

THE COMPENSATED DOLLAR
OF
STABILIZING THE DOLLAR.

Thesis submitted by R. Bennett for B.A. degree.

TABLE of CONTENTS.

Chapter	Page
1 The Problem Outlined -----	1
2 Stabilization in History - - - - -	13
3 Particular Details in the Working of the Compensated Dollar - - - - -	26
4 Discussion of Criticism which the Compen- sated Dollar has aroused - - - - -	44
5 Recent Attempts at Stabilization - - - - -	67

THE COMPENSATED DOLLAR

CHAPTER I.

THE PROBLEM OUTLINED.

The course of commodity prices over the past century or more forms an interesting and informative study. As far as is known no good measure of price movements exists before 1782, the year at which the series of English index numbers compiled by Jevons begins. Between 1789 and 1809 the index of English prices rose from 85 to 161, and in the next forty years, 1809 to 1849, it fell from 161 to 64. From this time on our information is gathered from Sauerbeck's index number. Between 1849 and 1873 it registers a rise from 74 to 111. Index numbers for prices in United States show somewhat corresponding fluctuations over the same period. In the United States prices fell between 1873 and 1896 according to the index which fell from 100 to 51. From 1896 to 1914 there was almost a continuous rise in the price levels of United States, England, and Canada.

War and post-war conditions played havoc with the price levels of all the leading countries. The index numbers have shown violent fluctuations from 1914 to the present, while war and reconstruction were being financed. In United States the highest peak of 154.4 was reached in 1920. From then on it has almost steadily fallen till in 1931 it touched 73; in 1932, 65, and for the first five months of 1933, 63. Price levels

in European countries were more seriously disturbed than that of United States. Inflation was carried on in Germany at the end of the war to such an extent that the price level must have risen more than a millionfold. The same was true for France, Russia, and other countries, but the inflation was on a much smaller scale.

Index numbers measure changes in the price level of a country, and these in turn are equal to changes in the purchasing power of money. By means of index numbers it is possible to compare prices in general over a given period, to any other period of the same length, selected as the base of comparison. They take no account of variations in the prices of individual commodities, which may fluctuate according to the demand for and supply of them; but they measure the changes in the prices of goods in general. Thus, if in any period the index number of prices shows a rise, then the price level has risen (i.e. the general direction of prices of all goods is upward), the dollar will not purchase as many goods now, its purchasing power has fallen. On the other hand, when the index number decreases, the price level has fallen (i.e. prices in general have fallen); the dollar will buy more goods, its purchasing power has risen. We conclude then, that any change in the index number of prices indicates a change in the price level, and this amounts to a change in the purchasing power of the monetary unit (whatever it may be).

Changes in purchasing power of money should not just be taken as a matter of course; they are a social and economic evil and some palliative for them must be sought after. It has long been the aim of economists to discover some means of keeping the price level stable. If what the dollar will purchase varies sharply over a given period, the stability of business is threatened; and so also are financial operations which extend over this period. Creditor and debtor relationships are upset. The effect on bondholders and stockholders varies in accordance with a rise or fall in the price level. Industrial processes covering a long period are affected by changes in purchasing power.

Let us consider the effect of changes in the price level on debtor and creditor relations. Let us suppose a debt to be created in 1920 in United States when the index was at 154.4, and that the debtor desired to repay his loan in 1931 when the index registered 73. He will have to repay the same number of dollars that he borrowed, but in 1931 those dollars would buy more than twice as much as a similar sum in 1920. The debtor returns a command over goods more than twice as great as that he borrowed. The creditor gains, and the debtor loses. If the debt had been contracted when the price level was low, and was repaid when the price level was higher, the opposite would be true -- the creditor would lose, and the debtor gain. In this instance, the effect

of changes in the price level on creditors and debtors has probably been exaggerated. Although a rise in the price level harms creditors to some extent, it also cushions this effect and minimizes the harm. Higher prices mean a period of prosperity and greater profits and the creditor while he loses purchasing power when a debt is repaid, he also benefits from greater business activity. In a similar manner a fall in the price level means a period of depression usually. The debtor although he loses, when he has to repay more purchasing power, yet he benefits from the fact that his income will buy more. So the harmful effects in each case are cushioned to some extent by the same changes in the price level that cause them.

Bondholders and stockholders are peculiarly situated with respect to changes in purchasing power of money. It is most clearly exemplified by * Irving Fisher when he gives the example of a company which in 1913 had a bonded debt of \$100,000,000, and a similar amount of outstanding stock; each of which yielded 5% or \$5,000,000 -- a total of \$10,000,000. Let us suppose ~~this~~ company does the same volume of business in 1920, but at a doubled price level. The amount of money for distribution among bondholders and stockholders would have doubled in 1920 -- \$20,000,000. Out of these earnings the bondholders will receive, according to contract, the 5% interest on their bonds which is still \$5,000,000, and this amount in 1920

* The Money Illusion by Irving Fisher p.78

has a real value of only half of that in 1913. The remaining \$15,000,000 will be distributed among the stockholders, and this sum in 1920 has greater purchasing power than the sum of \$5,000,000 had in 1913. In this case it is quite evident that the stockholders gain at the expense of the bondholders. If the price level had fallen before the earnings were distributed the opposite would be true.

Another person who stands to gain when prices fall and lose when they rise is the wage earner. The movement of wages always lags considerably behind the movements of prices. Thus, while prices fluctuate freely wages tend to remain fairly stable, with the result that wages will purchase more goods as the price level falls and will purchase less goods as it rises. The depositor in a bank stands to gain or lose in a manner similar to the wage earner.

Evils from an unstable currency occur not only within countries, but also between them, especially during and after the Great War. Almost all European countries borrowed heavily at a time when prices of commodities were at their highest. In most cases the money borrowed was turned into actual goods and comparatively few were obtained. Now when the debts are payable, prices have fallen to a half or less of what they were when the debts were contracted. This means that it takes more than twice as many goods to repay the capital of the loan. On top of this the interest on the capital has accumulated and must be paid.

It is not hard for anyone to see the social injustice or the unfairness arising from unstable money. Professor Fisher likens it to a pick-pocket or a lottery. With every change in the price level one class of individuals unintentionally picks the pockets of the other; or to put it in another way one class wins the stakes of the other as in a lottery. * Professor Soddy aptly phrases it: "The variations of the purchasing power of money expose the community to wholesale injustice on one side and undeserved gain on the other." It is utterly impossible to determine to what extent this wholesale pickpocketing is carried on.

In spite of the immensity of these undeserved gains and losses in purchasing power, few people, indeed, realize that they have lost or gained. Because most persons actually think only in terms of dollars and cents, the fact that they have lost or gained in purchasing power is hidden. We hear some say that our standard of living is high; they believe it is high because prices have risen; they give no thought to the fact that the value of money may have fallen; yet in most cases that is actually what happens. So great is the ignorance of the populace on this point that Irving Fisher has written an enlightening book on the subject, entitled "The Money Illusion". If we considered our dealings in money in terms of purchasing power over commodities, instead of actual

* Wealth, Virtual Wealth, and Debt by Soddy p. 230

terms of money we would get a true picture of our gains and losses. That after all money is nothing more than a command over commodities, should not be forgotten.

In a hearing before a sub-committee on banking and currency of the House of Representatives in United States in 1932, Professor Fisher stated his beliefs about an unstable currency, which may briefly be summarized as follows:

1. Money always has been unstable with a few exceptions.
2. Inflation and deflation are injurious, and if as extreme as the present, ruinous.
3. The three main evils resulting from inflation and deflation may be divided into three sections-- social injustice, social discontent, and social inefficiency.
4. People are prevented from realizing this by what he calls the "Money Illusion."
5. The present depression 1929 to 1933 is due in most part to deflation.
6. The price level could still go much farther down than it is now if something isn't done about it.
7. This drop in price level could have been largely prevented.
8. Even at the present time it is curable to some extent.
9. If it is not cured, the capitalistic system, as at present, is threatened.

Many of these beliefs are illustrated well in a series of events which transpired in 1929, and can be traced to the system of unstable currency. To begin with, two items, one depending on the other seem to stand out prominently as a cause of the present depression of business -- over-indebtedness and deflation of prices -- and almost all events can be explained in the light of these. In 1929 there was the stock market crash which occurred at a time when the world was overshadowed by huge war and inter-governmental debts. In the United States the war had caused great farm debts. Post-war conditions were at the root of wild financial speculation as to the rate of recovery at home and abroad, since many new inventions had been discovered. Many only invested for a short time and then withdrew from the markets; these were the ones who were dangerous to society since they increased the number and amount of the debts. A "debt disease" seems to have attacked the economic system. The present indebtedness of the United States is now estimated to total more than \$200,000,000,000. The "debt disease" must have been contagious, for eventually, following Professor Fisher's argument, it spread to the dollar and it contracted the "dollar disease" in the following manner,--

The per capita indebtedness of United States is not abnormal, but the point is, that it is too few people who are in debt too far. When it is discovered

that certain people have such huge debts, it becomes harder for them to obtain credit. The only remaining way to get money is by liquidation; that is, they have to sell. Because they are forced to sell, they drive prices down. When prices seem to be dropping, others fear they will be caught in a wave of falling prices, so they also begin to sell, driving prices still lower. This has all started from a few trying to remain solvent. As debtors begin paying off their debts there is a contraction in currency, since in most cases the debt was created by the bank (i.e. a deposit was entered to the credit of the borrower by means of a book entry.) When that debt is repaid by means of a check on the borrower's deposit, that much money disappears from circulation. So the contraction of currency begins in this way and prices drop still more. Falling prices indicate an increase in purchasing power of money. It affects assets, but does not affect liabilities, since they are usually fixed in terms of so many dollars. So that the value of the assets fall while that of liabilities remains the same -- the difference between assets and liabilities becomes smaller, bringing others near bankruptcy or into bankruptcy. Following this reasoning through further, it becomes evident that there is a corresponding fall in profits. In a capitalistic system it is the entrepreneur or the profit-taker who operates industry. When his profits become smaller or nil, he

will be forced in many cases to shut down the plant, resulting in unemployment. In this connection, the Independent Labour Office, in affiliation with the League of Nations, investigating the problem of unemployment, have reached the same conclusion --

"Fluctuations in the purchasing power of gold are indisputably a cause of unemployment." All of these conditions have a psychological effect -- there is pessimism, because of the prevailing conditions. Unemployment causes distress. People who are in doubt regarding the future hang on to their money. Money is withdrawn from circulation and as the hoarding increases, there will be bank failures; a bank must have money in order to carry on. Finally there is a change in the interest rate -- it becomes lower in a period of depression (i.e. the rate in terms of money is actually lowered) but when the price level falls faster than the rate of interest, it happens that in terms of purchasing power of money, the interest is higher. The "money illusion" tends to hide that fact too.

In his book "Booms and Depressions", Professor Fisher has again emphasized the fact that unstable money is responsible in a large measure for our business cycles which comprise only a series of booms and depressions. In his study of business cycles, he finds a definite order of events transcending in all of them. In this series of events can be traced the part played by unstable money.

The various steps are:

*

1. Debt liquidation.
2. Currency contraction.
3. Dollar growth -- its swelling (considered usually in terms of a falling price level.)
4. Net-worth reduction (excess of assets over liabilities.)
5. Profit reduction.
6. Lessened production, trade, and employment.
7. Pessimism and distrust.
8. Retarded circulation.
9. Lowered money interest -- but raised real interest.

These steps have been outlined briefly above. In the early phases, it is not difficult to connect the "debt disease" (too much debt) through currency contraction to the "dollar disease" (a swelling dollar). The key to all depressions is the "dollar disease" or falling prices. Both W.C. Mitchell and Dr. Thorp have observed this fact-- that when prices are falling, a depression lasts a long time, but if by chance an up-turn occurs, a depression is cut short, as it were.

At the present time the dollar is our unit of currency and it is defined as 23.22 grains of fine gold. It is constant in gold content, but its purchasing power fluctuates constantly because the price level is always fluctuating. Such a currency has been demonstrated as unsuitable for our needs. It does not fulfil one of the prime requisites of a good unit of

money -- it does not serve as a store of value. A unit of money stable in purchasing power is what we need and has been eagerly sought after for many years by outstanding economists. Among suggested palliatives, the "compensated dollar" plan of Professor Irving Fisher of Yale, first published about 1911, stands as one of the foremost and one of the least criticised ever suggested to establish a stable unit of money.

CHAPTER II.

STABILIZATION IN HISTORY.

An examination of prices in the course of history reveals that the price level has never remained stable. Ever since the introduction of money into the economic system, the monetary unit has been continually changing in purchasing power and it has always been regarded as an evil to cure. Many and varied have been the remedies prescribed by the peoples in the various ages to keep the general level of prices even and by this means to maintain a definite standard of living.

The first instance of a so called debasement of the coinage was when Solon changed the weight of the Athenian silver drachmas, making them lighter. This was done apparently to obtain a more convenient standard, but it can also be argued that it was aimed at raising prices which were very low at the time. The famous debasement of the Athenian coinage by the tyrant Hippias in 512 B.C., when he stamped all coins with a mark denoting double the former value, may also be attributed to a serious fall in prices, following on the capture of Thrace by the Persians and the cutting off of the supplies of silver. It is very difficult to unravel the real significance of these operations, but, that they were a crude attempt at compensating the coinage by reducing its weight at

a time of low prices, does at least give a credible explanation.

Even the Roman Empire did not escape it. The Roman emperor, Diocletian, in 303 A-D. was faced with problems which also face us in recent times. Then, as now, the price level varied and at this time it threatened to rise so high that the actual existence of the people bordered on starvation. High prices at that time were caused by a burst of credit inflation, by which large credits were given to farmers (land-owners) with only small holdings, thus making it almost impossible for them to repay. However, Emperor Diocletian sought to solve this problem by issuing a decree in which the maximum prices of over 800 goods and services were fixed. Their unit of currency was a copper coin, which today has about the same value as a half-penny, and in terms of our money some of the prices decreed were as follows,--

Teacher of Greek, Latin, Geometry, per pupil, per month		\$0.87		
Teacher of Rhetoric, per pupil, per month		1.09		
Counsel for presenting a case		1.09		
Counsel for finishing a case		4.35		
Watcher of clothes in public bath	ea.	.09		
Babylonian hide of 1st. quality		2.17		
Manual labourer	per day	.11	plus food	
Bricklayer	" "	.22	" "	
Driver for camel, ass, or mule	" "	.11	" "	

Veterinary for straightening hoofs, per animal		\$0.26	
Wheat	.75		per bushel
Rye	.45		" "
Honey	0.15--	0.30	" quart
Butter	.10		" pound
Eggs	.05		" dozen
Wool	.22		" pound

By this edict, Diocletian forced Egypt to accept Roman money and the Roman scale of prices and wages. The edict was only enforced for a period of ten years. It caused riots and so much discontent, it had to be recalled. Earlier history of the Roman Empire also contains examples of the ever changing price levels, which seemed to plague them as they do us.

Nor was England in the later Middle Ages free from the same evil. The Tudors in the 15th and 16th centuries had to face a rising price level. The whole reign of the Tudors involved higher taxes which were levied by the government to meet increasing costs due to increasing prices. About this period the gold and silver, brought from America by Spain and Portugal, were just beginning to filter into commerce and as a result, prices all over Europe began to rise. The downfall of the Stuart monarchy was brought about by the fact that their costs of governing were increasing, while their tax incomes remained fixed. Their reigns were one long continuous quarrel with parliament as to

which should levy additional taxes on the nation in which Parliament finally won. Other European governments had the same problem to deal with and some of them attempted regulation of prices by levying higher taxes and more of them. Almost all such schemes failed.

More recently, the 19th century contains a series of trade cycles which can in reality be traced to changes in the value of gold, or in which changes in the value of gold play an important part. One of the main causes of trade depressions in the earlier half of the century was the increase in the value of gold, because there had been crop failures and this meant that foreign grain had to be imported. Any increase in imports entails an export of gold from the country, causing a loss of purchasing power and a fall in prices. From 1815 to 1820 was a period of depression following the Napoleonic Wars due in a large measure to the increase in national debt and public expenditure. Goods had been bought from England at such high prices that at the end of the war, debtors found they could not pay. However this situation gradually corrected itself -- the farmers had a series of good crops, manufacturers discovered new markets in Central and South America.

After 1820 speculation followed in developing these new American markets. Credit was issued more freely until in 1825 a crash came. There was drastic deflation through a series of bank failures. The Bank of England had to supply the great demand for currency by issuing £1 notes. In spite of this, banks

and corporations failed. Confidence gradually returned, and in the '30's new machine inventions in weaving and spinning, and in railways were being introduced for the first time. Again financial speculation set in and a large trade with United States developed. This boom was brought to a close in 1839, after there had been a series of crop failures in England; and gold had to be exported for foreign grain again. The rise in the price of cotton, resulting from a monopoly held by the Bank of United States, aggravated the situation. The sudden drain of gold in 1839 caused a financial panic. During this period 1837-1840 the Chartist movement commenced in opposition to the times. One of the most active members of the Chartist group, and also a currency crank was Thomas Attwood, who presented a suggestion for currency reform, which approximated the plan of the "compensated dollar." He advocated briefly, that some system be devised for altering the standard of value with the fluctuations of prices to cure instability of conditions. By 1844 the depression had lifted again, but another followed in 1848 as a result of revolution in foreign countries, and unrest at home; and also due to the Bank Act of 1844, which had divided the Bank of England into two departments. Peel's tariff and foreign policies brought on a new revival of trade, which continued till 1857 when a bumper wheat crop precipitated another crash. For the remainder of the century and later the price level continued to fluctuate as it did in the period just described. It is no wonder men began

to think of some palliative to stabilize prices. The conditions caused by fluctuating currencies forced men to think and several propositions were launched as remedies.

Professor Fisher asserts that the earliest definite proposal similar to his "compensated dollar" was that of John Rooke, which was published in 1824, in a book called "Inquiry Into the Principles of National Wealth." This plan preceded that of Thomas Attwood, so it may be aptly called the embryo of the "compensated dollar." In his book, Rooke describes it thus:-- "The regulation of the new system is, that in whatever proportion the general and annual price of farm labour throughout the kingdom has a tendency to rise or fall, that rise or fall shall be counter-acted by a reverse rise or fall in the current price of gold and silver coin."

Simon Newcomb who was an astronomer also wrote on economics. He too, proposed almost the same thing. Professor Alfred Marshall of Cambridge, was the author of a plan for stable currency as early as 1887. He suggests briefly that "an official index number, representing average movements of the prices of important commodities might well afford the base for a Unit of general purchasing power, in terms of which long period obligations might be expressed." In 1892 Mr. Aneurin Williams, an Englishman, worked out a plan for a stable currency in some detail.** "If we could by

* Money, Credit and Commerce----Marshall p.36
 ** A "fixed Value of Bullion" Standard ---Economic Journal, 1892

magic increase the weight of gold in a sovereign just in proportion as the purchasing power of a single grain of gold decreased, and decrease the weight just as the purchasing power of the grain increased, we should keep the total purchasing power of the sovereign constant." He proposed to do this by varying the quantity of gold in the sovereign with the variations of an official price index. The bullion sovereign would circulate in the form of paper notes, but of course, the actual sovereign would be held in reserve.

All of the plans so far described have been similar to Professor Fisher's "compensated dollar." Obviously his plan of currency reform is nothing new. However, not all plans for stabilization follow the same line of argument. Many others differed entirely, since other authors seek the cause of instability in other sources.

Bimetallism.

Bimetallism has been suggested, and also been tried to prevent a fall in the price level, when the supply gold became scarce. Under it, gold and silver would be freely minted; there would have to be a permanent fixed mint ratio between gold and silver. It is argued that a bimetallic standard would serve better than the monometallic one since the changes in the value of one metal in one direction are likely to be offset by changes in the value of the other in the opposite direction. Professor Marshall criticises bimetallism on the grounds that when it was tried, it

appeared always to have been open to the danger of becoming, and indeed did become, "alternative metallism," depending on which metal was the more valuable in the market. If gold were the more valuable, then according to Gresham's law silver would drive the gold out of circulation, and silver would remain as the currency. On the other hand, if silver were more valuable, then the gold would tend to keep circulating, and silver would disappear. Symetallism, in a way, resembles bimetallism, but the currency is based on both gold and silver together. Each dollar would be defined as so many grains of gold and so many grains of silver. (i.e. the dollar would not contain all gold or all silver, but so much of each.) The same criticism applies to symetallism as applies to bimetallism.

Keynes, Cassel, Fisher.

Numerous other stabilization schemes place the blame for instability on the issuance and control of credit, and consequently they seek to solve the problem by various means of credit control. Two of the best plans along this line have been designed by two modern economists -- J.M. Keynes, of England, and Gustav Cassel, a foremost Swedish professor of economics. Prior to a review of their suggestions, it may be well to realize, that to seek the cause for instability of prices in credit is the same as to seek it in changes in the value of gold, since if credit is expanded, more money will begin to circulate, and prices will rise, with the result that gold itself will depreciate in value. In this respect then, Fisher, Keynes and Cassel

all agree; but their methods of attack differ. Fisher would attempt a solution by regulating the weight of gold in the monetary unit; Keynes and Cassel would seek the remedy by controlling the amount of credit through various means.

According to Keynes, the only method of controlling prices open to modern banks is by adjusting the amount of credit through the control of the rate of investment, which should be so sensitively controlled that it will operate effectively and quickly. He believes monetary reform * "consists in adjusting the creation of credit so as to meet all genuine demands for working capital." ** "The true criterion of a creation of credit which shall be non-inflationary lies in the preservation of a balance between the rate of saving and the value of new investment." It is his theory that the banking system of any country should not only be allowed to control the volume of money in circulation by retaining an arbitrary control over the price of gold, but also its distribution between the various uses, since he contends that money going to different uses may have different exchange values, and it is the proportion of the total supply of money going to these that constitutes the chief factor in determining whether there is inflation or not. Mr. Keynes has even formulated an equation of exchange, which may be used by a banking system when it attempts to control price changes. Of course, this proposal

* A treatise on Money -- Vol. II p. 218 Keynes
 ** A Treatise on Money -- Vol. II p. 220 Keynes

requires a system of highly centralized banking, preferably one of central banking.

It is in a world wide system of central banks that Professor Gustav Cassel seeks a solution for unstable prices, and his plan is applicable to all countries, not to any one in particular. Briefly, it suggest that all central banks co-operate *ⁿto extend devices such as the gold exchange standard for economizing gold." Apparently he blames a growing scarcity of gold for the rise in prices. All countries would be able to introduce price stabilization, for now they might enjoy the benefits of surplus reserves.

These two suggestions by Keynes and Cassel along with that by Irving Fisher are considered to be among the most prominent in recent years, for stabilization of purchasing power. Keynes and Cassel agree in that both blame the issuance of credit for any disequilibrium among prices, and both seek its remedy in control of credit by means of a central bank. Although little fault can be found with either of these plans, both are open to the same criticism as central banks, and one of the chief arguments against them is that they are liable to political interference of the worst kind.

Fisher's Compensated Dollar.

Professor Fisher's remedy for the unstable purchasing power of money lies in the "compensated dollar," first advocated about 1911, and since then the

object of much investigation and publicity. The basis of its solution is found in the fact that it replaces a unit of currency, stable in weight (of gold) and varying in purchasing power with one stable in purchasing power and varying in weight (of gold). To him the cause of fluctuations in purchasing power is located in the value of gold, not in the value of commodities. With this fact in mind he formulated the "compensated dollar"; it contains at least five distinct points,--

- * 1. "To abolish gold coins and to convert our present gold certificates into "gold dollar certificates," entitling the holder to dollars of gold bullion of such weight as may be officially declared from time to time.
2. To retain the virtual "free coinage"-- that is, deposit--of gold and the free redemption of gold dollar certificates.
3. To designate an ideal composite goods-dollar consisting of a representative assortment of commodities, worth a dollar at the outset, and to establish an index number for recording, at stated intervals, the market price of the composite dollar in terms of the gold dollar.
4. To adjust the weight of the gold bullion dollar at stated intervals, each adjustment to be proportioned to the recorded deviation of the index number from par.

* Stabilization of Business (Stabilization of the Dollar--
Fisher) ---Edie p.100-101

5. To impose a small "brassage" fee not to exceed any one change in the gold dollar's weight."

The plan should be established to start at or near the existing price level, but if it is too high or too low, steps should be taken to lower or raise it to the price level at which it is desired to stabilize.

The "compensated dollar" must not be confused with the tabular standard, which in one respect resembles it, that is, in the rise of the index number as its base. The tabular standard was devised solely to alleviate the effects of rising and falling price levels on debtors and creditors; so in it the index number is used to indicate, as it rises or falls, how many dollars more or less a debtor must pay in order to liquidate his debt. The idea is that the debtor must repay the same amount of purchasing power that he borrowed. In both of these plans the aim of social justice appears.

In some respects the "compensated dollar" bears a likeness to the gold-exchange standard. The latter purports to be a system of full or partial redemption of the country's currency in gold, but the gold does not have to be held in the home country; it may be held as a reserve in various world centres. It is a system whereby the currency of a country (which has some other base than gold) is manipulated in such a way as to prevent its value wandering fremppar with gold to any great extent. There are points above and below par within which the currency may fluctuate without any interference,

but if it goes beyond them either way, then the currency is contracted or expanded; as is required to bring it back to par. This kind of standard exists between India and Great Britain and so far has operated well. The "compensated dollar" * involves a combination of the tabular standard with the principles of the gold-exchange standard."

* Purchasing Power of Money -- p.337.

CHAPTER III.PARTICULAR DETAILS IN THE WORKING OF
THE "COMPENSATED DOLLAR."Index Numbers as Measures of Purchasing Power or Cost of Living.

Can we rely on index numbers to measure variations in the price level? For our purpose, the answer is -- Yes! Although in such an assertion we may stir up the most violent opposition among statisticians. Index numbers were invented sometime ago, but only recently have they been perfected to such an extent as to be accurate in measuring the purchasing power. They comprise the prices of numerous commodities that enter into the every day life of the people. Changes in the prices of individual commodities are absorbed into the average change in the prices of all the other commodities. By raising the index number of prices it is easy to determine how many goods one dollar will buy at any one time. If the price level be always stable as the plan of the "compensated dollar" calls for, then the dollar will always buy the same amount of goods. If the prices of several articles have risen in relation to the prices of others, one may pay more for them, but the increase in price for those commodities may be compensated by a decrease in the prices of the rest. In such cases, a dollar may always purchase the same amount of goods, and the index number in measuring the purchasing power of it is analogous to the yard-stick in measuring a bolt of cloth. If the prices of a majority of commodities rise

or fall, this is reflected by a rise or fall in the index number of prices and it is an indication of a rise or fall in the cost of living, since it will require more or less money to buy the same necessities. Consequently changes in the index number may be said to measure the extent of changes in the cost of living. However, it must not be forgotten that the concept "cost of living" is a very illusive one since with every change in the price level of the most staple commodities, the principle of substitution enters. (i.e. If the price of any necessity or luxury rises, a cheaper grade may be substituted or the article may be discarded altogether; if the price level falls a better grade may be bought or a more plentiful diet may be indulged in and more luxuries may be added.) For such reasons therefore, we cannot definitely state that changes in the cost of living are denoted by changes in the index number. It is on these grounds that Professors Bowley, Fisher, and Yule find points of difference. In spite of the fact that there are wide differences regarding index numbers as true measures, (especially in the case of the price level) they are widely used in many countries to measure the extent and trend of certain economic and social phenomena. Surely this demonstrates that index numbers at least give a rough idea of any changes which have occurred in the price level; after all, a rough idea of a trend in prices is better than none at all.

Selecting of Data.

There are many different kinds of index numbers. Some differ with regards to the method of computation, some differ with regards to the price data used, and still others differ with regards to the number of commodities contained in them. Some indexes are weighted, and some unweighted. Each different type may be regarded as another means of approach to the same end. As long as it gives accurately the general trend of all prices, the form of it may be adopted. For ease in gathering data, and for accuracy of data, a good choice of index number would be found in one constructed on the principle of that of the United States Bureau of Labour Statistics. In fact, if United States should undertake to establish the "compensated dollar" that very index would work. The various other countries have official index numbers upon which the "compensated dollar" could be based. That index contains the wholesale prices of over 784 commodities, which are representative of the different classes of goods, and has reached such a high degree of efficiency that the trend of prices over the previous week can be computed inside of 48 hours. The various weights, assigned to the commodities in it, were determined by their relative importance as measured by the amounts of them marketed in the last census year -- thus the more important commodities or those which have the greater use, secure the greater weights. W.C. Mitchell has proven that when such a large number of commodities comprise the index, the matter of weighting can be

dropped with no wide variation occurring. The problem as to how many price series should be included in any index number has been discussed at great length by Dr. Irving Fisher, and such eminent statisticians as Dr. Bowley and Mr. Yale. The conclusion seems to be that if a large number of commodities is included, weighing becomes superfluous; if a small number, weighing is necessary. The index number of the Dominion Bureau of Statistics covers 502 commodities; that of the Canadian Bank of Commerce, 80; yet it is impossible to say which one is the superior.

The Problem of a Proper Base Period.

Every index number requires a starting place -- a base period. In the "compensated dollar" plan, the aim is to keep the price level always at or near that of the base period. That implies many things. It involves the question of an average year and the wide variances of opinion concerning it. What constitutes an average year? Some say there isn't any such thing. Others say that we should take the average of a period of years for a base. Still others say it doesn't matter what the base is, any year at all will do. The choice of a base period, at which prices will be stabilized, must not ignore the financial relationships existing between the various classes of people. It would be unwise to choose a base in which prices were abnormally high, or one in which they were abnormally low. Stabilizing when prices were high would be unjust to debtors, and stabilizing at a low price level would be unjust to creditors.

A good base would be one situated between a period of low prices and one of high prices, or one which seemed to typify a series of fairly stable years. Another consideration must ensure that prices in the base period must be such as to guarantee all industries, including agriculture, a fair margin of profit with which to carry on. A general concensus of opinion seems to favour 1926 as a suitable period, which may be used as a base at which to stabilize prices now.

The Frequency of Changes in the Gold Content of the Monetary Unit.

Some difference of opinion exists regarding the frequency of making the variations in the weight of the gold dollar. Some advocate that they be made daily, some say weekly, others say monthly; bi-monthly and quarter-yearly changes have been suggested. My own choice would be bi-monthly changes. An examination of index numbers of prices in United States since 1914 will substantiate the choice. (Base 1926--100)

1912	69.1	1918	131.3
1913	69.8	1919	138.6
1914	65.1	1920	154.4
1915	69.5	1921	97.6
1916	85.5	1922	96.7
1917	117.5	1923	100.6
1924	98.1	1929	95.3
1925	103.5	1930	86.4
1926	100.0	1931	73.0
1927	95.4	1932	64.8
1928	96.7	1933 (5 mo.)	63.4

Over these two decades it was during the war and post-war years 1915-20, a period of seven years, when the most drastic inflation and deflation occurred, and during 1929-32, a second period of post-war deflation, that prices fluctuated by more than 5.4%. During the most

stable periods 1912-15, and 1921-29, periods which economists claim to be the most desirable to maintain since the whole economic system seemed to be functioning well, the greatest fluctuation was 5.4%. From the fact that a change of only 1% in the gold content of the dollar can be made at any one time, it follows that in six periods of two months each, the difference in the price level of 5.4% during these normal years could be corrected. It is highly probable that much greater annual fluctuations could be corrected also, since the change every two months in the gold content would bring the price level back nearer the base. Each change would tend to return the index number to 100.

The Problem of Preventing Speculation.

Naturally in a plan where the amount of gold in a dollar always varies, speculation is invited. The profit motive might encourage some to buy gold from the mint just before a bi-monthly alteration in the hope that the price level will have fallen, and if it has, they will receive more certificates from the mint when they return the gold. In the "compensated dollar" this overnight speculation has been allowed for by the process of limiting each change in gold content to 1% and at the same time a "brassage" fee of 1% is charged when gold is bought from the mint. The mint would charge 1% more for gold than it would pay for it. The "brassage" charge removes any motive for "overnight" speculation. The proceeds from it recompense the government for it resembles a profit which is due to it for supporting the monetary system.

Brassage resembles the ancient custom of seignorage which was of Norman-French origin; doubtless the idea of brassage has developed directly from the seignorage. In a feudal society, the right of coinage was only a privilege of the seigneur, or king. Whenever metal belonging to his subjects was minted by him, he exacted a fee. Any income derived from these fees was called seignorage and the seigneur retained it for his own use. Unruly seigneurs often abused their privileges by making all existing coins illegal, and thus forced all of them to be reminted. In England two charges were made for minting metal -- there was the seignorage which went to the king and there was the brassage which went to the mint officials. The word "brassage" has never been commonly used; it has come to be known as "mint-charge". In the "compensated dollar" then, the old custom of seignorage would be revived in the form of brassage which would be used to finance the mint operations.

Brassage charging, however, does not remove longer period speculation. A speculator might buy gold expecting to re-sell it to the mint at the end of several months in the hope that it may have appreciated in value. A glance at annual index numbers reveals that it is only in abnormal periods that gold has appreciated more than 5% in a year, so that the chance of gain would be slim, and would not offer itself frequently, since the maximum gain could only be 1% every two months and the maximum gain would not likely continue long. So for longer periods the risk of gain would be so

great as to discourage any speculation.

Operation of Varying the Gold Content of the Dollar.

The most intricate part of the plan must yet be investigated, namely how the changes in the gold content of the dollar would operate to correct the price level variations and bring the index number back to 100. This involves an examination of the gold reserve upon which the quantity of gold certificates depends. Some sort of permanent and adequate gold reserve has got to be guaranteed; for the "compensated dollar" does not divorce itself entirely from gold. Modern currency systems in most countries demand that the reserve of gold backing the notes should not fall below a certain percentage. When United States and Canada were on the gold standard it was possible to redeem notes for gold at any time, the gold being of certain weight and fineness, always remaining at 23.22 grains of pure gold for each (\$1.00 note) one dollar note. Under the "compensated dollar" when the amount of gold in a dollar is continuously fluctuating, the weight of gold transferrable for a dollar would fluctuate-- so that a fixed gold reserve would support fewer or more dollars, according to whether the weight of gold in the dollar increased or decreased. The "dollar for dollar" gold backing in the present system could not be maintained under the "compensated dollar". If the dollar's weight were increased by 1% the fixed gold reserve would contain about 1% fewer of them or the reserve would be 99% against outstanding notes. Thus the reserve constantly changes depending on how the index number varies. No attempt is made to

regulate it. Professor Fisher calls it the "indefinite reserve" system.

It is believed by some that a sound currency system requires a 100% reserve of gold. In the "compensated dollar" plan a 100% reserve could be maintained, if it were considered desirable. Suppose, as above that the dollar's weight were increased, and the reserve fell to 99%. Two possible methods of restoring the 100% reserve lie open -- either to increase the gold holdings, or reduce the number of outstanding certificates. The latter could be done simply by the mint withdrawing notes from circulation and in such an event the government would stand the loss. However if, on the other hand, the reserve were greater than 100% it could be restored by the issuance of more notes and these could be circulated by government expenditure. Here the government profits. This may be further clarified by an illustration of its entire functioning--

Let us suppose that at the end of a bi-monthly period, the price level has risen as indicated by a rise in the index number. This would be a signal for the mint to increase the weight of the dollar (i.e. to reduce the price of gold). As a result, the tendency to deposit gold would lessen, and the tendency to redeem outstanding gold certificates would increase, both tendencies causing a lessened volume of circulating certificates. As the gold reserve fell below 100%, some certificates would be destroyed, or sterilized for the time being by the government, so that they would not be put back in circulation. The index number would gradually be restored

to par by such operations. The whole process as described above would have been reversed if the index number had fallen instead of risen. The one great advantage of having a constant reserve is that any variations which have to be made in the dollar's weight can be considerably reduced. The system outlined above is known as the "definite reserve" system.

Both the "definite reserve" and the "indefinite reserve" systems possess advantages. With the latter, which is quite the simpler in operation, the changing weight of the dollar only, regulates the price level. But with the former, two factors enter into the regulation of the price level -- the change in the dollar's weight, and the adjustment in the number of certificates required to maintain a constant reserve. The "definite reserve" system, although it has an added complexity, is probably the more efficient for the reason that the two factors acting on regulating the price level bring about the adjustment to normal much more promptly. It also has the advantage to society of assuring a sufficient reserve, whereas in the "indefinite reserve," a continuous period of rising prices may result in a falling gold reserve. Methods of assuring an adequate reserve have been suggested to maintain the "indefinite reserve" system. One of them suggests that a definite ratio of certificates to gold be maintained, say 50%. Any reserve over that the government might appropriate for investment purposes. Any deficiency in the reserve the government would have to make up from its own funds.

Another method suggests that a reserve of 50% be kept constant and along with this a variable surplus maintained. All outstanding certificates then would have a gold backing of 50% as well as the variable surplus, varying according to changes in the weight of the dollar. It would not be necessary to hold this surplus as a mere reserve in addition to that of the 50%. The surplus may be invested and still greater reserves may be accumulated.

Under the present system variations in the value of gold, as reflected in the changes of the index number are unjust to all members of society through changes in the purchasing power of money. Any losses or gains due to the fluctuations are absorbed by the individuals. The "compensated dollar" corrects this fault of the present system. People would deal with money which would always buy a certain amount of goods. Any losses or gains from oscillations in purchasing power have been transferred from the individuals to the government (society as a whole.) If a fall in the price level occurs, certificates may be withdrawn from circulation and destroyed or sterilized by the government; the government loses by the number of certificates withdrawn. If over a period of years the government has lost considerably, it may compensate the loss by increasing the taxes of the people -- thus all people share equally the burden caused by a depreciated dollar. On the other hand, if the government has gained by a rise in the price level which necessitates more certificates, new ones may be issued and circulated by means of government expenditures. A gain over a period of time would allow the taxes to be reduced and thus the

gain is spread equally to all taxpayers. No one class of individuals shoulders all the losses or benefits by all the gains; everyone shares them equally.

Discontinuance of Coins and "Gold Clauses."

The adoption of the "compensated dollar" would mean the discontinuance of our present gold coins of certain weight and fineness, and also the discontinuance of "gold clauses" in contracts. The whole problem of what to do with existing coins and "gold clauses" arises; it can only be solved by appealing to the law. It would be possible to impose a penalty on all those who hoard gold coins from circulation after a certain date. President Roosevelt of United States has employed this method to encourage or enforce the return of all gold to the banks; anyone guilty of hoarding is heavily fined. As the existing coins were retired, smaller taken coins of less weight or of some other metal could be minted and put into circulation. It is not deemed necessary any more to use gold coins of full weight — gold certificates would circulate just as freely.

Many bonds and future contracts containing phrases, which claim payment in gold of a certain weight and fineness, would have to be annulled. "Gold clauses" originated with the idea of protecting the investors against repayment in depreciated paper currency or in depreciated coin. Investors were no doubt attracted by the "gold clause", believing they had a safe investment; they did not realize that gold, as well as the paper representing it, varied in purchasing power. With the

new currency consisting solely of gold certificates or token coins, no assurance that an investor will receive exactly what he paid would be necessary, since the quantity of goods that a certain amount of money will buy is always the same. A tax on all bonds or contracts in which the "gold clause" appears would easily remove it.

Feasibility of the Plan in One Country Alone.

The feasibility of the plan in a single country has been questioned by many who hold that it cannot function unless all countries undertake to adopt it. It is sound to assume that differences between the prices which would be paid by the mints in the various countries for gold, might cause gold to be moved from countries with a lower price to those with a higher price, thus draining some and flooding others. Fisher opposes this apparently sound assumption, claiming that there exists a "fallacy of the mint price." For instance the mint price here of \$20.67 per oz. of fine gold (assuming the gold standard in operation) and the mint price in England of £4.4s.11d.f per oz of gold 11/12 fine, are the same. The par of exchange between Canada or United States and England is \$4.866 for £1 of English money and it is upon this par that prices of commodities in the two countries are based. Suppose the price of gold here has fallen 1%, the mint price of gold will become \$20.46 and the par of exchange will become \$4.82 for £1. It would be more profitable for miners to send newly-mined gold from here or United States to England when the price of gold remained

unchanged, thereby obtaining bills of exchange on London, which they could sell at a profit. As the volume of gold going to England increased, less profit would be realized, and the miners would soon find it just as profitable to sell gold to the mint at home at the price of \$20.46 which would become the new mint price, and the new par of exchange would be \$4.82 for £1. The new mint price contains fewer dollars but heavier ones. Unstable currencies conceal all of these facts from us. The terms "dollar" and "sovereign" only serve to indicate units of weight (of gold).

Under the gold standard, the price level within a country rises or falls according to whether gold flows into or out of its gold reserve; to some extent then its price level is controlled by the policies of its debtor and creditor nations. The best illustration of this occurred during the Great War, when the fighting nations practically dumped their gold on neutral countries as Sweden, United States, etc. The prices within these countries were inflated and most of them had to adopt preventive measures to sterilize this useless gold. United States received most of the unwanted gold. Now that the war is over, the participants; once they have deflated their currencies sufficiently, may withdraw gold from the neutral countries, and a consequent period of deflation will set in. Since the war there has also grown up a huge supply of gold available for short term loans, which seems to flow to centres promising the greatest return. This supply of gold has become unwanted,

since its movements are uncertain and affect the price levels in the various countries in an uncertain manner. With a stabilized currency, the gold inflation and consequent deflation in the neutral countries could have been prevented. In such a case, when gold began to flow into a country prices would rise; the weight of gold in the dollar would have been increased, corresponding to the increase in the index number. The quantity of dollars would remain constant and so prices would be kept stable. Newly added gold then would not be reflected in a high inflation of prices, but in dollars which contained more gold.

Providing that the principle of the "compensated dollar" worked, international trade in goods may be disturbed by a single country adopting it. In the long run, it is said that the rate of exchange between two countries varies in proportion to their price levels. In the one country we may assume the price level to be almost stable, and in any of the other countries it varies. The rate of exchange between a country with a fairly stable price level and one with a variable price level will be influenced or altered only by changes in the latter. If changes in the price level correspond to changes in the rate of exchange, the gain or loss from them is comparatively small and is due to a certain lag between prices and exchange fluctuations. To illustrate this, let us suppose the price level to have risen in one country, England, and remained stable in another, United States, and also the rate of exchange on the former will have fallen

correspondingly. Exporters in United States can sell their wares for higher prices in England; they will receive bills of exchange for more English pounds, but when they sell their bills of exchange for American currency, they will receive just as much as though there had been no rise in the English price level. So importers and exporters in a country with a stabilized currency would stand to lose or gain in a very slight degree. This risk of losing or gaining would, however, be minimized, since the old risks of business arising from changes in the purchasing power of domestic money would be eliminated were the system of a "compensated dollar" introduced.

No greater difficulty would be met in foreign exchange transactions if a single country or all countries were to adopt the "compensated dollar", than now exists when the gold standard has been generally suspended. In a time of chaos the gold standard is usually abandoned, the various currencies fluctuate wildly in the foreign exchanges. Surely one country with a stabilized monetary unit would subtract at least one element contributing to the confusion in the exchanges. Fisher suggests that one such currency having stable purchasing power could be resorted to as a "common denominator in foreign trade" just as well as a currency stabilized in gold content. The conclusion to be arrived at is that any country which adopts the "compensated dollar" singly will not be inconvenienced in any way by doing so. Also if any country succeeded in stabilizing its currency, other countries may follow.

A more general adoption of a stabilized currency would alter foreign exchange mechanism to some extent. With a gold standard the par of exchange between any two countries is determined from the weights of gold in their units of currency, which are fixed by fiat. However, the rate of exchange may differ from par according to the inter-relation of demand for and supply of products between the two countries. One country usually buys goods from another because it can buy them more cheaply there. (Prices are lower or the price level is lower.) As more goods and service are purchased, the deviation from par of the exchange increases until it exceeds the export gold point, and then gold flows from the buying country to the selling one. This gold flow tends to raise prices and wages in the one country and to lower them in the other, thus bringing the rate of exchange between the two back within the gold points and nearer par. This is the manner that gyrations of the rate of exchange above or below the gold points control the flow of gold to or from a country. The flow of gold tends to raise or lower the price level, depending on whether gold comes to or goes from a country. But with more than one country having a currency stabilized as in the "compensated dollar" (provided it functioned), the above described mechanism would not operate in the same way. In this case, the mint selling price and mint buying price would take the place of the "gold points". The price level, it is presumed, will be stable. The price of gold would fluctuate between the two prices, or the weight of gold in the unit of currency would fluctuate, and these alterations in weight would affect

the rate of exchange between any two countries. But any alterations in the foreign exchange rate would not be large; probably they would not exceed those variations from par, which occur under the gold standard. Money, of itself, is as useful to us as a car without an engine. When, let us say, dollars are bought in the international exchanges, it is really their command over goods that is purchased. If the gold standard were in operation, the amount of goods purchasable by a dollar would vary in accordance with the price level in Canada or United States. So, when the price level here is low, the dollar will be in great demand in the exchange markets because it will buy more goods; the reverse will also be true -- when the price level is high, the dollar will be in demand little. This practice of speculating in goods would be considerably decreased with the general acceptance of the new plan, since the dollar would always command the same amount of goods. The regulator of the price level would not be the external flow of gold to or from the country, but the internal flow of gold to or from the mint. Any change from the existing par would, of itself, tend to restore prices to the original prices before the change, and the old par would be resumed. These elements all acting on the price levels in the various countries would tend to have a steadier effect on international exchanges than the international movements of gold required under the gold standard.

CHAPTER IV.A DISCUSSION OF CRITICISM WHICH THE
COMPENSATED DOLLAR HAS AROUSED.Criticism of American Bankers' Association.

Naturally such a novel scheme will not meet with the approval of all classes of people. The most violent opposition to it comes from the bankers. In any country they comprise the most conservative group, regarding any suggestion to vary from what they call a "sound money" policy as sacrilege. In 1919 Professor Fisher presented his plan for stabilizing the dollar at an annual convention of the American Bankers' Association. There, the convention decided to investigate his "stable money" idea. The following year the investigating committee reported that

*"Professor Fisher's plan, though interesting and ably worked out, is wholly impractical and would involve grave dangers to the stability of our financial and monetary system." Their conclusion was accompanied with a few of the chief objections:-

1. "It would lead to foreign drains on the gold of United States in a period of crisis", since then the dollar would be lightened.
2. In periods of rapidly rising prices it would be almost impossible to maintain gold redemption.
3. If adopted at that time (1919), "it would

*Journal of American Bankers' Association --
November, 1920

perpetuate all the suffering which recipients of fixed incomes have experienced as a result of the rapidly rising prices of the war.

4. The plan would not have operated successfully during the war.

For these reasons the investigators deemed it inadvisable to ask Congress to consider the scheme.

In this same connection, B. M. Anderson, economist of Chase National Bank, has edited a pamphlet in which he amplifies and augments the grievances mentioned in the report. At the beginning, his insistence stands out, that the problem of sound money can only be solved by ^{*}"the restoration of the old-fashioned gold standard."^{*} His beliefs are:--

1. Professor Fisher's plan has no obvious or necessary connection with the "quantity theory" of money, yet he is one of its leading exponents. His plan seeks to control the price level by the weight of the dollars, not their number.
2. In time of war it would do positive harm. Scarcity of labour and goods in periods of war cause prices and wages to rise in certain industries. Governments would have to keep adding gold to their monies to keep the average of prices stable. This would mean that prices of goods produced by other industries would have to fall considerably, and it might bring ruin to them.
3. If prices were continually rising, the governments would find difficulty in maintaining redemption.

* The Fallacy of "The Stabilized Dollar"-- E.M. Anderson

4. Its adoption would introduce a new element of instability into the finances of the government, and the gold basis of currency itself, since in periods of crisis gold would be withdrawn from the country.
5. It exposes the government to raids by speculators. If there is an upward tendency of prices, the government will have to increase the weight of the unit. "Bear" speculators could deposit gold with the government in exchange for gold certificates, and these could be returned later for a larger amount of gold.
6. B.M. Anderson cannot agree with Professor Fisher's premise that changes in prices are due to changes in the value of gold, not to changes in goods.
7. The attempt of a single country to adopt the "stabilized dollar" is absolutely out of the question since it would increase complications in the international exchanges, especially between this country and any other country on the gold standard. However, he does admit that this criticism counts for little with the aberrations in the exchanges as existing in 1919. Again, if the plan were applied to the world, he foresees difficulties in choosing a suitable world index number of prices, or in case each country had its own index, a multiplication of difficulties.

In spite of this most vociferous attack on his plan, Professor Fisher ably defended it, but before doing so, he scourged the bankers for their conservativeness. Some of their points, he demonstrates are not real criticisms, but only faults, which can also be found in the gold standard, or which, by some slight alteration, may be corrected. Two special faults --

(1) In a period of rising prices it would be difficult to maintain gold redemption, and (2) In a period of falling prices, foreign drains would threaten the maintenance of the gold reserve -- imply that the gold reserve is decreased both by a depreciation and an appreciation of gold. He claims both of these cannot be true. Under his proposed system *"the government would take the risk of gold depreciation instead of the individual holder of gold (or its substitute)," as under the present system. Obviously it would cost the government something to maintain its reserve when gold is depreciating, (or prices are rising.) Very rarely, if ever, have prices risen continuously over long periods by large amounts. The longest and largest steady rise in prices probably occurred during and after the Great War. At this rate the danger from any great and continuing depreciation of gold will only appear in times of great crisis, and if in these times it threatens the gold reserves in a nation, it would be no more harmful to abandon the "compensation" than to abandon the gold standard. In normal times, Professor Fisher declares that "as long as a government can make both ends meet,

*Journal of American Bankers' Association -- June, 1921.

it can stabilize the dollar", and in recent months this has become more evident in various countries, France and United States, in particular.

In connection with the appreciation of gold within a country, the danger of foreign drains is no more serious under the "compensated dollar" than under the gold standard. Any country on a gold standard is constantly at the mercy of conditions in foreign nations, which, as explained before, was best exemplified in the United States during the war. At that time countries at war transferred a large quantity of their gold to United States for safe-keeping; however, the addition to the gold reserve reflected in a rise of prices, and to prevent its loss an embargo had to be placed on its export. The government knew that a drain of gold would result in falling prices and there would ensue a serious depression in trade. Even after the war, United States was still threatened by the drain of gold to Europe when European countries resumed gold payments. Such floods and drains of gold need not be feared with a stabilized currency, since by its operation, they would be rendered harmless -- a flood of gold would not raise prices, it would make the dollar heavier, a drain of gold would make it lighter. As it is, (or was before United States went off gold) European banking and currency policies, their trade and tariffs, and especially their war debts and war indemnities, all outside the control of United States, have a great influence on the functioning of the gold standard there.

The report to the American Bankers' Association claims that, were the "compensated dollar" adopted then (1919), it would have perpetuated all the sufferings which receivers of fixed incomes have experienced. This claim is quite true, but it is not impossible to find a solution for it. The plan for stabilizing necessitates that it should be established to start at or near the existing price level. But the desire to stabilize may come at a time of unusually high prices, as in 1919, or at a time of unusually low prices as at present, and so the dollar cannot be stabilized until the price level has become adjusted to some desired level which will allow all classes of industry to operate at some moderate rate of profits. Economists generally wish to stabilize the currency at a price level at which most existing debts were contracted. In most cases the price level which benefits industry will also benefit the creditor--debtor relations. Many routes may be taken to the desired end, namely that of bringing the prices of commodities to the desired level. Inflation would raise prices if they were unusually low, and deflation would lower them if they were unusually high. Remonetization of silver would act in raising prices the same way as inflation. At the present time President Roosevelt is trying by novel means to raise prices to the level of 1926. He is bidding up the world price of gold, thereby making the gold reserves in that country more valuable, and thus making more credit available. Eventually prices, he hopes, will be pushed to the desired level.

Control of Prices in Time of War.

Mr. Anderson's argument that the stabilized currency would not operate in a time of war is not only applicable to it, but also to the gold standard. In the last great war, almost all nations abandoned gold and since then, most of them have experienced difficulty in maintaining it. His line of argument follows this line -- in time of war goods and labour in certain industries become scarce and their prices rise, with the result that the whole price level will rise. Therefore, gold would have to be added to the unit continually to keep the price level stable. This would necessitate that prices of goods produced in other industries fall considerably, and it might bring ruin to them. But his argument does not hold true to fact. Fisher in his study of prices concludes that ^{*}"a study of index numbers in the belligerent countries during the Napoleonic Wars, the War of 1812, the Boer War, and the Great War indicates that war seldom raises prices except when, and to the extent that the costliness of war forces recourse to inflation as a fiscal expedient of governments or their people." In a time of war the scarcest commodities are foodstuffs and raw materials required for the manufacture of war necessities -- or in other words the most desirable goods are basic commodities. Any increase in their prices cannot help but pull the prices of all other commodities up with them through an increase in the cost of living and

* Stabilizing the Dollar -- Fisher p.35.

consequently in the cost of production. There is not the disequilibrium between prices in war time which Mr. Anderson would have us believe. And if the "compensated dollar" caused such a disequilibrium between prices as to threaten the existence of certain industries, then it could easily be abandoned until the war danger was over.

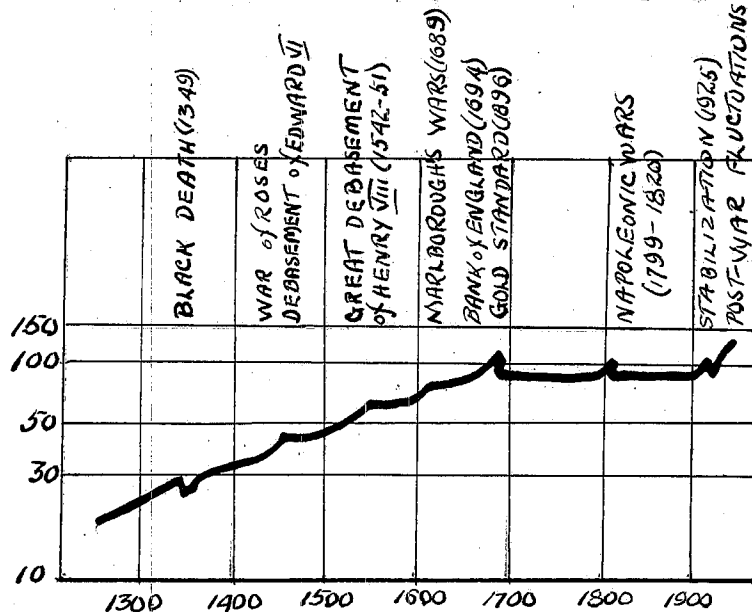
Another point of difference between Fisher and Anderson concerns the causes of the fluctuations in prices. The latter cannot agree that they are due to changes in the value of gold, but believes they are the result of changes in the supply of and demand for goods. Fisher stands by his contention that changes in the price level are due largely to changes in the gold supply and demand. Over a period of the past few decades it has been proven that changes in the price levels of various countries correspond rather closely to changes in the gold supply and demand. History, indeed, demonstrates that as the quantity of the world's gold increased, the price levels rose accordingly. Of course, many consider that gold never varies in value.

The Production of Gold and Prices.

Mr. A.E. Feavearyear pictures the course of the value of gold since 1257 to the present, which indicates that it has fluctuated in value like any other commodity. In the graph it can be plainly seen that gold has appreciated over 750% of its original value in 700 years -- in 1257 its price was

17.8 shillings per fine ounce, and in 1933 its price was 154.7 shillings per fine ounce. From 1257 to 1697 the price of gold represents the mint price of gold in London. From 1697 it represents the annual high in the London bullion market.

*Price of Gold in London (1250 - 1933)
(in shillings per fine ounce.)



A little chronological explanations will clarify the fluctuations. From 1066 to 1250 the price of gold was kept constant by royal decree. From 1257 to 1694 gold bullion was scarce, so gold appreciated in value steadily over these years. On account of a growing appreciation of gold, the mints found it difficult to balance the budget and to maintain the price level-- they were forced to devalue their currencies by debasing the coins. Under Henry VIII. of England the greatest debasement occurred. As the mint price of gold was raised, commodity prices rose too, but much faster; riots among the lower classes broke out. Finally in 1694 the Bank of England and the gold

*Barron's Weekly (from "The Pound Sterling -- A.E. Feavearyear.)

standard were established. Gold was given the value of 84.95 shillings per fine ounce, at which it remained stable for over a century until the Napoleonic Wars. It had to be abandoned then (1799-1820), but at the end of the war it was restored again to the old value at which it remained for another century. During the Great War it was abandoned again until 1925. The gold standard finally broke down and had to be abandoned in 1931. During the years 1931 to 1934 the value of gold rose steadily to set new all time highs. The last value given to gold in the chart is 134.7 shillings per fine ounce in 1933. All of this evidence verifies the fact that gold does change in value and that these changes manifest themselves in the price level and cost of living. Many historical happenings in a nation can be traced to changes in the value of gold as their cause. We conclude then, that the information given by Mr. Feavearyear, on the whole, substantiates Professor Fisher's contention that price fluctuations are due to a large extent to changes in the value of gold.

The criticisms of the plan offered by the American Bankers' Association do not seem to be very substantial. They are the very type of argument that one would expect from the conservative type. It is not unnatural that many of the powerful banking institutions should object to a plan such as that proposed here for stabilizing the purchasing power of money. This plan would put the control of issuing money in the hands of government agencies; it would also put a check on the issuance of credit by the banks -- since the amount of

credit which a bank might issue would not only be limited by the amount of gold held to its credit in the nation's vaults, or by the amount it holds in gold certificates, but also by the varying weight of gold in the unit. Private banks then would lose much of their freedom if the currency were stabilized.

Other Criticisms of Dr. Fisher's Plan.

A second kind of criticism comes from people who have misunderstood, or misinterpreted the plan, or who have been given false ideas concerning it. It includes many varied petty faults. Professor Fisher has classified them under fourteen heads, a few of which it may be well to examine. One of the striking features, and one which reveals the wide variety of interpretation of the plan is that some of the numerous criticisms contradict each other.

Some object that the correction of the price level would be too sudden; they imagine that a sudden alteration in the price level will occur immediately the bi-monthly adjustments are made. This objection is not true; it takes time for money and credit to flow into and out of circulation, and although the change in the price level may begin almost at once, it will not be completed for some time. On the other hand, it is suggested that the correction of the price level would be too slow; that a long time would elapse before any effect of the change in the weight of the unit would be noticeable on the price level. However slow or rapid the change is made, no accurate means exists to measure it; there are many instances though, where

changes in bank discount rates were responsible for an appreciable slackening or increase in the quantity of credit in demand in a short time. The price levels of different countries tend to the same level by the flow of gold to and from, between them; it takes a comparatively short time for a flow of gold into or out of a country to reflect in the price level. Therefore, we have to assume that the correction in the price level will come about in a suitable manner.

Some claim the multiple standard (or "compensated dollar") is especially faulty when the cause of price movements is due only to the abundance or scarcity of goods in general. But it is impossible to compute just how much of a change in the price level is entirely due to a general scarcity or abundance of goods, or how much is due to a scarcity or abundance of gold. Admittedly, it would be wise to discriminate between the two separate causes of price movements. Regardless of the cause of any alteration in the price level, the fact remains that they occur, and that it seems theoretically possible to overcome the evils from them by this plan. Of course it may require a greater or lesser amount of gold to correct variations in the price level due to both the scarcity or abundance of goods and gold, than it would to correct only those due to shortage or abundance of money. Professor Fisher says: * "The plan for compensating the dollar does not in essence consist in

* American Economic Review (Dec. 1914) --
Objections to a Compensated Dollar Answered p.826

selecting the multiple or any other standard. It consists in a method of making the monetary unit conform to any standard chosen." The multiple standard is far more stable and accurate than the single gold standard on which to base values because

* "while individual goods may vary greatly in absolute value, the general mass of goods will vary comparatively little and seldom." It does not seem unreasonable to assume that the variations in the values of some commodities in one direction will be offset by variations in the values of other commodities in the opposite direction, thus averaging the variations.

The correction in the weight of the unit always comes too late, some say. It always comes a after the deviations of the index from par have occurred. It is far better though, to have the corrections come after the deviations, than not at all. There is no method by which we can accurately forecast the trend of prices in the future, unless it be a very general one. As Professor Fisher points out, it may often happen that after the correction has been made, prices will take the opposite turn. But whether they do or not doesn't matter much, as long as the corrections are sufficient, and come often enough to keep the price-level near par.

It is also a common belief that the plan aims to fix all prices, but this also is a mistaken idea. It doesn't aim to fix the price of a single commodity, except the price of gold which will change probably

*Ibid

every two months. The aim of the "compensated dollar" is to fix the general average of all commodity prices at a certain level. By fixing the general level however no attempt is made to fix the prices of individual commodities; they are still free to rise and fall according to the law of supply and demand.

Another common error is made when some claim that the "compensated dollar" would interfere with supply and demand. Under the gold standard the price of a commodity consists of two separate elements--the effects of the supply and demand for gold and the effects of the supply and demand for the commodity. When the currency has been stabilized according to this plan, the effects of one of the elements in the price disappears. The effect of the supply of and demand for money on the price of the commodity is compensated by the fluctuations in the price of gold and so it does not appear in price of the commodity. The gold standard fixes the price of gold at \$20.67 per fine ounce irregardless of its scarcity or plenitude so that changes in its value are reflected elsewhere, but largely in the prices of all other commodities.

There is no truth in the statement that it is a plan to control the value of gold. The only operation, which controls gold in the plan, is that at the mint, where the weight of gold in the virtual dollar is lightened or made heavier, depending on which is necessary to bring the price level toward par. It does not attempt to affect the price of gold per ounce.

Nor is it true that the plan operates only through the flow of gold. Some wrongly hold that the basis of the plan rests on the flow of gold into and out of different channels. These people overlook the fact that a change in the price of gold and in the weight of the virtual gold dollar changes the number of dollars in a given mass of gold. A lowered gold price (or raised dollar weight) can reduce the mass of gold into fewer dollars, and a raised gold price can increase their number.

These comprise a few of the minor faults which have been discovered in the stabilized dollar. In many cases they arise from ignorance of the intricate working of the monetary mechanism; or they may, as I have said before, arise from misunderstanding or misinterpretation. Although numerous, these defects are not important. The most important type of criticism to be interested in is that which arises after a careful analysis of the plan has been undertaken. The greatest controversy over any new monetary scheme will probably center around its connection with the "quantity theory of money". This is the case with the "compensated dollar." As yet, the "quantity theory" has not been fully accepted by everyone. Suppose we examine next the relationship which exists between the "compensated dollar" and the "quantity theory" of money.

The Quantity Theory of Money.

Early economists held that the value of money depended on its quantity, and that, other things being equal, prices varied directly with the amount of

money in circulation. Therefore double the quantity of money in circulation, and, other things being equal, prices will rise twice as high. This was the original form of the "quantity Theory" of money, but it did not appeal to later economists, who found that certain considerations had been omitted. The incompleteness of this theory was an incentive for Professor Fisher to further investigations along this line, because he saw in the original theory some element of truth. To him is due the credit for revising and making more modern the conception of the "quantity theory". He is the modern quantity theorist. According to his view the purchasing power of money depends on five sets of factors, and five only -- money, deposits, the velocity of circulation of money, the velocity of circulation of deposits, and the volume of trade. His whole theory may be summed up briefly in an equation of exchange, expressed as a formula $MV + M'V' = \sum pQ$, when M and M' represent money and credit respectively and V and V' represent the velocities of M and M' respectively and $\sum pQ$ represents the sum of the various goods multiplied by their prices. The action of the various factors can be seen on prices by means of this exchange. The five causes are still the effects of antecedent causes, such as differentiation of wants, diversification of industry, and speeding up of transportation, which all go to increase the volume of trade and therefore to decrease the price level. Thriftless methods, the use of book credit, and fast transportation tend to increase

velocities of circulation, and therefore increase the price level. The import and mining of metal, the adoption of bimetalism, and the issuance of bank notes cause an increase in the quantity of money and the price level. There are three conclusions which he arrives at.

* "It is still true that (1) prices vary directly as the quantity of money, provided the volume of trade, and velocities of circulation remain the same; (2) that prices vary directly as the velocities of circulation provided the quantity of money and volume of trade remain the same, and (3) that prices vary inversely as the volume of trade provided the quantity of money and deposits and their velocities remained unchanged."

The "quantity theory" is actually true then, in the sense that ** "one of the normal effects of an increase in the quantity of money is an exactly proportional increase in the general level of prices." At bottom the quantity of money is everything in his thesis. The strictly proportional effect in prices only occurs after several transitional periods in which any increase in the quantity of money produces likewise effects on all other factors in the equation of exchange. An increase in M therefore produces an increase in M' , and quickens V and V' . Fisher assumes that a normal ratio exists between M and M' ; if M increases so also does M' in this normal ratio and often temporarily beyond that ratio. During the transitional periods, when there are seasonal changes in the volume of trade, (such as crop-moving times)

* Purchasing Power of Money -- Fisher p.151

** Ibid p.157

the "quantity theory" will not hold strictly true, since at that time more money is needed; the velocities of M and M' increase and the normal ratio between money and credit is temporarily exceeded. The point to be stressed in Fisher's interpretation of the "quantity theory" is the normal ratio between the quantity of money, and the amount of credit which can be issued on the monetary basis. Upon this assumption the "compensated dollar" is founded.

For instance, let us suppose the index number shows a decrease, the plan calls for a decrease in the weight of gold in the dollar, so that now a given quantity of gold will support more credit or more dollars; consequently credit is made easier to obtain or more dollars are printed. As the quantities of money and credit increase, their velocities quicken, and the concentrated action of these four factors tend to increase prices of the fixed quantities of goods. Conversely, let us suppose prices have shown a rise above the general average, which indicates that the dollar must be increased in weight. A given mass of gold will support less credit or less dollars, therefore credit is made difficult to obtain, or dollars are called in from circulation. As the quantity of money and credit in circulation decrease, their velocities tend to decrease, and prices of the fixed quantities of goods to fall. Each of the factors M and M' , V and V' has an ultimate effect on prices.

At this point those who oppose the "quantity theory" object, saying that prices are not the effects of these other factors, but that they are the causes of

them. Does this seem reasonable? Just imagine that prices in general have doubled in some way (other than the effect of the above four factors). What would be the effect of doubled prices on the other four elements? The equality between the money side on one hand and the goods side on the other must be maintained. Doubled prices would make the goods side twice as great as the money side. To perfect the equation either the quantity of money and credit, or their velocities must increase or the volume of business decline. The quantity of money cannot be increased since money will not be enticed into a country with high prices, nor will gold be taken to the mint since its purchasing power would have been cut in two, nor will gold mining be encouraged by high prices. The quantity of deposits will not increase since they depend on the quantity of money in circulation and this will not increase. It is rather foolish to think that the velocities of these monies would quicken, although it would be possible, since they have already been adjusted to suit individual convenience. Again, it is inconceivable that higher prices would decrease the volume of trade. Not only would prices of goods be twice as high, but so also would prices of labour and services. Everyone would be able to endure the higher prices and the volume of trade would remain stable.

References to history verify the conclusion that prices are the result of the four factors which have been described above. Prices did not rise in England until the gold and silver which Spain and Portugal had brought

from the Americas began to percolate through the English financial system. To understand the "compensated dollar" requires a knowledge of the "quantity theory" of money as Professor Fisher apprehends it.

Value and Quantity of Gold.

The "quantity theory" has also been attacked of late from the angle that gold does not mainly depend for its value on its quantity. Credit has been extended to such a degree in recent years its quantity really affects the value of gold more than the quantity of gold itself. This criticism implies that no connection or normal ratio exists between the quantity of gold and the quantity of credit which is based on it. Credit is expanded or contracted according to the needs of business, regardless of the amount of gold behind it. Doubtless a great deal of truth is concealed in this treatment. Because of a growing scarcity of gold to carry on the ever-expanding business and commerce of the world, it has become necessary to conserve it and economize in its use so as to make it go much farther than before; and this has been done by resorting to an issuance of credit beyond the limit which gold can support. No matter what monetary system prevails today, it is being threatened by a shortage of gold. Even the "compensated dollar", if it were adopted, could not avoid it. At the end of the war most of the countries faced the problem of an extremely small gold reserve to support an unusually high price level. Some were compelled to devalue their currencies -- Germany and France reduced the gold content of their monetary units. England and United States have only

postponed the process of devaluation; today the former has practically brought about a devaluation of the pound by going off the gold standard, while the latter has just completed the process. As I have stated, the problem of a gold shortage also would face the "compensated dollar". Probably the best way to solve the difficulty would be, first, to take stock of the nation's gold reserves, then with due regard to the future supply of the metal, inaugurate the plan of the "compensated dollar" with the unit of currency containing as little as possible gold backing. (i.e. to devalue the currency at the start, to such an extent that the gold supply, no matter how small, will be able to support sufficient currency to carry on the nation's business at that time and as far into the future as possible.) A certain amount of leeway will thus be allowed for in the event of a period of rapidly rising prices and the gold reserve will not be threatened for some time at least. If it so happens that a country, while on the "compensated dollar", finds its gold reserves insufficient to carry on with, it may abandon the plan for a short period, then decrease the weight of gold in the virtual unit of currency, (or devalue the currency) and finally resume the full plan again. Such devaluations will occur very rarely, and may never need to occur, but if they were necessary, no more inconvenience would be caused a country than a process of devaluation under the gold standard.

Alterations offered by Keynes.

In discussing recent monetary reform,

J.M. Keynes gives us a problem to consider in stabilizing

the currency. It may be classed as a criticism, or an alternative to the plan of Fisher's. He presents the question thus: ^{*}"Is it more important that the value of a national currency should be stable in terms of purchasing power, or stable in terms of the currency of certain foreign countries?" Briefly it is stability of prices versus stability of exchange. Mr. Keynes explains that a country must choose between these two stabilities. The rate of exchange between one country and another depends on the relation between the internal and external price level, and this rate can only be kept stable if both of the price levels remain stable. From this, it follows that the more difficult course for a nation to follow would be to attempt stabilizing the rate of exchange since it would have no control over the price level in other nations. Great Britain discovered the same fact when she attempted to stabilize the exchange value of the pound, believing it would bring about some degree of stability internally by halting the fall in prices. Her method failed -- prices and wages did not stop their downward trend. Finally it had to be given up and some form of internal currency management was adopted to stop prices from falling more and to start them on a desired upward trend. The proposals of Irving Fisher aim to stabilize the internal price level in preference to the rate of exchange between countries. Of course, the choice of stabilization depends a great deal on the commercial position of a nation. If a nation has great foreign trade connections then it will be advantageous for it to have a stable exchange rate.

^{*}A Tract on Monetary Reform -- J.M. Keynes p.141-2.

Since this is so hard to achieve, and since every country carries on a huge domestic trade, it is perhaps wisest to suggest as Professor Fisher does, that stabilization of the internal purchasing power of money is, in the long run, the easier to adopt. On this one point at least, Keynes and Fisher agree.

CHAPTER V.RECENT ATTEMPTS AT STABILIZATION.

The trend of worldly events in the last few years has again brought to the fore the question of stabilization of currencies. The predominant belief seems to consider this as the first necessary step toward lifting ourselves out of the economic chaos, in which we have been floundering. Since 1919 nationalism has reached seemingly new heights, and world trade and commerce has been reduced to a comparative standstill through high tariffs and currency regulations. In 1929 came the stock market crash, which reverberated all around the world, and since then Europe and United States have faced the worst financial crises they have ever seen. War debts and reparations have practically failed. The gold standard has been abandoned by most countries. Almost all countries have been in a state of depression over the last three or four years. Since the abandonment of gold the international exchanges have been in hopeless confusion and have contributed to the decline of international trade. The internal problems of each nation have been continually on the increase. One can, with little difficulty, trace the trend of the depression phase of the business cycle, as Irving Fisher sees it in his book *Booms and Depressions*. Every country has been or is being faced with a falling price level, which has led to reduced production, unemployment, and un-

balanced budgets both in industry and in the government. In spite of the apparent breakdown of the economic system in the various nations, which the depression seemed to many to indicate, several have not yet given up the hope of returning to more prosperous times. Indeed such a situation has stimulated certain countries to experiment by artificial means to raise the price level, or at least to keep it stable, instead of remaining passive with a "laissez faire" attitude. The two countries which have recently sought to cure their ills by stabilization of currencies, and the two in which we are mainly interested are Sweden and United States. Our interest in these two particular countries lies in the fact that their plan of stabilizing follows very closely that suggested in this thesis -- the "compensated dollar."

The Swedish Experiment.

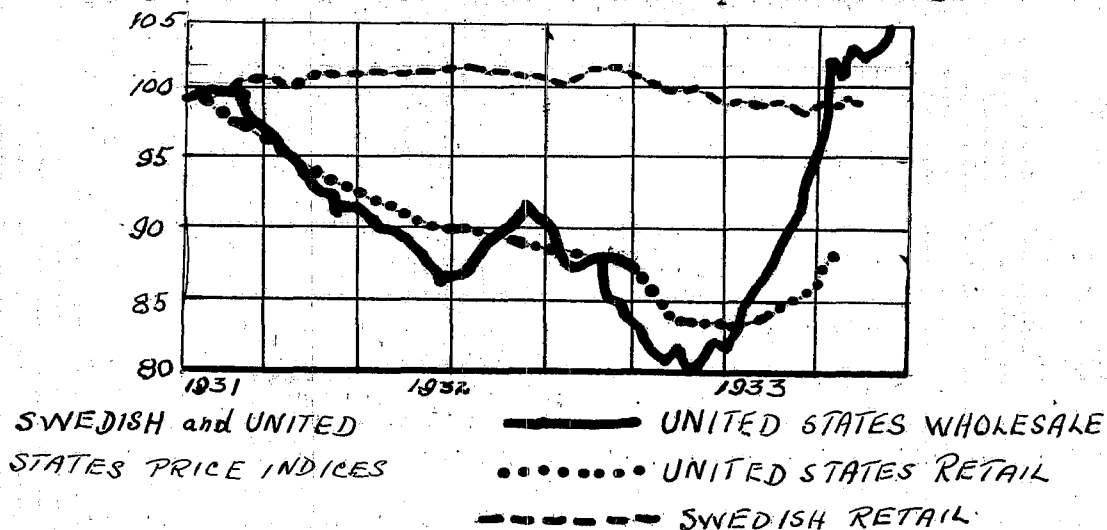
Sweden abandoned the gold standard with England in 1931, and at that time inaugurated some form of managed currency to keep the price level stable. Owing to a lack of information concerning its operation, it is only possible to pick up meagre details in connection with the plan. Nevertheless there is no doubt about its success as the following data indicates.

	* <u>Month</u>	<u>Official Index No.</u>
1931	August	109
	September	107
	October	108
	November	110
	December	111

* Index published by Svenska Handelsbanken

	<u>Month</u>	<u>Official Index No.</u>
1932	January	109
	February	110
	March	109
	April	109
	May	109
	June	108
	July	108
	August	108
	September	110
	October	110
	November	109
	December	108
1933	January	106
	February	106

During this period of nineteen months the index number never varied by more than three points from par. The following *chart pictures the stability of prices more effectively, and it also compares the stability of the Swedish and United States price levels.



In Sweden the price level has been stabilized at the expense of the exchange rate which has been allowed to fluctuate, finding its own level in the exchange markets. In reality her currency has been allowed to sink to a discount of 30% or more. We are only

* Reprint from *Econometrica* (Vol. 1 No. 4)--The Debt-Deflation Theory of Great Depressions--Fisher.

interested in the fact that her price level has been more stable than that of any other country. It is almost certain that the index number steers the currency management in that country, therefore any tendency of the index number to move from par indicates the need for some sort of operation to bring it back to par; but just what operation has been adopted I do not know. But Sweden has a central bank, so that it would not be folly to assume that this institution controls the management by central bank operations such as -- the issuing into or withdrawing from circulation a quantity of money required to readjust the index number nearer par; or by making credit harder or easier to obtain by means of the bank discount rate, so that the index number might be moved nearer par. No matter what method is used, Sweden's experiment resembles in many phases the "compensated dollar" and it confirms the possibility of its success in United States.

President Roosevelt's Monetary Policy.

With the advent of Roosevelt to the presidency of United States in March, 1933, the greatest single experiment in economics in the world began. That country was in the trough of a depression out of which it seemed unable to climb. New low peaks had been reached in production and unemployment relief. Gross mismanagement in many of the nation's private banks had brought the country into a serious financial breakdown; and had resulted in some banks permanently closing their doors. It was no wonder the nation foresaw "Roosevelt or ruin." His coming to office saved the nation from anarchy. Right from the beginning he relied principally for advice

on a newly formed "brain trust" which was composed of a number of the most prominent men in specialized economic fields.

Let us glance at the chain of events which have transpired in United States since March, 1933. Roosevelt's first great move was to proclaim a nation-wide bank holiday, arising from the discovery that several large city banks were in a dangerous position. All banks were to remain closed for an indefinite interval, during which the solvency of all banks was to be examined. Only those which could prove their solvency were allowed to re-open. A great many were not in a position to resume business since they had loaned money on land and real estate, to support marginal industries, and to finance wild speculation; their loans could not be realized when they were most needed. Unit banking in United States had not responded to changes in business like banking systems in other countries (i.e. branch banking in Canada.) Billions of dollars were tied up in frozen assets, and naturally the purchasing power of money would be seriously affected by the freezing of so much circulating medium. The problem to be solved in this connection was to thaw out the frozen assets, or to substitute some form of money for them, until they could be thawed out, and as this was done the price level would rise. The level at which most of the debts had been contracted was that of 1926, so that was the objective of Roosevelt's money policy.

Prices had to be artificially raised by some means to the 1926 level to enable persons to pay off the loans they received in terms of the same purchasing power. A large block of the people cried for inflation but the president opposed it. Before any experimenting could be undertaken, United States had to abandon gold, not because of falling gold reserves as is usually the case, but to prevent the outflow of gold which was certain to occur when the monetary system was meddled with. With the abandonment of gold, United States wrested from Great Britain her great advantage in international trade, due to the depressed value of her currency. Doubtless, Great Britain, by means of the "sterling equalization fund", had attempted to keep other foreign countries at a premium to the pound in order to maintain her advantage. Now, the American dollar was allowed to seek its own level in the foreign exchanges.

I would divide Roosevelt's recovery program into two parts. The first deals with industry-- the actual manufacture and distribution of goods; and it comes under the jurisdiction of the N.R.A.-- National Recovery Act. It aims to shorten the hours, and increase the wages of labour, so that many unemployed might find their way into industry again. Of course each type of industry had to draw up its own code, which had to meet the approval of Congress. The actual effect of the N.R.A. was to reduce unemployment, increase the cost of production of goods, and therefore increase prices. It started prices upward, not only in manufactured products

but also of agricultural products. The second part consists of a monetary reform meant to supplement the industrial plan. The two most famous men of the "brain trust" who were responsible for the president's money policy were Professors Warren and Pearson of Cornell. The aim of the money plan was also to raise prices. So, the new recovery program, or the "new deal" as it is sometimes called, started the ball of prices rolling upwards.

Warren and Pearson's Theory.

Both Warren and Pearson have for years favoured a managed currency. Many students have been indoctrinated with their theories. Strangely enough their "commodity dollar" has become quite definitely related to Irving Fisher's "compensated dollar." The two plans are almost identical, and for this reason we are interested in the American experiment, which is being directed by them. The basic assumption in the Warren and Pearson theories is that a definite relationship exists of gold to prices. * "The price of a commodity is a ration of two values -- the supply of and demand for gold to the supply of and demand for the commodity." This law of relationship of gold to prices may be summarized in the following equation:--

$$\frac{\text{** World's gold stocks}}{\text{Production of all basic commodities}} = \text{Wholesale prices of all commodities.}$$

* Journal of American Statistical Association (Mar. 1933)--
Relationship of Gold to Prices p. 119, by Warren & Pearson.

** Journal of American Statistical Association (Mar. 1933) p.119

Statistically this relationship is made clearer as the following chart indicates:

Year	World Monetary Gold, Millions of ounces	Index of Gold Stocks 1880-1914 =100	Index of World Physical Volume 1880-1914=100	Ratio of Gold Stocks to Production 1880-1914=100	Prices in England 1880-1914 =100
1850	54	23	22	105	105
1870	131	57	42	136	131
1890	169	73	74	99	98
1910	340	147	140	105	106
1914	388	168	146	115	117

In the same article "Relationship of Gold to Prices" these men state that no evidence has been found that credit management could have prevented a decline in commodity prices and still maintain the existing price of gold. They point out that any attempt to expand credit enough to restore the price level means making gold cheap, and the only way a nation can cheapen gold is to reduce the world demand for it. They also affirm that to restore prices, the gold standard must be suspended. One can see traces of these influences in the American experiment.

Since the United States went off gold the external value of the dollar has fallen considerably below par, due largely to the undefined and indefinite money policy. It was a fairly general belief that Roosevelt intended to permanently devalue the dollar, but just how much no one knew. The details of his plan at first were very meagre; the only references to it were made in several radio speeches to the nation. In the first on May 7, 1933 he said, "The administration has the definite object of raising commodity prices to such an extent that

those who have borrowed money will, on the average, be able to repay that money in the same kind of dollar which they borrowed. That is why powers are being given to the administration to provide, if necessary, for an enlargement of credit in order to correct the existing wrong. These powers will be used, when, as, and if it may be necessary to accomplish the purpose." Doesn't that sound something akin to the inauguration of a plan like the "compensated dollar.? Some of the powers granted, which the president might choose to use were:

1. He was authorized to arrange for the purchase in the open market of some \$3,000,000,000 worth of government obligations through the Federal Reserve System.
2. If the first failed or could not be undertaken then, he was given the choice of three things (a) direct inflation of government notes to the extent of \$3,000,000,000; (b) Devaluation of the dollar by as much as 50% of its former content in gold, or (c) unlimited free coinage of silver at a fixed ratio with gold. What was Roosevelt to do? He had his choice.

In another of his world famous radio speeches on July 3, 1933 the president stated, in clarifying his money plan "The United States of American seeks the kind of dollar which a generation hence will have the same purchasing power and debt paying power as the dollar we hope to attain in the near future." Again I do not believe Irving Fisher could have explained the aim of

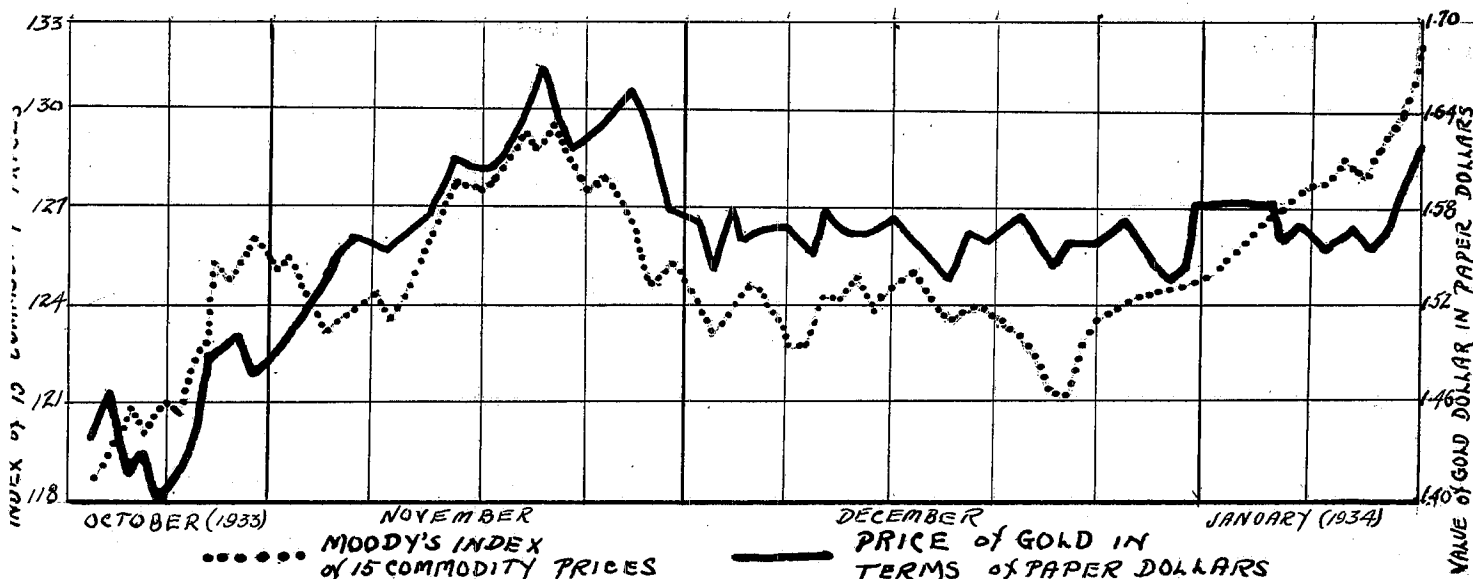
his "compensated dollar" in any superior terms.

The next step in the monetary reform was announced in another radio speech on October 22, 1933 which was as follows, ^{*}"the definite policy of the government is to restore commodity price levels.-----
When we have restored the price level we shall seek to establish and maintain a dollar which will not change its purchasing and debt paying power during the succeeding generation." The theories of Warren and Pearson were put into practice. In the same address it was announced that the Reconstruction Finance Corporation was authorized to buy gold ^{**}"at prices to be determined from time to time after consultation with the Secretary of the Treasury, and the President. Whenever necessary to the end in view we shall also buy or sell gold in the world market. -----We are thus moving toward a managed currency."
Soon after this the Reconstruction Finance Corporation began fixing the price of gold higher than the world market price; at indefinite intervals the price was advanced. On October 25th the first price offered for newly mined gold was \$31.36 per ounce, 27 cents above the London price. Late in December the price reached \$34.06 per ounce, making the actual gold content of the dollar only 64 cents. As the price of gold advanced, prices followed with a striking degree of similarity, as the following graph indicates. It compares the trends of prices and gold over the first three months.

* Current History February, 1934 p.527

** Ibid

* TRENDS of PRICES and GOLD in UNITED STATES (1933-34)



The policy of gold buying was continued until well into January, 1934, at which time the directors of the experiment considered that prices had risen to a level, at which it was desirable to stabilize.

In the meantime the plan took on still more aspects of the "compensated dollar." The threatening banking situation had stimulated the hoarding of gold to a dangerous extent. To get the upper hand on the situation, the hoarding of gold was declared illegal and punishable by a heavy fine. All gold had to be returned to the banks; gold coins disappeared from circulation, as the banks collected them into their vaults. With United States off gold, no metal was available for export to meet maturing obligations of that country in foreign countries. The "gold clause" both in foreign and domestic future contracts had to be removed to ensure that no gold would again get into circulation, at least while they were experimenting.

* From New York Times, January 21, 1933.

The disappearance of gold coins, and the removal of the "gold clause" give the monetary reform in United States greater similarity to Fisher's device, and lead us to believe that the new system will be fashioned after it.

During the week January 14-21, the new monetary program was drawn up by the advisors and signed by the president. Our special interest in it lies in the fact that it contains many striking similarities to the "compensated dollar." One would almost think it were the same plan in different terms, but for a few details. Mr. Charles Merz has well summarized the important points of the program in a recent issue of the New York Times as follows:

1. The limits for devaluation of the American dollar would be set at from 50 to 60 cents in terms of its present gold value.
2. The president would be authorized to manage the dollar within these limits by making changes necessary to retain domestic price stability or to protect their foreign trade.
3. The gold now held in Federal Reserve Banks would be impounded in the treasury and any profit resulting from an increase in the dollar value of the gold would accrue to the government.
4. The approximate profit in dollars would amount to about \$2,600,000,00, out of which \$2,000,000,00 would go to create a stabilization fund which could be used by the Treasury for the purchase

of gold, foreign currencies and government securities.

5. It would probably provide for the ultimate return of United States to a new and modified gold standard.

The actual devaluation reduced the gold content of the dollar to 59.2 per cent of its former weight. It did not interfere with the existing relationships between the various circulating coins and bills. One dollar still equal 100 cents, 10 dimes, or 20 nickels. It is interesting to note that, in reality, the dollar was not devalued at all. The dollar in the foreign exchange markets had fallen almost steadily, because as I have pointed out, the money policy of United States had not been clearly stated (The value of the dollar in the exchanges at the time of devaluation was even lower than that assigned to it), and because the dollar had been driven down to this low level by the operations of the Reconstruction Finance Corporation which kept offering more American dollars for an ounce of gold until the final limit of \$35.00 per ounce was set. The devaluating process was based on the theory of Warren and Pearson, who believe that by reducing the content of the theoretical gold dollar, the prices of goods the dollar buys will increase since more of the cheaper dollars will be required to buy the same quantity of goods. The previous chart suggest that the theory contained much truth -- the index of prices of fifteen staple commodities (cotton, wheat, corn, wool, hogs, hides, sugar, coffee, cocoa, silk, rubber, copper, silver, steel scrap and lead)

follows with considerable regularity the same trend as the price of gold (in terms of paper dollars). It was hoped these prices would continue to rise and would spread to the prices of other commodities, because prices had to rise in order to increase farm purchasing power, to ensure that goods be sold at greater profits, and to allow payments of debts at a price level more like that at which they were incurred.

The new program permits the dollar to be fixed in gold content somewhere between 50 and 60 per cent of its former weight. There are at least two reasons for allowing such a wide range -- first, since it is only an experiment and because of many world uncertainties, it would not be in the public interest that an exact value be permanently fixed. These two extremes give some margin within which to move. Second, since the monetary program in the future seeks to establish "the kind of dollar which a generation since will have the same purchasing power", it requires that a stable price level be maintained, and that some room be allowed for successful currency management. Power was given the president to alter the gold content of the dollar from time to time-----whenever and as the expressed object (to stabilize domestic prices) of this section in his judgment may require". Thus if prices begin to fall, the president may attempt to check them by reducing the weight of gold in the theoretical gold dollar, thereby making it less desirable in terms of commodities. On the other hand if prices begin to rise, the process would be reversed. The difference between a 50 cent and

a 50 cent dollar is 20 per cent, so that, given this margin within which to work, variations in the price level by as much as 20 per cent may be corrected. Precisely another step towards Fisher's "compensated dollar."

In Roosevelt's judgment the government must be the sole guardian of the metallic basis in order that the proper relationships be maintained between gold and prices. Therefore the whole of the nation's gold supply was impounded in the Treasury vaults and its ownership was transferred to the government. The total gold stock amounts to \$4,323,000,000 and is divided as follows:

In treasury	446,000,000
From Federal Reserve Banks	3,566,000,000
In circulation (lost, destroyed, hoarded)	311,000,000

Gold certificates issued by the treasury replaced the gold bullion in the Federal Reserve Banks, which must now maintain reserve against their notes in the form of gold certificates. Since the number of dollars in the gold reserve would automatically increase with devaluation, a certain amount of profit would accrue to the holders (United States government). The profit amounted to something like \$2,600,000,000.

Now that domestic prices had reached the desired level, attention was turned to the exchange value of the dollar. It was not desired that any of the profit should find its way into circulation since it would entail a further rise of prices. Of the profit \$2,000,000,000 went to create a "stabilization fund" to be used at the discretion of the Secretary of the Treasury for the purchase

or sale at home or abroad of "gold and foreign currencies, and such other instruments of credit or security as he may deem necessary-----for the purpose of stabilizing the exchange value of the dollar." The fund was created for the same purpose as the English "Sterling equalization fund" of \$1,750,000,000 which is being operated to keep the pound within a certain range, well below par, for advantage in foreign trade. It is estimated that billions of dollars will have to be borrowed in the near future to cover new expenditures, consequently there is liable to be a tendency to depress the value of government bonds. The "stabilization fund" however would have power to support the market for these bonds. The original plan of the fund calls for an annual audit of it and an annual report to be submitted to the president.

These latest developments seem to point to the adoption of a new and modified gold standard in United States, in which gold would still serve as the basis of the monetary system, but it would not circulate as money. All of the gold returned to government vaults will eventually be formed into bars of definite weight and fineness; such bars may be used only by the Federal Reserve Banks for the purpose of settling international balances. One of the sub-commissions of the World Economic Conference unanimously adopted a resolution, favouring such a procedure as that in United States --

* "Under modern conditions monetary gold is required not for internal circulation, but as a reserve against central bank liabilities and primarily to meet external

demands for payments caused by some disequilibrium in foreign account. It is consequently undesirable to put gold coins or gold certificates into internal circulation." This new gold standard (if it may be called so) differs in many respects from the old one. With the exception of the "stabilization fund", the new monetary system in United States is only a slight modification of the original "compensated dollar."

BIBLIOGRAPHY.

- The Compensated Dollar - - - - - Fisher.
Booms and Depressions - - - - - Fisher.
Stabilizing the Dollar - - - - - Fisher.
Purchasing Power of Money - - - - - Fisher.
Stabilization of Business - - - - - Edre.
A Tract on Monetary Reform - - - - - Keynes.
Wealth, Virtual Wealth, and Debt - - - Soddy
The Fallacy of Stablising the Dollar - -
- - - - - B.M. Anderson.
American Bankers Journals - - - - - 1919-20.
Annals of American Academy - - - - - January '33.
Recent issues of the New York Times - - -
- - January, February, March, '34.
Barron's Weekly - - - - -
Several Issues of American Economic Review and
American Statistical Society.