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GOLD PRICES AND MONETARY REFORM

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GOLD PRICES AND MONETARY REFORM

Adam Smith, the great philosopher and father of scientific political economy, writing in the *Wealth of Nations*, 1776, has said:

"When we talk of any particular sum of money, we sometimes mean nothing but the metal pieces of which it is composed; and sometimes we include in our meaning some obscure reference to the goods which can be had in exchange for it, or to the power of purchasing which the possession of it conveys ... the wealth or revenue which it in this case denotes, is equal only to one of the two values which are thus intimated somewhat ambiguously by the same word, and to the latter more properly than the former, to the money's worth more properly than to the money.

Thus, if a guinea be the weekly pension of a particular person, he can in the course of the week purchase with it a certain quantity of subsistence, conveniences, and amusements. In proportion as this quantity is great or small, so are his real riches, his real weekly revenue."

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GOLD PRICES AND MONETARY REFORM**INTRODUCTION:**

Fluctuations in prices have agitated men's minds for ages. But the purely monetary aspect of the relation between money and the general level of prices is of comparatively recent interest. "The doctrine, that increases in the supply of gold, or other money commodity, brings increases in the general level of prices, was first enumerated in modern times in Spain in the 16th century, and following the flow of the precious metals from Spain to other countries, it first appeared in English literature about 1588. That prices vary directly with the amount of money is one of the most simple generalizations of the economists, but it covers the most complex of economic phenomena." (1) The practice of the mediæval kings, of clipping coins so as to increase the supply of currency was acclaimed by debtors because the resulting increase in prices enabled them to pay their debts more easily.

(1) Mackintosh, W. A., "Gold and the Decline of Prices,"
 Proceedings of Canadian Political Science Association 1931.
 p. 88.

(2)

In other words, their payments were made in depreciated currency. "All other debtors in the state were allowed the same privilege; and might pay with the same nominal sum of the new and debased coin whatever they had borrowed in the old. Such operations, therefore, have always proved favorable to the debtor and ruinous to the creditor; and have sometimes produced a greater and more universal revolution in the fortunes of private persons than could have been occasioned by a very great public calamity." (1)

The emphasis of this thesis is revealed in the above italicised words. We will go further and consider how a fluctuating standard of value distributes wealth unfairly whether through a rise or a fall in prices. It is the purpose of this thesis to study the effect of an unstable price level on the different classes of society, the various proposals that have been advanced to reform the monetary unit of accounts, and to evaluate the merits and defects of each.

(1) Smith, Adam, "Wealth of Nations" (McCulloch Ed.,) p.13.

PART I THE PROBLEM

"The stability of money goes to the very basis of life; any sudden change that affects the purchasing power of money touches every kind of moral question and every kind of obligation". (1) "It (Stabilization of prices) is the most bitterly practical of all questions; it is the fundamental solution to trade depression in the basic industries, unemployment, labor unrest, class hatred, high taxation and the rest." (2) History shows that apart from wars and religious intolerance, no single factor has been more productive of misery and misfortune than the high degree of variability in the general price level. A stable price level is a thing to be desired second only to international and domestic peace.

"Money is that money does." (3) In general this short definition covers what we mean by the term money. For our purpose, however, we shall select a particular definition. "Money is simply that which the state declares from time to time, to be a good legal discharge of money contracts." (4)

- (1) Young, Owen, D., "The Stability of Money," in The Movement for a Sounder Currency, P. 15.
- (2) Stamp, Josiah C., The First necessity of Thinking today on sound questions ibid P.33:
- (3) Walker, F. A., "Money", P. 405.
- (4) Keynes, J. M., "Monetary Reform," P. 9.

(4)

We think of the dollar as fixed. But it is fixed only in the sense that its equivalent is a fixed number of grains of gold. Actually, our dollar is elastic; it is power over commodities in exchange, but it is not fixed in the amount of those commodities that it will secure. The dollar is approximately $1/20$ of an ounce of gold. Hence, an ounce of gold is worth \$20.00. The dollar is a unit of weight and as such it is invariable; but as a measure of value it is variable. The yard stick, for example, is an invariable standard of linear measurement; but the dollar yesterday may have bought one dozen oranges, one-half dozen eggs, one pound of butter, while today it may buy two dozen oranges, one dozen eggs, two pounds of butter, and tomorrow, one-half dozen oranges, one-quarter of a dozen eggs, and one-half pound of butter. "In short, the dollar is a unit of weight masquerading as a stable unit of value or buying power." (1).

As indicated in Figure 1, prices in general rose, or what is the same thing, the purchasing power of the dollar fell during the period from 1913 to 1920. Fifty-five cents would buy as much of the good things of life in 1913 as one dollar in 1920. (2)

(1) Fisher, Irving, "The Money Illusion," P. 16 ff.

(2) All calculations in this thesis regarding the purchasing power of money are based on Irving Fisher's Indexes and are, therefore, applicable to America.

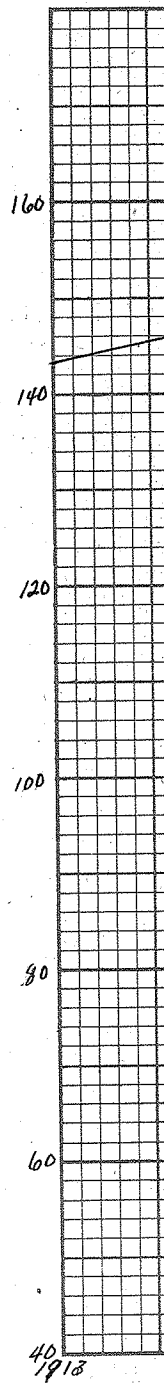
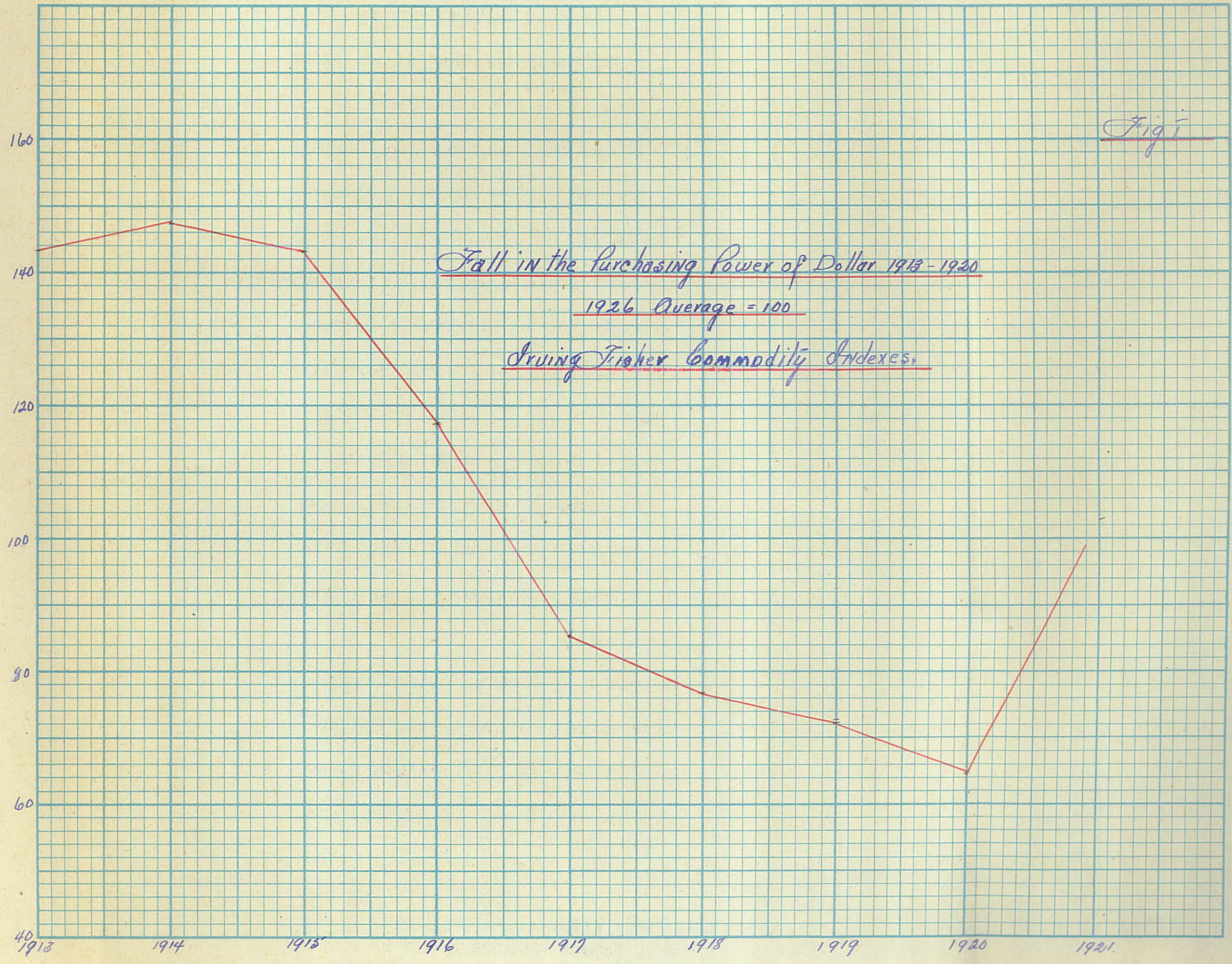


Fig 1



Fall in the Purchasing Power of Dollar 1913-1920

1926 Average = 100

Irving Fisher Commodity Indexes.

On the other hand, during the period of 1926 to 1931 prices in general fell, or the purchasing power of the dollar appreciated (Fig. II) so that \$1.00 in 1931 was the equivalent in purchasing power of \$1.40 in 1926.

*When wholesale price movements are compared with the movements in the cost of living index and with index numbers of average weekly wages, it is at once apparent that the fall in the former has been much greater than the fall in the other series:

TABLE I.

(Base 1924 equals one hundred in all cases)

		Wholesale Prices (Board of Trade) All articles.	See Fig. (3) Total Non-food	Cost of Living Index (M/L)	Index of Average Weekly Wages	Industrial Production (Board of Trade)
		99.9	100.5	101	100	
1924	1st Quarter	98.5	100.3	97		
	2nd	99.3	99.1	99		
	3rd	102.3	100.1	103		
	4th	84.6	81.1	94	100.2	109.3
1928	1st	86.1	81.4	94	100.0	103.6
	2nd	83.8	80.5	94	99.7	100.2
	3rd	83.1	79.9	96	99.5	108.4
	4th	83.6	80.5	93	99.5	110.6
1929	1st	83.2	79.7	92	99.5	112.0
	2nd	82.1	79.3	94	99.3	110.7
	3rd	80.7	78.1	95	99.0	114.0
	4th	76.9	74.8	92	98.8	111.0
1930	1st	73.4	71.5	88	98.3	103.1
	2nd	70.7	68.1	89	98.3	99.5
	3rd	67.0	64.5	89	98.3	99.0
	4th	64.0	62.2	85	98.0	95.4
1931	1st					

Fig 2.

Rise in Purchasing Power of Dollar 1928-1931

1926 Average = 100.

Irving Fisher Commodity Indexes.

180

160

140

120

100

80

1926

1927

1928

1929

1930

1931

1932

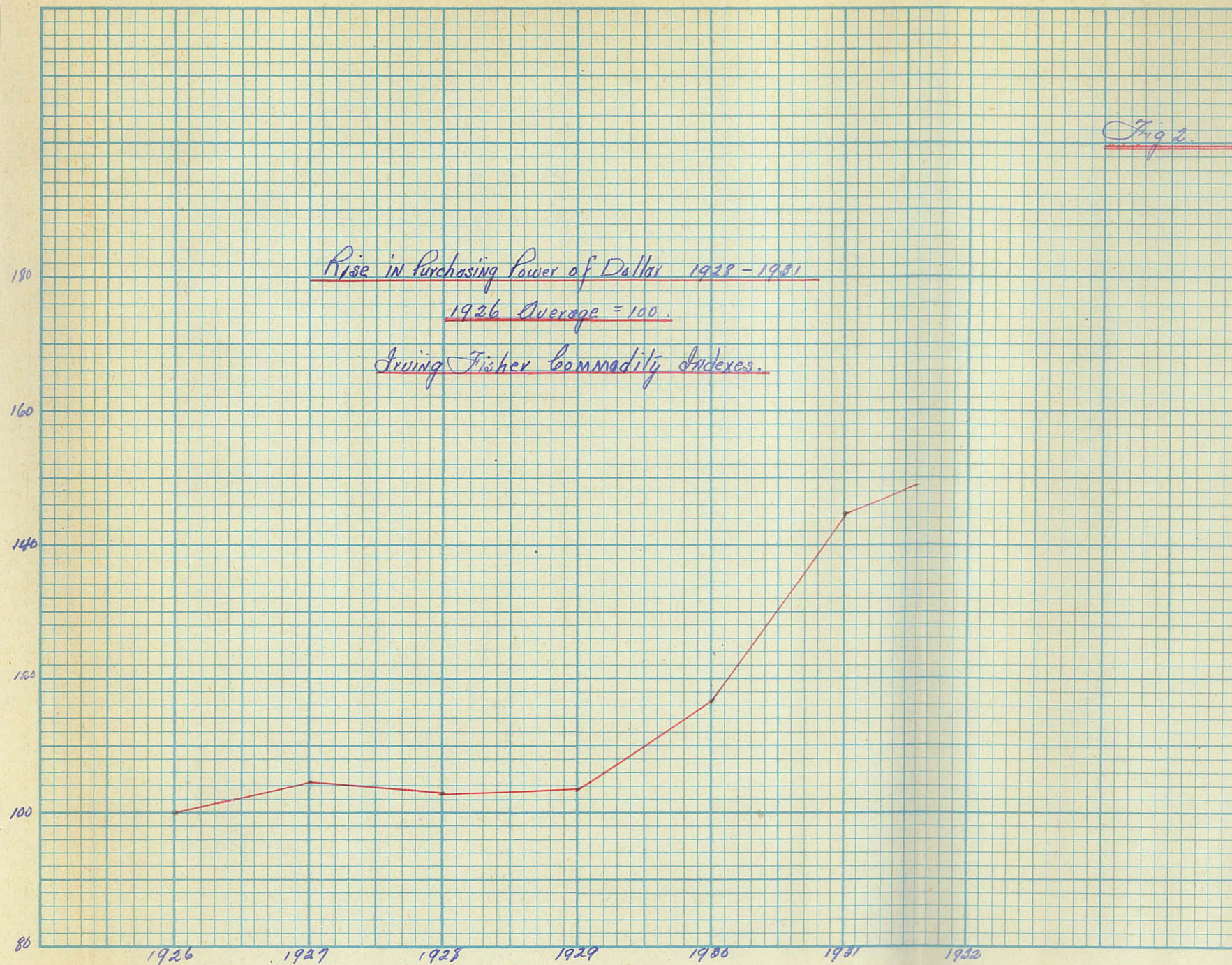
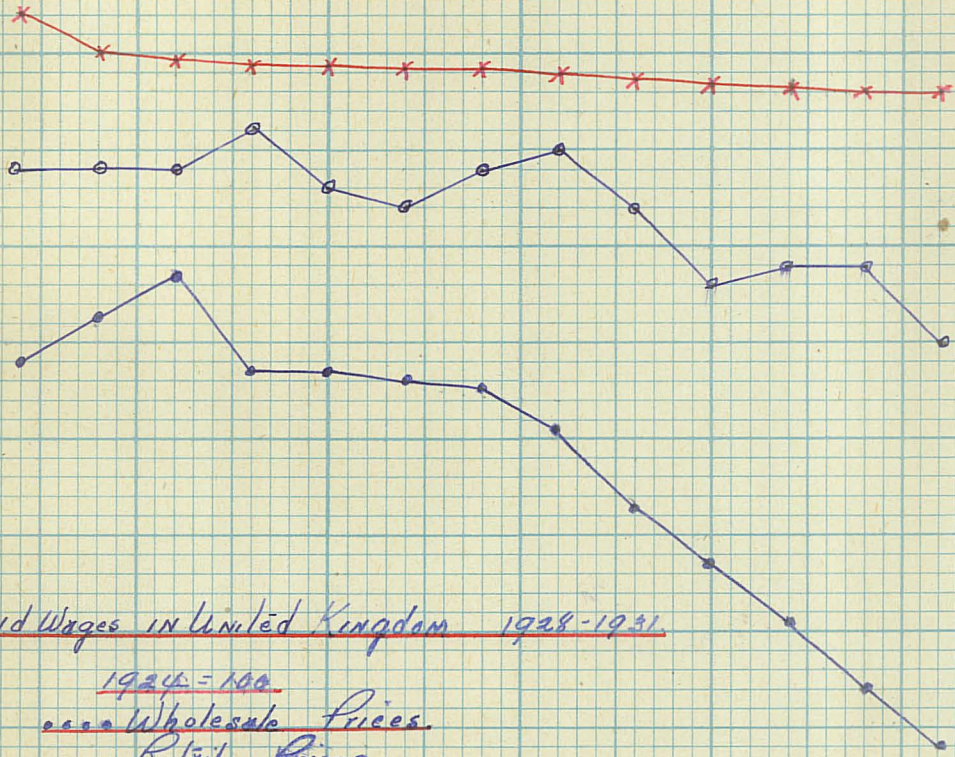


Fig. 3



Prices and Wages in United Kingdom 1928-1931

1924 = 100.
 Wholesale Prices.
 ——— Retail Prices
 x x x x Wages.

Source:

Committee of Finance and Industry Report p. 80.

40. 50. 1928 1st 2d. 3rd 4th 1929 1930 1931

The same feature of a much sharper fall in the wholesale level of prices than in the level of the cost of living which is characteristic of the position in Great Britain is to be noted in other countries. Thus the ratio $\frac{\text{Cost of Living Index}}{\text{Wholesale Index}}$ stood at one hundred and twenty-six in January, 1930, and one hundred and forty-two in December; in Germany for the same month, at one hundred and fifteen and one hundred and twenty; in France (1st Quarter 1930, compared with last quarter) at one hundred and one and one hundred and twenty. Thus, all over the world the wholesale price index has been falling abruptly and the cost of living has nowhere completely adjusted itself to the fall in the level of wholesale prices. (1)

Fig. 4 shows the relation between wholesale prices and bond yields in Canada during the course of prices from 1920-1930. (1) It indicates that as wholesale prices fall bond yields rise and vice versa.

1. Effects on Different Classes of Society of a Fluctuating Standard of Value.

Money is only important for what it will buy. If the value of money changed equally for all persons, or for all purposes, if a man's receipts and debits were modified in one uniform proportion, it would make little or no difference to society whether prices rose or fell. But, unfortunately, when prices rise or fall the social consequences are often disastrous.

*The characteristic of the ideal unit for the measurement of

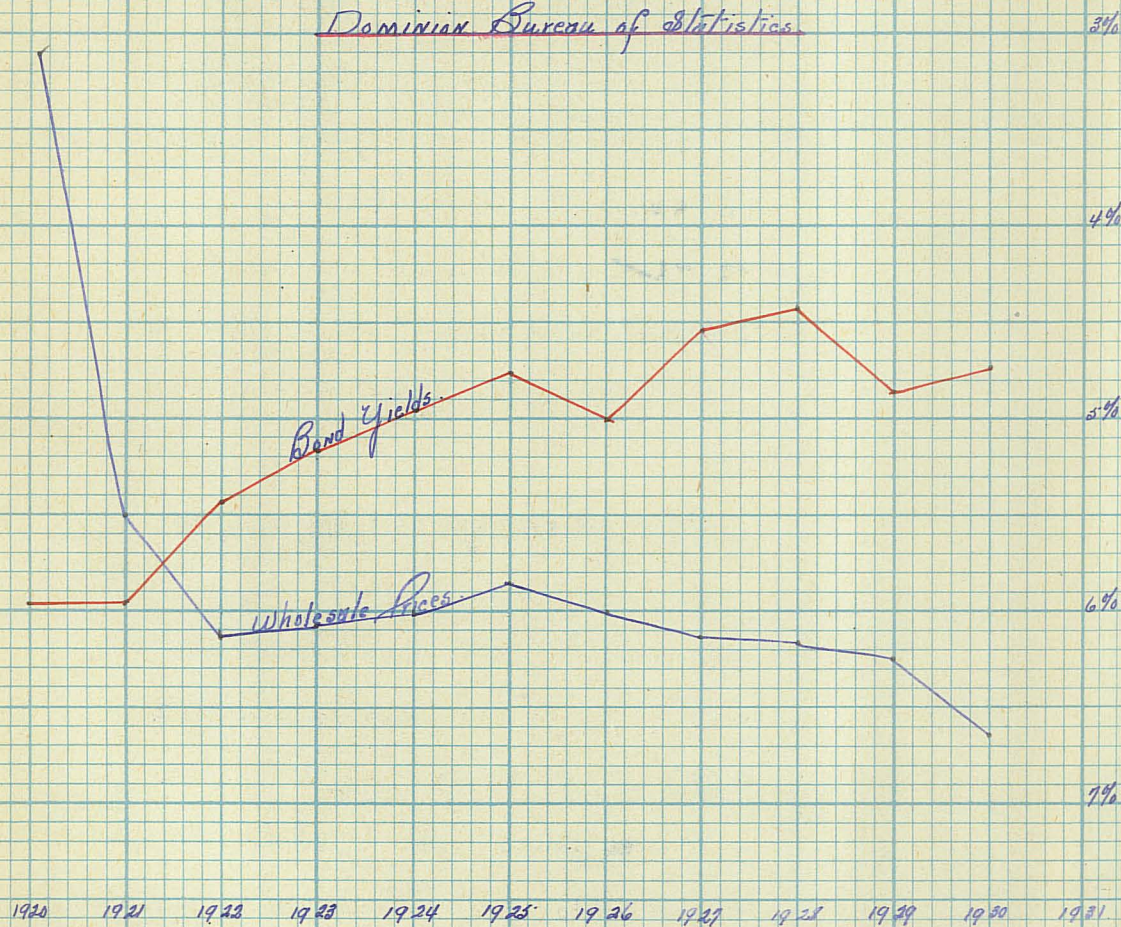
(1) Committee on Finance and Industry Report 1931. pp 83-86.

Fig 4

Bond Yield and Wholesale Prices 1920 - 1930

1926 Average = 100.

Dominion Bureau of Statistics



debts is that it should have the same meaning when the debt is discharged as when it is contracted." (1). If a merchant orders goods from a manufacturer in say July, to be delivered the following January at an agreed price, he expects to sell the goods through the retailers to the consumers at prices approximately equal to those he anticipated; while the manufacturer in turn must be able to rely on his cost of production being approximately that which he estimated. Again, if an investor buys a ten-thousand dollar annuity bearing 5% interest he expects to receive an annual income from it which will represent for an indefinite period the same purchasing power over commodities as when he invested. Wage agreements are particularly a matter of difficulty when the monetary standard is unreliable. Weekly variations matter little; but variations, even weekly, which extend over a lifetime give many occasions for dissatisfaction. Wages cannot be revised every week, but when the "accumulated effect of the variation makes itself felt" the result is grave friction and instability of the whole social system. (2)

(1) Hawtrey, R. G., "Monetary Reconstruction", P. 49.

(2) Ibid., P. 49.

Each process, inflation and deflation has caused great social distress. Each alters the distribution of wealth among different economic classes. Inflation over-stimulates, while Deflation retards the production of wealth.

A. As Regards Distribution:

Society may be conveniently divided into three classes; viz., investors, business people, and earners. It is true that one and the same individual may represent all three, but in general each of these three classes has different interests and different functions to fulfill.

(1) Investors. This class is vitally interested in the stability of money. It is a matter of grave concern to an investor whether a holder of ordinary shares in a joint-stock company, of a lease, of mortgage bonds, debentures, or preference shares, that he should have at all times approximately the same command over all commodities to which his position entitles him. Government bonds have always been considered gilt-edged securities and a discussion of the relative position of a bond holder, as regards the actual purchasing power of his capital investment, and his income therefrom will illustrate the effect of the instability of the monetary standard upon investors.

During the first quarter of the 19th century the very high prices of the Napoleonic Wars were followed by a somewhat rapid appreciation in the value of money. The tendency of prices (aside from temporary fluctuations) continued downwards, a low

being recorded in 1896. A remarkable feature of this period was the relative stability of the purchasing power of the dollar. "Approximately the same level of price ruled in or about the years 1836, 1841, 1855, 1862, 1867, 1871, 1915. Prices were also level in the years 1844, 1881, and 1914 in Great Britain. If we call the index number of these latter years 100, we find that; for the period of close on a century from 1826 to 1914, the maximum fluctuation in either direction was 30 points, the index number never rising above 130 and never falling below 70". (1)

Money contracts appear to have possessed stability over a long period. The bond holder's investment was secure. The steady fall in the rate of interest had increased the number of years' purchase of the annual income which represented the capital. The purchasing power of the annual money income was on the whole increasing. It is estimated that the capital value of British Consols rose almost steadily from 79 to 109, while the purchasing power of the annual dividends (even though interest rates had been reduced in 1889 from 3 to 2½% and in 1903 to 2¼%) had increased 50%. But the monetary events both during and after the war have taken from such investors "about one-half of their real value in England, seven-eighths in France, eleven-twelfths in Italy, virtually the whole in Germany, and in the succession states of Austria-Hungary and Russia" (2). "The owner of Consols in 1922 had a real income, one-half of what he had in 1914, and one-third of what he had in 1896." (3) The following table explains the situation:

(1) Keynes, op. cit. P. 11-12

(2) Ibid., PP. 13-14

(3) Ibid., P. 15.

	P. Power of Income of Consols	Do. after deduction of income tax at the standard rate	Money price of capital value of Consols	P. Power of capital value of Consols
1815	61	59	92	56
1826	85	90	100	92
1841	85	90	122	104
1869	87	89	127	111
1883	104	108	138	144
1896	139	145	150	208
1914	100	100	100	100
1920	34	26	64	22
1921	53	39	56	34
1922	62	50	76	47

In America if a man deposited \$100 in a savings bank in 1896 at say $4\frac{1}{2}\%$ Compound Interest and drew it out in 1920, he would have \$300. Each of these dollars was worth $.26 \frac{2}{3} \times \$300 = \80 of the 1896 standard. In short, he put in \$100 and took out the equivalent of 80 such dollars. He had really lost besides his interest \$20 principal. But if a man deposited \$100 in a savings bank in 1920 at the same rate of interest he would draw out very much more than his original principal plus Compound Interest in actual purchasing power in 1931. (Amount of \$100 at $4\frac{1}{2}\%$ Compound Interest for three years $3^{\frac{1}{3}} \$113.64$). With 1926 as a base at 100 a dollar now will buy approximately \$1.40 more, or the real value of his investment is $113.64 \times \frac{1.40}{100} = 159.09$. (1) The diagram on the following page drawn from Professor Irving Fisher's, "The Money Illusion," P. 70, illustrates the above argument.

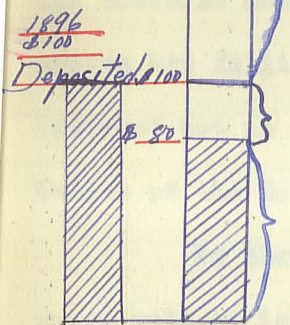
(1) Fisher Irving, "The Money Illusion", pp. 67-68.

1920
Deposit Accumulated
1/2% Compound Interest
\$300

(11)

The Illusory Interest on Saving.

Apparent Gain \$200 Dollars.



Real loss, 1896 Dollars.

Buying Power \$300 Dollars of 1920

Equivalent to \$80 Dollars 1896.

(2) Business Class. A period of rising prices acts as a stimulus to enterprise and is profitable to business men. Suppose a business man borrows a sum of money worth 100 in terms of commodities when the loan is contracted, say for a year at 5% interest, but that at the end of the year when the loan is repaid it is only worth 90 in purchasing power; then the lender received back (principal and interest) that which is only worth 94½%. The money rate of the interest was 5% but the real rate of interest was actually negative, equal to minus 5½%. On the other hand, suppose the value of money at the end of the year had risen so that the capital sum lent had become 110 in terms of commodities. The money rate of interest would be still 5% but the real rate of interest would be 15%. Thus when

prices are rising the business man is able to repay the lender in terms of real value, not only no interest, but even less than the original capital advanced. The real rate of interest falls to a negative value and the business man or borrower reaps a corresponding benefit. But when prices are falling he repays in real value not only the money rate of interest but in addition a corresponding amount equivalent to the appreciation of the dollar.

In the second place in a period of rapidly changing prices the money rate of interest seldom adjusts itself adequately or fast enough to prevent the real rate from becoming abnormal. It is not because prices are rising, but the anticipation of such a rise due to various possible price movements, and an estimated prediction of each which influences money rates. Where the currency of a country has not collapsed completely, the short money rate scarcely ever rises above 10% per annum or falls below 1%. This is not sufficient to balance a movement in prices up or down of more than 5% per annum. But the actual price movement has quite often fluctuated more than that.

With rising prices the business man gains and his profits are looked upon as the cause, not as the result of his high prices. The consumer is inclined to decry high profits and at the same time to speculate for the rise himself. The doctrine of normal profits, or, in other words, that profits shall bear a certain proportion to other incomes subjects the business man, i.e. profiteer in this case, to severe criticism. The result is that enterprise is discredited. Popular remedies for the

business man's profits are subsidies, price and rent fixing, profiteer hunting, excess profit duties -- remedies which only increase the evil as they tend to destroy confidence and business initiative.

(3) Wage Earners. When prices change wages tend to lag behind. The result is that the wage earner's real wages tend to decrease during an interval of rising prices. This is true of ill-placed or ill-organized labor, but even real wage rates in Canada, United States, and Great Britain during the last period of falling prices have increased, and that too in Great Britain when the total wealth of the nation suffered a decrease. In the years following the war, the working classes improved their relative position as against all other classes except the profiteers. If account be taken of shorter hours, increased money-wages, despite higher prices, some sections of the working class, eg., railroad employees, improved their absolute position, as they secured a higher remuneration for each unit of work done.

A greater evil underlay all this. When the value of money fluctuates greatly, distinctions between capital and income become confused. A depreciating currency enables a community to live on its capital unawares. (1) "The increasing money value of the community's capital goods obscures temporarily a diminution in the real quantity of the stock." (2).

(1) Keynes op. cit., p. 29.

(2) Ibid. Cit.

But this need not blind us to the fact that rising prices are not an unmixed blessing for the wage earner. Suppose a man began his work in 1914 on a salary of \$3000 and that in 1925 his salary had been increased to \$5000. Nominally he is drawing \$2000 more, actually his salary of \$5000 in 1925 measured upon the basis of the purchasing power of 1914 is only worth approximately \$3000. He handled, it is true, more money, but he did not have any more real income.

(4) Conclusion. Inflation redistributes wealth very unequally. It is injurious to the investor, very beneficial to the business man, and to certain well-organized labor groups, especially manual workers. It is of little or no benefit to the salaried man, indeed it more often does him harm, for salaries of professional people tend to remain fixed or almost so over long periods. It must be fairly obvious that salary increases as a reward for increased efficiency gained through experience, or otherwise, are very illusory in periods of inflation. The most striking consequence is the injustice done investors who have invested their savings in return for a fixed income. Inflation not only diminishes the capacity of investors to save, it destroys their confidence, i.e., their willingness to save.

B. As Regards Production.

If the business world expects that prices will fall, the processes of production are damped down; conversely, if it expects that prices will rise there is a tendency to over-stimulate production. Upon the anticipated real profit of the entrepreneur the intensity of production is largely dependent. But when fluctuations in the standard of value are occasioned, the delicate balance of the interests of the community are upset.

Risk is a great factor in productive enterprise today. The development of international trade, involving as it does great distances between the original place of production, and the final place of consumption, as well as more technical and complicated methods of the processes of manufacture has greatly increased the risk of business enterprise. Considerable of this risk is due to fluctuations in the relative value of a commodity in comparison with that of commodities in general during the period elapsing between the beginning of production of an article and its final consumption. This risk is beyond the scope of this inquiry, being more or less independent of the vicissitudes of money, but the risk due to instability in the value of money may cause production to cease altogether if a general fear of falling prices destroys business confidence that much.

*Once begun, the process of liquidation extends rapidly, partly because most enterprises, which are called upon to settle their maturing obligations in turn, put similar pressure upon their own debtors, and

partly because, despite all efforts to keep secret what is going forward, news presently leaks out and other creditors take alarm," (1). "This movement inevitably reacts upon business confidence. Under its influence the dying error of optimism gives birth to an error of pessimism. This new error is born, not an infant, but a giant. For an industrial boom has necessarily been a period of strong emotional excitement, and an excited man passes from one form of excitement to another more readily than he passes to quiescence." (2). "The fact of falling prices injures entrepreneurs; consequently the fear of falling prices causes them to protect themselves by curtailing their operations; yet it is upon the aggregate of their individual estimations of the risk, and their willingness to run the risk, that the activity of production and of employment mainly depends." (3).

"The revival of industry comes about through the gradual and often simultaneous growth of confidence among various trades." (4).

- (1) Mitchell, Wesley C., "Business Cycles," P. 576.
- (2) Pigeu, A. C., "Industrial Fluctuations," P. 83.
- (3) Keynes, Op. cit., P. 37.
- (4) Marshall, A., "Principles of Economics," P. 711.

Again, the consequence of the above uncertainty is that when prices are likely to rise, more and more money is borrowed to buy goods; this helps prices to rise; business becomes inflated, it is managed recklessly and wastefully; those working on borrowed capital pay back less real value than they borrowed, enriching themselves at the expense of other members of the community. On the other hand, when credit is shaken and prices begin to fall, every one desires to unload commodities and secure money which is rapidly appreciating in value. This makes prices fall all the faster, and the further fall makes credit shrink even more, and thus for a long time prices fall because prices have fallen.

To Sum Up: All whose money incomes are fixed, and whose expenditure varies with prices, gain from a fall, and suffer from a rise in prices. Such are professional men with fixed salaries, civil servants, landlords with rents fixed under long leases, bondholders etc. Conversely all whose money incomes vary with prices, suffer from a fall, and gain by a rise in prices -- in so far as their money outlay is fixed. Such are merchants, or farmers renting land under long leases. In short, a rise in prices benefits the debtor class at the expense of the creditor, while a fall in prices means an increase in the burden of all debts--individual and national.

"The reactions brought about by a re-distribution of wealth are easier to appreciate if a concrete case is examined. Professor Bowley and Sir Josiah Stamp published in 1927 a monograph on the 'National Income' of Great Britain in 1924. Largely based on the figures given in this publication, Mr. Joseph Kitchen has compiled an account in which the

national income of that year is apportioned among the principal classes of the Community who are particularly affected by a re-distribution of wealth due to a change of the general price level. The account does not pretend to represent statistical facts (and the authors of the monograph must not be held responsible for the allocations made), but they are put forward as the best estimate that the available data permit to be made. They are believed to be sufficiently near the truth to serve the present purpose. The account is set out below:

NATIONAL INCOME AND DISTRIBUTION ACCOUNT

<u>INCOME</u>		<u>DISTRIBUTION</u>	
money value.		money value.	percentage.
£ millions		£ millions	of total income
4060	(a) Public debt service.....	405	10.0
	(b) Interest and rent.....	665	16.4
	FIXED MONEY OBLIGATIONS.....	1070	26.4
	(1) Other governmental expenditure.....	285	7.0
	(3) Profits of enterprise ("entrepreneur").....	685	16.8
	(3) Wages and salaries.....	2020	49.8
4060	RESIDUE.....	2990	73.6
		4060	100

The distribution of the national income has been split up, it will be observed, into the constituents of (a) Public Debt Service, and (b) Interest and Rent, which are grouped together under the main heading of "Fixed Money Obligations," and (1) other Governmental Expenditure, (2) Profits and Enterprise, and (3) Wages and Salaries, grouped under the main heading of "Residue." The first group, as the heading implies, comprises the obligations in respect of contracts involving fixed money payments. It includes, apart from interest and redemption charges of the National Debt, the debts of public bodies and private undertakings, also rent on landed and house property, and pensions. These obligations may be said to constitute a first charge on the national income. They have to be met whatever the income may be, if default is to be avoided. The second group, headed "Residue," represents the balance of the national income that is available to meet (a) Governmental expenditure other than debt charges; (b) profits of enterprise ("entrepreneur")--which includes all dividends of a variable type, such as accrue to holders of ordinary or preferred shares of companies--and finally (c) wages and salaries."

In the diagram (Chart D) appended, an attempt is made to show the nature and relative extent of the changes in the distribution of the national income consequent on changes in the general level of prices. It is built up from the figures given above, the vertical line above the figure 100 at the bottom of the chart representing the national income as distributed in the above account. To the left of this vertical line can

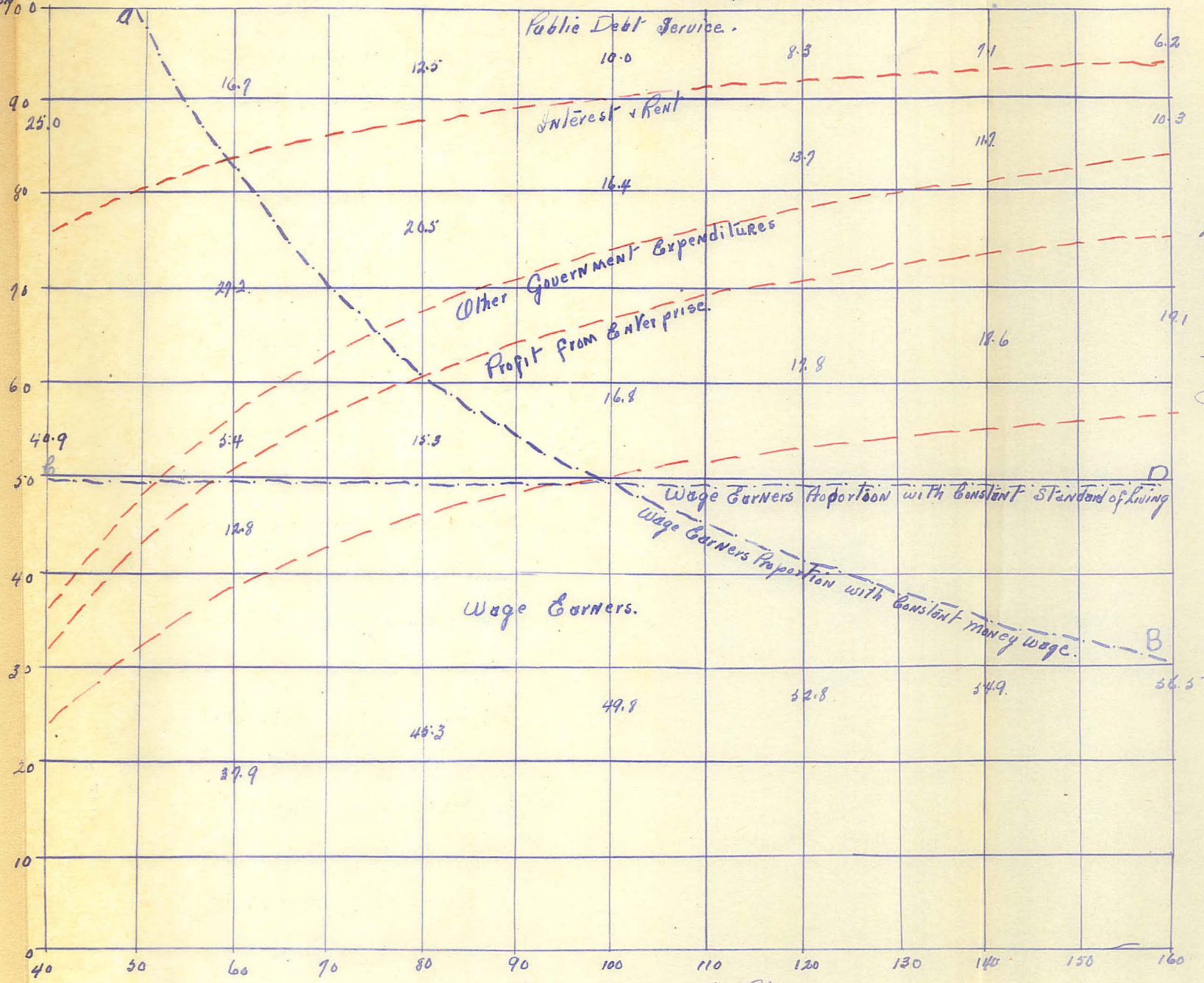
*% of Total
Production*



% of Total
Production

Changes in Distribution of National Production as a result of changes in the general
Level of Prices, The Volume of Production being constant.

Chart 19.



Source:

League of Nations Bulletin
Selected Documents.
submitted to the Gold
Delegation of the
Financial Committee
P. 34.

Index of General Prices.

be read off the effect which any given fall, and to the right any given rise, of the general level of commodity prices has on the distribution, on the supposition that the national income remains stationary, and that the "residue" is divided in the original account shown in the vertical line above the figure 100. It does not; and indeed could not take account of the innumerable subsidiary influences which are constantly at work in the direction of accelerating or retarding the redistribution of the shares in the national income as between one section of the community and another.

It, however, faithfully represents the change in the proportions of the national income that fall to those having fixed money claims on the one hand, and the "residue" on the other consequent upon changes in the general level of commodity prices, on the assumption that the national income neither increases nor decreases. But the division between the main constituents of the "residue"—viz., the wage-earning and "entrepreneur" classes shown in the diagram—is an ideal one. The line denoting that division has been drawn simply to illustrate how each of these classes would be faring if they bore rateably the burden consequent on a fall, and enjoyed rateably the benefit consequent on a rise in the level of prices. In point of fact, it is the process of dividing the "residue" (especially if the "residue" becomes smaller as a result of a falling price level) that causes the struggle and friction between the two classes which right through history, has accompanied every violent change in the level of prices.

Of far greater significance, in that connection, are the lines shown on the diagram which denote the wage-earners' share of the national income if money wages remain constant (A - B), and their share if their standard of living is to be maintained stable (C - D). The first, in particular, illustrates strikingly the friction that even a relatively small fall in the general level of commodity prices sets up between the wage-earning and "entrepreneur" classes. It shows how deeply the wage-earners' share cuts into "profit of enterprise" while money wages remain unaltered, and how urgent, therefore, a readjustment of money-wages becomes. Line C - D which presupposes a readjustment of money-wages to a point at which the real wages i.e., the standard of living--is maintained unaltered, shows that even this involves a rather substantial encroachment on "profit of enterprise." Conversely, if the latter is incapable of bearing the burden (and there is, of course, a limit beyond which "profit of enterprise" cannot be curtailed without killing enterprise), it shows that a fall of prices forces upon the wage-earning community a debasement of their standard of living.

In case of a rise in prices the diagram (Chart D) clearly shows how the share in the national income accruing to those who have fixed money claims is reduced, how the "residue" is correspondingly increased, and how the "ideal" division of the "residue" among the wage-earning and "entrepreneur" classes (i.e., its division in the same proportions as those of the original National Income and Distribution Account) raises the standard of living of the former and yet leaves the latter with a greater profit.

The need for a readjustment of money wages is again strikingly illustrated by the lines A - B, and C - D, but it will be apparent that the adjustment, though no doubt liable to cause friction, is a much less difficult matter than in the case of falling prices. To divide the benefit of a surplus is a much less unpleasant affair than to divide the burden of a deficiency.

The appended diagram (Chart G) illustrates the development of things when general prices are stable. It is built up from the figures given above, the vertical line above the figure 0 at the bottom of the chart representing the distribution in that account. It assumes that the national income increases at the rate of 3% per annum compound, that the Public Debt Service remains at a constant figure, but that "interest and rent" (Private debt) increases at the same rate as the national income--viz., 3% per annum--it being assumed that the additional capital equipment needed to produce the 3% increase of the national income will be provided by a rateable increase of private debt. The "residue" is divided in the constant proportions of the original account--viz., "other government expenditure" (9.5%), "profits of enterprise" (22.8%) and "wage-earners" (67.7%).

(Except for the increase of private debt on the assumption made) those having fixed money claims receive practically the same amount of real income right through the period and practically the whole of the increase of the national income accrues to the "residue". It would be

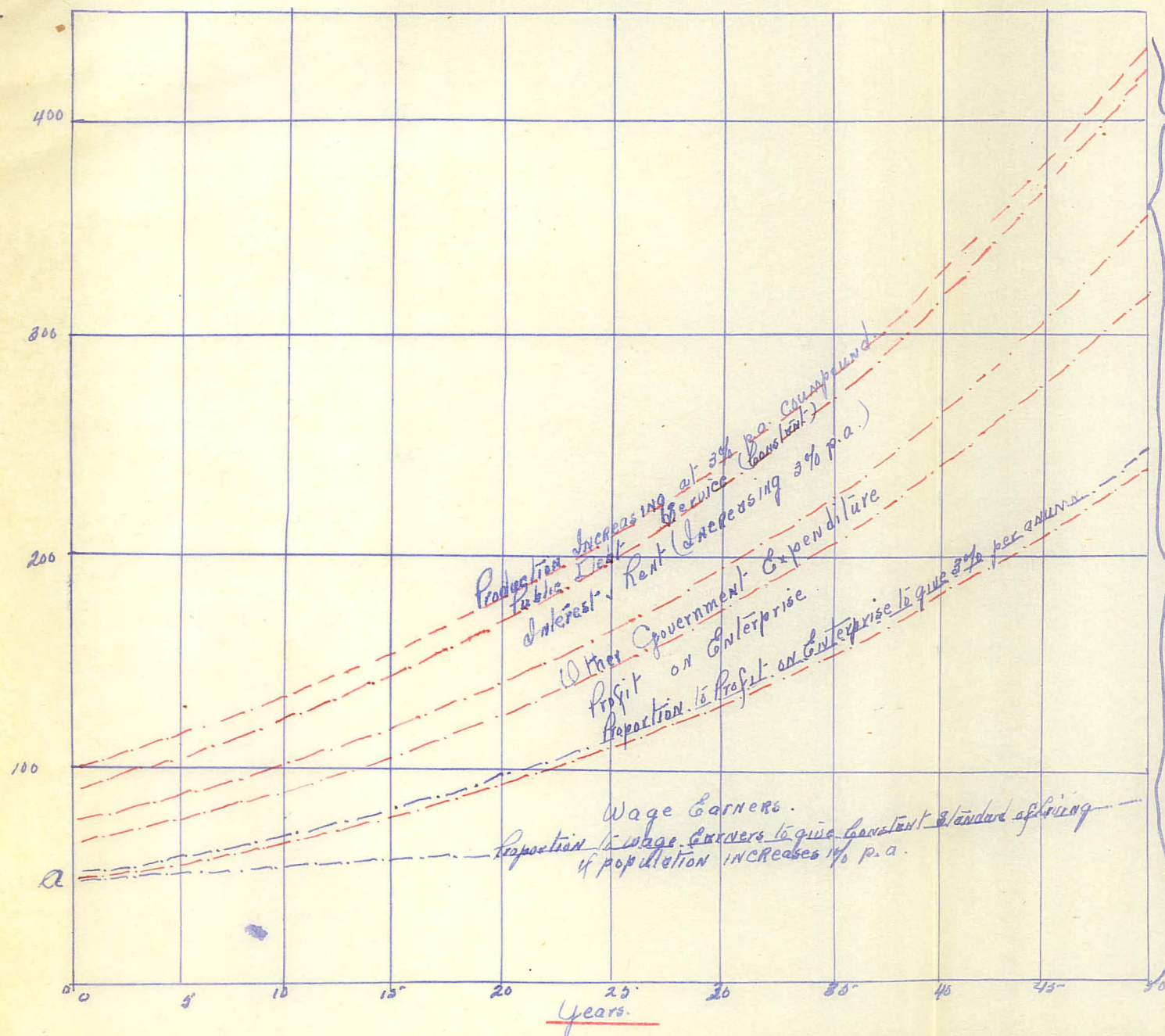
*Index of
Year 0*

Annex G.

Variation in Distribution of National Production as Production Increases the General Level of Prices Being Constant

Index of Production.
Year 0 = 100.

Chart G.



Fixed Money Obligations.

Source:

League of Nations Bulletin
Selected Documents.
Submitted to the gold
Delegation of financial
Committee P. 36.

Residue

B

difficult to show that this distribution does not do full justice to all sections of the community; those having fixed money claims receive the same amount of money of the same purchasing power they bargained to receive when the creditor and debtor position was created. The wage-earners and "entrepreneurs" share in the fruits of their creation. The division of the "residue" between wage-earners and "entrepreneurs" in the constant proportions of the original account secures to both an increase of income at a rate somewhat greater than 3% per annum. The line A - B drawn across the diagram indicates the proportion of the national income that is needed to give the wage-earners a constant standard of living, on the assumption that the population increases at the rate of 1% per annum. That line brings out in a particularly striking manner how an increase of production in conditions of monetary stability makes available for the improvement of the standard of life of the wage-earners a steadily increasing margin, and yet satisfies the just claims of the "entrepreneur" class to a rateable share in the increased production. The diagram thus indicates that in the conditions assumed, the standard of life of the wage-earners would be doubled in thirty years--indeed, that no section of the community benefits as much from an increase of production as they do. That increased production does not reach the wage-earner unless money wages are increased accordingly. Friction may, but need not, arise in the process, for, as in the case of rising prices, it is a question of dividing between wage-earners and "entrepreneurs", not the burden of a deficiency, but the benefit of such a surplus. Besides, in conditions of stability, it should not be beyond the wit of man to devise a system by which the wage-

earners due proportion of the increased production is currently--almost automatically--transferred to him. But even if friction were to arise here and there, it cannot affect but slightly the immeasurable benefits which are from the fact that, in conditions of price stability, a redistribution of wealth is avoided, and, with it, the profound disturbances that spring from it. There would be no check to the smooth flow of goods, the steadily increasing income accruing to the "residue" being exercised in the purchase of consumable as well as capital goods. There would be no undue stimulus or deterrent to enterprise, nor would the smooth flow of savings to the capital market be interfered with. In a word, there would be no check to economic progress (1).

- (1) Strakesch, Sir Henry, "The Economic Consequences of Changes in the Value of Gold," published by the League of Nations, Selected Documents submitted to the Gold Delegation of the Financial Committee, Geneva, 1930, pp. 26-30.

C. Further Observations Regarding the Effect of Falling Prices.

The policy of modern states has greatly added to the number of contractual obligations which are affected by movements up or down in the value of money. The various services, e.g., Old Age Pensions, Insurance Allowances, and other forms of assistance are all fixed by the Legislature in terms of money. The growth of Joint Stock enterprise and Government debts has increased enormously the number of fixed future money payments. It is obvious that changes in the value of money may give rise to important changes in the annual payments made.

But it is in the field of public finance that a large fall in prices produces probably the most serious problems. Governments are everywhere faced with most serious difficulties in endeavoring to balance revenue and expenditure. The revenue of the State tends to be affected unfavorably in all its branches. During a business depression, the volume of profits is reduced. Thus the yields from the income tax and the surtax; and those from Estate Duties due to a fall in valuation are materially less. At the same time the volume of transactions liable to stamp duties; the yield of Customs and Excise Duties are less. All these taxes bring in less on balance, not only because of a reduction in the volume of goods consumed, but also because of a fall in values. The State in so far as it must meet its obligations in terms of a fixed amount of money, must either increase the rate of such taxes or resort to an extension of the field of taxation. In any

event revenue falls off materially.

On the side of expenditures there is usually, if not always, an increase all along the line. The unemployment situation is usually met in either one or both of two ways. Tariffs are raised in the hope of creating employment, but this results in a general slackening of trade and usually aggravates the situation. The provision for direct relief to those out of work is increased as prices continue to fall. Moreover, a large proportion of State expenditure is contractual in the form of interest on debt. This can only be reduced by conversions either voluntary or on maturity in a favorable market. A large part of expenditure is fixed in terms of money by Acts of Parliament, e.g., pension allowances of many kinds, contributions to public health, etc., which are not readily alterable when changes take place in the value of money. During rising prices the recipients of these gratuities are hard pressed to equate their receipts and expenditures, but the government can easily manage to declare a surplus; but during falling prices those in receipt of such fixed money grants really receive a bonus while the government faces a constantly widening gulf between its credit and debit ledger.

The Macmillan Report cites some interesting evidence on the point we are considering. "Nominal Imperial Taxation" fell between 1920-1921 and 1929-1930 from £22 per head to £14.8, while the burden of local taxation remained unchanged at £3.9 per head. Thus the total taxation fell from £25.9 to £18.7 per head. But the change in

prices in that period has meant that the commodity value has risen from about \$18 to \$20 (expressed in 1924 values on the basis of the cost of living index); a reduction of nearly one-third in the nominal value of taxation imposed has yet left an increase in the real tax burden" (1).

The internal and external debts problem of a country during a depression are indeed very serious. Liquidation in a period of markedly falling prices seldom has the effect of reducing debts, unless resort is made to repudiation.

On the other hand "it increases debts in the sense that it increases the burdensome of each dollar in each unpaid item." (2).

In ordinary times every payment helps; but in a depression, when all society is liquidating under high pressure, liquidation is accomplished by the distress selling of enormous quantities of collateral and of all other forms of security.

(1) Committee on Finance Report P. 90.

(2) Fisher, Irving, "Booms and Depressions," an address given before the American Association for the Advancement of Science, reported in the press.

"Such unmitigated selling not only deflates the price of what is sold, it deflates commodity prices and wipes out currency by wiping out the bank deposits of which a very important part of our variegated currency is based. Each remaining dollar becomes more valuable and harder to get, thus increasing the difficulties of all remaining debtors, including the most discreet and conservative business men" (1).

The burden on debtor countries is insupportable. For example, Great Britain finds that after huge payments made to America that her real, although not her nominal, debt is 45% greater than it was to start with because of a 50% increase in the value of each dollar owing to the United States (2).

But in many respects it is not the directly economic consequences of falling prices which are the most serious. The social changes that are a result raise delicate questions of justice between the different classes of the community. The adjustment to the new set of values offers grave difficulties. The factors of production receive their payments; these payments ultimately constitute income. The men and women who receive this income have various standards of social equity, based for the most part upon the settled expectation of definite money incomes so that it is only with the greatest difficulty that the economic structure can be rebuilt to meet the new

(1) Ibid
(2) Ibid

situation. The rigidity of the economic structure is indeed a source of great weakness in this respect.

2. The Relation Between Money and Prices.

(1) The purpose of a Standard of Value.

It is generally recognized that the desirability of an exchange standard arose largely because of the inconvenience of securing at all times and places that double coincidence of wants and possessions which a system of barter entails. Gradually gold and silver supplanted all other standards of value and have become generally accepted standard money. The precious metals were found to give the nearest approximation to an ideal basis for improved credit facilities which the rise of the modern state necessitated. Gold finally supplanted silver in the Western World, while the Orient still clings, for the most part, to the silver base. (1)

"An ideally perfect unit of general purchasing power is not merely unattainable, it is unthinkable. For the effective value of money to each individual depends partly on the nature of his wants."

(2)

(1) Note: L. D. Edie, holds a somewhat different view, see Money Bank Credit and Prices. pp. 627

(2) Marshall, Alfred, "Money, Credit, and Commerce." p. 28

A rise in the price of, say, pastry foods accompanied by a fall in the price of a household necessity such as bread, affects the purchasing power of the classes of society differently. To the very poor the fall in the price of the necessity of life increases his purchasing power, to the rich it leaves his command over bread relatively unaffected. The former will have more to spend on other things or on bread, the latter only buys so much bread in any case, and a fall in the price of such a commodity has little effect on his relative purchasing power. A unit of purchasing power "is merely that which will give an approximately uniform means of satisfying his wants to the average consumer." (1)

There is, however, another angle from which we may view the standard of value. If the unit of account is going to give the average consumer an approximately invariable command over the good things of life, it is necessary that the quantity and therefore the value, of the currency should not be exposed to manipulation. "The only use of a standard is to regulate the quantity and by the quantity the value of the currency...and... without a standard it would be exposed to all the fluctuations to which the ignorance or the interests of the issuers might subject it." (2)

(1) See Cit.

(2) Ricardo, David, Works (McCulloch Ed.) P. 400.

The precious metals themselves cannot provide an invariable standard of value, but on the whole most people now, and all people before the War, regarded a sound currency as one based on precious metals. It was regarded as the only bulwark against inflation, that insidious financial vice, so attractive, overindulgence in which ensnares or wrecks the system. The classical theory taught us to guard against inflation (a too free creation of credit) by tying down credit rigidly to a metallic basis--in most cases, gold. So long as the quantity of purchasing power was not unduly increased or decreased, prices were not disturbed and the value of money remained stable. But owing to the natural instability of credit, this was not dependable. Therefore, the expedient had been adopted of fixing the price of one commodity. Gold was given a coinage price and every creditor was given the right, if he so desired of requiring payment from the debtor in gold. This was a device for keeping the variations in the value of the monetary unit within bounds. The test of every paper currency was parity with the precious metals.

Supporters of the classical doctrine recognized that prices were raised by the opening up of new mines of gold and silver, and depressed by a deflation of the existing sources of supply. But one of the greatest merits of the precious metals, as a standard of value, it was argued, was that owing to their indestructibility the annual supply was always small in proportion to the accumulated stock in the world.

This is true, but the variations in demand are more potent today than variations in supply. Although the supply of gold is large in proportion to the annual product of the mines, its proportion to the annual absorption into industry is larger still. This large stock and a part of the annual supply are withheld from the industrial demand only because they are needed for currency purposes. Therefore, the demand for gold and its value arises very largely from its use as currency, i.e. from its "interchange ability with credit". "Credit possesses value, and it is more correct to say that the value of gold is due to its convertibility into credit than that the value of credit is due to its convertibility into gold." (1) "The Whole lesson of the world's sad experiences of monetary mismanagement can only be drawn if we realize that the gold standard is nothing else than a paper standard the value of which is entirely dependent upon the way in which the supply of means of payment is regulated." (2)

(2) The Quantity Theory of Money

The Quantity Theory of money is an explanation of the relation between money and the general level of prices. It is based upon

(1) Hawtrey, R. G., "Currency and Credit" 2nd Ed., P. 417

(2) Cassel, Gustav, "Post-War Monetary Stabilization", P. 4.

two important assumptions:

- (1) Certain habits of business and banking.
- (2) A given level and distribution of wealth.

Upon these two foundations the amount of cash which a community requires depends upon the level of prices. Suppose consumption and production of wealth to remain unchanged, but prices and wages to be doubled, then twice as much cash is required to do the same business. In other words, the total quantity of money in circulation has a more or less fixed purchasing power, i.e., the elasticity of the demand for money is unity. In given conditions, people choose to hold in the form of ready purchasing power an aggregate real value which stands in some definite proportion to their real income, and the price level in general is the resultant of a race between the circulation of money and credit on the one hand and the volume of trade on the other, as to which will grow the faster.

The purchasing power of the dollar is simply the reciprocal of the general level of prices. To say that prices have doubled is the same thing as to say that the purchasing power of the dollar has been cut in two. Unfortunately, most people forget or do not realize the monetary side of the problem. They fix their attention on the goods side, and make the mistake of thinking that a general "rise" or "fall" of prices is explainable, on the same principles of supply and demand as apply to the "rise" or "fall" of a particular price. They imagine by explaining the "rise" or "fall" in price of a particular commodity they have explained thereby the rise or fall of all

commodities. Each individual price depends in part on the general level of prices. (1)

The price of bread is a ratio between bread and money. Any one who buys bread considers which is the more important to him, the money or the bread. The money is equivalent to the "other things" which it might buy if it were not spent on bread. If the general purchasing power of the dollar is great, money will seem precious in his mind, and he will be less anxious to part with a given amount of it for bread than if its purchasing power over "things in general" were small. That is, the greater the power of money to purchase "things in general" the less of it will be offered for any particular commodity, i.e. bread, and the lower the price of bread will therefore become. Or in other words, the lower the general level of prices, the lower will be the price of bread. The price of bread must sympathize with prices in general.

It is a question of the flow of money and its substitutes and the flow of goods in return for them. It is the number and not the weight of the coins that is essential. As long as the number of dollars remains the same, each dollar, other things being equal, will have the same purchasing power regardless of what the weight of the dollar may be.

(1) Fisher, Irving, "Why the Dollar is Shrinking". P. 24 ff.

The relation of the quantity of money in circulation to the general price level is borne out by history. Thus David Hume in his "Essay on Money", says of the effect of the 16th century silver discoveries in America--the mines of Potosi (1546): "It is certain that since the discovery of the mines in America industry has increased in all the nations of Europe, except in the possessors of those mines; and this may be justly ascribed, among other reasons, to increases in gold and silver. Accordingly we find that in every kingdom into which money begins to flow in greater abundance than formerly, everything takes on a new face; labor and industry gain life; the merchants become more enterprising, the manufacturer more diligent and skilful and even the farmer follows his plow with greater alacrity and attention."

Similarly, it is claimed that the gold discoveries in California and Australia about the middle of the 19th century helped to create the expansion of trade and industry which was a mark of the period of 1850-75. Newmarch, the great statistician and author of the standard "History of Prices" said in 1853; "We are justified in describing the effects of the new gold as almost wholly beneficial--it has already elevated the condition of the working and poorer classes; it has quickened and extended trade."

In 1863 Stanley Jevons described the effect of the fall in the value of gold: "It loosens the country as nothing else could from the old bonds of debt and habit. It throws increasing rewards before

all who are making and acquiring wealth. It excites the active and skilful classes to new exertions, and is, to some extent, like a discharge from his debts is to the bankrupt long struggling against his burdens. All this is effected without a breach of national good faith, which nothing could compensate."

(3) Inflation as a Method of Taxation.

"Few governments in time of stress can resist the temptation to meet their immediate financial needs by increased issues of paper, and in this they have invariably the support of the debtor class claiming that 'money is scarce'. Hence the tendency is always almost towards excessive issue, with consequent depreciation. From this follows the robbery of creditors to the immediate advantage of their debtors, among whom stands conspicuously the government itself. Then there is also the destruction of all certainty as to the meaning of contracts made in terms of money, and commerce becomes gambling".(1)

During the decade following 1914, the currencies of several European countries were inflated. The German mark, Austrian krone, and Russian rouble will serve as examples. Through excessive issues of notes natural debts were repudiated and wealth taken from the wealthy classes and redistributed. The Italian lire and the French franc were somewhat differently managed, but each was inflated before being stabilized at a new and lower parity. In Great Britain and Canada financial necessities were met by increased borrowing from the banks, which in turn brought inflation in its train.

A government can manage to meet its obligations for a long time by printing paper money. Let us assume that the value of gold remains, for the time being, fixed, and that there are in a country

(1) Clark, A. B., "Recent Developments in Currency and Credit", reprinted from "Cost and Management", September, 1929, p. 4 ff.

ten million notes equivalent in value to forty-five million gold dollars. Suppose the government issues five million more notes so that the total amount of currency becomes fifteen million, then, according to the quantity theory of money, the fifteen million notes are still equivalent in purchasing power to forty-five million dollars. In the first case each note equals four and one-half dollars, and in the second three dollars. Hence, the original ten million notes held by the public are now only worth thirty million dollars, while the new issue is worth fifteen million. By printing paper notes the government has transferred to itself as effectively as by taxation a sum equal to fifteen million dollars? (1) The inflation has amounted to a tax of $33 \frac{1}{3}\%$ on all note holders in proportion to their holdings. The incidence of the tax is well diffused, the tax incapable of evasion; it costs nothing to collect, and in a rough and ready way people are taxed in proportion to their ability to pay; and before people begin to realize that the notes are worth less than before, the new notes can be passed off at the same value as when there were only ten million in circulation.

Then, suppose the government repeats the process and prints a further seven and a half million notes so that there will be twenty-two and one-half million notes altogether, which by the previous reasoning are worth two dollars each instead of three dollars. The government has transferred fifteen million dollars just as before from the public to itself, or a tax of $33 \frac{1}{3}\%$ has been imposed in proportion to ability to pay.

(1) Keynes, op. cit., p.p. 42-43 ff.

When these exactions are overdone relatively to the wealth of the community, the prosperity which accompanied the note issues diminishes, and the standard of living is lowered. With the fall in the standard of living, there may be sufficient currency to conduct the business of the country despite the aggregate fall in its value, and even if the aggregate real value of the currency falls, say, 75% of what it was before the efficacy of inflationary taxation has not been impaired. All the government needs to do is to increase proportionally its quantity of notes.

The public is more or less the victim of habit. It is accustomed to regard money as the ultimate standard; so believing that the rise in prices due to the increase in note circulation is only temporary, they hoard all they can, with the result that they hold in a monetary form a larger aggregate of real value than before. Similarly foreigners think the fall in the real value of the money as evidenced by the exchanges is temporary, and so purchase the money speculating for the rise.

But after a while the public slowly realizes that it is the holder of notes, that bears the load of taxation, and consequently people economise as much as possible their holding of notes. They may do this by:

(a) spending their ultimate reserves on durable objects, jewellery, or household goods;

(b) even though it be at great personal inconvenience they may reduce their till and pocket money;

(c) they may use foreign money in lieu of the more natural and convenient use of their own.

By thus reducing the amount of notes with which to do their business, the aggregate real value of the notes becomes substantially less than before, i.e. the notes in circulation become worth thirty million instead of forty-

five million. The result of this is that the government is forced to increase the rate of inflation in order to secure a given sum as the levy falls on a smaller amount.

When the public at length is fully alive to the gravity of the situation, in their efforts to avoid loss, they reduce their note holdings to the irreducible minimum, i.e. below the working minimum. In order to do this they replenish their daily needs for cash by borrowing. By this means they are penalized for money-rates of interest at such times are exorbitant, e.g. Germany in 1923. The money-rate of interest rises until it equals or exceeds the anticipated rate of the depreciation of money. The public, in their anxiety to hold as little money as possible, fail to provide themselves with the minimum requisite to their needs. Hence there are recurrent periods of scarcity of currency when money is rapidly depreciating.

In the last stages of inflation the velocity of circulation becomes extreme, and this may cause prices to rise while depreciating the exchanges more than the increased quantity of notes put into circulation.

There are, however, purposes for which money is used in modern society that do not lend themselves to a continuance of the inflationary levy for such an extended period as outlined above. When money is held as a store of value it is discarded very quickly when a further depreciation is expected. As a unit of account for contracts and for balance sheets it soon becomes worthless. However, if the current money be legalized tender for the payment of debts there is a tendency so far to keep the current money as a standard longer than there should be.

Finally, we reach the very last stage. The legal tender money is only used for the most trifling expenditures. In this case the total value of the note issue needed by the public to meet its minimum requirements is altogether such a relatively small amount that the government is unable to reach sufficient resources by an inflationary levy to make the tax worth while. Inflationary taxation has defeated itself.

(4) Deflation.

"The policy of reducing the ratio between the volume of a country's currency and the requirements of purchasing power in the form of money so as to increase the exchange value of the currency in terms of gold or of commodities is conveniently called Deflation." (1). Deflation is the reverse process of inflation. Instead of the purchasing power of money falling as in the case of inflation, our command over the good things of life in terms of the purchasing power of the dollar is increased. It is the appreciation as opposed to the depreciation of a country's currency. By means of deflation the wealth of the community is transferred from the other classes of society to the rentier class (i.e. bond holders) and to all holders of titles to money. It involves a transfer from the active classes, e.g. traders, manufacturers, farmers (the borrowers) to the inactive class (the lenders). Deflation means the oppression of the tax payer for the enrichment of the rentier. Deflation means a reduction of profits and wages. If wages resist the process and it falls too heavily on profits the result is unemployment. When a country is on the gold standard, and the value of its currency is automatically adjusted by the exchanges, there is every motive to

(1). Keynes, J. M., op. cit., p. 142.

persuade the commercial part of society to undergo the operation and have the appendix (in this case an adverse exchange), removed by deflation. But when the gold standard has been abandoned or relinquished, the traders' desire to have sufficient credit created to finance their business at the existing level of wages and prices is difficult to resist. On the other hand, trade unions are unwilling to accept a wage reduction even when a fall in prices or a loss of profit has actually taken place.

"But if labor and capital are banded together to resist deflation, their opposition may bring it to nothing, e.g. as happened in the United States in 1865, and the consumers' income may become stereotyped at its inflated amount. But a country cannot acquire increased purchasing power in the world's markets merely by increasing the number of units in which the consumers' income is reckoned. The former condition can hardly be a permanency; the latter can, provided the monetary unit be allowed to be permanently depreciated" (1).

The period 1873-1896 was one of falling prices and Mr. W. T. Layton, editor of the London "Economist", points out that the arts of production and the means of transport probably progressed faster between 1874 and 1896 than they had ever done before; that there is no reason to desire an advance in prices on the ground that it stimulates production, that on the whole the social well-being is best advanced when prices are stationary or slightly declining. At the same time, while falling prices continue there is an increase in the demand for safe interest-bearing securities which rise in price. A government, by taking advantage of this situation may convert its debt to a lower rate of interest,

(1) Hawtrey, R. G., *Currency and Credit*, 2nd ed., p. 369.

e.g. Canada, 1931.

On the other hand falling prices redistribute wealth unfairly, increase the weight of all debt charges, and are provocative of much labor dispute and industrial stagnation. There is a steady drag, unconscious for the most part, upon the margin of profit and if the other items have no elasticity and do not change correspondingly, the margin may disappear altogether. Deflation provides good times for people who have work because the value of their money wages is increased, but the number having work is gradually reduced, for falling prices continually restrict the area of profitable business. If prices remain stable at a lower level these effects are overcome. One price level is as good as another provided it is a stable level and all prices have been fairly adjusted to that level. It is the transition from one to the other without an even or proportionate change in all the prices that upsets the delicately balanced equilibrium of the interests of the social classes. In the second place, wage adjustments are made on the assumption that they are real and fair ones, and that they will mean the same this year, next year, or any time. But any considerable variation in the price level either way--high or low--precludes any permanent adjustment. The divergence in the price level must be great before any attempt at readjustment can be made. Labor is suspicious and fears that a fall in the wage schedule will not ensure a corresponding rise when prices move upward.

In the third place, when prices fall the purchasing power of incomes is correspondingly increased. All receivers of fixed payments, e.g. receivers of interest on War Loans, or Repaid War Loans or Debentures, take

a larger toll of the national production. With every fall in the index number their claims become more burdensome and less of the output of industry is left for others. The worst type of redistribution of income is effected between the reward for current production and that due for past savings; between capital invested for safety (debentures) and that for risk (1).

(5) Conclusion.

The Quantity Theory of money is an explanation of the relation between money and prices. Other things being equal, the more money coin or paper which is put into circulation, the higher is the price level. In other words, there is a close relation between the volume of money in circulation and the general level of prices. Over a considerable period of time we find a continual increase in the total supply of the means of payment accompanied by a proportional rise of the general level of prices. "We cannot say that either one or the other of these two movements is cause or effect. Both are the result of the continual creation of nominal purchasing power. But a necessary consequence of the process is a general proportionality between prices and the supply of the means of payment" (1). The only thing we can know with certainty is that when the community is supplied with an additional purchasing power not justified by an increase in the volume of trade to be transacted, the result will be a rise in prices (2).

(1) "Committee on Finance and Industry Report," p. 26.

(1) (a) Cassel, Gustav, "Post-War Monetary Stabilization," p. 7.

(2) Ibid., p. 6.

Inflation or currency depreciation is popular as a method of taxation. It falls in a rough and ready way upon people's several abilities to pay. Owing to the inertia of the public it takes considerable time to defeat its own ends.

Deflation or currency appreciation is very unpopular among the active productive agents of society, but is clearly in the interests of the rentier class. When a country is on the gold standard, a return to the former gold parity by deflation normally insures the automatic regulation of its money supply by means of the foreign exchanges. With its return, the period of uncertainty has ended and business normally increases. But if the gold standard has been relinquished or abandoned, a combination of capital and labor may successfully resist deflation.

There is some disagreement amongst bankers, business men, and economists as to the relative merits of currency appreciation. The beneficial effect of falling prices is supported by such an eminent authority as the late Dr. Alfred Marshall of Cambridge. "It wants," he says, "very much stronger evidence--statistical evidence--than one yet has, to prove that a fall of prices diminishes the productiveness of industry, except during a relatively short transitional period." Mr. W. T. Layton supports the same view. On the other hand Professor Gustav Cassel, Mr. R. S. Hawtrey, Sir Josiah Stamp, Mr. J. M. Keynes, all regard deflation and depression as co-workers in their disastrous effects upon society in general. They argue that wealth is unfairly distributed, the weight of all debt charges is increased, industry is deadened, and labor disputes complete a vicious circle from which escape does not lie in currency appreciation.

PART II THE PROPOSALS OF REFORM

The foregoing has been an attempt to analyze the monetary situation, and to show the evils of the instability of the monetary standard. The following will deal with the various proposals to reform the monetary standard.

(1) The Labor Theory of Value.

As a result of the statements of Ricardo, many attempts have been made to find a standard in the day's work of an average unskilled workman which would have the stability of the sacrifice of human effort and supposedly invariable from time to time for goods in general. Labor, however, is but one of the elements entering into the value of an article. But if the labor theory of value were valid, it would be an impracticable standard. A workman does not expend the same effort and sacrifice from day to day nor even during each hour of the day. The efficiency of the different men varies; and the same men, or different men, do not have the same efficiency at all times. Improvements in machinery change the kind of labor, and no article is to-day made wholly by unskilled labor. Since skilled labor is often undergone with less effort than unskilled, wages are not a true measure of the relative efforts put forth by different kinds of labor. In a word, different kinds of labor are not comparable, and one kind could not be used as a measure of another, for as subjective effort is impossible of measurement, so quantitative wages cannot be used as a true basis for comparison.

(2) Bimetallism.

When silver began to fall in value relatively to gold about 1873, and was demonetized by several states thereafter, various writers suggested that the fall in prices from 1869 to 1896 was due to a lack of metallic money. But by the end of the 19th century the Bimetallio Standard had been generally abandoned; but even yet there are some who maintain that a reversion to that standard would be beneficial. There are those who would agree with W. J. Bryan that we must not "crucify mankind upon a cross of gold." The great weight of banking and economic opinion throughout the world is against the suggested change as a retrogressive and ineffective step. Quite recently the special committee of experts appointed by the International Chamber of Commerce to study this question brought in a finding which rejected a return to Bimetallism.

The present day arguments in favor of the use of silver are chiefly: The present world trouble is the result, not of over-production, but of maldistribution of goods, and this because there is not a sufficient metallic basis for international currency, or its equivalent. There are potential markets for the surplus manufactured goods of the western world in the vast populations of the Orient which have immemorially used silver as a currency. Gold being inadequate in itself, and a "managed currency" created by the co-operation of the great central banks of the world based upon gold, not being practicable, there must be a metallic currency based upon the re-marriage of gold and silver.

The main support for a Bimetallic Standard, however, has rested upon its supposed greater stability, because the total supply of the two metals would be subject to less violent fluctuations than the supply of either one. It was argued that if both metals were full legal tender at a fixed ratio in a number of the leading commercial states that had agreed to accept both metals at their mints without restriction as to coinage at a uniform fixed ratio, when one metal fell in value, it would, according to the principle known as Gresham's Law, drive out the under-valued metal and become the sole standard. But as a consequence of such an action a new demand would arise for it at the same time that the demand for the dearer metal fell off, and the two would be again brought back to the fixed ratio.

When the Latin Union maintained the Bimetallic Standard, a compensatory action tended to keep both gold and silver more steady in value than they would otherwise be. Suppose the two metals be legally adopted at the ratio of $15\frac{1}{2}$ of silver to 1 of gold. "If silver becomes more valuable than in the ratio of 1 to $15\frac{1}{2}$ compared with gold, there arises at once a tendency to import gold into any country possessing the double standard, so that it may be coined there, and exchanged for a legally equivalent weight of silver coin to be exported again" (1). French currency which was mainly composed of silver in 1849, became by 1860 almost wholly gold. France absorbed the cheapened metal in vast quantities and omitted the dearer metal, which no doubt had the effect of preventing gold from falling and silver from rising so much in value as they would other-

(1) Jevons, W. Stanley, "Money and the Mechanism of Exchange", p. 137 f.f. (Authorized Edition).

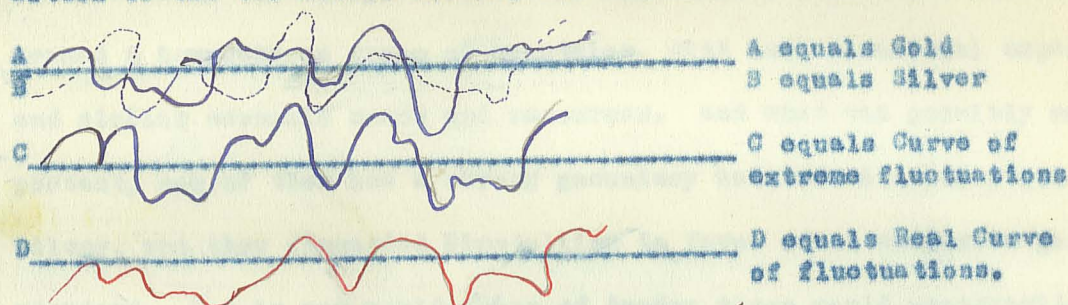
wise have done. On the other hand, if gold rose in value compared with silver, the action would be reversed; gold would be absorbed and silver liberated. The double standard cannot prevent either metal from falling or rising in value compared with commodities in general, but it tends to throw variations of supply and demand over a larger area, instead of leaving each metal to be affected merely by the accidents of its production.

"Imagine two reservoirs of water, each subject to independent variations of supply and demand. In the absence of any connecting pipe the level of the water in each reservoir will be subject to its own fluctuations only. But, if we open a connection, the water in both will assume a certain mean level, and the effects of any excessive supply or demand will be distributed over the whole area of both reservoirs. The mass of the metals, gold and silver, circulating in western Europe in late years (about 1975), is exactly represented by the water in these reservoirs, and the connecting pipe is the law of the seventh germinal an. XI (1803), which enables one metal to take the place of the other as an unlimited legal tender." (1)

In reality there would be alternating standards as the "bimetallic union" would be really under alternating metallic influences, or, in other words, if prices were expressed in the lowest standard, prices would follow alternately that of the two standards which were the lowest in value. The demand, as a consequence would be put on the one which had fallen, and taken away from the one which had risen in value.

(1) Ibid., p. 138.

The following chart illustrates the probable compensatory action of the two metals forming the Bimetallic Standard:



"On the supposition that prices would follow the cheaper of the two metals, it was said that the level of prices would not show the extreme fluctuations, as in line C, but in fact follow line D, made up of the low value of which ever metal was cheaper at the time. Hence, while the actual level of prices would show more frequent changes, these changes would not fluctuate to so great an extent" (1).

But there are objections to Bimetallism which make it impracticable as a standard. There are great differences in the sources, time, and yield of supply. Gold has been produced mainly in Russia, California, Australia, South Africa, Alaska, and Canada; while silver producing countries include chiefly Mexico, South America (Peru and Chile), the United States (Idaho, Montana, Nevada, Utah), Canada, British India, and Japan. Besides, silver differs from gold in being produced as a by-product of other metals, chiefly copper. The production of each metal is very liable to extreme variations. The regions and mines from which gold and silver come are widely different. Thus, as regards supply, there would be great difficulty in controlling the metals; and from the stand-point of demand, it is very doubtful indeed if the inherent customs of the people could be overcome; for, as soon as the long-established gold standard was seen to be in danger of being undermined by a cheaper and less desired one, public

(1) Laughlin, J. Lawrence, "Money, Credit, and Prices", Vol. 1, p. 458, f.f.

opinion would demand governmental intervention. Historically, Bimetallism, as a national standard, has not been successful. The Latin Union embraced a homogeneous group of countries, with long commercial experience and similar economic needs and resources. And what was possibly more important, none of them had a strong pecuniary interest in either gold or silver, yet they discarded Bimetallism in favor of an exclusive gold standard. But in any world-union of to-day there would necessarily be some nations without settled economic traditions, some with strong special interests in either silver or gold; while there is always the danger of international friction, even war. If the supply from the mines threatened to disturb the fixed rating, powerful interests would have a pecuniary motive in changing the rating. Credit would be disturbed. Indeed, the general disturbance to credit might result in greater fluctuations in prices with longer duration than any the world has yet seen.

(3) Symmetallism.

The late Professor Alfred Marshall of Cambridge suggested a substitute for Bimetallism, known as Symmetallism. Under this scheme two or more metals would be joined together physically in the same coin or in "linked bars." Any ratio could be used but neither metal could drive the other out of circulation. "The value of the composite coin would be the sum of the values of its two constituents, and the fluctuations in its value would be the mean of the fluctuations of its constituents" (1).

(1) Fisher, Irving, "Purchasing Power of Money", p. 323, a Reference to Edgeworth, F. Y., "Thoughts on Monetary Reform", Sept. 1895, p. 443.

The proposal is subject to the danger of unwise or dishonest political manipulation.

(4) The Tabular Standard.

As the value of gold has undergone extensive changes in the question has arisen whether the progress of economical and statistical science might not enable us to devise some better standard of value. Joseph Lowe, in his book, "The Present State of England in Regard to Agriculture, Trade, and Finance", published in 1822, treats in Chapter IX in a very enlightened manner of the fluctuations in the value of money, and proceeds to propound a scheme, probably invented by him, for giving a steady value to money contracts. He proposes that persons should be appointed to collect authentic information concerning the prices at which the staple articles of household were sold. Having regard to the comparative quantities of commodities consumed in a household he would then frame a table of reference, showing in what degree a money contract must be varied so as to make the purchasing power uniform. Lowe did not attempt to work out the practical details and his plan involves needless difficulties (1).

About eleven years later a similar scheme was proposed independently by Mr. G. Poulett Scrope, "to correct the legal standard of value (or at least to afford to individuals the means of ascertaining its errors), by the periodical publication of an authentic price current,

(1) Jevons, W. Stanley, "Money and the Mechanism of Exchange", pp. 321-322.

containing a list of a large number of articles in general use, arranged in quantities corresponding to their relative consumption, so as to give the rise or fall from time to time, of the mean of prices; which will indicate, with all the exactness desirable for commercial purposes, the variations in the value of money, and enable individuals, if they shall think fit, to regulate their pecuniary engagements by reference to this tabular standard" (2). "This proposal", says Jevons, "though scarcely practicable is interesting, and perhaps sound in a theoretical point of view" (1). In 1838 Mr. G. R. Porter in his first edition of his "Progress of the Nation" (sections III and IV) p. 235., proposed the formation of extensive tables of prices, but added: "It is not meant by this to recommend a mere record of the prices of goods, such as would be afforded by a collection of prices current, but a calculation conducted upon the plan already described, or some other that should be equivalent to it, and which would afford, on inspection, a correct comparative view of the average fluctuations that should occur" (2). To carry the above schemes into effect, "a permanent government commission would have to be created and endowed with a kind of judicial power. The officers of the department would collect the current prices of commodities

(2) Scrope, G. Poulett, "Principles of Political Economy", p. 406., as quoted by Jevons op. cit., p.p. 322-323.

(1) Jevons, W. Stanley, "Investigations in Currency and Finance", p. 122.

(2) Jevons, W. Stanley, "Investigations in Currency and Finance", p. 123.

in all the principal markets of the Kingdom, and, by a well-defined system of calculations, would compute from these data the average variations in the purchasing power of gold" (3). Jevons, in his pamphlet on the "Serious FALL in the Value of Gold, etc.", and in his paper on the "Variations of Prices since 1732", advocated that one hundred commodities more or less should be chosen with special regard to the independence of their fluctuations one from another, and then that the geometrical average of the ratios in which their gold prices had changed should be calculated logarithmically. Irving Fisher points out in his, "The Purchasing Power of Money", that such a double standard would lead to confusion nationally and internationally. Nationally, business men would require two different systems of account. "If receipts and expenses could both be reckoned in the tabular standard, his profits (the business man's) would be more stable than if both were reckoned in money. But if he should pay some of his expenses, such as interest and wages, on a tabular basis, while his receipts remained on the gold basis, his profits would fluctuate far more than if both sides, or all items of accounts, were in gold" (1). A slight deviation between the two standards might turn expected profits into losses. The business man would prefer the use of the same standard for both sides of the ledger, rather than have two standards only one of which fluctuated, for his profits depend more on the parallelism between the two sides of his account than on the stability of either. Internationally, it would have the disadvantage of isolating that country com-

(3) Jevons, Op. Cit., p. 323.

(1) Fisher, Irving, "The Purchasing Power of Money", p. 336.

mercially, and thus reintroducing the inconveniences of an uncertain rate of international exchange (2).

(5) The Compensated Dollar.

This plan is associated with the name of Irving Fisher of Yale University. The crux of Professor Fisher's plan lies in a method whereby the index regulates the dollar's weight. To keep the gold dollar from depreciating it is to be increased in weight in recognition of the fact that a depreciated dollar is a short-weight dollar; and conversely to keep it from appreciating, it is to be made to shrink in weight in recognition of the fact that an appreciated dollar is an over-weight dollar.

"If a man borrows a thousand dollars when the index number is one hundred, he might agree to pay back with interest not the same number of dollars, but the same general purchasing power. If at the time of repayment the index number had gone to one hundred and fifty, the principal of the debt would be understood to be fifteen hundred dollars, since this represents the same purchasing power that was borrowed. If, on the other hand, the level of prices had fallen to eighty, the principal would automatically become eight hundred dollars. Thus both parties would be protected against fluctuations in the value of money. The same correction would apply to interest payments, each of which would be adjusted according to the index number relating to the time of payment" (1). In short, during falling prices, the burden of debts grows greater and during rising prices, less, and it is to make possible a more equitable settlement of debts that Professor Fisher has advocated the above monetary scheme.

(2) Ibid. p.p. 396-397.

(1) Fisher, Irving, "Purchasing Power of Money", p. 211.

But there are difficulties in the way of the adoption of this plan which so far are insurmountable. One great problem is to compile indexes that are equitable and satisfactory to creditor and debtor. The best index number for the purpose of a standard of deferred payments in business should be the same index number which it was found best to indicate the change in prices of all business done. "The index number ought to be based on all commodities weighted in proportion to their consumption and it ought even to embrace services, but only consumable commodities or services, for otherwise raw materials and intermediate services would be counted twice over. All prices so measured will tend to rise or fall with consumers' outlay. But not in exact proportion, for, when credit is expanding, and the consumers' outlay swollen, consumption is partly fed from stocks. What allowance is to be made for general scarcity or general abundance of commodities? If the consumers' outlay be constant, the index number will be raised by scarcity and depressed by abundance. The better alternative seems to be to aim at making the consumers' outlay constant. But it must not be absolutely constant. It must vary with the population, and must also vary in some way with the quality of the work they do. If that ideal could be attained, the value of the monetary unit in terms of human effort would be kept" (1).

But index numbers compiled from commodity prices are not a very reliable guide at all times. In a paper entitled "An Analysis of Prices and Price Indexes in Canada 1913-1925", appearing in Canadian Historical Review (September, 1927, p.p. 243-246) V. W. Bladden and A. F. W. Plumptre

(1) Hawtrey, R. G., "Currency and Credit", p. 420.

have attempted to show to what extent the use of an average is justified. Use was made of the index number of prices of the individual commodities (Table VI in the report on Prices and Price Indexes, 1913-1925, Dominion Bureau of Statistics). This gives the ratio of the price of each commodity in each year to the prices of that commodity in 1913. For example:

<u>Commodity.</u>	<u>Index number of prices. Base 1913.</u>		
	1913	1914	1915
Apples	100	112.5	113.8
Bananas	100	100.0	120.0
Lemons	100	95.0	80.8
Raisins	100	76.0	122.6
Carrots	100	197.3	111.0

"These price ratios range in 1914 from sixty-nine to one hundred and ninety-seven, but half of them fall between ninety-four and one hundred and nine. A glance at the last year of the series, 1925, shows a wider scatter, the range is from seventy-four to three hundred and thirty-two and one hundred and eighty-eight." (1)

(1) Applies to total data.

The result of this analysis may be seen in the following table and in the accompanying Figure (5).

Table 2.

TABLE OF DECILES IN AN ANNUAL ARRAY OF THE INDEX NUMBER OF 232 COMMODITIES
BASE 1913.

	1st. decile	2nd. decile	3rd. decile	4th. decile	5th. decile	6th. decile	7th. decile	8th. decile	9th. decile	High	Low
1914	85	92	95	98	100	101	105	112	117	197	69
1915	84	91	98	100	104	108	114	121	137	371	46
1916	95	105	111	118	123	131	143	158	182	401	62
1917	107	126	144	154	169	185	202	221	250	427	82
1918	130	152	164	176	195	211	231	246	264	590	85
1919	134	164	183	193	207	215	235	264	295	650	63
1920	154	183	200	213	232	254	274	304	362	758	40
1921	166	132	141	153	168	180	194	215	256	479	22
1922	103	122	132	140	151	164	175	193	231	424	23
1923	103	119	131	140	152	171	182	203	234	374	32
1924	105	124	132	142	153	169	184	202	225	330	29
1925	110	126	137	146	160	173	182	195	223	340	74

To sum up this analysis a measurement of the significance of the average change in price may be suggested. In any year half the commodities fall within a certain range around the median--on the chart this is the distance between one point roughly half way between the second and third deciles, and another point roughly half way between the seventh and eighth deciles (1). There is an even chance that any commodity will fall within this range in any year. (This is known as the inter-quartile range). Where the median is changing violently it is desirable to have this expressed as a percentage of the median. Such a comparison of the inter-quartile range with the ratios expressed by the median is seen in the following table:

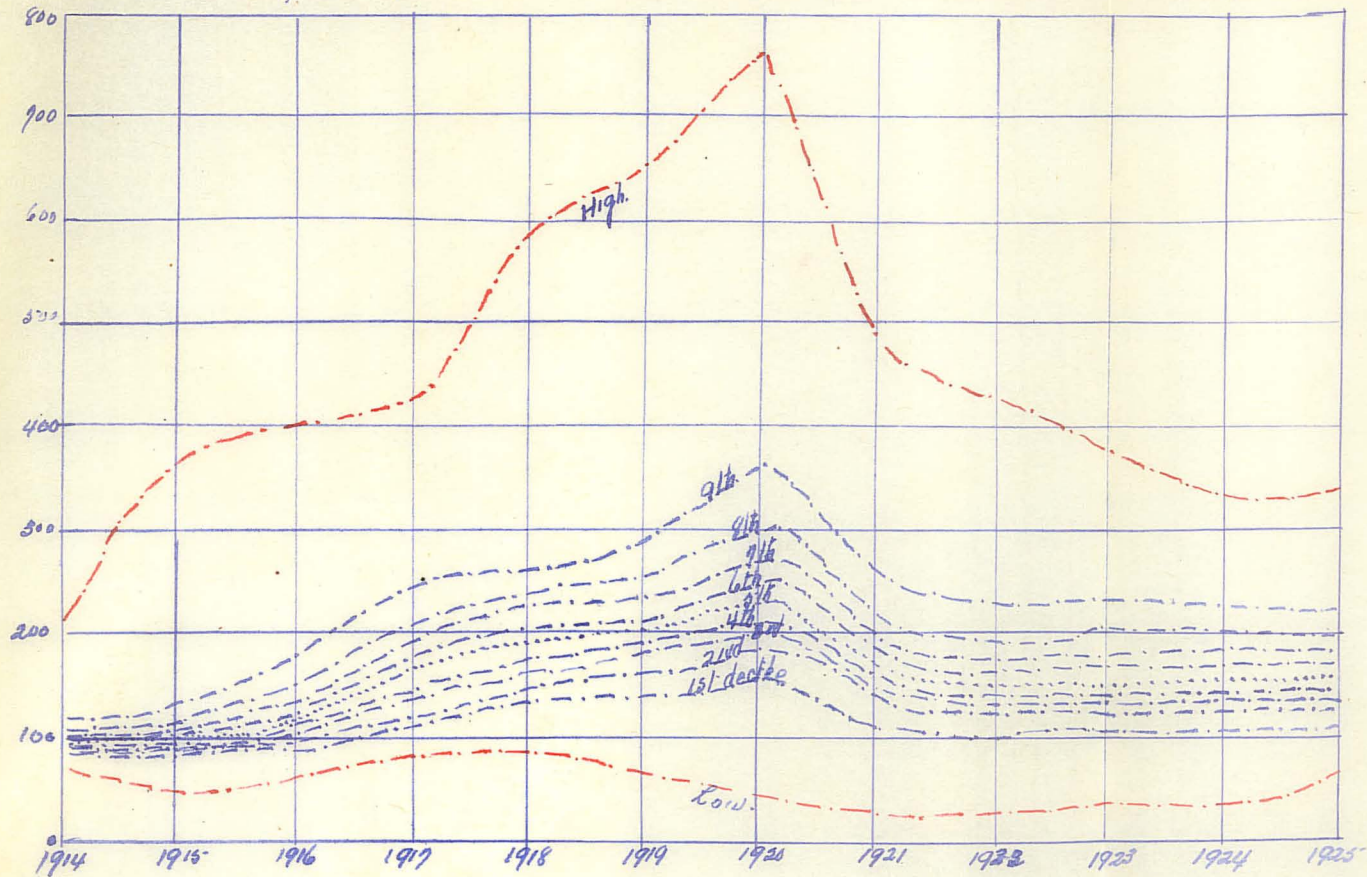
(1). Note, "deciles", the ratios on the list of 232 commodities used, which divide the group into ten sub-groups each containing one-tenth of the total number of commodities, are called the deciles. The fifth decile, or median, is the price ratio of that commodity in each year which was in the middle of the array or list, half of the commodities had price ratio less than this, the other half had price ratios greater than this. The median is one form of average.

Index number of the Dominion Bureau of Statistics.	Year	Median	Inter- quartile range	Percentage which inter- quartile range is of median
102	1914	100	15	15
110	1915	104	22	21
132	1916	123	42	34
179	1917	169	75	44
199	1918	195	80	41
209	1919	207	70	34
244	1920	232	77	33
172	1921	168	56	33
152	1922	151	48	32
153	1923	152	56	37
155	1924	153	56	37
160	1925	160	56	35

This shows that the central tendency is distinctly broad. Prices are shown to be on the average 60% higher in 1925 than in 1913, but it would be more accurate to say that there is an even chance that the price of any particular commodity will be $(60 \pm 23\%)$ higher in 1925 than in 1913. The index number of the Bureau of Statistics is weighted, thus making allowance for the relative importance of various commodities. This weighting is the main cause of the divergence of this index number from the median of the above series; the differences are not very great but the weighted index number is more accurate. The accuracy of this weighted number is, however, subject to the same general condition as is the median, it depends on the degree of concentration in the data. The foregoing measure of the dispersion of prices of the individual commodities used in making this index number is therefore a valid test of its accuracy. The dispersion is least for the years nearest the base years, is greatest in the years of great disturbance and general rise in prices, 1917-1921, and that since the war (to 1925), the inter-quartile range has

Fig. 5.

Course of Prices of 232 Commodities as shown by the deciles in an annual array 1914-1925.



Source:

Canadian Historical Review Sept. 1927. (p. 243).

See Data of Table (1)

been, on the average, about 35% of the median." (1) The evidence submitted in the above paper shows the extreme difficulty involved in working out a satisfactory commodity base, for the proposed Compensated Dollar plan.

In the second place the Compensated Dollar plan means the use of two gold standards at the same time; one for settling debts; the other, the existing gold standard, in which price-making will go on as formerly. This serves to complicate business; and on the other hand, in the actual business life of the community, most of the many engagements between creditor and debtor are for short maturities so that the amount gained or lost by changes in the standard would not warrant a change to a two-edged standard. Besides, different classes of society would require different commodity standards. Foreign exchange between different countries is worked out on the basis of the pur content in gold of the respective monetary units. Any scheme that would disrupt the working of the foreign exchanges, and impede exports and imports, would be fatal to a country's trade. In short, the leading commercial nations have been, and to a large extent are, inclined (whether through custom or otherwise) to place their confidence in a gold standard. Again, in the period of United States history from the Civil War to 1896, there was a prolonged fall in prices. Fifty-one commodities rose while forty-nine fell in price (ascribed to the new Industrial Revolution). Some influences at work were more powerful than others, and no one remedy would be likely to have changed the outcome (1).

(1) From an article in the Canadian Historical Review for Sept., 1927, by V. W. Bladen and A. F. W. Plumptre, an article entitled, "An Analysis of Prices and Price Indexes 1917-1925."

(1)(a) See Laughlin, op. cit., p. 498

(61)

The Compensated Dollar plan of price stabilization is very attractive, and has attracted world wide attention. Its inherent limitations, as well as its practical defects, are many. It depends upon a satisfactory base of the index number of prices. There is none. The adjustment between debtor and creditor would have to be made on the basis of either what has been or what is as regards the general price level, but the practical consideration is how accurately will the contract correspond to future prices. Hence for this reason the adjustment of contracts would be always out of alignment with present prices. It means the use of two standards. From the domestic standpoint, standard contracts are on the whole predominantly for short terms; and from the standpoint of external relations the confidence of foreign nations in another country's standard of value has a favorable trade reaction which it is doubtful that a commodity standard would possess. There are more deeply rooted causes for price fluctuations than the variations in the monetary standard alone constitutes, e.g., the United States period 1862-1896. The plan does not call for the requisite definiteness of contract between debtor and creditor. It is difficult to convince the average person that the difference between the purchasing power of the dollar in 1933 and 1928 is approximately 40%. The ordinary individual regards a three hundred dollar investment for ten years at, say, 5% interest as the right to receive the principal (three hundred dollars) plus the interest at 5% for ten years.

It would seem best on the whole that justice between debtor and creditor be worked out individually. For example in the old tithe system in England and certain rural payments in Scotland, settlement was made in produce. It is the variation in the purchasing power of the dollar that the western farmer is unconsciously striving to overcome when he contracts to purchase his land on the bushel per acre plan.

(6) The Proposal of Mr. J. M. Keynes.

In order that Mr. Keynes' position may be fairly placed before the reader, I have made a summary of Chapter V p.p. 177 to 205, of his "Monetary Reform."

There is proposed:

(1) A method for regulating the supply of currency and credit with a view to maintaining, so far as possible, the stability of the internal price level, and

(2) A method for regulating the supply of foreign exchange so as to avoid purely temporary fluctuations, caused by seasonal and other influences and not due to a lasting disturbance in the relation between the internal and the external price level.

Keynes believes the ideal system in Great Britain can be most nearly and most easily reached by an adaptation of the actual system which has grown up haphazard since the war.

The system actually in operation in Great Britain in 1923 was broadly:

(1) The internal price level is mainly determined by the amount of credit created by the banks, chiefly the "Big Five"; (1) though in a depression, when the public is increasing its real balances, a greater amount of credit has to be created to support a given price level (in accordance with the quantity theory as outlined in Part I Section 2) than is required in a boom, when real balances are being diminished.

(2) The amount of credit, so created, is in its turn roughly measured by the volume of the banks' deposits--since variations in this total must correspond to variations in the total of their investments, bill-holdings, and advances.

I. (3) The Volume of "Cash" of the "Big Five" in the shape of Bank and Currency notes and Deposits at the Bank of England closely determines the volume of credit which they create.

The amount of their "cash" can only be altered in one or other of three ways:

(a) by the public requiring more or fewer notes in circulation.

(b) by the Treasury borrowing more or less from the Currency note Reserve.

(c) by the Bank of England increasing or diminishing its assets (for the aggregate of its liabilities in the shape of deposits and notes in circulation automatically depends on the volume of its assets),

(d) an additional factor has to be introduced; the proportion of the banks' second line reserve in the shape of their holdings of Treasury Bills, which can be regarded as cash at one remove.

(1) Note: The Present Tense is used in this summary.

But (c) and (d) are the main determining factors of the price level.

(c) The assets of the Bank of England consist of:

- (1) Ways and Means advances to the Treasury,
- (2) Gilt-edged and other investments,
- (3) Advances to customers and Bills of exchange,
- (4) Gold.

An increase in any of these items tends to increase the other banks' "cash," thereby to stimulate the creation of credit, and hence to raise the price level; and contrariwise.

(d) The banks' holdings of Treasury Bills depend on the excess of the expenditure of the Treasury over and above what it secures:

- (1) from the public by taxation and loans,
- (2) from the Bank of England in Ways and means advances,
- (3) by borrowing from the Currency Note Reserve.

Thus it is seen that the capacity of the "Big Five" to create credit is mainly governed by the policies and actions of the Bank of England and of the Treasury. When these are settled, (a), (b), (c), and (d) are settled. Therefore it is broadly true that the level of prices and hence the level of the exchanges depends in the last resort on the policy of the Bank of England and the Treasury. The other Banks the "Big Five", could thwart or delay it to a certain extent—provided (only) that they were prepared to depart from their usual proportions in the distribution of assets.

II. When cash, in the form of Bank or Currency Notes is supplied ad libitum i.e., in such quantities as are called for by the amount of credit created and the internal price level established under (I)(above). That is to say, in practice, in theory, a limit to the issue of Currency Notes has been laid down, namely the maximum fiduciary issue actually attained in the preceding calendar year. This theoretical maximum has never been operative since it was prescribed, (and in a matter where the recommendations of the Cunliffe Committee call for urgent change, unless we desire deliberately to pursue still further a process of deflation).

The tendency today--(rightly, Keynes thinks) is to watch and to control the creation of credit and to let the creation of currency follow suit.

III. The gold of the Bank of England is immobilized. It can be used neither to buy nor to sell. The gold plays no part in our system. Occasional shipments are made to the United States by the Bank of England to help the Treasury in meeting its dollar liabilities. South African gold etc., comes purely as a commodity to a convenient entrepôt centre, and is mostly re-exported.

IV. The foreign exchanges are unregulated and left to look after themselves. From day to day they fluctuate in accordance with the seasons and other irregular influences. Over longer periods they depend on the relative price levels established here and abroad by the respective credit policies adopted here and abroad.

To sum up:

In practice we have already gone a long way towards the ideal of directing bank rate and credit policy by reference to the internal price level and other symptoms of under or over-expansion of internal credit, rather than by reference to the pre-war criteria of the amount of cash in circulation, (or of gold reserves in the banks), or the level of the dollar exchange.

Proposal.

(1) That the stability of sterling prices be the primary objective--though this would not prevent the authorities aiming at exchange stability as a secondary objective by co-operation with the Federal Reserve Board in a common policy.

(2) To what criteria should the Bank of England, the Treasury, and the "Big Five" look respectively in regulating the bank rate, Government borrowing, and trade advances? Should the criterion be (a) a precise arithmetical formula or should it be (b) sought in a general judgment of the situation based on all the available data?

Professor Irving Fisher advocated the former in the shape of his "compensated dollar" which was to be automatically adjusted by reference to an index number of prices without any play of judgment or discretion. This policy assumed a pre-war system of gold reserves and gold ratios; and if we wait until a price movement is actually afoot before applying remedial measures we may be too late. "It is not the past rise in prices but the future rise that has to be counteracted" (1). It is characteristic of the impetuosity of the credit cycle that price move-

(1) Hawtrey, R. G., "Monetary Reconstruction," p. 103.

ments tend to be cumulative, each movement promoting, up to a certain point, a further movement in the same direction. Professor Fisher's method may be adopted to deal with long period trends in the value of gold, but not with the often more injurious short period of oscillations of the credit cycle. It would promote confidence and furnish an objective standard of value if, an official index number having been compiled of such a character as to register the price of a standard composite commodity, the authorities were to adopt this composite commodity as their standard of value in the sense that they would employ all their resources to prevent a movement of its price by more than a certain percentage in either direction away from the normal, just as before the war they employed all their resources to prevent a movement in the price of gold by more than a certain percentage. The precise composition of the standard commodity could be modified from time to time in accordance with changes in the relative economic importance of its various components.

Actual price-movements must provide the most important datum, but the state of employment, the volume of production, the effective demand for credit as felt by the banks, the rate of interest on investments of various types, the volume of new issues, the flow of cash into circulation, the statistics of foreign trade and the level of exchanges must all be taken into account. The main point is that the objective of the authorities, pursued with such means as are at their command, should be the stability of prices.

Thus we could avoid deflating the supply of "cash" when real balances are being inflated--action which materially aggravates the

severity of a depression. The time to deflate the supply of cash is when real balances are falling, i.e., when prices are rising out of proportion to the increase, if any, in the volume of cash, while the time to inflate the supply of cash is when real balances are rising, and not, as seems to be our present practice, the other way around.

Is it possible to obtain stability of prices over long periods and stability of exchanges over short periods? Now, the gold standard overcomes the excessive sensitiveness of the exchanges to temporary influences. The object would be to secure this advantage without committing ourselves to follow big movements in the value of gold itself.

Much could be done in this direction if the Bank of England would regulate the price of gold, just as it already regulates the rate of discount—"regulate" but not "peg." A willingness on the part of the Bank both to buy and to sell gold at rates fixed for the time being would keep the dollar-sterling exchange steady within corresponding limits, so that the exchange rate would not move with every breath of wind, but only when the Bank had come to a considered judgment that a change is required for the sake of the stability of sterling prices.

If the bank rate and the gold rate in conjunction were leading to an excessive influx or an excessive efflux of gold, the Bank of England would have to decide whether the flow was due to an internal or an external movement away from stability. Suppose gold is flowing outwards. If this seemed to be due to a tendency of sterling to depreciate

in terms of commodities, the correct remedy would be to raise the bank-rate. If, on the other hand, it was due to a tendency of gold to appreciate in terms of commodities, the correct remedy would be to raise the gold rate (i.e., the buying price for gold). If, however, the flow could be explained by seasonal or other passing influences, rather than by permanent or depreciated causes, then it should be allowed to continue (assuming, of course, that the Bank's gold reserves were equal to any probable calls on them) unchecked, to be redressed later on by the corresponding reaction.

Regulation of Note Issue.

The object of fixing the amount of gold to be held against a note issue is to set up a danger signal which cannot be easily disregarded, when a curtailment of credit and purchasing power is urgently required at its lawful parity. This has two great disadvantages:

- (1) The minimum gold reserve held against note issue is immobile, and reduces the amount available for use as a store of value to meet temporary or sudden deficits in the country's international balance of payments.
- (2) As a barometer to curtail or to encourage credit, it does not give the necessary warning soon enough. If gold movements are actually taking place, this means that the disequilibrium has proceeded a very long way; and whilst this criterion may pull us up in time to preserve convertibility on the one hand, or to prevent an excessive flood of gold on the other, it will not do so in time to avoid an injurious oscillation of prices.

Proposal.

Separate entirely the gold reserve from the note issue. The gold reserves of the country should be concentrated in the hands of the Bank of England, to be used for the purpose of avoiding short-period fluctuations in the exchange. The Currency Notes to be issued by the Treasury without being subject to any formal regulations (which are likely to be either inoperative or injurious) as to their volume. Except in form, this regime would not differ materially from the existing state of affairs.

To sum up

Gold is to be held as an ultimate safeguard and as a reserve for sudden requirements. These objects are to be obtained without irreversibly binding our legal-tender money to follow blindly all the vagaries of gold and future unforeseeable fluctuations in its real purchasing power.

United States.

In practice the Federal Reserve Board often ignores the proportion of its gold reserve to its liabilities and is influenced, in determining its discount policy, by the object of maintaining stability in prices, trade, and employment. The United States has pretended to maintain a gold standard. In fact it has established a dollar standard; and, instead of ensuring that the value of the dollar shall conform to that of gold, it makes provision, at great expense, that the value of gold shall conform to that of the dollar.

Keynes agrees with Mr. R. G. Hawtrey that the ideal state of affairs is an intimate co-operation between the Federal Reserve Board and the Bank of England, as a result of which stability of prices and of exchanges would be achieved at the same time. But he suggests that it is wiser and more practical that this should develop out of experience and material advantage without either side binding itself to the other. We have reached a stage in the evolution of money when a "managed currency" is inevitable, but we have not reached the point when the management can be entrusted to a single authority. The best we can do is to have two managed currencies, sterling and dollar, with as close a collaboration as possible between the aims and the methods of the managements.

Other Countries.

Their wisest course would be to base their currencies either on sterling or on the dollar by means of an exchange standard, fixing their exchanges in terms of one or other (though preserving, perhaps, a discretion to vary in the event of a serious divergence between sterling and the dollar), and maintaining stability by holding reserves of gold at home, and balances in London and New York to meet short-period fluctuations, and by using the bank-rate and other methods to regulate the volume of purchasing power, and thus to maintain stability of relative price levels over longer periods.

The proposals of Mr. J. M. Keynes for monetary reform are based on what is already existing practice. (1) Credit policy in Great Britain is practically controlled by the Bank of England and

(1) I. e., in 1923.

"Big Five" and the primary aim should be to secure internal stability of prices, and secondarily exchange stability. The criteria of this price level should be based on

(a) Irving Fisher's compensated dollar for long term contracts;

(b) but while actual price movements must provide the most important data, there are other factors to be considered e.g., state of employment, volume of production, etc. The benefits of a stable price level over long periods and a stable exchange over short periods might be secured, in part at least, if the Bank of England regulated but did "peg" the price of gold. A minimum gold reserve held against note issues is objectionable for two reasons:

(1) it is immobile, and

(2) it is an untrustworthy barometer; and to overcome this the gold reserve should be separated from the note issue, and used by the Bank of England to prevent short-period fluctuations in the exchanges. The notes are to be issued subject to no formal regulations. This would merely give sanction to what is already existing practice. The excess gold reserves of the United States are sterile. Co-operation between the United States and Great Britain would be the ideal state of affairs in which stability of internal prices and exchange could be achieved. But this is out of the question, as mutual suspicions would preclude effective control. Other countries should adopt either the pound or the dollar standard as a base for their currencies, maintaining stability by reserves of gold at home, and balances in London and New York to meet short-period fluctuations. And by using the bank-rate and other methods to regulate the volume of purchasing power, and thus to maintain relative stability of the price-level over a longer period. In a word the stability

of internal price-level is the paramount consideration, stability of exchange a secondary objective. This objective is to be reached by a paper currency based upon a commodity standard for the first; and gold as a basis for the second.

It is only too true that the sense in which the gold standard can be said to be automatic is very limited. It is automatic only as an indicator of the need for action and of the end to be achieved. "If gold were not used as currency, nor even as the means of settling international balances, any expansion of credit would quickly raise its market price, and if the regulation of credit were always so directed as to keep the price of gold as nearly as possible constant, action would be taken at an early stage." (1). But, the danger is that the unit may wander far beyond the prescribed limits, whatever they may be. And whether the standard of value be based on paper, commodities, or gold, the tendency of credit is towards inflation, and is liable to fall away in value from the standard. The unit may follow in the well-trodden path of the assignats, and the continental experiments, etc. "A return to a standard once lost is a painful and laborious journey" (2).

In the second place the historical references which Keynes has used are no doubt illuminating and convincing, but at the same time there are other historical facts of significance. Sweden was the first country in Europe to restore its currency to its old gold parity. No attempt was made to mitigate the process, but by means of the contraction of the currency the general price-level was brought down in a very

(1) Hawtrey, E. G., "Currency and Credit," p. 419 f.f.

(2) Ibid, p. 421.

short time to less than one-half of what it had been. It is true that the crisis that followed swept away the fortunes of many, endangered the position of the banks, and for a time the industry of the country stagnated. But it is equally true that Sweden reaped the reward of its perseverance in an effort to improve its exchange parity. During the next few years the industrial life of Sweden witnessed a period of comparatively great prosperity (1). The fact that Sweden followed Great Britain off the gold standard in 1931 is a proof of abnormal world conditions.

Does adherence to an international standard involve the payment of too heavy a price in the shape of domestic instability? If a debtor country--yes, if its trade is concentrated on a narrow range of primary products whose prices are subject to violent disturbance. But aside from the abnormal conditions of today, experience is not proof that a creditor country, whose trade is diversified, is liable to suffer undue domestic strain merely because of adherence to an international standard. Great Britain has as one of her most valuable sources of income, the practice of international banking and associated services. This may be looked upon as an export, and along with the shipping and staple export industries has provided the principal part of her wealth. "It is by no means clear that the possible advantages to our export activities from the fact that a fluctuating exchange would automatically offset the rigidity of money-incomes, would balance the unquestionable loss of international banking and associated services; and we might be a poorer country on balance . . . It would not be possible for a country so intricately concerned with the

(1) Cassel, Gustav, "Post-War Monetary Stabilization," pp. 17-18.

outside world as Great Britain, is, to escape so simply from repercussions of instability elsewhere. . . There can be little or no hope of progress at any early date for the monetary system of the world as a whole, except as a result of a process of evolution starting from the historic gold standard. If Great Britain were to cut adrift from the international system with the object of setting up a local standard with a sole regard to her domestic solution, she would be abandoning the larger problem, the solution of the purely domestic problem" (1). We conclude, then, that the proposal of Mr. Keynes' is objectionable in many ways. Notably Great Britain would stand to lose commercially, while world monetary stability would tend to be delayed. On the other hand, the suggestion that the Bank of England be the sole depository of gold and the sole controller of credit seems admirable. It would enable positive and effective use of the discount rate and much could be done to control the price-level through its judicious use. Again, owing to the significance of the political factor in upsetting any international convention that might be agreed upon, it seems beset, as Mr. Keynes proposes, to let each country work out its own monetary salvation.

(1) "Committee of Finance and Industry Report," p. 108-9.

(7) Alternate Proposals for Countries that are off the Gold Standard.

When a country is off the gold standard there are two recognized procedures, either of which may be employed by that country to secure a stable gold exchange parity with other nations. During the period 1919-1923 alternate proposals, notably in Great Britain, were made for stabilizing the currency. As Great Britain was forced off the gold standard on September 21, 1931, the question of whether she should attempt to regain her former gold standard or stabilize her currency at a new and lower gold exchange parity has come to the fore once more.

"The policy of reducing the ratio between the volume of a country's currency and its requirements of purchasing power in the form of money, so as to increase the exchange value of the currency in terms of gold or of commodities is conveniently called Deflation".

(1). The alternative policy of stabilizing the value of the currency somewhere near its present value without regard to its former value is called Devaluation. (2)

The post-war period has been a period of disequilibrium as regards internal and external exchange relations. Due to the abnormal situation, created chiefly by the folly of the Versailles settlement of German reparations, the return to the former gold standard was found almost impossible for most nations. Germany was to make, besides other reparations, an annual payment of about four hundred and eighty million dollars. This was a tribute against which there was no offsetting item

(1) Keynes, J. M., "Monetary Reform", p. 142.
 (2) Ibid. p. 142.

and payment had to be made by selling goods or services, borrowing the money, or shipping gold. Her creditors prevented payment in goods by raising protective tariff barriers and loaned Germany the money. Another result has been the sterilizing of gold in the vaults of two nations, United States and France. The Federal Reserve System of the former nation held on December 2, 1931, \$2,478,000,000 as a reserve, against a note circulation of \$1,817,000,000; the latter held on December 24, 1931, 68,481,174,225 francs, against a note circulation of 83,546,961,975 francs, while Great Britain has had to conduct a much greater business than France on coin and bullion of \$121,348,721 held against a note circulation of 2364,151,000 (1) and it is not only the gold situation that is bad, but the whole superstructure of credit built upon it.

Recognizing the abnormality of the financial situation Mr. J. M. Keynes proposed in 1923 some very cogent and worthwhile monetary reforms.

(a) Deflation Versus Devaluation. There are some objections to deflation as a monetary policy and recent history has supported the contention that a return to the gold standard once relinquished, is fraught with financial danger. In the first place, as previously noted, deflation effects a change in the existing standard of value in such a way as to redistribute wealth unfairly, and a drag is put on the wheels of industry. Simultaneous action on the part of the powers so that deflation might be accomplished at the same time is unlikely. Each

(1) "Commercial and Financial Chronicle", January 1931, p.p. 4-10

wishes the other to try the water first. Secondly, in many countries, deflation of the currency to its former pre-war parity is not possible, because it would throw upon an already overburdened taxpayer an unsupportable load. Czechoslovakia tried deflation in 1922, Great Britain in 1925. The former country's financial credit was good, her foreign resources adequate. But by deflating her currency, her industries were stagnated, and her standard remained unstable. The latter country fell off the gold standard on September 21, 1931 after deflating her currency sufficiently in 1925 to resume the gold standard.

There are three main arguments that have been put forward for a return of pre-war gold parity. In the first place, it is argued that inflation which has depreciated the currency is an injustice to all those whose money incomes are fixed, e.g. rentiers, etc., and that not to restore the currency to its former level is a breach of contract. In answer to this Keynes points out that the vast issues of War Loans have swamped the pre-war holdings of fixed interest bearing stocks and society has largely adjusted itself to the new situation. "Much the greater proportion of the money contracts still outstanding were entered into when money was worth more nearly what it is worth now than what it was worth in 1913. Thus, in order to do justice to a minority of creditors a great injustice would be done to a great majority of debtors" (1). This argument is supported by Professor Irving Fisher who says in an article entitled "Devaluation versus Deflation" published in the eleventh Manchester Guardian Reconstruction Supplement (December 7, 1922)

(1) Keynes, J. M., "Monetary Reform", p. 148.

and quoted by Mr. Keynes, "We forget that not all contracts require the same adjustment in order to secure justice, and that while we are debating whether we ought to deflate to secure ideal justice for those who made contracts on old price levels, new contracts are constantly being made at the new price levels. An estimate of the volume of the contracts now outstanding, classified according to their age, would show that some contracts are a day old, some are a month old, some are a year old, and some are a century old, the great mass, however, being of very recent origin. Consequently, the average or centre of gravity of the total existing indebtedness is probably always somewhat near the present" (2).

Secondly, it is argued that to restore a country's currency to its pre-war gold value, future confidence in its monetary stability and financial prestige abroad would be the reward. This argument is reasonable enough provided a country's currency is within say 5 or 10% of its former value, and that the said country can hope to restore its pre-war parity at an early date. Otherwise, it is not sound policy, and is better to devalue and fix the value of the currency at a point near its depreciated value that is "in the neighborhood of the existing value to which commerce and wages are regulated" (1).

In the third place, advocates of restoration to the former gold parity maintain that appreciation of the currency will be beneficial to labor, as living will be cheaper, foreign goods will be less expensive and foreign debts fixed in terms of gold (e.g. to the United States in the

(2) Ibid., p.p. 143-9.

(1) Ibid., p. 150.

case of Great Britain) will be paid with less effort. If the pound is worth more, wages which are paid in S.s.d. will be so much cheaper. "pas du tout," says Keynes, If S.s.d. are worth more they will buy more labor as well as more goods--e.g., wages will fall and British exports which pay for the imports, will, measured in S.s.d., fall in value just as much as the imports. On the other hand, even if the pound falls as low as four dollars in foreign rating, the number of dollars England will have to transfer to America to pay her debts will be unaltered (2). The foreign debt depends "on the value of gold, in terms of which it is fixed, not on the value of sterling" (3).

(b) Stability of Prices versus Stability of Exchange. The Quantity Theory, which was discussed previously in this paper, has to do with the purchasing power of commodity-value of a given national currency. But when we approach the study of the relative value of two distinct national currencies or in other words the theory of the Foreign Exchanges an explanation of their working is found in the Theory of Purchasing Power Parity. When the currencies of the world were nearly all on a gold basis, the rates at which units of different currencies exchanged for one another fluctuated within limits that were determined by the actual amount of gold metal in a unit of each, and the cost (including freight insurance etc.) of transferring the metal from one monetary centre to the other. But during and after the great war this system broke down, and the majority of the chief commercial nations adopted independent systems of inconvertible paper. The manner

(2) Ibid., p.p. 151-2

(3) Ibid., p. 152

in which the units of different currencies exchange for one another in the long run then, was found in an explanation by Professor Gustav Cassel, and made familiar to the public under the name "purchasing power parity". (1) Briefly, this doctrine is as follows:

"(1) The purchasing power of an inconvertible currency within its own country, i.e. the currency's internal purchasing power, depends on the currency policy of the Government and the currency habits of the people, in accordance with the Quantity Theory of Money.

(2) The purchasing power of an inconvertible currency in a foreign country, i.e., the currency's external purchasing power, must be the rate of exchange between the home-currency and the foreign-currency, multiplied by the foreign-currency's purchasing power in its own country.

(3) In conditions of equilibrium the internal and external purchasing powers of a currency must be the same, allowance being made for transport charges and import and export taxes; for otherwise a movement of trade would occur in order to take advantage of the inequality.

(4) It follows, therefore, from (1), (2) and (3) that the rate of exchange between the home-currency and the foreign-currency must tend in equilibrium to be the ratio between the purchasing powers of the home-currency at home and of the foreign-currency in the foreign country. This ratio between the respective home purchasing powers of the two currencies is designated their 'purchasing power parity' (1).

(1) For an excellent criticism of the Purchasing Power Parity doctrine see Taussig, "International Trade" p. 340 and Ch. 26. Passim.

(1)(a) Keynes, J. M., "Monetary Reform," p. 98.

From this explanation it is evident that the exchange cannot be stable unless both internal and external price levels remain stable. "If the external price level is unstable we cannot keep both our own price level and our exchanges stable, we are compelled to choose" (2). Normally, stability of exchange is an easier aim to attain since it only requires that the same standard of value should be adopted at home and abroad, whereas internal stability based on an index number of prices is a very unsatisfactory project, as seen from the previous discussion. If it could be achieved business expectations and activity would increase, resulting in an increase of prosperity. There are many considerations entering into the pros and cons of internal versus external exchange stability. A country's choice must depend to a large extent on the relative importance of foreign trade to its economic prosperity.

A comparison of England and India regarding exchange fluctuations from 1919 to 1923, as given by Mr. J. M. Keynes, points to the value of concentrating the country's efforts on stable internal price level. India secured during that period a relatively stable price level. During the boom of 1919-1920, when world prices were inflated, the exchange value of the rupee was allowed to rise by successive stages, with the result that the high level of the Indian index number in 1920 was only 12% greater than the average figure for 1919. In England, on the other hand, a fluctuation of 29% was recorded. When the reverse process set in, world prices collapsed, and the rupee was allowed to fall with them, and the low of the Indian index number in 1921 was only 16% under the high of 1920, whereas in England the figure was 50%. The following table summarizes these movements:

(2) Ibid, p. 89.

(Keynes Monetary Reform, p. 157)

	Indian Prices	English Prices	Value of Rupee in Sterling	
			P. P. Parity	Actual Exchange
Average 1919	100	100	100	100
Highest 1920	112	129	115	152
Lowest 1921	95	69	69	72
Average 1922	90	64	71	74

During the pre-war period relative internal prices and foreign exchanges were comparatively stable. But the exchange mechanism of pre-war days was too slow and insensitive in its mode of operation to be effective in dealing with such large or sudden divergences between the price levels of the various countries as experienced from 1919-1925. On the other hand, in the post-war period the internal price level depends mainly on internal influences (i.e., currency and credit policy) while the foreign exchange rates have to be adjusted thereto. The fault of this mechanism is that it is too rapid in its effect and over-sensitive; it may act violently for merely transitory causes (1).

In the mechanism of the pre-war process for restoring equilibrium between internal and external prices the discount rate played a vital role. The equilibrium was achieved very slowly. The rise or fall in the rate of interest sometimes gave more encouragement to the inflow or export of capital for investment than it had effect on home prices. Seasonal dis-equilibrium was met by the "ebb and flow" of foreign funds between slack and busy seasons. This made for stability of internal price levels. But when this disequilibrium was caused by more permanent in-

(1) Keynes, J. M., "Monetary Reform", p. 159 ff.

fluences pre-war adjustment was sometimes imperfect; "for the stimulus to foreign loans, whilst restoring the balance for the time being might obscure the real seriousness of the situation and enable a country to live beyond its resources for a considerable time at the risk of ultimate default" (2).

But the post-war period reveals a much more serious foreign exchange debility. "If at the existing rate of exchange the amount of sterling offered in the exchange market during the course of the morning exceeds the amount of dollars offered, there is no gold available for export at a fixed price to bridge the gap. Consequently the dollar rate of exchange must move until at the new rate the offerings of each of the two currencies in exchange for one another exactly balance in amount. Unless the American prices move to meet them half-way, the English prices immediately rise correspondant to the movement of the exchange (1). Without a discount policy the fluctuation of the exchange can bring about equilibrium in the post-war period. "Thus when there are violent shocks to the pre-existing equilibrium between the internal and external price levels, the pre-war method is likely to breakdown in practice simply because it cannot bring about the readjustment of internal prices quick enough" (2a).

To sum up: Deflation as a means of returning to the pre-war gold standard is objectionable on two grounds. It decimates industry at the expense of the active forces of production, i.e., production capital and labor, to the profit of the rentier class. Secondly it would place

(2) Ibid, p. 160.

(1) Ibid, p. 160-1.

(2a) Ibid, p. 161.

an overwhelming burden on the taxpayer. The experience of England and Czecho-Slovakia has been in this respect particularly unfortunate. There are three main arguments in favor of deflation:

(1) That not to deflate is a breach of contract in respect of the rentier class who have pledged their savings in good faith prior to inflation;

(2) that by deflating its currency a country would secure financial prestige and inspire confidence abroad;

(3) that it would be an all around benefit to industry once the process had been completed. Keynes argues that to deflate would be harmful. As regards (1) the majority of contracts are of comparatively recent date. To deflate would be to benefit a small minority of creditors at the expense of a large majority of debtors. As regards (2) the argument is only applicable provided the return to the gold standard can be effected in a short time. In any case the country's currency should be within 5 or 10% of its former parity. As regards (3) deflation would deaden industry and increase the difficulty of meeting foreign competition. It would, on the other hand, make no difference to foreign creditors if the internal price level is measured in a depreciated currency for the payments made to them are, with a few exceptions, paid in terms of gold.

The Quantity Theory of Money is an explanation of the relation of the quantity of money in circulation and the general level of prices; while the Theory of Purchasing Power Parity explains the working of the exchanges of an inconvertible paper standard and a gold standard, or other inconvertible paper standard country. The essential fact to recognize is, that the foreign exchanges cannot be stable unless the internal and external price levels remain stable. Keynes believes that the stability

of the internal price level is of most importance. Use is made of the Indian exchange to support his contention. The mechanism of the pre-war exchange depended to a considerable extent on discount policy for its smooth working. But during the post-war period it proved to be inadequate, being too slow to influence an adverse exchange. On the other hand the post-war exchange mechanism does not depend upon discount policy but is a reflex of the internal compared with the external price level. It is over-sensitive and is likely to break-down because it acts violently for merely transitory causes.

International trade, commerce and finance are based on confidence. Should Great Britain, as one of the greatest creditor nations of the world, deliberately choose to stabilize her currency at a new and lower gold exchange parity the shock to the international financial world would undoubtedly be very great. On the other hand, in view of the present world depression and disorganization in the foreign exchanges, the relief to be obtained from say a 10% devaluation might prove to be disappointing. (1) The Macmillan Report saw fit to remark with reference to the period prior to September, 1931 that "it is not certain that with the world demand at its present low ebb such a measure would serve by itself to restore our export trade to its former position, or to effect a radical cure of unemployment. On the contrary, in the atmosphere of crisis and distress which would inevitably surround such an extreme and sensational measure as the devaluation of sterling, we might well find that the state of affairs immediately ensuing on such an event would be worse than that which had preceded it" (1a).

(1) Committee on Finance and Industry Report, p. 110.

(1a) Ibid., p. 111.

In the second place although international co-operation is undoubtedly a fragile plant, it is not only essential, it is imperative that the leading creditor countries iron out their differences and cut the Gordian knot that today stagnates trade and industry. Britain's authority would be weakened in such discussions if her financial strength were open to criticism.

(c) Proposal of Mr. R. G. Hawtrey. The ideal monetary standard should in some sense give the user an invariable command over wealth. But unfortunately this seems impossible of attainment; the relative values of different kinds of wealth vary from time to time, and if the monetary unit represents the same command over one kind of wealth, it varies in relation to another. Averages and index numbers can give an approximate test of general purchasing power. That is all. At best they will contain an arbitrary element. The gold standard by fixing the price of one commodity offers a rough and ready solution of the problem.

"Whether we like it or not there seems to be no means of avoiding a 'managed currency' or a managed gold standard. The scientific economist is tempted to look for a solution in the regulation of currencies by index numbers of prices" (1). But there are many practical difficulties to be solved as has been observed previously. "The function of the index number will be rather to give guidance along with other data, in the administrative control of currency, than to play a part in the mechanical rigidity of a statutory system" (2).

(1) Hawtrey, R. G., "Monetary Reconstruction", p. 69.

(2) Ibid., p. 69.

Mr. R. G. Hawtrey, in his scheme for monetary reconstruction, proposes that the uncovered paper money (not the total note issue) be limited while an index number of prices be used in the administrative control of currency. Depreciation, or a rise in the general level of prices, is most directly measured by indexes. "And what is more important still, the rise of prices precedes the drain of legal tender money into circulation. It will be the function of the principal banks of issue of the Associated States to watch the index of world prices, and to put the brake on by raising the rate of interest as soon as a material rise is recorded. But this must not be done without discrimination. On the other hand, a rise of prices may be due, not to credit expansion, but to a scarcity of one or two important commodities. On the other hand an incipient expansion of credit may take effect, not in a rise of prices, but in an increased volume of purchases. The banking authorities must take into account not only the statistical data, but also all that they can learn of the state of business from their relations with traders" (1). Mr. Hawtrey urges that co-operation between England and America would give a fairly satisfactory practical solution of the currency problem. "In reality, therefore, we can arrive at a fairly satisfactory practical solution of our currency problems as soon as we can reach an agreement between England and America with their combined resources of gold, with a view to maintaining their aggregate uncovered issues as nearly as possible at a fixed amount, to providing for remittances between them on a gold exchange basis, and to controlling credit with a view to keeping the gold value of commodities as measured by an index number approximately constant" (1). Ultimate control of credit would be vested in the co-operation of

(1) Hawtrey, R. G., "Monetary Reconstruction," p. 63.
 (1a) Ibid., p. 64.

Great Britain and the United States. But he is not in favor of resuming the gold standard irrespective of whether the difficulties in regard to the future purchasing power of gold have been provided against or not. "It is not easy", he says, "to promote international action and should it fail, the wisest course for the time being might be to concentrate on the stabilization of sterling in terms of commodities, rather than to tie the pound to a metal, the vagaries of which cannot be foreseen" (2). Mr. Hawtrey is clearly putting forward a middle course policy. Two of his reasons indeed support this premise,

(1) gold is required as a liquid reserve for the settlement of the international balance of indebtedness;

(2) that it enables an experiment to be made without cutting adrift from the old system.

It is evident that an international convention between Great Britain and the United States would give the latter an undue preponderance, and for that reason and others the plan is of little practical value. The Federal Reserve Board would be in a position to disregard the Bank of England. But should the latter disregard the Federal Reserve Board it would leave itself liable to be flooded with, or depleted of gold. Further, if the Bank of England should be disposed to dictate policy to the Federal Reserve Board, or to influence American discount rates "incalculable", (1) the United States would be suspicious. Again, the development of the credit cycle and the state of business may sometimes

(2) Keynes op. cit. p. 174

(1) Note: "incalculable", the plans of the executive of the Government of the United States are often upset by political pressure. Politics are regional.

be as it has been in the past widely different on the two sides of the Atlantic.

(8) The Gold Standard.

(a) The Foreign Exchanges. "The foreign exchanges are a mechanism by which international indebtedness is settled between one country and another, and the rates of exchange are the prices at which the currencies of the various countries are expressed relatively to one another. When the balance of claims between two places does not roughly agree, gold has to be shipped to settle the difference, unless it can be met by what is called arbitrage, which consists of dealings in bills on other centres. For instance, London may not have enough claims on Paris to set off the claims of Paris on it, but may be able to fill the gap with bills on Berlin, or some other centre which Paris may happen to want" (2). Such in theory is the explanation of foreign exchange mechanism. In practice there are difficulties in the way of its smooth and almost automatic working. Restrictions on the withdrawal of gold by the chief monetary centres will often prevent, or at least postpone, the working of the exchange machinery. "The question of how many marks the pound sterling is worth in Berlin depends on the balancing of supply and demand. Supply and demand arises from unsettled business obligations and speculation. The inter-valuation (1) exchange is determined by business settlements, which give rise to payments on one side or the other, and also forecasts of future business conditions. "The exchange is, therefore, a psychological phenomenon; it depends on acts of will in the past which have given rise to these unsettled transactions, and also on opinions as to future business

(2) Withers, Hartley, "The meaning of MONEY", p. 184. 3rd. Ed.

(1) Note: Inter-valuation relation is roughly speaking, the "course of exchange". Knapp, "The State Theory of Money".

relations" (2). "The exchange has, as a rule a certain inertia, which is only shaken by great events. Its psychological origin allows great fluctuations without necessarily entailing them" (3).

The automatic operation of the gold standard even in the pre-war days was more or less limited to the sphere of the Bank of England. The success of banking policy, indeed, depended upon the fact that London was the great financial centre of the world. "The draft on London is the real cash of international commerce and finance because money in the real sense of the word, gold or its equivalent, is only to be had always, and without question, and to any amount, in London" (1). The Bank of England had "sight" claims on the rest of the world much greater than those of the world on her. By the operation of the bank rate she could almost immediately adjust her reserve position. "Other countries had in the main to adjust their conditions to hers" (2).

Before the war, when the exchanges were favorable, gold flowed freely into Great Britain, and an increase of legal tender money accompanied the development of trade. When the balance of trade was unfavorable and the exchanges were adverse, it became profitable to export gold. The would-be exporter bought his gold from the Bank of England and paid for it by a cheque on his account. The Bank obtained the gold from the Issue Department in exchange for notes taken out of its banking reserve, with the result that its liabilities to depositors and its banking reserve were reduced by an equal amount, and the ratio of reserve to liabilities consequently fell. If the

(2) Knapp, George Friedrich, "The State Theory of Money", translated by H. M. Lucas and J. Bonar, based on the 4th edition, 1923, p. 221.

(3) *Ibid.*, p. 222.

(1) Withers, Hartley, "The Meaning of Money," p. 91. wrd. Ed.

(2a) "Committee of Finance and Industry Report," p. 125.

(92)

process was repeated sufficiently often to reduce the ratio in a degree considered dangerous, the Bank raised its rate of

discount. The raising of the discount rate had the immediate effect of retaining money in Great Britain, which would otherwise have been remitted abroad and of attracting remittances from abroad to take advantage of the higher rate, thus checking the outflow of gold and even reversing the stream.

"If the adverse condition of the exchanges was due not merely to seasonal fluctuations, but to circumstances tending to create a permanently adverse trade balance, it is obvious that the procedure above described would not have been sufficient. It would have resulted in the creation of a volume of short-dated indebtedness to foreign countries which would have been in the end disastrous to our credit and the position of London as the financial centre of the world" (1). In this case use was made of the Bank rate. Again, under the old system the internal volume of purchasing power was more or less automatically adjusted to the general level of world prices. "The essence of such a standard is that notes must always stand at absolute parity with gold coins of equivalent face value, and that both notes and gold coins stand at absolute parity with gold bullion" (2).

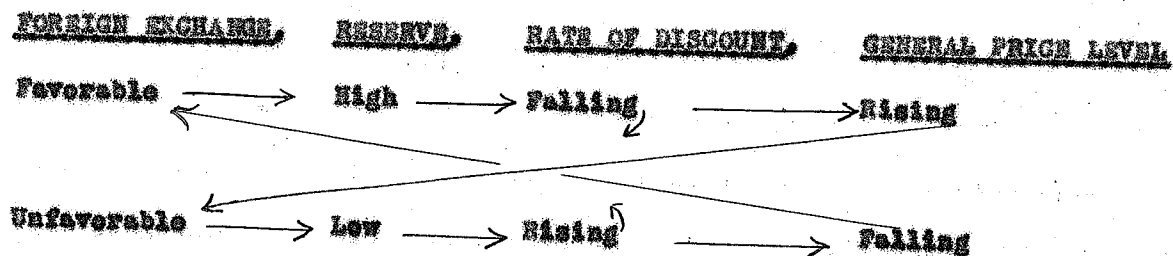
The use of the Bank rate to correct an adverse exchange had its limitations but on the whole its tendency was to short circuit the usual roundabout train of events that brought the exchange back to equilibrium. However, "an elevation of the Bank rate will correct only temporarily unfavorable balances of payment. If the factors causing an unfavorable balance of payments are permanent in nature, such as decreased production,

(1) "First Interim Report of the Committee on Currency and Foreign exchanges after the war, 1918," p. 3.

(2) Ibid., p. 4.

the Bank rate could not correct the exchanges" (1). But aside from this, the discount rate played an important role. If the rate of discount in London was relatively low, bills were poured in from abroad, discounted, and exchanged for cash. Foreigners used this credit to draw on London. This in turn increased imports into Britain, and the exchange became unfavorable to London. A rise in the rate of discount, on the other hand, checked the import of bills, foreigners preferred to remit funds to London to be employed for purchasing bills. A continuation of this process resulted in Britain exporting securities and thus the exchange became favorable to London.

The part played by the rate of discount is made clearer by the following diagram and explanation:



"Apart from its immediate influence on the price of bills, the rate of discount affected the exchanges through its influence on the state of credit and the condition of trade. A low rate tended to produce in the course of time an expansion of credit, increased speculation, rising prices, and an increased importation, both of securities and commodities. This, *ceteris paribus*, led in turn to an adverse balance and an unfavorable exchange, which again reacted on the reserve and the rate of discount. A high rate whether at once attracting gold from abroad or at least checking

(1) Beckhart, E. H., "Discount Policy of the Federal Reserve System," foot note 70, p. 51.

the drain, at the same time led to a direct contraction of credit at home, and a fall in the price of securities and commodities with an increased exportation of both, and other things being equal favorable state of the exchanges" (1). The significant point to notice is that the rise of the discount rate short circuited the slower process whereby the exchanges worked themselves out to equilibrium. This fact is indicated in the diagram by the two short arrows. "International indebtedness is the balance arising from the exchange between countries of goods, services, and securities" (2). "An elevation in the Bank rate immediately affects the invisible items (3) in the balance of trade between nations, and mainly through its effect on these corrects the exchanges" (1a). Thus before the war when most of the great commercial nations were on the gold standard, and gold was distributed in such a manner as to facilitate the trade of each and every nation, London as the chief monetary centre, in reality, by its highly developed credit mechanism and judicious use of the discount rate, managed to expedite trade and prevent serious exchange disequilibrium.

(b) Banking and Discount Policy. The mere existence of an effective gold standard does not guarantee stability of prices in abnormal circumstances as a whole either over space or over time. But in the nineteenth century price movements in different countries showed a marked tendency to move together. A considerable degree of long-period instability was evidenced in the absolute level of prices. But in the post-war period

(1) Clark, A. B., "The Foreign Exchanges."

(2) Withers, Hartley, "The meaning of Money, " p. 196.

(3) Note: Invisible items include shipping freights, interest coupons, insurance facilities, banking facilities, travel, pleasure, social amenities, titles, and art treasures etc., tolls on drafts on London by foreigners, discounting bills for financing foreign speculation.

(1a) Beckhart, B. H., "Discount Policy of the Federal Reserve System," p. 53

the "sympathetic" movement of prices over space is subject to considerably more interference than during the pre-war period. On the other hand, the trend of prices over time has borne witness to a decided degree of instability.

If prices are to be kept approximately at an equal level over space, two things are requisite:

(1) Countries which are losing gold must act on a policy that will lower prices; countries which are the recipients of that metal must employ a policy that will raise prices.

(2) The economic, as distinct from the currency structure, must be both organic and elastic enough to permit of the above policies working themselves out.

The first requisite referred to is the concern of central banking policy, the second limiting condition one of actual economic conditions in which the first policy has to work. But it may easily happen that where the first condition is present the second is absent. Pressure can be brought to bear upon the users of credit by a restriction of it, or by raising the bank rate but such pressure cannot be effectively applied to costs of production. If the economic structure is rigid, the effect may be to depress wholesale prices but to leave other prices unchanged, and also the process of restoring income and prices to an equilibrium.

The methods by which a modern Central Bank controls the volume and terms of credit in its domestic monetary system consist mainly in:

(1) what are known as "open market operations," this is to say, the purchase or sale of assets in the market on the initiative of the Central Bank itself, and

(2) in varying the terms on which it will purchase assets on the initiative of the seller, which is known as "bank rate policy," "Discount policy includes the type of collateral which a Central Bank will accept against advances and the various methods it employs to protect its gold reserve. An effectual discount policy by a Central Bank presupposes that it has a virtual monopoly of the note-issue function of the country, that it holds the ultimate banking reserve, and that there exists in the financial centre of the nation a fairly important discount market" (1). The effects of the operation of the two methods (open market operations and discount policy) are different in their details and in the rapidity of their influence on the various elements in the market rather than in their essence.

Let us consider Bank rate policy. "It is the peculiar property of bank rate policy that it exercises a pressure in the right direction whether the problem is merely one of monetary short-period adjustment or whether it is of a more fundamental character" (2). The function of the rate interest is like that of all other prices, a device to equate supply and demand. If nothing had to be paid for the use of capital the demand for it would be so strong that it would not be possible to satisfy it. If the bank rate is kept too low, other means of restriction will not help; people will find it advantageous to borrow at the bank and thus the supply of the means of payment will swell independently of any restrictions (3).

(1) Beckhart, E. H., "Discount Policy of the Federal Reserve System," p. 2.

(2) "Committee on Finance and Industry Report, 1931," p. 96.

(3) Cassel, Gustav, "The Rate of Interest, the Bank Rate and the Stabilisation of Prices." *Quarterly Journal of Economics*, volume 42, 1927-1928, p. 513.

Central Banks have long been aware of the duty to watch the movements of the capital market, and to adjust their bank rate in accordance. The aim of the Central Bank, the country of which is on the gold standard, is not to keep the general level of prices constant, but to keep the price of gold as invariable as possible. If the purchasing power of gold relatively to other commodities remains constant, there is no cause for a movement in the bank rate, but if the value of gold varies, the purchasing power of the monetary unit must be regulated in accordance with the variations in the gold standard. This calls for a movement up or down, as the case may be, in the bank rate. In order to bring about such variations, i.e., to increase or decrease the purchasing power of the monetary unit so as to bring in line the general level of prices and maintain them as constant as possible, it is necessary to keep the bank rate higher or lower than the equilibrium rate of interest, in order to meet the requirements of the situation at any given moment. In other words, the actual rate of interest continually deviates in opposite directions to the equilibrium rate (i.e., that rate which equates the demand for and the supply of capital) (1).

"Scientific men have also tried to work out the connection between the bank rate and the rate of the capital market" (2). A relation was apparent between the bank rate and the profits of real capital, but this proved to be unsatisfactory when investigated for profits are often strongly increased on the ground that it is more fully employed. On the other hand,

(1) Ibid., p.p. 520-521.

(2) Ibid., p. 522 ff.

the rate of profits derived from real capital varies with the amount of money expended in constructing such capital in the first place. This being a thing of the past, it should have no influence on the present bank rate. Again, profits vary materially in the different enterprises in which capital is employed. Attempts have therefore been made to refer the bank rate to the average return of all capital already invested (1). But it is better to regulate interest to the "return of the last investment", i.e., the marginal return, than to refer to such an average (2). However, the banking authorities can obtain no help in this quarter for the "marginal return" must always be, tend to be, or be equal to the bank rate. The practical guide for the Central Bank must be sought in the stability of the general level of prices. The bank rate that results in such a stability being attained represents as truly as possible "the real rate of interest of the capital market, and may be taken as a practical definition of that rate" (3).

The reasoning in the foregoing pre-supposes that there is only one rate of interest in the capital market. But the rate of interest in the capital market varies directly as the risk involved. But apart from this, "the most conspicuous difference in the capital market is the difference in the interest paid for short and long-term loans" (1a). The money-market and the capital-market are extricably interwoven but as different rates are quoted for loans under different conditions to what rate of interest should the bank rate approximate? "The bank rate ought to

(1) Op. cit. p. 523.

(2) Ibid. p. 523.

(3) Ibid. p. 523.

(1a) Op. cit. p. 524.

coincide with the particular rate of interest that must be paid for such loans as are usually supplied by the bank. Then other rates will adjust themselves to this rate and the result will be seen in the stability of the general level of prices" (2).

(c) How the Bank Rate Influences Prices. When the rate of interest is increased the prices of those goods for the production of which capital is required rise correspondingly. If bank rate policy manages to keep the general level of prices invariable, every rise in some prices is counterbalanced by a fall in others. As long as the bank rate coincides with the equilibrium rate of interest, it has no particular influence on prices" (1). But suppose a rise in the bank rate above that of the equilibrium rate of interest, demands for loans are contracted, debts are reduced at the bank, the community is restricted more in its means of payment and consequently, the nominal purchasing power of the market is reduced. Hence prices in general must fall. Conversely a fall in the bank rate below the equilibrium rate of interest will cause a rise in the general level of prices.

The above reasoning assumes a static condition of society, but let us consider dynamic conditions. "In order to meet its present desire for more complete equipment with real capital, society is always in need of saving" (2). These savings are provided by individual savers who discount the present in order to enjoy the future accumulation of their savings. An increased demand for the use of capital is not followed at once by an increase of savings. Equilibrium is effected only by a rise in the rate of interest which contracts the desire for productive capital. It is possible, that the

(2) Ibid., p. 524.

(1) Ibid., p. 525 ff.

(2) Ibid., p. 526 ff.

rise in the rate of interest may somewhat influence individual savers and more capital will be placed in the hands of the producers. In this case, the total amount of real capital produced is augmented, the productive forces of society being diverted from consumption purposes to that of the production of real capital. It is possible, too, that this diversion may be accompanied by increased efficiency, or an intensifying of the capital so employed. We are then on the rising tide in the cyclical movement of trade. Reaction comes sooner or later when the production of real capital is not able to support the burden of the high rate of interest. The rate of production of real capital receives a general set back and we are on the falling tide of the cyclical movement of trade—in a depression. The rate of interest falls rapidly and a long way. This new low rate in time engenders renewed activity in the construction of real capital and we are on the upswing once more. The rate of interest works as a regulator tending to keep the general movement of all prices within narrow limits. The bank rate is not a complete deterrent but it is a method from which much may be hoped. It is an old method and capable of much improvement. "The fact that a Central Bank fails to raise its bank rate in accordance with the actual situation of the capital market very much increases the strength of the cyclical movement of trade with all its pernicious effects on social economy. But, here again it is impossible for the Central Bank to know exactly what this "natural rate" is. In this case too, the bank has only to regulate its rate so that the general level of prices is kept as constant as possible. The Central Bank can know this rate only when it has succeeded in stabilizing the purchasing power of its currency (1).

(1) Cassel, Gustav, "Post-War Monetary Stabilization," p. 82.

(4) Bank Rate Limitations. There are limitations to the successful use of the discount rate. The Bank rate should not be increased or decreased without due regard to many conflicting circumstances. Frequent oscillations introduce uncertainty in the stock and produce markets. Business under such conditions is more nearly akin to gambling than to speculation. "The true test of sound (economic) as distinguished from merely solvent banking, is the moderation of the average rate of discount" (2). Arthur Fischel, a Berlin banker before the German Bank Enquiry Commission of 1905 said: "I am inclined to assume that it would be better for us to have a stable rate of interest, one fluctuating as little as possible, than a very low rate that would be only temporary and would later on expose us to the danger of a corresponding violent rise" (3).

A rise in the Bank Rate "will be ineffective in correcting the exchanges, in preventing domestic speculation or in reducing the amplitude of cyclic fluctuations unless the market rate advances with the Bank Rate" (1a). If a rise in the bank rate to secure a contraction of credit does not influence the market rates, borrowers may draw on general bankers, i.e., commercial banks at a lower rate of interest. "What affects the foreign exchanges directly, then, is the open market rate, or group of rates, and not the Bank Rate in and of itself, for a rise in the Bank Rate will induce imports of gold only so far as it raises the outside rates" (2).

(2) Beckhart, B. H., "Discount Policy of the Federal Reserve System," p. 76.

(3) Ibid., p. 76.

(1a) Note: The market rate is the rate charged by acceptance houses, discount corporations, bill brokers, commercial paper houses, joint stock banks, general banks and the private investor on the type of paper acceptable for discount at the Central Bank, Moulton, Financial Organization of society, pp. 606-608 re market rate.

Ibid., p. 57.

(2a) Beckhart, B. H. p. 57.

The business world has found it difficult to interpret the meaning of a change of bank rate in any particular instance. It may be directed with a view to correcting a temporary maladjustment in the international short-term position, or it may be the beginning of a contraction which will produce a restriction of industrial enterprise with resulting business losses, until the necessary adjustments have been made. Knowledge of the purpose of such action should be diffused. It should be the watchword of the Central Bank to present the relevant facts as far as possible to the money market and the great commercial banks.

Secondly, a policy which awaits the movement of gold may be tardy. These movements are very often the last event in a situation which has been developing for some time. More complete knowledge is required both scientific and statistical, in order that the powers of diagnosis may supersede dependence on a comparatively late appearing symptom.

Thirdly, bank rate policy guided and governed by the tendency of gold to move is directed toward maintaining the stability of the exchanges rather than the stability of the general price level, or what is very important, the stability of business. This is a great weakness. International dislocations affect the internal stability of prices. But this is not so much the fault of the Bank rate as the inherent limitations of an international standard. Co-operation is needed to protect internal exchange as much as possible from international disturbances.

Fourthly, bank rate policy is an excellent means of regulating expansion and enterprise at home, and for bringing pressure to bear on costs in order that they may accommodate themselves to changes in the relative

internal situation as well as to the international level of prices. But when the value of money is greatly changed, some means must be taken to bring the internal level of costs into line. Changes in the bank rate alone cannot hope to effect the necessary adjustment, for it depends for its success, when prices are falling, upon decreasing profits and increasing unemployment up to the point where it will force the business man to reduce his costs by instituting economies in operation or reducing wages. But public opinion does not readily agree to such a process. (1).

The control of the Central Bank over the creation of credit, and hence the effectiveness of its discount policy, is a factor that varies from country to country. Great Britain has the most highly developed system in this respect. "The Bank of England, as the Central Bank of Great Britain, is in complete control of the creation of the cash base of the country, subject to such limitations as result from the statutory restrictions upon the issue of legal tender money and the obligation to meet demands for the export of gold. As regards the former, however, the provisions of the Act of 1928 permit of the expansion of the note issues by an increase of the fiduciary portion" (1). The Bank of England is able to regulate the volume of credit, so long as the joint stock banks distribute their assets (cash, call and short-notice loans, bills, advances and investments) in the usual way. Indeed, it is possible for the Bank of England to effect any change which might be made in the practice of the "Big Five". The link between the Bank of England and the commercial banks is the discount

(1) "Committee on Finance and Industry Report", p. 98.

(2a) Ibid, p. 44.

market. This is the first outlet for any surplus funds held by the Big Five, etc., and from whence funds are withdrawn when the banks find it necessary to replenish their reserves. "If the withdrawal causes a shortage of funds in the market, the market borrows, in one form or another, from the Bank of England, and the accommodation given by the Bank of England provides the means of replenishing the cash resources of the commercial banks" (2). The Bank of England then, is in a strong position to enforce a discount policy in so far as the internal position is concerned. Externally and Internationally, however, it is quite possible at the present time for the non-co-operation of the Federal Reserve System and the Bank of France with the Bank of England to offset this worthy instrument. The other great Central Banks, e.g., the Bank of France, the Federal Reserve System, and the Reichsbank have not the control over the creation of credit that the Bank of England has. The control of the Federal Reserve System over the creation of bank money in the United States or its equivalent in the shape of direct loans to the call market is not as automatic, nor is its credit mechanism so highly developed as that of the Bank of England. Hence the Federal Reserve System has great inflationary and deflationary possibilities. And on the other hand "politics" are too potent a force in the United States to enable the Federal Reserve Board to take as firm a stand as its scientific knowledge and statistical evidence would warrant. "The Federal Reserve System has frequently revised its stand, e.g., discount policy, not because the course of events demonstrated any error in its original position, but because of changes occurring in

(2) Ibid., p. 45.

popular sentiment" (1).

But in ordinary times and under normal circumstances, the power of the banking system, aside from international limitations, to increase or to diminish the active employment of money in enterprise and investment is beyond question, and "it is equally true that an increased activity of money in these ways will tend to raise prices and that a decreased activity will tend to diminish them" (1). On the other hand, when conditions of extreme uncertainty and depression have developed, a fall in the cost of short-term credit will not itself attract borrowers. As a considerable part of interest represents not pure interest, but the actual expenses of the commercial banks, the rate of interest cannot be lowered beyond a certain point. There is, however, room for more action than what is taken.

(c) Effect on Business Activity of an Increase in the Quantity of Bank Credit during a Depression. By means of the purchase of government securities in the market the monetary authority, e.g., the Bank of England, is able to cause a rise in the general level of prices. There results a rise in the prices of government securities from the direct action of the Central Bank, and also in other prices indirectly from the idle funds, thus placed in the hands of the commercial banks. It is evident that a use will be found for such funds. A rise in the price of government securities will be reflected to the price of those less prime, to some extent. Conversion operations will be facilitated, and gradually those classes of securities in which the special risks of the slump are relatively unimportant will rise. This in turn affects the cost of the long-term borrowing by first-

(1) Beckhart, B.H., "Discount Policy of the Federal Reserve System", p. 510

(1a) (Committee of Finance and Industry Report", p. 102 ff.

class borrowers. Fixed investments, e.g., house-building and the expansion of public undertakings, are fairly sensitive to changes in the long-term rate of interest (1). It is conceivable that building which is at a standstill at 5% becomes active at 4%. Again, "a fall from 6 to $4\frac{1}{2}$ % in the rate of loans is practically the equivalent of a fall of 25% in the cost of production when it comes to calculating the minimum level of rent which will prove profitable; and there is reason to think that the demand for house-room is elastic" (2).

When the above point has been reached the effect of abundant credit on the long-term market will be to increase new industrial enterprise. Business confidence being restored, actual profits may be expected to turn prices on the upswing. The same method, but in this case the selling of government securities ought to be used at the beginning of an inflation.

But without international co-operation the additional liquid funds made available by the above method will merely find an outlet in foreign markets if better terms are offered. The result would be loss of gold and an ineffective attempt to influence prices in the desired direction. In the case of inflation, the attempt of the Federal Reserve System in 1929 to employ the above method was disastrous.

(2) Gold and Prices. Changes both in the amount of the gold stock and in its distribution have given rise to much discussion. In the first place, it has been argued that the stock of monetary gold is being increased at a slower rate than that at which the physical output of the world's industry and trade is increasing; that this explains in part the fall in prices which has taken place, and in any case threatens a fall in the future. In the second place it has been argued that the distribution

(1) Ibid, p. 103.

(2) Ibid, p. 104.

of gold has itself been such as to bring about a fall in the world price level.

(1) The Production of Gold and Industrial Activity. The evidence on this point is reassuring. Mr. Carl Snyder (the statistician of the Federal Reserve Bank of New York) measuring the progress of the United States by a wealth of statistical data comes to the conclusion that the trade of the United States--i.e. broadly, its production--has been increasing steadily during the past fifty years at a compound rate of 4% per annum; world production he places at a compound rate of 3% per annum. Mr. Joseph Kitchen (a recognized authority on precious metal statistics), measuring the economic progress of the world by figures of the physical production of the chief commodities, arrives at a somewhat similar conclusion. The League of Nations, in its volume "Memorandum on Production and Trade" gives figures of world production which correspond broadly to an increase for the period from 1923 to 1927 of the same figure of 3% per annum compound. The population of the world, on the other hand, has increased during those periods at a rate of about 1% per annum. "It is true to say then that there was an excess of production equivalent to about 2% per annum over and above the amount needed to maintain that increased population at a stationary standard of life. Yet, except for a brief period in 1907, the general level of commodity prices rose steadily from the year 1896 to the outbreak of the war" (1). Sir Henry Strakosch concludes that it is not a case of over-production, but of the maldistribution of gold that has caused the fall in the price level.

(1) Strakosch, Sir Henry. "The Economic consequence of changes in the value of gold." The League of Nations Bulletin, selected documents submitted to the Gold Delegation of the Financial Committee, p. 22.

There are various ways in which the use of gold has, or may be economised. In the first place, the maintenance of a stable price level is not bound up with an inevitable annual increment in the volume of various forms of purchasing power held by the public, such as coin, notes, and deposits in commercial banks. Changes in habit may alter the amount of purchasing power which the public employ. Revived business activity is likely to result in a relative decline in the holding of cash. Secondly, there may be a reduction in the legal gold requirements held against deposit liabilities. Little or no gold reserve need be held in the form of coin. The use of gold bars by Great Britain in place of coin was a notable step in this direction. In the third place gold need not be held primarily against note issues but to meet temporary deficiencies in the balance of international payments. Hence the obstacle to the creation of a much increased volume of purchasing power could be effected without any increase in the supply of gold. Lastly, the monetary gold should be concentrated in the reserves of the Central Banks and a common understanding between the Great Central Banks of the world to permit reduction of the proportion of the total gold cover held in practice, when necessary (1).

(2) The Distribution of Gold. The working of the gold standard has been neutralised by the fact that the various gold parities established by the countries returning to the gold standard have not been brought into line, in each case, with the existing level of incomes and costs in terms of their internal respective currencies. Great Britain's existing level of sterling incomes and costs was relatively too high in terms of

(1) Committee of Finance and Industry Report, p.p. 66-7. Remedial Measures Recommended by the Gold Delegation.

the gold parity set up. Thus those industries which were subject to foreign competition were at an artificial disadvantage, unless a downward revision was made in their costs of production. France and Belgium are representatives of the converse. Other countries provide examples of an intermediate position between Great Britain on the one hand and France and Belgium on the other. As a result the distribution of foreign trade has been seriously disturbed from an equilibrium position corresponding to the normal relations between the different countries' costs in terms of gold. In other words, the relative productive efficiencies of different countries for different purposes have been largely set aside by the abnormalities in the gold parities due to the difficulty in adjusting costs of production to these several gold parities. This has caused an unaccustomed perturbation in the distribution of foreign trade. The international lending powers have been concentrated in two countries, France and the United States. Great Britain was the most highly developed pre-war lending power in the world and France and the United States have used their post-war control of credit unwisely, and thus adversely to Great Britain. It was because additional imports were not made nor long-term credits given by France and the United States that the situation was made adverse to Great Britain. These countries offset the advantages of a normally smooth working standard by requiring payments of the greater part of their annual surplus either in actual gold or in short-term liquid claims. "The gold held by the Bank of France in terms of dollars was two billion, six hundred and fifty million dollars on the twentieth of November, 1931, against a note circulation of three billion, two hundred million dollars, a gold cover of approximately 83%. In the United States the

Federal Reserve Banks reported gold reserves on the second of December, 1931, of one billion, eight hundred and seventeen million dollars, held exclusively against a note circulation of two billion four hundred and seventy-eight million dollars, the percentage of cover being 73.3 with a legal requirement of 40%. The total monetary gold stock of the United States including holdings by the Federal Reserve Banks, amounted to four billion two hundred and ninety-two million dollars on October 31, 1931" (1). Great Britain, on the other hand, has had to be content to support a financial structure equal to, if not surpassing, that of the United States with a much smaller quantity of gold.

It being generally accepted that the production of the world increases at the rate of 3% per annum, an increase in the world's monetary gold reserves at the same rate would, in the absence of any economy in the use of gold for monetary purposes, provide an amount of currency and credit adequate to maintain prices" (1a). But this statement presupposes a distribution of the gold reserves of the world in a manner commensurate with the organization of the several financial centres of the world. The practice of France, her preference for liquid assets as compared with long-term securities, and that of the investors of the United States towards long-term foreign securities has had an effect on international prices similar to that of hoarding in a primitive community. "It is to this increased and undue preference for the employment of resources in a liquid form, rather than to the shortage of new supplies of gold that the

(1) As quoted by Mr. Jackson Dadd, joint general manager of the Bank of Montreal, from the address of the joint general managers at the 114th annual general meeting of the Bank. Manitoba Free Press, December 12, 1931.
 (1a) Strakosch, Sir Henry. "The Economic consequences of changes in the value of gold", op. cit., p. 24.

fall of prices is to be attributed. Even a large increase in the current supplies of new gold would not do much good so long as the causes persist which have led to the present maldistribution of gold. For the additional surpluses would soon find their way to the same destinations" (2).

(2) "Committee on Finance and Industry Report", p.p. 67 and 69, paragraphs 153-154.

PART III SUMMARY AND CONCLUSION

Price fluctuations caused by variations in the means of payment, here, we have seen different effects on the classes that make up the social structure; and whether prices rise or fall the adjustment that has to be made in the economic structure before exchange between the factors of production is once more normal is often tardy and much harm, silent for the most part, is thereby occasioned to society. In general, it may be said that of the three classes of society, investors, business people, and wage earners, the first benefits by a fall in the general price level, while the two last find a rise beneficial. During a rise in the purchasing power of the dollar (the same thing as a fall in prices), the rentier class receive the same fixed money income but their consumption outlay is much reduced. They are therefore able to increase their net balance of cash in hand at the expense of the business people and wage earners. On the other hand, when the purchasing power of the dollar falls (prices rise) the rentier class are at a loss to balance their budgets. Their money income is more apparent than real. But on the other hand, the business men immediately, and wage earners ultimately, profit by the rise in prices. The former find it easier to borrow capital because in fact they are paying little real interest on their nominal borrowings. Production being accelerated, more and more labor is employed at higher and higher prices. The base of high prices is that the country lives unaware on its capital and when the reverse process sets in (when prices fall), the community finds that its gains during prosperity are more apparent than real.

The depression in which we are living has acutely fixed the minds

of economists and statesmen on the evils of a depreciating and an appreciating currency. State activities, have been greatly extended during the past two decades and governments are faced with rapidly rising expenditures to meet social services and unemployment relief. The output of the government is actually much increased through the appreciation in the dollar; while at the same time revenue has fallen off. Business steadily declines and with it the taxable power of the people. Governments resort to tariffs in order to create employment but usually defeat their own ends by slackening the exchange of goods and services so that unemployment actually increases.

In many respects, however, it is not the direct economic consequences of falling prices which are the most serious. It is the remote evils to society that compels investigation in price movements. The social changes that result from a fall or a rise in prices raise delicate questions of equity between the different classes of the community. The rigidity of the economic structure prevents adjustments being readily made. Standards of social justice set up on one level of prices, are torn asunder; the new adjustment is badly made and we are faced with hardship, unemployment, crime. The question of a stable standard of value goes to the very basis of society.

The need for a standard of value is said to have arisen because of the inconvenience of barter. The precious metals have gradually supplanted all other measures of exchange value and in the Western world gold has become the standard while the Orient, for the most part, employs silver for the same purpose.

A perfect standard of value, that is, one which should have an invariable purchasing power, is not possible. The effective value of money to each individual varies directly as his wants. But aside from this unattainable feature of the monetary standard, the unit of account should give an approximately invariable command over the good things of life. In order to do this, in so far as the monetary aspect is concerned, the quantity of money put into circulation must not be exposed to the vagaries of either state or private whim.

The Quantity Theory of Money properly stated is irrefutable. It is an explanation of the relation between money and prices. The price level, aside from counteracting factors, varies directly as the quantity of money put into circulation. Appeals to history, e.g. post-war inflation, confirm our belief in the theory as showing in a simple manner why prices rise and fall. It is recognized that there are counteracting factors such as, changes in production, improvements in transport and communication, the substitution of credit instruments for coin as means of payment, etc. but in any attempt to explain the rise and fall of the price level from the monetary standpoint, the use of the theory is indispensable.

Inflation, or currency depreciation, created by an increase in the supply of the means of payments beyond the normal requirements of a country, is a popular method of taxation. Resort is usually made to this device by governments in times of financial stringency, following a war. It may, then be regarded as a tax; it falls in a rough and ready way upon people's several abilities to pay, and owing to the ignorance or inertia of the public it takes a considerable time to defeat its own ends,

Deflation, or currency appreciation, the converse of inflation, redistributes wealth in a manner favorable to the rentier class and unfavorably to the other agents of society. When a country desires to return to the gold standard in order to resume its former purchasing power parity in the world exchanges, resort is made to deflation. By resuming its former position amongst the gold standard nations it secures, in normal times, the more or less automatic regulation of its money supply. The period of uncertainty has ended, though the sacrifice may have been great, and in the ordinary course of events business activity is promoted. But a combination of capital and labor may successfully resist deflation, if the standard of value has greatly fallen below its former gold parity.

There is some disagreement amongst bankers, business men, and economists as to the merits of deflation. They are, however, in agreement on one thing, and that is, it is the transitional period from high to low prices, or vice versa, that is detrimental to society. Once the higher or lower level has been effected, and the interests of the different classes of society so adjusted that an equitable exchange can be made upon the new basis, the lag in industry is caught up and the earnings of entrepreneur, rentier and wage earner become adjusted.

Many attempts have been made to reform the monetary standard. One of the most interesting, yet improbable, means to find an equitable standard of value, resulted from the statements of Ricardo. An attempt was made to measure the value of commodities in general by taking as a criterion the sacrifice of human effort. But labor is only one of the elements entering into the value of an article and different kinds of labor, or even the same kind are not comparable. Subjective effort is incapable of measurement and quantitative wages cannot be used as a true basis for comparison.

Ever since silver was divorced from gold there has been in the Western world more or less agitation for a return to Bimetallism. The usual argument is that prices would rise with the introduction of silver as one of the partners in the twofold base for the credit structure and, that business would increase with the Orient because its purchasing power would be increased thereby. From the standpoint of supply there would be great difficulty in controlling the metals and from the standpoint of demand the customary use of the gold standard would cause people to demand governmental intervention if gold were threatened to be driven out of circulation by silver. It is recognized that the compensatory action of one metal on the other is a valuable consideration; but unless the chief commercial nations adopted Bimetallism, great difficulty would be experienced in maintaining the double standard. The example of the Latin Union is a case in point. The most probable result would be a greater disturbance to credit accompanied by price fluctuations of longer duration than any yet experienced. The proposal of Alfred Marshall known as Symmetallism, whereby two or more metals would be joined together in coin or linked bars, is subject to the danger of unwise or dishonest political manipulation.

The Tabular Standard which Lowe, Scrope, Jevons and others proposed would require a double standard, one for internal contracts, the other to provide a means of settling international indebtedness. The confusion that would result robs the plan of any practical significance. A plan which received serious consideration and which has provoked much discussion is that advanced by Professor Irving Fisher generally known as the "Compensated Dollar". It is in reality a double standard, one for settling

debts, the other, the existing gold standard, in which price-making will go on as formerly. The inherent limitations and practical defects of such a standard are many. But the chief difficulties are: First, it depends upon a satisfactory base of the index number of commodity prices. There is none. A different index would be necessary for each different class of society. Second, contract adjustment, between creditor and debtor, would have to be made on the basis of either what has been, or what is, as regards prices; but the practical consideration is what will be. For this reason adjustment would always be out of alignment with present prices. In the third place it is not definite enough. It is extremely doubtful if debtors and creditors would consent to tie their contracts to the vagaries of an index adjusted to the general level of prices. It is granted that they agree to pay or to receive at present no fixed real amount but the tangibility of a definite amount of dollars at the end of a certain period of time has a deeply rooted influence on the mass of debtors and creditors. In a word a dollar is a dollar.

In 1923 Mr. J. M. Keynes proposed a scheme of monetary reform. It was based on what was already existing practice in Great Britain. Credit policy was practically controlled by the Bank of England and the "Big Five". The primary aim, he argued, should be to secure the internal stability of prices, and only secondarily exchange stability. The internal price level was to be based on the best available index of prices, while all possible evidence such as the state of employment, the volume of production, etc., should be considered in the data upon which the stability of prices was to be based. The Bank of England should exercise greater control over gold with power to regulate, but not to "peg" its price. A minimum gold reserve held against note issues would be objectionable for

two reasons: it would both be immobile when needed and an untrustworthy barometer. Therefore, he argued, the gold reserve should be separated from the note issue and used by the Bank of England to prevent short period fluctuations in the exchange. Notes were to be issued, in accordance with the existing practice, subject to no formal regulations. Co-operation between United States and Great Britain is an ideal state of affairs whereby stability of internal prices and external exchange could be achieved. But mutual suspicions would preclude this arrangement being an effective device of control. United States is an incalculable power while Great Britain could hardly submit to Federal Reserve authority. Other countries should adopt either the pound or the dollar standard as a currency basis, maintaining internal stability by reserves of gold at home, and balances in London and New York would provide facilities to meet short period fluctuations in the foreign exchange. The Bank rate, and other methods, should be used to regulate the volume of purchasing power and thus maintain stability of the relative price level over a longer period. In a word, the stability of the internal price-level is the paramount consideration; stability of exchange, a secondary objective.

Mr. Keynes argues forcibly and well but there are objections to his plan. It is very true that the working of the gold standard is only automatic under conditions comparable to the pre-war period, and that it is only automatic as an indicator of the need for action and of the end to be achieved. With gold distributed as it is today and the absurd policy of the two chief nations holding the greater part of the gold, neither of them willing to lend on long term security, nor to allow the imports of gold to inflate their prices, so that they would become good nations to sell to, and thus indirectly correct their too favorable exchanges, the

gold standard is not effective as an instrument for stabilizing price levels. But, the danger of any standard is the tendency of credit towards inflation. We have had experiences of that nature only recently in the post-war period. It is preferable to deal with the devil you know than the one with whom you are not acquainted. It would seem that, in consideration of all available evidence, a debtor country by adherence to an international standard pays a dear price in the form of internal instability of prices, but that aside from the abnormal conditions of today a creditor country with a diversified trade would run a decided risk of losing commercially by concentrating upon its internal price level. The practice of international banking and associated services has given Great Britain a pre-eminent position and a valuable source of income, e.g., banking commissions. This, together with the shipping and staple export industries, has provided the principal part of Britain's wealth; and to secure stability of internal exchange would be to sacrifice external exchange relations and there would be an unquestionable loss to highly developed international banking and associated services. On the other hand, repercussions of instability in the rest of the world would inevitably react on Britain's internal price level, even under Mr. Keynes' plan. It would seem that the solving of the whole must precede the solution of individual monetary problems. And by setting up an individual standard Britain would only delay the settlement of the larger problem. On the other hand, if the Bank of England had absolute control of the creation of credit in Britain the Bank rate could be effectively used to control prices.

When a country is off the gold standard two well defined plans to stabilize the exchange either by return to the former parity or by adopting a new and lower exchange parity have been employed. A return to the

former gold standard by means of deflation is recommended by Economists of the Old School. It is objectionable on two grounds. In the first place it deadens industry at the expense of labor and the entrepreneur. In the second place it places an overwhelming burden on the taxpayer. There are three principal arguments in favor of deflation: (1) to not deflate is a breach of contract in respect of bondholders and others who are in receipt of fixed money incomes, and who have pledged their savings in good faith; (2) deflation would bring financial prestige and inspire confidence abroad; (3) it would be an all round benefit to industry if the pain were once undergone. But the majority of contracts are of comparatively recent origin. To deflate would be to benefit a small minority of creditors at the expense of a large majority of debtors. Deflation is thus only applicable provided the return of the standard can be accomplished in a short time. It makes no difference to foreign creditors whether the internal price level is measured in a depreciated currency, for debts to them are settled on the basis of gold. Great Britain's economic history from 1925-1931 bears ample testimony to inequities set up by deflation. Instead of a rapid adjustment between efficiency earnings of the wage earners and the earnings of the entrepreneurs the former maintained an inconveniently high level of real incomes. Consequently British industry could not compete abroad, unemployment increased and Great Britain fell off the gold standard in September, 1931. The other process of stabilizing the currency of a country at a new and lower parity is known as devaluation. The advantage of such a procedure is that once the gold parity is set up there would be an increase in business activity as the period of uncertainty would be ended more quickly and much more easily than by means of deflation. The advantage of internal business would seem to outweigh the disadvantage

that such action might have on trade relations with other nations. Goods are produced much more cheaply relatively than when resort is had to deflation.

The Quantity Theory of Money is an explanation of the relation of money and prices, while the Theory of Purchasing Power Parity explains the working of the exchanges of an inconvertible paper standard country and a gold standard or another inconvertible paper standard country. The essential fact to grasp is that the exchange cannot be stable unless the internal and external price level remain stable. The mechanism of the pre-war exchange depended to considerable extent on discount policy for its smooth working. But during the post-war period it proved too slow to influence an adverse exchange and the mechanism of the Post-War exchange is a reflex of the internal price level so far as Great Britain is concerned. The better policy, therefore for a country that is off the gold standard is to devalue and secure internal stability, argues Mr. Keynes. But there are objections to such a policy. International trade, commerce, and finance are based on credit. If Great Britain were to devalue and stabilise her currency at a new and lower gold exchange parity, as a great creditor nation, the shock to international finances would certainly be very great. With the world in such a state of depression as now exists it is by no means certain that Great Britain would secure the twin benefits of increased export trade and decreased unemployment. The immediate consequence of devaluation would likely be very disappointing owing to the atmosphere of crisis and distress that would result. And lastly, although international co-operation is one of the most fragile of plants, it is not only essential, it is imperative that the leading creditor countries iron out their differences and cut the Gordian knot that today stagnates trade and industry.

Another alternative to the return of the gold standard is the proposal put forward by Mr. R. G. Hawtrey in 1923. Currencies would ordinarily be made convertible into one another through the foreign exchange market, convertibility into gold remaining in the background as an exceptional and infrequent alternative. Ultimate control would depend on the co-operation of Great Britain and United States. He is not in favor of resuming the gold standard irrespective of whether the difficulties in regard to the future purchasing power of gold have been provided against or not. Should international co-operation fail he would concentrate on the stabilization of sterling in terms of commodities. A middle course policy in which gold is recognized as necessary for a reserve to settle international balances of indebtedness; but a policy which enables an experiment to be made without cutting adrift from the old system. It is evident that an international convention between Great Britain and United States of this nature is well-nigh impossible. The Federal Reserve Board would be in a predominant position and should the Bank of England disregard the Federal Reserve Board pressure could be used for the Bank of England would be liable to be flooded with, or depleted of gold. If the Bank of England were disposed to dictate policy to the Federal Reserve Board, or to influence American discount rates, the special difficulty that faces all negotiations with United States--the division of power between President and Congress--would be manifested.

This has brought us to the final standard of value--the gold standard. Before the Great War, by means of the foreign exchange mechanism, prices were remarkably stable over long periods. When most of the great commercial nations were on the gold standard, and gold was distributed in such a manner as to facilitate the trade of each and every nation,

London as the chief monetary centre, by its highly developed exchange mechanism and judicious use of the discount rate managed to facilitate trade and to prevent lengthy exchange perturbations. In ordinary times and under normal circumstances the power of the banking system, aside from international limitations, to restrict movements of the general level of prices is beyond question. On the other hand, in a depression the cost of short-term credit would not itself attract borrowers. There is always a psychological factor to be considered. Prosperity breeds optimism, but depression breeds pessimism and no confidence in the expectancy of future profits. But by the purchase of government securities in the market the central banking agency could cause a rise in the general price level and the selling of such securities would be particularly useful to prevent periods of undue credit expansion. But this presupposes international co-operation to be an effective method of price control. In the one case, lacking international co-operation the additional liquid funds made available would merely find an outlet in foreign markets where better terms are offered; in the other, additional funds would flow from foreign countries to increase the orgy of speculation.

There has always been two sides to the monetary gold standard; the demand for and the supply of the metal. Upon the side of supply the investigations of the late committee on gold bears ample testimony that the production of gold is sufficient to provide for its monetary use. It is the maldistribution of gold rather than its supply which occasions complaint. From the standpoint of demand the chief use is for monetary purposes. There are various means by which its use has been economised, e.g. reduction of reserves held against currency and notably Great Britain's action in using gold for export only and not for external circulation.

Increased use of credit instruments contributes to the same end. This latter economy may be extended but depends a great deal upon the habits and customs of the people.

There is no mathematical formula for the regulation of prices. Any available index is bound to be affected by price variations in particular commodities arising from non-monetary causes, e.g. harvest conditions, new inventions, increased production through new scientific methods or the exhaustion of those that exist. A change in the supply of the means of payment on the other hand may not at first affect prices at all, but result in a change in the volume of purchases. The index number may not be affected until the volume of purchases has made material progress. Hard and fast rules of stabilization are out of the question.

The gold standard cannot function in a world commercially at war. Economic exclusiveness, persistence by different nations in making commercial war upon one another will defeat any monetary policy to stabilize prices. As the concluding note of the MacMillan report lays it down: "We believe that our own monetary authorities will not be able to remedy matters without assistance from changes in other non-monetary factors by which the volume of our domestic output and employment and in particular our balance of trade, are also influenced." The gold standard does not work itself; it is a convention and its successful working depends upon the whole-hearted co-operation of the gold exchange nations. As Sir Henry Strakosch says, "The villain of the piece is not gold itself, nor the gold standard, it is the failure of certain governments to work the gold standard in the right way."

The Central Banks must not only exercise discretion but be prepared to co-operate with other Central Banks. It is their duty to detect and prevent monetary disturbances before they affect prices. Central

Banking policy must depend on all the available scientific knowledge and statistical evidence. In the last resort Central Banking policy must gain perfection from the experience of trial and error.

We conclude then that the best standard of value yet evolved is gold, it has the confidence of creditors and debtors, and it furnishes the means of building a superstructure of credit large enough to provide sufficient means of payment to take care of increased production. At the same time there is every reason to expect that man's increased scientific knowledge will enable a better and more complete control over the creation of credit being accomplished. From the monetary standpoint this will mean a more stable distribution of wealth. The only proposals of monetary reform that seriously rival the gold standard are Bimetallism and the Commodity Standard. It seems evident that the difficulties of maintaining at fixed ratio the values of the twin components of the Bimetallic Standard, as well as of counteracting the future danger of inflation, would more than offset any temporary gains that might result from a re-marriage of gold and silver. The commodity standard to be successful would have to be adopted by all the leading commercial nations and an accurate index has yet to be evolved which would be satisfactory to debtors and creditors. Considering the multitude of commodity and other prices together with the proper weighting of each, as well as the fact that the various interests of the several classes of society would necessitate different indexes of prices being used, it seems very unlikely that the commodity standard would secure universal acceptance.

An international currency is an ideal. Therefore, each nation must work out its own monetary salvation. International payments may be facilitated and greater economy exercised in the use of gold by means of

the agency of the Bank for International Settlements. Stability of any nation's currency cannot be achieved except through such international agreement as will secure the redistribution of gold. But after that is done any monetary reform must have as its starting point the gold standard.