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THE  
FUTURE OF EXCHANGE  
AND THE  
INDIAN CURRENCY



THE  
FUTURE OF EXCHANGE  
AND THE  
INDIAN CURRENCY

BY

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1922

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## PREFACE

This book is written for readers in India, and everything is expressed from the Indian point of view. It is not intended to be a scientific treatise, nor in any sense an academic discussion of currency and exchange; neither is it a popular exposition of the subject. It is designed more especially for the information and assistance of business men in India, for those engaged in public affairs, and for all who take a keen and understanding interest in the problems of exchange.

At first my intention was to limit the book to an attempt to forecast the probable course of exchange during the next year or two; and the first eight chapters were written with that purpose. Continued study of the subject led to the alteration of my views as to the permanent policy which ought to be adopted in regard to exchange; and I seemed to arrive at conclusions of some novelty and importance. I therefore wrote three more chapters, leading

up to the last and longest which sets forth a practicable policy for the immediate attainment of stability, and defines the principles which should guide the subsequent regulation of currency and exchange.

Since the deplorable failure of the policy recommended by the Exchange and Currency Committee of 1919, it has become the fashion to decry the advice of "doctrinaires" and "theorists." Whilst the Government has adopted "a policy of masterly inaction"—apparently not knowing which way to turn—the general demand is for a solution of the problem to be found by men of commerce and affairs. It is because of this appeal to business men, and because any change of policy will, I hope, be decided by the Legislative Assembly, that this book has been written with the special purpose of indicating the bearing of economic theory on the exchange problem. I make no apology for being a theorist; for, without a profound knowledge of theory, a true understanding of the very complicated factors influencing exchange is impossible. The objection to the theorist does not lie in the fact that he applies theory to a practical problem—which it is as essential for the financier to do as it is for the engineer—but rather in the application of theory without a

sufficient appreciation of the facts of the situation, and with a deficient judgment of the probable effects of the changes proposed. That was how the mistakes in 1920 came to be made. I was one of the first to recommend the adoption of the two-shilling exchange in a lengthy letter to the "Pioneer" of Allahabad in 1919;<sup>1</sup> but I think I may claim that if my proposal that the exchange rate should be raised "by one penny at a time whenever the demand for Councils becomes particularly strong"<sup>2</sup> had been adopted, the exchange crisis of 1920 might have been averted (or at least very much modified), and so the 2s. rate might conceivably have been maintained.

This book, then, is an attempt to present just those parts of economic theory which bear upon the exchange problem in its present form, and the principal relevant facts. There is a logical sequence in the development of ideas throughout each part of the book; and a desire to marshal the facts for each section fully has led to a certain amount of repetition. Moreover, I have adopted the rather risky device of proving certain things to be possible which I do not advocate. For all these reasons I

<sup>1</sup> Issue of June 12th, 1919, p. 7.

<sup>2</sup> See my written statement of evidence. Report of Committee on Indian Exchange and Currency, Vol. III. Appendices (1920), p. 148.

must beg the reader to be good enough to read the whole book ; or, at any rate, not to judge of any proposals by reading detached portions. The casual reader might well say that I am making impracticable proposals ; but I venture to think that if he reads all I have said, and considers carefully, he will be converted to the view that my actual proposals, as summarised at the end of the last chapter, are eminently practicable, and would confer an immense and early benefit on the country's trade. I can only add that I have not spared myself in thinking these proposals over again and again, and in testing them by reference to all the facts of the present situation that I can ascertain, and by comparison with all the suggestions which other people have been making for the solution of the present difficulties.

Such a book as this deals mainly with an immediate problem and current conditions, and ought therefore to be written at a given moment and published instantly like a daily paper. With many other duties claiming my time, the writing has taken several months ; but worse still has been a pause in the printing due to the strike on the East Indian Railway, which caused a delay of over two months in receiving a needed consignment of paper. The

whole of the book was written and in type, except a portion of the last chapter, when the situation was modified by the Government accepting in the Legislative Assembly, on 22nd March, 1922, Sir Montagu Webb's amendment to the Finance Bill, suspending for 1921-22 and 1922-23 the operation of Section 13 (c) of the Paper Currency Act (1920) requiring the interest on the securities in the Reserve to be applied to reducing the "created securities." Frequent references to this provision of the Paper Currency Act would have been omitted or altered had this event occurred before going to press.

Another event not recorded in the body of the book is the first issue, in March, 1922, of Currency notes to the amount of Rs. 2 crores against internal bills of exchange (presumably mainly *hundis*) according to the provision incorporated in law for the first time in the Paper Currency Act of 1920. The occasion for utilizing this resource was doubtless the tightness of the money-market and need of funds for financing the crops.

A result of the unavoidable delay in issuing the book is that some of the statistics are not quite so up-to-date as I hoped they would have been. To remedy this defect I have arranged for a supplement to be printed and inserted

at the end of the book after it is bound. In this way most of the monthly statistics are brought up to the end of March, 1922; and a few even later.

In conclusion, I wish to express my cordial thanks to gentlemen in official positions who have assisted me with information, and to assistants—old students of my Department—who have helped me by collating and setting out the statistics. Willing labor is always given in the search for India's welfare.

To Mr. D. S. Dubey, Lecturer on Economics in Allahabad, I am indebted for the preparation of the index.

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## CHAPTER I

### GOVERNMENT AND EXCHANGE

In every country the currency system is established by or based upon an enactment of the legislature, which prescribes the standard and subsidiary coins and their relations to one another. Foreign exchange is a relation between the currencies of two countries. In dealing with the Indian exchange, which means between India and London, it is necessary, therefore, to understand the exact legal position of both the Indian and English currencies. We shall observe how far conditions created by the War have compelled in England a departure from the strictly legal position, and in India totally new legislation. The importance of understanding clearly the legal position of the currency lies in the fact that whilst the law cannot modify adverse

economic conditions, especially those depending on world-wide causes, it certainly can and does prescribe limiting conditions. In other words, the legal basis of the sovereign, the rupee, and the paper currency have clearly defined effects—as for example in preventing the rise or fall of exchange beyond certain limits, or influencing through the volume of circulation the level of prices in India, and thus the balance of trade.

It is a commonplace that the Indian currency and exchange are “managed” by Government, and that to an extent not attempted by any other equally important commercial country. Whether this system is good or bad, the fact of this management has to be taken into account by everyone interested in the course of exchange. It is necessary to understand the part Government plays and what reserves it holds; and it is wise to be familiar with its past and present policy as some guide towards the probable tendency of its future line of action.

### *Indian and English Currency Systems*

The Indian currency system was fundamentally altered by an Act of the Imperial Legislative Council passed in September

1920, of which the principal provision was to make the sovereign legal tender for ten rupees only instead of fifteen rupees. Thus the rupee is now a token coin of unlimited legal tender, and represents the tenth part of the sovereign. As the legal weight of the sovereign is 123·2745 grains of English standard gold, eleventh-twelfths fine, the sovereign legally should contain 113·0016 grains of pure gold. The rupee now legally represents one-tenth of that, or 11·30016 grains of pure gold. As the tola weighs 180 grains, it is an easy calculation to show that the "mint price" of gold in India, on the new basis of Rs.10 equal to one sovereign, is Rs.15-14-10 or Rs.15·927. This is simply a statement of the number of gold rupees of 11·3 grains each into which one tola of pure gold could be coined.

The English system of currency, established more than one hundred years ago, has the sovereign as the standard coin. The mint price of gold in England is the number of sovereigns into which one ounce troy (which contains 480 grains) of standard gold, eleventh-twelfths fine, is coined, and this works out to £3. 17s. 10½d. or 3·89375. The English token coinage is the shilling, of which 20 equal £1. Thus the shilling represents

5·65 grains of pure gold. The only difference of the shilling from the rupee, as regards its legal status, is that it is legal tender only to a sum of forty shillings in any one payment, whilst rupees are unlimited legal tender in all payments.

Last year the British Government reduced the fineness of the English silver coins to one-half instead of eleven-twelfths, the idea being to protect them against any conceivable rise of the price of silver which might occur in the future. This had no influence upon exchange, excepting in so far as it had a small tendency to keep down the price of silver.

### *The Status of Gold*

In England before the War gold was actually the standard coin in practice as well as in theory. Sovereigns were in constant circulation; and all bank-notes and deposits at banks were actually paid on demand in gold without hesitation. In India before the War gold was coming gradually into circulation in certain parts of the country to a limited extent, the sovereign passing for fifteen rupees. Not only did Government issue gold from the Gold Standard Reserve

and the Paper Currency Reserve when required for export from India; it made a practice of issuing sovereigns in exchange for rupees from the currency chests for internal circulation. The main difference in the status of gold in the two countries lay in the following facts: (1) There was no Mint in India at which gold could be freely coined on presentation by the public; (2) The habit of the people was in favor of using rupees rather than sovereigns; (3) In England gold and the paper representing it was the only unlimited legal tender, whereas in India, besides gold, the rupee and paper representing it was also unlimited legal tender. Thus there was no tendency compelling the use of gold as the general medium of circulation.

Soon after the outbreak of War the status of gold changed fundamentally in both countries. In India it disappeared from circulation immediately; and Government, after first limiting the issues, in a few days stopped all exchange of rupees or notes for gold, except for export through approved parties. It was not long before gold rose to a premium, and the sovereign became worth Rs.16, Rs.18 and over Rs. 20 by 1918.

In England the Bank of England and the great joint-stock banks agreed, at the

request of Government, to limit the issue of gold; and although notes and bank deposits were still legally payable in gold, it was made practically impossible to obtain it. The export of gold except under licence was prohibited, and no free market in gold existed during the War. The New York exchange was "pegged" at \$4.76 $\frac{7}{16}$ . In the summer of 1919, hostilities having ceased six months previously, it was considered inadvisable for Government interference to prevent any longer the gradual resumption of normal conditions. Gold imported into England was allowed to be exported, and the New York exchange was left to the mercy of the balance of indebtedness. This being strongly in favor of the United States, the dollar exchange fell rapidly, going below \$4.00 in a few months. It has since fluctuated between \$3.30 and \$3.95, and has only recently recovered to a little above \$4.20.

The fall of the dollar exchange, or the "New York cross-rate," as it is called in India, caused a rise of the price of gold in England to a level far above the "mint price." The United States, having had a favorable balance of trade throughout the War, had accumulated enormous reserves of gold, and thus in 1919 was (and is still) the only

great free market for gold in the world. For this reason the dollar exchange regulated the price of gold in England, according to the formula :—

$$\text{Price of gold in England} = \frac{4.8667}{\text{dollar exchange}} \times 77\text{s. } 10\frac{1}{2}\text{d.}$$

The price of gold in England was a little above or a little below this at times, according to the demand for gold in London, a brisk demand sometimes drawing gold from America. The anticipation of a rise or fall of the dollar exchange also affected the price of gold, owing to the time taken in transit. Variations of the dollar exchange, other than day to day fluctuations, are due to seasonal causes, principally cotton and wheat crop shipments, and to payments of interest and principal by the British and French Governments to the United States Government; also to German Reparations payments.

### *The Present Price of Gold in India*

The price of gold in India is dominated by exchange; but the relative prices of gold in London and in India and the quantity available in the market have also a reciprocal influence on exchange. If we neglect for

a moment the cost of freight and insurance, and the time taken in transit when shipping gold from Bombay to London (or New York) or *vice versa*, the price of gold in India<sup>1</sup> is found by the following formula:—

$$\text{Price of gold in India} = \frac{180}{440} \times \frac{\text{price of gold in London}}{\text{rate of exchange}}$$

When exchange is falling, or the balance of indebtedness is definitely outwards, the price of gold is lower than this in Bombay by the cost of freight, insurance, etc., from India to London; and when exchange is rising or has recently risen, the price of gold is higher than is given by the formula by an equivalent amount. Anticipation of a fall or rise of exchange *during the time of the voyage* is also taken into account.

The *availability* of gold may at times be a factor of importance also. When much gold has been shipped from Bombay, it is necessary to draw on up-country bazars, and the cost and time taken in collecting supplies from inland will maintain the price somewhat higher than the figure estimated as above. The reverse does not seem to be true—at least to the same extent—for when gold becomes

<sup>1</sup> The usual quotation is per tola of fine gold.

cheap in Bombay, it is usually absorbed with avidity by the big inland trading centres.

### *Status of the Paper Currency*

Although gold is now nominally the standard money of India, there remains not only a difference in practice from the English currency system, but also one very important legal difference—the status of the paper currency. In the United Kingdom all paper money, whether currency notes issued by the Treasury, or Bank of England notes, or notes issued by the joint stock banks in Scotland which have this privilege, are promises to pay so many pounds sterling—that is, gold. The present suspension of payments is only temporary; and the public assume that after three or four years at the utmost financial conditions will have so far righted themselves that both the Treasury notes and the Bank notes will be paid in gold at par.

In India the Government currency notes have never been legally payable in gold, but only in silver rupees. Neither have rupees ever been legally convertible into gold. It is true that during the period 1901 to 1914 Government made a practice of paying

out gold in exchange for silver at the rate of one sovereign for Rs.15, and that, since currency notes are convertible into rupees, it was the practice to encash currency notes in gold when so requested at the currency offices, if a sufficient stock of gold were available. As mentioned above, on the outbreak of the great War, this practice was necessarily suspended. The currency notes reverted therefore to their original position of being convertible only into silver rupees; and so they have remained to the present day.

As already explained, the rupee in India occupies the position of a representative or token coin, because its intrinsic value as silver bullion is less than its nominal value. Thus our Indian paper currency merely represents token money; and the economic effect of this is that the circulation of currency notes abnormally increases the total volume of rupee currency in circulation. Judged from the point of view of the gold standard, such as we have legally, because gold is legal tender and gold bullion, though not minted in India, may be freely exchanged into sovereigns, the position is that we have an enormous volume of token coins (rupees), the volume of which is nearly doubled by the

addition of a paper currency which represents rupees.

The economic position of the currency, therefore, is similar to that of a gold standard country in which the Government, being short of money, has proceeded to coin an enormous quantity of token money—an operation which is profitable on account of the seignorage, or difference between the cost of the metal and the nominal value of the coin. If, in addition to that, a big issue of paper money, payable only in the token coins, were made, we should have an exact parallel with the present position of the currency in India. Such over-issues of token money were made at various times during the last century by some of the smaller countries of Europe; and a few years ago the first serious attempt at currency reform in South China had a similar ending.

When I say that these cases of the over-issues of token money are on exact parallel with the economic condition of the currency in India, I have regard to the actual legal and economic status of affairs at the moment, and not at all to the historical process by which that condition was arrived at, which is entirely different in the two cases. In India we are struggling upwards towards the achievement of an ideal—a gold standard

with gold in actual circulation and freely minted in India. In the first stages of our transition we have got into that economic position which I have described. In cases which may be regarded roughly as parallels the condition has usually arisen (except in China) through the reverse process, namely, a degeneration from a more or less established gold standard by the over-issue of the token money.

### *Paper Currency Reserve*

A complete understanding of the exchange problem is impossible without a full appreciation of the part played therein by the composition of the Paper Currency Reserve. Prior to 1920 the law prescribed a fixed maximum to the fiduciary portion of the reserve, and for every note issued beyond that sum an equal value of gold or silver had to be deposited in the Reserve. The securities composing the fiduciary portion might be either those of the Government of India or of the United Kingdom, a maximum limit being prescribed for each. Those maxima overlapped, so that both could not be at their maximum at the same time. Thus, at the 31st March,

1914, the composition of the Reserve was as follows :—

|                                  | <i>Lakhs of Rupees</i> |
|----------------------------------|------------------------|
| Gold coin and bullion in England | 9,15                   |
| do. do. in India ...             | 22,44                  |
| Silver coin in India ...         | 20,53                  |
| Rupee securities ...             | 10,00                  |
| Sterling securities ...          | 4,00                   |
| Total ...                        | <hr/> 66,12            |

After the first year of War the demand for Indian produce became so great that the Secretary of State sold Councils briskly ; and before long had difficulty in finding rupees wherewith to meet trade requirements and to finance the raising of the Indian Army for overseas service and its supplies. The results must be vividly remembered by all commercial men in India, and I need waste no time in describing the difficulties of financing exports, the various restraints on trade, and the prohibitions of import and export of silver and gold on private account which were deemed necessary. For my present purpose the point is that Government had to find rupees in India somehow, and besides importing vast quantities of silver for coinage it was driven to successive increases of the fiduciary

portion of the Paper Currency Reserve. By successive Ordinances and Acts of the Imperial Legislative Council the limits of securities in the Reserve were raised as follows :—

*Limits of Securities in the Paper  
Currency Reserve.<sup>1</sup>*

| Year.               | Maximum<br>all securities. | Rupee<br>Securi-<br>ties. | Sterling<br>Securi-<br>ties. | British<br>Treasury<br>Bills. |
|---------------------|----------------------------|---------------------------|------------------------------|-------------------------------|
| 1915                | 20                         | 20                        | 6                            | ...                           |
| 1916                | 26                         | 20                        | 10                           | 4                             |
| 1917                | 62                         | 20                        | 10                           | 42                            |
| 1918                | 86                         | 20                        | 10                           | 66                            |
| 1919<br>(March)     | 100                        | 20                        | 10                           | 80                            |
| 1919<br>(September) | 120                        | 20                        | 10                           | 100                           |
| 1920<br>(March)     | 120                        | 120                       | 120                          | 120                           |

By the device of constant applications to the Legislature the necessary elasticity of the circulation was secured. This was obviously a wrong system; and could only be regarded as a temporary expedient. When the trade balance began to turn against India early in 1920, and Government plunged

<sup>1</sup> Condensed from table in my book *Money Banking and Exchange in India*, page 183, which see for particulars of limits prescribed by some ordinances issued at intermediate dates.

into the sale of Reverse Councils at fancy prices, they acted rightly in meeting them from the sterling securities held in the Paper Currency Reserve in London. But this involved either the cancellation of the notes presented in India for the reverse transfers, or an increase of the limit of the fiduciary part of the Reserve which could be held in rupee securities. It was believed that a drastic reduction of the circulation might create a very unpleasant financial situation in India : consequently but a small proportion of notes was cancelled, and power was taken to hold the fiduciary part of the Reserve in either rupee or sterling securities or both, in any proportion up to the full limit of 120 crores for all securities.

This could only be a temporary expedient. The whole question of the legal composition of the Reserve needed reconsideration ; and a few months later, during the Simla session of the Council in the summer of 1920, a very important Act was passed. As regards the Paper Currency Reserve it contained both temporary and permanent provisions. The former, which came into effect on 1st October, 1920, merely re-affirmed the basis adopted in the earlier Act of the same year and allowed rupee and sterling securities to be held in any proportion up to a

total limit of 85 crores (instead of 120). It also provided for the gold in the Paper Currency Reserve and the sterling securities being immediately revalued on the basis of Rs.10 for the sovereign. The gap thus formed in the Reserve was filled by the issue of a special creation of securities of the Government of India. All these were mere paper transactions, the real and operative facts being the volume in which silver was returning from circulation, and gold coming from abroad, to find a resting place in the Reserve ; and the extent to which Government was able or inclined to reduce the total circulation of notes, which will be dealt with in a later chapter.

Although it has not been possible as yet to bring the permanent provisions of the Paper Currency Act (1920) fully into force, steps are being taken to make them effective ; and it is necessary, therefore, to examine them briefly. The object of the permanent provisions is to give an automatic elasticity to the paper currency circulation, so that it may be expanded when trade demands money, without the necessity for new Ordinances or Acts. There are two new devices for this end : (1) the fiduciary portion of the Reserve, instead of having a fixed limit, is not to exceed the value of the metallic portion (silver and gold) of the Reserve—in

other words, is not to exceed 50 per cent of the total circulation, exclusive of that based on commercial bills; (2) notes to be issued against commercial bills of exchange maturing not later than 90 days to a limit of 5 crores.

This will provide considerable elasticity. When trade is expanding and prices are rising there is a demand for more currency; and according to the state of the market or character of the season it will either take the form of a demand for notes or for silver. In the former case, Government can issue notes on securities of the Government of India to a limit of 20 crores (of which only 12 crores may be created securities), and to an additional amount on the basis of sterling securities (which would probably be bought by the Secretary of State from the proceeds of sales of Councils), up to a limit which would make the total value of all kinds of securities equal to the total value of the gold and silver in the reserve. Further issue of notes will then be possible only if ten rupees in gold or silver be deposited in the Reserve for every twenty rupees worth of notes to be issued; which means that the Secretary of State must look ahead and purchase silver or gold for shipment when he sees that the limit is likely to be reached. On the other hand, if the public demand is for silver it can be allowed to go without replacement

until the total value of gold and silver in the Reserve is reduced to 50 per cent of the circulation (less the notes backed by bills of exchange). To release further rupees, either gold must be substituted, or silver bullion purchased; or the total circulation must be reduced by twice the amount of the silver withdrawn. This involves some foresight on the part of the Secretary of State; and it is conceivable that difficulty might arise in case of a sudden drain of silver. For this reason it is desirable that the low limit of 5 crores for the issue of notes against bills of exchange should be increased to 15 or even 20 crores, as soon as the rules governing such issue have had an opportunity of being tested.

The present position is that substantial progress has been made in the direction of realising the permanent constitution of the Reserve. A considerable amount of gold was collected during 1920, and even at the new valuation of Rs.10 for £1, the gold in the reserve amounts to nearly Rs.25-crores. Still more striking is the great strength of the silver portion of the Reserve. During the past 18 months there has been an enormous return of silver from circulation, and the Reserve now contains the huge total of Rs.78-crores, including a small quantity of silver under coinage. . The total of

the metallic reserve amounts to over 100 crores, and is thus well over 50 per cent of the total circulation, which stands at about 170 crores.

That the Reserve may conform to the permanent provisions of the Act of 1920, it is necessary that the securities of the Government of India be reduced to 20 crores, and the portion thereof consisting of created securities be reduced to 12 crores. The created securities now stand at about 59 crores, and the other securities of the Government of India at 10 crores.

The created securities can only be reduced by a gradual process ; and in his speech introducing the bill in the Legislative Council, in September, 1920, the Finance Member was careful to explain how it was intended to reduce these securities. The whole of the interest on the securities of the Paper Currency Reserve was to be set aside for the purpose ; and after the Gold Standard Reserve had reached 40 million pounds (which it did in September, 1921), the whole of the interest of that reserve was to be utilised to pay off the created securities. The interest on a part of the Paper Currency Reserve and on the whole of the Gold Standard Reserve arises in England, and is at present being transferred to India by crediting the Secretary of State's

balances and debiting revenue in India. Assuming no other funds are allotted to reducing the created securities, it will take some five or six years to attain the permanent composition of the reserve. This is not a matter of moment, however, as the present strength of the metallic portion of the Reserve will permit a sufficient elasticity in the circulation to meet any likely contingency. More important is the question of the rate at which the total circulation can be reduced by this extinction of the created securities.

### *Gold Standard Reserve*

The Gold Standard Reserve was established in 1900 and has been accumulated out of the profits of the coinage of rupees and the interest upon the securities of the reserve. The whole of the profits of coinage for the past 21 years have been credited to the reserve, with the exception of £1,100,000 which was diverted for the construction of railways in 1907. There have been changes of policy from time to time. Sometimes the Reserve has been held largely in actual gold, partly in India and partly in London. For several years there was a rupee branch, which was established in 1908 out of the proceeds of

the sales of Reverse Councils. The Royal Commission on Indian Currency and Finance of 1913-14 regarded the holding of rupees in the Gold Standard Reserve as inexpedient; and suggested their exchange with gold of the Paper Currency Reserve. This was done accordingly in 1915.

Recent policy in the management of the Gold Standard Reserve has been in the direction of holding it mainly in sterling securities, and a very small part of it in actual gold. It used to be the practice to buy British Government loans, including long dated War Loan stock. In successive revaluations of the securities in the Reserve these long-dated loans showed a very serious depreciation; and when realisations were necessary, as in the early stages of the War, a heavy loss was incurred. The later policy was, therefore, to invest the Reserve partly in loans "at call" and "short notice" to the great financial houses in London; but mainly in the purchase of British Treasury bills and other securities having not more than 12 months' maturity, and which therefore cannot depreciate like long-dated investments. This was undoubtedly a sound policy; but in 1920, the advantage of a still further change was realised. Owing to the low interest yielded by loans "at call"

and "short notice," these were discontinued, and the whole Reserve, excepting a small cash balance at the Bank of England, was invested in British Government Securities, practically all of short date.

The Gold Standard Reserve should be looked upon as a national banking deposit of India kept in London, so that when there is an exceptional demand for payments to be made in London, Government may, so to speak, sell cheques on that deposit. Obviously, then, the money is required to be in the most liquid form possible.

The following statements of the composition of the Gold Standard Reserve on 31st of March, 1917 and 1921, will sufficiently illustrate what has been said above:—

*I. Details of the balance of the Gold Standard Reserve on the 31st March, 1917.*

|                                                                                                                                        |                     |
|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| In England :—                                                                                                                          | £                   |
| Estimated value on the 31st March 1917 of the Sterling Securities of the nominal value of £26,320,337 (as per details below) . . . . . | 25,405,570          |
| Cash placed by the Secretary of State in Council at short notice . . . . .                                                             | 6,001,456           |
| In India :—                                                                                                                            |                     |
| Gold . . . . .                                                                                                                         | 103,000             |
| Total.                                                                                                                                 | <u>£ 31,510,026</u> |

## Details of investments :—

|                                                                 | Face value<br>£ |
|-----------------------------------------------------------------|-----------------|
| Local Loans, 3 per cent Stock .                                 | 200,000         |
| Guaranteed $2\frac{3}{4}$ per cent Stock .                      | 438,720         |
| Transvaal Government 3 per cent<br>Guaranteed Stock (1923-53) . | 1,092,023       |
| Exchequer 6 per cent Bonds . .                                  | 4,134,500       |
| Exchequer 3 per cent Bonds . .                                  | 2,875,000       |
| Canada $3\frac{3}{4}$ per cent Bonds . .                        | 161,000         |
| New South Wales $3\frac{1}{2}$ per cent Stock                   | 113,000         |
| British Treasury Bills . . .                                    | 13,732,000      |
| National War Loan, $4\frac{1}{2}$ per cent Stock                | 3,574,094       |
| Total                                                           | £ 26,320,337    |

*II. Details of the balance of the Gold  
Standard Reserve on the 31st March, 1921.*

## In England :—

|                                                                                                                                                  | £            |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Estimated value on the 31st March<br>1921 of the Sterling Securities of the<br>nominal value of £ 40,123,243 (as per<br>details below) . . . . . | 38,951,416   |
| Cash at the Bank of England . .                                                                                                                  | 4,883        |
| Total                                                                                                                                            | £ 38,956,299 |

## Details of investments :—

|                                                                   | Face value          |
|-------------------------------------------------------------------|---------------------|
|                                                                   | £                   |
| British Treasury Bills . . .                                      | 24,559,000          |
| Guaranteed $2\frac{3}{4}$ per cent Stock . .                      | 438,720             |
| $2\frac{1}{2}$ per cent Consolidated Stock .                      | 1,000,000           |
| Transvaal Government 3 per cent<br>Guaranteed Stock (1923-53) . . | 1,092,023           |
| Exchequer $5\frac{3}{4}$ per cent Bonds, 1925                     | 2,663,700           |
| ditto 1921                                                        | 6,955,800           |
| National 5 per cent War Bonds .                                   | 3,414,000           |
| Total                                                             | <u>£ 40,123,243</u> |

## CHAPTER II

### PRICES AND VOLUME OF CIRCULATION

#### *Quantity Theory of Money*

During the course of the War and afterwards, we have seen enormous issues of paper money made by the principal countries of Europe. I think I am right in saying that in all cases this paper money nominally represents gold; but in fact it is inconvertible, and must remain so for very many years. It is clearly established and generally admitted that the extent of the depreciation of paper money, as measured by the rise of prices and wages in the country itself, is due more than anything else to the volume of the paper money in circulation. To understand this no resort to higher mathematics is necessary. Let us assume that in a certain country there are 400 crores of the monetary units (be they rupees, francs, or marks)

in circulation. Assume that this number is rapidly doubled, other things remaining the same, and in such a way that the 800 crores are distributed in the same proportion amongst all the inhabitants of the country. Then every body has twice as much money as he had before ; but there has been no change in the quantities of goods and property existing in the country. Therefore the prices of all things will be doubled. Other influences on the general level of prices, such as the rapidity of circulation, depending on the degree of organization of banking and the money market, and the activity of trade, are insignificant by comparison in a short time.

What is true as regards paper money is also true as regards the volume of coins in circulation, both standard and token money. It is also true of the volume of bank deposits kept on current or drawing account with all the banks in the country. When there is a general extension of credit by banks, this naturally increases at the same time as the grand total of deposits held with banks.<sup>1</sup> As affecting prices, however, only those deposits which people keep as ready money with the object of drawing cheques upon them, need to be taken into account. The volume

<sup>1</sup> By a process which I have fully explained elsewhere. See my book, *Money, Banking and Exchange in India*, Chapter XVII.

of fixed deposits in banks has much less effect on prices.

Whatever the precise form which the currency takes—whether standard or token money, paper money, or bank deposits subject to cheque—the total volume of the currency of all kinds, relative to the volume of trading goods within sight of the markets, is the chief cause determining the general level of prices.

This statement is generally known as the “quantity theory of money”. It has been examined and put upon a scientific footing by Professor Irving Fisher.<sup>1</sup> He has shown that prices are governed by the following equation of exchange :—

$$M \times V + M' \times V' = P \times T$$

Where  $M$  is the total quantity of money in circulation (coins plus currency notes).

$M'$  is the total sum of bank deposits subject to cheque.

$V$  is the velocity of circulation of the currency.

$V'$  is the velocity of circulation of bank deposits subject to cheque.

<sup>1</sup> See his book, *Purchasing Power of Money*, especially Chapters II to VIII.

P is the average level of prices, and T is the total volume of trade.

By total volume of trade is meant the sum total of the money values of transactions carried out in the country during a given period, say one year. By V is meant the average rate of turnover, which depends on countless individual rates of turnover, which in turn depend upon the habits of the people and the degree of organization of trade.<sup>1</sup>

If we assume for a moment that the velocity of circulation is the same for currency and for bank deposits (which is probably not exactly true), we make  $V = V'$  and the equation becomes :—

$$(M + M') \times V = P \times T.$$

From this it is evident that if V, the velocity of circulation, and T, the total volume of trade, remain constant, the average price level must vary proportionately with the quantity of money. The velocity of circulation is dependent on the trade customs and organization, and is something which probably changes slowly, at any rate, in peace times. The volume of trade, on the

<sup>1</sup> See Fisher's *Purchasing Power of Money*, page 152.

other hand, is subject to fluctuations from year to year in accordance with the general activity of trade, which depends largely on the world's harvests. This trade fluctuation is dealt with later, in Chapters IV and V.

As stated by Professor Irving Fisher in his equation of exchange, the quantity theory of money is undoubtedly valid, and he has given a statistical verification.<sup>1</sup> Very numerous examples could be quoted in confirmation of the theory from the statistics of prices and circulation of paper currency in many European countries, during the War and subsequently. In Poland, for example, the total circulation of currency notes and the average level of prices have increased step by step in nearly equal proportion. In England, the increase of prices has been found to be nearly proportional to the increase of currency including paper money.<sup>2</sup> In Norway, prices have been found to fall or rise in accordance with the ebb or flow of money from or to the country.

<sup>1</sup> See *Purchasing Power of Money*, Chapters XI and XII; also the *American Economic Review*, Vol. V, p. 407 (June, 1915), and annually thereafter; for example, see Vol. IX (1919), p. 408.

<sup>2</sup> See *Statements of Production, Price Movements and Currency Expansion in Certain Countries* (British official publication), 1919 [Cd. 484]; and *Economic Journal*, Vol. XXIX (1919), pp. 504-6 for abstract.

*Prices with Gold Currency*

The great difference between the standard money, gold, and the bank deposits, and token coins which represent it, is that gold is used as international currency, so that it tends to flow into or out of the country according to the prevailing level of prices in the country relatively to other countries and according to the rate of exchange. By way of illustration, we may say roughly that :

$$\text{Prices in India} = \text{Rate of Exchange} \times \text{World Prices.}$$

The effect of the international use of gold will be clear by considering as an example the case of a country which itself produces large quantities of gold. Suppose that in South Africa there was a law passed prohibiting the export of gold. What would happen? The mines would continue working and putting quantities of gold onto the market which they would send to be coined at the Mint, let us assume, or else to be deposited with banks, which would advance to its full value, and payments would be made by cheques. The increased quantity of gold commercially available in the country would gradually bring about a decided and continuous rise of prices. If the export was still prohibited, the

rise of prices would so increase, because of the production, that the cost of mining would increase, and the output of gold would become more and more restricted ; and ultimately would cease altogether.

Assuming, on the other hand, that the prohibition of export of gold continued for a comparatively short time only, the rise of prices would be sufficient to drive a considerable amount of gold abroad as soon as the prohibition was withdrawn. The price level having risen within the country, exports would be reduced and imports increased, thus producing a balance of indebtedness outwards, which could only be settled by sending gold. As the production of gold goes on continuously in a gold-producing country like South Africa, internal prices are maintained at a level permanently higher than prices in non-gold-producing countries. Thus the exchange is permanently unfavorable to a gold-producing country ; and a continuous stream of gold is exported.

As between non-gold-producing countries there is an inflow and outflow of gold as the balance of trade fluctuates ; and in this way, the general levels of prices in different countries are maintained at a parity.

*Inelastic Representative Currency*

When the principal currency of a country is not gold, entirely different conditions prevail. Supposing the circulation to be entirely token and paper money, then the price level in the country depends principally upon the volume of that currency and secondarily on the activity of trade. If the volume of the token and paper money is not elastic, but remains practically fixed, *exchange must fluctuate*, as being the only means of adjusting the internal level of prices to the external level, as we are assuming that there is no gold currency to be exported or imported.

The simple fact is that the value of a representative currency, token or paper money, can only be maintained by restricting its volume. The more its volume is increased, the more the price level is raised, and the more does exchange move against the country. Contraction of the volume of the representative money means a lower price level and exchange moving in favor of the country.

An excellent illustration of the effect of a redundancy of rupees is to be found in the course of events subsequent to the closing of the Indian Mints to the free coinage of silver in 1893. From that date the rupee ceased

to be a standard coin, and derived its value entirely from the limitation of its volume of circulation. In fact, there was not sufficient limitation of the circulation. So many rupees had been coined in 1892 and 1893 that, with the depressed condition of trade in the years 1894 to 1896, exchange continued to fall. The value of the rupee in exchange very soon became greater, however, than its intrinsic value as silver bullion ; and this margin, or seigniorage, gradually increased until with the reviving internal and export trade of 1897 and 1898 the rate of exchange rose, until it reached 1s. 4d. in the latter year. There is no doubt that, if Government had so desired, it could have raised the value of the rupee in exchange to 2s. in a few years, by the simple expedient of refraining from further coinage and retaining the volume of the paper currency circulation stationary. With the growth of population, and an expanding volume of business having to be conducted with a fixed quantity of money, the price level would have fallen and the value of the rupee in foreign exchange would have risen.

The process of limiting the circulation and raising exchange might indeed have been continued without limit. Probably the raising

of the rupee to 2s. 6d. would have caused a severe and long continued depression of trade; but the possibility of such a currency operation, and its effect being as described, cannot be controverted.

The relation between the total volume of circulation and the general price level, and the influence which they exert on exchange, are generally admitted. Writing on India, Mr. Shirras says:<sup>1</sup> "The effect of an increase in currency, other things being equal, is to lower exchange, and the effect of contracting it relatively to the work that it has to do, is to raise exchange. This is of interest in the light of experience from August, 1917, to the present time."

### *Inflation of the Currency in India during the War*

There are some people who maintain that the great rise of prices in India in recent years is not due to the inflation of the currency. That view is only correct if an unusual meaning be attached to the word "inflation." Inflation properly means the act of causing anything to enlarge or swell up. The inflation

<sup>1</sup> *Indian Finance and Banking* (1919), page 168.

of a balloon is the act of expanding it with gas. The inflation of the currency is, similarly, the act of increasing its volume by the issue of more currency. The word has, strictly speaking, no idea of the rightness or wrongness of the operation attached to it.

It is true that, owing to the evil results of an inflated currency, a Government which deliberately makes an over-issue of paper money, in order to finance its expenditure, meets with general disapprobation ; and rightly so. It does not follow, however, that the inflation of a currency is always a deliberate act of a Government, or that, if it be so, it is necessarily a wrong course of action. Under exceptional circumstances a considerable increase of the circulation may not only be justified but necessary. The question is entirely one of the net public advantage.

It will be understood then that, when I refer to the inflation of the Indian currency which occurred during the later stages of the War, I am not passing any adverse judgment on the Government for having been a party to that inflation. In the situation created by the War, it was necessary to have a large volume of exports from India to provide for the Indian Army abroad ; and the necessary purchases could not have been made, and a

sufficient volume of goods exported, without the creation of more currency, and the power thereby obtained of offering higher prices.

For our present purposes, it is only necessary to be clear as to the extent of the inflation which did occur; and a fairly accurate idea of this can be obtained from official figures.

It has to be remembered that our currency in India consists of four interchangeable media of exchange : (1) Rupees, (2) Currency Notes, (3) Bank Deposits subject to cheque, (4) Gold coins.

The total issue of gold in the form of sovereigns and of the gold mohur pieces of Rs. 15 was so small as to be negligible in comparison with the issues of rupees and notes; and I propose therefore to ignore it. This is further justified by the fact that probably almost the whole of the issues of gold were immediately hoarded or melted, and never formed any part of the real currency in circulation.

### *Silver in Circulation*

Silver was imported on an enormous scale during the four years 1916 to 1919, and the mints of Bombay and Calcutta coined a

record quantity of rupees. The following figures show the rupees coined during the War period and afterwards :—

|      |              |
|------|--------------|
| 1912 | 12,41,89,206 |
| 1913 | 16,32,65,951 |
| 1914 | 4,83,70,150  |
| 1915 | 1,52,72,118  |
| 1916 | 21,29,00,210 |
| 1917 | 26,47,82,876 |
| 1918 | 41,36,50,628 |
| 1919 | 42,76,06,284 |
| 1920 | 10,89,36,640 |
| 1921 | 1,15,15,179  |

From time to time, some of the newly coined rupees were exported ; but probably over 90 per cent of them were put into circulation in India. It is not to be supposed, however, that the actual circulation was increased by the addition each year of the enormous quantities coined. There is always an appreciable loss going on from the rupees in circulation, due principally to export and to melting up for use as bullion. From the summer of 1917, when the price of silver rose above 43d. per ounce, and above Rs.109 per 100 tolas in India, it became profitable to melt up rupees for all purposes for which silver was required. In spite of legal prohibition, undoubtedly very large quantities of rupees were melted up in

1917, 1918 and 1919; and further large quantities went into hoards. Hence it is impossible to find out what was the net increase of the circulation from the official figures of rupees issued.

There is a statistical method available, however, for measuring the rupee circulation, which is based upon the "census of rupees," which is taken every year in May under the direction of the Controller of Currency.<sup>1</sup> In this census, ten thousand coins are examined in each Treasury and Currency Office; and the number bearing each date of coinage is counted.

The percentage which the coins of each year bear to the total examined is ascertained; and the number counted is regarded as a true sample of the whole circulation.

From the result of a succession of such censuses, a calculation is possible of the actual total volume of circulation in any given year.<sup>2</sup>

An elaborate estimate on this basis has been made by Mr. G. Findlay Shirras; who found

<sup>1</sup> See Appendix to the Annual Report of the Controller of Currency for any recent year, where results of the annual censuses are published.

<sup>2</sup> The method is too complicated to be described here; but those interested in following the subject should consult Mr. G. Findlay Shirras's book *Indian Finance and Banking*, where the method is described in Appendix II; and Prof. Edgeworth's observations in the *Journal of the Royal Statistical Society*, Vol. LXXXIII, pp. 508-18 (July, 1920).

that the rupees in active circulation amounted, by 1912, approximately to 182 crores and in 1913 to 191 crores. His figures show a decrease next year, and then an increase to 227 crores by 1917. It is surprising to find that Mr. Shirras calculates that there was a *decrease* to 219 crores in 1918, a year in which the mints were working at high pressure and there was an unparalleled drain of the rupees in the reserve. Further, he finds an increase to only 228 crores in 1919.<sup>1</sup> Mr. Shirras does not discuss the validity of his estimates. In view of the enormous output from the mints (nearly 140 crores), in the four years 1916 to 1919, and the huge absorption of rupees by the public in 1918, his figures for 1918 and 1919 seem scarcely credible. The matter is too technical to be discussed here; but I prefer to rely upon my own calculations, which suggest a much larger figure for 1919—about 280 crores. The melting of rupees must have been freely resorted to in 1919 and 1920 owing to the high price of silver, and probably the wastage of 1920 was greater than the coinage of that year. As the rate of wastage was undoubtedly high, but varied very considerably from year to year during the period 1916 to 1920, and most probably affected the new coins more

<sup>1</sup> *Indian Finance and Banking* (Macmillan & Co., 1919). Table 16, page 462.

than the older coins, we have literally no means of estimating the circulation in 1920 or 1921.

For the purposes of this book, however, a series of very rough estimates will suffice; and I shall assume that the total active circulation of rupees (excluding, that is to say, those permanently hoarded and those lying in the Paper Currency Reserve) was as shown in the middle column of the following table. In the last column is given, for the sake of comparison, the holding of rupees in the Paper Currency Reserve at the end of May in each year, which corresponds approximately with the date of the rupee census.

| Year | Rupees in<br>Active<br>Circulation<br>(crores) | Rupees in<br>Currency<br>Reserve<br>(crores) |
|------|------------------------------------------------|----------------------------------------------|
| 1912 | 182                                            | 16                                           |
| 1913 | 191                                            | 16                                           |
| 1914 | 187                                            | 25                                           |
| 1915 | 204                                            | 32                                           |
| 1916 | 215                                            | 18                                           |
| 1917 | 230                                            | 15                                           |
| 1918 | 260                                            | 5                                            |
| 1919 | 280                                            | 19                                           |
| 1920 | 250                                            | 37                                           |
| 1921 | 220                                            | 63                                           |

The estimates of rupees in circulation for the years 1912 to 1915 are Mr. Shirras' figures; and from 1916 to 1919 my own

rough estimates. The estimate for 1920 is obtained by assuming a loss of 50 crores in the twelve months by wastage, due to melting, export, permanent hoarding, etc. As the rupees coined during that period amounted to nearly 38 crores, we have:—

|                          |    | Rs. crores |
|--------------------------|----|------------|
| Circulation in May, 1919 |    | 280        |
| Coinage, 1919-20         |    | 38         |
|                          |    | <hr/>      |
| <i>Deduct</i>            |    | 318        |
| Wastage                  | 50 |            |
| Return to Reserve        | 18 | 68         |
|                          |    | <hr/>      |
| Circulation in May, 1920 |    | 250        |
|                          |    | <hr/>      |

In calculating the circulation for 1921, I assume the wastage to be very much less, as the price of silver fell considerably during the later half of 1920, so that the reduction of the active circulation is mainly due to the return of rupees to the Reserve.

### *Paper Currency Circulation*

We come next to the paper currency circulation, and here we have no difficulty. The figures of gross circulation are issued week by week; and this is a true index of the spending power of the Government and the people of India in paper money, for

only an insignificant proportion of the notes is lost or accidentally destroyed.

| Year             | Gross circulation of currency<br>notes, 31st of March each year<br>crores of rupees. |
|------------------|--------------------------------------------------------------------------------------|
| 1910             | 54·4                                                                                 |
| 1911             | 55·0                                                                                 |
| 1912             | 61·4                                                                                 |
| 1913             | 69·0                                                                                 |
| 1914             | 66·1                                                                                 |
| 1915             | 61·6                                                                                 |
| 1916             | 67·7                                                                                 |
| 1917             | 86·4                                                                                 |
| 1918             | 99·8                                                                                 |
| 1919             | 153·5                                                                                |
| 1920             | 174·5                                                                                |
| 1921             | 166·2                                                                                |
| 1922 (Jan. 15th) | 172·9                                                                                |

### *Bank Deposits*

The remaining component of the circulation is the total of bank deposits subject to cheque. Unfortunately, we cannot learn this accurately from any published statistics ; for only a few of the banks distinguish in their balance-sheets between money and fixed deposits and on current account. In the following table the total deposits undoubtedly consist largely of moneys on fixed deposits ; and they are merely given by way of illustration, as

we may assume that, with the growth of deposits, the proportion of fixed deposits to the whole would continue to bear about the same proportion.

*Table II—Bank Deposits*

| 31st<br>Dec. | Presidency<br>Banks. | Exchange<br>Banks. | Joint Stock<br>Banks. | Total of All<br>Banks. |
|--------------|----------------------|--------------------|-----------------------|------------------------|
|              | <i>Rs. lakhs.</i>    | <i>Rs. lakhs.</i>  | <i>Rs. lakhs.</i>     | <i>Rs. lakhs.</i>      |
| 1910         | 36,58                | 24,79              | 25,66                 | 87,03                  |
| 1911         | 38,58                | 28,17              | 25,29                 | 92,04                  |
| 1912         | 40,11                | 29,54              | 27,26                 | 96,91                  |
| 1913         | 42,37                | 31,04              | 24,10                 | 97,51                  |
| 1914         | 45,66                | 30,15              | 18,37                 | 94,17                  |
| 1915         | 43,50                | 33,55              | 18,79                 | 95,83                  |
| 1916         | 49,91                | 38,04              | 25,72                 | 1,13,68                |
| 1917         | 75,43                | 53,38              | 32,16                 | 1,60,97                |
| 1918         | 59,62                | 61,26              | 42,15                 | 1,63,03                |
| 1919         | 75,94                | 74,36              | 61,28                 | 2,11,57                |
| 1920         | 87,05                | 74,81              | 73,43                 | 2,35,29                |
| 1921         | 71,71 <sup>1</sup>   | ...                | ...                   | ...                    |

<sup>1</sup> Imperial Bank of India.

### *Total Circulation and Prices*

Combining these three sets of figures, the following table may be taken as roughly

illustrating the total growth of circulation during the War period and thereafter :—

*Table III—Total circulation*

| Year. | Rupee circulation. | Note circulation, 31st Dec. | Bank Deposits, 31st Dec. | Total circulation. | Index No. of Prices. |
|-------|--------------------|-----------------------------|--------------------------|--------------------|----------------------|
|       | Rs. Crs.           | Rs. Crs.                    | Rs. Crs.                 | Rs. Crs.           |                      |
| 1912  | 182                | 66                          | 97                       | 345                | 137                  |
| 1913  | 191                | 65                          | 98                       | 353                | 143                  |
| 1914  | 187                | 61                          | 94                       | 342                | 147                  |
| 1915  | 204                | 62                          | 96                       | 362                | 152                  |
| 1916  | 215                | 82                          | 114                      | 411                | 184                  |
| 1917  | 230                | 108                         | 161                      | 499                | 196                  |
| 1918  | 260                | 147                         | 163                      | 570                | 225                  |
| 1919  | 280                | 183                         | 212                      | 675                | 276                  |
| 1920  | 250                | 161                         | 235                      | 647                | 281                  |
| 1921  | 220                | 173                         | 204 <sup>1</sup>         | 597 <sup>1</sup>   | 260 <sup>1</sup>     |

<sup>1</sup> Author's estimate on information available.

An examination of these figures reveals several features of interest. The bank deposits increased together with the total circulation till 1919, getting slightly in advance in 1917; but during 1920 deposits continued to increase, in spite of a reduction of the currency circulation. This was probably due to the extension of credit on the vast amount of goods imported. It is of special interest to compare the rise of prices with the increase of

the total circulation. For this purpose, I have quoted in the last column of the table the annual index number of prices published by the Department of Statistics which is calculated on the basis of 39 staple commodities of commerce.

In order to bring out the comparison of the price level with the growth of circulation more clearly, I have reduced the figures of total circulation and the index numbers of prices to the common denominator of 100 for the year 1912, and have thus obtained the following series of percentages:—

| Year | Circulation | Prices |
|------|-------------|--------|
| 1912 | 100         | 100    |
| 1913 | 102         | 104    |
| 1914 | 99          | 107    |
| 1915 | 105         | 111    |
| 1916 | 119         | 134    |
| 1917 | 145         | 143    |
| 1918 | 165         | 164    |
| 1919 | 195         | 201    |
| 1920 | 187         | 205    |

It is noticeable that the slight contraction of the circulation in 1914, following the outbreak of War, did not stop the rise of prices, neither did the contraction of the circulation in 1920. Apart from this, there is a large measure of

uniformity in the rise of prices and the growth of the circulation.

The index number of prices in India above quoted is the only one available with any official authority behind it which has been carried on for a long series of years and brought up to date. It is far from being perfect as an index of the general level of prices throughout the country; for the 39 commodities<sup>1</sup> contain rather too large a proportion of foodgrains, and the other commodities are represented only by quotations at the great ports—Bombay, Calcutta, Madras, Rangoon, and Karachi, and therefore follow rather more closely the prices in foreign markets than does the general level of prices throughout the inland parts of India.<sup>2</sup>

### *Mechanism of the Inflation of the Currency*

It is interesting to observe the manner in which the currency became inflated during the years 1916 to 1919; and the proper understanding of this is essential to an appreciation of the exchange problem as it now

<sup>1</sup> See list given in Appendix II, *Index Number of Prices in India from 1861 to 1918*, Superintendent of Government Printing, India, Calcutta. Price As. 12.

<sup>2</sup> For note on index numbers of prices for India, see Appendix.

presents itself. When the balance of trade turned strongly in favor of India towards the end of 1915, the Secretary of State began to sell Councils freely and soon found that if the export trade was not to be hindered he must sell beyond his own requirements. The employment of the Indian Army in Europe and other foreign theatres of war acted as an "invisible export." The British Government refunded the extra expenses so incurred by the Indian Government to the Secretary of State in London; and very soon these refunds became by themselves more than sufficient to meet the Secretary of State's ordinary expenditure. If such a situation had arisen in peace times it would have been met by the import of large quantities of gold into India for liquidating the favorable balance of indebtedness caused by the export trade. Owing to the War, however, all the great Governments jealously guarded their stocks of gold, and prohibited export; for otherwise they would have lost their gold entirely, on account of the great rise of prices in their own countries.

It being essential to obtain from India cotton, jute, oilseeds, and various raw materials, the Secretary of State was obliged to sell Councils for the purpose to the utmost limit of his capacity. That limit was set by the

possibility of providing rupees in India. He made great purchases of silver in the open market in 1916 ; and continued to purchase until the Indian demand began seriously to raise the world's price of silver ; though it is fair to add that some of the other countries economically affected in the same way were also absorbing silver.

As it was impossible to purchase and coin sufficient rupees, it was necessary greatly to increase the circulation of the paper currency ; and this was done as noted above (in Chapter I) by increasing from time to time the fiduciary portion of the Reserve, the increase being, after 1915, entirely in the securities held in the United Kingdom. Thus the Secretary of State was piling up a fiduciary reserve in the form of British securities in London and issuing paper rupees against them in India. This was a process of inflating the currency which might have gone on without limit, had it not been necessary to maintain the convertibility of the currency notes. These were not acceptable to the agricultural classes in the greater part of India ; and for buying cotton, jute, wheat, hides and oil-seeds, vast quantities of silver were paid out to the cultivators through the hands of local dealers and the agents of large exporting

firms. It is true that later on successful experiments were made in the purchase of the wheat crop in the Punjab with gold and the jute crop in Bengal with currency notes, including one-rupee notes. Yet, throughout the greater part of India the drain of silver continued ; being augmented by the high payments made in recruiting for the Army and for numerous labor corps, and for payments of pensions and leave allowances.

In May, 1919, the silver in the Paper Currency Reserve decreased to the record low level of four crores for the whole of India ; and we seemed to be on the point of inconvertibility of the Paper Currency. The opportune arrival of a ship-load of silver, purchased from the United States Government under the Pittman Act, saved the situation ; and the continuous arrivals of "Pittman silver" soon re-established the Reserve, in spite of a continued drain of rupees.

It is probable that the operations of the Secretary of State expanded the circulation of currency notes upon the fiduciary basis up to the limit that was possible. That inflation caused a rise of prices in India which became itself an important cause of the severity and long continuance of the drain of silver from the Reserve.

The rapid rise of prices was observed with amazement and distrust by the population in general. They believed that the *bantias* were trying to withhold stocks of goods and cheating them. They anticipated that there would be a rapid fall of prices immediately the War was over; and the natural policy was to make existing things last as long as possible—to save money now, and buy later on.

It was not only the consumers who followed this policy; the *bantias* and local merchants throughout the country adopted the plan of letting their stocks of goods run low because they feared to buy at high prices, and also to some extent because there was actual difficulty in buying many kinds of goods at all. Hardly any of these local dealers keep banking accounts, and their liberated capital was kept in chests on their premises in the shape of silver rupees.

### *Government and Inflation*

It is often claimed that the action of the Indian currency system and of the Gold Exchange Standard is automatic; and that Government has no power to vary the total volume of the rupee or paper currency circulation at will.

Yet, Government having a monopoly of producing coin and paper money, inflation of the currency (as distinct from inflation of credit) can result only from the action of Government in producing more money. In normal times, as before the War, it is quite true that the expansion and contraction of the circulation is automatic, depending on the state of trade ; and so long as public revenue exceeds expenditure Government has no means of putting into circulation an increased amount of money which is not demanded by the state of trade.

There are, however, three ways by which inflation has been, or can be, caused by the Government. (1) When there is a rapid rise of prices outside India, as in 1915 to 1918, there would be an enormous inflow of gold and silver to India if the movement of the precious metals were free. If Government, under such circumstances, and when import of gold and silver is impossible, does not permit exchange to take the normal course of rising, but sells Councils at a fixed rate and pays them by issuing notes against sterling securities, that is a policy which causes inflation of the currency in India. It may be pushed to the limit of making the paper currency inconvertible by drawing heavily on the reserve of rupees, as nearly happened in 1918. The extent of inflation possible by this

method is conditioned by the relative price levels in the two countries and the fixed rate of exchange adopted.

(2) The common method of inflation in all countries is the financing of a deficit in the public revenues by the creation of more money : either tokens—like rupees—which are coined at a profit, or more usually paper money. When the newly-created money goes straight to the Treasury Balances (as in many countries it does) it is obvious that there is a creation of purchasing power by the Government on its own behalf and a consequent distribution of a larger volume of money in circulation amongst the people. In India the mechanism of this process is the issue of paper currency against Government's own Treasury bills—the so-called "created securities."

(3) The other method, or group of methods, of inflation is in essence the same as (2). The actions being indirect, the cause of the inflation is not commonly understood ; but the result is the same and the prime cause also—the need of Government to spend more than it receives. Whenever a Government undertakes extraordinary expenditure greatly exceeding the normal—as during a war, or even in taking up simultaneously a series of great public works—it is obliged to offer increased prices for most

kinds of labor and materials needed, so as to command a sufficient supply in a short time. The money needed to meet this extraordinary expenditure may not be simply coined, or printed and issued, as in method (2): the Government may use its more or less unlimited credit in one or more ways. It issues a big loan; and, if it wishes this to be highly successful, makes a good part of the existing stock of money in the country serve several times over by depositing the proceeds of the loan in a bank, as fast as the money is paid in by the subscribers to the loan. Then commences the heavy expenditure at enhanced prices: the Government's cheques are paid by the banks to the contractors, and these draw on their banks for disbursements in coin and notes; consequently a big demand for currency sets in. As this money gets distributed amongst the people, the price level rises, and exchange turns against the country.

There are a dozen variants of this last method; but all depend upon the Government using its credit to finance extraordinary expenditure, or a deficit of revenue. One variant is the expansion, which took place in 1920, of that part of the Indian paper currency circulation which is backed by the "created securities" of the Government of India—that is, the securities

issued for this purpose. When Government borrows from banks by selling them Treasury bills, or otherwise, the effect is the same ; for the people whom Government pays bring that same money to the banks as deposits ; and the banks can go on buying Treasury bills indefinitely—so long as Government also supplies them with legal tender notes for their reserves. Both bank money and currency in circulation are increased, and prices rise.

The result of this analysis is to show that any inflation or increase of the currency not due to the influx of gold, by whatever mechanism it is effected, must be the result of some action of Government. Consequently, deflation can only take place by action of Government. Prices are raised also, of course, by inflation of credit which occurs when trading becomes speculative and everybody is lending, or when banks begin to lend more freely. When banks lend increasingly on stocks and shares, and on land, as well as on commodities of commerce, inflation of credit becomes pronounced. The extent of the inflation of credit depends on the extent to which commodities are valued beyond normal, and the only brake is the necessary relation of cash reserves to deposits, which has sometimes been disastrously ignored.

*Deflation of the Currency*

After a period of inflation and rapidly rising prices, the reaction must come sooner or later. In Europe, there was a great boom of trade in 1919 and the early part of 1920. The summer of 1920 saw a commencement of the collapse, indicated by a small but definite fall in the general level of prices. Statistics seem to show that in England the commencement of deflation followed soon after the beginning of the general fall of prices; but in India the opposite has been the case. The deflation commenced early in 1920, as the result of the turning of the balance of trade; but it will probably be found, when index numbers for 1920, 1921 and 1922 have been calculated, that the general level of prices in 1921 was but little below 1920.

Statistics enable us to trace already pretty clearly the progress of the deflation. There was no gold in circulation in 1920 or 1921; and the figures of bank deposits, which are always published very late, are not yet available. These, however, vary in proportion with the total volume of the currency circulation, so I shall neglect them now. The contraction of the paper currency circulation commenced in January, 1920, with the sale of Reverse Councils,

the proceeds being largely, but not entirely, used to cancel notes. The monthly figures of the gross circulation of the Paper Currency given below show that the reduction continued during the whole period throughout which Reverse Councils were sold, that is, until the end of September, 1920. On the last day of that month the circulation was 157 crores. From that date onwards there was still a slight increase each week till the maximum figure of nearly 180 crores was reached in October, 1921; but there has been a renewed decrease of the circulation since then.

The gradual expansion of the Paper Currency during the past fifteen months does not mean, however, that deflation was not at the same time proceeding. We have to bear in mind that the total volume of circulation consists mainly of rupees and currency notes. If the latter was expanding slightly, the rupees in circulation were certainly diminishing even more; for a large volume of whole rupees was coming back from circulation and swelling the holding of silver in the Paper Currency Reserve. This is shown clearly in the third column of Table IV.

The net reduction of the circulation is found by subtracting the increase (or adding

TABLE IV.—NET REDUCTION OF CIRCULATION

| Date            | Gross circulation of Paper Currency | Rupees in the Currency Reserve | Net monthly increase (+) decrease (−) in the rupee and paper circulation | Progressive total. Reduction of circulation from 31st Jan. 1920 |
|-----------------|-------------------------------------|--------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------|
|                 | Rs. lakhs                           | Rs. lakhs                      | Rs. lakhs                                                                | Rs. lakhs                                                       |
| 1919, Oct. 31st | 1,75,29                             | 35,58                          | ...                                                                      | ...                                                             |
| Nov. 30th       | 1,79,67                             | 32,84                          | + 7,12                                                                   | ...                                                             |
| Dec. 31st       | 1,82,91                             | 29,64                          | + 6,44                                                                   | ...                                                             |
| 1920, Jan. 31st | 1,85,15                             | 28,38                          | + 3,50                                                                   | ...                                                             |
| Feb. 29th       | 1,83,03                             | 29,84                          | − 3,58                                                                   | − 3,58                                                          |
| Mar. 31st       | 1,74,52                             | 33,22                          | − 11,89                                                                  | − 15,47                                                         |
| Apr. 30th       | 1,70,74                             | 33,80                          | − 4,36                                                                   | − 19,83                                                         |
| May 31st        | 1,66,92                             | 37,10                          | − 7,12                                                                   | − 26,95                                                         |
| June 30th       | 1,64,34                             | 41,94                          | − 7,42                                                                   | − 34,37                                                         |
| July 31st       | 1,63,87                             | 46,75                          | − 5,28                                                                   | − 39,65                                                         |
| Aug. 31st       | 1,63,27                             | 51,62                          | − 5,47                                                                   | − 45,12                                                         |
| Sep. 30th       | 1,57,63                             | 54,34                          | − 8,26                                                                   | − 53,48                                                         |
| Oct. 31st       | 1,59,58                             | 55,60                          | + 69                                                                     | − 52,79                                                         |
| Nov. 30th       | 1,60,21                             | 56,05                          | + 18                                                                     | − 52,61                                                         |
| Dec. 31st       | 1,61,40                             | 57,13                          | + 11                                                                     | − 52,50                                                         |
| 1921, Jan. 31st | 1,63,41                             | 58,95                          | + 19                                                                     | − 52,31                                                         |
| Feb. 30th       | 1,64,60                             | 60,03                          | + 11                                                                     | − 52,20                                                         |
| Mar. 31st       | 1,66,16                             | 61,42                          | + 17                                                                     | − 52,03                                                         |
| Apr. 30th       | 1,67,32                             | 62,45                          | + 13                                                                     | − 51,90                                                         |
| May 31st        | 1,67,81                             | 62,96                          | − 2                                                                      | − 51,92                                                         |
| June 30th       | 1,71,76                             | 66,86                          | + 5                                                                      | − 51,87                                                         |
| July 31st       | 1,75,56                             | 70,61                          | + 5                                                                      | − 51,82                                                         |
| Aug. 31st       | 1,76,02                             | 72,19                          | − 112                                                                    | − 52,94                                                         |
| Sep. 30th       | 1,78,37                             | 74,55                          | − 1                                                                      | − 52,95                                                         |
| Oct. 31st       | 1,79,71                             | 75,76                          | + 13                                                                     | − 52,82                                                         |
| Nov. 30th       | 1,73,48                             | 74,21                          | − 4,68                                                                   | − 57,50                                                         |
| Dec. 31st       | 1,72,53                             | 69,76                          | + 3,50                                                                   | − 54,00                                                         |

(For the latest figures continuing this table, see the Supplement at the end of this volume)

the decrease) of the Paper Currency circulation—from (to) the increase of the silver holding in the Reserve. Making these calculations each month, we have the figures given in the fourth column of Table IV, which indicate the net monthly decrease (—) or increase (+) of the circulation. The last column gives the progressive total reduction of circulation. It is interesting to see that the deflation has been considerable and almost continuous since the beginning of 1920.

Since July, 1920, the coinage of whole rupees has been practically suspended, except for the recoinage of worn rupees withdrawn from circulation; but a considerable quantity of half-rupees has been coined.

The actual rate of coinage, however, has no influence itself upon the total rupee circulation (coins and paper). New coins are not, as a rule, transferred from the Mints to the Treasury Balances, but to the Paper Currency Reserve. Under the 1920 Act each rupee placed in the reserve enables the issue of two rupees of paper money against it; but this power need not be made use of. If each silver rupee coined is used to replace a rupee's worth of "created securities," there is no effect whatever upon the circulation. The only result is to increase

the percentage of the metallic portion of the Reserve.

When rupees come back from the active circulation, as has been happening during the past two years, the banks and treasuries find themselves overloaded with rupees, and they exchange them for currency notes of large denominations which are more conveniently stored. This increases the paper currency circulation, but the net effect on the paper-plus-coin circulation is *nil*. Thus, when we see that the paper currency circulation was increasing until the end of October, this does not mean that the paper-plus-coin circulation was increasing. On the other hand, as is clearly shown in Table IV, there was a net decrease during the preceding six months.

## CHAPTER III

### WORLD-WIDE TRADE DEPRESSION

#### *The Short-lived Boom*

The boom of trade which followed the conclusion of peace at Versailles in all countries which had not been devastated by the War was of unprecedented intensity. The extreme shortage of stocks of all commodities and constructional materials created a terrific demand before which prices soared, whilst labor everywhere became restive, and costs of production rose correspondingly. All this had been foreseen by business men immediately the Armistice had been declared. What had not been anticipated was the comparatively short duration of the boom. Even in the summer of 1919 confidence was universal, and everyone expected trade prosperity to last for at least another two or three years. No serious and general decline of prices was anticipated before the summer of 1922 at the earliest.

Yet the trade boom of 1919-20 was shortlived, like the greatest of its predecessors. Prices had risen to a height at which buyers could only afford the most urgent requirements. Governments, railways and industrial companies had exceptional needs which had to be satisfied at any price. To the "war profiteers" high prices did not matter—they must rise to their new and luxurious standard of living at any cost; but the general public was not going to buy much at inflated prices. Pressing needs being satisfied, the demand at top prices slackened. There remained only a large potential demand which would come into effective operation at lower levels of prices. Hence the inevitable bursting of the bubble.

### *Beginning of the Collapse*

In the early months of 1920, the first signs of falling prices were observed. In March and April, the prices of the metals, such as copper, lead, zinc, and of other raw materials, began to decline in England and America. The enormous demand for iron and steel for reconstruction purposes kept up their prices some months: and the price of coal remained high throughout the summer.

By June, however, a general decline of prices, definite though as yet slight, had set in ; and the fall of prices continued month by month, at first gradually, but in the autumn and winter months rapidly. In fact, from September, 1920, onwards, the collapse of prices was in full swing.<sup>1</sup>

It is interesting to observe that the actual date of the turn of the tide differed but little in different countries. *The Statist* publishes each month a very useful table of the monthly index numbers of prices in the principal countries of the world. From these we observe that prices reached their maximum in England in April, 1920, whilst in the United States the maximum occurred in May.<sup>2</sup> In France and Italy, prices were highest in April, but in Japan the maximum was in March. In the latter country, a financial crisis developed in April and prices fell all the more rapidly thereafter. When we turn to some of the neutral countries, we find that the general fall of prices commenced a little later : for instance, in Sweden the maximum came in June, 1920, in Holland in July, in Norway and Denmark in

<sup>1</sup> See *Wholesale Prices of Commodities in 1920*, Journal of the Royal Statistical Society, Volume LXXXIV, page 257 (March, 1921).

<sup>2</sup> Federal Reserve Board and United States Labor Bureau index numbers.

September, in China (Shanghai) in June. No index number for India is quoted ; but the maximum in India according to the index numbers of wholesale prices in Calcutta and Bombay occurred in June and July, 1920 ; but the fall in the following months was far less than in England and America. This will be discussed in the Appendix.

One other country is of special interest. It is instructive to set the figures of the note circulation and the index numbers of prices in Germany side by side :—

NOTE CIRCULATION OF IMPERIAL BANK OF GERMANY

| End of      | Crores of Mark's<br>(00,00,000's omitted). | Index No.<br>of prices |
|-------------|--------------------------------------------|------------------------|
| <i>1920</i> |                                            |                        |
| January     | 37,44 <sup>1</sup>                         | 131                    |
| July        | 54,00                                      | 141                    |
| <i>1921</i> |                                            |                        |
| January     | 66,20                                      | 136                    |
| February    | 67,42                                      | 131                    |
| March       | 64,38                                      | 130                    |
| April       | 70,84                                      | 132                    |
| May         | 71,84                                      | 128                    |
| June        | 75,32                                      | 135                    |
| July        | 77,39                                      | 156                    |
| August      | 80,07                                      | 164                    |
| September   | 86,38                                      | 184                    |
| October     | 91,53                                      | 284                    |
| November    | 100,94                                     | ...                    |

<sup>1</sup> The figures before the comma represent hundreds of crores or thousands of millions.

In Germany, there was a maximum of prices in November, 1920; but after falling continuously till July, 1921, prices again rose sharply in that country, reaching in October a much higher point than the maximum of 1920. Doubtless this was due, in the first instance more to the creation of additional paper money in connection with the big reparations payment of August 31st, 1921, than to any legitimate revival of trade, as is shown by the figures for the total outstanding note circulation of the Imperial Bank of Germany.

### *Present Level of World Prices*

In all the principal countries there was a continuous fall of prices throughout the later months of 1920 and the first six months of 1921; but in July, a slight rise took place in the principal countries (due in England mainly to minerals and textiles),<sup>1</sup> whilst the fall was renewed in August, 1921. The actual level of prices in recent months can be judged best from the index numbers quoted in *The Statist*, choosing the series which have been recalculated to the basis of 100 for prices in 1913. In the table on the opposite page, I have selected a sufficient number of examples to illustrate the extent of the fall from the

<sup>1</sup> See *The Statist*, August 13th, 1921, p. 263.

maximum price level in 1920 and to show the present position, and have added the index

TABLE V.—MONTHLY INDEX NUMBERS OF PRICES

| Month                | India<br>(Bombay) | England | United<br>States | France | Italy | Germany | Japan |
|----------------------|-------------------|---------|------------------|--------|-------|---------|-------|
| 1913 (average)       | 100 <sup>1</sup>  | 100     | 100              | 100    | 100   | 100     | 100   |
| 1920 (highest month) | 224               | 313     | 264              | 588    | 670   | 1690    | 322   |
| 1920 November        | 204               | 263     | 190              | 461    | 670   | 1658    | 221   |
| December             | 192               | 244     | 173              | 435    | 655   | 1603    | 206   |
| 1921 January         | 191               | 230     | 163              | 406    | 642   | 1473    | 201   |
| February             | 191               | 215     | 154              | 377    | 613   | 1419    | 195   |
| March                | 190               | 209     | 150              | 360    | 604   | 1408    | 191   |
| April                | 198               | 200     | 143              | 347    | 584   | 1430    | 190   |
| May                  | 199               | 191     | 142              | 329    | 547   | 1387    | 191   |
| June                 | 197               | 183     | 139              | 325    | 509   | 1463    | 192   |
| July                 | 199               | 186     | 141              | 330    | 520   | 1690    | 197   |
| August               | 203               | 182     | 143              | 331    | 542   | 1777    | 199   |
| September            | 207               | 176     | 143              | 342    | 580   | 1993    | 207   |
| October              | 195               | 163     | 141              | 332    | 599   | 2687    | 219   |
| November             | 193               | 161     |                  |        |       |         |       |

<sup>1</sup> July, 1914=100.

numbers of wholesale prices in Bombay published by the Labor Department of the Government of Bombay.<sup>1</sup>

The fall of prices is most marked in the United States and England, and is considerable in France. In Japan, there is a slight upward tendency, and in Germany the considerable rise due to the further inflation of the paper currency circulation above mentioned. The figures for Holland, Switzerland and Sweden, which there is not space to quote here, show a continuous decline of prices more or less parallel with that of England;<sup>2</sup> but with a trifling rise in September in the case of the first two.

### Continuous — *Volume of Trade*

Low and falling prices are not the only characteristic of a depression of trade. The contraction of the volume of trade which occurs at the same time that prices are falling, is an equally striking and equally disconcerting phenomenon. Those whose business takes them frequently to the docks of any of the world's great ports, have the evidence of this thrust all too plainly on their eyes. In 1920 even, they began to see ships coming into

<sup>1</sup> See *Labour Gazette*, published monthly by the Labour Office, Bombay, Vol. I, No. 4, December, 1921, p. 43.

<sup>2</sup> See *The Statist*, November 12th, 1921, page 719.

London and other ports with the loading line well above water; and as month followed month so were ships one by one laid up in harbor, being unprofitable to sail with the reduced cargoes offering, and the high working costs.

All maritime countries of the world publish monthly statistics of foreign trade; and from these it is possible to get a fairly accurate idea of the shrinkage of the volume of goods entering and leaving each country. The figures of foreign trade as usually quoted in the newspapers are of little use for the purpose; for they give only the *total money value* of the trade inwards and outwards. Obviously, a general rise or fall of prices affects the total money value of the trade precisely in proportion to the amount of the rise or fall of prices, if the quantities of commodities of all kinds passing in and out remain unchanged.

It is difficult to obtain any direct statistical measure of the change of the volume of trade, because there are so many commodities measured in various different units. Each would have to be examined separately. There are two ways of finding very roughly the extent of the change of the quantities of goods passing: (1) by selecting several of the great staple

commodities of commerce—wheat, rice, cotton, jute, sugar, coal, and so forth—which are measured by weight or bales, or other unit, in the official returns of foreign trade, and calculating the change separately for each and then combining them into an index number, each being weighted, according to its importance by money value in the whole list of staple commodities in the base year; or (2) dividing the total money value of the foreign trade at successive dates by the general index numbers of prices at the same dates, which would eliminate the effect of the change of prices, if the index numbers of prices in the country accurately represented the average change of prices of the commodities imported and exported.

Neither method is free from objection. The first assumes that the change in a few staple commodities may be taken as a fair indication of the change of volume of the whole trade; whilst the second method has the weakness that the general index number of prices in a country does not usually correspond exactly with the prices at which its foreign trade is valued in the official returns. The following figures relating to the United Kingdom are given as illustrating this second method rather than as actually measuring the

decline of the volume of overseas trade. They are obtained by dividing the combined monthly totals of the import and export trade of the United Kingdom by the *Statist* index numbers, month by month.

TABLE VI. APPROXIMATE INDEX NUMBERS OF VOLUME  
OF TRADE OF THE UNITED KINGDOM

|           | 1920 | 1921 |
|-----------|------|------|
| January   | 100  | 87   |
| February  | 83   | 74   |
| March     | 92   | 75   |
| April     | 86   | 73   |
| May       | 92   | 65   |
| June      | 93   | 67   |
| July      | 98   | 66   |
| August    | 86   | 76   |
| September | 89   | 79   |
| October   | 90   | 89   |
| November  | 96   | 94   |
| December  | 95   |      |

A more accurate method of measuring changes of the volume of trade has been devised and utilized by the British Board of Trade. The quantities and prices of goods imported and exported in the base year having been ascertained, the quantity of

each commodity imported and exported in subsequent years or months is multiplied by the price of that commodity in the base year, thus obtaining the total value of the trade in the subsequent years at the prices of the base year. The change of this arbitrary total value from month to month or year to year is a measure of the change of the volume of trade. This method was applied to Indian foreign trade for the period 1901-02 to 1916-17 by the Department of Statistics <sup>1</sup> ; but these calculations have not been published for later years.

The Board of Trade ascertains the change in the volume of trade of the United Kingdom for each quarter of the year by this method, the quantities imported and exported being valued at the prices which prevailed in the first quarter of 1913. The results are of interest as showing the decline of the volume of trade since the boom of 1920. For example, the volume of the import trade of the United Kingdom during the first quarter (January to March) of 1921 was only 75 per cent of the volume of the import trade during the corresponding period of 1920, whilst the exports of home produce had

<sup>1</sup> See *Statistical Tables showing for each of the years 1901-02 to 1916-17 the Estimated Value of the Imports and Exports of India at the Prices prevailing in 1899-1900 to 1901-02.* (Superintendent of Government Printing, India, 1918.)

fallen to 71 per cent in volume. In the second quarter of 1921 (April to June), the imports were 78 per cent of the volume in the corresponding period of 1921 and the exports only 52 per cent. The falling off of the volume of trade was very marked during the summer owing mainly to the coal strike. There was a definite recovery of the volume of British trade during the later months of 1921; and so far as present indications go, this seems likely to be maintained, which arouses hope that the most acute phase of the slump of trade has already passed. Although trade is likely to remain depressed, so far as the level of prices is concerned, a gradual revival to a normal and healthy activity is in progress.

## CHAPTER IV

### CAUSES OF THE TRADE DEPRESSION

The foregoing survey of prices and trade is probably sufficient to give a good idea of the present situation. This chapter may be devoted, therefore, to a discussion of the causes probably responsible for it, with some estimate of their relative importance and probable duration. It will appear that there are no less than five distinct causes, each of which has contributed separately towards the depression of trade, and everyone of which is continuing in action, with varying degrees of intensity.

In the first place, it is inevitable that a collapse of prices and trade should succeed a boom of intense activity, such as followed the termination of the Great War. Whilst urgent demands remain unsatisfied, prices keep on mounting higher and higher. Optimism prevails universally, and the profits of businesses

are so great that much new capital is invested. Not only are numerous and big companies floated, but the erection of new mills, factories, and works is commenced which sooner or later must reach the producing stage and add their supply to markets already suffering from a glut of goods.

The collapse of prices following the boom was not in the present case, I believe, mainly the result of supplies arising from new sources. It was simply a necessary reaction from a feverish market created by the extraordinary shortage of many commodities caused by the War and by the aggregation of wealth in new hands. The imperative demands being satisfied, the normal supplies coming forward could not be absorbed at the prevailing high prices. In fact, the normal supplies were enlarged in some industries where more labor could be employed on overtime work, or where the investment of new capital could be rapidly accomplished. This hastened the collapse, which must in any case have come no more than a few months later, if supplies had remained normal. Once the tide of prices had turned, that very fact tended to increase the scope and intensity of the collapse. With falling values of commodities in stock, credit became

restricted and manufacturers could not carry out their plans for the enlargement of their businesses; and this reacted unfavorably on other industries. Hence, by action and reaction the collapse developed into acute depression.

### *Destructive Effects of the War*

Although a collapse and depression of trade were the inevitable consequences of an excited boom, the present depression of trade is being accentuated by several other causes. Not the least of these is the exhaustion of the European countries as a result of the wide-spread ruin and destruction caused by the War. The destruction of property in the shape of railways, roads, houses, factories and machinery was prodigious. Civilization has created much wealth and property during the past hundred years; but the destruction of four years of almost universal war was upon an equally gigantic scale.

Although the physical destruction and deterioration of property extended over hundreds of thousands of square miles, its aggregate effect upon the world's industry is far less serious than the destruction of the political and social organization of the peoples of Central and Eastern Europe. The

effect of the War upon the peoples of Russia, of the former Austro-Hungarian Empire and of the Balkans and Turkey has been a breakdown of the social fabric. The political changes—the revolutions and setting up of new governments—must be sufficiently embarrassing to merchants in those countries; but when this is accompanied by a complete subversion of the social order, as in Russia, Poland, Austria and Hungary, commercial enterprise is stifled and the former channels of trade destroyed. Old-standing merchants have lost their capital, if they have escaped with their lives. The present traders are largely upstarts who have seized the occasion and made money by the various opportunities which the new state of affairs affords. They know nothing of foreign commerce and confine themselves to local trade and speculation. Furthermore, the general social upheaval is accompanied by what is generally called “war-weariness.” Skilled workmen and laborers refuse to work the long hours which they did before the War; their output is much reduced, and the work is not so well organized as formerly. A large percentage of adult men have lost their health and their energy in the hardships of the long-drawn-out campaigns; and very many have their mental faculties impaired. From

all this, the countries most fully involved in the War are suffering severely ; but, since all trade is reciprocal, the reduced productiveness of labor throughout nearly the whole of Europe affects the demand for goods throughout the world.

### *Disorganized Exchanges*

The difficulties of trade are immensely accentuated by the disorganized condition of nearly all the principal foreign exchanges. Reference from time to time to any financial paper shows how the exchanges keep fluctuating ; and in a manner which it is impossible to foretell. This reduces every foreign trading operation to a gamble ; and only those bargains are concluded which appear to show a large margin of profit at present prices and exchange rates. It is true that numerous exchange banks dealing between the principal countries make forward contracts ; but many of the important exchanges are so erratic that no bank will risk forward sales.

The outlook as regards the European exchanges is by no means hopeful, for most of them are going from bad to worse. The finances of all the late European belligerent nations are in a bad way. The huge excess of

recurring expenditure over revenue is made good only by continuous recourse to the printing press; and the continuous inflation of the paper currencies tends always to weaken their exchanges further and further. In the case of Germany, which is perhaps the only country on the continent of Europe which has retained its industrial and commercial organization but little impaired by the War, the difficulty of balancing the imperial budget as well as the burden of the enormous reparation payments is bound to have a continuously depressing effect upon the value of the mark in foreign exchange. This stimulates exports from Germany which come into competition with the goods of the allied and neutral countries, whilst at the same time it makes Germany a poor buyer in foreign markets.

The principal effect of the disorganized exchanges, however, is the immense reduction of the total volume of trade which all the uncertainty causes. As already remarked, only those transactions which show a large margin of profit are entered into; and it is not perhaps sufficiently realized what a large proportion of the ordinary foreign trade in pre-war times was done upon a narrow margin, which to-day would be regarded as no profit at all.

*Disposal of Government Surplus Stocks*

Some industries are being adversely affected by the disposal of enormous surplus stocks of munitions, machinery and material, and various equipments and goods of all kinds. The size of the stocks collected by the Allied Governments, particularly the British Government, during the later years of the War, has had a decided effect upon the supply of many kinds of commodities. Government created monopolies in many kinds of commodities needed for military purposes whilst hostilities continued. Thus they bought up the whole crops of wool, sugar and some other commodities in the principal producing countries; whilst the whole output of many manufacturers of motor cars, lorries and various kinds of machinery was requisitioned. A particularly glaring example has been the engrossment of wool by the British Government. Such vast quantities were purchased during the War for clothing the troops that a famine of wool arose for the supply of the civilian population. The prices of woollen garments rose to four and five times the pre-war prices; and the substitution of cotton for wool was extensively introduced by manufacturers, which was detrimental to the health

of the people, and has tended permanently to reduce the demand for wool. Since 1919, enormous Government stocks of woollen cloth and other fabrics and garments have been put on the market, with the result that in 1920 there was a tremendous slump in the price of wool, and a commercial crisis developed throughout the industry, it seemed as if most of the Australian wool growers would go into bankruptcy, and this might have happened had not some concerted assistance been forthcoming.

The Allied Governments have contributed to the present depression, partly through buying in some instances more liberally than was necessary; and, secondly, in failing to put their surplus stores on the market as rapidly as they might have done—that is to say, in 1919, when the demand was the greatest. The Armistice was declared on the 11th November, 1918, and the peace treaty was signed at Versailles on the 28th of June, 1919. It was probably wise not to commence any considerable disposal of surplus stores until the signature of the treaty was practically assured; but preparations might have been made for disposing of the whole of the surplus stocks during the following six or eight months. In fact, what has happened

has been that, instead of disposing of the great bulk of the surplus stores during the boom period of 1919-20, the greater part was left to be sold at falling prices during 1920-21, whilst some surplus stocks are still being disposed of in England.

In India, the delay in disposing of surplus stores has been even more serious; and it is only twelve months since the sale of surplus stocks began to be seriously pushed. It is probable that for another year at least some industries will find themselves embarrassed by the competition of the Controllers of Sales.

### *Cycle of Trade Fluctuations*

In considering the causes of the present depression of trade, due weight must be given to the fact that alternations of good and bad trade are the normal course of events in times of peace. Statistics of the foreign trade of England extending over the past two hundred years show clearly that fluctuations from year to year in the volume of trade and in prices, have always been a normal feature of English trade, and the experience of other countries carrying on a considerable foreign trade is similar. During the nineteenth century the fluctuations of trade became more marked

in intensity and displayed a certain peculiar regularity in their recurrence. The index numbers of prices show a rise and fall with intervals usually 10 years or 7 years between the maxima. Each of these maxima of prices corresponds with a period of excited trade and speculation, which is technically known to economists as a boom of trade. We find that maxima of prices occurred from the beginning of the nineteenth century in the following years :—

| Date of<br>Maximum | Years<br>interval | Date of<br>Maximum | Years<br>interval |
|--------------------|-------------------|--------------------|-------------------|
| 1907               |                   | 1847               |                   |
|                    | 7                 |                    | 8                 |
| 1900               |                   | 1839               |                   |
|                    | 10                |                    | 14                |
| 1890               |                   | 1825               |                   |
|                    | 10                |                    | 7                 |
| 1880               |                   | 1818               |                   |
|                    | 7                 |                    | 9                 |
| 1873               |                   | 1809               |                   |
|                    | 9                 |                    | 9                 |
| 1864               |                   | 1800               |                   |
|                    | 7                 |                    | 4                 |
| 1857               |                   | 1796               |                   |
|                    | 10                |                    | 13                |
| 1847               |                   | 1783               |                   |

I considered this subject in some detail in an article on *The Art of Economic Development*, published in the *Indian Journal of Economics*, for January, 1918.<sup>1</sup> From my

<sup>1</sup> See Volume II, Part 1, pp. 42-50.

examination of the fluctuations of trade right back to 1670, I came to the conclusion that the most probable duration of the interval from one maximum of prices to the next is 7 or 10 years; and that periods 4, 9, 11 and 13 years in length are possible, but not so likely. Intervals of any other length from maximum to maximum are extremely unlikely.

The last great boom of trade before the War was in 1906 and the summer of 1907. In May of the latter year prices began to show signs of falling; and in the autumn, a general collapse commenced which affected all the great commercial countries simultaneously. In America, there developed one of the greatest financial crises that has ever been experienced in that country, which led to the complete reorganization of the banking system on the present basis of the Federal Reserve Banks.

From 1907 to 1914 is 7 years; and it seems probable that the active trade of 1913-14 would have been followed by a collapse of prices in the autumn of 1914 had it not been for the outbreak of War. The prices of certain materials had, in fact, already begun to decline in the early summer of 1914. If the War had not taken place, when would the next maximum of prices have occurred? The most probable date would have been either 7 years

or 10 years after 1914 — *i.e.*, in 1921 or 1924. If the maximum had occurred in 1921 it would have been followed by a collapse of prices in the autumn of that year.

There is to be noted, however, a very peculiar fact about the sequences of these commercial fluctuations—that it has never been known that two seven-year periods followed each other: a seven-years' period is usually followed by a 9 or 10 years' interval; or by a longer interval of 13 or 14 years. Since the War prevented the fall of prices after 1914 it would seem that the most probable length of the cycle would be 13 years, whilst it might be 14 years, from 1907. Arguing in this manner, I wrote in January, 1918, as follows:—<sup>1</sup>“ If a cycle has extended beyond 10 years, it will most probably extend to 13 or 14 years. The last year in which a maximum occurred was 1907; consequently, it would seem likely that the maximum following the conclusion of the War will occur in 1920 or 1921. The exact year must depend mainly on the date of the termination of the War, and on the relative effects of Russian, American and Indian harvests, and those of the southern hemisphere. Should the War be prolonged until 1920, however, it is quite possible

<sup>1</sup> *Indian Journal of Economics*, Vol. II, page 47.

that the next maximum of prices might not occur until 1924." It is satisfactory to note that this anticipation that the maximum of prices following the War would occur in 1920 or 1921 has been fulfilled.

The causes of the cyclical fluctuations of trade will be discussed in the next chapter, and the foregoing references to the harvests will be explained. Attention has been drawn here to these trade fluctuations because there seems to be reason for believing that we are suffering from what may be called a normal collapse and depression of trade, due to the causes which produce the fluctuations of trade in peace time, super-added to the special causes resulting from the War which have been described in this chapter.

## CHAPTER V

### HARVESTS AND TRADE FLUCTUATIONS

Much controversy still rages over the causes of those cyclical fluctuations of trade which have been described in the last chapter—which affect the whole world simultaneously, and in peace time as well as war. That they are accompanied by, and also largely caused by, psychological changes in the state of mind of the whole business community is now generally admitted. Authors are agreed that over-investment of capital and over-trading also are largely responsible for the commercial depression which invariably follows a boom of trade. These, and similar explanations, are incomplete, however; for they fail to account for the rhythmic succession of the periods of excited trade followed by depression. We saw in the last chapter how these tend to recur especially at intervals of 7 and 10 years. It is quite impossible to find any

reason for this particular law of recurrence in any of the suggested causes of a commercial, financial, or psychological character. Any cause of a purely human origin—whether mainly psychological or inherent in the method and organization of industries—might produce an oscillation roughly periodic; but, although successive periods would probably differ somewhat in length, they would all tend to vary but a little from some average figure. To use the technical language of statistics, they would tend to group themselves about one mode, rather than about two principal modes, at 7 and 10 years, with two subsidiary maxima at 4 and 13 years. It is this peculiar grouping of the lengths of the periods which has given strong support to the theory that the cause determining the exact length of each oscillation is something of cosmic origin—in fact, that it is due to variations from year to year in the intensity of the heat received from the sun, which affects the harvests and thus the activity of trade.

The peculiar regularity in the sequence of commercial crises attracted the attention of the late Professor W. Stanley Jevons, who connected this strange recurrence with the periodicity of sun-spots. A quotation from

one of his writings will explain his views. At the beginning of the paper on *The Solar Period and the Price of Corn*, written in 1875, he introduces the subject with a brilliant generalization:—

“There is no doubt that the energy poured upon the earth’s surface in the form of sunbeams is the principal agent in maintaining life here. It has lately been proved, too, beyond all reasonable doubt, that there is a periodic variation of the sun’s condition which was first discovered in the alternate increase and decrease of area of the sun-spots, but which is also marked by the occurrence of auroras, magnetic storms, cyclones, and other meteorological disturbances. Little doubt is now entertained, moreover, that the rainfall and other atmospheric phenomena of any locality are more or less influenced by the same changes in the sun’s condition, though we do not yet know either the exact nature of these solar variations nor the way in which they would act upon the weather of any particular country.

“The success of the harvest in any year certainly depends upon the weather, especially that of the summer and autumn months. Now, if this weather depends in any degree upon the solar period, it follows that the

harvest and the price of grain will depend more or less upon the solar period and will go through periodic fluctuations, in periods of time equal to those of the sun-spots."

Subsequent research has shown that the connection, so far as there is any, between the state of the sun as exhibited by the sun-spots and industrial fluctuations is distant and indirect; yet the basic idea contained in the above quotation has received confirmation from the investigations of meteorologists in England and America, and by an enquiry into the fluctuation of the total agricultural outturn of the United States which I undertook some years ago.

Briefly, the result of my investigation was to show that the total agricultural produce of the United States of America varies from year to year by a greater percentage than might have been supposed. Furthermore, the index numbers indicating the change of the total agricultural produce from year to year, when plotted on a curve, show a series of maxima at irregular intervals, the average length of which is about  $3\frac{1}{2}$  years. As a proof that these fluctuations of American harvests depend upon world-wide influences which affect the weather from year to year, I compared the fluctuations of the agricultural

produce with the yearly averages of the readings of the barometer in Cordoba (South America) and Bombay; and it was evident that there was a sufficiently close correlation to indicate the probability of some causal connection. This strengthened the view that the fluctuation of the harvests from year to year is due to some extra-terrestrial cause which affects weather conditions from year to year all over the world at the same time.

The point of special interest, however, was the discovery that the harvests vary in a period of about  $3\frac{1}{2}$  years. On the one hand, this agrees closely with the period of fluctuation of the solar prominences. On the other hand, the  $3\frac{1}{2}$  year period is half of 7 years, about one-third of 10 years, and nearly one-fourth of 13 years. As the harvests are bound to recur in the calendar years, and as multiples of  $3\frac{1}{2}$  years cannot fit exactly into multiples of calendar years, it would appear that we have an explanation of the irregularity of the length of the trade fluctuation; and of its peculiar tendency to a length of 7, 10 or 13 years.

As the records of trade fluctuations extend back for a far longer period of time than the statistics of yields of harvests, meteorological records, or observations of the sun, it is

possible to calculate the average length of this short period fluctuation with greater accuracy from its effect upon trade. I find its average length to be 3·4 years.

### *Variability of the World's Harvests*

Most business men will readily admit the close connection there is between the harvests of a country and the state of trade. In India, this is universally recognized. What is not so generally understood is that the state of trade activity throughout the whole world is dependent from year to year upon the results of the harvests of the whole world. The statistics of harvests in the great countries of the world during the 40 years preceding 1914 give strong presumptive evidence that the total agricultural production of the world fluctuates in a period averaging  $3\frac{1}{2}$  years in length, as it clearly does on the North American Continent. Furthermore, statistics seem to show that the great continental countries—America, Russia, India, Australia—suffer from drought and short harvests at the same time, or nearly so. Sometimes failure of the harvests will occur in two different continental countries of the Northern Hemisphere in succeeding

years; and during the intervening season in the Southern Hemisphere. During such period of two years, the world's agricultural production is distinctly below the average; and in the following two years it will be found to be distinctly above the average.

### *Influence of Harvests on Trade*

A brief analysis of the effects of good and bad harvests on trade activity will show the importance of this fluctuation of the world's agricultural production from year to year. The increased wealth arising from the good harvests stimulates activity in industries in two ways:—(1) By increasing the demand for manufactured commodities; (2) by producing an increased and cheap supply of raw materials for industries and of food for the industrial classes.

In any country where good harvests are experienced the farmers and cultivators, and all classes immediately dependent on them, such as merchants and, in India, lawyers and landlords, usually gain increased purchasing power. It is only in exceptional cases that the fall of price of the produce is so great as to counteract the advantage of the increased yield which the farmer reaps from

his outlay. Even when this does occur, it simply means that the enlarged wealth which the world has produced is not enjoyed by the cultivating classes, but is passed on to be utilised in industries in various parts of the world, and to be enjoyed by the industrial classes and all their dependants.

The normal result appears to be, however, that bountiful harvests afford increased purchasing power to the agricultural population, and at the same time also stimulate industries by the cheapening of raw materials and lowering the cost of living of the industrial classes. To follow out all the steps by which the increased wealth of abundant harvests filters through the channels of trade to the different classes of capitalists and workers in the same country and other countries through the world-wide markets, would need a complex and lengthy treatise far beyond the scope of the present book. It is sufficient to observe that it can be shown on theoretical grounds that the above must be the result of bountiful harvests, and to know that an actual investigation of the statistics of harvests and industrial activity in the United States shows the close dependence of the latter on the former.<sup>1</sup>

<sup>1</sup> See the present author's *Sun's Heat and Trade Activity*, pp. 28-4. Also Professor H. L. Moore, *Economic Cycles*, pp. 114-27 and 148.

The effect of poor harvests is naturally the reverse. The agricultural population and the classes dependent on them have less purchasing power ; the supplies of raw materials to industries are more expensive and the cost of living of the industrial classes is more or less enhanced. The precise effects depend upon the organisation of industries and social institutions. Where there is no trade unionism, the wage rates of industrial workers fall ; and if the wage rates are maintained, unemployment becomes extensive. The effects of short harvests operate through various channels ; but all with the result of reducing the demand for industrial goods, whether they be plant, machinery, materials of construction, or commodities for direct use and consumption.

The usual sequence of events is that the first year or two of good world harvests awaken trade from its lethargy, and an expansion in the volume of trade and a slight rise of prices begins, which is checked, but not stopped, by the succeeding poor harvests.<sup>1</sup> The next cycle of good harvests, occurring on the average  $3\frac{1}{2}$  years later, greatly stimulates trade ; and if two good years follow each other, a boom of trade is created. Speculation and company promotion become rife

<sup>1</sup> Compare Pigou, *Economics of Welfare*, p. 825.

and prices rise rapidly. Even whilst trade is booming, the next harvest in the world as a whole is poor. The boom is cut short and a collapse of prices begins, which continues with its own momentum from the contraction of credit and reaction from overtrading and glutted markets. Trade settles down into a depressed condition ; which is relieved by the next cycle of good harvests. Sometimes this re-awakens trade into the expansion ; but if it does not, depression continues until the second cycle of good harvests, and thus the complete cycle of trade will extend to ten instead of seven years.

## CHAPTER VI

### PROBABLE FUTURE COURSE OF PRICES

The future course of exchange depends, as regards causes external to India, more upon two special factors in the present situation than on those causes normally operating in peace times—I refer to the trend of world prices as the first and most important; and to the sterling price of gold in London as the second. The first is likely to have a potent weakening effect upon exchange, and the latter to allow wide limits of fluctuation to continue for several years, if the Government of India continues its policy of keeping out of the exchange market, except for its own requirements.

#### *Effects of Falling World Prices*

Under the compulsion of a heavy adverse balance of trade and low exchange, prices rose again in India during 1921 when prices in all other countries, except those where paper

currency was being inflated, were falling. We stand at the present time, therefore, with a high price level, a comparatively low exchange (1s. 3 $\frac{7}{8}$ d), and the level of world prices already substantially reduced. The balance of indebtedness has ceased to be strongly against us ; and it seems to be hanging in a state of equilibrium—with very nearly an equal balance of payments due each way. It is highly important to inquire, therefore, what would be the effect of a further fall of world prices, and whether such further fall may be expected.

A further fall of prices in foreign countries would have the usual and inevitable effect of stimulating imports and checking exports, thus re-creating an adverse balance of trade, and a weak exchange. The normal result would be that exchange must continue depressed until prices had become reduced sufficiently in India to check the stream of imports, and to stimulate exports. In normal times, there are two factors which operate to re-establish equilibrium : (1) the increased influx of commodities not largely produced in India, and the reduction of export of those we do produce ; (2) the outflow overseas of gold *from the currency*, thus producing a contraction of the circulation and an automatic reduction of the price level.

Under present currency arrangements, the outflow of gold from the Currency Reserve and the consequent contraction of the circulation is not likely to take place, for reasons which will be explained in the next chapter. A continuing fall of world prices would, therefore, produce a state of affairs in which prices outside India were always falling in advance of prices in India. In such circumstances, all persons who have free money to invest will always find it cheaper to buy goods from abroad. Merchants whose stocks have run low, and industrialists who want to buy machinery or materials, will find that they can save money by buying directly from foreign countries rather than from the big merchants already holding stocks in India. At the same time the continued fall of world prices must exercise a depressing effect upon the export trade. The tendency will be towards a constant renewal of the adverse balance of trade. If there were no great stocks of gold or silver in the Indian markets available for export, the extent of the adverseness of the balance of payments could be limited only by the fall of exchange, which acts as an automatic corrective of the balance of trade.

A continued fall of world prices would mean, therefore, a continual tendency for

exchange to weaken again and again after every slight recovery. Exceptionally good crops of India's staple exports would no doubt harden exchange for a time—perhaps by 2*d.* or 3*d.*—but the inevitable reaction would come after the export season, so long as world prices were continuing to fall.

### *Extent of the Fall of Prices*

It is obvious that a continued fall of world prices would have so important an effect upon exchange that a very careful examination of the probable extent and duration of the downward movement is essential to any anticipation of the future course of exchange. The Committee of 1919 on Exchange and Currency were fully alive to the serious effects which might be expected from this very contingency. In their report (written in December, 1919) they say<sup>1</sup> :—

“It seems probable that prices generally will remain at a high level for a considerable time, and that any return to lower levels will be gradual ; but if, contrary to this expectation, a great and rapid fall in world prices were to take place, a new element of disturbance would be introduced. The costs of production in India might fail to adjust themselves with equal rapidity to the lower level of prices, and Indian exports might suffer

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<sup>1</sup> Report of Committee on Indian Exchange and Currency, Section 51, page 23.

to an extent which would endanger the maintenance of exchange at the level which we propose. In that case, it would be necessary to consider the problem afresh, and take the measures which might be required by the altered circumstances."

What, then, is likely to be the extent of the fall of world prices? Has the fall of prices in the world's markets already nearly reached its limit, or are we to anticipate a still further and long-continued downward movement? In the present state of our knowledge, it would be absurd to claim the power of prophesying the future course of prices: yet, I think, that argument by analogy will enable us to obtain an idea of the most probable course of events, on the assumption that no new exceptional cause, such as a new great European War, will occur within the period under consideration.

### *The Napoleonic Parallel*

If we seek for analogies in history, we shall find the closest parallel in the state of affairs resulting from the Napoleonic War, a little more than a century ago. England was almost constantly involved in wars on the continent of Europe from 1793 to 1815. The expenditure was on a prodigious scale.

Considering the great difference in population and in national wealth, it was comparable with the cost of the recent Great War; and it caused a very heavy strain upon English finances. The economic and financial consequences are curiously parallel in the two cases, except that they developed more slowly in the Napoleonic War.

The enormous expenditure abroad on the English Army and Navy, during the early years of the war against Napoleon, as well as the loans and subsidies granted to some of the continental countries, caused a steady export of bullion. This was accentuated by the rise of prices in England, caused by a considerable increase of the circulation of the notes of the Bank of England and of private banks. In 1797, the Bank of England suspended payment of notes in gold, by order of Parliament. This "suspension of cash payments", as it is generally called, lasted from 1797 until 1821, or six years after the conclusion of peace. As at the present time, the depreciation of the English paper money varied from time to time. Prices were, of course, commonly quoted in the current paper money; and the price of gold in London fluctuated from time to time at a level high above the "mint price" (77s. 10½d.), then as now.

For instance, in 1800 the price of standard gold was 85s. per oz., in 1811 it was 97s. 6d., and, in 1814 rose to 108s. The resumption of cash payments was realized by stages under an act of Parliament of 1819 which authorized the Bank of England to redeem its notes in gold bullion at the following rates:—

From 1st February, 1820, to 1st October, 1820, at £4. 1s. [of paper money] per ounce standard.

From 1st October, 1820, to 1st May, 1821, at £3 : 19 : 6 per ounce.

From 1st May, 1821, to 1st May, 1823, at £3 : 17 : 10½, and thereafter in gold coin.

The course of prices in England during this period is very interesting. From 1783, when prices were at 100, the index number fell to 85 in 1786, and remained without much change until 1790, when a steady rise of prices began. A maximum of 125 was reached in 1796; but after some fall, prices rose again until they reached 153 in 1801. Then prices collapsed to 119 in the next year; but there was a steady rise to 164 in 1810, followed by a slight fall. The price level continued high (in paper money) until the conclusion of hostilities. Afterwards there was a rapid fall from 153 in 1814 to 109 in 1816. Then prices rose again slightly to a maximum in 1818 of 135. Thereafter there was a

long-continued decline until 1833 when the price level touched 75. After rising again it fell to the minimum of 64 in 1849. Thus in the 39 years from 1810 to 1849 prices fell by 61 per cent.

Of more immediate interest for our present purpose, however, is the fall of prices which took place from the maximum in 1810 until 1822, the year following the resumption of cash payments. In these twelve years, prices fell from 164 to 88, that is, by about 46 per cent. In the first six years, however, from 1810 to 1816, prices fell from 164 to 109, that is, by  $33\frac{1}{2}$  per cent.

Turning to the present occasion, we may find out what fall of prices has already taken place. In order to make a fair comparison with the index numbers just quoted for the Napoleonic period, we must take the index number of the average level of prices for the whole year 1920, which was the year of maximum prices in England and most other countries. *The Statist* index number for 1920 is 251<sup>1</sup>; and the index number for November last is 137, which is a fall of 45 per cent. This seems to suggest that we need not expect much

<sup>1</sup> See *The Statist* of December 10th. 1921, p. 894; also *Journal of the Royal Statistical Society*, Vol. LXXXIV, p. 255 (March, 1921). *The Statist* index numbers are a continuation of Mr. Sauerbeck's series.

further fall of prices in England, or at least not so rapid a fall as up to the present time.

### *Secular Change of Price Level*

It would not be sound reasoning, however, to place any great reliance on the calculation of the present percentage fall of prices as compared with the percentage fall which took place in six or twelve years from the maximum of 1810. The safer method is to observe the general trend of prices during the years 1810 to 1822, and to consider whether it is reasonable to expect a similar trend in the present circumstances. The analogy of the two cases appears to be fairly complete. Europe had been devastated by long years of warfare, and was in a state of economic and political chaos very similar to the condition of Central and Eastern Europe at the present time. The main differences between the two cases lie in the far more developed condition of the non-European countries at the present time, the far greater accumulation of capital, and the intricate financial and industrial organization of the present age.

When we study the curve of the index numbers of prices from, say, 1800 to 1850, we are struck by the general downward trend

after the maximum in 1810. The curve is, however, broken by several sharp rises. Prices would rise for two or three years and then start falling again, each time going lower than before. Inspection of the diagram of index numbers of prices in England opposite this page, indicates this more clearly than any description in words. We see the effects of the cyclical fluctuation of trade super-imposed upon a secular fall of prices. Each recurring period of active trade followed by a boom, lifted prices temporarily from their downward course; but the collapse always came and the following depression carried prices still lower.

In an attempt to forecast the course of world prices, therefore, we have two separate questions to consider: (1) Is it likely that the secular rise of prices which has continued from 1896 to 1920 will be converted into a secular fall of prices extending over a period of some 25 years, or will the secular rise of prices reassert itself, the present fall proving to be merely a severely accentuated cyclical fluctuation? (2) at what dates, and, in each case, to what extent, may it be anticipated that the cyclical fluctuation will cause prices to rise temporarily, or at least to halt in their downward path?

As regards the first question—the probability that we have entered on a seculum

of falling prices—we have to examine the evidence for and against this view.

Looking back many centuries in English history, we find that the general tendency of prices in all countries, and in each century from the fifteenth to the nineteenth, has been upward. Undoubtedly this has been due to changes in the monetary standard and in the volume of circulation. From time to time there occurred actual debasement of the standard coin; but more important in its effect than this was the continued growth of the total quantity of money in circulation, ever since the discovery of silver in America and its importation on a large scale to Europe by the Spaniards. From the seventeenth century onwards another important cause operating to increase prices was the increased use of credit and credit instruments in commercial transactions. People ceased to hoard money. At first they lent it privately to traders; but in course of time bankers arose who acted as brokers between the public having money to lend and the merchants wanting to borrow. This extension of credit would in itself have the effect of raising prices.

During the eighteenth century, however, and especially the second half of the century, a number of private banks came into existence

which put their own notes into circulation. This, and the further extension of credit during the Napoleonic wars, was doubtless the cause of the secular rise of prices which culminated in 1810.

When a country is in a static condition as regards its industrial organization, there does not seem to be any force acting to depress prices, if we assume the volume of circulation and credit to remain constant. The progress of invention, however, and the enlargement of the scale of production, and the more efficient organization of industry and transport generally, has always a tendency to reduce prices. Since the industrial revolution, which may be said to have come into full operation in England by the beginning of the nineteenth century, this tendency towards falling prices became the normal result of the progress of civilization.

Thus in modern times—that is, from about 1800 onwards—there seem to have been two opposing forces at work influencing the secular movement of prices: the expansion of the circulation and of credit tending to raise prices, and the progress of invention and industrial organization tending to lower prices. The actual movement of prices is the resultant of the excess of one of these two opposing forces.

The secular fall of prices from 1873 to 1895 had special causes operating in addition to the cheapening of products by improved industrial organization and sea transport—chiefly the demonetization of silver and the consequent drain of gold to the continent of Europe and to America, and the restriction of bank credit resulting partly from scarcity of gold, and partly from the new policy of the English banks of restricting credit to a basis of sound commercial and readily marketable securities, following the sad experiences of the crises of 1857 and 1866.

### *Duration of the Fall of Prices*

The main question, and one of the greatest difficulty, is *whether we have entered on a secular fall of prices*, or not. *In favor of this view*, at least three weighty arguments may be adduced.

In the first place, the expansion of credit during the war and after was so enormous, that further expansion is almost unthinkable in England, France and America; and the financial policy of the Governments and great banks of these countries will probably dominate the trend of world prices. Each of these countries is determined to “set its house in

order " as soon as possible : to bring Government expenditure well within revenue, to begin the progressive redemption of Government debt, and to curtail the paper currency circulation. In England and America, this is actually being done. On the other hand, German reparation payments, if they continue to be received in gold and credits, will tend to transfer some of the German inflation to an expansion of credit in the Allied countries. It seems essential that some effective arrangement for payment in kind should be devised, or else it would be advisable to postpone reparation payments until there is a recovery of the world's demand, and German goods can be absorbed abroad. Since inflation of the German currency and credit cannot go on indefinitely to meet the reparations debt, a gradual net contraction of circulation in the Allied countries and America seems probable.

In the second place, the production of gold has decreased in response to increased costs of production and is not likely to increase from the existing gold fields for the next few years until costs of production have been reduced again. In addition, the drain of gold to the East—and particularly to India, accentuated by the new valuation of the sovereign when the trade

balance turns in favor of India—may prove to be an important factor in reducing gold supplies to Europe and America, and thus reducing credit and lowering prices.

In the third place, there is every likelihood that conditions will be such as to favor a renewed predominance of the normal tendency of industrial progress to bring about reductions of prices. This rests upon the assumption, to be justified below (p. 115), that a continuation of the fall of prices for another two or three years is almost inevitable in any case. When prices are rising, the stimulus to invention and improvement is in the direction of finding entirely new uses for capital—a movement which became especially marked during the period 1897 to 1914. On the other hand, when prices are falling, the stimulus is towards employing capital in developing inventions and improvements which make for reducing the costs of producing commodities already on the market. When this movement has been set on foot by some three or four years of falling prices, it may tend to gather momentum of its own accord, each successive reduction of costs of production stimulating further efforts in that direction, because competition continues to force prices down. The movement, once set

going, may very well continue for some twentyfive or thirty years, until some currency expansion—due to some such event as discoveries of new gold fields, or the adoption of an international paper currency, or another world war, or widespread revolution or civil war—shall set prices on the upward course again.

On the other hand, the factors tending towards *a resumption of the secular rise of prices* are: (1) the growing political ascendancy of the proletariat in Western countries, their demands being such as to require reckless Government expenditure, making the contraction of credit and circulation a slow or impossible process; (2) the fact that the output of gold, though less than the pre-war figure, still continues at a high level, so that the annual increment to the world's stock is an appreciable fraction of the whole.

On the whole, I am inclined to believe that the desire of mankind to return to normal conditions of existence will lead to the predominance of the forces tending to reduce the price level, and that *we are more likely than not entering on a seculum of falling prices the duration of which cannot be foretold, but is likely to exceed twenty years.*

*The Near Future*

The probable course of prices during the next few years is what will interest my readers most; and to anticipate this it is essential to take account of the cyclical fluctuation of trade. We have already seen in Chapter IV (at page 82) that the most probable duration of the interval from one maximum of prices to the next is 7 or 10 years, and in Chapter V (pp. 89-94) that the outturn of the world's harvests as a whole varies from year to year in a roughly periodic manner, the average length of the period being about  $3\frac{1}{2}$  years. Further, we saw that the world's harvests being above the average creates an improvement of trade and a rise of prices in general (or keeps prices nearly stationary, if a secular fall is in progress) and that the advent of bad harvests throughout the continental countries of the world occurring when there is a boom of trade creates a collapse of prices, usually in the following year.

The best indication we could obtain, therefore, of the most probable course of world prices in the near future would be the dates of the latest maxima and minima of the world's agricultural production, if these could be ascertained with certainty.

The only convenient and authoritative source of statistics of production of the staple agricultural crops of the world is the *International Crop Report and Agricultural Statistics (Part II, Production)* issued monthly by the International Institute of Agriculture of Rome. Tables are given therein of the estimated total yield of each crop in all countries which publish official estimates; and these comprise all the great countries except China and, since the War, Russia. As totals for the same areas in successive years are given it is an easy matter to add up the total world's production (so far as recorded) for successive year's.<sup>1</sup> The results for the past five years are expressed by the following index numbers, which represent

<sup>1</sup> The commodities included in my totals are :—wheat, rye, barley, oats, maize, rice, potatoes, sugar beet, cotton and linseed. The production of each is reduced to the same unit—the cental of 100 lbs. The index numbers are not an average of percentage changes for each commodity, but merely the percentage changes of the grand total weight of all crops, calculated on the chain-system, which it was necessary to adopt because the areas for which totals are published for successive pairs of years are different. It might be argued that each crop should be weighted according either to its commercial importance in international trade, or to its price, or both, but the appropriate weighting is a very difficult problem. I have, therefore, contented myself with a simple addition of all crops by weight as a very rough indication of those variations of harvests which seem to have an important influence on trade fluctuations, but cotton was multiplied by 10 and oilseeds by 2. The 1921 index number is subject to revision when the final estimates are published, but I have used the latest estimates of Indian crops.

the variation from year to year of the total weight of the crops included:—

|      |     |     |       |
|------|-----|-----|-------|
| 1917 | ... | ... | 100·0 |
| 1918 | ... | ... | 94·5  |
| 1919 | ... | ... | 99·7  |
| 1920 | ... | ... | 107·8 |
| 1921 | ... | ... | 107·1 |

All changes in the areas from which statistics have been recorded are eliminated by the method of calculation of these index numbers; but they include the effects of changes in the area cultivated, which is proper for our purpose.

It will be seen that 1918 and 1919 were years of poor yield; whilst the harvests of the two following years were more bountiful. To interpret the figures it is necessary to consider when the harvests reach the markets. The crops assigned to 1919, for instance, are those harvested in the summer and autumn of 1919 in the Northern Hemisphere and in the early months of 1920 in the Southern Hemisphere. Hence the scarcity or abundance of the harvests cannot have much effect on the world's trade until the following year, having regard to the time taken in marketing; whilst the full effects upon trade and industry may quite possibly be deferred until the second

year.<sup>1</sup> Hence it is not unreasonable to suggest that poor harvests in 1918 and 1919 may have been partly responsible for the collapse which began in April, 1920; and that good harvests in 1920 and 1921 may be stimulating some revival of the world's trade which will become effective during 1922.

Admitting a short period oscillation (averaging  $3\frac{1}{2}$  years) in the activity of the world's trade, as evidenced by numerous statistics (including English foreign trade), it is more probable than not that a renewal of trade activity will begin to manifest itself in 1922, and culminate in 1923 or 1924, to be followed by renewed depression. Hence, even if no reliance be placed upon the statistics of the world's harvests which I have quoted, or on my deduction from them, it may still be reasoned that an improvement of the world's trade is due before the end of 1922. This will react on the Indian exchange both through the volume of demand for Indian products and through prices.

<sup>1</sup> A lag of one or two years in the effects of harvests upon the activity of trade might be expected *a priori*; and American statistics prove that prior to 1888 there was a lag of two years in the effect of bountiful harvests on the production of pig iron, which thereafter was reduced to one year and even less owing to the improved organisation of business and credit. Considering the disorganised state of business and credit everywhere since the war, a lag of the world's trade behind its harvests by two years seems probable enough.

Here we are concerned with the general level of world prices only. Their most probable movement in the near future may be summed up as follows. The fall of prices which commenced in the summer of 1920 and still continues, though more slowly, seems likely to be more or less completely arrested before the end of 1922. There may be actually a slight rise of the average level of prices during the later part of 1922 or in 1923. More probably prices will remain on the average approximately stationary during this period, or fall very slightly. This slight revival of trade is likely to be only temporary; and the inevitable years of low agricultural production in the world as a whole will cause a renewed and fairly rapid fall of prices, which is most likely to come towards the end of 1923, or in 1924. On the whole the tendency of prices is likely to continue downward, as argued in the first half of this chapter. A definite and marked increase of trade activity with a rise of prices is not likely to occur, except in the course of the cycle of trade; and the most likely duration of this is 7 or 10 years from 1920. Arguing *a priori*, I should come to the conclusion that the present depression is so severe and the dislocation of the world's trade such a long way from being readjusted, that length of the present cycle would be more

probably 10 years than 7 years; but it is impossible to give any definite evidence in support of this view. We shall either have active trade beginning in 1925-26 and culminating in 1927 ; or the expansion of trade will be deferred to about 1928 and will culminate about 1930—after which there would be a collapse of trade and a renewed fall of prices.

## CHAPTER VII

### GOVERNMENT'S EXCHANGE POLICY

The future of exchange resolves itself into two distinct questions—on the one hand what the rate of exchange is likely to be in the future, and on the other hand what the future exchange policy ought to be in the best interests of the Indian people and having regard to what is practicable. These are two distinct questions ; but it is obvious that they have a close bearing upon one another. The future course of exchange is certain to be influenced by the policy of Government in regard to exchange ; but this policy is likely to be that which it is believed will conduce to the welfare of India, in so far as it is practicable. There can be little doubt that whenever there is any general consensus of opinion in India in favor of a particular policy of exchange, which will stand the test of examination from all points of view, Government will sooner or later adopt that policy.

On the other hand the policy which Government will pursue is necessarily limited as regards its practicability by the economic conditions existing at the time, and by those general economic forces and tendencies of a more permanent character.

The actual course of exchange in the near future must depend on the general trade conditions in India and the rest of the world, which have been considered already, and upon the Government's policy in regard to exchange. Since there is no means of forecasting any probable change of the policy of the Government, it is possible only to proceed upon the assumption that the present policy will be continued. It is true that the Committee on Indian Exchange and Currency (1919) suggested that in the event of a severe fall of world prices, it might prove necessary to reconsider the policy which they proposed.<sup>1</sup> The Government of India however have not committed themselves to the opinion that the altered circumstances render the present time opportune for a fresh consideration of the problem. Indeed, the Finance Member, speaking on a motion by Sir Vithaldas Thackersey in the Legislative Assembly on January 24th, 1922, re-affirmed Government's intention to

<sup>1</sup> See quotation from Report, section 51, on page 98 of this book.

continue a policy of *laissez faire* in exchange matters, adding, however, the very important pledge that Government "would not again sell reverse Councils without first coming to the House." The anticipations of the future course of exchange to be submitted here will be based upon the assumption that the existing policy as announced up to the time of writing (February 22nd, 1922) will be continued.

The present chapter will be devoted to a statement of the Government's declared policy and an examination of the extent to which they are carrying it out. This will prepare the way for a consideration of the probable future course of exchange in the next chapter. In a later chapter entitled "Stability of Exchange" I shall examine the modifications of the present policy which are necessary to attain stability, and in the last chapter shall consider the general policy of exchange with reference to the future welfare of the country.

### *The Two-Shilling Rupee*

Although the speech of the Finance Member on January 24th of this year, referred to above, seems to indicate some hesitation as to the maintenance of the currency system

inaugurated in 1920, Government has not committed itself to any change.

The act making the sovereign legal tender at Rs.10 remains untouched upon the statute book. Recent actions, such as the borrowing of seven millions sterling, and later another ten millions, in London whilst conserving the Gold Standard Reserve intact, seem to indicate that the intention of the Government of India, supported by the India Office, has been, and still is, to persevere towards the goal of realising the permanent two shilling exchange, however long they may have to wait for favorable trade conditions.

I now proceed to a brief survey of the salient points in the actual handling of currency policy during the past twelve months. The Gold Standard Reserve, the Paper Currency circulation and Reserve, and the financing of deficits will be examined; and an estimate will be attempted of the degree in which the recent practice has tended towards realising or defeating the Government's declared policy.

### *Gold Standard Reserve*

Though little attention has been paid to it in the press, the outstanding feature of the

present relation of Government to exchange, is the fact the Gold Standard Reserve, now larger than it has ever been before, remains untouched in London, wholly composed of sterling securities and a small cash balance in the Bank of England. The Gold Standard Reserve did indeed recently contain one golden sovereign located in India, which was solemnly transferred from the Paper Currency Reserve in the week ending August 31st, 1921, (*vide* statement of that date) and solemnly retransferred to the Paper Currency Reserve on November 30th. At the 30th September, 1921, the composition of the Reserve was :—

|                                                                    | £                 |
|--------------------------------------------------------------------|-------------------|
| 1. Gold in India . . . . .                                         | 1                 |
| 2. Cash at the Bank of England . . . . .                           | 4,013             |
| 3. British Government Securities<br>(Value as at 30th Sept., 1921) | 40,322,868        |
| Total                                                              | <u>40,326,882</u> |

This was the first statement in which the total of the Gold Standard Reserve exceeded £40,000,000; and the sudden jump up by nearly £700,000 in the 30 days since 31st August was due mainly to the increased value of some of the securities, a revaluation of which is made every six months on 31st March and 30th September.

The special importance of this return of September 30th, 1921, is that it marks the initiation of the new policy in regard to the Gold Standard Reserve which was described by the Finance Member in his speech on September 2nd, 1920, on the Paper Currency (Amendment) Bill.<sup>1</sup> As I shall have to refer more than once to the new policy of utilizing the interest on the securities in the Paper Currency and Gold Standard Reserves for reduction of the created securities, it is worth while to quote the whole passage. After having stated that, as compared with the proposed permanent constitution of the Paper Currency Reserve there was then an excess 47 crores of rupee securities, Mr. Hailey said Government did not propose merely to wait on the course of events.

“Far from that,” he proceeded, “we propose to hasten the arrival of the appointed day by setting aside every year for the purposes of our Reserve, the whole of the interest on our English and Indian securities held specially for the Reserve, and, further, in order that there will be a full guarantee that we have done so, there will be an annual attestation to this effect by the guardian of our official conscience—the Auditor General in India. Roughly this interest will amount to £2-million annually. We shall go further than this although we have not provided in the Bill for

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<sup>1</sup> *Gazette of India*, Part VI, September 18th, 1920, page 1116.

this measure; and when our Gold Standard Reserve amounts £40-million, it is now £37 $\frac{1}{4}$ -million, we shall take all the interest from that and place it to the credit of our Currency Reserve.

In accordance with this undertaking the return of the Gold Standard Reserve for September 30th, 1921, states "The excess over £40-million will be utilized for the reduction of the created securities held in the Paper Currency Reserve." The interest on the sterling securities of the Gold Standard Reserve is being transferred to India by a process of debit and credit, the Secretary of State utilising it for his ordinary expenditure, and the Government of India paying, or proposing to pay, an equivalent amount from revenue to the Paper Currency Reserve, for reduction of the "created securities." The accumulation of the interest on the securities in the Paper Currency Reserve, which commenced from 1st April, 1921, is being continued in similar manner. The peculiar fact that the reduction of the "created securities" ceased in December last, will be commented on at the end of this chapter.

As I said at the beginning of this chapter the outstanding feature of the situation is that the Gold Standard Reserve remains as yet intact in London. It has not been used

to support exchange; neither has the Secretary of State needed to have recourse to it to meet his expenditure in London. The forecast of the Finance Member in his Budget Speech may very well be more than realised. He said :—

“In concluding my remarks upon our ways and means operations I must say a few words regarding the Secretary of State's position next year. This is a matter which at the present time is of particular interest and importance, because of its bearing upon the future course of exchange. We anticipate that the total expenditure which the Secretary of State will have to meet in London will be about £46-millions. Now it will be obvious at once to honorable members that if it were necessary next year to put the Secretary of State in funds by means of the sale of Council Bills in London, such Council Bills, if sold to any large extent, would act as a very severe deterrent to any recovery in exchange which the trade conditions of next year might otherwise lead to. Fortunately we do not anticipate that, humanly speaking, there will be any necessity for the sale of Council Bills during the year. In the first place, we shall be recovering from the War Office about £20-million in respect of rupee disbursements made by us on their behalf. From his own cash balances and from certain other sources the Secretary of State will probably be able to find another £12-million. We also hope, as I have already stated, that he will be able to raise a sterling loan of about £5-million. He will need therefore a further £8½-million. Now what is the position as regards our sterling reserves? We have some £8-million in the Paper

Currency Reserve and no less than £38-million in the Gold Standard Reserve. It is obvious, therefore, that the Secretary of State, by operating on those reserves, *i.e.*, by transferring them to India, should be able to avoid the sale of Councils for a considerable period. He would draw upon those reserves in London, while we should credit thereto in India an equivalent amount of rupees, the net result being a transfer of the reserves, to that extent, from England to India. During the next financial year we expect, as I have said, that he will only have to place himself in funds from these reserves to the extent of £8 $\frac{3}{4}$ -million, and this can be found almost entirely from the Paper Currency Reserve''<sup>1</sup>

The estimates for 1921-22 showed a proposed transfer of £2,500,000 of the Gold Standard Reserve from England to India during the financial year; but, as the Secretary of State borrowed £7-millions instead of £5-millions and £10-millions later in the year, and the recoveries from the Home Government proved larger than was anticipated, the Secretary of State did not need to trench upon the Gold Standard Reserve. It thus remains as a resource from which the Secretary of State could, if necessary, finance himself for the whole of 1922-23 without selling Councils.

<sup>1</sup> Budget, 1921-22, page 24.

*The Government's Policy*

Succinctly stated the Government's policy for dealing with the currency and exchange situation which developed in the summer of 1920 and grew worse during the following twelve months is this. Seeing that the rupee circulation was obviously already redundant, as rupees were returning to the Paper Currency Reserve, they completely stopped the coinage of whole rupees in July, 1920. Then, at the end of September, 1920, Government had to confess their inability to support exchange and stopped selling reverse Councils. From that time onwards Government's policy has been to keep out of the exchange market altogether. It had become obvious that the whole of the sterling resources might be exhausted within twelve months if reverse telegraphic transfers were to continue to be offered at a million a week—nothing less would have had much effect—and thereafter it would be necessary for the Secretary of State to sell Councils to finance his own expenditure, and thus further depress exchange. It was decided, therefore, to abandon the exchange rate to the tender mercies of demand and supply, Government conserving its sterling resources so as to keep out of the market as long as possible.

That is the justification given by the Finance Member of the peculiar fact that in this, the most severe adverse balance of trade experienced since 1900, when the Gold Standard Reserve was established, not a penny of that Reserve has been utilized to keep exchange from falling to any depth which the play of momentary economic forces might dictate. The policy cannot be better described than in the Finance Member's own words then<sup>1</sup>—

“A year ago we were being criticised very severely for supporting exchange, at the high level then existing, by the sale of Reverse Councils. More recently we have been criticised in several quarters for not making use of the Gold Standard Reserve to stabilise exchange, at the level to which it has subsequently fallen. Our more recent critics point out that the very *raison d'être* of the Gold Standard Reserve is to support exchange. I entirely agree. My reply is that the best and most effective way of utilising that reserve is in order to keep the Secretary of State in funds and to avoid his having to sell Councils at a low rate of exchange. When one considers that the Secretary of State has over £46-million of sterling reserves, apart from his cash balances and apart from any other assets that may accrue to him in England, there is surely some justification for a refusal to feel unduly pessimistic about the future course of exchange. For unless it be contended, and I have not yet heard the assertion made, that the balance of trade has now set permanently against India, and if it be agreed that the present

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<sup>1</sup> Budget, 1921-22 page 25.

trade conditions are highly abnormal, then it can only be a question of time before a return commences towards a more normal state of affairs. When that happens, there must be a balance of trade in India's favor, and unless that balance be satisfied by the sale of Council Bills exchange must rise. Then, and not till then, will in our opinion be the psychological moment to make full use of our sterling reserves,<sup>1</sup> rather than to dissipate these now in efforts to stabilise exchange at some rate, which from the very nature of the existing conditions of the world's trade, could not be made permanent. If there is one lesson that can be drawn from the events of 1920 it is surely this: if, as we are told, a mistake was made last year in endeavoring to stabilise exchange when conditions were so abnormal, let us not repeat that mistake by trying to do a similar thing when, owing to a violent swing of the pendulum, the converse position is equally abnormal."

### *Deficits and Inflation*

A more subtle and intricate question of policy is that connected with the financing of the deficits of the Central Government. From 1918-19 onwards the Afghan War and the general increase of expenditure due to rising prices and other causes has led to a series of annual deficits. In 1919-20 the deficit

<sup>1</sup> This assertion was surely a slip of the tongue on the part of the Finance Member. It is not likely the sterling reserves would be used for sale of reverse Councils when exchange was rising; they would be reserved for preventing another fall after a rise had once taken place to a high level. In his Budget speech on March 1st, 1922, delivered after this chapter was in type, Sir Malcolm Hailey has made it clear that a sudden raising of exchange is not the intention of Government.

was over 23 crores, and in 1920-21 about 32 crores. A Government like an individual, can only meet a deficit either by drawing on a reserve, like a bank balance, or by borrowing. There being no sufficient reserve capable of being converted to this purpose, Government was forced to borrow; and this it did in two ways: (1) by issuing to the public (including banks) Treasury Bills for three, six and nine months; and (2) by issuing currency notes backed by Treasury Bills specially issued to the Currency Reserve for this purpose and called "created securities."

This process of issuing currency notes to finance a deficit is tantamount to a forced loan raised from all the people of the country, because it transfers spending power from them to the Government whether they like it or not, owing to the increase of prices which is caused by the increase of the circulation. All the countries of Europe, except England, are even now using this simple expedient for meeting the difference between expenditure and revenue; and the effect is always the same however much it may be glossed over by legislative sanctions or indirect issues. The German Government uses the Imperial Bank of Germany as its agent, and the bank issues notes to the Government's order. In India

the legal fiction is adopted that notes beyond the amount of gold and silver in the Reserve are issued only against securities placed in the Paper Currency Reserve; but when the securities in the reserve are Government's own promises to pay to itself, specially issued for the purpose, it is obvious that this is no check whatever upon the amount of the inflation. It is merely a book-keeping transaction which records the amount of the inflation.

The Finance Department was perfectly aware of this, but could not help itself when the money market was tight and excess expenditure unavoidable. The Finance Member in his Budget Speech was quite candid about the matter:—

"I do not think I need lay stress" he said,<sup>1</sup> "on the necessity for freeing ourselves as early as possible from the embarrassments which follow from the present volume of our floating debt and from an inflated currency. Nevertheless, in view of the necessity for finding what money we can for the railway program we have felt unable for the present to make any specific provision for a reduction in our floating debt, or for the cancellation of the treasury bills held in the Paper Currency Reserve, save in so far as this is automatically provided for by the Indian Paper Currency (Amendment) Act XLV of 1920. I am afraid that some of our financial critics will place their finger upon

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<sup>1</sup> Budget, 1921-22, page 22.

this meagre provision as being a weak point in our ways and means budget. We propose, however, should the rupee loan bring in more than the 15 crores budgeted for, to devote such excess to the purpose of making a further reduction in our floating debt or of the deflation of the currency. I feel very strongly that these objects have the first call upon any surplus assets that the operations of next year may give rise to."

It is clear that Government was fully aware of the evils of an inflated currency and meant to take all practicable measures, not only to avoid further inflation, but also to reduce the inflation already existing. I shall show later the very important part which their failure or success in this heroic task is bound to have upon exchange. In the mean time we must see to what extent they have been successful during the past twelve months in carrying out the general policy just outlined.

The Paper Currency Act of 1920 provided [section 13 (3)] that from the 1st April, 1921, the whole of the interest on the securities in the Paper Currency Reserve should be applied to the reduction of the "created securities" until the latter should be reduced to 12 crores. In the following table are given the total values of the sterling and rupee securities each month and the nominal value

of the "created securities" included in the latter:—

| 1921           | Sterling Securities<br>Rs. lakhs. | Rupee Securities<br>Rs. lakhs. | Nominal value<br>of "created securities". |
|----------------|-----------------------------------|--------------------------------|-------------------------------------------|
| 31st March     | 8,33                              | 68,07                          | 61,26                                     |
| 30th April     | 8,35                              | 68,06                          | 61,26                                     |
| 31st May       | 8,35                              | 67,99                          | 61,26                                     |
| 30th June      | 8,35                              | 67,99                          | 61,26                                     |
| 31st July      | 8,35                              | 68,05                          | 61,26                                     |
| 31st August    | 8,35                              | 66,92                          | 60,00                                     |
| 30th September | 8,35                              | 66,92                          | 60,00                                     |
| 31st October   | 8,35                              | 67,06                          | 60,00                                     |
| 30th November  | 6,35                              | 64,40                          | 57,20                                     |
| 31st December  | 5,85                              | 68,40                          | 61,26                                     |
| 1922           |                                   |                                |                                           |
| 31st January   | 5,85                              | 69,39                          | 62,26                                     |
| 7th February   | 5,85                              | 68,41                          | 61,26                                     |

Perusal of these figures shows that the created securities were reduced by a little over Rs.4-crores between July 31st and November 30th. The interest on securities of both the Paper Currency Reserve and of the Gold Standard Reserve was being applied as promised and deflation was being gradually accomplished, as I have shown above in Table IV on page 57. As explained by the Finance Member in his Budget Speech for 1922-23,

the process was reversed in December, and those 4 crores odd of created securities were re-issued. Worse still, another crore was issued in January, making the amount of created securities higher than ever before.<sup>1</sup> It appears that they have been used to replace sterling securities realised by the Secretary of State and silver coin withdrawn for circulation.

It is difficult to say whether this action conforms with the letter of the law; but it is certainly opposed to the spirit of Paper Currency (Amendment) Act of 1920, and to the Finance Member's explanation thereof in the Imperial Legislative Council. The intention of Section 13 (3) of the Act appears to be that the whole of the interest from securities of the Paper Currency Reserve, arising after 1st April, 1921, must be continuously applied in reduction of the created securities; and Government gave an undertaking that the interest from the Gold Standard Reserve would also be so applied. It is true that the Act does not say that no new created securities may be issued, but only prescribes the maximum total issue against securities at 85 crores, and this limit has not been reached. Yet it would be a jesuitical interpretation of the law to read it as permitting new created

<sup>1</sup> Two crores were, however, paid off by February 11th.

securities to be issued as fast as the old are redeemed. One wonders what certificate the Auditor General will give? Or is it the intention of the Finance Department to redeem these newly issued securities before the close of the financial year by the issue of Treasury bills, and so to conform after all with the spirit of the Act and the declarations of the finance Member?

The plain fact is that the Government are in financial difficulties, with expenditure exceeding, and revenue falling short of the estimates; and to finance the deficit Treasury bills must be issued. Banks and the public are sometimes slow in taking bills at the rates offered, and so recourse is had to increasing the fiduciary note issue—which means inflation. The rapidity of the recent increase of the fiduciary circulation is alarming—from December 15th, 1921, to January 23rd, 1922, it increased by about  $4\frac{1}{2}$  crores. In this period the rupee-plus-note circulation increased by 4·85 crores. Subsequently there has been some reduction.

The total floating debt of Government (Treasury Bills) has exhibited a most disquieting expansion since last summer (when it was reduced by funding), indicating the difficulties of the Central Government in making both ends meet in current revenue and

expenditure. The figures of the total of Treasury bills outstanding are :—

|                      | In Currency Reserve | With Public |
|----------------------|---------------------|-------------|
| September 24th, 1921 | 60,00               | 22,23       |
| October 31st, 1921   | 60,00               | 29,84       |
| November 28th, 1921  | 57,20               | 39,10       |
| January 2nd, 1922    | 61,26               | 43,25       |
| February 11th, 1922  | 60,26               | 47,37       |

Unless the financial condition of the Central Government can be set right by additional taxation in the coming year the outlook is gloomy. An increasing deficit is almost certain to lead to further inflation. Either recourse must be had to the issue of notes against further created securities until the limit of 85 crores for all securities is reached, or Government must issue Treasury bills to persons who borrow on them from the banks, particularly the Imperial Bank, or borrow from the banks by issuing bills to them direct, or otherwise. The last two alternatives will produce inflation of bank deposits (see above pp. 52-4); and in either case the general price level will be prevented from falling, and exchange will tend to weaken. Relief could only be obtained by funding this floating debt out of the proceeds of the next long term loan. This expedient had to be adopted last year; but it is very bad finance. The Assembly must realise the gravity of the

situation and seek every means of increasing the revenue and retrenching expenditure.

*Policy as regards Gold*

The Government's policy as regards gold in India is one of inaction. With gold selling at over Rs.28 per tola the sovereign is worth Rs.17-9-0; but in the Currency Reserve it is valued at Rs.10. There is gold equivalent to more than 24 million sovereigns in the Reserve, and the amount has varied but little since the date when sales of gold were suspended in September, 1920. Although the holding of gold has been reduced by Rs. 3-lakhs in the last three months, it appears that Government are pursuing the policy of holding their stock of gold. When it becomes necessary to transfer part of the Gold Standard Reserve to India on account of the Secretary of State drawing thereon for his requirements, the portion of that Reserve located in India will probably consist largely of gold transferred from the Paper Currency Reserve as recommended by the Chamberlain Commission. There is no sign that Government intends to release gold for export, although they could do so at a good profit and with advantage to exchange.

## CHAPTER VIII

### THE PROBABLE COURSE OF EXCHANGE

The preceding chapters have furnished a basis on which to attempt a forecast of the probable future course of exchange. Obviously the conclusions which will be presented in this chapter cannot have more than a transient utility; except in so far as the analysis here presented suggests to the reader ways of making or improving his own estimates of the future. Moreover a forecast is naturally given with much reserve; for, assuming the reasoning to be sound, it can have no greater validity than is warranted by the correctness and completeness of the data on which it is founded. It may even be considered a rash undertaking to attempt any forecast of the probable future of exchange when the opinions of the most competent judges have so often proved wrong.

If I were merely to state an opinion as to the future course of exchange, it would rightly carry but little weight. The importance to be attached to any forecast depends upon the statement of the reasons on which it is based. If the facts of the existing situation be fully analysed and the correctness of the analysis be admitted, the forecast becomes, however, something more than a mere opinion. There is justification then for the belief that it indicates the most probable course of events. That is all that can be offered ; for it is as yet beyond human power to anticipate the future in economic events with more than a moderate balance of probability.

Having these considerations in view the endeavor is made in this chapter to give a complete analysis of the economic conditions now affecting exchange, and to anticipate how they may change and thereby influence its future trend. The degree of reliance which the reader may place upon my forecast must depend mainly on his opinion of the correctness of my analysis of present conditions. Unforeseeable events, of course, may occur ; and political troubles and emergencies of all kinds must be regarded as belonging to this class, for I can venture no forecast of them or of their effect on exchange, if any.

*Exchange Policy*

A factor of uncertainty which defies estimate is the future of the Government's exchange policy. Will the declared policy of Government outlined in the last chapter be maintained, or will a new policy be adopted? We have seen in Chapter II that Government is embarrassed with an increasing revenue deficit, and, partly for this reason, has not only ceased to reduce the created securities but actually increased the total during December and January. During those months the note circulation increased and also the total rupee-plus-note circulation. It may be assumed that the interest on securities in the two reserves will continue to be devoted, at least nominally, to the reduction of the created securities<sup>1</sup>; but it is very doubtful whether, even if the Assembly imposes new taxes in March, the contraction of the rupee-plus-note circulation can be resumed until the summer when some of the floating debt may be funded. The Secretary of State is obtaining a further £50,000,000 borrowing powers in London, and I do not anticipate that much deflation will actually occur on account

<sup>1</sup> Since the above was set in type, the Assembly has appropriated the interest on the Paper Currency Reserve securities in relief of the revenue deficit.

of keeping him in funds, at any rate before September. The external price level is likely, therefore, to continue falling as fast as the price level in India. Consequently, even if we assume, as we are justified in assuming, that Government will refrain from selling Councils throughout the financial year 1922-23, and if all other conditions remain unchanged, the mere continuance by Government of its present exchange policy will tend not to support exchange, but rather to allow it to weaken further.

If Government, on reviewing the situation afresh, should decide to take further and drastic measures for the reduction of the circulation, such as those outlined in Chapter XI such action might easily have, after a few months, a predominant effect upon exchange and cause it to rise appreciably. I give reasons in the following chapters, however, for thinking that Government cannot safely reduce the circulation rapidly, and that it would probably require two years for them to raise exchange to 1s. 8d. by manipulation of the price level. It seems unlikely that any considerable result could be effected during the next twelve months.

*Relative Price Levels*

This question of the contraction of the circulation has been considered first because undoubtedly it has a predominant effect on the exchange situation. So long as the internal price-level remains high relatively to the external price-level, there will be a constant stimulus to imports, and the balance of trade will *tend* to continue unfavorable. A continuation of the fall of prices in Europe and America is probable, and this will keep ahead of the fall of prices in India, so that merchants will constantly be ordering new goods from abroad in preference to absorbing stocks already in the country. Exchange will *tend* to fall to that level at which, with the prevailing relative internal and external levels of prices, many proposed import transactions become unprofitable. Thus exchange will fall to and hang about that level which achieves a balance of indebtedness inwards and outwards.

It is obvious, however, that other conditions enter into the balance of trade besides the relative internal and external price levels. A revival in the world's markets, or abundant harvests in India, would create a favorable *tendency* in the balance of trade which must

neutralize to some extent the unfavorable influence of the relative price levels; and must *to that extent tend* to raise exchange, and, subject to other influences, actually do so. We must proceed, therefore, to examine the probable influences on the balance of trade independent of relative price-levels.

### *The Balance of Trade—Imports*

Apart from relative price levels there appear to be only three influences on the balance of trade which may be considered important—the boycott of foreign goods, especially cloth, the customs tariff, and the buying power of the people. The non-cooperation movement has been more successful than many people anticipated in securing a boycott of foreign cloth, and piece-goods merchants seem largely to have adhered to their undertaking to place no orders abroad for piece-goods until after December 31st. Sales in up-country markets have undoubtedly been effectively reduced by the boycott and picketing. It is quite possible that the fashion of wearing *khaddar*, or at least cloth of yarn spun in Indian mills, will persist amongst a section of the middle-class population for several months more; and Indian importers will order

with caution. By the end of the summer the boycott movement may very likely have lost much of its force. For this reason, and because the existing stocks will have been digested to some extent, and Lancashire and Japanese prices will probably have fallen further, I anticipate that a very moderate scale of import of piece goods during the next six months will be followed by a gradual expansion of import in the closing months of 1922. This will tend to weaken exchange in the later months of the year and in 1923.

The disorganized condition of the coal mining industry owing to difficulties of wagon supply and labor has led to the import of a considerable quantities of Welsh and South African coal to Bombay. The East Indian Railway strike on the one hand and the fall of the price of coal in England is likely to cause some increase of imports in the immediate future ; but it is to be hoped that with the improvement of the railway position, if not of labor at the mines also, the imports may be decreasing by the close of the year.

As explained in Chapter IX, the effect of increased import duties is to curtail the import trade. By the recent budget the general tariff is increased from 11 to 15 per cent, the special rate on luxury articles from 20 to 30 per cent and

the sugar duty from 15 to 25 per cent, besides special increases on matches, oil, salt and other imported goods. Since goods ordered before the increases will be arriving for some three or four months thereafter, there can be no immediate effect; but the tendency slightly to raise exchange should begin to act during the summer.

The buying power of the people depends more than anything else on the success of the harvests—particularly of the *rabi* crops and cotton. Both the total outturn and the price are important. Conditions during sowing and subsequently have been good for the current *rabi* harvest, and a good wheat harvest in the Punjab and United Provinces may be anticipated, and good yields elsewhere are probable. The present cotton crop (1921, marketed 1922) is good; but the foreign demand only fair. On the whole, conditions are such that the buying power of the people seems likely to increase somewhat during 1922. This would tend to weaken exchange in the later half of the year.

### *Export Trade*

The activity of the export trade depends mainly on (1) the yield of produce in India available for export; and (2) on the foreign

demand. The outlook as regards the former is on the whole favorable. The wheat crop in Northern India promises well and the Punjab may have a bumper crop. It is reasonable to hope that there may be a substantial surplus available for export under license. The cotton crop is better than last season's, and is a fair average crop; and oilseeds promise well. The area of the jute crop will probably prove to be restricted and the crop may be no larger than last year's. This is a matter which need not cause concern in relation to exchange; for, since India has a practical monopoly of the world's jute supply, and the elasticity of demand for jute goods in a particular season probably is little more than unity, whilst the supply is very inelastic in a period of twelve months, with a normal demand for jute goods the price will be raised nearly in the same proportion as the crop is less than normal. Hence the total indebtedness to India for jute exports in a single shipping season would be little reduced even if a smaller quantity were shipped.

The production of tea has been reduced in the last twelve months and unrest in Assam may affect the next crop; but the quality is being improved, and with the exhaustion of stocks abroad the prices obtainable this year will range higher. The collapse of the foreign demand

for hides eighteen months ago and the export tax gave us a legacy of large quantities of hides and crust leather lying in godowns, awaiting a revival of demand and removal of the export duty.

On the supply side, therefore, there is no reason to anticipate any serious shortage in the volume of goods for export when foreign demand revives. Of course it is partly a matter of price ; but the position in India seems to be such that large quantities of certain commodities will be available to be sent abroad, and that the shortage of others will be largely made up by some rise of price when demand revives.

Turning to the prospects of the foreign demand for Indian products we note that, for reasons already explained in Chapter VI (p. 114), it seems likely that there will be a definite improvement before the end of 1922. Indeed signs of it are in evidence already in the increasing volume of trade.

The effect of this anticipated revival of foreign demand, coupled with the generally ample supplies of goods available for shipment, will be a tendency to a stronger exchange in the autumn of 1922, which is likely to persist in modified degree throughout 1923.

It is to be understood that here, as elsewhere in this chapter, this is only a statement of a tendency. The forecast is reserved for the summary at the end of this chapter.

### *Gold and Silver*

Exchange is much influenced by the fluctuations of the prices of gold and silver in India and abroad, and by the steady demand for both these precious metals for absorption by the upcountry markets. On the average there is a balance of import over export in each case ; but when exchange falls one or both metals may be exported, and when exchange rises one or both are very soon imported to an extent that brings exchange down again. Sometimes India has been importing silver and exporting gold, and at other times *vice-versa* : more often, on the balance, importing both together. The effects on exchange are these : if the price of gold falls in London, gold is imported, and paying for it lowers exchange ; and the same may be said of silver. A strong demand for these metals in India also lowers exchange. On the other hand if the price of gold or silver rises in London this tends to raise exchange, as India exports the metals.

In this connection the New York cross-rate is of the greatest importance for it is the principal factor governing the price of gold in London, and also affects, though in less degree, the price of silver. During the past few months the American cross-rate has been rising, owing chiefly to the remittance of funds to Europe for more profitable employment than they could find at home. This has lowered the price of gold in London and also helped to lower the price of silver. Whether this tendency to weaken the Indian exchange will continue, it is very difficult to say. England is to begin paying the interest due to the American Government after 15th May; and this will tend to lower the New York rate. However, if the American money market cannot profitably use those funds they will simply be remitted back to Europe for employment. Trade seems likely to revive in the United States during the late summer of 1922, and this would find employment for American money; and as the Bank of England rate has been reduced to  $4\frac{1}{2}$  per cent, and seems likely to go lower, an American trade revival would mean a reverse movement of funds, and a fall of the cross-rate. On the whole this seems to be more likely than not. Furthermore the export of American crops, which

usually depresses the cross-rate in the autumn, will probably have its normal effect this year, owing to some revival of European demand and the absence of the peculiar movement of funds along with the crops which characterised the autumn of 1921. Thus the probabilities are in favor of conditions tending to raise the Indian exchange during that period. The reduced production of gold on the Rand owing to the prolonged strike and its after effects will have a slight tendency in the same direction.

On the other hand the price of silver would seem likely to go lower owing to enlarged production and a slack demand in Europe and America. This would have a weakening tendency on the Indian exchange.

### *Movements of Funds*

Remittances of trade funds by banks and commercial firms, and the withholding of normal remittances, have often an appreciable effect upon exchange. We may expect a decline of the amount of commercial profits and dividends, and earnings of shipping due for remittance home; and the cheapening of money in London which is in progress may very well lead to the flow of capital resources to India. Both the latter movements and the decrease of

remittances would tend to raise exchange. Serious political troubles in India might, however, lead to the net movement of funds being in the other direction. Any widespread disturbances here might well cause temporarily a weak exchange. It is also probable that considerable sums are being retained in India for remittance Home when exchange rises.

### *European Exchanges*

The disorganisation of the European exchanges is largely the result of the very weak economic condition in which the War has left the continental countries. Deficits in public finance have led to unrestricted issues of paper money. So long as more and more paper is issued their currency will continue to depreciate in exchange value. Whilst the movement of depreciation continues these countries are at a great disadvantage as buyers in foreign markets; for the internal price level rises more slowly than their money depreciates in foreign exchange. A country which manages to stabilise its currency even at the present depreciated level will find that, after a few months, internal prices have risen sufficiently to make a resumption of the normal importation of raw materials profitable.

The collapse of the German exchange in October last practically extinguished her buying power for a time ; and this she is now gradually recovering.

As regards the future much will depend upon the outcome of the Genoa Conference, to be shortly held. The countries of Central Europe must be given a breathing space in which to reconstruct. If the Allied powers agree on reasonable measures, it is quite possible that Central Europe may revive considerably within twelve months, and become a real factor in the demand for Indian produce during the latter part of 1922 and thereafter. It being in the interests of all parties to re-establish Central Europe, I think it is more likely than not that a way will be found. The principal source of danger seems to me the possibility of revolutionary disturbances owing to the severe privations of the working classes in those countries.

On the other hand the selling power of the Central European countries is temporarily augmented by each fresh depreciation of their paper currency, because the internal price level rises slowly. The further depreciation of German, Austrian or Italian currency would mean increased imports, and have a weakening tendency on the Indian exchange. Speculative purchases of marks by the Indian public followed the

first collapse in October ; and any sudden further fall of the mark may have some effect in depressing the Indian exchange ; but it would only be temporary, and probably unimportant, for the ardor of the speculators has been damped.

### *General Summary*

The most important single factor acting on exchange is doubtless the inflation of the currency ; and the question is to what extent deflation is possible or likely during the next twelve months. As Government has undertaken not to sell reverse Councils again without consulting the Legislative Assembly, it may be assumed that reverse Councils cannot be sold until August at the earliest. Deflation could proceed, however, by the application of interest from the Reserves and by transfers from revenue to meet the Secretary of State's expenditure. Government will be deterred from utilizing these resources to the full by the desire not to embarrass banks and the money market generally, and by the difficulty of financing the Imperial deficit. On the whole I think Government is likely to steer a middle course and effect some deflation <sup>1</sup>.

<sup>1</sup> But not so much as they could do, and, in my opinion, ought to do, in spite of the deficit budget.

My general conclusion as to the *most probable* course of exchange during the next twelve months is, therefore, that from April to August, 1922, *exchange will remain weak, fluctuating in the neighborhood of 1s. 3d., that before the end of September a firm tendency will be evident, and that in October, assuming no change of Government policy, the rate will rise to about 1s. 5d. (but not exceed 1s. 6d.), and remain at about 1s. 5d. during November. During December it is likely to weaken, and will probably fall to 1s. 4d. by the end of the year, remaining at, or slightly below, this figure for the following three months.*

Any change of Government policy, such as the adoption of measures to stabilize exchange at 1s. 4d. or 1s. 6d. would obviously vitiate this forecast. It should be remembered also that if this forecast should be generally accepted as indicating the most probable course of events speculators might think it worth while to operate on the probable rise and fall. The effect of such operations would be to cause some rise at a slightly earlier date, to lessen the average amount of the rise and slightly to delay the fall. In other words the curve of rise and fall from August to the following January would be somewhat flattened.

This levelling effect of speculation (including forward contracts) might conceivably be so effective as to prevent the average for any one of the months, September, October or November, exceeding the average of August by more than  $\frac{1}{2}d$ . Hence no reliance can be placed on any estimate of the *amount* of the rise from August to October. I can only say that it is most probable that there will be some rise, and that the figures given on the preceding page will not be exceeded.

## CHAPTER IX

### TARIFF POLICY AND EXCHANGE

#### *Policy of Protection Probable*

The appointment of the Fiscal Commission may very well prove to have been a landmark in India's national history as well as in her industrial history. The mere fact that this commission is meeting in India is an open acknowledgment of the fact that India's fiscal policy has been freed from external control. It will no longer be subordinated to alien interests and theories.

The opinion seems to be widely held that the Indian Fiscal Commission is likely to recommend the adoption of a policy of protection of Indian industries with or without a measure of imperial preference. The Government of India would seem to be already in favor of the adoption of a protective tariff, if one may judge from the character of the questions which they prepared and circulated in anticipation of the Commission commencing its labors.

As a matter of fact the customs tariff of the present year's budget is already semi-protective in character, and wholly so in regard to a few commodities. The general rate of import duty on articles other than machinery and materials of industries is 15 per cent *ad valorem*. A long list of goods, mainly luxury articles, such as gold and silver plate, silk piece goods, prints and engravings, toys, and motor cars and all parts and accessories thereof, are taxed at 30 per cent. There are numerous special duties at an equal or higher rate ; such as two annas per dozen boxes on matches ; 25 per cent *ad valorem* on sugar, and 75 per cent *ad valorem* on cigars and cigarettes, and Rs.2-4-0 per lb. on manufactured tobacco.

The Finance Member in introducing last year's budget took pains to explain that the duties he proposed were for revenue purposes only. "It is solely our financial necessity" he said "and no new departure of fiscal policy, which has obliged us to propose to the legislature this particular measure."<sup>1</sup> Obviously the Finance Member had no *locus standi* to commit the country definitely to a change of fiscal policy. Neither would the Government of India be prepared to do so without

<sup>1</sup> The increase of the general tariff from 7½ to 11 per cent (Budget speech, 1921, para. 29.).

adequate discussion. Yet the fact remains that last year's tariff was more or less protective in character as regards a large number of Indian industries, and highly so in regard to manufactured tobacco, cigars and cigarettes, and that the present year's tariff is still more so.

The arguments which may be advanced in favor of a protective tariff scientifically devised to assist infant industries are very strong. India possesses resources capable of facilitating the establishment of many important industries which might supply goods widely consumed in the country. The various Departments of Industries might well make it their business to investigate the resources not only in materials, but also in skilled labor and technical knowledge, available in the cases of those industries for which the conditions proved to be favorable. Protective duties might be imposed so long as the goods are not those consumed by the poor; and assuming also that capital has proved its willingness to embark on the industry. To afford adequate protection to an infant industry the duties would need to be arranged at from 30 to 50 per cent according to the nature of the commodity. The general tariff might remain approximately at the

present level ; but new protective duties would be added from time to time as new industries were started with prospects of success.

### *Effect of Protective Tariff on Foreign Trade*

Assuming that there is a considerable probability that a policy of protection may be adopted within the next two or three years, it is necessary for us to consider carefully how this will affect foreign trade and influence exchange. That it must have a considerable effect is clear, not only from economic reasoning, but also from the experiences of the United States and other countries.

High import duties unquestionably act as a restriction upon the import trade. The prices of most important articles within the country are raised by nearly the full amount of the import duties, and the consumption tends to fall off. Different commodities are affected in this manner in very different degrees. The restriction of imports tends indirectly and gradually—though none-the-less surely—to restrict exports to an equal total annual value. During the first ten or twelve months after the imposition of a tariff of higher import duties, the export trade continues for the time as before. This causes a

balance of indebtedness in favor of the country, because the imports have fallen off. In normal times, with a fixed exchange, gold would flow into the country. It might be said, in a popular sense, that high import duties make it cheaper to import money—that is Council bills or gold—than some kinds of commodities.

The restriction of imports operates in a few months; but the restriction of exports operates gradually through the rise of the general level of prices in the country which is caused by the inflow of money. In the course of a year or so an equilibrium will be reached in which the general level of prices is appreciably higher than before the new duties were imposed. This higher level of prices then renders some portion of the export trade unprofitable; and it becomes automatically reduced so that the total inward and outward indebtedness of the country become once more balanced.

The higher price level caused by the high import tariff is not a mere passing phase, but remains permanently so long as the import tariff is retained. This, of course, is only one of the numerous factors affecting the price level; but it is clear that other things being equal, the price level will

rise and remain at a higher level after the imposition of a general tariff of high duties than it would otherwise have been.

A concrete illustration of this effect is to be found in the United States of America, where the high duties of the McKinley tariff, imposed in 1890, undoubtedly prevented the volume of American foreign trade from growing as it otherwise would have done, and caused a flow of money into the country. The latter was the principal cause of the comparatively high level of the cost of living in America during the quarter of a century preceding the Great War.

### *Effect upon Exchange*

We may now turn to examine the probable effect of a general protective tariff upon the Indian exchange. The tendency to a favorable balance of trade which the high tariff will cause within twelve months after its imposition is naturally a factor tending to strengthen exchange. If the export situation is normal, and the duties are high enough, the reduction of imports caused by the tariff may well prove the decisive factor, and actually be responsible for a considerable rise of the exchange rate.

It must be remembered, however, that everything written in this chapter concerns

only the *tendencies* of economic forces. The actual results are never due to single causes ; but are the resultant of several economic forces acting at one time. Obviously it cannot be true that the exchange level will rise considerably and also the internal price level, both as the result of the imposition of a high protective tariff. These two effects are also at the same time potential *causes*, and would act in opposite directions. The rise of the internal price level would tend to depress exchange ; and the rise of exchange would tend to keep the internal price level unchanged. A problem of considerable interest and importance is—which would act first? I think there is little doubt that the tendency to raise exchange would act first ; because it is only through the influx of money that the internal price level would rise. Hence there would be some rise of the exchange—it would have at least a “firm tendency”—whilst funds were coming into the country. The more the favorable balance of trade was actually liquidated by the expansion of the Indian currency, against Councils sold in London, or by the influx of gold, the more would prices in India rise, and the tendency for exchange to rise be modified. The strong or rising tendency of exchange would, therefore, gradually work itself out,

the ultimate effect being distributed over both results. Exchange would probably rise appreciably and the price level also; but each would have risen less than if the other had not risen.

This analysis has probably been carried far enough for the purposes of this book. It should be explained, however, that I have assumed the present wide margin of fluctuation of exchange to continue—that is to say that no new rating of the sovereign in terms of rupees is adopted. If exchange were to be fixed at any lower level than 2s.; say, at 1s. 6d., the effect of imposing a high protective tariff would be to cause exchange to rise to that level; and the price level would either remain stationary, or rise by such small amount as was necessary to establish equilibrium after the fixed level of exchange was attained. We have always to remember that the lower the level at which the exchange rate is fixed by the price of Councils and the rating of the sovereign in rupees in India, the higher will be the corresponding price level in India when trade is balanced.

### *Effects of Export Duties*

The imposition of export duties has an effect upon the balance of trade analogous to

that of import duties, but in the opposite direction. An export duty tends to reduce the volume of export business, and thus increases an unfavorable balance of trade, or decreases a favorable balance of trade. The effect of levying a new export duty is, therefore, to weaken exchange; and the effect of removing an existing export duty would be to strengthen or raise exchange.

An export duty also tends to alter the price level in the country. As it makes the balance of trade less favorable, more money will leave the country than if the export duties were not imposed, and the price level will fall, or tend to fall.

As in the case of import duties, the actual result will depend upon the other conditions prevailing. If exchange be free to fluctuate between wide limits, as at the present time, the probable effect of imposing export duties would be to lower exchange slightly; and there would be subsequently a gradual fall of price level in India, which would continue or be maintained, until the equilibrium was re-established and exchange moved back to its original position. In the actual course of events other more powerful causes would be influencing exchange and the price level, and would probably overshadow

the effects of the export duties. Its tendency, however, would be as just indicated; and it would operate as one of a number of causes which would combine to produce the actual movement of exchange and price level.

If exchange were maintained at a fixed point, being supported if necessary, by the sale of reverse Councils, the only difference would be that the imposition of the export duty could not lower exchange, but would decrease the demand for Councils, or increase the demand for reverse Councils, and operate to a corresponding degree to lower the price level in India.

The action of an export duty in the manner just indicated will be small, or even negligible, if the commodity on which the export duty is imposed is one of which India has a virtual monopoly of the world's supply, as for example jute, lac, or sandal wood. On the other hand, the smaller the part of the total world's supply of a commodity which is contributed by India, the greater will be the effect of an export duty in diminishing the quantity exported, and consequently, the greater the effect in weakening exchange and lowering the price level. It is obvious that the export duty on hides belongs to the latter class, and its removal would probably contribute

appreciably towards a better tone in the exchange market.<sup>1</sup>

The effect of the prohibition of export of any commodity, as for example wheat, is obviously similar to that of an export duty, only more pronounced. The present policy of prohibiting the export of food grains, or strictly limiting their export, has undoubtedly a weakening effect upon exchange. This is not the place to consider that policy; but the suggestion may be hazarded that an export duty upon wheat and rice which varied with their prices according to a sliding scale, would be in many ways preferable to absolute prohibition. In peace times it would prove equally efficacious in preventing too great a rise of prices in India at a time when poor harvests in India coincided with high prices of grain in the world's markets.

### *Import of Capital*

There is one possible result of the imposition of a general protective import tariff which might have an important effect upon exchange. If a scientific tariff should be adopted, especially devised to foster industries producing articles

<sup>1</sup> It may be doubted whether the export tax on hides is not costing the country as much as it yields. Hides being a joint product with beef, if the tax were removed the cost of feeding the army would be reduced,

for which there is a large demand in India, and for which resources for manufacture exist in India, there would be a very strong inducement for capitalists in England, America and other countries to establish branch factories and engineering works in this country. Some of the capital needed for erecting the necessary plant might be raised in India; but unquestionably a large amount of capital would have to be remitted to this country. The effect of such an influx of capital would be to strengthen exchange and actually to raise it within the limit set by the rating of the sovereign, or the fixed price of Councils. In so far as the incoming capital were utilised to import machinery and material, this effect would be neutralized; and the same would be true if the goods were sent instead of money, and remained here at the credit of the foreign firm. It is quite possible, however, that no inconsiderable amount of capital might be remitted to this country to be utilised here in the employment of labor on building and other works; and the import of such capital would tend to a favorable balance of payments, and the raising of exchange. It should be observed that the floating of sterling loans by the Government of India—a practice which has recently been resumed—has the same effect in so far as it

avoids the sale of Councils to transfer funds from India. If, however, the purchase of railway materials and stores is contingent upon the Secretary of State being able to raise funds in London, it cannot be said that such an operation has any effect upon exchange in the nature of a capital transaction, for the goods are simply transported to India on credit, and there is no remittance of money. Of course the subsequent payments of interest would tend to weaken exchange in future years.

## CHAPTER X

### PRICE LEVEL POLICY

Professor Irving Fisher, the well known American economist, author of *The Purchasing Power of Money* and other books, described the Indian Gold Exchange Standard system many years ago with approval. To its other merits he added this—that it is practicable for Government to vary or regulate the price-level at will, and also the rate of exchange, whereas in a gold using country the price-level is beyond control and exchange is fixed.

The mechanism of the regulation of prices has been explained earlier in this volume<sup>1</sup> and it was clearly explained that the price-level and exchange are closely inter-related, so that if one be varied (within the limits of practicability) the other must change in correspondence therewith. Assuming the external price-level to remain

<sup>1</sup> See Chapter II, pp. 30-2.

unchanged, an expansion of the rupee circulation (coin-plus-notes) raises prices in India and lowers exchange, and *vice versa*; whilst the raising of exchange by deliberate Government action (when the balance of trade permitted) would, if the new rate were maintained, bring about a lower price-level in India, and *vice versa*. In the event of world prices not remaining stationary, but falling, that would affect the Indian price level to a proportionate extent, adding its effect to the change caused by the Government of India's action; or subtracting, as the case might be.

It being possible for the Government of India, within limits, to vary the price-level in India, and the question of price-level being inseparably connected with the question of exchange, it is an essential preliminary to any decision as to the best future rate of exchange to be adopted to consider its effect upon or connection with, the internal price-level, and whether the resulting change of price-level is most likely, on the balance of advantage and disadvantage, to be salutary or harmful to the majority of the people. This aspect of the question was amply recognized by several witnesses examined by the Currency and Exchange Committee of

1919, and by the Committee itself in its Report. The only reason for reopening the matter is that circumstances have changed—fundamentally changed, as I think—owing to the general and severe fall of world prices, and the slump and long continued depression of the Indian exchange, which has given us a high price-level since 1920.

### *The Effects of Rising Prices*

The general rise of prices is often referred to as a “depreciation of the currency” or a “fall of the purchasing power of money.” The obvious effect of a general rise of prices is that the rupee will buy less than before in nearly all purchases. The result is that people with fixed incomes are at a great disadvantage; but on the other hand those who live upon profits, whether of agriculture, trade or industry, are benefited. Their costs of production usually rise at first in less proportion than the rise of prices; so that the margin of profit grows actually in larger proportion than the rise of prices. This explains the enormous transferences of wealth which have taken place in European countries as a result of the great rise of prices caused by the war.

Speaking generally, the effect of a rise of prices is to place debtors in a position of advantage and creditors at a disadvantage. The majority of debtors will find that their income expands with the rise of prices; so the burden of repaying a fixed number of rupees is less. People having to pay rent, or other fixed annual charges, benefit likewise. On the other hand the creditors lose, for the rupees which they receive back purchase fewer goods than when they were originally lent. The creditor may well wish that instead of having lent his money he had purchased goods and merely stored them; for after a period of rising prices their value is usually found to have risen considerably more than the interest he has received upon his money. The receivers of rent, interest on investments, salaries and other fixed annual incomes suffer in the same way as the creditors.

Taking a rapid survey of the whole community, we see that the people of the towns suffer more than the rural population, the majority of whom are cultivators living on profits. Those who cultivate merely for subsistence neither gain nor lose; but in so far as they produce cotton, wheat, oilseeds, and other commercial crops, cultivators benefit by a rise of

prices—they can easily pay their rents and reduce their debts. Between 1916 and 1920 thousands doubtless paid off their debts and saved something besides. The landlord class on the other hand tends to lose. A landlord's rents are largely fixed, or can only be raised by a small amount, or after delay; whilst the cost of maintaining his family and establishment greatly increases with higher prices.

In the towns the laboring populations and skilled industrial workers are prejudicially affected, for wages can only be raised after lengthened negotiations or strikes. It is the universal experience that the rise of wages lags behind the general rise of prices; but more so in the case of skilled workers than in the case of coolies and unskilled workers generally. The latter are always paid at the subsistence rate; and their very existence requires that their wages should rise with the cost of living.

### *The Currency Committee on High Prices*

The Committee on Currency and Exchange of 1919 was fully aware of the serious hardships caused to the town populations and even the laborers in agricultural districts by

a considerable rise of prices; and their belief in a policy of low prices was one of their principal reasons for recommending the 2s. exchange. In their Report they quoted the following graphic passage from the memorandum of evidence submitted by the Government of India:—

“The effect has, of course, been felt most directly by the poorer classes, but it has reacted on all sections of the community. Complaints on the subject have been universal throughout the country, and it is reported from the districts that in recent months the topic of high prices has engaged the minds of the people at large to the exclusion of every other; they could understand dearness during the war, but cannot understand why prices do not fall now that the war is over; they can account for some of the rise in the price of food-grains by last year's poor monsoon, but they are puzzled by large increases in the prices of their other necessities of life, the supply of which is not dependent on a good rainfall. There is no longer any room for doubt that the resultant increase in the expense of living due to the high prices of food-grains, as also of other necessities, such as cloth, kerosine oil, and the hardships which this increase has entailed on the poorer classes and those on fixed incomes, have been a very important factor in promoting unrest and discontent. At the same time the cultivator, who would ordinarily be the first to profit by the high prices of produce, whether food-grains or other raw material such as jute and cotton, has seen his profits disappear owing to the simultaneous rise in the price of other necessities. The wages of manual labor have no doubt been to some extent readjusted, and

ultimately the wages of the clerical and other classes of employees will undergo a similar readjustment. But the process of adjustment, however rapid, must inevitably be a painful one, which no amount of administrative palliatives, such as control of distribution, can alleviate."

The report proceeded: "These views are not a matter of theory alone. Disturbances have actually arisen in various parts of the country from time to time as a result of high prices, and the social and economic discontent to which they give rise is especially serious in a country where the mass of the population is ignorant and uneducated, and inclined to attribute all calamities to the action of the Government. The rise in prices in India has now reached a point at which it is injurious to the country as a whole, and we believe that any measures tending either to reduce prices or to check a further increase would be beneficial to the mass of the population.

We are led therefore to the conclusion that on economic and social grounds it is not desirable to restore a low level of exchange for the rupee under present conditions. Such a level would tend to augment prices generally and to aggravate the dangers of social and economic discontent. Having regard to the conditions under which the large mass of the population lives, we are satisfied that, in so far as the rise in exchange has mitigated a rise in Indian prices, it has been to the advantage of the country as a whole, and that it is desirable to secure the continuance of this benefit."

### *Price Movements since 1919*

The recommendations of the Committee of 1919 in so far as they were based upon a

policy of low prices have been seriously weakened, if not completely vitiated, by the subsequent course of events. The high exchange of 1919, and the first few months of 1920, undoubtedly prevented prices rising in India in the same proportion as in Europe. The enormous overtrading in imports, stimulated undoubtedly by the artificial exchange of February to May, 1920, coupled with the fall of exports, and later on the decline of world prices, led to the slump of exchange, from which we still suffer. As exchange fell, so did the price-level in India rise, and it seems to have attained its maximum in the summer of 1920, after which there was on the average some slight fall in prices. The Index numbers both of wholesale prices and cost of living show a fall in the later half of 1920, followed by a rise of prices during the first half of 1921. This renewed rise of prices was due partly to shortage of food crops; but the failure of the Government to contract the paper currency circulation to the full extent of the reverse Councils sold, and to go on contracting it after September, 1920, contributed to it. The paper currency circulation increased from 157·6 crores on September 30th, 1920, to 178·4 crores a year later; and even the rupee-plus-paper circulation increased slightly (see p. 57). The price level of 1921 was almost the

same as that of 1919, and a high level of prices has been maintained in spite of the legislative adoption of the Exchange and Currency Committee's proposals. It may be hoped and believed that we have now passed the highest point to which prices are likely to rise, excepting in the unlikely event of an abnormal and serious inflation of the currency. If prices have already reached the maximum, and receded from it, the Committee's observations as to the benefit to the population of checking a further increase of prices have now no application.

That it will be advantageous to reduce prices from their present high level goes without saying; but the question as to what extent of reduction of prices is desirable is open to argument. A moderate fall of prices, say by 15 per cent, would come as a great relief to the town populations and the laboring classes generally, and would not prejudice seriously either the cultivators or the industrial concerns. If, however, a more drastic fall of prices were brought about, so that within two or three years prices should fall by 50 per cent or more—this might prove a greater evil to the country as a whole than a continuance of prices at their present high level. That is the problem which we have now to examine.

We have to remember that economic adjustments have been taking place already in relation to a high price level. Wages have been raised, and in some occupations are still going up; the rents of agricultural holdings, which adjust themselves to prices more slowly than do wages, are being raised. Rents of house property in towns are rising, where not legally restricted, and the capital value of all kinds of property is going up. A sudden reversal of this process, followed by a long continued and severe fall of prices, may cause a very considerable economic disturbance and depression throughout the country.

### *Effects of a Fall of Prices*

The effects of a general fall of prices are, to a large extent, the reverse of those caused by a rise of prices. Creditors and the receivers of fixed incomes benefit because the rupees due to them will now buy more than before. On the other hand debtors and the payers of fixed rents lose, because their incomes decline in proportion to the fall of prices, or even more in the case of persons living on profits; and the fixed payments they are under contract to make thus constitute a heavier burden on the reduced income. The

working classes, as a whole, benefit by a fall of general prices. The wages of skilled workmen are not easily or immediately reduced ; and usually the earnings of skilled workers fall less than the cost of living. This gives them the opportunity of gradually adopting a higher standard of living, which was a very marked feature of the long fall of prices in Europe from 1873 to 1895. On the other hand unskilled workmen can offer less resistance to the reduction of their wages. Their earnings will sooner or later fall almost in proportion to the cost of living ; but they experience a temporary benefit during the delay. Merchants and traders do not suffer much unless they hold large stocks of commodities ; but manufacturers and all owners of industrial plant suffer because profits become greatly reduced and no longer furnish an adequate remuneration for management and supervision, and interest on capital. Drastic economies in production become necessary.

The effect of a fall prices upon the public finances is serious and almost unavoidable. The state revenue tends to decline, especially receipts from income-tax, customs revenue and excise ; but the ordinary recurring expenditure on the maintenance of the army and the civil establishment consists mainly of fixed salaries ;

and can only be contracted by a wholesale reduction of staffs, resulting in unpopularity of Government and perhaps in inefficiency. With falling prices the public debt also becomes an increasing burden, for the interest and sinking fund is a fixed charge. The only important item of Government receipts, which does not decline with prices, is the land revenue; but the very fact that this remains fixed imposes hardships on the cultivating and land-owning classes.

The argument against a policy which would inevitably produce a drastic fall of prices derives its chief support from a consideration of the interests of the great mass of the cultivators. During the War, but more especially afterwards, from 1918 to 1922, a continual process of raising rents, at first of non-occupancy tenants and later of occupancy tenants, has been in progress, and it is still proceeding. A severe decline of prices will make it impossible to pay agricultural rents without resorting to the money-lender, and the more prices fall, the more deeply and permanently in debt the cultivators will become. The poorer tenants in most years earn only just enough to pay their rent and keep themselves alive—they are always on the margin of subsistence, and they can hardly be driven

lower than they now are. As regards this class, the landlords and *mahajans* will simply fail to realize their dues. The more substantial tenants, however, who have more or less freed themselves from debt, and many of whom have some money hoarded, will find themselves inexorably driven back into penury. This, and the extreme depression which would settle upon Indian industries, are strong reasons for avoiding too great an accentuation of the coming fall of prices by the persistence in a policy of exchange which must have that effect.

### *Desirable Restriction of the Fall of Prices*

Some fall of prices from the present inflated level is undoubtedly desirable both in the interests of townspeople and of the restoration of healthy trade conditions. Even if exchange were to be kept fixed from now on at 1s. 4d., some fall of prices from their present height would inevitably occur during the next two years in sympathy with, and following, the general fall of world prices. The ultimate extent of this fall, with exchange stationary, would probably be at least 20 per cent—more probably 25 per cent.

On this assumption it is easy to calculate to what extent the price level would have to

be reduced to enable the permanent maintenance of the proposed 2s. exchange. In order that the balance of trade may be established, the Indian price level must be reduced in the same proportion as the cost of £1 sterling in rupees: *i. e.*, from Rs.15 to Rs.10. Let us take the present price level as represented by 100. We assumed in the preceding paragraph that the general fall of world prices may be expected to bring the Indian price level down by 25 per cent, that is, to 75, even though exchange remains at Rs.15 to £1. The realization of the rating Rs.10=£1 will require that the price level in India be reduced to

$$75 \times \frac{10}{15} = 50.$$

In other words, present prices would have to be halved—on the average. Ordinary mill cloth must fall from 12 *as.* (retail price) to 6 *as.* per yard, and wheat (now scarce) from 5 to 10 seers to the rupee, whilst cotton would fall from Rs.370 to, say, Rs.200 per candy. We should, in fact, return to the price level of 1913, or thereabouts, by 1924 or 1925. During the period of nine years since 1913 all economic relationships, business and social, have been more or less completely adjusted to a higher price level—to the level,

say, of 1917. The disorganization and hardship which would be caused, particularly amongst the cultivating classes, by forcing prices back to the level of 1913, appears to me likely to be extremely serious. I have been confirmed in my opinion as to the inadvisability of this policy by the report of a lecture recently delivered in London by Professor Irving Fisher, in which he characterized a rapid and extensive fall of the general price level as a serious economic and social evil. He dwelt upon the injustice and hardship thereby caused to persons who had recently, in the legitimate and necessary business of life, become debtors. Deflation, and the consequent lowering of the price level, whilst wholesome up to a point, might easily be carried too far.

If the 2s. exchange is to be achieved, it can only be by causing so drastic a contraction of the paper currency circulation that prices in India will fall to the 1913 level; and I can hardly believe that this line of action will commend itself as a matter of deliberate choice.

## CHAPTER XI

### STABILITY OF EXCHANGE

#### *Early Attainment of Stability Essential*

Amongst commercial men there is but one opinion on the subject of stability of exchange—that there can be no return to a normal healthy condition of trade until stability is assured. It is true that individual transactions may be, and usually are, covered by forward contracts with exchange banks. The merchant makes a contract with the bank that the latter will purchase from him bills to such and such value at a fixed rate of exchange during any period, say two months, commencing three months hence. Likewise the importer can make a contract to pay bills or remit so much money in some future month at a given rate. These forward contracts save the merchant from a considerable amount of risk; but not without a considerable amount of trouble and calculation on his part, and at the cost of the margin of profit which the

exchange banks naturally exact for the service rendered. Although the risk of a fluctuation of exchange directly affecting a given transaction after the contract has been entered into may be eliminated thus, it is impossible to avoid a large measure of general commercial risk. An importer may cover every transaction and feel sure of a reasonable profit; but if exchange should rise soon after he has made a forward contract with the bank there is no remedy, if his capital is limited, for the fact that he will now find his goods in competition with those imported by his rivals at a lower cost in rupees.

The general result of the uncertainty of trade when exchange is liable to considerable fluctuations is to compel traders to buy for immediate needs only, and to increase the average margin of profit required. This keeps the trade at a lower total volume than it would be with a stable exchange. Government, for its own purposes, would welcome a stable exchange; but for the commercial prosperity of India it is an *imperative necessity*. The earlier stability can be brought about the better; and it may well be argued that the effects of a long period of unstable exchange would be so disastrous that the most statesmanlike policy would be to fix exchange at any rate at which there is a reasonable certainty of attaining stability, in

preference to waiting to realise it at a high exchange rate.

### *Contraction of the Circulation*

A clearer view of the problem will be obtained if we consider in some detail the actual steps which would have to be taken by Government if they were still determined to realise the 2s. exchange without a long period of fluctuation intervening. By adhering to their present policy, as outlined in a previous chapter Government might, and no doubt would, in course of time, say in four or five years, realise the 2s. exchange, with a fair prospect of maintaining it. By taking measures of the kind which I shall describe, directed to the reduction of the paper currency circulation, it would be possible for a stable exchange to be realised at the 2s. level in about two years, the country experiencing meanwhile a drastic fall of prices. I do not say that I recommend this; but wish to show that it is possible.

It should be understood that when I write of stability at a 2s. exchange, I mean 2s. sterling and not 2s. gold. Events have proved that a serious error was committed by the Currency and Exchange Committee of 1919 when they recommended the establishment of stability in

relation to gold, which meant instability in relation to sterling. It is now obvious that, with the world economic outlook still so unsettled, it would be folly to delay the realisation of stability in the actual commercial unit of exchange. A theoretical realisation of the gold standard is highly inexpedient if the process of realising it creates a hindrance to the recovery of Indian trade.

Stability of exchange on the basis of 2s. sterling can only be attained at an early date, that is within about two years, by a drastic reduction of the rupee circulation: that is, of coin, notes and bank deposits taken together. We know the paper currency circulation accurately; but unfortunately it is impossible to estimate with accuracy the number of rupees in active circulation. We have already, however, in Chapter II, adopted a rough estimate of the circulation in 1921; and this is probably close enough to enable us to calculate approximately to what extent the total circulation (rupees and currency notes) would have to be contracted in order to make sure of realising the 2s. exchange. That calculation is a matter of simple arithmetic. If exchange is to be raised from 16*d.* to 24*d.*, the general level of prices within the country must be lowered in the same ratio, that is as from 3 : 2;

and to effect this reduction of prices the volume of the circulation must likewise be contracted in the ratio of 3 : 2.

It is assumed that the whole of the contraction will be realised by reducing the paper currency circulation, the volume of rupees in the hands of the public remaining unchanged. The assumption is that Government would take definite measures to reduce the paper currency circulation; but would take no measures to increase or decrease the circulation of rupees. In order to obtain an approximate result it may be assumed that the rupee circulation would remain practically unchanged, the contingency that rupees would leave the reserve to replace notes withdrawn from circulation being ignored.<sup>1</sup> It is quite possible that the "economic friction" or inertia, which might be expected to act so as to prevent a rapid fall of prices would lead to a certain amount of substitution of rupees for paper money in the active circulation, if the paper currency circulation were to be reduced rapidly. I am not, however, postulating a *very* rapid reduction of the paper currency circulation; and in any case, the effect of rupees replacing notes in the manner indicated would

<sup>1</sup> It might happen for example, that part of the reduction of the currency note circulation was due to the public presenting notes for encashment in rupees.

probably be small and temporary; and it could, if necessary, be compensated and overcome by contracting the paper currency circulation beyond the ratio 3 : 2, which as I shall show, would be possible theoretically, though not desirable to attempt.

It is unnecessary to take into account the volume of bank deposits subject to cheque and to estimate the amount of contraction which these must undergo in order to reduce the price level in the ratio of 3 : 2, for the simple reason that a contraction of the total bank deposits subject to cheque may be expected to take place in the same proportion as the reduction of the currency circulation (coins plus notes) after a certain amount of delay. The reason is that bank credit is based ultimately upon the cash reserves held by banks; and, if the cash available is forcibly reduced by the contraction of the circulation, the banks must in the interests of financial security, gradually contract their loans and discounts.<sup>1</sup>

<sup>1</sup> For the present purpose it is sufficient to understand that the volume of bank deposits subject to cheque is normally proportional to the volume of actual currency in circulation. As Irving Fisher expresses it "Prices are the passive element and their general level must conform to the other factors. ... An increase in the quantity of money (M) tends to increase deposits (M') proportionately, and the increase in these two (M and M') tends to increase prices proportionately." It

*Amount of Contraction Necessary*

The data required for calculating the necessary contraction of the circulation are the total circulation of currency notes, which is published weekly, and the active circulation of rupees. At the end of December, 1921, the total circulation of currency notes was about 174 crores. At the same date rupees in active circulation must have been about 220 crores. This is the figure given from the rough estimate for 1921 on page 40, which refers to May of that year. Since that date there has been an increase of the rupee-plus-currency-notes circulation amounting to about 2 crores; but an approximately equal subtraction must be made for general wastage.

follows, therefore, that if the currency circulation (coins plus notes) is reduced in the ratio 3 : 2, the bank deposits will eventually also fall in the same proportion; and when this has happened the price level will have fallen in the proportion of 3 : 2. Any lesser contraction of the circulation will, of course, produce a proportionately less contraction of bank deposits and a proportionately less fall of prices.

The foregoing statements are true on the assumption that other factors remain unchanged; but we may safely say the change of the velocity of circulation and of the volume of trade during the period occupied by the contraction of the circulation is likely to be small as compared with the considerable change in the volume of circulation which we are supposing. Another factor, namely the increasing tendency to make payments by means of cheques and demand *hundis* in place of currency would theoretically tend to counteract and reduce the fall of prices caused by the contraction of the currency; but the effect during the short period under consideration would be negligible.

The total rupee-plus-currency-note circulation is therefore approximately :—

|                                   | Rs.-Crores. |
|-----------------------------------|-------------|
| Rupees in hands of the public ... | 220         |
| Paper Currency Circulation ...    | 174         |
|                                   | <hr/>       |
|                                   | 394         |
|                                   | <hr/>       |

To effect a reduction of prices in the ratio 3 : 2, this total circulation must be reduced by one-third, that is, by about 130 crores.

### *Ways of Contracting the Circulation*

There are three principal ways of contracting the paper currency circulation : (1) By the sale of reverse Councils and cancellation of currency notes equivalent to the price paid for them ; (2) realisation of the metallic portion of the reserve ; (3) sale of the securities of the Government of India in the reserve ; or—what would come to the same thing—the issue of a loan, and use of the proceeds to retire notes. We may examine these methods separately and estimate the amount of contraction of the circulation which each could contribute to the required total.

(1) Reverse Councils could be sold on the Gold Standard Reserve and the sterling securities of the Paper Currency Reserve,

the former amounting to £40-million and the latter to over £5-million. They would be sold at the market rate, which would gradually rise. If sold at an average price of, say, 1s. 6d., or say Rs.13 to £1, the yield would be Rs.58,50-lakhs, of which 6,50 lakhs would be directly used to cancel notes, and 52,00 lakhs, being the Gold Standard Reserve, would be used either to lock up notes and silver withdrawn from circulation, or to take over "created securities" to the equivalent value from the Paper Currency Reserve, the notes now issued against those securities being cancelled.

(2) The gold in the Paper Currency Reserve amounts to over 243 lakhs of sovereigns; but being valued at only Rs.10 to the sovereign, its "book value" in the Paper Currency Reserve is only Rs.24,30-lakhs. This gold, if sold gradually, would probably realise at least Rs.27 per tola (the present price being over Rs.28). If 240 lakhs of sovereigns (or equivalent gold bullion) were sold at that price, they would yield Rs. 40,68-lakhs.

It would not really be necessary to melt any of the silver in the Reserve and sell it; but the operation is a possible one. The profit on the sale of gold could be used to

set off the loss on the sale of silver. Since gold valued for currency purposes at Rs.24,00-lakhs would be sold for Rs.40,68-lakhs, the profit, Rs.16,68-lakhs, is sufficient to pay the loss on the melting and sale of 65-crores of silver rupees at an assumed average sale price of Rs.82 per 100 tolas, the present market price being over Rs.87.<sup>1</sup>

(3) Assuming the need for contraction of the currency to be considered more urgent than other expenditures to be met by borrowing, Government could sell all the rupee securities in the Paper Currency Reserve other than the "created securities," and a large part of the latter. It would come to the same thing if a portion of the ordinary loan floated each summer were to be earmarked for redemption of the rupee securities in the Reserve and cancellation of notes. Some thirty crores might reasonably be provided in this manner, if the loan were issued before other methods of contraction were started.

The possibilities of contracting the circulation are summarised in the table below, the first column giving the total, assuming

<sup>1</sup> The calculation is simple. Rs.65-crores on melting gives 59.58 crores of pure silver, and at Rs.82 per 100 tolas this is worth Rs.48,85-lakhs, the loss being Rs.16,15-lakhs plus the cost of melting and sale, say  $\frac{1}{2}$  per cent (= Rs.35-lakhs), making a total loss of Rs.16,50-lakhs, which is less than the possible profit on the sale of gold—Rs. 16,68-lakhs.

silver is melted and sold, and the second on the assumption that the silver remains untouched.

AMOUNTS OF CONTRACTION OF CIRCULATION POSSIBLE  
FROM THE SEVERAL RESOURCES

*(In lakhs of rupees)*

|                  | Assuming<br>silver melted | Assuming<br>silver not melted |
|------------------|---------------------------|-------------------------------|
| Reverse Councils | 58,50                     | 58,50                         |
| Gold in P. C. R. | 24,00                     | 40,68                         |
| Silver ...       | 65,00                     | ...                           |
| Loan ...         | 30,00                     | 30,00                         |
|                  | <hr/> 177,50 <hr/>        | <hr/> 129,18 <hr/>            |

The value of the foregoing figures lies in the demonstration they afford that it would be possible to carry out a contraction of the circulation to the extent of 130 crores or more. If such a policy were considered the best, and its untoward consequences were neglected, it would be possible thus to reach the 2s. exchange by a sufficiently drastic contraction of the circulation.

*Difficulties of Deflation*

As will be seen in the next chapter, I do not now advocate the attempt being made to realise the 2s. exchange ; but the study here presented of the potentialities of the contraction of the circulation is not therefore redundant ;

for I shall have occasion to argue that the contraction of the circulation ought to be more freely recognised than it has been as a powerful instrument in the regulation of exchange. In normal times the sale of reverse Councils ought always to be accompanied by an equivalent reduction of the circulation ; and how rapidly, and by what mechanism, this can be effected with the least embarrassment of internal finance and trade are the questions we have now to consider.

The process of contracting the circulation involves the withdrawal of money from use by the public and banks, and its total extinction if it is paper, or locking up in the Currency Reserve if it is silver. Currency notes and silver being both legal tender rupee money, it makes little difference from our present point of view which happens to be withdrawn from circulation, so long as it is withdrawn from the *active* circulation, and not from hoards.

The principal difficulty of contraction is to find a method which will not impinge with undue severity upon particular points in the financial nexus of the country. It has to be remembered that currency notes form much the greater part of the legal tender money held by banks as their cash reserves. If Government decides to contract the circulation, the currency

notes must be paid by the banks to Government in settlement for the reverse Councils, or gold, or other assets sold by Government. When the actual buyer pays by a cheque on his current account the bank has to yield up currency notes to Government in payment of the cheque, or else the notes could not be cancelled. There is thus a drain upon the Bank's cash reserves. Since the latter will form only, say, 20 per cent of the "outside liabilities," it is evident that there is not much margin. A reduction of a crore of rupees in the deposits held by the bank will mean a reduction of a crore in the cash in hand, which might thus rapidly be brought down to 10 per cent or less. The banker is thus faced with a very difficult problem. He must call in his loans as far as possible and refuse to buy or discount bills; or he must go to the stock exchange and sell securities. The pressure of the contraction of the circulation bears first upon the Imperial Bank; but extends rapidly to all other banks whose clients purchase the assets sold by Government. Hence a serious stringency in the money market is created; and raising the bank rate will do little to relieve it. In India the bank rate acts more as an index of the state of the money market than

as an attraction for funds, for it is an uncertain agent in retaining funds in Calcutta and Bombay or attracting them from abroad.

The stringency of the money market which is caused by a rapid contraction of the legal tender currency might, if pressed too far, give rise to a commercial crisis. In any case Government is naturally unwilling to embarrass the money market unduly by such action, especially when it is obliged to be a heavy borrower itself. Contraction of the circulation certainly tends to spoil its own market for floating Treasury Bills.

### *Mobilization of the Currency Medium*

The root of the difficulty seems to lie in the fact that we have a highly organised banking system in two financial centres, Bombay and Calcutta, whilst the vast mass of the circulating medium lies in the hands of thousands of merchants and native bankers in upcountry towns. These latter may not want to purchase sterling. Only the native bankers and traders of the big commercial centres will do that ; and their demand may be almost negligible compared with that of Bombay and Calcutta. Hence the sale of reverse Councils does not automatically

create a flow of the legal tender money from the *muffassil* to the two great financial centres. These latter must temporarily bear the brunt of the contraction of the circulation.

We are led, therefore, to the conclusion that Government in order to effect a rapid and continuous contraction of the currency must sell other assets beside sterling remittances, and in widely scattered localities. Readily saleable assets are gold and silver. It would not seem difficult for arrangements to be made for the actual sales of gold to take place in numerous upcountry towns wherever district treasuries are located. Local enthusiasm would be aroused, and money would come forth from traders, who would not dream of arranging for agents to buy gold for them in Bombay or Calcutta. If some portion of the superfluous silver in the Paper Currency Reserve were to be melted for disposal this would be sold in the upcountry markets in the same manner.

Contraction of the circulation by issuing loans or treasury bills could also be pushed in all small financial centres throughout the country. It is quite essential for Government to free itself from its present dependence on the money markets of Bombay and Calcutta. This not only restricts unduly Government's freedom of action, but will continue to place an

undue burden on commercial resources so long as deficits and deflation of the currency have to be financed. The organisation of small financial centres would be assisted by Government offering therein at the seasons of slack demand for money, Treasury Bills of small denominations.

The object to be aimed at would be a contraction of the circulation evenly distributed over the financial resources of the whole country. It would not do to concentrate sales of gold overmuch in the mufassil, or Government might find its resources being dissipated in the endless process of bringing money out of hordes. Pressure would need to be applied continuously in Calcutta or Bombay at the same time as in the mufassil up to the limit which those markets could stand, in order to bring about gradually the necessary contraction of credit, and the concurrent contraction of bank deposits, without which the contraction of the currency cannot exercise anything like its full effect upon prices.

### *Urgency of Regaining Stability*

The serious effect which the present instability of exchange is having upon the revival of Indian trade was emphasised at the beginning

of this chapter. No further argument is needed to enforce that proposition. The only questions are : how can stability be most effectively achieved under present circumstances, and what exchange rate should be fixed? Stability might be achieved at a low rate now, say 1s. 4*d.* or 1s. 6*d.*, with the intention of raising exchange to some higher fixed rate at a future date when circumstances are favorable. This question of policy I shall discuss in the next chapter.

I have shown in the first half of this chapter that Government has immense resources at its disposal for contracting the circulation—more than enough to raise exchange to 2s. Can it be doubted that, if Government would boldly face the situation, they could immediately stabilise exchange at 1s. 4*d.* or 1s. 6*d.*? It may be suggested that they could not be sure of maintaining it at that level, after once achieving it. In the next chapter I shall give reasons for believing that there would be no difficulty in so doing; but meanwhile I would reply that obviously the situation has to be met from time to time as it changes and that, if exchange showed signs of falling further owing to the continued fall of the external price level, Government would simply have to throw in a little more of its resources for further contracting the circulation,

The resources are ample to secure any amount of contraction which may be necessary to secure and maintain stability. The only rock on which the ship of exchange might founder would be a continually growing deficit in the Central Government's revenues. It is difficult to finance a deficit without leading to inflation of the currency or credit directly or indirectly. The prime necessity is the removal of the recurring deficit by retrenchment of expenditure.

## CHAPTER XII

### THE POLICY ADVOCATED

#### *Abandonment of 2s. Exchange*

The most successful statesmanship is that which, guided always by the distant view of a high ideal, shapes its immediate course by expediency. The limits of present action are often closely drawn by circumstances beyond control; and to ignore them is to court disaster. These maxims seem to me to apply with special force to the control of currency and exchange, and to warrant a change of policy when circumstances have altered.

This book was half written, indeed, before the conclusion forced itself on me, against my former opinion, and as a result of the economic analysis presented in the preceding chapters, that I could no longer advocate perseverance in the policy of endeavoring to establish the 2s. gold exchange. That policy has failed up to the present, and it cannot, in all human

probability, be realised within the next four or five years. If it could be realised within four years, it would be only with the accompaniment of a fall of prices from their present level by 50 or even 60 per cent. Such a tremendous fall of prices, whilst welcome enough to those in receipt of fixed incomes, would spell ruin and hardship for millions of cultivators, would keep Indian industries in a state of depression for several years, and would place an undue burden on all debtors, including the State itself, and disorganise the public finances. I have already indicated in Chapter X the hardships which a severe fall of prices would inflict on the great mass of debtors and rent payers throughout India,—that is to say, on over 80 per cent of the adult male workers—but did not there consider the effect on the finances of the Central Government. The receipts from income tax and from customs duties would both suffer considerably from a fall of prices ; but Government is committed to heavy expenditure on the army and on a large body of civil servants at fixed or rising salaries. Retrenchment sufficient to make the budget balance could be effected only by a breach of contract with its own servants and by the curtailment of public services to a standard much below public needs.

India must in any case experience some fall of the internal price level in sympathy with the fall of world prices, even if exchange be fixed no higher than 1s. 4d. Bearing this in mind, my conclusion is that the further very considerable fall of prices which would be entailed by raising exchange to 2s. would have economic effects so serious, nay, even disastrous, that it would be folly to persist in that policy. It must be definitely shelved at least until such time, many years hence, as an expansion of trade has turned the tide of world prices definitely on the upgrade, with a strong demand for Indian goods.

*Immediate Stability at 1s. 4d.*

What then is to be the immediate policy? The need of reviving Indian foreign trade, and the important part which stability of exchange will play therein, point to stabilization at any practicable figure as the essential requisite of the immediate policy. The argument of the last chapter suggests that it would be practicable to raise exchange to 1s. 6d. in a few months and to stabilize it at that figure. If undertaken immediately, that could almost certainly be done by next October, when I expect exchange in any case to have a

firm tendency and to rise probably to about 1s. 5d.

On the other hand, is there any particular object in using up Government's resources in sterling, gold and silver, in achieving and retaining an exchange rate of 1s. 6d.? The rise will hamper the export trade and unnecessarily stimulate imports so that the retention of the rate may unduly dissipate those resources; besides which the necessary contraction of the circulation would cause embarrassment in the money market.

It seems plain, therefore, that immediate stabilization at 1s. 4d. is the policy which should be adopted. Without further delay Government should offer Reverse Councils to the amount of from £300,000 to £500,000 weekly, which should be met from the Gold Standard Reserve. At the commencement of sales they should either be offered at the then prevailing market rates, if less than 1s. 3 $\frac{29}{32}$ d. (the pre-war rate), or be put up for tender. As soon as the market rate had been raised to 1s. 3 $\frac{23}{32}$ d., reverse telegraphic transfers would continue to be sold weekly at that figure. The whole of the proceeds of the sales must be devoted to cancelling currency notes; and this contraction of the circulation, combined with that arising from

the Secretary of State's ordinary expenditure financed from the sterling resources, will in the course of a few months lower prices in India sufficiently to check the import trade and stimulate the export trade. Hence after six or seven months at most the demand for Reverse Councils would slacken, and (the contraction of the circulation continuing) would gradually die out.

It might prove advisable to assist in restoring a favorable balance of trade at 1s. 4d. by offering gold for sale by tender from the Currency Reserve in various parts of India at times when the price in India exceeds import parity. In the balance of trade this is equivalent to the sale of Reverse Councils to an amount equal to the value of the gold whose import is thereby prevented; and this would not be much less than the total proceeds of the sales of gold.

That this policy is practicable I conclude from the following reasoning. Let us assume that the market rate of exchange is as low as 1s. 3d. when the policy is initiated. In order to raise exchange to 1s. 4d. and keep it there, the total volume of rupee-plus-currency-note circulation must be contracted approximately in the inverse proportion. On referring back to page 190 it will be seen that the total

circulation was estimated at 394 crores—say, 400 crores. Thus a contraction of about 25 crores would be necessary. About 3 crores of this could be provided by the interest on the reserves, and the balance would be easily provided by the sale of the sterling securities in the reserve and the use of about £10-millions of the Gold Standard Reserve.

The contraction of the circulation by 25 crores would only suffice to keep exchange at 1s. 4d. if the external price level were to remain stationary. It is most likely, however, that prices in the world's markets will fall further, possibly by as much as 15 per cent of the present figure during the next twelve months. This would necessitate a contraction of the circulation in India by approximately the same percentage, in order that prices might also fall in the same ratio. This is off-set, however, by the effect of the new customs tariff, which, taking it all round, may be regarded as equivalent to a 5 per cent difference of price level.<sup>1</sup> We have, therefore, to take into account the possibility of a reduction of 10 per cent of the total circulation in India being necessary in addition to the reduction by the 25 crores above

<sup>1</sup>The reader is referred to Chapter IX for the effect of an import tariff on exchange.

mentioned, in order to maintain the rate of 1*s.* 4*d.* This would mean a possible further  $37\frac{1}{2}$  crores of deflation, which would require £25-millions of the Gold Standard Reserve. The Finance Member stated that the liabilities of the Secretary of State for the year 1922-23 were estimated to amount to  $52\frac{1}{4}$  millions, and that, after allowing for various other resources, the Secretary of State would need to draw on the sterling reserves to a sum (£18-million) which would involve deflation to the extent of 27 crores. To this must be added deflation of 6 crores arising from the interest of the reserves, making a total of 33 crores. The utmost deflation necessary to realise and maintain the 1*s.* 4*d.* exchange is  $25 + 37\frac{1}{2} = 62\frac{1}{2}$  crores, which leaves  $29\frac{1}{2}$  crores of deflation to be realised by sale of Reverse Councils, which will require nearly £20-millions of the Gold Standard Reserve. Thus the total demand on the sterling resources within the twelve months would be £38-millions, whilst the two reserves contain £45 $\frac{3}{4}$ -millions. It will be seen, therefore, that there is every reason to believe that Government's resources are ample to enable the stabilization of exchange at 1*s.* 4*d.* The only question is as to the practicability of carrying out the requisite deflation without precipitating something like a commercial crisis.

*Deflation*

The Finance Member in his budget speech on 1st of March, 1922, had some observations to make on deflation<sup>1</sup> which I cannot overlook. The passage needs quotation in full.<sup>2</sup>

"Both of these" [the Paper Currency Reserve and the Gold Standard Reserve], he said, "are held mainly in the form of British Treasury Bills which are readily convertible into cash. The Secretary of State can, therefore, to the extent of his requirements, draw on those reserves, provided of course (and the House will soon see that the proviso is an important one) that we earmark the necessary funds in India for credit to those reserves, the net result being a transfer of the reserves from England to India. In the case of the Paper Currency Reserve, we should at this end cancel notes to an amount equivalent to the British Treasury Bills sold out by him, thus reducing the circulation to that extent. In the case of the Gold Standard Reserve, we should have to earmark funds for credit to that reserve in India; we propose to do this by earmarking gold, *i.e.*, we should transfer gold from the Paper Currency Reserve, which contains £24-millions, in sovereigns and gold bullion, to the Gold Standard Reserve. But here again, in order to be able to make this transfer, we

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<sup>1</sup> I may explain that "deflation" means almost the same as "contraction of the circulation." It is a more convenient term; but I have avoided using it, partly because it seems to suggest only the removal of an inflation of an abnormal character, and partly because the term is more commonly applied to the contraction of the paper currency circulation only; and I have wished particularly to lay emphasis on the fact that rupee and paper currency circulation must be contracted together.

<sup>2</sup> Budget speech, March 1st, 1922, paragraph 86.

should of course have to make equivalent payments to the Currency Reserve, and thus cancel notes to the necessary extent. So, whether the Secretary of State draws through the Paper Currency Reserve or through the Gold Standard Reserve, the net result is a cancellation of notes in this country. That is the operation generally known as "deflation," and I use the word for the reason that this is the actual effect of such drawings, and not because we consider that circumstances justify a policy of deflation on its own merits. But when one looks at this matter practically the question at once arises whether we could in fact effect cancellation to the necessary extent. I must point out moreover that deflation in order to put the Secretary of State in funds, does not represent the whole of the cancellation necessary, seeing that under the Paper Currency Act we are bound to apply the interest on our Paper Currency Reserve investments to the cancellation of notes issued against our 'ad hoc' securities in India, and further, we have also undertaken to apply to the same purpose any excess in the Gold Standard Reserve over and above the figure of £40-millions. The deflation in respect of these two items will amount next year to about 6 crores, and when added to the deflation necessary on our present estimates to put the Secretary of State in funds, represent a total sum of 33 crores. I have only to mention this amount for the House to judge of the practicability of cancelling 33 crores of notes out of a total circulation of about 170 crores. I need not elaborate this point, for it is one which all bankers and financiers, and indeed most business men, will at once appreciate. Every crore of notes cancelled by us means a withdrawal of a crore of notes from the money markets, with a proportionate tightening of money. By

cancelling notes at judiciously chosen opportunities we hope to be able to provide some portion of the Secretary of State's requirements in the coming year in this manner; and of course deflation, if carried out with caution and with due regard to the legitimate needs of trade, has, as the economists tell us, a valuable effect in reducing the general level of internal prices. But, as recent experience in other countries has shown, there is an obvious limit to which we can or should go in this direction, and we recognise fully the responsibility on us not to go too far, or to produce such a sudden or rapid stringency as might lead to a dangerously acute position."

Bankers and financiers, and most business men, dislike the process of deflation, because it involves an abnormal tightening of the money market, the forced realisation of stocks of goods, and a fall of commodity prices. Loans become more difficult to obtain or renew, and at the same time the security of existing commercial loans or paper depreciates. Bankers naturally have a very anxious time; and if they do not work in co-operation, and with the support of a central institution like the Imperial Bank, or if need be of Government, a commercial crisis is possible. In any case, there are bound to be some suspensions of commercial firms. This has always happened in England and America when deflation has set in after a boom. It is in fact a necessary pre-requisite to the restoration of a healthy condition of markets and trade.

The whole question is one of degree. It would be disastrous to create a first class commercial crisis by any well-meant attempt to support exchange. But, if the banks have timely warning, and the spirit of consultation and co-operation between all parties prevails, the difficult but necessary period of financial reconstruction can be safely passed through. If the suggestion made in the last chapter (pages 196-8) for distributing a part of Government's operations for contraction of the circulation in upcountry centres were to be adopted, the strain on the markets of Calcutta and Bombay which might be involved (though I think not probably) in maintaining exchange at 1s. 4d. could be appreciably reduced.

I repeat that the whole question is one of degree. Sir Malcolm Hailey appears to be seized with undue alarm at the possible results of deflation and to underestimate its positive advantages. His words above quoted—"not because we consider that circumstances justify deflation"—puzzle me. If ever there was a time when deflation was needed, it is now; and I see no reason to believe that it will become any easier as time flows on. The longer it is postponed the longer will the revival of trade and confidence be deferred. In every country times arise when the money market and busi-

ness system need purging to restore a normal and healthy circulation of goods and money. That purging is provided by deflation and the consequent contraction of credit and fall of prices. Uncomfortable—Yes! But no good doctor spares his medicine to save his patient some discomfort.

The Finance Member stated towards the end of the passage quoted that “as recent experience of other countries has shown, there is an obvious limit to which we can go in this direction,” *i.e.*, in deflation. He referred probably to England and the United States, where opinions were expressed that deflation had been too rapid. In England the policy of Government and of the great banks in bringing about a drastic deflation has been severely criticised by commercial interests. These facts have little bearing, however, on the present position in India. Commercial men will always grumble at the unpleasant effects of deflation; but in America and England they had something real to grumble about, to suffer from—namely, an unprecedented fall of prices. If the reader will refer back to page 65 of this book, he will see that if we consider the fall of prices from the highest monthly figure in 1920 to June 1921, the drop was in England from 313 to 183, or 41 per cent, in the United

States from 264 to 139, or 47 per cent, and in India (Bombay) from 224 to 197, or 12 per cent. The severity of the squeeze in England and America was such as we have never experienced in India, and need not fear. The amount of deflation necessary to stabilize exchange at 1s. 4d. ought not to cause a fall of prices in India by more than 16 or 17 per cent in twelve months. Neither will the necessary deflation cause a commercial crisis if carried out gradually and after due warning to the banks and the commercial public, the pressure being applied in the smaller financial centres as well as Calcutta and Bombay.<sup>1</sup>

### *Sale of Reverse Councils*

I come now to consider some important principles which must be understood and adhered to if the permanence of any fixed rate of exchange is to be assured. The currency of this country has undergone a great change as a result of the War; but even more striking is the rapid growth of banking in recent years, and the promise of its future development. These are conditions different to any existing during the period 1900 to 1914, during which

<sup>1</sup> See above, pp. 196-8.

the working of the Gold Exchange Standard system seemed to have become a mere matter of routine. The growth of the Indian money markets introduces complications involving the recognition of new principles. I do not mean that the principles are new to currency theory; but simply that their applicability to the Indian exchange has not been adequately recognised, because the previously existing conditions had not brought them into prominence.

In the first place, it is necessary to be perfectly clear as to the part which the sale of Reverse Councils should play in the maintenance of exchange at the fixed rate decided on. It cannot be too clearly understood that the object of selling in India reverse telegraphic transfers, or bills drawn on reserve funds kept in London, is not merely to provide remittance for the public. The provision of such remittance temporarily diminishes the adverse balance of indebtedness; but in itself does nothing to remove the prime cause of the unfavorable balance. That can be effected only if the volume of circulation in India be reduced by the amount of the proceeds of such sales. So long as the internal circulation is not reduced, the price level in India will remain high relatively to the external price level at the existing rate of exchange; and

the unfavorable balance of trade will continue—constantly renewing itself. On the other hand, when the circulation is contracted by the amount of the proceeds of the sales of reverse Councils, the internal price level is bound to fall, after some little delay ; and this automatically corrects the unfavorable balance, and gradually brings to an end the need for the sale of reverse Councils.

The function of Reverse Councils will be more clearly understood by describing it as a method of reproducing artificially the outflow of gold, which used to take place in normal times, from any gold-using country when the balance of trade turned against it. Gold flowed into or out of any country according to the direction of its balance of indebtedness, and thus the volume of legal tender currency was automatically expanded or contracted, and credit with it ; and at the same time the price level was thereby raised or lowered respectively, and automatically corrected the balance of indebtedness which brought about the flow of gold. In every advanced country of Europe and America the money market and banking system was *obliged* to adapt itself to this automatic deflation of the circulating medium, which was multiplied several times in its effect in deflating the volume of credit. In England the raising of

the Bank rate is a device for checking the outflow of gold and simultaneously retarding the rise of commodity prices by making credit more expensive, so re-establishing the balance of trade. It is absolutely inevitable that the money market and banking system of India shall learn to adapt itself to the expansion and contraction of the legal tender circulating medium which must regularly occur in the cycle of trade; and if a commercial crisis is necessary to teach us this lesson, a crisis will have to be endured sooner or later.

### *Abolition of the Gold Standard Reserve*

The history of the Indian exchange and currency shows that the establishment of the Reserves and their composition and location has never been thought out according to comprehensive logical principles, but determined by a process of evolution through the adoption of measures from time to time which seemed best suited to meet the necessities of the existing situation. Thus the Gold Standard Reserve was established in a tentative manner from the profits of rupee coinage, and not according to the comprehensive plan previously outlined by Sir John Brunyate; and the present practice of holding it in strictly liquid form has resulted

from sad experience of losses from the sale of permanent investments. In like manner, there has been an evolution of the composition of the Paper Currency Reserve. In the pre-War period a tentative beginning was made with holding a part of it in London, in sterling securities and in gold, and a small part in silver awaiting shipment. During the War the necessity of providing for the expansion of the circulating medium in India to finance war expenditure and exports led to an enormous increase of the holding of sterling securities, so that these amounted early in 1919 to more than 50 per cent of the total reserve.

This great change in the composition of the Reserve, which was dictated by a period of exceptionally favorable balance of trade, has suggested to me a permanent change in the machinery of regulating exchange, the very simplicity of which makes a strong appeal for its acceptance. In short, I propose the abolition of the Gold Standard Reserve, by incorporating it in the Paper Currency Reserve.

A little consideration shows that the device of holding a part of the Paper Currency Reserve in the form of sterling securities at the disposal of the Secretary of State provides the whole machinery which is necessary to allow for the normal expansion and contraction of

the circulating medium in India, in substitution for the natural inflow and outflow of gold of the gold standard countries.

The working of the system when normal trade conditions have once been re-established would be extremely simple and may be described in a few words. When the balance of trade was favorable to India the Secretary of State would sell Councils at the fixed price in excess of his requirements for Home charges and the cost of silver needed for coinage, on behalf of the Paper Currency Reserve. He would thus *pari passu* increase the circulation of the currency notes in India and build up the sterling securities in the Reserve. The price at which Councils were sold would be fixed at such a figure as not entirely to stop the flow of gold to India; but so as to prevent so great a flow as would involve the return of gold when the balance of trade became unfavorable. The expansion of the circulation which would thus occur while the favorable balance of trade prevailed, would gradually slacken through the rise of the Indian price level caused by the expansion of the circulation, so that the movement could not go too far and involve undue inflation. When the demand for Councils by the trade became insignificant, the Secretary of

State would sell for his own requirements only ; and when the balance of trade turned definitely against India and a demand for reverse Councils arose, the Secretary of State would obtain his remittances through the Paper Currency Reserve, and the reverse Councils would be paid by sale of the sterling securities of the Reserve. Thus the circulation would be automatically contracted in India ; and the demand for reverse Councils could not last long, because the fall of prices in India would act as an automatic corrective. By the time nearly all the sterling securities had been sold, or used by the Secretary of State, the adverse balance of trade must have disappeared. If any occasion should arise when the sterling securities were exhausted without thereby removing the adverse balance of indebtedness—and this could only happen when the circumstances were quite exceptional—the Secretary of State would proceed to finance his own expenditure by the issue in London of India Bills of 12, 9, 6 and 3 months, renewing them until the balance of trade became again sufficiently favorable to enable him to sell Councils without weakening exchange. I am convinced, however, that in normal circumstances the unfavorable balance of trade would disappear long before the whole of

the sterling securities had been exhausted, because these would have been built up by the preceding favorable balance of trade, and also because I propose that the holding of sterling securities be augmented at the commencement by the addition of the whole of the Gold Standard Reserve. The risk of the deflation being too rapid might be avoided by making a *limited* use of the power to issue notes against bills of exchange, at the time when reverse Councils were first beginning to be sold.

### *Future of the Paper Currency Reserve*

The above described manner of regulating exchange may be made still clearer by displaying in figures the variations of the Paper Currency circulation and Reserve which would take place in an ordinary cycle of seven or ten years.

I shall assume that the Gold Standard Reserve has been incorporated bodily in the Paper Currency Reserve by simply retiring the "created securities," and some of the original rupee securities, to the amount of the Gold Standard Reserve calculated at Rs.15 to £1—that is, to a total of 60 crores. The total amount of notes in circulation would remain absolutely

unchanged thereby. Hence this would be merely a book-keeping transaction made to enable the currency circulation and exchange to be regulated easily in a manner which the public can understand. The disappearance of the Gold Standard Reserve would not mean the loss of a single rupee of India's money; but it would protect it from being raided to meet budget deficits. If anyone is puzzled at this assertion that India will be no poorer if the Gold Standard Reserve be swallowed up in the Paper Currency Reserve, let him reflect that the issue of about 60 crores of currency notes against Government's own Treasury bills in 1920 made the Indian people poorer by the rise of prices thereby caused. The Gold Standard Reserve was *in effect* used up then, or rather, its power as an asset was fully drawn upon, because the 60 crores of notes then issued could not be retired except by paying them from the Gold Standard Reserve. I merely recommend, therefore, the frank acknowledgment of a *fait accompli*.

Coming now to the fluctuations of the composition of the Gold Standard Reserve under the system advocated, let me first set out what may be called the medium or normal composition which would be realized approximately in the early years of a recovery

of trade—a year or two after the sale of reverse Councils had ceased, and the sale of Councils recommenced:—

| Rs. Crores        |       | Rs. Crores                   |       |
|-------------------|-------|------------------------------|-------|
| Total Circulation | 125   | Reserve :—                   |       |
|                   |       | Silver (Coin and<br>bullion) | 65    |
|                   |       | Gold                         | 15    |
|                   |       | Rupee Securities             | 5     |
|                   |       | Sterling Securities          | 40    |
|                   | <hr/> |                              | <hr/> |
|                   | 125   |                              | 125   |

Let us assume that there follow three or four years of expanding trade, with world prices rising relatively to Indian prices, so that Councils are being sold freely. That is the normal sequence of events; and according to the proposed system the Secretary of State will be accumulating sterling securities whilst the total circulation grows. At the end of the four years or so, when the tide of trade is about to turn, the composition of the Reserve will be as follows:—

|                   | Rs. Crores |                     | Rs. Crores |
|-------------------|------------|---------------------|------------|
| Total Circulation | 170        | Reserve :—          |            |
|                   |            | Silver              | 30         |
|                   |            | Gold                | 35         |
|                   |            | Rupee Securities    | 5          |
|                   |            | Sterling Securities | 40         |
|                   | <hr/> 170  |                     | <hr/> 170  |

It will be noticed that the gold and sterling securities have increased owing to the favorable balance of trade and that the silver has greatly declined (in spite of purchases and coinage) owing to absorption caused by rising prices and active trade in India. When the boom is over and the balance of trade has turned definitely against India, reverse Councils will be sold on the sterling securities of the Reserve, and the circulation will be contracted, the deflation being perhaps relieved a little by the issue of notes against commercial bills, as suggested above. The composition will then be :—

| Rs. Crores            | Rs. Crores             |
|-----------------------|------------------------|
| Total Circulation 145 | Reserve :—             |
|                       | Silver 40              |
|                       | Gold 30                |
|                       | Rupee Securities 5     |
|                       | Commercial Bills 5     |
|                       | Sterling Securities 65 |
| <hr/> 145 <hr/>       | <hr/> 145 <hr/>        |

If this amount of deflation proved insufficient to stop the demand for reverse Councils, the latter would continue to be offered to the amount of 2 to 4 million pounds per month ;

and gradually the composition of the reserve would assume the following shape :—

| Rs. Crores        |           | Rs. Crores          |           |
|-------------------|-----------|---------------------|-----------|
| Total Circulation | 120       | Reserve :—          |           |
|                   |           | Silver              | 70        |
|                   |           | Gold                | 15        |
|                   |           | Rupee Securities    | 5         |
|                   |           | Sterling Securities | 30        |
|                   | <hr/> 120 |                     | <hr/> 120 |

Silver has returned from circulation and gold has been released for export, and the commercial bills retired. The Reserve has still 15 crores of gold and 30 crores of sterling securities on which to fall back in case the adverse balance of trade is still unsatisfied. Assuming, however, that the balance of trade soon becomes favorable again, as it normally would do after such an amount of deflation, the Reserve will in a year or two approximate again to the composition shown in the first of these four hypothetical balance-sheets (p. 222), and the cycle of trade of seven or ten years will be complete. On reaching the normal composition again (first balance-sheet) all the figures would probably be proportionately larger, owing to the continued growth of trade in India.

This example will have made it clear that exchange can perfectly well be regulated without the separate existence of a Gold Standard Reserve. The more the people can be induced to use notes instead of silver by making the designs of the notes more attractive, and by giving yet greater facilities for encashment and changing large notes, the easier will this system of regulation become.

### *Proposed Limit to Securities in Reserve*

In the past there has not been sufficient elasticity permitted by law to the paper currency circulation, so that a favorable balance of trade has involved the import of much gold and of huge quantities of silver for coinage. It will be observed from my exemplar balance-sheets that my proposed system of regulation would not be possible under the permanent provisions of the Paper Currency Act (1920); for, after the period of expanding trade and favorable balance of payments, the securities in the Reserve would necessarily exceed 50 per cent of the circulation (see above, pp. 15-17). During the period of favorable trade balance silver is absorbed in circulation in great quantities and gold partially takes its place in the Reserve; but it is absurd to require that the

metallic portion of the Reserve shall still be 50 per cent of the circulation<sup>1</sup> till the last moment just before the tide turns and silver comes back from circulation. Under the present law, if the minimum of 50 per cent is to be assured, the average proportion of the metallic part of the Reserve throughout the years constituting a cycle of trade must be over 60 per cent; and this is unnecessarily high and wasteful of silver.

It is impossible to reduce the proper regulation of the currency Reserve to any rule—at least nothing short of a complicated mathematical equation could take account of all the normal changes in the course of the trade cycle. Even if a minimum limit (fixed or variable) of the metallic portion of the Reserve be legally required, it remains for the Finance Department and the Secretary of State to see that gold and silver are present in the appropriate proportions, having regard to the phase of the cycle of trade. Careful and understanding management of the Reserve is essential in any case, and it is more as a sop to convention than for any useful purpose served thereby that a minimum limit to the metallic portion of the

<sup>1</sup> As the Reserve consists only of two portions, metallic and securities, the prescribing of a maximum percentage for securities obviously prescribes a minimum percentage for the metallic portion. The possible 5 crores of commercial bills may be ignored in this argument as not affecting the principle,

Reserve could be advocated—or, what comes to the same thing—maximum *proportion* of securities. In case of a crisis and sudden demand for encashment of notes the minimum limit must be suspended, or the notes become inconvertible whilst many crores of silver remain in the Reserve. We must remember that the encashment of notes reduces the silver in the reserve in much greater proportion than it reduces the total note circulation. The encashment of notes for which the silver is needed, *can* proceed and *should* proceed, until the silver is actually on the point of exhaustion.

The only limit which can be imposed and maintained, and wisely so, is a *fixed* limit to the total securities in the Reserve (not a proportion); and the temporary provisions of the Paper Currency Act (1920) are in this respect sounder than the permanent provisions. It is noteworthy that the rupee securities play a passive part in the Reserve, and their only function is to provide a small part of the circulation not backed by any externally realizable asset. If kept within a very narrow compass they are admissible; but they should not be allowed to expand. The “fixed” limit to the total securities in the Reserve might be permitted to expand by one per cent per annum, so as to allow for the growth of the population

and trade of the country. Thus a new Paper Currency law in 1923 might provide that the maximum holding of securities in the Reserve should be 90 crores in that year, and that the limit might increase by 1 per cent each year. Of the total securities, not more than 10 crores should be rupee securities, and this limit should remain fixed. The limit of total securities would grow by "compound interest," so to speak, and by 1933 would have reached 99·4 crores, so that the sterling securities limit would have increased in 10 years from 80 crores to 89·4. This method of regulation would prevent undue inflation and at the same time provide an adequate reserve of silver. It prescribes no minimum amount of metallic backing, such as the permanent provision of the 1920 Act does. This is economically sound, for the reasons above stated. If there were a further provision that the legal maximum of securities in the Reserve should remain fixed, at not more than 60 per cent of the average total circulation of the preceding three years, that would assure an ample reserve of silver (or gold) to meet any sudden drain.

### *The Gold Currency Alternative*

Two courses are open. Government may take advice and make the necessary provisions

for working the Gold Exchange Standard system ; or it may divest itself of the continuing burden of responsibility for regulating the currency and exchange in this manner, in the interests of Indian business, by introducing gold as the medium of circulation, so that India becomes a gold standard country like any other. This could be done, probably without difficulty, by fixing exchange definitely at 1s. 4d., and still more easily by fixing exchange at 1s. 3d.—that is, rating the sovereign at Rs.16. It may be said: How is that possible when the price of gold is now such that the sovereign is worth nearly Rs.18? My reply is that the price of gold is like the price of any other commodity: it can be brought down by contracting the volume of the circulating medium. To understand this fully we have to go back again to first principles. It was explained in the first chapter (p. 10) that the rupee is token money and that the currency note merely represents tokens. There is no standard money in circulation in India, but only a huge volume of inconvertible token-plus-paper currency. The purchasing power of this inconvertible currency (which cannot be exported or imported) is strictly dependent on its volume relatively to the business to be done. Contract the total volume of rupee-

plus-paper circulation, and all prices in India must go down and exchange rise; and *vice versa*. Any contraction which brings down the prices of commodities and silver, will also bring down the price of gold. Carry the contraction far enough, and the price of gold would come down to Rs.15-14-10 per tola, which is equivalent to Rs.10 for the sovereign; but I very much fear that at that price India would absorb more gold than the world can spare, which would precipitate a further fall of world prices and weaken the Indian exchange again. There can be no question, however, that deflation in India can be carried far enough not only to maintain exchange at 1s. 4d., but to bring the price of gold down to Rs.23-14-3 per tola which corresponds with Rs.15 for the sovereign. I repeat that it is all a question of contracting the rupee-plus-paper circulation. During war-time India was flooded with token-silver and paper. Let a substantial part of that be withdrawn by use of the sterling resources, and gold can be brought into circulation. The people take it readily in the Punjab; and sovereigns were beginning to come into circulation elsewhere before the outbreak of the War. Gold ought to be coined in India. I am not *recommending* that any attempt should be made to make gold the

normal medium of circulation, but I say that that is the only practicable alternative if Government will not take adequate measures for working the Gold Exchange Standard system.

### *Organization of the Money Market*

It cannot be too clearly understood that the pre-war conditions of the money market in India have disappeared completely and are never likely to be re-established. The expansion of business and of the circulating medium during the War, accompanied by a great expansion of banking, has established in Calcutta and Bombay money markets similar in many respects to those of European countries; but yet, of course, having features of their own. This is not the place for any description of the Indian money markets, nor for making detailed suggestions for improving their organization, if I were in a position to do so. I can only point out here that the future regulation of currency and exchange must have an intimate relation with the money markets. The subject, therefore, demands a much closer investigation by Government, and by any committee appointed to advise it than it has yet received.

A careful study of the money market and banking system will not be enough in itself.

Some definite measures must be taken to organize it with a view to facilitating the regulation of the paper currency and the control of exchange. Government can no longer take up the attitude that its duty is merely to provide a circulating medium and to offer Councils for its own requirements, the needs of commerce having a secondary place, to be supplied only so far as may be convenient. As well might it be argued that the railways and the telegraphs exist primarily for Government business and that the public may be graciously allowed the use of any additional facilities which can be provided.

If the gold exchange standard system is to be continued, as I have assumed, Government will find its task extremely difficult, if not impossible, unless it takes steps to organize the money markets and control the volume of rupee credit as well as currency. The nature of this organization can only be briefly indicated. It is not only a matter of offering additional Government facilities, though these are needed, particularly in the upcountry market centres. An important object of the needed organization should be the definition of monetary policy in consultation with the banks and the big shroffs. Mutual consultations should be arranged, not only during a

crisis, but in normal times, the consultations being directed towards formulating such lines of common action as will avoid undue monetary stringency and the development of a crisis, as well as the best means of mitigating the effects, if any period of difficulty should arise. The impression that one gains from watching the conduct of the currency and financial business, as well as from statements of the Finance Member, is that such consultation with business interests as is now resorted to, is too occasional, and too limited in its field of enquiry.

What is really needed is a close and continuous mutual co operation between Government, the Imperial Bank, and the directors and managers of the great joint stock and exchange banks and representatives of the Indian financiers. An effort should be made to induce the Imperial Bank and the directors and managers of leading banks to understand and agree upon a true currency policy, and to work in harmony with one another and with Government for a common purpose. The banks should realize that they owe a duty to the well-being of the country as a whole, that there are times when a narrow view of their own interests ought not to dominate their business policy—that they have not only to assist their own

customers, but to help in maintaining exchange and in financing reasonable Government requirements. I repeat that there is a danger inherent in the Gold Exchange Standard system, in that the basis of its operation may be undermined by a big inflation of bank credit, which may raise prices to such an extent as to make it impossible to maintain exchange even with the whole of Government's resources. If Government consults the interests of the banks, as it should do, the banks on their side must not ask too much of Government.

### *The Finance of Deficits*

A judicious but firm policy of deflation is indeed a paramount obligation to the country. India has suffered from a severe inflation of the rupee-plus-paper circulation, as an after result of the War. Rising expenditure, caused mainly by that inflation, and only partly by increased military charges and expansion of Governmental activities, has landed the Central Government in a series of deficits from which there will be no escape this year, or even next (1923-24), in all probability. The finance of these deficits becomes, therefore, a question of prime importance.

I wish to make certain things very clear. In the first place, no country can afford to go on for long incurring deficits year after year. The most elementary propositions of public finance are that expenditure should be limited to that which is strictly necessary or beneficial to the country, and that revenue must be raised to meet the whole recurring expenditure.

When, however, the avoidance of a deficit is impossible, there are two ways of meeting it: (1) The easiest and apparently the cheapest is for Government to issue paper money to fill the gap, as was done in India in 1920, and as the Governments of Central Europe and Russia have been doing on a vast scale since the War. Such inflation of the currency amounts to a forced loan from the people, gives a temporary stimulus to internal industry and speculation, transfers wealth from the poor to the rich, and sooner or later lands the country in a state of desperate poverty, and stagnation of trade and enterprise.

(2) The other way of financing a deficit is by borrowing: first by temporary loans (Treasury bills mainly), and then by funding the floating debt at intervals into permanent debt.

Amongst economists there is only one opinion as to the proper choice between these

methods: that the funding of deficits into permanent debt is always preferable to an inflation of the currency. A little more added to the unproductive debt of the country, though undesirable, does no great damage—as witness the expansion of England under a great load of unproductive debt resulting from the Napoleonic wars, and numerous other examples leading to the same conclusion. On the other hand, the results of the inflation of the currency are always disastrous in the long run. The people's labor never overtakes the growing cost of living; exchange falls, and confidence generally is destroyed. A long period of depression and suffering results.

Once the issue of paper currency is used to pay for a deficit, the country has ventured on a slippery slope. Steps can be retraced only by a supreme effort. Every deficit so financed raises the general level of prices, and thus causes an increase of the national expenditure. The revenue, however, shows less elasticity. Thus each year's deficit becomes larger than the last, whilst the currency continually grows in volume and its purchasing power falls. Once started down this slippery slope, it is extremely difficult to stop, as the countries of Continental Europe are now finding. A great depreciation of the currency

is national bankruptcy—a national catastrophe from which it may take twenty years or more to recover.

These are my reasons for saying that every effort must be made to make revenue and expenditure balance ; but that if and when a deficit is unavoidable, it must be financed entirely by loan operations and not in the slightest degree by inflation of the currency. I would go so far as to say that the finance of an unavoidable revenue deficit should have the first claim upon the Government's borrowing power. A deficit must be financed somehow ; and it is more important to avoid financing it by the excessive issue of rupees or paper money than to postpone the undertaking of public works, greatly needed as many of these are in India at the present time.

### *Control of Currency Policy*

In exchange matters Government apparently has at present no policy, except to avoid embarrassing the money market and the finance of its own deficit. It is a policy of *laissez faire*, and of waiting to see what happens. Within the last five months, however, there has been a new development, the significance of which does not seem to have been generally

appreciated. I refer to the policy of deferring to the opinion of the non-official members of the Legislative Assembly. In speaking on the resolution of Sir Vithaldas Thackersey in the Legislative Assembly, Sir Malcolm Hailey is reported to have used the following words :—

“I can give the Assembly this much guarantee, at all events, that we should not re-open the sale of Reverse Councils in order to maintain exchange or to raise exchange in the manner suggested, without first coming to this Assembly.”<sup>1</sup>

I interpret this to mean that Government will not again sell Reverse Councils without a resolution in favor thereof having been adopted by the Assembly. More recently Government has accepted a non-official amendment to the Finance Bill moved by Sir Montagu Webb, to suspend for the years 1921-22 and 1922-23 the operation of the section of the Paper Currency Act (1920) which requires the interest of the Paper Currency Reserve to be applied in reduction of the created securities.<sup>2</sup>

Having once started consulting non-official opinion in India, it is difficult to imagine that Government can recede from this welcome innovation. Expert financial opinion in England

<sup>1</sup> Legislative Assembly Debates (Official Report), January 24th, 1922, p. 1856.

<sup>2</sup> Legislative Assembly Debates, March 22nd, 1922,

served them badly in 1919, and Government may well feel that they will be on safer ground in future if they take advice in India. It appears as if the new policy is to keep the Indian legislature more or less continuously in touch with the course of events in the regulation of currency and exchange. The pathetic spectacle of a Legislative Council desired to pass successive bills amending the Paper Currency Act, with only a small minority of members understanding anything of what was being done, is now to cease. This indeed is a welcome change.

On the other hand, I feel bound to point out that there is a danger of going too far in this direction. The regulation of currency and exchange is a highly complex and technical business; and it is impossible to believe that even a majority of members of any legislature can ever understand its intricacies sufficiently to give an intelligent vote on the controversial proposals which are certain to arise. Whilst Government may well feel that because exchange is in its present predicament it should come to the Assembly before recommencing the sale of Reverse Councils, it would be fatal to make this the regular rule; for it is of the essence of successful regulation of exchange that Government should be open to offer Reverse

Councils at any moment when needed, at not more than a week's notice.

In most countries the currency system is established by Act of the legislature, usually on the advice of a commission; and once established its working is entirely free from any dependence on the legislature. In England the Treasury and the Bank of England between them regulate the currency; and in the United States the principal agent of Government in this behalf is the Federal Reserve Board. It will be necessary either to establish a permanent Currency Board in India, or to rely very largely on the Imperial Bank as the adviser and agent of Government. The suggestion has been made frequently that a Central State Bank for India, when established, should take over the management of the paper currency and exchange.<sup>1</sup>

There are manifest advantages in freeing Government from the onus and anxiety of this technical business. The currency and exchange would be removed once and for all from the fear of influence by political interests, and harmony between the management of the currency and exchange business and the policy of bankers would be fully secured, if that

<sup>1</sup> See, for example, Royal Commission on Indian Finance and Currency, Minutes of Evidence, Vol. I., Questions 4875 and 9148.

management were entrusted to the Imperial Bank. There is the risk, pointed out by Sir Vithaldas Thackersey,<sup>1</sup> that the public might view with suspicion the transference of the note issue; and the popularity of the notes might decline somewhat, unless the Bank were only the issuing agent, and the notes remained secured on the whole public revenues of India. Either the Bank must be given the whole of the Paper Currency Reserve and Gold Standard Reserve as a basis for issuing its own notes, Government receiving in return a fixed rate of interest on the total note circulation in excess of, say, 50 or 60 crores, representing the metallic portion of the Reserve; or the Bank must simply act as the agent of Government and keep a separate account of the paper currency in the present fashion. The question is of no immediate interest; for it can hardly become practical politics within the next five or six years. The international exchanges must first become normal; and the Bank needs now to concentrate its energies on the enlargement of banking facilities for the internal trade of India and on the organization of the money markets.

<sup>1</sup> Report of Royal Commission on Indian Currency and Finance, Appendices, Volume III, page 720.

*A Currency Commission in India*

The patient reader of this book will perhaps have gained some idea of the complexity of the problems presented by the present disordered state of the Indian currency and exchange, and of the immense responsibility resting on the Government of India either to provide for the efficient working of the Gold Exchange Standard system, so as to secure stability of exchange at an early date, or to take effective steps to bring a gold currency into circulation. Decisions so momentous ought not to be taken without advice; but debates in both Houses of the Legislature will not provide a balanced and considered judgment. The opinions and information of financiers, merchants and economists need to be concentrated on the problem—not, however, in London, but in India.

I would recommend, therefore, the appointment of a Commission on Indian Currency and Exchange, which would take evidence at five or six principal centres in India, and prepare its report in this country. It might be advisable for two or three members to visit London and take evidence there; or memoranda and written replies to questions could

be obtained from the Secretary of State and from financial experts in England.

A Commission which should sit for a few months only might fail to find a permanent solution, owing to the constant changes in the economic situation. I have always felt that the system of appointing Commissions which make their reports and are then dissolved, is unsatisfactory. The Commission which investigates a problem and recommends a certain course of action, ought to be made to carry its recommendations into effect. There is no doubt that people tend unconsciously to look at things from two different points of view when they are merely recommending actions which other people are to carry out, and when they are proposing work which they themselves will have to perform. I anticipate, therefore, more cautious proposals and more effective results from a Commission which would not be dissolved until it had achieved its object of putting exchange upon a stable and permanent basis. After the taking of evidence and a preliminary series of meetings, a new policy would be initiated by an interim report. The Commission would then have a recess for a few months and be called together again to examine the results of the working of the new policy in the interval. After drawing up another interim

report it would then separate for another six months and again meet and report, if necessary. An even more continuous association with the routine control of the currency and exchange during the period of transition could be arranged by means of monthly meetings, or even by the appointment of a sort of working committee of the Commission, which would frequently meet for consultation with the Finance Member, the Controller of Currency and officers of the Finance Department and the Managing Governors of the Imperial Bank.

### *Summary of Proposals*

So many suggestions have been made in various parts of this book that it seems to me desirable to state distinctly, in summary form, the definite recommendations I make for the regulation of exchange.

- (1) In the forefront I put the immediate attainment of stability at any rate which is practicable.
- (2) I have shown that the attainment of the rate of 1s. 4d. and its maintenance is practicable; and I recommend this being fixed upon as the permanent rate, the sovereign being made legal tender again for Rs.15.

- (3) I have shown that to attempt the raising of exchange to 2s. would not only involve such stringent deflation as to cause a commercial crisis, but also involve a great fall of prices,—practically to the 1913 level—which would create very serious hardships for a large part of the population, particularly the cultivators. The attempt to reach the 2s. rate should, therefore, be permanently abandoned, or be postponed for many years until rising world prices would make its attainment comparatively easy.
- (4) Deflation is not an unmixed evil. It is a difficult process which must be endured, in order that better conditions may prevail in the Indian money market, and trade be revived to a healthy activity.
- (5) The great development of banking in India in recent years has altered the problems connected with regulating the Gold Exchange Standard system. It is necessary for Government to take steps to develop the upcountry money markets, and to organize the money markets of Calcutta and Bombay. In particular, it is necessary to generate a feeling of community of interest between Govern-

ment and all the great bankers, and to develop a policy of co-operation amongst the latter, and a sense of responsibility for the country's welfare.

- (6) The separate existence of the Gold Standard Reserve serves no useful purpose, and it should be amalgamated with the Paper Currency Reserve, being used to replace the whole of the "created securities", and part of the original rupee securities. Thereafter the regulation of exchange should be carried out by the Secretary of State investing the proceeds of the sales of Councils, in excess of his own requirements, in sterling securities on behalf of the Paper Currency Reserve. When the balance of trade turns, reverse Councils must be sold and met from these sterling securities in the Paper Currency Reserve, the note circulation in India being contracted by the whole amount of the proceeds of the sales of reverse Councils.

Such, in broad outline, is the policy I recommend for the future regulation of the currency and exchange. Its merits are its simplicity and its practicability. True, it leaves unsolved the problem which dominated

the thoughts of the Committee of 1919, namely, the protection of the currency system against a great rise of the price of silver. That contingency now appears to be remote, however; and in any case it is better to secure stability immediately on the old footing and thus remove a serious present evil than to pursue an idealist policy, the realization of which can afford no advantage equivalent to the loss likely to be sustained in realizing it.

It may still be open to argument whether an exchange rate of 2s. sterling could not have been maintained by more judicious handling of the situation in 1920. It would be useless now to open that question. We have to take the situation as it is; and after a review of all the existing circumstances, Indian and foreign, I believe that the policy I have recommended is the one which will find favor and pass the test of criticism. The outstanding feature of the present situation is the serious and recurring deficits of the Central Government. Whilst these continue, the currency and exchange situation will remain embarrassing. Let me repeat my warning against any attempt to meet deficits by inflation of the paper currency circulation backed by rupee securities. To start this is to venture on the "slippery slope" which cannot be reclinbed. If deficits

there must be, the proper way to meet them is by funding them as permanent debt, every opportunity being taken to reduce the floating debt to small proportions. The fundamental principles of sound finance are simple. The difficulty is to generate the will and the courage to carry them into effect.

## APPENDIX

### INDEX NUMBERS OF PRICES IN INDIA

The study of the fluctuations of the general level of prices in India does not receive the attention it deserves. The conditions of money markets and the general course of trade, no less than currency and exchange, can only be understood by reference to changes of the general price level; and for the successful regulation of currency and exchange in the conditions likely to prevail henceforth it is essential that fluctuations of the price level should be closely watched. This requires that index numbers of prices should be calculated and published monthly, compiled from a sufficient number of representative quotations of the staple commodities of commerce.

An index number of wholesale prices in any year is usually a simple average of the percentages which the prices in that year are of the prices of the same commodities in a certain year selected as base year. Thus the quotations in the year (or series of years) selected as base are averaged and taken as 100 for each commodity. By rule of three the quotations in other

years are converted to the same basis. Thus if the average price of wheat in the base year was Rs. 5 per maund and it has risen to Rs. 6 in a later year, 120 stands for the price of wheat in that later year. This being done for as many commodities as possible the sum of the percentages for any year is divided by the number of commodities, which gives the index number for that year.

Until 1921 no monthly index numbers of prices in India were published; but there were several series of annual index numbers. That compiled each year by the Department of Statistics<sup>1</sup> is referred to in the text (pp. 44-6), and it gives us index numbers from 1861 up to date. There is no other old annual series which is being kept up to date, so in spite of its defects this series has to be used. It is a pity that much delay (usually five or six months) occurs in publishing the index numbers after the close of each year. It ought to be possible to bring out the index number for the preceding year by the end of January.

Other series of annual index numbers are available for particular series of years. The elaborate *Enquiry into the Rise of Prices in India*<sup>2</sup> carried out by Messrs. K. L. Datta and G. Findlay Shirras contains a splendid series of index numbers of prices in India of 104 commodities, collected from all over the country. It is a pity that this series has not been con-

<sup>1</sup> Index Numbers of Indian Prices, 1861-1918, and annual supplements.

<sup>2</sup> See the report of the *Enquiry into the Rise of Prices in India* in five volumes. Superintendent of Government Printing, India, Calcutta, 1915 and especially Vol I.

tinued, for all other index numbers have been predominantly those in the great port towns. Another annual series from 1890 to 1919 covering 40 commodities is to be found in the evidence submitted to the Exchange and Currency Committee of 1919.<sup>1</sup>

For the study of many financial and economic questions index numbers which show the changes of prices month by month are required. Two official series of such monthly index numbers of Indian prices are now published, one prepared by the Department of Statistics based on wholesale prices of 75 commodities in Calcutta, the other prepared from quotations of 44 commodities and published<sup>2</sup> by the Labor Department of the Bombay Government under the supervision of Mr. G. Findlay Shirras. For some mysterious reason the former series (Calcutta) is not published in India at all, but appears only in the international statistical journals.<sup>3</sup> For this reason we in India learn the course of prices in Calcutta only after several months delay.

Wishing to have a punctual means of observing the trend of prices, and also to compare fluctuations of prices upcountry with those of Bombay and Calcutta, I have had an index number calculated monthly

<sup>1</sup> Report, Vol III, Appendices, pp. 165-76.

<sup>2</sup> In the *Labour Gazette* issued monthly by the Labour Office Secretariat, Bombay. See the number for September, 1921, for an account of the basis on which the index number is prepared.

<sup>3</sup> The most convenient source of reference is the *Monthly Bulletin of Statistics* published by the League of Nations (in India by the Oxford University Press, Elphinstone Circle, Bombay). See also the *Federal Reserve Bulletin*, issued by the Federal Reserve Board, Washington, D.C., U.S.A., and the *Bulletin Mensuel de l'Institut International de Statistique*, The Hague, Holland.

by my Research Assistant in the Economics Department of the University of Allahabad, Mr. R. R. Chaube, M.A., LL.B. It was impossible to collect special material, so I made use of the quotations of wholesale prices which appear fortnightly in the supplement to the *Gazette of India*. The commodities chosen for this source were rice, wheat flour, *jowar*, gram, *arhar dal*, linseed, mustard and rape seed, *ghi*, sugar (raw), salt, tobacco leaf, turmeric, *bhusa*, Bengal coal, sheep, and kerosene oil, being 16 in number; and quotations for three others were taken from *Capital*, namely: cotton (oomras), cotton yarn (16's), and jute (jat 4's). The total number of commodities included in the index number is therefore only 19. This number is too small, and if other reliable quotations had been easily accessible, I should have increased the number. A feature of the index number is that the quotations taken from the *Gazette* refer to a large number of places scattered throughout India, namely: Calcutta, Benares, Cawnpore, Agra, Delhi, Lahore, Bombay, Ahmedabad, Nagpur, Madras. The average of the quotations in each of these ten places each month was calculated and used. Such error as there may be in the index numbers as representing the changes of the general purchasing power of money lies, therefore, more in the undue effects of special causes which may have affected the prices of particular commodities, than in any causes of a local character.

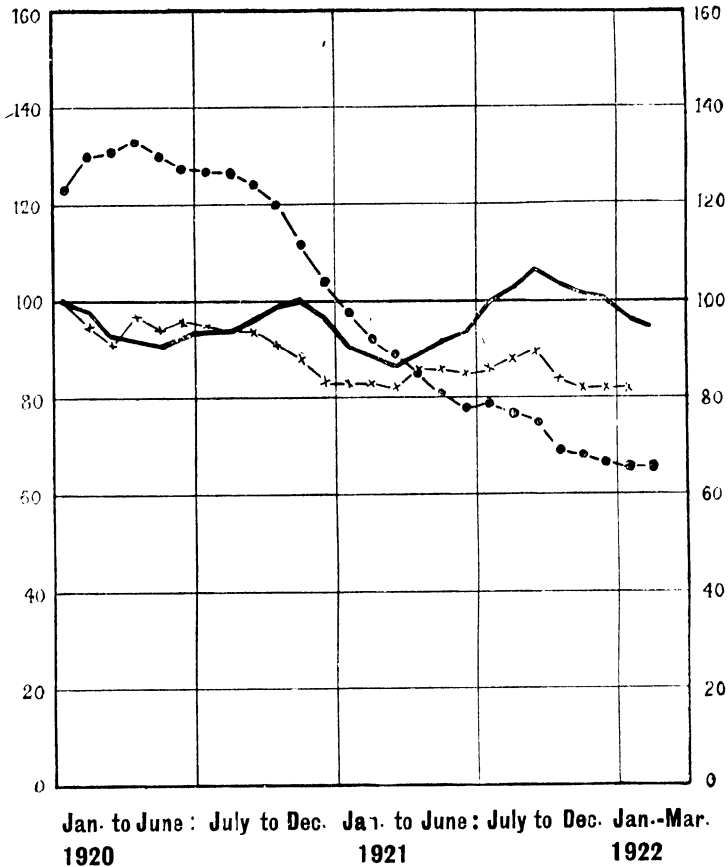
With this brief explanation I may print the Economics Department series of index numbers and set beside them the official index numbers for Bombay and Calcutta.

## TABLE OF MONTHLY INDEX NUMBERS

|           | Economics<br>Department | Bombay Labour<br>Gazette | Calcutta<br>(League of<br>Nations Bulletin) |
|-----------|-------------------------|--------------------------|---------------------------------------------|
| 1920      |                         |                          |                                             |
| January   | 100                     | 231                      | 218                                         |
| February  | 98                      | 219                      | 209                                         |
| March     | 93                      | 211                      | 198                                         |
| April     | 92                      | 224                      | 200                                         |
| May       | 91                      | 217                      | 210                                         |
| June      | 93                      | 222                      | 206                                         |
| July      | 94                      | 220                      | 209                                         |
| August    | 94                      | 217                      | 209                                         |
| September | 96                      | 218                      | 208                                         |
| October   | 99                      | 210                      | 206                                         |
| November  | 100                     | 204                      | 194                                         |
| December  | 97                      | 192                      | 180                                         |
| 1921      |                         |                          |                                             |
| January   | 91                      | 191                      | 178                                         |
| February  | 89                      | 191                      | 174                                         |
| March     | 87                      | 190                      | 175                                         |
| April     | 89                      | 198                      | 183                                         |
| May       | 92                      | 199                      | 184                                         |
| June      | 94                      | 197                      | 178                                         |
| July      | 100                     | 199                      | 183                                         |
| August    | 103                     | 203                      | 184                                         |
| September | 107                     | 207                      | 187                                         |
| October   | 104                     | 195                      | 184                                         |
| November  | 102                     | 193                      | 180                                         |
| December  | 101                     | 190                      | 180                                         |
| 1922      |                         |                          |                                             |
| January   | 97                      | 190                      | 178                                         |
| February  | 95                      | 186                      | 179                                         |
| March     | 98                      | 192                      | 182                                         |

In the opposite diagram curves are plotted of the Economics Department and the Bombay figures; and I have added for the sake of the interesting comparison they afford, *The Statist* index numbers of English prices. It will be observed that there is no essential difference between the Economics Department and the Bombay series. Both show that prices fell at the end of 1920 and rose again in 1921, reaching a maximum in September, 1921, since which there has been a continuous fall. The great contrast with the course of English prices is highly interesting and instructive; for they began to fall in the early summer of 1920, and there has been a rapid and almost continuous decline right up to the present time. For this contrast the inflation of the currency in India is mainly responsible; and as Indian prices remained high whilst English prices (and therefore world prices) were falling rapidly, the Indian exchange necessarily fell and remained weak.

Plate II.—Facing Page 254.



— ECONOMICS DEPARTMENT  
 x — x — x — x BOMBAY LABOUR OFFICE  
 • — • — • — • "THE STATIST," ENGLAND

(*"The Statist"* index numbers have been plotted on half scale, that is have been divided by 2.)

DIAGRAM OF MONTHLY INDEX NUMBERS OF WHOLESALE PRICES



## TABLE OF EXCHANGE RATES

1917 to 1922

(Quotation for demand drafts in Calcutta adjusted to the nearest one eighth of a penny)

| Date       | 1917              | 1918  | 1919              | 1920               | 1921              | 1922              |
|------------|-------------------|-------|-------------------|--------------------|-------------------|-------------------|
|            | s. d.             | s. d. | s. d.             | s. d.              | s. d.             | s. d.             |
| 1st Jan.   | 1 4 $\frac{1}{8}$ | 1 5   | 1 6               | 2 3 $\frac{7}{8}$  | 1 5 $\frac{1}{4}$ | 1 4               |
| 15th Jan.  | 1 4 $\frac{1}{8}$ | 1 5   | 1 6               | 2 4                | 1 5 $\frac{3}{8}$ | 1 3 $\frac{7}{8}$ |
| 1st Feb.   | 1 4 $\frac{7}{8}$ | 1 5   | 1 6               | 2 8 $\frac{1}{2}$  | 1 4 $\frac{1}{4}$ | 1 3 $\frac{5}{8}$ |
| 15th Feb.  | 1 4 $\frac{1}{4}$ | 1 5   | 1 6               | 2 7 $\frac{1}{2}$  | 1 4 $\frac{1}{2}$ | 1 3 $\frac{5}{8}$ |
| 1st March  | 1 4 $\frac{1}{4}$ | 1 5   | 1 6               | 2 7                | 1 3 $\frac{3}{8}$ | 1 3 $\frac{1}{8}$ |
| 15th March | 1 4 $\frac{1}{4}$ | 1 5   | 1 6               | 2 3 $\frac{3}{4}$  | 1 3 $\frac{5}{8}$ | 1 3 $\frac{1}{8}$ |
| 1st April  | 1 4 $\frac{1}{4}$ | 1 5   | 1 6               | 2 4                | 1 3 $\frac{5}{8}$ | 1 3 $\frac{1}{8}$ |
| 15th April | 1 4 $\frac{1}{4}$ | 1 6   | 1 6               | 2 3 $\frac{7}{8}$  | 1 3 $\frac{5}{8}$ | 1 3 $\frac{1}{4}$ |
| 1st May    | 1 4 $\frac{1}{4}$ | 1 6   | 1 6               | 2 3 $\frac{3}{8}$  | 1 3 $\frac{5}{8}$ | 1 3 $\frac{1}{4}$ |
| 15th May   | 1 4 $\frac{1}{4}$ | 1 6   | 1 8               | 2 0 $\frac{1}{2}$  | 1 3 $\frac{1}{2}$ | 1 3 $\frac{3}{4}$ |
| 1st June   | 1 4 $\frac{1}{4}$ | 1 6   | 1 8               | 2 1 $\frac{1}{4}$  | 1 3 $\frac{1}{4}$ |                   |
| 15th June  | 1 4 $\frac{1}{4}$ | 1 6   | 1 8               | 1 10               | 1 3 $\frac{1}{2}$ |                   |
| 1st July   | 1 4 $\frac{1}{4}$ | 1 6   | 1 8               | 1 8 $\frac{3}{4}$  | 1 3 $\frac{3}{8}$ |                   |
| 15th July  | 1 4 $\frac{1}{4}$ | 1 6   | 1 8               | 1 9 $\frac{7}{8}$  | 1 3 $\frac{1}{4}$ |                   |
| 1st Aug.   | 1 4 $\frac{1}{4}$ | 1 6   | 1 8               | 1 10 $\frac{3}{4}$ | 1 3 $\frac{1}{2}$ |                   |
| 15th Aug.  | 1 4 $\frac{1}{4}$ | 1 6   | 1 10              | 1 10 $\frac{1}{2}$ | 1 3 $\frac{7}{8}$ |                   |
| 1st Sept.  | 1 5               | 1 6   | 1 10              | 1 10 $\frac{1}{4}$ | 1 4 $\frac{3}{4}$ |                   |
| 15th Sept. | 1 5               | 1 6   | 1 10              | 1 10 $\frac{1}{2}$ | 1 4 $\frac{1}{8}$ |                   |
| 1st Oct.   | 1 5               | 1 6   | 2 0 $\frac{1}{4}$ | 1 9 $\frac{3}{8}$  | 1 5 $\frac{1}{2}$ |                   |
| 15th Oct.  | 1 5               | 1 6   | 2 0 $\frac{1}{4}$ | 1 7 $\frac{1}{2}$  | 1 5 $\frac{3}{8}$ |                   |
| 1st Nov.   | 1 5               | 1 6   | 2 0 $\frac{1}{4}$ | 1 7 $\frac{3}{8}$  | 1 4 $\frac{5}{8}$ |                   |
| 15th Nov.  | 1 5               | 1 6   | 2 0 $\frac{3}{4}$ | 1 7 $\frac{7}{8}$  | 1 4 $\frac{1}{4}$ |                   |
| 1st Dec.   | 1 5               | 1 6   | 2 3 $\frac{1}{8}$ | 1 6 $\frac{3}{8}$  | 1 4               |                   |
| 15th Dec.  | 1 5               | 1 6   | 2 4               | 1 5 $\frac{1}{8}$  | 1 3 $\frac{7}{8}$ |                   |



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