judge. The subject is of such peculiar interest and importance at the present time, when vast money problems beset us on all sides, that an attempt to restate the

foundations of the science seems deserving of attention.

I must apologise for the imperfections of this work. It has been composed in moments of scanty leisure, to some extent while travelling and without books handy for consultation. This must excuse the absence of references to writers from whose books I have received help, and whose ideas I may have incorporated in my text without acknowledgment. Two writers not referred to in the text I should, however, like to mention here. They are Tooke, whose standard work on prices throws much light on the mechanism of commerce, and Taussig, whose admirable book on the Wages Fund is a valuable guide to the mechanism of industry.

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CHAPTER I

THE FUNCTION OF CREDIT

DURING a large part of the nineteenth century the theory of money was the subject of hot debate. At first the battle raged in England round the question of the bank note, but later, the scene of the fiercest controversy was transferred to America, where bimetallism formed the apple of discord. As with many other controversies, the debate finally flickered out, not because any general agreement was reached as to the truth of the matter, but because conditions had so altered in the meantime that knowledge of the truth became of less practical importance, and the public were content to leave further enquiry to the experts.

The enormous increase in prices since the beginning of the war has revived interest in the problem. Once more the Quantity Theory of

money has come to the front and we have the old question whether prices have risen because money has increased, or whether money has increased because prices have risen. Professor Nicholson says every increase of currency notes has been followed by a rise in prices. Professor Foxwell inclines to the view that a rise of prices was inevitable, whether new money was created or not. A prominent business man opines that the Quantity Theory of money is one "to outgrow, and unlearn, and forget." Others believe that the influence of money is insignificant, and that the main factor in the rise of prices is to be found in the expansion of credit.

Credit and the Quantity Theory of Money

Credit is the real stumblingblock to the theory of money. The fact that has impressed economists and business men is the increasingly small extent to which metallic currency is actually used in the world of commerce and finance. Business, they say, is roundabout barter; things are not exchanged for gold, but for one another. In international trade the shipments of gold are insignificant compared with the volume of goods. Were it not for the production of new metal, which has to be distributed over the world, there would be little movement of gold between one country

and another. Gold is a mere makeweight, analogous to the tape or pins given you in a draper's shop to balance the odd halfpenny or farthing. The true international medium of exchange is not gold, but bills. Even internal trade is mostly carried on by paper, in some countries by notes, in others by cheques; the gold merely lies in the bank as a guarantee, or (where notes of small denominations do not exist) is employed as the pocket money of the people. Macleod estimated that gold did not form more than 2 per cent. of the total currency. The late Lord Farrer quoted this with approval, and the inference appears to be (although Lord Farrer did not express himself as free from doubt) that if gold is only $\frac{1}{50}$ part of the circulation, then by doubling it you only increase your total money by $\frac{1}{50}$, which would be insignificant. On the other hand Professor Irving Fisher, the modern champion of the Quantity Theory, holds that bank credit is in proportion to gold reserves, and therefore if you double the gold you double the credit. But like the others, he attributes the rise of prices chiefly to the increase of credit (since credit is the larger part of currency), and he considers that the extension of banking facilities must operate in the direction of raising prices still further. But perhaps the writer who goes furthest in attributing the rise of prices to the extension of credit is Mr. J. A. Hobson, who repudiates

Fisher's idea that bank credit is regulated by the amount of gold, and puts down the rise of prices almost exclusively to the expansion of credit consequent upon the extension in the supply of what are called banking securities. These views find a redoubtable opponent in Professor Loughlin, but even he makes no distinction between cash and credit. If he disputes that credit raises prices, it is because he denies that the quantity of the medium of exchange affects prices in any way. Gold being a commodity like platinum, copper or tin, Professor Loughlin insists that its value is determined in the same way as that of platinum, copper or tin. Gold is simply the standard commodity; that is to say, the commodity chosen as the basis of comparison. How can the quantity of it used as money directly determine prices when the majority of exchanges take place without the use of gold at all; and how can credit influence prices, when credit itself expands and contracts with the expansion and contraction of transactions and of prices?

Such was the position of the matter before the war, and although much discussion has since taken place, I do not know that any clear theory has emerged such as to command general assent.

There is one criticism which seems to be applicable to most of the discussions of money, and that is that they lump together in one aggregate all purchases, whether they are purchases for con-

sumption or purchases for re-sale. They take the aggregate of money payments and the aggregate of commodities bought, and endeavour to establish a ratio between them. Just as money counts as fresh money every time it changes hands, so goods are counted as fresh goods every time they change hands. Insufficient attention, as it appears to me, is paid to what we may call the physiology of industry and trade. If we drop the idea that we are dealing with two inorganic masses which can only be weighed against one another, and substitute the notion that production and exchange are living processes whose successive stages can be traced and analysed, I think we stand a better chance of arriving at a just conception of the laws of money. As credit appears to be the main obstacle to progress, I propose to select it as the point for immediate frontal attack.

The Two Factors in Credit

When we analyse credit we are able to distinguish two factors, and there has been much discussion as to which of them is the more important. Probably the first meaning the word credit conveys to the mind is the idea that we can obtain goods to-day which we do not need to pay for until a later date. That is the *time* element.

Credit puts an interval between purchase and payment. Instead of the exchange taking place at once, only half of it takes place now, and the other half at a subsequent time. But the word itself comes from *credere*, to believe or trust. It refers therefore to the fact that one man's goods are entrusted to another. This may be in the form of a loan, or it may be a sale without immediate payment. The distinction is really legal rather than economic. Bohm-Bawerk points out that in the language of lawyers things lent are either fungible or non-fungible. If the latter, the very thing lent must be returned; if the former, only the equivalent has to be returned. And a loan of the fungible kind he considers equivalent to the sale or exchange of some present thing for a future thing. Now, if this identification of the fungible loan with a sale on credit is sound, we can equally approach it from the other point of view and say that a sale on credit is precisely equivalent from the economic point of view to a fungible loan. And I believe we shall find this view helpful. The essence of the transactions is that one man's goods are entrusted to another, and an equivalent has to be returned at a future date. Whether this is a sale or a loan affects the legal position of the parties, not the economic essence of the transaction.

When economic writers speak of credit, they have in mind the vast mass of credit by which

trade and industry are financed, and not the comparatively unimportant credit allowed by shopkeepers to their customers. Nevertheless, as the latter presents a very simple form of the phenomenon, we may pause for a moment to consider its effect.

Inefficacy of Retail Credit to Increase Demand

If I earn £50 a month, I can only spend £600 in the course of the year. If I spend more than £50 in January, I must spend less in February; or if I spend the same in February, then I am anticipating my spending-power for March, and the balance is again carried forward. The important thing to note is that while a month's credit may enable me to increase my purchases in one month, it does not enable me to increase them in every month. My expenditure is necessarily limited by my income. Because I spend double my income in January, it does not follow I can spend double my income in the year. On the 31st January I paid for £50 of goods bought and I owed for other £50 worth of goods. By the end of the year I have bought £650 worth of goods instead of £600 worth, but the balance is still debited against me. At the end of two, three, four, five years, the position is still the same. In ten years I have bought £6,050 worth

of goods and paid for all but £50 worth, which was the original excess of purchasing which was allowed me by credit over and above what I could have bought with cash. I may continue this course throughout my life, always anticipating next month's salary; but the inflation of purchasing power was confined to the one month in which I actually bought more than the equivalent of my income. So long as this is carried forward from month to month it only means that my purchases are always one month in advance, and my creditors' spending of the money is always one month in arrear. When I die, if I still owe that £50, my executors must pay it and my creditor will at length get square with me. Whether shopkeepers allow one month, or two months, or more credit, in the long run and in the aggregate they cannot sell to their customers more than their customers have cash to buy with.

This of course applies to aggregates, and not to individual transactions. A dealer in pianos or motorcars, for instance, may actually increase his sales by selling on the instalment or hire-purchase system, which is a species of credit. The dealer increases his sales, because the articles he sells are so expensive that few people could afford to buy them in prompt cash. But the aggregate of goods sold is not increased. The purchasers anticipate their future incomes; their future purchases are diminished by the amount

that their present purchases are swollen. Again, the dealer may, and probably will, be able to sell his goods at higher prices than would be possible if he only sold for cash. Precisely to the extent that the purchasers pay more for their cars and pianos, must they spend less upon other things; the difference, which they would have spent upon other things, is spent by the dealer instead. The aggregate spent remains the same as the aggregate of the total income.

It must be noted, however, that when we say that credit does not permit any increase in the aggregate of sales, it is necessary to include in our survey the whole period of the credit, that is to say, both the advance and the repayment. Usually this would not be more than a few months, but there are exceptional cases when this period may be stretched out for a number of years. Supposing in a certain town the population is increasing more rapidly than the housing accommodation. The value of houses goes up. Landlords who wish to sell perhaps find many people eager to purchase houses, but few who have sufficient ready cash to put down a large sum. If the landlord is content to take £200 on account and to accept the balance in annual instalments of £100, plus interest, he may perhaps get £1,000 for a house that otherwise would not have found a purchaser at £800. What is the effect on the aggregate purchases for the year? It increases them,

because the long credit has enabled the purchasers to spend now part of the income of the following eight years. But on account of this draft on the next eight years' income, their expenditure during the next eight years will be reduced. If you take all the purchases of the whole nine years you will not find the aggregate increased. By just so much as I have to pay for the house must my expenditure upon other things be diminished. But this is an exceptional case. In most instances credit is short, and a period (say) of one year is sufficient to cover both advances and repayments, and we may therefore say roughly that the total of sales during that year has not been increased by the credits granted (and extinguished) within that year. There will no doubt be a fraction of the credit unextinguished at the end of the year, but this will probably only about counterbalance the repayment which takes place at the beginning of the year of credit brought forward from the previous period.

Inefficacy of Wholesale Credit to Increase Demand

If we turn from retail credit to wholesale credit, it seems clear that the same principle holds good The shopkeepers cannot sell to their customers

more than the customers have money to buy with. Whether the shopkeeper buys for cash or on credit he will only buy as much as he can sell, and the amount he can sell is limited by the capacity of his customers to buy. Supposing the retailer is able to dispose each month of goods which cost him £100. If the merchant allows him three months credit, he begins by running into debt to the extent of £300. If this credit remains unaltered at the end of six months, twelve months, twelve years, he still owes £300. In the first year he bought £1,500 worth of goods from the merchant; he sold and paid for £1,200 worth and had in stock £300 worth unpaid for. At the end of twelve years he has bought £14,700 worth of goods, has sold and has paid for £14,400 worth, and still has in stock £300 worth unpaid for. The £300 is equivalent to a fungible loan, advanced by the merchant. This loan is always repaid within a few months and a fresh one granted. When the retailer has sold £30,000 worth of goods, if he then had a fire and went insolvent, he would only have bought from the merchant goods $\frac{1}{100}$ in excess of what he had paid for; while if he does not go insolvent, but closes off the account by paying off what he owes, then he has not bought or sold one penny's worth of goods more than he paid for in cash.

Traders' Demand a Derived Demand, or Linked Demand and Supply

I suppose it will be conceded that credit cannot increase price unless it increases demand. If we examine the difference between consumers' demand and traders' demand, we recognise that the latter is only a derivative demand. The demand of the shopkeeper is derived from the demand of his customers. The shopkeeper buys bicycles from the merchant because the public buy bicycles from him; and the merchant buys them from the manufacturer because he can sell them to the shopkeeper, who sells them to the public. It is a sort of House-that-Jack-Built, all tracing back to the consumer. If therefore the merchant offers the shopkeeper credit, or if the shopkeeper seeks credit, in neither case is demand really increased. The retailer will not buy more than he can sell; he is really only voicing the demand of the consumer, and if the retailer and wholesaler were eliminated the manufacturer could sell bicycles direct to the public. He would, however, have to employ somebody to undertake the necessary work of taking orders, distributing the goods, and collecting the money for them, and if that man were remunerated by salary, or even by commission, no one I think would make the mistake of imagining that he originated the demand for the bicycles.

The demand of people who buy to sell again is not a real demand, but only a reflected demand. If, however, you choose to regard it as a real demand, it makes no difference, because you have then to take into account that the buyer in turn becomes a seller. If he buys to-day, he sells to-morrow. If he increases demand to-day, he increases supply to-morrow. What he withdraws from the market, he restores to the market. Each purchase is linked to a re-sale. It is a case of linked demand and supply; the two move together, introducing no alteration in the ratio between them, not even in appearance unless the two transactions are separated by a wide interval of time, and not even then if your survey covers a period long enough to include both the withdrawal and the restoration of the goods to the market.

As a rule the withdrawal of the goods is followed at no long interval by their restoration to the market. The essence of these transactions between traders is that they are merely parts of the productive process. The goods are removed from the factory to the warehouse, from the warehouse to the shop, from the place where they are produced to the place where they are required for consumption. Leather is removed from the tannery to the workshop in order that it may be converted into boots, or cotton and wool are shipped to the spinner and weaver in order that they may be converted into cloth, and removed

again from the weaver to the tailor in order that they may be converted into clothes. If you look upon demand as a sort of magnet, that magnet is not situated in the merchants' warehouse, nor yet in the retailers' shop; it is situated in the street or in the consumer's home, and is, thence, attracting the goods from the mine or field to the factory, from the factory to the warehouse, from the warehouse to the shop, and from the shop to the final resting place where they satisfy a human want. Wants are the magnet; they are the source of demand and of value.

Normal Credit only a Means of Lending Capital to Producers

It seems clear enough, therefore, that credit does not in the long run increase demand, all demand being derived ultimately from the retail market, which is a cash market. What normal credit does is to facilitate the exchange of goods while they are in the intermediate stages of production; it permits the goods to be transferred from one process to another, to be passed along from one stage to another, to be removed to more convenient centres for distribution, payment being deferred until the goods have passed through the next stage. It enables a number of producers, while remaining independent, to co-operate as

though they were all members of one big firm and the goods were shifted from department to department on their way towards completion. The key to the whole position lies in the fact that division of labour is only made possible by a vast accumulation of capital, and that as this capital belongs to various individuals, the few who have capital must entrust the same to the many who have none in order that it may be employed to the best advantage.

To illustrate this point, let us suppose the case of a man who discovers a rich spring of mineral oil. To get the benefit of this property he must manage to have it refined, put in barrels, distributed over thousands of miles. He cannot do this himself, but must avail himself of the services of a number of other men. Supposing he gets in touch with the owner of a refining plant. If that owner says to him. " I will buy all your crude oil from you at so much a gallon," well and good. But if the refiner says, " I will take your oil, refine it, and when I have sold it I will pay you so much a gallon," that answers exactly the same purpose. In the one case the oil-owner trades for cash, in the other he sells on credit, and which system is adopted will be a mere matter of convenience, and will have no effect either upon the amount of oil required by the consumers or upon the price they are able and willing to pay for it.

Thus we see that the essential thing about

credit is not the time element, but the trust element. Credit is a means by which capital is placed in the hands of those who are able to make the most productive use of it. Thus if the manufacturer grants credit to the merchant, and the merchant to the shopkeeper, they do not thereby make a direct increase in the demand for their goods. What they do is to place their goods where they can be readily taken by the public. The position is precisely the same as it would be if the manufacturer sent out a number of his own salaried employees to open shops where the goods could be seen and bought by the public. To illustrate this, let us suppose that A is a manufacturer and in front of his factory he has a shop where his products are sold to the public. He notices, however, that many of his customers come from a distant quarter of the town, so he decides to open a branch shop in that locality and to put his clerk B in charge. The rent and expenses of this shop are £50 a quarter, and B's salary is another £50. A puts into this stock £1,000 worth of goods, and at the end of three months they have all been sold for £1,200. The expenses being £100, A's profit at the end of three months is £100.

Being satisfied with this experiment, A decides to open a second branch and to put C in charge. But C says to him, " I was thinking of setting up on my own account. I have watched your

experiment with B, and I find that once in three months you give him £1,000 worth of goods, and at the end of three months you get back your £1,000 plus £100 profit. Now I will engage a shop at my own expense, and I want you to supply me with £1,000 worth of goods, and at the end of three months I will pay you £1,100 for them."

In the one case you have the salaried manager and in the other the independent buyer on credit, but I ask whether from an economic standpoint there is the slightest difference between these two cases? In the first case, legally, A remains the owner of the goods right up to the time when they are sold to the public; in the second case the legal ownership passes to C and A has merely a right to an equivalent. In both cases A's property is handed over to be made the best of by B or C, and whether the salesman's remuneration is by salary, by commission, or by profit, whether A remains owner, becomes a lender, or is a seller on credit—these are merely legal and commercial distinctions which have an important influence on the financial positions of the individuals concerned, but which have no bearing on the fundamental, the essential nature of the economic phenomenon. Under the credit system, says Jevons, "the trader is not obliged to be the real owner of the goods in which he trades, but may buy freely by giving a promise of payment in perhaps three months' time. Thus the goods really belong to the holder of his

promissory note or bill ; only the margin of profit or loss falls to the share of the trader."

Credit an Instrument for Division of Labour

Credit implies capital. Credit being in the nature of a fungible loan, the things to be lent must exist, or there can be no credit. It would be well if this were always borne in mind, as many people appear to think that credit can be manufactured out of nothing. The immense production of our day is only possible on account of the immense development of capital in its various forms—roads, canals, harbours, steamboats, railways, tunnels, bridges, quarries, mines, reservoirs, pipelines, telegraphs, telephones, trucks, wharves, warehouses, factories, machinery, and a million and one devices for a plentiful production and rapid transport, together with a large stock, constantly renewed, of consumable articles such as men need to consume while they are working at the production of more. Now all these things belong to a comparatively few individuals, and in order that they may be put to beneficial use, they must be placed at the disposal of the whole population. The labourers must be invited to pour into the fields, the workmen must be allowed to enter the factories, mines and quarries; ships must be entrusted to sailors ; trains, locomotives,

vans and lorries must be handed over to the care of drivers and conductors; the goods produced must be entrusted to the hands of distributors. Some method has to be devised to enable all this capital, and all the materials supplied by nature, to be handled and manipulated by the multitude who are not its proprietors, otherwise it stands idle and useless. Under the system of division of labour, which capital alone makes possible, materials must pass from hand to hand, from process to process, from place to place, before they reach, finally, the person who is to consume them.

Credit and Wages Alternative Methods of Loaning Capital to those who can make the most Productive Use of it

Broadly speaking there are two ways in which capital is placed for productive purposes at the disposal of those who are able to make the best use of it. One of these is the credit system, and the other is the wage system. The practical identity of these we have already seen in the case of two shopkeepers, B and C, both supplied with goods by A. The difference between the two is that under the credit system the worker becomes the legal owner of the goods, adds his labour, sells the product, and then turns over the price to the

original owner after deducting his own share; while under the wage system the original owner of the goods remains the owner, he entrusts the goods to the worker, and when the worker has added his labour, he pays him for that labour, receives back the goods and is recouped when he has sold them. In the former case you have the characteristics of the fungible loan, and in the latter of the non-fungible. In both cases the worker obtains for himself the margin referred to by Jevons, which represents his own share in the product.

It will be observed that the amount of A's capital advanced is somewhat different in the two cases. He not only supplies B, the wage-earner, with the goods to be worked on, but he supplies him with tools and with the means to live pending sale of the goods; C on the other hand pays his own expenses, though he does not pay for the goods until the sale has been made. C therefore is himself a capitalist to a small extent. B may be prevented from taking up a similar independent attitude by the lack of even a small capital, or by absence of sufficient courage and enterprise to face the risk of loss. But although this difference of means or of character may have a good deal to do in determining whether an individual becomes a wage-earner or sets up on his own account, there is a more fundamental factor in deciding the question whether the system shall be the wage

or the credit system, namely, the nature of the capital that is handled. It would not be possible on a ship for one man to own the rudder, another the propeller, nor for the co-operation of the crew to be carried on by mutual buying and selling of one another's services. Steamships, railways, factories and other large masses of fixed capital are more or less one and indivisible. The owner is not necessarily one man ; it may be a group of men ; it might be the state ; or all the workers on that particular plant might be co-partners and co-owners of the concern. But under any circumstances it would not be practicable for each worker to become successively the buyer and seller of what he handles, and the only practicable method is for him to be paid for the work he does.

Whether or not the crew of a ship have a little capital of their own, whether they are in need of advances to cover subsistence or not, the predominant consideration in this case is that they are not merely handling goods which are passed on from hand to hand, but are handling a large mass of fixed capital, the parts of which cannot be alternately bought and sold like materials and goods. In such cases the wage system, the system of purchasing the labour alone, is the form which the advances made by capital take ; but where the capital is mainly in the form of goods which can be passed from hand to hand, then you have a choice of systems ; the original owner of the goods

may have a salaried employee to handle the goods for him, or he may employ an agent who will handle them on commission, or he may sell them to another person who may pay cash for them on the spot, or may promise to pay cash for them when he has himself sold them for cash.

Inflation of Intermediate Demand

Now, if these arguments are sound, it follows that the *trust* element in credit exercises no direct influence upon demand, nor upon price, while the indirect influence it exercises through permitting the division of labour and increasing the efficiency of production, tends not to raise but to lower prices.

But we must not overlook the *time* element in credit, which is inseparable from the trust element. This again has no direct influence upon prices, but since it puts an interval between purchase and payment, it gives scope for the play of any forces which may be at work tending to raise values, and accordingly it gives scope for speculation in such rises. Under the credit system a man can buy more than he has the means to pay for at the time, and the goods so bought will themselves furnish the means of payment, together with the profit, if their value goes up between the time they are bought and the time

they are resold. As we have already seen, normally the intermediate holder makes a profit, because in the ordinary processes of trade and industry he either improves the goods themselves, or so distributes them that he adds to their value. But quite apart from the cases where the intermediate holder causes such additional value, there are many cases where the value increases from extraneous circumstances, and the interval between purchase and payment enables the intermediate holder to reap the advantage of that rise in value, just as, if the extraneous circumstances cause the value to fall, he must support the loss. The real forces fixing the values of things are, as we have seen, to be found in the retail market; but these forces may be studied and their action predicted; and although the action taken by those who foresee a rise or fall cannot as a rule exercise in the long run much, if any, influence upon demand, yet it may cause a considerable fluctuation of prices in the intermediate market.

Supposing A, B and C are three dealers in rubber, and they go into the market and buy up a great deal of rubber, using their credit freely, competing against one another, and running up prices. Credit will enable them to become responsible for purchases far in excess of what they could have bought with their cash in hand. But although they act upon their own initiative, their demand is nevertheless a derived demand. We

may safely assume that they have some reason for believing that the demand for rubber goods is about to increase, or that the supply is going to be short. If the speculators prove to be mistaken, then credit has assisted in the temporary inflation of prices (perhaps confined to the wholesale market) which means that the planters who sold have gained at the expense of the speculators who bought. If on the other hand it turns out that there is really a larger demand for rubber, then the speculators did not create it; they merely anticipated it; and credit enabled the speculators to secure the benefit of that rise instead of allowing it to go into the pockets of the planters.

Hence we cannot attribute a continuous rise of prices, extending over years, to the growth of credit. Prices may fluctuate in the wholesale market without affecting the retail market; but a continuous rise of wholesale prices is a sure indication of a similar rise in the retail market. Credit cannot increase demand in the retail market; and the wholesale demand is derived from the retail. The retail market is a cash market, and it is there that the values of goods are ultimately determined; wholesale prices are governed by what the goods will fetch in the retail market, and whether the exchanges between those who buy to sell again take place with cash as a medium, or by mere book-keeping, does not in the long run affect the price the goods will fetch. As

Adam Smith said, " The value of the goods circulated between the different dealers never can exceed the value of those circulated between the dealers and consumers ; whatever is bought by the dealers being ultimately destined to be sold to the consumers."

I do not mean to say, however, that prices in the wholesale market may not rise for a time above the level justified by the values in the retail market. They may, and traders who have bought at a price which they cannot recover when the time comes for resale, may have to submit to heavy losses and may even find themselves ruined. This may happen whether they bought with cash or on credit, though in the latter case others may be involved in their fall. Nor do I mean to say that this will not indirectly affect the retail market. If the speculation and over-trading have been widespread, and if the credits involve and interlock the fortunes of a large number of people, the collapse which follows when the miscalculation begins to make itself apparent may be such as to dislocate and disorganise industry and commerce, and partially paralyse production, with the result that many workers may for a time cease to earn, while others are afraid to spend, and the result may be a temporary diminution of demand in the retail market. But the study of abnormal conditions is best postponed until we have mastered the principles which underlie the normal activities of trade.

CHAPTER II

HOW PRICES ARE FIXED

If we are correct that prices are ultimately determined in the retail market, we have made a great stride towards the simplification of our problem. Mill, after expounding the Quantity Theory of money, adds that it only holds good if all transactions are for cash, credit in all its forms being excluded. The retail market is the only market at all answering to that description, and it is in that market therefore, if anywhere, that we have a chance to discover the Quantity principle in operation. But if we now focus our attention on the retail market, it is not because it furnishes a more favourable field for the Quantity Theory; it is because it is in the retail market that prices, even wholesale prices, are in reality determined. The fact that the one is practically a cash market and the other mainly a credit market is quite a secondary matter. If our presentation of the case is correct, it does not matter whether the transactions in the wholesale market are conducted by cash or credit, it does

not matter whether the currency of the wholesale market is elastic or inelastic, because in either case the prices of goods bought for re-sale are adjusted with a view to what the goods will fetch when resold, and therefore if we can find the principle which governs price in the retail market, we find the principle which ultimately governs all prices.

Retail Prices Determine Wholesale Prices

That the retail price really fixes the wholesale price is, however, not a self-evident proposition. If the question were put to the ordinary business man, he would probably say it is true in some cases and not in others. He knows on the one hand that there is a great deal of business done where the question the dealer constantly puts to himself is, " How much will this fetch when I come to re-sell ? " and the amount he is prepared to offer is governed accordingly. On the other hand, he knows that in every shop throughout the land the retailer usually takes the wholesale price and adds a percentage for his expenses and profit, and if the wholesale price goes up, he raises the retail price. And this system prevails largely throughout industry. For instance, if the price of raw cotton is raised, the manufacturers of cotton goods have to pay more for their material and consequently raise their price to the merchant, who in turn raises

his price to the shopkeeper, who raises his price to the public. Thus the impression is created that value arises from cost of production. But we have only to ask ourselves what raised the price of cotton in the first instance, to see at once the fallacy of this argument. The price of cotton was raised because it was anticipated that at the old price the demand would be greater than the supply. Whence comes that demand? From the retail market. Neither broker, manufacturer, merchant nor shopkeeper will buy, unless by a miscalculation, more than can ultimately be sold to the public; the demand of the intermediate dealers is a demand derived ultimately from the demand in the retail market. But because the magnitude of the supply and the magnitude of the demand are approximately known in advance by those whose business it is to make a study of such matters, because production takes place in anticipation of demand and dealers' buyings are governed by their estimated sellings, because producers fix their prices in advance according to their estimates of what the goods will be worth when completed, we get the false impression on the *post hoc propter hoc* principle that value is derived from cost of production, whereas in reality it is the value of the finished product which gives value to the goods at all their prior stages, and it is the final price of the goods when bought by the final buyer which ultimately

governs the shares of the various factors which have co-operated in its production.

It would be easy to conduct a profitable business if producers could raise values merely by raising prices. But although dealers fix prices, they cannot fix values except so far as they can control supply or influence demand. Values are determined by relative demand and supply, and prices must conform to values. The dealer who puts upon his goods a price above their value fails to sell his wares; the dealer who puts too low a price upon his goods makes the purchaser a present of the surplus value. Now the fact that values are constantly altering, from changes in the relative strength of demand and supply, means that the position of persons holding goods for sale is constantly changing for better or for worse. Persons whose business it is to make a study of these changing values, who buy largely when they anticipate a rise and sell quickly when they anticipate a fall, may, if they are shrewd and of sound judgment, secure for themselves large profits which would otherwise accrue to somebody else, or shift on to another's shoulders a loss which would otherwise have fallen on their own. Therefore the dealer in cotton who anticipates that the supply will fall short of the demand, does not wait until his predictions are fulfilled before taking action, for then it would be too late to secure the profit for himself. Supposing, for example, that

in a sleepy world the dealer bought the same quantity and at the same price as last year, that he sold the same quantity and at the same price to the manufacturer, who did the same to the merchant, who did the same to the shopkeeper, while the latter, to his astonishment found the demand greatly augmented. If he sells at the old price to his customers, then they benefit, but his stock is sold out before all who wish to buy have had a share in it. Or if the shopkeeper raises his price, he nets a huge profit in which the merchant, manufacturer and grower get no share. Is it to be supposed that the shopkeeper will send some of these extra gains back to the merchant, the manufacturer and the planter? Not at all. If the planter wishes to get a higher price, he must obtain it or contract for it at the time he sells, and so must each of the other traders through whose hands the goods pass.

An ounce of fact is often worth a pound of theory, so let us take one concrete instance. A few weeks after the signature of the Armistice we read in the papers that there was an advance in the price of ostrich feathers at Port Elizabeth. Why was this? Had Europe been cabling orders to South Africa for feathers? On the contrary, merchants in England who had large pre-war stocks were anxious that importation of feathers should be restricted. But the dealers in South Africa foresaw the reopening of markets and the

renewal of active demand. They did not imagine that by raising the price of their feathers they could raise their value in the London market; but they considered that consumers would shortly be ready to buy briskly, and they saw no reason for shipping at the old price when the dealers in Europe would obtain a higher price. And the merchants who bought from the farmers were willing to pay the higher price demanded because they were confident of receiving a higher price in turn. Thus the "cost" of feathers to the dealer in London goes up, but that only means that the grower has raised his price and thereby raised his profit. What is profit to the seller becomes cost to the buyer, but the whole value of ostrich feathers is derived in reality from the demand of the consumer.

Part of the "cost" to the London dealer is the freight between Port Elizabeth and London. Supposing the freight is £5 upon a particular parcel of feathers, this adds £5 to the "cost" of the feathers in London. Does it add £5 to their value? It may seem to do so; but if the value of ostrich feathers could be increased in so simple a manner, then we might add another £5 to the value by shipping them back to South Africa. In reality, although the cost would go up another £5, the value would go down £5. The feathers gained in value by being sent to London, not on account of the cost of the voyage, but because

they were sent from a place where there was little demand for them to a place where the demand is so much greater that it justifies the expenditure of £5 on the transport. No doubt if the shipping charges could be reduced to £2 10s. the price at which ostrich feathers would be sold in London would fall accordingly. But it would not fall without actual or threatened increase of supply.

And is not the shipping company's charge for freight determined by the "cost" of running its steamers? No doubt it is to some extent. But would the shipping company obtain any freight at all if it were not that consumers in London were ready to pay the necessary price for goods from South Africa and consumers in South Africa similarly prepared to pay for goods from Europe? The shipping company is able to make a profit not because it costs it so much to run its steamers, but because the value of the services they render is greater than the cost of running them. And do not the wages of the sailors and the ship's officers all depend ultimately on the fact that their services derive a value from the demand of the consumers for the goods they carry? And if the Captain's pay is higher than the boatswain's, is it not because the services he renders in the whole transactions which are ultimately paid for by the consumers of the goods transported are more valuable than those rendered by the boatswain?

The law of value is a complicated matter,

often misunderstood and seldom well taught, but it is too large a matter to go further into here.

Gold a Universally Acceptable Commodity

I think I have said enough to justify our regarding the retail market as the arena where the respective values of goods and gold are determined and their ratio established. I say gold rather than money, because I do not want at this stage to enter into the question of the different kinds of money. What is and what is not money will necessarily appear during the course of our investigation. In the meantime there can be no dispute that the sovereign is money not only in Great Britain and her colonies, but throughout the world. Gold in fact is natural money, or you may call it commodity money ; that is to say it is a metal that is highly prized in every community (except Sir Thomas More's Utopia, and we know where to look for that on the map) and as such it is readily exchangeable for other commodities in all countries, even those where the coinage is not made of gold, and even among barbarous peoples who have no coinage at all. From the earliest times gold was treasure coveted by kings and carried off by conquerors. It is easy to understand the transition from treasure to money. He who had gold could readily obtain other things in exchange. Hence, even if a person did not

want to hoard gold, or more correctly, if he could not afford to embellish his home and person with plate and trinkets, yet he would be willing to barter his products for gold, knowing as he did that he could readily re-exchange the gold either immediately or when the necessity arose for other things that he wanted. Gold being a commodity acceptable at all times, by all persons, and in all places (to use Lord Overstone's phrase), became the most efficient form of purchasing power and the most convenient form in which to store purchasing power. The "interposed commodity," as it has been called, did away with all the inconveniences of direct barter. From this position historically it may be a long step, but intellectually it is but a short step, to the division of gold (the raw material of plate and trinkets) into little ingots of uniform weight and fineness which would serve as a convenient medium of exchange. And it is but another short step, intellectually, to the position where the use of the interposed commodity has become so general as to bring about a condition in which it may be said that practically no exchange can be made except through the medium of money, that is to say a condition where products cease to be exchanged at all by the process of barter, where things are never sold except for money, and nothing can be bought except with money. That is the condition of things in the retail market.

How the Ratio of Exchange between Money and Commodities Established in the Retail Market

Now the problem we have before us is how is the exchange value of gold determined in a world where it has thus become money, that is to say it has become something which people accept simply because they can exchange it for other things, and not because they want to keep it. They value it, not for itself, but for the command it gives them over goods and services.

Let us try to see the process of exchange at work.

Money is valuable for what it will buy. It is exchanged for commodities, which term I use to cover goods and services, the bulk of the goods, and of course all the services representing what we may call current production. These commodities form a constant stream of production which flows on throughout the weeks, the months and the years, like a great river rising from various sources and flowing sooner or later into the great market where human wants are supplied, and where everything is bought by some one or other for keeps. The corn is sown, reaped, sent to the miller to grind, sent to the baker to make bread of, and from there taken off and consumed. The wool is grown on the sheep's back, is sheared,

woven into cloth, converted into clothes and so worn. Metals are extracted from the earth, smelted, purified, cast into blocks, distributed, melted again, rolled or hammered or cast again into plates and rails and rods, each in turn to be bent and hammered and pressed into a thousand useful shapes, and so ultimately brought to the market to minister to human requirements. Stone and wood, cotton and rubber, the hides and tusks of beasts and feathers of fowl, all sorts of materials and forces hidden in the earth are thus passed through a series of processes, from raw material to finished product, and form a perpetual stream which never ceases to pour its product into the lap of man. And all, when they reach the retail market, are bought for money, so that while the stream of production rolls on unending from farmer and miner to manufacturer, from manufacturer to merchant, from merchant to shopkeeper, from shopkeeper to consumer, in the manner we have already examined, the stream of money moves simultaneously in the opposite direction, from consumer to shopkeeper, from shopkeeper to the merchant from whom he buys, from the merchant to the manufacturer who made the goods, from the manufacturer to the farmer or miner or fisherman or hunter who produced or secured the raw materials. These two streams of things thus exchanged for one another necessarily measure themselves against one another and fix

the rate of exchange ; but we have to note the important fact that whereas the goods are like a river rising from various sources and pouring into the ocean, there to be swallowed up, the money circles round like a gigantic water wheel ; for the retailers and merchants and manufacturers and miners and the rest, all bring their money round in turn to the great market where they buy back their own, or rather one another's products, for their own use and enjoyment.

Commodity Income and Money Income Necessarily Equal one another

To put the position in a few words, the stream of production represents the community's gross income in commodities, and the stream of gold represents the community's income in money. Where does the money income come from? From the sale of goods and services. What is done with this money income? It is spent on goods and services. The one stream exchanges for the other and is necessarily equal to the other. The magnitude of the one is measured against the magnitude of the other and thereby is determined what we call the general level of prices. This conception perhaps offers a little difficulty. There is no difficulty in conceiving the magnitude of the stream of gold. It is homogeneous : it simply

consists of so many ounces or pounds or tons of gold flowing per day, week, month or year. Every part of the stream is like every other part; there are no differences of kind, and we have only to measure the quantity or count the units. Ten units have ten times the value of one, and fifty have five times the value of ten. But how are we to measure the "quantity" of the goods stream? How can there be a general level of prices when prices are endlessly different? The difficulty vanishes if we bear in mind that the total or aggregate money income is equal to the total or aggregate commodity income. If the aggregate money income exchanges for the aggregate commodity income, then surely we may say that one-millionth of the former exchanges for one-millionth of the latter. If the money income is one thousand million pounds, surely we may say that each pound purchases one thousand-millionth of the commodity income, and may therefore say that if the money income were only 500 millions, while the commodity income remained the same, then each £1 would purchase a 500-millionth of the commodities, i.e., twice as much as in the other case; whilst if the money income were double (i.e., £2,000,000,000), then it would take £2 to purchase one thousand-millionth part of the commodity income. Although commodities are not homogeneous like gold, although the relative values of commodities to one another differ

enormously among themselves, yet we may conceive of the total stream of commodities as being made up of so many commodity-units of equal value.

Let us then adopt that idea and endeavour to simplify our figure of the production stream by imagining it to consist of a river of real water. However different may be the nature of the commodities—no matter whether in reality some would be sold by weight, some by bulk, some by number, and all according to quality—we may reduce them all mentally to a common denomination of commodity units. If one commodity is twice as valuable as another we will conceive it as represented by twice as much water as another, and so on. Each commodity according to its relative value represents so many units in the great aggregate which makes up the stream.

With these conditions in mind, let us endeavour to visualize the problem by imagining a dam thrown across the stream of commodities at its mouth, thus creating a huge reservoir of products, fed on the one hand by a number of streams, emptied on the other hand by innumerable taps. The streams flowing into the reservoir represent the productive processes. Some of these streams are small, some large; some rapid, some sluggish; some regular, some intermittent; some start afar off and take weeks, months or years from source to mouth; others are short rapid

streams which empty themselves once a day into the reservoir. That of course is a very rough conception, but it will give us a general idea of the incessant flow of production destined to minister to human wants. Now, the rate of outflow from that reservoir must in the long run be governed by the rate of inflow. Since you have a reservoir, it is obvious that the outflow and inflow at any particular moment do not need to be equal. If the inflow exceeds the outflow for a time, then the stock or store in the reservoir accumulates; if the outflow exceeds the inflow, the stock or store runs down. It is obvious that, since we have accumulated a large stock, our consumption in the past has not quite equalled our production; but roughly, outflow or consumption must balance inflow or production. How is this regulated?

The outflow takes place through innumerable taps, or rather I should say through innumerable spouts, each regulated by a tap. Attached to each tap let us suppose there is an apparatus by which a coin put into a slot opens the tap for a certain time. A sovereign in the slot opens the tap for one minute, while two sovereigns will open two taps for one minute, or one tap for two minutes. Now, we have said that the outflow must be equal to the inflow. But the number of taps opened and the number of times they are opened must depend upon the number of sovereigns put into the slots. If the taps are opened

too often, the store in the reservoir will run down ; if the taps are not opened often enough, the store in the reservoir will mount up. Therefore the people who hold the reservoir must have command of a general sluice or valve by which they can regulate the amount that runs out of the taps in a given time. This valve or sluice is Price. If the stock is running down, the valve is partly closed, that is to say price is raised ; each sovereign put into the slot carries off a smaller amount of the contents of the reservoir. If on the other hand the contents of the reservoir are found to be accumulating, by opening the valve a little wider, that is, by lowering price, the goods run off more rapidly, i.e., each sovereign carries off a little more. That is how the general price level is regulated. Thus we get a picture of a constant flow of goods into the reservoir and a constant outflow of goods of corresponding volume ; and while the stream of goods is flowing in this direction from producer to consumer, there is simultaneously a stream of sovereigns flowing in the opposite direction, first into the hands of the shopkeepers, from them to the merchants from whom they obtained their goods, from the merchants to the manufacturers, from the manufacturers to the producers of raw materials, and so forth. And of course all the sovereigns which thus flow into the hands of the producers are in turn brought round to the taps, so that, while the goods

flow like a river from source to sea, the money flows round and round in a circular stream as indicated by the arrows in this figure :—

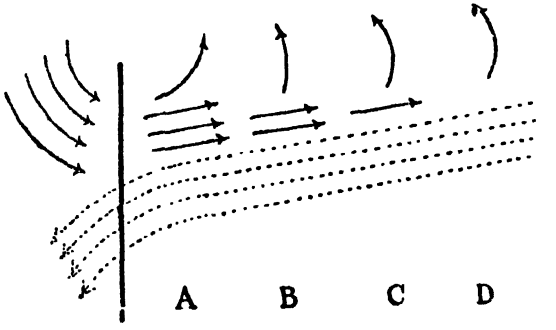

FIG. 1.

How Increase of Money affects the "General Level" of Prices.

Now this seems to illustrate clearly enough the manner in which the quantity of money regulates prices. It does not determine the price of any one particular thing, but it determines the aggregate price to be paid for all the things to be sold, and the prices of the various items in the commodity income are so adjusted as to result in the total money income and the total commodity income just balancing; and the aggregate of the sums received for the sale of commodities constitutes the aggregate money income to be expended in the purchase of commodities—leaving

aside the question of additional money introduced from outside and added to the stream. With regard to such additions, our illustration makes it clear that each such addition to the money stream must (unless indeed the rapidity of the stream diminishes) increase the aggregate money price paid for the commodities sold, and must therefore involve such an adjustment of prices as will re-establish the equality, unless indeed there chances to be a simultaneous and equivalent increase in the stream of goods. Even if the addition to the money stream only raised the price of one particular article in the commodity stream, such addition would nevertheless constitute an addition to the aggregate of money paid for the aggregate of commodities, and would thus constitute a rise in what we call the general level or average. But it is easy to show that the general level would rise in a more literal sense than this. Supposing, for instance, the new gold from the mines belongs entirely to one man, and that this particular man only desires to spend his additional money on one particular thing, say pictures, and even at that we will assume his passion is for the pictures of one particular artist. The price of that artist's pictures goes up through the increased competition to get hold of them. Thus the artist comes into possession of a larger income, and that income will not be spent in buying pictures, at all events not in buying his own.

In all probability Madame the artist's wife will order new dresses, her husband perhaps will present her with jewels, the children will be sent to a smarter school, the artist's friends will be regaled with choicer wines and cigars; in short, from this one source alone the increased demand which was originally an increased demand for pictures only, will become an increased demand for a variety of articles; and each trader who benefits by this increased demand will in turn spread it fan-wise over a number of articles. And if instead of starting with one single gold-king intent on pictures, we imagine the new gold to go in the first instance to hundreds of people holding shares in mines, and each of these people to be wanting scores of different things, we can see that any increase of gold in the stream of money income very quickly acts upon all the different constituents of the commodity stream, so that there is an all-round rise in prices. All commodities will not be affected alike. Even if there is no change in the money stream and no alteration in the commodity stream, the prices of some articles will nevertheless go up while others will go down, from changes in the taste or requirements of the producers. The augmentation of the money stream will not prevent these changes taking place in the relative values of commodities among themselves; on the contrary, it is quite likely to be itself a cause of some of these relative

changes; but the net result must be that if the money stream increases by one-tenth or one-fifth, the aggregate price paid for the whole of the commodity stream will increase by one-tenth or one-fifth, and if that stream of commodities has itself remained unaltered, the result is necessarily that the prices of the units have risen "on the average" to that extent.

Although we have represented money and commodities as two streams, our illustration is in reality dynamic in appearance only; it represents nothing more than an equation—the necessary equality which exists between money income and commodity income. The stream of goods goes on continuously. Its volume depends upon a number of considerations which do not concern us in our present problem—the abundance of materials, the efficiency of the tools, the quantity, energy and skill of the labour and so forth. The stream of money also flows continuously, but its movement is circular like that of a wheel. How much of the year's production will be carried off by one complete circulation of the stream therefore depends upon how often the stream revolves in the year. If it revolves once in a month, it will carry off at each revolution one month's production. If it takes two months to revolve, it will carry off two months' production. And the amount that the entire body of money carries off in one revolution being thus

determined, the question how much each sovereign will carry off depends upon how many sovereigns make up the stream. Our real problem therefore consists in ascertaining what determines the number of sovereigns in the stream and what determines how long they take to circle round. Supposing that we should find that every increase of money caused a decrease in rapidity of circulation which exactly offset it, the Quantity Theory would be untenable. Again, we cannot tell until we investigate, whether the rapidity of circulation depends upon the rapidity of production, or whether, taking into account artificial as well as natural money, the amount of money itself expands and contracts according to the amount of trade, in which case prices could not be said to depend on the quantity of money. Hence we have not solved our problem yet, but merely prepared the ground.

How the Level of Prices Reacts on the Quantity of Money

Leaving the rapidity of circulation for later consideration, we may note that there is and can be no question that in the case of commodity money, like gold, prices do react upon the quantity of money in a manner which puts a check on the rise or fall, as the case may be, and at the

same time an increase or diminution in the quantity of money reacts upon the quantity of goods in a way which also serves to check the rise or fall of prices.

To begin with, the value of gold directly influences the quantity of new gold produced, just as it does the quantity of any other production. To say that the value of gold is high is to say that prices are low. If the mine-owner can procure cheap labour, cheap explosives, cheap tools and appliances and plant of all kinds, it is worth his while to exploit low-grade mines which would probably be abandoned if the cost of production were high.

But even supposing there were no production of new gold, and no mines left to work, there is still a source from which the money stream may derive an increase of quantity under the stimulus of low prices, and that is the very large quantity of gold in the world at present used for other purposes than money. This gold may have been once in the stream, but it has been withdrawn, just as commodities of other kinds were once in the stream and have been withdrawn. And just as the goods so withdrawn, if not consumed, may be returned at any time to the reservoir for sale, so the gold withdrawn, if not destroyed or scattered beyond recovery, may be restored to the stream. Neither goods nor gold, so long as they remain withdrawn from the two streams that are

constantly measuring themselves against one another, exercises any influence on the ratio called price. But both form a reserve which might be drawn upon in case of emergency, for instance upon the outbreak of war, and both form a source of potential supply that may be attracted from retirement by alteration in the terms of exchange offered. If prices are falling, that is to say if compared with one another goods are becoming cheaper and gold dearer, the inducement to indulge in gold ornaments is less. It means a greater sacrifice of other things. A rise in the price of goods (a fall in the value of gold) tends to provoke an increase in the offer of goods and a diminution of money, whilst a fall in price (or increase in the value of gold) tends to provoke a diminution in the quantity of goods and an increase in the quantity of money. Not only does a rise in prices stimulate the activities of those producing goods, but it attracts into the market goods previously withdrawn from it. For example, in a period of rising prices a man who owns a house may think it a favourable time to sell; nay, owing to the rise in the cost of living, he may consider it necessary to sell his house, thus increasing the quantity of goods in the market. Simultaneously with this, as gold has become cheaper compared with other things, there may be other people who have considered it would be extravagant to indulge in gold ornaments, but

now consider that they can do so. To do so now involves a smaller sacrifice of other things, besides which these persons may have benefited by the rise in prices from which others have suffered. Thus the increase in the goods stream and diminution in the money stream tend to check the rise of prices. And of course the opposite effects ensue when the contrary condition prevails. If prices are falling, if gold is becoming dearer. the inducement to indulge in gold ornaments is less, and people possessing objects of gold feel that it is extravagant to be holding them when by turning them into goods they could get so much more benefit or enjoyment; and simultaneously with this you have the withdrawal of some classes of goods from the market because prices are too low, and a diminution of production for the same reason, this again checking the tendency of prices to fall. To this extent, then, the level of prices determines the quantity of money instead of the quantity of money determining the level of prices, and to this extent it may be said that it is the value of gold as a commodity which determines its purchasing power.

But observe the conditions under which this holds good. The value of a gold coin is approximately identical with the value of its gold contents only on certain conditions which do not always prevail. So long as any one can bring gold to the mint in any quantity and have it converted into

sovereigns, practically free of charge, sovereigns cannot rise above the value of gold bullion, because if there were such a rise in the value of the sovereign, gold bullion would at once be brought to the mint to be converted into sovereigns. And so long as every one possessing sovereigns is at liberty to export them, or can with impunity melt them down into bullion, sovereigns cannot fall below the value of bullion, because if bullion became more valuable, then sovereigns would be promptly melted. But if you abolish this convertibility, parity of value no longer follows as a matter of course. If on the one hand the government closed the mint to the manufacture of sovereigns, and if on the other they could effectively prevent the export or melting of sovereigns, then gold money and gold commodity would be divorced and would no longer have anything in common, and their respective values might diverge considerably. Sovereigns might be worth more or worth less than an equal amount of standard gold. It would depend upon their quantity. Their value would be determined in the manner we have already examined, that is to say they would be units in that total of money income which purchases the total of commodity income.

In fact we may lay it down that money, as money, whether made of gold or of paper, necessarily has its value fixed by its quantity. Com-

modity money is not independent of the quantity principle; its value will always adjust itself to that of the commodity of which it is made provided the means of adjustment are left open; but the adjustment will necessarily be made by an increase or diminution of the quantity of money until the values are at par. Its value as money can be affected in no other way than through the quantity. If the value of coin rises above the value of bullion, steps are taken to increase the quantity of coin, and it is this increase which brings the value of coin down to the level of bullion. If the value of bullion rises above that of coin, steps are taken to diminish the amount of coin, and it is this diminution that raises the value of coin to the level of bullion. We find here, therefore, a confirmation and not a disproof of the Quantity Theory, but at the same time we have to note its limitations. The stream of money income equates with the stream of commodity income; how much each sovereign will buy depends upon the number of sovereigns in the stream; but this in turn depends upon prices, for a rise in prices tends to drive gold out of the money stream and so check the rise, while a fall in prices tends to attract more gold into the stream and so check the fall of prices. It is very much like saying that if a cake is to be divided among all the children present in a room, then (given the size of the cake) the quantity each child will get

depends upon the number of children present, but on the other hand the number of children who take the trouble to be present is not uninfluenced by the size of the slice which is to be had by being present!

CHAPTER III

THE PHYSIOLOGY OF CIRCULATION

PRICES depend not merely on the quantity of money or number of coins in circulation, but also upon what is generally called "the rapidity of circulation." This question of circulation we have now to consider. Strictly, I suppose, a thing does not circulate unless it moves in a circle, or at all events returns periodically to the point from which it started. But the word is commonly used in a much looser sense. When the Paris policeman cries "Circulate" no one imagines that he has in mind the fact that you left your home in the morning and that early or late you must complete your round by returning to the domestic hearth. He simply means what the London bobby means when he says "Move on."

The Meaning of "Circulation"

Similarly, when we speak of the circulation of money we usually mean nothing more than the

movement of money from one person to another. Thus if A gives a sovereign to B in exchange for goods, and a little later B gives the sovereign back to A in exchange for goods, the money is said to have circulated twice. It "circulates" once when it goes from A to B;[1] it circulates a second time when B uses it, whether he gives it back to A or pays it to C or D or Z. The only thing economists wish to indicate by the expression is that one sovereign paid away twice purchases the same quantity of goods as two sovereigns paid away once. Whether the sovereign returns to the place whence it started is not considered in this view.

Now that is what we called at the outset the inorganic or amorphous picture of the circulation of money. It represents money as moving this way and that, to and fro, in and out, in an uncharted manner corresponding to similar uncharted movements of commodities. It makes no attempt to trace the actual course which money is following. I do not criticise this use of the word circulation, because we speak of a newspaper having a large circulation, when we simply mean that a large number of copies are distributed or scattered among a mass of people. But to my mind the stout lady in the opera who claimed that she had the largest circulation in the world had a better title to the expression than any journal. She used the word in its

physiological sense, and it is from the physiological standpoint that I propose to examine the circulation of money. In our view goods and money form two streams which to the mind's eye can be seen moving steadily in opposite directions. While raw materials are being extracted and sorted and purified, then worked into simple products, then elaborated into numerous useful forms by craftsmen and manufacturers of various kinds, then passed into the stores of merchants for territorial distribution and thence to the retailers who finally distribute them among the public, simultaneously there is a tide of money setting in the opposite direction, passing along from consumer to retailer, from retailer to wholesaler, from the latter to the manufacturers, and back ultimately to the producers of crude materials. But whereas the goods, when they reach the hands of the final purchaser, are withdrawn from the market, each of the producers in turn becomes a consumer, bringing round his share of the money received to the retail market where he exchanges it for commodities, and where in fact the whole mass of products which constitute the commodity income of the community is sold for the money which constitutes the money income of the community. Thus the money circulates round and round, returning again and again unceasingly to the point from which it started.

Money and Commodities are Streams Moving in Opposite Directions

Of course it has to be admitted that in the actual world of business this orderly movement is not discernible without looking below the surface. The complexities and ramifications of trade and industry under the system of divided labour are so intricate that it is easy to overlook the simplicity of the essential movement. In a few instances, indeed, the course of the commodity from raw material to finished article may be easy to trace, as for example in the case of the wool sold by the farmer, which we can follow to the cleaner and comber and dyer, thence to the weaver who makes cloth of it, and from him to the tailor who makes clothes of the cloth and sells them to the public. Or again, the farmer sells cattle to the butcher, the butcher disposes of the meat to the public but passes on the hides to the tanner; the tanner sells leather to the maker of harness and trunks and boots, and so forth; and the farmer buys harness, boots, etc. in the retail market. But there are other cases where the transformations are so complete, or the movements are so intricate, as to be difficult to follow, while in other instances the identical material may never reach the final market at all, although the service it has rendered does so, embodied in some other

goods. Coal may disappear as coal and reappear in the coal-miner's house as gas, or tar, or disinfectant, or as a toilet perfume. Or the coal may be used to generate electricity, and the electricity so generated may be employed to drive a printing press whereby the coal miner is supplied with a newspaper. In all such cases the coal reappears in a sense, although no single atom or particle of it is actually to be discovered either by chemical or microscopical analysis in the final product. But however much goods may be passed to and fro in the course of handling under a system of divided labour, and however erratic may appear the movements of money corresponding to these transactions, we may still say that the progress of hides from the farmer to the butcher, from the butcher to the tanner, from the tanner to the boot factory, from the factory to the merchant, from the merchant to the retailer, and from the last to the consumer, is the true type, and represents the essential nature, of all these movements, and fully justifies us in regarding money as following a definite course from the final buyer to the retailer and so back from him to the earlier stages of production.

While therefore the circulation of an individual coin may, at the dictate of mere chance, follow a most irregular course, the body of money as a whole does constitute a stream which follows a really circular movement not unlike the circula-

tion of the blood. It goes round and round like horses on a race course. It reappears again and again in the retail market, like a stage army perpetually defiling before the audience, an apparently endless host. Now the number of horses that pass the post in a given period, the number of men on the stage at any one time, depends upon three things. It depends (1) on the number of units taking part in the circular procession, (2) on the rate at which they move, and (3) on the length of the circuit they have to travel. In other words, the amount of the income stream passing "through the taps" in a given period depends upon how many sovereigns there are and how often they come round, the latter being compounded of two factors, the speed and the distance.

The Length of the Money Circuit

If we turn back to our diagram we do not find any indication of the speed or rate at which money travels from hand to hand, but the diagram does throw some light on the question of the distance to be covered; at least it indicates that the number of hands through which money has to pass is different in different cases. We have spoken of the flow of the money stream from the purchaser to the retailer, from the latter to the merchant, from the merchant to the manu-

facturer, and so on; but our diagram shows that at each stage of the journey a portion of the money breaks off or turns back to the retail market. The whole price of the goods sold goes first into the hands of the retailer. Some of this money represents his own profit or income, and some of it represents the wages or income of his staff. That money does not travel on to the merchant and the manufacturer, but turns back to the retail market where it may be spent on bread and butter, clothes and boots, housing accommodation, gas and coal, theatre and concert tickets, and so forth. Every trader retains the margin that belongs to him; that constitutes his gross income (i.e. net income plus wear and tear, or replacement, of fixed capital). The balance of the price received by the retailer for the goods is not, to him, income; it is circulating capital. If he obtained the goods from the merchant on credit, then this portion of the price received belongs to the merchant and must now be passed on to him. If on the other hand the retailer bought the goods with his own capital, the money is nevertheless passed along to the merchant, because the retailer must replace the stock he has sold. The retailer's circulating capital consists alternately of goods obtained from the merchant and of money obtained from the consumer; as the one goes in the other goes out, in the fashion of Box and Cox.

And if we follow this money into the hands of the merchant we find exactly the same thing happening. The whole money received from the consumer, less the retailer's margin, has now come into the hands of the merchant. Part of it represents his gross profit, the margin which he can use as income. The remainder replaces his capital, or the capital which he had obtained on credit from the manufacturer. And so it proceeds from stage to stage, until the whole price of the goods received from the consumer has been split up, first into the earnings of the retailer, then into the earnings of the manufacturer, leaving at last a diminished fund which is the income of the man who owned the raw materials before they were extracted from the earth. Thus each individual in the community contributes to the commodity income either his own labour, mental or manual, or the service of some thing or things belonging to him, and thus does he obtain the cash equivalent of the same, or money income, which he can take round to the retail market and exchange for his share of the commodity income. Thus money as it flows round and round becomes alternately income and circulating capital; thus does every man's income consist alternately of money and commodities; and thus does every trader's circulating capital consist alternately of money and goods.

We said a little while back that money circu-

lates round and round like horses on a race course or like a stage army appearing and reappearing before the eyes of the spectators. It appears, however, from what we have been saying, that instead of all the money following one course, some portions pursue a much longer circuit than others. Some of it goes from A immediately back to A; some goes from A to B, and from B back to A; some again passes from A to B, from B to C, and from C back to A; still another portion passes from A to B, from B to C, from C to D, and thence back to A. The money which follows the longer course must take a longer time to perform the circuit; or what amounts to the same thing, more money will be required to keep the stream in that channel constantly flowing at the full. If we were dealing with horses, three horses running on a mile circuit might be sufficient to permit one horse to pass the post every minute, while on the two-mile circuit double the number, or six horses, would be required if one is to pass the post every minute. And in proportion as the circuit is lengthened, so the number of horses required to maintain the constant flow past the post would have to be augmented. In an analogous fashion, assuming that there is no substitute for money and that every exchange between producers has to be financed by actual money, it is obvious that the greater the number of hands that the goods have to pass through

in the course of their production, the larger will be the amount of money required to be kept constantly *en route*, so to speak. This money *en route* is circulating capital. It all becomes income; but at any given moment, if a census of the money in existence could be taken, it would be found that only a portion of it was in the pockets of the people as income, while a large portion (probably the larger portion) was in the hands of traders, travelling along from shopkeeper to merchant, from merchant to manufacturer, and so on. All this capital in turn is paid away as wages, salaries, dividends, rents, royalties, etc., and goes round in a regular stream to the retail market where the reservoir is tapped.

It would therefore appear that while we cannot attempt to determine the length of the circuit or circuits followed by the money stream or streams, we may say at least that there is always a large portion of the stream which is not at any given moment influencing price in the retail market; just as, if three men with hammers are driving a stake into the ground, at any given moment while one hammer is striking the stake, the other two are in the air. The retail market is the arena where money is measured against commodities, but only a portion of the money in circulation is at any moment in that arena. But we cannot measure money against commodities at a given *moment*; both constitute a flow, and we must take a period;

and whether the commodities sold in a given period are equal to all the money in existence, or less or more, depends upon the length of the period taken. Thus to take quite arbitrary figures by way of illustration, it might be discovered by taking a census of coin on a certain day in a certain community that the total money in existence was £6,000,000; other statistics might reveal the fact that the community's gross money income for the year was £52,000,000. In that case it is obvious that the income of one week would be £1,000,000, or only one-sixth of the money in existence, which is another way of saying that, taking an average, the whole of the money in existence circulates once in six weeks, or 8 and 2/3rd times in the course of the year.

There it may be well to leave the matter until we have endeavoured to obtain some light on the other factor in the "rapidity of circulation," namely, the pace at which money moves, which is the same thing as the frequency with which it changes hands.

The Pace of the Money Stream

Upon what does the pace of the money stream depend? It is obvious that the rapidity with which money is exchanged for goods is exactly the same as the rapidity with which goods are ex-

changed for money. It might be thought therefore that we should find the factor governing the rapidity of the money movement, or exchange, in the circumstances that determine the rapidity of production, since goods cannot be sold for consumption more rapidly than they are produced. And under very simple and primitive conditions this might be the case. Imagine a little community of three men in which A produces one thing, B another, and C a third thing. If it takes A a week to complete his product he can only make an exchange once a week. And if B and C also took a week, no doubt the length of the interval between exchanges would coincide with the length of the production period. But if B has ready a completed product once a day, while C takes a month over his work, the coincidence between production period and exchange period disappears at all events for some members of the community. If B wishes to exchange his products for those of A or C, he must accumulate them for a week in the one case or a month in the other, or as one alternative he may supply A and C with his products as fast as he produces them, and wait for the corresponding return when it is ready. In that case he is financing A and C; he is giving them credit; he is making advances, and waiting for the return. Thus even under almost the simplest conditions it is possible to imagine the element of capital comes in. Either A, B and C

must each possess a sufficient store of necessaries to enable him to carry on until his product is completed, when he can either consume it or exchange it for other things which he can consume, or else one or more members of the community must be in a position to make the necessary advances to the long-period producers and to await the return of the product. These are the very conditions of capital and credit which we examined in the first chapter. A reservoir is created upon which every man can draw daily for his daily needs, no matter whether his contribution to the reservoir is made at short or long intervals. In a week or a month he may produce nothing that can be consumed; but the capitalist is prepared to buy his unfinished product, or to pay him for his labour, thus enabling him to exchange his unfinished product immediately for a finished one. Owing to this organisation of industry and of supplies, individual members of the community may be engaged in operations which remain without utilisable result for years, and yet they may individually draw each day the equivalent in a form which they can immediately enjoy. We may for instance have a thousand men engaged for years in boring a tunnel to carry a railway through a mountain. At the end of the first year they have produced nothing but a hole in the rock, which neither contributes nor is capable of contributing anything to human com-

fort or convenience. At the end of the second year the position is the same ; the hole they have dug is deeper, darker, damper, dirtier than ever, but not a whit more useful. Not perhaps until the end of four or five years is the tunnel finally pierced and the railway laid which will carry passengers in ease and comfort from one side of the mountain range to the other. Meanwhile the men who have been engaged in this work have been able to sell their product day by day, or week by week, despite its incomplete and presently useless shape, to others having claims on the great reservoir of enjoyable wealth. They have drawn their money incomes regularly and exchanged them as regularly for commodity incomes. These incomes were part of the capitalists' income or circulating capital, and in proportion as this capital has disappeared it has been replaced by another (fixed) capital in the shape of the railway.

It is not, then, in considering the length of the production period that we shall discover the frequency with which commodities exchange for money and money for commodities. Under the modern capitalistic conditions (by which I do not mean the control of industry by capitalists, but the organisation made possible by capital) long period products which are produced by instalments can be sold by instalments. The capitalist who has command of a large fund of finished products, is able and willing to buy un-

finished products, or what is much the same thing, he is prepared to buy labour and pay for it without awaiting the completion of the undertaking. At some point or other on the various streams which are continually feeding the reservoir each man is engaged doing his fraction of work, contributing his mite to the grand total which issues forth as the commodity income of the nation, and in exchange he receives a fraction of the money income which will enable him to secure his share of the commodity income in whatever form is most convenient to him. Most men work for an employer, and as they labour day by day a debt from the master to the man accrues and accumulates. Custom, arising out of and founded upon convenience, determines at what intervals this debt shall be discharged. Some men may be paid daily; most perhaps are paid weekly; a very large number are paid monthly, while comparatively few are paid quarterly or half-yearly or annually. The creation of the national commodity income is a matter of daily toil—toil which reaches fruition in numerous overlapping periods of various lengths, according to the nature of the work; on the other hand the distribution of the national money income is made periodically at short intervals for the convenience of those (the great majority) who have no accumulations upon which they can draw. It is the wage period—be it weekly, monthly or other—which is the

governing factor in the pace of the money stream. Wages that are received weekly will be spent weekly; salaries that are received monthly will be spent monthly; rents that are received quarterly will be spent quarterly; dividends that are received half-yearly will be spent half-yearly. Whoever sells his services, whether he sells them for a wage or like the lawyer or doctor for fees, generally receives or collects his money income at certain intervals fixed by law, custom or contract, and on the average what he receives at one pay day he will spend during the interval which intervenes before the next pay day. This in turn must regulate the receipts, and therefore the expenditure, of those who do not sell their labour but sell goods. The working man's weekly receipts of money become the weekly receipts of the shopkeepers with whom he deals. The flow of money into the pockets of those who are remunerated by wages, salaries or other periodical payments is determined by the customary periods of settlement, which we may call collectively for short the wage period; this in turn determines the pace at which money flows into the hands of those who sell, not their simple skill and labour, but concrete things, and whose income consists in the margin of profit.

The Rôle of Money in the Retail Market and of Credit in the Wholesale

In almost every textbook dealing with money will be found, à propos of barter, some passage describing the troubles of the tailor who wants bread but does not want a whole coat's worth of bread, and of the shoemaker who wants a horse but cannot find a horse-owner who wants a whole horse's worth of shoes, and so forth. And if the nation were made up entirely of shopkeepers (according to Napoleon's dictum) such no doubt would be our difficulties in exchanging goods with one another. But the real difficulty is much greater than this. Though the shopkeepers have goods to offer, their customers for the most part have none to offer in return. If a man earns his living as a clerk, what has he to offer to the shopkeeper? Whatever he has produced, not one ounce of it is in his hand, in his pocket, or in his bag. If a man, along with a hundred others, is engaged in hammering rivets into a ship's hull, in digging a cutting on a railway, in mixing mortar for a bricklayer, in ploughing fields for a farmer, in driving a locomotive or steering a ship, what product has he, what work of his own hands, that he can take into a shop and exchange for bread and meat, for boots and crockery?. How

can the actor who has played his part, the singer who has sung her song, the lawyer who has won (or lost) his client's case, the doctor who has cured (or killed) his patient—how can any of these take any portion of their products into the market to exchange for what they want? The bulk of people nowadays sell their labour, and they must obtain from the person to whom they sell it something in exchange which they can without difficulty or delay re-exchange for the commodities they want. Hence the necessity of money. Cargoes of wheat may be exchanged for cargoes of cotton or coal or steel; linen and cloth may be sent to the other end of the world in exchange for cocoa, coffee or tea; the wines of France, Italy and Spain may be brought to England and paid for with machinery, paper or worsteds; and all these exchanges of capital may balance one another and involve no payment in gold, or only the payment of a trifling balance. But the position is entirely different when we consider the case of the shopkeeper selling goods to the consumer, or the case of the labourer selling labour to his employer. The shopkeeper has no cross-entry account with his customer, nor the labourer with his employer. The shopkeeper will never receive from his customer nor the labourer from his employer goods or services which can be offset against what he has sold him. There is a break in the chain; a gap which requires to be filled by

the "interposed commodity" acceptable at all times, in all places, and by all persons who have goods or services to sell.

When John Law, the financial Colossus of the eighteenth century, declared that gold is the value by which, and not the value for which, goods are exchanged, he stated of course a real truth. But the literalness with which this can be applied is different in the case of the retail and the wholesale market. In the latter gold is scarcely more than a standard, a measure, a common denominator which serves the bookkeeper for the cross entries whereby the transfers of circulating capital are recorded and set off against one another. In the retail market and in the labour market the commodities are actually sold for, exchanged for, gold, though it is true that the ulterior object is to re-exchange the gold for commodities. Having quoted Law, we may quote Locke: "The yard or quart men measure by may rest indifferently in the buyer's or seller's or a third person's hands, it matters not whose it is. But it is not so with silver; it is the thing bargained for, as well as the measure of the bargain; and in commerce passes from the buyer to the seller, as being in such a quantity equivalent to the thing sold; and so it not only measures the value of the commodity it is applied to, but is given in exchange for it, as of equal value." For silver which was the standard money of John Locke's

day, we must now read gold. Gold is a valuable commodity; it is not merely a measure, it is a value; it is an asset in every man's balance sheet, a power in every man's hands. When goods or labour are sold for money, one thing is exchanged for another. The exchange is complete; nothing is owing on either side. Adam Smith was only speaking fancifully when he likened a sovereign to an I.O.U. given by society at large, and Macleod was in error when he put forward as a serious proposition that money represents indebtedness. Money is payment, No doubt a further exchange is necessary before the person who has received the money attains his ulterior object; but this only means that there are two exchanges, and not two demi-exchanges as the older writers used to put it.

CHAPTER IV

CIRCULATING CAPITAL AND INCOME

In this essay we have represented commodities and money as two streams measuring themselves against one another at a given point, namely, at the point where the stream of completed commodities debouches into the ocean of consumption. That is the only point through which the full commodity stream and the full money stream pass; in other words, where the whole of the commodity income and the whole of the money income meet together and exchange. Turning to our diagram, if we measured the streams together at B we should be leaving out that part of the commodity income which is added or created by A, and also that part of the money income which turns back from A.

Buying for Keeps and Buying for Re-sale

Now this portrayal of the position differs from the usual presentation of the facts in that it does

not include all the exchanges of goods for money. It omits all those purchases which are made by traders with a view to re-sale. In the actual world of industry many an article is sold again and again, and although these sales are often made on credit and may be off-set by other sales, thus rendering the employment of money unnecessary, yet these contra-accounts can never be so exact—the coincidence as to persons exchanging, quantities exchanged, and times of payment can never be so complete—as to eliminate the use of money in the wholesale market. Moreover, although exchanges of circulating capital as it passes from process to process or from place to place form a very important feature in the world of industry and commerce, we must recollect that we do not live by exchanging but by producing; and the stream of money which enters at the taps when the products are withdrawn for consumption has to be passed along and distributed among the various persons who have contributed to the product. Hence to whatever extent credit may be developed as a means of exchanging things, it cannot be used for the remuneration of services, and the money income which streams through the retail market must in turn stream through the wholesale market in order to distribute itself among the producers and become money income once again.

In order to bring traders' exchanges under

survey, no very great alteration is required in our diagram. We may reconstruct it thus :—

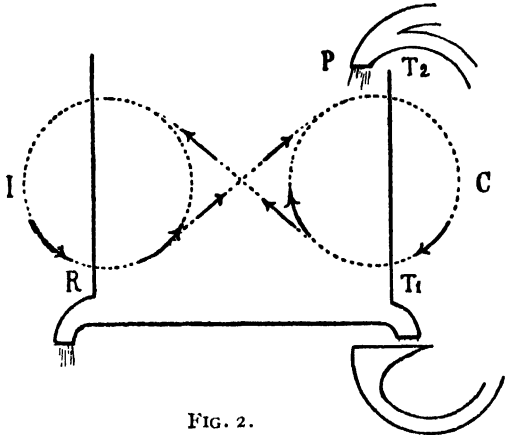

FIG. 2.

Here as in the original diagram we have the inflow of new products at P and a corresponding outflow at R, which is the retail or final market where things are bought for keeps. But in addition we have figured a second tap T_1 to represent the purchases made by traders with a view to re-sale. As all such purchases come back sooner or later into the reservoir, we have sketched a pipe by which they are conducted back, and this pipe is represented as joining the production stream, because most of the things which pass through this pipe have something added to them, some new element of "production," before they return to the market. Thus coal and iron ore

may be purchased at T and re-enter the reservoir at P as pig iron; the pig iron may be purchased again at T and re-enter at P as bar iron; the bar iron may be purchased at T and re-enter the reservoir at P as rails; and the rails may be purchased at R by a railway company.

It may perhaps sound incongruous to speak of rails, locomotives, railway stations, goods sheds, etc., being bought in the retail market. But the retail market is not necessarily a shop with a counter. Our definition of the retail market is the market where commodities are bought for keeps. It is the market where money income is exchanged for commodity income. But here again it may be objected that a railway is not income, but capital. What is capital but accumulated income—income that is not spent but saved and utilised for the production of further income? A man who has earned money income may spend it as he pleases; he may purchase a motor car for pleasure or for the purposes of his trade, or partly for each; he may expend his money in enlarging his dwelling-house or his warehouse; he may purchase pictures, or he may join with others in subscribing the necessary capital to lay down a new railway. In any case he becomes the final owner, and the goods are no longer for sale.

With regard to income, however, it has to be noted that the stream of commodities which issues from the taps is gross income, not net. That is to

say, some of it merely replaces fixed capital that has been destroyed. Men save part of their income; they invest it; for instance, they lay it out in the construction of a railway. The railway brings them in an income, but in the process the railway is gradually deteriorating. Wear and tear are gradually destroying it. Part of the income derived from the services of the railway, therefore, must be put aside to replace, to renovate, to rebuild the railway, the rolling stock and the plant. The balance only, after allowance has been made for the replacement of capital, is net income.

The Interchange between Circulating Capital and Income

Now let us look at the money stream as outlined in this modified diagram. Take first the circle marked I. This represents the stream of income passing in through the taps of the retail market in payment of the stream of commodities issuing from those taps. These commodities may be goods or services. Supposing X is a domestic servant; her services are sold direct to the final buyer (tap R), and the wage she receives is income pure and simple. She owns no capital, fixed or circulating. The whole of the money she receives she spends again as income at the tap R. Perhaps she lays out a month's wages on a pair of

shoes. The boot store receives the full price of the shoes. But this price is not all of it income to the shopkeeper. It is divisible into (1) wages, or the earnings of labour; (2) interest, or the earnings of capital; (3) replacement of circulating capital; (4) replacement of fixed capital, or compensation for depreciation.

Now, what happens to this money? A portion of it turns back at once and again makes the circle I, while the rest passes on into the circle C (circulating capital). Probably almost the whole of items (1) and (2), which represent net income, will circle back immediately to be spent on the living expenses of the shopkeeper and his assistants; it is equally probable that the whole of item (3) (i.e. replacement of the shopkeeper's outlay in purchasing the shoes from the wholesale merchant) will be expended again at the tap T in purchasing another pair of shoes; in other words, in laying in a fresh stock. With regard to the item (4), as this is replacement of capital, it is clear that if the capital is to remain intact, it cannot be spent on the living expenses of the shopkeeper; nevertheless, either at once or after a delay, it must circle back to the tap R to be laid out on the purchase of fresh fixed capital. Moreover if the shopkeeper wishes to add to his capital, there will be some small margin of items (1) and (2) devoted to the enlargement of capital. If this

saving is invested as fixed capital it will go round to tap R ; if invested as circulating capital it will go to the tap T to purchase goods for the purpose of re-sale.

It makes no difference if part of the fixed capital employed belongs not to the shopkeeper but to somebody else. The shop, for instance, may not be his own property ; it may be rented from a landlord. This rent paid to the landlord is partly interest on capital and partly compensation for depreciation. It may be that the shopkeeper pays this money only once a quarter ; in that case the money as it accrues may lie idle in his hands for a time, not taking part in the stream, or more probably it will be temporarily employed as circulating capital either by the shopkeeper or by somebody to whom it is lent.

So much for the shopkeeper's money receipts. As we have said, the price of the shoes included the replacement of the original outlay on purchasing shoes from the wholesale depôt. This money now crosses from the circle I to the circle C, that is to say, it is expended at T in the purchase of a fresh pair of shoes, and the money thus received by the wholesale merchant once more splits up. We need not repeat the analysis. The wholesale price in the hands of the merchant splits up exactly as the retail price did in the hands of the shopkeeper. Part of it represents the income of his labour and of his capital ; part is

replacement of capital, fixed and circulating. The part which is income turns back to the circle I; the circulating capital once more tours the circle C; that is to say, the merchant replaces the shoes he has sold by purchasing a fresh pair from the manufacturer. The price of this new pair splits once again in the hands of the manufacturer, his income returning to the circle I, while his circulating capital again "loops the loop" of C, going into the hands of the tanner for the purchase of leather. And so it goes on until the last remnant of the price of the shoes purchased by the domestic servant represents only income and the whole of it crosses over to the circle I.

The Ratio of Circulating Capital to Income

Now, figure this once more as a race. Supposing we had 100 men running round and round the circle I; if we then altered their course and made them run alternately round circle I and circle C, the result would be to reduce the number in circle I by half. If we made them run twice round C for every once round I, then the number in the latter circle would be reduced to one third of the original figure. If we made them run three times round C for once round I, then we should have seventy-five men running round circle C and only twenty-five round circle I. And it is the same with money.

Money cannot be income and circulating capital at one and the same time; it cannot be circling the loop C and at the same time looping the circle I.

Let us now compare the position as represented in Fig. 1 with that represented in Fig. 2. We started out with the statement that money becomes alternately income and capital; that it all flows from the final purchasers into the hands of the retailers, thence back and back in a diminishing stream to the producers, and so round again to the retailers. We have now substituted the idea of two separate circuits, a stream perpetually circling round the tap R and another perpetually circling round the tap T—two streams between which there is a constant interchange of waters, without however the quantity in either stream being increased or diminished except temporarily by the ebb and flow caused by the alternate payment and expenditure of wages.

These different presentations are not inconsistent. In the second as in the first, money flows from retailer to merchant, from merchant to manufacturer, and so on, at each stage giving off its margin of income. But the second diagram corresponds more closely to the facts of the business world in this respect, that it permits us to view the amount of money circulating perpetually round the tap T as a separate fund—as in fact Capital and not Income. In the actual world of

business, circulating capital is a fund distinct from the flow of income. It is money set apart for the transaction of business. Though perpetually changing hands, it remains distinct as a fund. What is paid away as wages, and becomes income, is replaced immediately, or almost immediately, by what is returned as the price of goods sold. And the amount of this fund depends directly, not upon income, but upon the amount set aside for business purposes, the amount invested. Yet it is obvious, if our line of reasoning has been correct, that the amount of this circulating capital bears some organic ratio to the amount of income. If the nation's money income forms the purchase price of the nation's commodity income, the amount that is flowing round I and the amount that is flowing round C must be adjusted to one another. The ratio may not be the same at all times; it may not be the same in all countries; but that there is a close causal connection, a physiological relationship, and not a mere arbitrary or chance relationship, seems clear enough. How is this relationship established and maintained? How are the respective quantities adjusted to one another? I think in the following manner.

Let us start with the assumption that prices are at a certain level. Let us assume that new gold from the mines comes into the income stream, increasing demand and resulting in a rise of

prices in the retail market. The higher prices yield a higher profit to the traders, and the higher profit induces an increase in the investment of money as capital. Not only does the retailer receive higher prices for his goods, but he must pay higher prices to the merchant, and the merchant must do the same to the manufacturer, and so on. More money is required to finance trade, and the higher profit or higher interest attracts it. With the rise of prices comes a demand for higher wages, which again adds to the need for more circulating capital. So long as the amount of money invested as circulating capital is inadequate to the requirements of trade, the " price of money " or rather the value of circulating capital will be high, and will continue high until sufficient money has been attracted out of the income stream into the circle of capital to bring about the necessary adjustment or relationship to which we have alluded.

The " Law of Money " in the Retail and in the Wholesale Market

The fact that a large part of the money in existence is employed in financing industry may seem to offer some justification for the common treatment of the subject which lumps together all transactions, retail and wholesale, purchases for

keeps and purchases for re-sale, representing them as one vast volume of commodities which exchange against the total volume of money. The aggregate of money undoubtedly has to be apportioned among the whole of the various uses. Money cannot be at one and the same time in the income circle and in the circle of circulating capital. The larger the area it has to cover the thinner must be the layer (so to speak) and the lower prices. Wholesale prices do not govern retail prices; but the wholesale market absorbs and retains a large part of the money in existence, thus indirectly affecting prices in the retail market by making gold more scarce and therefore more valuable. Nevertheless, our study clearly points to the necessity of keeping the two circles distinct, because they are governed by different laws, and by laws which are in a sense the reverse of one another. While economists declare that prices depend on the volume of money compared with the volume of commodities, business men are often just as emphatic in asserting that the quantity of money depends upon prices. While economists state that an increase of transactions tends to lower prices, business men declare that money will increase with the increase of transactions, and that in a period of productive activity prices are more likely to rise than to fall. The statements are no doubt irreconcilable if applied to the same market; but they are quite

consistent when seen to refer to different markets. In the retail market, where money income is exchanged for commodity income, an increase of money income without a corresponding increase of commodity income must raise prices. Prices are not governed by the amount of money in the wholesale market; they are ultimately determined by the amount of money in the retail market; and the amount of money in the wholesale market adjusts itself to the requirements of that market. The industrial world can attract to itself as much money as it requires to finance its transactions at prevailing prices. It attracts money in the same way that the Bank of England attracts money, by offering a higher price for it; that is to say, by a rise of profit or interest. And if too much comes forward it will discourage the further flow just as the Bank will discourage the further inflow of gold, by a diminished rate of interest.

A further reason for keeping distinct the retail and wholesale markets is that in the latter credit may often effectively supply the place of money, whereas in the retail market it cannot do so. When the business man talks of money, he uses the word in a large sense. To him, all is money that will do money's work; for his purpose credit is often just as effective as cash. When business is good, and orders are treading close upon one another's heels, what he requires to command is

increased purchasing power; that is to say, the power to obtain goods or materials, not the means to pay for them. The goods themselves furnish the means of payment when re-sold. It is in a falling market, it is in the face of contracting demand, that the trader requires a temporary addition to his means of payment. His position then approximates somewhat to that of the retail consumer. He cannot, at all events for the time being, sell what he has bought, whilst he is under the necessity of paying for it. Then it is that he requires to borrow the means of payment. Power of purchase is not sufficient; what he requires is ability to pay. And that is the great difference between money and credit. Credit is purchasing power, i.e., the power to obtain goods; money is the very best form of purchasing power, but in addition it is means of payment. As Locke said, it is one item in the exchange. And in the retail market, where the purchaser buys for keeps and it may be for immediate destruction, he must have the means of payment, and the only means of payment recognised or acceptable is money.

The exchanges of traders among themselves are merely exchanges of capital. In that market is realised John Law's dictum, that gold is the value by which, not for which, goods are exchanged. To what extent gold is actually employed depends upon the convenience and circumstances of individual cases. In many

cases it merely bridges over the gap which arises through lack of simultaneity between debts receivable and debts payable; in others it is the makeweight that settles balances. But the case is different in the retail market. There the stream of gold is exchanged for the stream of commodities. Here the truth lies, not with Law, but with Locke, who said that the metal was not merely the measure employed in the transaction, but was one of the two things exchanged. In the wholesale market "a medium of exchange" is almost an adequate description of money. To say that it is merely a medium of exchange in the retail market is only true if we take a wide and comprehensive survey which embraces not merely the transactions of the retail market, but the whole of man's activities from the time when he sets out to earn money by his industry to the time when he lays out that money in acquiring what he wants. But while the search for truth sometimes requires us to bring scattered facts together, at other times it is just as necessary to distinguish and separate. And the latter is required in the present instance. By their work men obtain the universally acceptable commodity; that is one exchange; they then barter this commodity for some other that they want; that is another and distinct exchange. In the former exchange the value of labour is determined; in the latter the value of goods. Taking the broad view, money is a mere means to an end,

and the two exchanges are rightly regarded as "semi-exchanges" which are only completed when the labour, first exchanged for money, is finally rewarded with commodities; but for the purpose of understanding how the value of money as a purchaser of goods is determined, it is necessary to concentrate attention on the exchange constantly taking place between the stream of money income and the stream of commodities.

In the wholesale market goods may be exchanged for gold or they may be exchanged for other goods. The most characteristic "medium of exchange" in the wholesale market is the Bill, and this form of currency is capable of indefinite expansion—indefinite, that is to say, in the sense that there is no predetermined or rigid limit beyond which the expansion cannot go, but definite enough in the sense that the expansion is normally limited by and corresponds with the growth or multiplication in the movements of commodities which have called it into existence and upon which it is based. If this form of currency be included as "money," then instead of the quantity of money determining prices, it may be said that prices determine the quantity of money. Let us again suppose that inflow of new gold into the income stream increases the aggregate demand in the retail market, and as a consequence the aggregate of prices rises without any increase in the stream of commodities.

The manufacturer sells the same goods to the merchant, but he debits him with a higher price; the merchant debits the retailer with a higher price; the retailer recovers a higher price from the final purchaser. Prices being higher than before, traders require larger credits; the goods being worth more than before, are as good security for the larger credit as they formerly were for the smaller credit; in this way "more money" (of a sort) is created to correspond with the extra "money work" to be done.

But it is not the increase of such money (or credit) which causes the increase of price. In the case supposed it is the increase of actual money in the retail market which causes the increase of substitutes for money in the wholesale market, pending at all events the time when the new money in the income circle has made its way into the pockets of producers and the necessary portion of it attracted into the capital circle by a rise in the rate of profit.

The Various Uses of Gold and their effect on its Value

It may be well before quitting this part of the subject to say something about the apportionment of gold among different employments, and its distribution through different countries caused

by differences of value and resulting in an approximation to a uniformity of value. It was common among the older economists to speak of the flow of capital this way and that, of the flow of labour from one employment to another, and so forth. It is easy to exaggerate the fluidity of economic elements and to attribute to them an automatic character which they do not possess. We have already in chapter II examined the considerations which influence the apportionment of gold between money and the arts. We have seen that the flow is not automatic, but is determined by men's weighing against one another the advantages to be derived from different courses in the particular circumstances in which at the time they are placed. In the arts gold is a commodity like silver, bronze or pewter. Its utility may be represented by a curve like that of any other commodity. Assuming that curve to represent correctly the condition of demand in a particular community at a particular time it means that if the value of gold (i.e. the quantity of other things that have to be given for it) falls, more will be employed in the arts, or if the value of gold rises, less will be so employed. But as with other commodities, the demand curve itself may change; it may change its shape, or retaining its shape it may simply rise or fall, or it may change both shape and elevation. This means that without any change in the price of gold

(measured in other things) more or less will be absorbed in the arts. And contemporaneously of course the demand curve may be different in different countries; in the east, for example, gold ornaments may be much more highly prized in comparison with other things than they are in Europe; or in a wealthy country more may be absorbed in this manner than in a poor country. These facts might be graphically depicted as follows:—

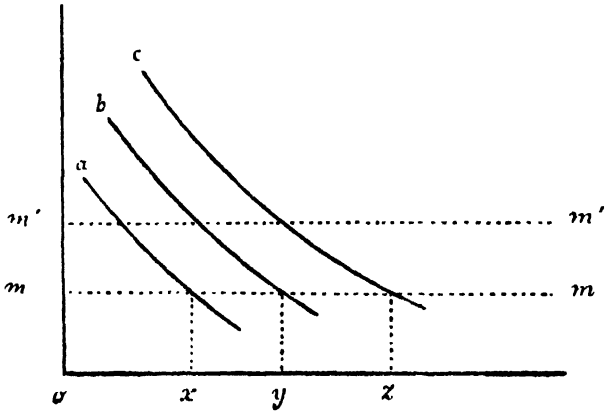

FIG. 3.

Here we have three different curves which either represent the demand for gold objects in three different countries, or in the same country at different periods. The value of gold (measured in other things) is supposed to be constant, as re-

presented by the line *m—m*. If *a* is the demand curve, then *x* quantity of gold will be absorbed in the arts; if *b* is the curve, then *y* quantity will be absorbed; if *c* is the curve, then *z* quantity will be absorbed. At the point where the curve intersects the line *m—m* gold has equal utility as money and as commodity, that is to say, this point is the marginal limit. To devote more gold to the arts would be to incur a loss of utility. Gold therefore is not likely to be forced into the arts beyond this point. If however the curve, originally *b*, sinks to the position of *a*, or (what is perhaps more likely) if the line *m—m* rises to *m'—m'*, may we safely assume that the diminished relative utility of gold in the arts will be corrected immediately by the necessary flow of gold from the arts back into the money stream? That, I think, would be an error. No doubt, if you have free coinage and there are no obstacles to export or to melting, the difference between the value of coin and the value of bullion will be practically negligible. But bullion is not gold employed in the arts. Bullion is more properly to be regarded as uncoined money. It is in fact employed as money in international trade; it is in fact held as money by the great banks of the world. New gold from the mines is money in the sense that it comes into the market to offer itself in exchange. Gold in the arts is on an entirely different footing. It is converted into buckles, brooches, rings,

watches, dentists' plates and stoppings, the gildings of the artist and the picture framer, etc. To reconvert this gold into bullion or into coin would involve the sacrifice of the workmanship, often more valuable than the gold itself. While therefore gold may flow freely into the arts, there is an impediment to its reflux, and it would require more than a slight difference in the level of value to provoke any considerable flow from the arts into the money stream.

What is the consequence of this withdrawal of gold for use in the arts, so far as the value of money is concerned? Obviously the absorption of gold into the arts diminishes the amount in circulation as money, and therefore raises its value. Were all gold at present absorbed in the arts compulsorily melted down and coined, it would increase the volume of money and so increase prices. But whatever effect the absorption of gold in the arts has upon money, by diminishing the amount in circulation, it must be noted that this effect is spread over the whole world and is not confined to the particular country in which the gold is employed in the arts. Supposing that in two countries, A and B, an equal quantity of gold is absorbed in the arts and that in each country there is an equal amount of money in circulation. If now country A develops a taste for gold trinkets and converts a larger portion of its gold into jewellery, and supposing

this to be done upon a sufficiently large scale to exercise a sensible effect, the first consequence would be a diminution of its money. Money would be more valuable ; it would purchase more ; prices would be lower. This would attract buyers from other countries, and would at the same time deter the natives from buying abroad. The consequence is obvious. Gold from B would flow into A, until prices in the two countries bore practically the same relationship to one another as they did before. The whole theory of international trade under a money régime is based upon this proposition. Country B buys goods with some of its gold ; country A buys gold with some of its goods. After that, things proceed as before.

With regard to money invested as circulating capital, the state of things is similar. In two countries, A and B, the level of prices may be the same, and the amount of business the same. But perhaps A keeps a large amount of gold employed as circulating capital, while B, owing to a superior development of its credit organisation, is able to carry on the same amount of business with a smaller use of gold. Let us glance back at our diagram (p. 83). It may be that in the one country industries have been so amalgamated into great concerns that goods pass from process to process without any change of ownership and without any buying and selling, that is to say they do not

enter the reservoir at P until they are complete, and therefore do not pass out at T to return at P; or it may be that credit has been so developed that although the goods pass constantly out at T and back at P, yet the transactions are controlled and balanced by book-entries instead of the passage of money. In that case trade is carried on with a smaller amount of cash as circulating capital.

The effect of the absorption of gold in circulating capital is the same as in the case of the absorption of gold in the arts. Whatever increases the area that gold has to cover, makes it scarcer and raises its purchasing power; whatever diminishes the area to be covered, makes it more plentiful and decreases its purchasing power. But the effect is not confined to the country where the economy is made. Were the effect confined to that particular country, more gold being freed for the income stream, prices would rise above the level of neighbouring countries, and this would lead the natives to buy abroad where things were cheaper, and would lead the foreigner to diminish his buying in this market on account of its being dearer. And the flow of money from one country to the other would restore the level to its former position. This does not mean that prices would necessarily be identical in both countries. There will be natural impediments to the flow of goods (and therefore to the counterflow of money) in

the shape of cost of transport, and there may be artificial impediments in the shape of tariff barriers; these things may result in a permanent difference of level, but this difference being allowed for, the readjustment in the apportionment of gold in any one country will tend to provoke a movement of money from the country where things have become dearer to the country where they have remained cheap, with the result that the difference of level will be restored to what we may call its normal condition.

Credit does not Raise Prices

These remarks, however, are not intended to suggest that gold is normally liberated or displaced by credit, if by that we mean an actual *diminution* in the area to be covered by gold. What credit does normally is to permit the expansion of exchange without giving rise to an *additional* employment of gold. Without any increase of actual money, it permits an increase of transactions at the same prices. To prevent a fall in prices is not the same thing as to cause a rise in price. Falling prices are no doubt welcome from the point of view of the consumer; but from the point of view of industry steadiness of price is best. If reductions of price result from industrial improvements which cheapen processes and increase output, they are entirely healthy;

but so far as prices depend on the quantity of money, it is not desirable that there should be any considerable or rapid changes, as such must necessarily upset the calculations upon which the industrial machine is based. Credit normally neither raises nor lowers prices, but it enables the machinery of production to be elaborated and extended without any disturbance of price relationships, except so far as by permitting a better and more economical organization of industry it facilitates production and enables goods to be placed on the market at a lower figure.

The allegation that credit raises prices reminds one of the little girl who said that pins had saved many lives. How? By not being swallowed. Credit raises prices. How? By not lowering them. It is undoubtedly true that if all the wholesale operations, all the transactions between traders, had to be conducted in cash, much more money would be required for this purpose than is at present the case, and gold would rise in value. But it seems as reasonable to say that if all the steamships and railways were destroyed, the task of moving the great crops from one part of the world to another to feed the vast and hungry populations would require so many sailing ships and sailors, so many horses, carts and coachmen, that employment would easily be found in this field alone for two-thirds of the world's population. The answer is that without railways and

steamships these vast tasks in transportation could never have been tackled, and these vast populations could never have been fed, and in fact could never have existed. It is much the same with credit. Lord Farrer pointed out many years ago that to speak of credit as economising gold is a very inadequate description of the part it plays in the commercial world. Credit has permitted an expansion of trade such as would never have been possible without it; it has permitted industry to be carried on upon such a scale, and in such perfection of division and organization, as renders production more voluminous and cheaper. It has not directly affected prices simply because it has expanded with the expansion of the transactions which gave rise to it and upon which it is based.

If we wish for an illustration of the actual economising of gold—of its actual displacement by a substitute—we have one ready to hand in the case of paper money. Paper money is a very different thing from a promissory note. Promissory notes and other credit instruments are only termed money when that word is used in a large and extended sense which includes currency and credit of all sorts. But paper money, that is to say, notes issued by a government are actual money; but they are artificial or conventional money, not natural or commodity money. If a nation which has hitherto used gold money adopts

a paper money, the gold that is thus set free from circulation in that country goes into other uses, thereby lowering the value of gold in that country for other uses, and in other countries for all uses, including currency. The area to be covered by the world's gold is diminished by so much, and gold is cheapened accordingly. Conversely, if a country which has hitherto had a silver currency adopts a gold currency, then it is silver that falls in value through the diminution in the demand for it, and gold rises in value through the increase of demand, or as we have previously put it, the increase in the area it is required to cover. This rise in the value of gold takes effect not merely in the country where the gold currency is adopted, but in all countries where gold is used. Gold becomes throughout the world (apart of course from fresh supplies) more scarce and therefore more valuable. It will purchase more, which means that prices fall.

CHAPTER V

MORE ABOUT CREDIT AND THE WHOLESALE MARKET

THE advantage of a reservoir, the reason for its existence, is that the periods of production and consumption may be to some extent independent of one another; that is to say, that they need not be necessarily simultaneous and coincident. Within limits, production may be at one period and consumption at another. In the long run the two must correspond; more cannot be consumed than is produced, and all that is produced will be consumed; but as regards any particular short period there may be production without corresponding consumption, or consumption without corresponding production. The harvest may pour into the reservoir a raging torrent once a year, and may be trickled out little by little, day by day, as it is required. Or on the other hand something which will only be required at a particular moment or a particular season may be slowly elaborated and prepared, while those engaged

on the work are sustained and supplied with the necessary materials out of the stocks in hand. To secure that correspondence or equivalence between production and consumption which, despite these temporary discrepancies in the rate of production and consumption, must necessarily be maintained in the long run, the outflow from the reservoir must be controlled, and this control is effected by periodical adjustments of price. This has been discussed in our second chapter, but we must now examine the subject more in detail.

The Regulation of Price

Prices have to be so regulated that the total money income exchanges for the total commodity income. They have to be so regulated that, taking a period of the right length into account, the inflow at P (see diagram of the reservoir Fig. 2) and the outflow at R correspond; that is to say, that consumption neither falls short of nor exceeds production. The raising or lowering of price is equivalent to the narrowing or widening of the outlet, or as we will put it, the raising or lowering of the valve which controls the outflow through the taps.

But in our revised picture of the reservoir (page 83) we introduced a second tap T_1 to repre-

sent purchases made by traders with a view to re-sale—that is, the purchase of materials to be worked up into other forms, or the purchase of goods to be transported elsewhere or held in reserve for a more favourable period of demand. Since all that is thus withdrawn from the reservoir at T_1 is subsequently restored at T_2 or (P), it does not interfere with the equivalence which necessarily exists in the long run between the inflow at P and the outflow at R. But it does or may alter the level of the reservoir for the time being. The outflow at T_1 reduces the level of the reservoir exactly to the same extent as an outflow of similar proportions at R; and an inflow at T_2 raises the level of the reservoir to the same extent as a similar inflow at P. Now, supposing the valve which fixes price moved automatically with every change in the level of the reservoir, however slight, it is obvious that the moment the outflow $R + T_1$ exceeded the inflow $P + T_2$ prices would automatically begin to rise, and the moment the inflow $P + T_2$ exceeded the outflow $R + T_1$ prices would begin to fall; only during those times when outflow and inflow exactly balanced would prices remain stationary.

But prices neither move automatically nor instantaneously. Prices are fixed from time to time by persons selling commodities, and before making any change they have to take a number of things into consideration. They have to con-

sider not merely the rate of consumption compared with the rate of production, but the rate at which either is growing or diminishing, and is likely to grow or diminish; they must take into account the size of the existing stock and whether, if consumption is increasing, the stock will hold out until the necessary increase of production can overtake it, or in the case of diminishing consumption, whether the existing stock can be disposed of at present prices before the demand dies away. They must look not merely to supplies in hand and current consumption, but to supplies in sight and demand in sight, and must weigh the prospects of variations in either or both. How long will the increased outflow or inflow last? Will there be a corresponding increase of inflow or outflow, and will it arrive quickly enough to restore the equivalence which threatens to be upset? Account has to be taken not merely of changes in demand, but of changes constantly taking place in the facilities of production; of new substitutes which may divert the demand; of new methods which may revolutionize supply; and so forth. And when we recollect that a single article which a trader deals in may be itself dependent upon a dozen different processes and a dozen different materials any of which may be liable to sustain a change of demand from some other and entirely different quarter, it is easy to see that calculations and forecasts are difficult, and that there is room

not only for much knowledge and judgment, but for a large element of speculation.

The ordinary trader cannot look back much beyond his immediate sources of supply. If a retailer finds demand increasing, he does not necessarily raise his price. So long as he can obtain further supplies at the same price, he continues to sell at the same price. If further supplies are procurable from the merchant at the same figure as before, he would by raising his price to his customer run the risk of finding himself undersold by competitors and of losing his trade. On the other hand he does not necessarily wait till his stock is exhausted before raising his price. If by enquiry he finds that he will have difficulty in replacing his stock, or at all events cannot replace it at the same cost as before, he may hasten to take a step which sooner or later will be necessary, and which his competitors will be taking, and raise his price at once, thereby securing an additional profit on the stocks he has in hand.

The Relation of Wholesale Demand to Retail Demand

With regard to the effect on the level of the reservoir of traders' buyings at T_1, we may distinguish three different cases. The first case is

when the outflow at T_1, and the inflow at T_2 are simultaneously equal. The goods merely change hands; they are bought, but immediately offered for sale again. Or it may be that new goods and materials are being withdrawn at T_1 and contemporaneously there is a restoration through T_2 of goods and materials withdrawn at an earlier period. This goes on continually; it is the normal condition of things, the natural result of the division of labour. It does not affect the consumption of commodities at R, nor the inflow of money. The level of the reservoir is not disturbed, and there is nothing to provoke any alteration of prices.

But there is another class of cases where for a period of weeks or months the outflow at T_1 exceeds the inflow at T_2, while for another period of weeks or months the inflow at T_2 exceeds the outflow at T_1. Taking the two periods together, they balance. If the price valve adjusted itself automatically, there would be in the first period a rise of prices, and in the second period a fall. But we must credit the regulators of the reservoir with intelligence. Assuming that the state of retail demand and the stock in the reservoir are such that before the extra outflow at T_1 has exhausted the existing supply, the reflux at T_2 will come into operation, there is no occasion for an alteration of prices. Now, this is the case with a number of articles. When they are with-

drawn from the market, everybody interested knows that they are merely withheld, and not consumed, and that they will be returned at the fitting moment. Of some articles the production may go on regularly all through the year, while the consumption occurs at one particular period only; for example, straw hats for summer wear. Other articles are produced perhaps only once a year, and consumed gradually through the whole twelve months, as for example wheat. In such cases the traders thoroughly understand the movements; they understand the temporary character of the augmented demand or the augmented supply, as the case may be; they distinguish between the demand for consumption and the demand of the trader who is merely laying in a store which he will offer again for sale when the demand for consumption springs up. The restaurant-keeper does not imagine, because there is a rush at one o'clock, that the crush will continue all the afternoon and that all his provisions for the evening will be exhausted before the evening comes; neither does the poulterer at Christmas imagine that the sudden demand for turkeys betokens the inauguration of a clamant demand that will persist all the year round; nor yet, on the other hand, does the dealer in grain take fright when the harvest comes in with a rush which far outstrips the wants of the people at the moment. He knows very well that the rush of

the harvest will soon be over; he knows equally well that the demand for grain will persist long after "production" has ceased; he measures the long-period demand against the short-period supply and adjusts his price so that the whole of the present supply shall be carried off before the arrival of the new supply. Prices in such cases do not rise and fall with every fall and rise in the level of the reservoir. They remain steady unless there appears reason to think that the whole demand will exhaust the whole supply before that supply can be replenished. The temporary rise and the temporary fall in the reservoir are the necessary condition of the co-ordination of non-coincident periods of consumption and production, and the net result is that a correctly judged price, maintained throughout both periods, secures the equivalence between production and consumption.

Speculative Buying

But there is a third case when these conditions of regularity and certainty are lacking, and when those who produce or purchase goods in advance for sale and consumption at a future date are obliged to rely upon their judgment, and to speculate upon uncertainties which may result in large profits or in large losses. The uncertainties may be with regard to supply or with regard to demand. Particularly in the case of many kinds of raw material, the elements of doubt may be consider-

able on both sides. The quantity of supply may be dependent upon factors (for example, on the weather) which may leave its magnitude for a considerable period in doubt; and the variety of uses to which the materials may be put, and the possibility of substitutes being used instead, may give rise to equal uncertainty as to the magnitude of demand. Changes may take place in fashion and new requirements may spring from new inventions or new enterprises; there may be an outbreak of war, pestilence or famine; a hundred changes of circumstances or condition may take place, any of which may modify profoundly the world's requirements and upset the ordinary equilibrium of supply and demand. Under these circumstances it may easily happen that the production of certain classes of goods or materials is in excess of demand, or on the contrary that demand is in excess of supply, and the natural result is, in the one case a fall of price, and in the other a rise.

Those who produce in advance, or purchase in anticipation, amid such uncertainties, run the risk of losses. But they hope for a favourable market, and as they are guided by experience and employ all the knowledge, shrewdness and judgment they possess, they are likely to be more often right than wrong; and indeed the mere fact that they carry on business is the best evidence that they are so. They buy at prices which they

have every reason to expect will yield them a profit, and a profit sufficiently large to more than compensate for the losses which they know must inevitably occasionally overtake them. And because they habitually sell at a higher price than they bought, the public impression arises that it is their profit which has raised the price. Because traders sell goods for more than they cost, because goods are sometimes sold at T_1 restored to the reservoir and again sold at T_1, once again restored and once again sold at T_1, and finally disposed of at R, in each case with an advance in price, the public get the impression that each person through whose hands the goods pass "raises" the price by adding a percentage for his profit. But although traders fix prices, prices must conform to values The goods may have passed from A to B, from B to C, from C to D, and from D to E, but if E can sell them for double the price charged by A, could not A sell them at that price were they still in his possession? Traders may appear to raise prices by adding their profit; in reality they must buy at a lower price than they can re-sell for, and it is the difference which constitutes their profit.

Speculative Prices affect the Distribution of Profit and Loss Among Dealers

As we have seen in a previous chapter, profit normally represents remuneration for a service

rendered—it is the money equivalent of an additional value given to the goods by the person handling them; but in other cases the goods rise in value through alteration in extraneous conditions which the holder of the goods has in no way contributed to bring about, but which perhaps he had the shrewdness to foresee; and foreseeing them perhaps in advance of other people, or being in a position to buy the goods from someone who was not in a position to hold them longer, he is able to derive a profit from the rise in value by making himself the owner of the goods before their price has been raised to the level of the actual, or soon to be actual, value.

It cannot be too much emphasised that it is not the trader's purchase of the goods at T_1 that raises their price at R (unless he acquires a practical monopoly and restricts supply). The price the goods will fetch at R is the ultimate limit to the price that can be paid at T_1 without incurring loss. But this does not mean that increase of intermediate demand at T_1 has no influence on the prices obtainable at T_1. The tendency of increasing demand is to raise prices, no matter whether that demand is final demand or intermediate demand. The increase in the volume of demand at T_1 acts in precisely the same way as an increase in the volume of demand at R. But the demand at T_1 acts upon prices at T_1, not upon prices at R. If a producer has a certain stock of

goods to sell and several traders are eagerly competing to obtain them, the seller will obtain a better price than if there were no competition. And as the prospects improve of a high price being obtainable at R, purchasers at T_1 will become more numerous and more eager, and intermediate prices will again rise, with the result that the advantage of the rising value will not go entirely into the pocket of the last holder of the goods—the one who sells to the public—but the sellers at earlier stages will secure their share in it. And it follows that if the expected increase of demand or value at R does not materialise, the sellers of the early stages who obtained a high price from the intermediate buyers, benefit at the expense of the latter, and the intermediate speculators have to pocket the loss.

The Effect of Credit

Now, what is the effect of credit upon these transactions? It enlarges their scope. It facilitates changes of ownership, permits the exchanges to be more numerous and the amounts exchanged larger, than they otherwise would be at that time and at that price.

If goods are steadily advancing in value, they may pass from A to B, from B to C, from C to D, and from D to E, without any passage of money until the price paid by E recoups A for what he

has parted with and furnishes each of the intermediaries with his margin of profit. Credit enables more people to take part in these transactions than could take part without credit, and it permits them to purchase larger amounts (for re-sale). By this arrangement two classes of person benefit. If the speculation turns out successful—that is to say, if the expected rise in value actually takes place, and the goods can subsequently be sold for more than they cost—then the persons who, thanks to credit, were able to buy more than their cash resources would have permitted, benefit by the profit on the larger amount of their turnover. And on the other hand, those whom we may for simplicity call the original holders benefit. It is true that if they could have held on to their wares until the forces working for a rise in value had become fully operative they might themselves have realised the higher price that the speculators secure. But in all probability it would not be convenient to the original holders to continue holding for this period. They would probably have had to sell in any case, and credit enabled them to secure from the intermediate buyers a promise of part of that extra profit to be received by the latter and which they could not have given had they had to pay cash. And it hardly needs to be said that if the speculators turn out to be mistaken, that is to say if their hopes have exaggerated the rise in value and they have

promised a price which they cannot themselves secure, then the original holders benefit at the expense of the speculators, always of course assuming that the speculators, despite their losses, are able to pay what they have contracted to pay.

There is, then, a limited sense in which credit may be said to raise prices in the intermediate market. It cannot increase the amount sold to the general public nor the price paid by the general public. For credit is not a means of payment. Credit is a medium of exchange only; it is not, like money, one of the items in the exchange. The aggregate price realised by all the goods sold at R will not exceed the aggregate income of the people. But the proportions in which that aggregate price is distributed among the producers are directly affected by the prices paid in the intermediate market. If A sells to B for £10, and B to C for £15, and C to the final purchaser for £20, then A receives £10 and B and C each receive £5. If A sells for £10, B for £15 and C for £30, then the incomes of A and B remain the same, but C obtains £15 instead of £5. If however A is able to secure £15, B £22 10s. and C £30, then the final price is the same as in the second case but A and B have secured a part of the advantage instead of allowing it all to go to C.

It is sometimes said that credit is an induce-

ment to overtrading. Since what is borrowed must be returned, since prices promised have to be paid, credit is not directly responsible for enlarged purchases by traders. The inducement to buy is the prospect of a profit. It is the fact that goods can be bought at one price and sold at a higher price that induces traders to buy, whether they buy with cash or upon credit. No honest speculator will purchase more on credit than he would buy with money if he had the fund available at the time. Yet too great facility of credit may lead to excessive and imprudent speculative buying by traders in the same way that it may encourage extravagance on the part of an expectant heir. Credit or no credit, traders will not buy unless there is a prospect of profit; but if there is a prospect of profit, they will be tempted to make their purchases as large as they can. And of course the reckless man, the man who puts a good deal of trust in "luck," will avail himself without scruple of every opportunity which offers him a chance, though it may be a slender one, of "turning an honest penny."

Trade Cycles and Credit Cycles

It is undoubtedly the fact that rising prices and expanding credit go together, and if we take the amorphous view of the market it may seem as

reasonable to attribute the rise of prices to expanding credit as it is to attribute the expanding credit to the rise of prices. But the physiological view teaches us that the true sequence of cause and effect is the latter. Trade is good when demand is increasing and prices are rising, and in such periods larger credits are required and obtained. Now, all that is bought at T_1 is destined to be ultimately sold at R. Prices in the aggregate can only rise through an increase of the money entering at R. Such increase of money at R can only arise from (1) more money, or (2) more rapid circulation. The former may be sufficiently accounted for by the continued production of new gold from the mines, although the effect of this may be counteracted in whole or in part by an extension of the area that gold has to cover, as for instance by the substitution of gold for silver in a country previously making use of the latter. As to the rapidity of circulation, we have seen that this is largely governed by the customs of the community, more or less fixed, with regard to the wage period; though we may find reason a little later to conclude that the increase of population and therefore of wage-earners results in what is practically tantamount to an increase of money or of circulation corresponding to the increase of production. From one or both of these causes we may assume that as the years go by, as population increases, not only

does production or the aggregate of commodity income increase, but the aggregate of money income also increases. Do they grow—can they reasonably be expected to grow—side by side exactly at the same pace and in the same measure? That is the condition which is necessary if prices are to remain continuously at the same level. But it is surely a condition which it would be unreasonable to expect. That the lead should sometimes be with the one and sometimes with the other seems, on the face of it, probable. And if at one time money increases more rapidly than commodities, an increase of demand, a rise of prices, what we call a trade boom, is the natural consequence. If on the other hand commodities increase more rapidly than money, a fall of prices is equally inevitable, and this is a trade depression; goods and materials bought at one price by those who make ready production in advance, have to be sold at a price which does not recoup the outlay, and all trade suffers, while bankruptcy may overtake a good many.

But although alternations of good and bad trade are what it appears natural to expect under existing circumstances, the actual alternations present, as regards their duration and their characteristics, a regularity and symmetry which would not have been anticipated apart from experience, and which seem to suggest that they are governed by some mysterious law. The nine-

teenth century exhibited a series of trade booms when prices rose and credit expanded; booms brought to a tragic conclusion by a slump in prices, a collapse of credit, and widespread bankruptcy or financial difficulties. Trade seemed to advance in a succession of waves, and what was remarkable was that from the crest of one wave to the crest of another, from one trough to the next trough, the period was in each case one of roughly ten years. This suggested to the mind of Jevons the theory that trade cycles were dependent on sun spots. Fantastic as this sounds, baldly stated, Jevons had a reasonable theory, namely, that the periodical recurrence of sun spots presumably betokened some change in the sun which might possibly involve changes in the earth's weather, which in turn would affect the harvests, and through them trade. I am not aware that any solid support for this suggestion has so far been discovered, but to my mind Professor Aftalion of Rouen University has furnished an adequate and satisfactory explanation of trade cycles.

Periodical Trade Crises

Space will not permit me to do justice to Professor Aftalion's careful working out of the subject, and unfortunately I have not his book by me and must speak entirely from recollection.

Roughly the idea may be represented by the following diagram.

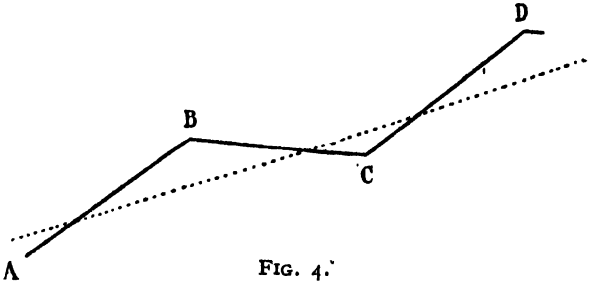

FIG. 4.

Let the dotted line represent the demand for commodities which with the growth of money income increases in volume year by year at a fairly steady pace. Let the zig-zag line represent the growth in production which takes place during the same period. It will be observed that between A and B the production of commodities grows more rapidly than money income. The consequent fall of prices checks the rapid growth of commodity income for a time. To put it in different language we may say that at A demand is in excess of supply and prices are accordingly high; this encourages production, which overtakes demand, exceeds it, and there is a sharp fall in prices. Production still for a time, from its own impetus, continues its increasing output; but being far in excess of demand at B, goods

cannot be sold at the old prices and dealers who purchased when prices were high, and have still large stocks on hand, find themselves unable to dispose of them at a profit or even at the price they gave, and perhaps find themselves unable to meet the bills they signed when they bought the goods. That is the time of crisis.

Stocks are thrown into the market by dealers in difficulties and the market is glutted. The brake is applied to production and men are thrown out of work, thus diminishing wages and therefore demand. This acute position (which is not indicated in our rough diagram) gradually passes away, demand resumes its upward trend, trade revives, production becomes more active, wages increase and so further increase demand, and thus the cycle is repeated, demand once more pushing productive capacity to the utmost limits that existing capital will permit.

Why should the trade cycle occupy ten years, and why should it always end in a general over-production and violent disruption in the chain of finance? The reader interested in this problem should consult Professor Aftalion's book; here we cannot attempt more than a rough reproduction of his solution.

Supposing to-day you order a ship to be built, it may perhaps be delivered in twelve months' time. That, however, is because all the tools and plant and conveniences necessary for building it

already exist, and all the materials are procurable when wanted. If there were no shipbuilding yard, no appliances, no tools, no steel, no plant for making steel, and so forth, obviously twelve years (instead of twelve months) might be an insufficient period to do all the preliminary work needed before even the keel of the new vessel could be laid down. The position is somewhat similar if all the existing means of production are already strained to their utmost, and if an enlarged output of finished goods can only be obtained by enlarging all the plant which contributes to that output of finished goods in all their preliminary stages. We have therefore an intelligible explanation why it may take a considerable time to enlarge output beyond a certain point, and why production increases by a series of leaps instead of keeping even step with the gradual increase of demand. And it is equally easy to understand why, when the leap is made, production, so long limping behind demand, suddenly outstrips it. Imagine the case of a single line of railway amid a growing population. Traffic increases; every seat is occupied; strap hanging comes into vogue; finally crowds are left on the platform because they cannot ride on the step. Trains are run more frequently and for longer hours; people who cannot get home by six resign themselves to getting home by seven. There comes a point when the Directors recognise that

only by laying down an additional line of rails will it be possible to cope with the constantly increasing demand for accommodation, or if the Directors do not recognize this, a new company is perhaps formed to open a competing line. The construction of this new line may take years, and during this interval the pressure on the existing railway becomes greater and greater. But the day the new line is opened the position is radically changed. The accommodation is perhaps doubled in a single day, and it may be that the traffic which was sufficient to keep one line in feverish activity is not sufficient to keep two even moderately busy.

This is an extreme case, but for that reason it brings into clearer light the tendency which is at work more or less throughout the large scale machine production of the present day. When trade is good, when there is difficulty in coping with demand, when prices and profits are rising, manufacturers begin to enlarge their plant; new capital is attracted into industry, new enterprises are taken in hand; arrangements for producing raw materials and finished goods on a larger scale are elaborated; fixed capital of all kinds is increased. All these things are undertaken during the good time; all these enterprises will take some while to complete and will begin to mature and come into operation more or less contemporaneously; and as they come into effect,

and increasingly as more and more of them come into effect, production advances swiftly, overtakes and outruns demand, and leads to that final glut which brings on financial crisis. Things of course will right themselves. As the older economists were fond of pointing out, in the long run commodities pay for commodities; a larger production means that the community may enjoy a larger commodity income. But consumption does not leap as production leaped; it advances at a more even pace, and meanwhile the trader who has bought at the old prices and has large stocks in hand which he is now compelled to sell at a loss, is placed in the greatest difficulty, and is perhaps forced into bankruptcy.

A trade cycle is naturally accompanied by a credit cycle, but it will be seen that credit is far from being the root cause of the phenomena we have been describing. When prices are rising credit naturally expands. Traders are anxious to avail themselves of credit to make their purchases larger than they otherwise could be. Sellers are willing to grant large credits, for the rising price of the goods offers the best security that the buyer will be able to pay. But when the period of comparative scarcity and high price comes to an end through production overtaking and outstripping demand, the position is radically altered. It is something like the game called "musical chairs." Someone is going to be left

with large stocks in hand bought at a high price which cannot now be disposed of at that price. Everybody is anxious to secure his position; everybody wants to turn his goods into cash before there is a further fall in value; the creditor wants to be paid before the crash comes; the debtor wants to be able to pay, and also if possible to be able to hold back his goods until the market again takes a more favourable turn. The various difficulties in which traders are landed by the changed conditions, concern principally themselves; at all events, if prices fall at R it is due in the main to the fact that the supply of commodities has grown more rapidly than money income.

CHAPTER VI

THE FUNCTIONS OF BANKS

HITHERTO we have spoken of credit in general, not of any particular species of credit or credit instrument. The only credit instrument which has been mentioned up to the present is the Bill, and many people would not consider a bill of exchange to be money who would just as emphatically hold that a banknote is so. Both are indeed promissory notes ; but the banknote is a promise to pay on demand to the holder, and as such enjoys practically the same currency as gold, whereas the bill of exchange is payable at a specified date to a specified person, is subject to certain formalities, and is only transferable by endorsement. The bill moreover is usually drawn for a large and irregular amount, and unlike the banknote is the promise of an individual or firm probably known to a comparatively small circle, while the person who pays it away after adding his signature on the back remains liable for the amount if the bill is not met at maturity. The

bill of exchange certainly does not fall within the terms of Lord Overstone's definition of money as being that which is acceptable everywhere and by everybody; a Bank of England note, on the other hand practically fulfils this condition within the limits of the country where it is issued.

These are important distinctions, but whether they make any difference as regards the effect upon prices is a matter which requires consideration. To obtain some light on this subject it is necessary to consider the part played by banks in modern industry.

The Nature of Banking

So far as England is concerned, banking seems to have originated in the practice adopted by many people of depositing money with the goldsmiths for safe keeping. Safety seems to have been the only aim, and to this day no doubt many people deposit money with bankers with the same object in view. But the development of banking has brought other and greater benefits. The convenience of paying by cheque, and the facilities for remitting money through the post and collecting it from a distance, are perhaps the principal advantages enjoyed by the ordinary depositor. Owing to this convenience, a large part of the community keep their money in the bank, and the bulk of this money remains in the

bankers' vaults. The title deeds to it are constantly passed from hand to hand, the ownership of it is constantly changed, but the money itself remains safe in the banker's keeping. A writes a cheque and hands it to B, and if B also has a banking account he does not draw the money out, but simply has it transferred to his account. Thus perhaps not more than one-tenth of the money in the bank is actually drawn out, and as a corresponding amount is paid in each day, the other nine-tenths might be deposited in the strong room in boxes fastened up and sealed, and probably at the end of a long period the seals would be still unbroken. Only in case of an exceptional run, or when money is required to be sent abroad, would it be necessary to unseal some of the boxes. Now, this fact that but a small proportion of the money deposited with bankers is habitually drawn out—in other words, the fact that the majority of cheques are never cashed at all, but simply transferred from one account to another—enables the banks to undertake an extremely important function in the modern business world, namely, that of facilitating the movement of circulating capital.

Supposing X, Y and Z represent three stages in the process of production. X produces raw materials, Y manufactures them, and Z buys them wholesale and distributes them to the various retailers. Y manufactures and sells to Z goods

worth £1,000. If Z pays him at once, he can immediately go to X, buy a further supply of raw materials and continue his productive work, and thus be ready to replenish Z's stock as soon as it is sold. If however Z cannot pay until he has himself sold the goods, and if as a consequence Y cannot buy more materials until Z has sold his stock, the result will be that Y, his men and his plant, will be idle for a period, and when Z's stock is exhausted there will be nothing ready to replace it. If however X, knowing that Y has supplied goods to Z on credit, is himself willing to supply materials to Y on credit; if X Y and Z are willing to keep the goods streaming along in one direction, knowing that the corresponding money stream is flowing along in the other direction though it may be a little behind in point of time; then there is no period of idleness, and the whole chain of workers is kept continuously busy.

But it may be that the circumstances are not so simple as this. Y may sell to Z on credit, and may purchase from X on credit, but he may have many other purchases to make which cannot be obtained on credit. He may have dealings with strangers who will not trust him; he may have dealings with people whose capital is not sufficient to allow them to give credit; he may have to make payments to railway and steamship companies which insist upon payment in advance; he may himself have given bills at an earlier

period which are now maturing and must be met in cash ; and above all, he has his weekly pay roll of wages to discharge. Taking all his transactions over the year, his receipts will exceed his payments by a margin which forms his income ; but receipts and payments do not always synchronize, and he may have heavy calls to meet at a moment when he happens to have none of his circulating capital in the form of cash.

Bank Credit

It is under these circumstances that he resorts to the bank. Some portion of his bills receivable he may hold until they mature ; another portion he may need to discount in order to discharge obligations arising in the meantime which have to be met in cash. He goes to his banker for assistance. He does not ask the banker to buy any goods ; he does not ask the banker to increase the demand for goods, or to create money to buy and pay for more goods than could otherwise be bought and paid for. All he asks is that the banker shall give him the money now which in any case he will have at his disposal in a few weeks' time ; that the banker shall give him the power to buy to-day what in any case he will be able to buy three months hence. His present means are increased, but he knows he must surrender means to a corresponding extent in the near future.

In other words, it is not a question of creating purchasing power, but merely of anticipating it; or if present purchasing power is created, it is not in addition to, but in substitution for, a later purchasing power which is already in sight.

How does the banker come to be in a position to assist the trader? The popular idea is that the banker takes some of the money entrusted to him by his other customers and lends it to the trader seeking assistance. That is scarcely a correct view; if it were correct, the banker's power to "lend" would be confined to the amount deposited with him, or rather to about four-fifths of that amount. But the real position is considerably different; the banker creates what is called banker's money, the cash actually deposited with him being merely the "reserve" or backing which enables him to maintain the convertibility of his fictitious money. He "lends" perhaps three or four times as much as he holds in cash, and is able to do so by virtue of the circumstance already mentioned that cheques and notes are seldom presented for actual encashment.

Y, wishing to discount Z's bill for £1,000, lodges it with the banker. The banker credits Y's account with that amount (less the discount, which we can neglect), so that in the banker's balance sheet Z appears as owing £1,000 to the bank and the bank as owing £1,000 to Y. Thus

their books balance, and the amount of " credit " is neither enlarged nor diminished. Y can now draw cheques for any amounts not exceeding £1,000 in the aggregate. The majority of these cheques perhaps will be given by Y to other persons who also have banking accounts, so that when the cheques are presented the amounts they represent are merely transferred from one account to another. If the banker is called upon to give cash for some of the cheques, he can readily do so, as he has plenty of money in hand belonging to other people who never draw it out; and moreover the persons who bring cheques to the bank to exchange for cash will proceed to spend the money; they will pay it away to various tradesmen most of whom have banking accounts, and who promptly proceed to pay in the money to the credit of their accounts, so that the amount of cash in the bank remains practically stationary. In the course of a few months Z's bill matures; by this time he has standing to his credit £1,000, the proceeds of his sales, and when he is debited with the £1,000 the bill is cancelled and all accounts are squared.

When a banker discounts a bill he does not so much create a credit as he liquefies a credit already created. To use Mill's expression, he coins the heavy blocks or ingots of credit. But there are other cases where the banker may perhaps more properly be said to originate a

credit, namely, where perhaps a manufacturer who has sold nothing, who has received no one's bill, but who has large orders on hand, applies for an overdraft to enable him to carry out his contract. The manufacturer is called upon to give credit to his customer in the sense that he has to engage upon a large outlay and is not to be recouped until the goods are ready, or at all events until they have reached a certain stage, when perhaps under the contract an instalment of the price is payable. The manufacturer comes to the limit of his means in making these advances, and has to look round for some one who will join with him in enlarging that credit. So he goes to the banker with a request for an overdraft. To the banker this transaction is as safe as the other one. He knows that the party who has contracted to pay the price will be good for the amount on the stipulated date, and he advances the money. In any case he knows that commodities worth the money are being created, so that if the purchaser who gave the order fails to take up the goods, they can very likely be disposed of elsewhere. Now here again the volume of money is not really increased; it is merely anticipated. A little more is poured into the stream to-day, but in a few weeks or months the corresponding amount will be taken out of the stream. Taking the two periods together, what is added at one time is counterbalanced by what is withdrawn later.

Effect of Bank Credit on Income

Yet one admission we have to make. Perhaps hitherto we have over-emphasised the idea that credit affects transfers of capital rather than income. We have probably given the impression that credit affects only the amount of "money" in the circle C, and leaves unaffected the amount of money in the circle I (Fig. 2). This emphasis appeared necessary in order to get rid of the erroeous notion that normal credit raises retail prices. Credit is in the closest possible association with circulating capital. But as we have seen, circulating capital becomes income, and income becomes circulating capital turn by turn, and the amount of the one bears a physiological ratio to the amount of the other. All the money paid in at R is ultimately distributed as income among the producers; and all the income distributed among producers eventually reappears in the retail market. Now, if a manufacturer goes to the bank and obtains a loan which he distributes among his workmen as wages, it is evident that it will cross over at once to the circle I and will be used to draw out commodities at R. Does this affect prices? It only affects them in the sense that it maintains them unaltered. The workmen have done their work; they have made their contribution to the commodity stream

and must be paid the money which enables them to draw out the equivalent. If they are paid to-day, before the goods are sold, they will not be paid again when the goods have been sold. The wages they receive to-day are not in addition to, but are in substitution for the wages they would receive later. They have created goods; these goods are not perhaps ready to enter the reservoir through P, but when they do enter they will be just so much the more for the work that has been spent on them. The accumulation in the reservoir permits the workmen to be paid immediately instead of being kept waiting. Our whole system of production is based on this arrangement, as explained in our first chapter. If we bring in review the period when the labourers are working and drawing their pay, and the period when the product matures and is put on the market, it will be found that the level of the reservoir has neither risen nor fallen; the amount of new commodity income created is equal to the amount of commodity income withdrawn. We may grant that under an automatic adjustment prices would have risen while the level of the reservoir was falling, and would have fallen when the level of the reservoir was rising; but an adjustment which is directed by intelligence foresees the proximate restoration of the amount at present withdrawn, and leaves price unaffected.

Even if the advance obtained by the trader is

not for the purpose of paying wages, but is for the purpose of replenishing his stock or purchasing raw materials, the position is the same. X gives credit to Y, Y gives credit to Z, and thus the chain of production is kept moving all along the line, as explained on a previous page. Now, whether X goes to the banker and obtains an overdraft to pay wages while he is executing orders for Y, or whether he takes Y's bill to the banker and discounts it, or whether Y himself discounts Z's bill, and with the money received from the bank pays X, the position is in all cases alike, that is to say, X is now in a position to pay his men for what they are producing without waiting for the time when these goods finally reach the cash buyer. Prices are not raised by this advance payment, because the ratio of the money income stream to the commodity income stream is not altered. Instead of having periods of idleness, there is continuous work; if this continuous work involves payment of more money wages, it also creates more commodity wages. The problem of price is not a question of money income alone. It is a question of the ratio between money income and commodity income, and if money income is never increased except concurrently with a corresponding increase in the commodity income, the level of the reservoir is not altered and prices are not affected.

In our first chapter it was stated that the

advances of capital (drafts on the reservoir) sometimes take the form of credit (e.g., in the transfer of goods from one trader to another) and sometimes the form of wages, the latter being payment to the labourer for work done, for a value created, before the goods have been actually sold, and perhaps before they are actually ready for sale. We now see the machinery by which this is effected. The ironmaster who employs a thousand men puts all his capital into iron; he specialises upon that product; he does not keep part of his capital in the form of clothes and food and fuel to hand out to his men in wages; but another capitalist has all his capital in the form of clothes, another all his capital in the form of meat or corn or wine, another all his capital in the form of coal or wood or building materials. By the aid of the bank all these capitals are in a sense unified. The ironmaster cannot give his men food and clothes; it would not be convenient if he gave them iron and left them to barter it for the things they want; so the iron is kept for the people who want it, and meanwhile the bank enables him to give his men drafts on the stocks of other capitalists who are holding the various sorts of things the men want. The other capitalists in turn are obliged with similar facilities. No one capitalist can pay his men wages out of his actual stock in hand; all the capitalists together can do so, and the bank is the medium which

makes this possible without awaiting the exchange of each man's product for gold.

It was to this method of enabling money income to grow concurrently and in proportion to the growth of commodity income as the number of workers and the amount of production increase, that we alluded on a previous page (p. 123) when we said that there might possibly be a way of increasing the rapidity of circulation and thus maintaining the level of prices without any actual increase in the amount of cash. It is quite legitimate to regard the use of money substitutes as equivalent to an increase in the rapidity of circulation. It is a method of making the same amount of money do a larger amount of work in a given time. At all events, what we had in view is what we have now explained. And in this connection it is worth while to recall that the foundation of the industrial prosperity of Scotland is often attributed to the part played by the banks in the early days, when they met the lack of coin with which industry was hampered by providing a substitute in the form of banknotes. It often happens where persons have no savings, that they cannot set to work to produce unless they are paid in advance. If paid in advance, they are able to produce the equivalent of what they have been paid. The ratio of commodity income to money income is no different because of this reversal of the order, no more than the march of

troops is different whether they step out "left, right, left" or "right, left, right." At the same time, we must not fall into Macleod's error of imagining that credit itself is capital. If means of sustenance and materials for production can be obtained on credit (or even in exchange for money, real or artificial) it is because these things exist. The credit only transfers the capital; it is not itself capital in any final sense. If the material capital is not in being, credit cannot command it, nor in fact can credit exist.

Similarity of Bank Notes and Cheques

If a trader obtains an overdraft from the bank or gets a bill discounted, it makes no difference whether the bank hand him a bundle of their own cheques to bearer, called bank notes, or give him the right to draw cheques himself. It may make some difference to his convenience, but the amount of his spending power is the same in either case, and the effect on the aggregate of money is the same. The old idea was that bank notes increase money in a way that cheques do not, because the bank notes remain in circulation and are handed from one to another, whereas the cheque usually serves for one purchase only and is then extinguished. I am not sure but that this fallacy lurks even now in the minds of some. If I buy a picture from an artist and give him my

cheque for £10 the artist then has power to buy £10 worth of goods from somebody else. Whether he endorses my cheque and passes it on, or pays it into his bank and draws another in its place, or exchanges it at the bank for notes or cash, the position is identical. I have parted with £10 of purchasing power, and the artist has received the like amount. When he pays that £10 to a third person, the artist parts with his spending power and the third person receivee it. This person in turn passes it on to a fourth person, and so it never ends. The money is in the circular stream, and goes round and round for ever. But if I who started it, borrowed the purchasing power from the bank, then I must repay, whether the bank gave me that power in the form of bank notes or of an account to draw upon.

Yet upon the fallacy above mentioned is founded Peel's famous Act by which the constitution of the Bank of England is governed and by which note issues are regulated to this day. Our legislators were alarmed by the fact that in the course of trade it sometimes happened that the nation owed to the foreigner a great deal more than the foreigner owed to Englishmen, and consequently gold had to be sent abroad. According to the theory of foreign trade, what was necessary to stop the drain was such a fall of prices in England as would make England a cheap market, with the consequence that Englishmen would buy

at home instead of abroad, and foreigners would buy from England instead of selling to it. And if this corrective did not come into operation promptly enough to check the drain before the stock of gold was exhausted, they imagined it was due to the banks creating fictitious sovereigns as fast as the real sovereigns went abroad, thus preventing the natural and healthy fall of prices.

Had the advances made by bankers operated in this way before the Bank Act, they would have continued to operate in the same way after the Bank Act, because the Bank Act left unimpaired the power of the banks to create "banker's money." The effect of the Act was to compel the banks to resort to the machinery of cheques instead of to the machinery of notes; and it is fortunate that this alternative was open, as otherwise the Bank Act would have imposed a serious handicap upon trade. But we have seen in the foregoing pages that the idea that banker's money raises prices is erroneous, at least when the power to grant loans is judiciously exercised upon sound business lines. But in the early days of banking, bankers had not the same experience as they have now, and the sound principles of banking were not so generally understood and adhered to. Even the Bank of England had not discovered that a drain of gold can be checked by a less drastic measure than a general fall of prices, namely, by raising the rate of discount or interest,

so that less gold is drawn out and more paid in. In a country which is the financial centre of the world the current level of prices may have nothing to do with the drain of gold; but supposing the drain to spring solely from the "balance of trade," the position between Englishmen and foreigners trading together is the same as between Englishmen dealing with one another. Their mutual transactions, taken over a long period may balance, but the cash payments due by one side and the other may not always synchronise; there will be moments when (without an agreed carry-over) A is due to pay cash to B, or B to pay cash to A. And so between nations whose transactions in the long run balance, there may be moments when the movement of gold is in one direction or the other, but if by agreeing to pay interest on the debt the debtor can get the creditor to let it stand over, the account will presently right itself by the transfer of goods in the ordinary course of trade, and no remittance of money will be necessary.

Good Banking

We have spoken of the sound principles of banking. What are these principles? Whether looked at purely from the banker's point of view or from the point of view of the general welfare of the community, these principles are the same. The banker, like other business men, is out to make

money, and his principal way of making money is by discounting bills or granting overdrafts upon which he charges interest. As a rule he makes no charge for taking care of people's money for them, collecting it and disbursing it according to their order. These services he performs gratuitously; his expenses in this respect are what he pays to obtain the loan of their money, and their money is indispensable in order to enable him to carry on the discount business from which he derives chief part of his profit. It is therefore to the advantage of the banker to do as large a discount business as possible and at as good rates as the market will permit him to obtain. But while this is the way in which he makes his profit, and the temptation consequently always presses upon him to enlarge his operations in that field, he has at the same time to bear in mind that the basis of his business is the money he has himself borrowed and which he has undertaken to repay on demand. No considerable part of that money, as we have seen, is likely to be suddenly withdrawn; the banker can rely in ordinary times upon not more than one-tenth or one-fifth of it being called for. But the liability is there, and he can only ignore it at his peril. Conditions are apt to change from day to day; some indiscretion on the part of a competing banker may result in his being called upon to pay out not 25 per cent., but 30 per cent. or 40 per cent. of his deposits. The

slightest hesitation or delay upon his part might lead to the whole 100 per cent. being demanded. Nay, more! for has he not given overdrafts to various people who never really had any money in the bank at all, but who may draw cheques which must be paid in cash if demanded? In a word, the banker's whole power to continue in trade depends upon his inspiring such unfaltering confidence that customers will never demand cash beyond the extent necessary to meet their immediate requirements—will never come to him and demand their money because they are in doubt as to its perfect safety.

It is therefore necessary that the banker shall always have in his till sufficient cash to meet instantly any and every call likely to be made. That comes to the same thing as saying that his advances must not bear more than a certain ratio to his cash. But this ratio will not always be the same—not the same at all times nor in all places. The banker has to watch the changing conditions of trade, in the country in general and in his neighbourhood in particular, and to judge whether he will be called upon to cash a larger or smaller proportion of his cheques; he also has to study the nature of his customers' habits and requirements, and the nature of the transactions in connection with which they require accommodation, in order that he may judge whether they are likely to entail a large proportion of cash pay-

ments or not. A loan to enable Y to pay X may not involve any additional cash being drawn out. An advance to pay wages may require a large amount of gold or silver to be paid out on Saturday, which will be returned on Monday or Tuesday.. An advance to cover a remittance abroad may mean the withdrawal of gold for a long period from the bank.

Short Loans and Long Loans

But the principal care of the banker must be to see that he does not get his money tied up for a long period. If he discounts a bill payable in two months' time, then in all human probability he will receive back the amount of that loan in two months' time. If a customer has orders in hand which will take him a couple of months to execute, and the terms of the bargain are that the goods will be paid for upon delivery, then again if the banker advances the wages he will get his money back in two months' time. If, however, a customer comes to him with the proposal that the banker shall advance the money to build (say) a theatre which cannot be completed and paid for until twelve months have elapsed, the banker must decline the transaction, because it will tie up his money for at least a year, and in the meantime he may have heavy calls for cash which he cannot meet. And if the theatre is not already

sold, but is being built as a speculation in the hope that a purchaser may be found, still more must the banker refuse, because it is then doubtful whether he will get back his money even at the end of twelve months. And even more determined must be his refusal if it is not a question of selling the theatre at all, but of running it as a going concern, because in that case the banker will be practically investing money, or at best lending it upon mortgage; and even if the interest is secure, he may have the greatest difficulty in ever obtaining repayment in full of the principal sum.

To remember the difference between a bill of exchange and a mortgage has long been the golden rule of banking. The banker wants interest and he wants securities; but he wants securities which after a short time will turn themselves into money. It is for this reason that I venture to doubt the view, advocated by so acute a writer as Mr. Hobson, that the increase of pledgable securities has caused credit to grow faster than the money area and has so raised the level of price. I do not imagine that as a general rule bankers will grant loans against securities, however good, if they think there is a likelihood that they may have to realise their securities in order to get back their money.

A certain proportion of their money banks do no doubt invest in readily marketable securities.

A banker may invest his own capital. It does not belong to the public and cannot be called for on demand. The only interest the public have in it is as an ultimate guarantee of the bank's solvency. But permanent investments are one thing and loans are another. When the banker grants a loan I imagine that, quite apart from the question of securities, he wants to know something of the kind of transaction in connection with which the loan is required, and he desires to be assured that at the end of a short period the fund for the repayment of that loan will be forthcoming, when the securities can be returned to the pledgor. This means that the banker's advances must be in connection with current transactions, such as bills in the course of maturing or contracts in the course of performance. The temptation to go beyond these limits is no doubt always present, and pressure from customers is no doubt of frequent occurrence, and it is only in human nature if the strict bounds dictated by ideal prudence are sometimes overstepped. But it is such overstepping of the legitimate limits of banking that has accounted for many of the disasters in the past, and accounts no doubt for not a few bad debts still.

I use the expression "legitimate limits of banking," because it is clear that from the point of view of the community no less than of the bank itself there are limits which ought not to be ex-

ceeded. If we quit the banker's individual point of view and look at the matter from the standpoint of its economic effects, we shall see that banking fills an extremely useful rôle provided it remains within certain limits, while its operations may be detrimental to commerce if those limits are disregarded.

Difference between Purchasing Power and Means of Payment

Confusion sometimes arises from failure to distinguish between purchasing power and means of payment. Purchasing power is the power to obtain goods; means of payment implies the ability to discharge the debt thus incurred, i.e. the possession of a *quid pro quo*. Credit gives purchasing power, but it does not form means of payment, and credit will not be given unless means of repayment are believed to exist. In the long run, commodities are the means of payment for commodities; he who possesses commodities may be said to possess means of payment. But he does not necessarily possess purchasing power, if by that we understand the power to obtain immediately what we want. If there were no money and we were reduced to barter, one man might find himself in possession of goods which he could readily and quickly ex-

change for other goods he wanted, whilst perhaps another man worth twice as much might experience considerable difficulty and delay in making the desired conversion. The owner of a few bags of wheat might be able to go to the market and come away in a few minutes with their equivalent in other things, while the owner of the field in which the wheat was grown might be searching here, there and everywhere for some one willing to give him other things at all equivalent to what he wished to part with. Offering a thing which is instantly and universally acceptable and a thing which is not so readily and generally acceptable is precisely the difference between buying and selling. The buyer is he whose commodity everyone will accept; the seller is he who has to find some one willing to exchange with him. Schedules have been prepared in which commodities are ranged according to the degree of ease or difficulty with which they can be exchanged. We have already seen that the precious metals were early recognised as acceptable by almost everyone. Next in order under modern conditions come foodstuffs and the materials for making clothes and other essentials of existence. The requirement of food is imperative, constant, and universal, and no one possessing a stock can have much difficulty in finding buyers. Raw materials are always in demand; no matter what change may be made at the dictate of fashion or neces-

sity in the forms into which they are to be worked up, raw materials are always indispensable for the production of anything at all. But when it comes to finished goods, and especially when it comes to things like houses, land, factories, etc. the difficulty of finding a buyer is, for any particular parcel of goods, very great indeed. Few people are wealthy enough to buy a house. Of those few, not everyone wishes to tie himself down to one. The chance that a man possessing the necessary means will happen to require just such a house and in just that neighbourhood and at just that time, and that this person will happen to hear of this particular house, is comparatively small—small indeed compared with the opportunity to dispose of a cargo of wheat on the recognised exchange. The people who come to the market with houses come as sellers of goods not as buyers of goods. Houses may be means of payment in an ultimate sense, but they have to be sold first. Only then are they converted into purchasing power. At the taps where the money stream is measured against the commodity stream, thus fixing price, houses are among commodities, not among money.

Wild schemes have sometimes been propounded for "coining" all the wealth of the country. There have been people, there still are people, who would issue paper money based upon all the land of the country, "the best possible security."

It was done during the French Revolution, with results that we know. Such a scheme overlooks the essential fact that the value of money does not depend upon the amount of commodities in existence, but upon the amount which is being offered day by day in exchange for money—ultimately on the amount of current production. If the people to whom the French *assignats* were given had bought land with them, and the assignats had then been extinguished, all would have been well; but the people did not want to buy land; if they had wanted to buy land, the land could have been sold direct, without the creation of assignats.

What is the bearing of all this upon banking? The bearing is this. It is no part of the banker's business to coin unmarketable wealth; it is no part of his business to convert what cannot be sold into means of payment—to create money out of what cannot be exchanged for existing money. Strictly, his business is not that of making loans upon security; that is the function of the money lender, the pawnbroker and the mortgagee; whereas the banker's business is to finance current transactions—to bridge the interval between the entry of commodity income into the reservoir and its exit through the taps when it exchanges for existing money. The amount of bank money that can be usefully created does not depend upon the value of the securities

offered, nor upon whether there are any securities at all; it depends upon the volume of sound current and shortly-maturing transactions which present themselves for carrying through. Our study of the reservoir has shown that consumption and production do not exactly synchronize; in fact, that the bulk of the population constantly require to receive their commodity income from the reservoir before their contribution to the store of commodities is sold, or perhaps even ready for sale. But it has shown us at the same time that the extent to which consumption and production can be divorced (de-synchronized, if there is such a word) is limited by the resources of the reservoir and the rate of its replenishment, and that for any but comparatively short periods, consumption and production must balance. If consumption is increased unduly, it must be checked by a rise in price. If the consumption of wheat is proceeding over-rapidly, a rise of price will not be prevented by the fact that the next harvest is likely to be abundant. And it is the same with all other productions, account being taken in each case of the length of time required to replenish the supply. In the case of a continuing demand, future supplies can only keep down present prices if they will be available before present supply is exhausted.

Not only therefore must the banker avoid converting the unsaleable into purchasing power,

but he must not convert distant future means of payment into present purchasing power. If future money income is brought into the market before future commodity income can be so brought a rise of prices is inevitable. To a particular individual it may be of the greatest importance and the greatest utility that he shall be able to obtain command to-day of some part of the means which will be his in abundance at a future date; but such a man should address himself to the moneylender or mortgagee. If one individual borrows another's money upon mortgage it does not matter how much or for how long he borrows. Precisely to the extent that the present spending power of the borrower is increased, the present spending power of the lender is curtailed. The amount of money income is not increased; it is transferred from one to another, and is expended by A instead of by B. But such is not the case with the banker's advances. The purchasing power which he places at the disposal of his customer does not diminish by a penny the purchasing power of any other customer. Long loans upon mortgage are suitable investments for the funds of life insurance companies, because such companies are made up of policyholders who desire to surrender part of their present purchasing power in exchange for a future and generally distant purchasing power to be enjoyed by their widows or their children. But long loans

are not suitable for a bank to undertake for a double reason: they endanger the safety of the bank by tying up money which the banker may require to meet a sudden call, and may thus entail the ruin of the banker; and at the same time they raise prices by causing a present increase of demand which is not counterbalanced by a present or proximate increase of supply. With short loans based on current production the case is different. The banker may advance to Y the value of the goods he has sold to Z, because the fact that Z has ordered those goods and promised to pay for them at an early date is the best evidence that in the judgment of Z (an expert on the point) the goods are such as are in demand and will shortly be exchanged for money.

Looking at the matter in terms of money, the banker does but anticipate a sale for cash that is already in sight. Looking at it in terms of commodities, the banker does but permit the withdrawal at R or T_1 of commodities equivalent to those which have been introduced or are about to be introduced into the reservoir at P. We have once again to note, what has already been sufficiently dwelt upon, that short discrepancies between outflow and inflow may occur without any disturbance of price, whereas a long-continued outflow progressively reducing the level of the reservoir will call for an adjustment of price, no matter whether there is or is not a

prospect that at a future date the level will be again restored.

Hence if a manufacturer comes to the banker and asks for an advance, extending over twelve or eighteen months, to enable him to enlarge his plant, the banker must decline. The new plant will enable commodity income to be increased; but the increase will not begin at once; it will not come along in time to prevent prices rising through the extra expenditure in the meanwhile. This, however, is not the reason for his refusal which will be given by the banker. The banker will express his regret that he cannot tie up his money for so long a period, no matter how excellent or ample the security, and he will advise his customer to obtain spending power from those who possess it but are willing to forego it for a time; he should either borrow on mortgage or appeal for an increase of capital.

And if the banker cannot grant an advance to the manufacturer to facilitate the enlargement of his productive plant, still less can he grant an advance to enable him to build a country house, unless of course the borrower can satisfy the banker that, quite apart from the value of the building to be created, he has coming along very shortly the means to repay the loan in cash. And for precisely the same reason, if the government approach the banker with the proposal that he shall advance the means for building a new naval

dockyard, what the banker will want to know is not how long the dockyard will take to build nor whether it could be sold if necessary to a shipping company; what the banker will want to know is how soon the government propose to obtain the money from the people by taxation, and how soon the bank may expect the loan to be repaid. Supposing the government shrink from taxation at the present time; supposing they say to the banker, "We have had to make so many demands upon the public for one thing and another that we feel we have reached the limit of what the public will endure. Already we are taking 25 per cent. of their income; they will rebel if we make it 30 per cent. Meanwhile the dockyard is urgently required for the national safety, and if you advance the money now, you will be repaid, with a handsome profit in two or three years' time." If the banker grants the loan he ties up his money for a long period; it is tied up in the sense that it is no longer at his call, but in reality it is let loose upon society and its effect is to raise prices. This in itself is a dis-service to society. It may of course happen that the national emergency is such that almost any evil is less than the evil of postponing the construction of the dockyard. But at all events the banker will be following sound banking principles if he refuses to entertain the government's proposal.

Government Paper Money

Now supposing in this contingency the government say, "Very well, we will do without your aid. If you can create bank money, we can create what is better, namely government money. If you can print £5 notes and £1 notes, and if they pass freely, we can do the same and surely ours will circulate even more freely." If the government proceed to carry this out, the effect upon prices must be exactly the same as if the manufacturer issued imitation bank-notes to pay for the building of his house. Whether it be a private individual or a public body that manufactures money, whether there is an honest intention to redeem the notes some day or not, so long as the extra money is in circulation and there is no corresponding growth in the stream of commodities which can be bought with it, the result must be a rise in prices by which all purchasers suffer.

A temporary addition to the money stream accompanied by a corresponding addition to the commodities stream does not affect prices; but if when the extra goods created have been withdrawn from the market and the commodity stream has resumed its old dimensions, the extra money created remains in circulation, then the ratio between the two streams is altered. It does not matter whether the new money is forger's counter-

feit, or government money, or genuine gold discovered behind a chimney, brought forth from a tower, or excavated in the earth. The extra money, so long as it is current, swells the money stream and so raises prices.

If a government wishes to obtain supplies, there are two ways of obtaining them; either to steal them or to buy them—either to take them without payment, in which case the owner is robbed, or to make the whole of the citizens pay, which is not robbery but taxation. There is another alternative and that is to manufacture artificial money. In this way the government's demand becomes purely additional demand; no one else's demand is curtailed. Prices rise. If at the end of twelve months the government repudiates its artificial money or imposes a tax which enables it to withdraw the artificial money, prices thereafter fall back to their original level. If the additional money is allowed to continue in circulation, say for ten years, then during the whole of that ten years prices will continue at the higher level.

But a government which resorts to the expedient of the printing press instead of to taxation seldom contents itself with a single emission of manufactured money. It is a government in difficulties; it is a government which is afraid to tax more heavily and which despairs of borrowing. It therefore resorts to the printing press again

and again, and as each new addition to the money stream causes a corresponding increase in prices it has to create larger and larger quantities of fictitious means of payment in order to secure the same quantity of supplies. This course brings many evils in its train. The rise in the price of goods calls for a rise in the wages of labour, and no sooner have these difficulties been surmounted amid much heat and friction, than another adjustment is rendered necessary by a new rise in prices. A period of rapidly rising prices must be a period of industrial unrest. Labour disputes, strikes, become endemic. Sellers of goods no doubt are happy; they find the money value of their stocks increasing while they sleep. They have not to worry about buying cheaper than they sell for they have only to wait a short time and they can sell dearer than they bought. But persons with fixed incomes are hard hit, and the wage-earner finds himself compelled to fight for a readjustment of his wage to the new scale of values. And if after a time the government (contrary to the usual experience) gets over its difficulties and sets about the withdrawal of the additional money the social troubles are not thereby ended, but merely exchanged for a new series of a different type. With successive withdrawals of money come successive falls in prices. The trader who bought at one price finds he cannot sell at a figure which will yield him a profit. The

manufacturer perhaps finds that the finished goods will not fetch the price of the materials and labour. The wage-earner enjoys a temporary prosperity, that is, so long as his money wage remains unaltered; but his turn comes when the dislocation of industry throws him out of employment. And so it goes on until stability of ratio between the money stream and the commodity stream has once more been reached.

Difference between Banker's Money and Government Paper Money

If all these evils (and many more) follow in the train of government paper money—in the making of it and in the withdrawing of it—it is natural to ask why similar inconveniences do not accompany the creation and cancellation of banker's money. The difference lies in the application of banking methods to the short loan and to the long loan. That is putting the most favourable construction on it. It is assuming that the government intend to withdraw the additional money they have created—to redeem it. If it is *not* withdrawn, then there is no element of loan about it. The government in that case simply use the printing press as a Fortunatus Purse into which they can dip as often as they please. But as we have seen, even if the intention to repay at some

later date is genuine and reliable, yet the anticipation of distant future money income will not prevent a rise in prices in view of the impossibility of anticipating future commodity income. In the case of a long loan a rise of prices can only be avoided if the lender gives up spending power corresponding in amount to that which the borrower acquires.

But a government in issuing paper money is not in the position of the bank; it is in the position of the customer who wants to spend money, and manufactures his own bank notes. It is a common idea that bank money is restrained within limits by the fact that the banker has to redeem. That is perfectly true; and in a sense that is the controlling factor. But the really fundamental fact in the situation is not the banker's need to redeem his notes, but the borrower's need to repay his loan. It is no doubt the fact that he must be prepared to redeem his notes or meet cheques drawn upon him which prevents the banker manufacturing money for the gratification of his own pleasure, and which compels him to confine his issues to loan transactions where he is satisfied that the money will be repaid certainly and soon. But the important point is that not only can the banker not use his manufactured money for the supply of his own wants, but neither can the customer who borrows do so. Fortunatus may

dip his hand into his purse and bring out fifty sovereigns; a trader may visit the banker's parlour and emerge with fifty pounds in his pocket, or with cheques or banknotes to that amount. So far, their position is identical. It is identical in that they can each buy wine and cigars to the value of £50. But Fortunatus can drink his wine and smoke his cigars and there is an end of the matter. The merchant has got to repay his £50 and therefore must re-sell what he purchases. It is here, and not in any difference in the nature of the paper, that is to be found the real difference between banker's money and government money. Not in the nature of the paper but in the terms of issue is the difference of effect to be sought. There was a period during the Napoleonic wars when the convertibility of Bank of England notes was suspended. This gave them a strong surface resemblance to inconvertible government paper. This did not lead to an over-issue of notes and inflation of the currency. Although the Bank was not for the time being under the necessity of redeeming them, the traders who borrowed them were held as strictly as ever to the repayment of them. No doubt the fact that sooner or later the Bank had got to redeem its notes made it impossible for the Directors to deal with them in the same way that Fortunatus deals with his magic sovereigns; but this must not lead us to overlook that there is an equally

strong obstacle to the employment of banker's money as a means of inflating consumption demand in the fact that the borrowers have to repay, and cannot afford to borrow more than they can profitably use in their business. If the Bank of England, instead of creating "banker's money," confined themselves to lending their own capital in sovereigns, they would not have to fear presentation for redemption, but the borrowers would still have to repay, and would still therefore be unable to use the borrowed money to increase their consumption.

Currency notes are on a different footing. Their nominal convertibility has given them a superficial resemblance to bank notes. But their issue has not been regulated by "sound banking" principles, nor can there be said to be any real convertibility so long as the use of gold is subject to existing restrictions.

Conclusion

It is not, however, any part of my purpose to enter into controversial matters connected with the financial measures adopted during the recent war. One may not think that these measures were always happily inspired; we may groan under the unnecessary burdens they have placed upon us. But we must remember that unparalleled difficulties, difficulties previously undreamed

of, had to be faced and overcome quickly. To fight the enemy was only one part of the government's task; to manage a people by no means noted for their docility, nor very receptive of new ideas, was perhaps an equally perplexing problem. If we muddled through, we were true to our national traditions, and the emphasis should be laid on the through rather than on the muddled. At the same time, if I have refrained in this essay from any discussion of recent financial developments it is not because I think they are an unfit subject for discussion or an unfair subject for criticism. It is because I have desired to produce if possible a non-controversial exposition of the laws of money. For this reason I have endeavoured to stick closely to my title, and to treat of physiology rather than pathology. Such remarks as I have made regarding government money are confined, I think, to the indispensable minimum necessary for understanding the subject of money, and are only such, I believe, as would have been made by any writer upon currency before the war. Indeed I have adopted the pre-war standpoint throughout, that is to say I have consistently spoken as though gold were still our currency in this country.

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