AMERICAN INSTITUTE *for* ECONOMIC RESEARCH

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MONTHLY BULLETIN

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RESEARCH REPORTS

Summary

Trends discussed in the latest weekly bulletin continue unchanged; electric power production is at a five year peak; car loadings hold up and steel activity advances.

Price-fixing provisions of NRA codes seem doomed to eventual elimination.

The Institute presents its Price Index in this issue.

Normal prices are defined as those necessary to preserve the long trend equilibrium between gold production, purchasing power, and prices.

The brief review of the historical record makes it possible to fix the present normal level substantially above present prices. Rising prices during the next few years in an approach to or perhaps a movement slightly above are in prospect.

The Institute's Price Index

In the preceding monthly bulletin, we pointed out that the Institute was planning to publish three indexes of fundamental importance. It will be recalled that the first one discussed was the Harwood Index of Inflation. That index will be found in this bulletin together with two others. All have now been carried back to 1914, and it is planned that the charts which appear on the last page of this bulletin will be repeated monthly, showing the latest information in each case.

In the next monthly bulletin, it is planned to describe the Institute's Index of Industrial Production. The chart showing its fluctuations from 1914 to date appears on the last page of this issue. Believing that clients will find a detailed discussion of this index especially interesting, we shall devote an entire bulletin to that purpose.

This issue is largely given over to a discussion of prices. The Institute's Price Index is explained and its fundamental significance, especially its relationship to the other two indexes, is pointed out. Readers will find that the adjustments made in this price index as the result of our research give it a special significance.

The Harwood Index of Inflation is important because it portrays the degree of inflation in the business structure. In addition to that, it may at times have even more definite forecasting value as, for example, during the past few months when it has steadily and plainly showed that we were not in a period of renewed deflation but that a resumption of the recovery process was probable. In its capacity as a forecasting device, the index of inflation is perhaps the most important of the three. However, both the Price Index and the Index of Industrial Production present vitally significant aspects of fundamental economic conditions.

The Institute's Index of Prices is perhaps more useful so far as judging the future is concerned than the Index of Industrial Production. It is also more certain to reflect the effects of inflation. It is now quite obvious that there cannot be any substantial degree of inflation without a corresponding effect on prices. This may be in the form of a sharp upward movement, as was seen in this country during 1919 and early 1920; or it may appear as the preservation of more or less stable prices when there would otherwise have been a general decline; or the more severe price changes may, under some circumstances and for a short period of time at least, be confined to one or two special fields. The trend of prices is important, not only as a confirmation of the Index of Inflation but in addition as a guide to future business profits and to wise handling of business inventories. It is also extremely valuable to know whether a cyclical depression is likely to be accompanied by a major change in the general price level or not. Given an adequate price index which portrays the relationship of current prices to a reasonable normal, the desired information becomes available.

Prices

It has long been acknowledged that the United States Bureau of Labor's Index of Wholesale Commodity Prices is the most comprehensive index of its kind available. Formerly, the base year was 1913, and prices for subsequent periods were stated as a per cent. of the average for that year. In other words, the index number of prices was based on 1913 = 100. In 1927, the United States Bureau of Labor chose to alter the base year used, and at that time the price index was adjusted on the basis of 1926 = 100. Parenthetically, it is interesting to note that the Bureau of Labor has in effect acknowledged that the index based on 1926 = 100 presents a distorted picture of the situation.

In selecting a given year as a base, there is danger that the general public will assume that year to have been normal. The mere use of the index number 100 for the base period chosen leads many people unfamiliar with statistical analysis to believe that there is something especially significant for the future in the price relationships of that particular year. Of course, the implied assumption that normal prices will remain unchanged is absurd, even if prices were normal during the base year chosen. Yet it is precisely on such obvious misconceptions as this that most of the current panaceas and fallacious attempts to cure the depression have been based. The truth is that the normal for prices is continually changing over long periods of years.

The use of a given year as a base period is likewise dangerous in that all fluctuations are stated as percentage variations from that base. Consequently, a more or less stable or uniform trend, if it is at the level of the base period chosen, may lead some observers to believe that prices are continuing a normal relationship. It was the relative stability of prices from 1922 to 1929 which led many business men and not a few economists to believe that there was no inflation during that period. Their basic error was in assuming that, if prices were stable in the absolute sense, they must likewise be normal. It has been shown by William F. Eade*, and by E. C. Harwood** in a development of Mr. Eade's basic thesis, that the normal trend of prices following the wartime inflation would have been downward throughout the period when commodity prices in this country were maintained at a stable level. Therefore, prices were diverging from the normal post-war trend during the period 1922-1929. The importance of knowing what this normal trend should be is obvious.

What Are Normal Relationships?

Unfortunately, "normal" is a word which lacks a sufficiently definite meaning, so it is necessary to deal at greater length with the fundamental relationships involved. We are used to thinking of prices in terms of dollars without giving any particular consideration to just what a dollar may be. Since it is a measuring device used to calibrate the value of numerous products, it is plain that it must itself have tangible existence just as must any other measuring device. The dollar is not a nebulous idea, nor is it a mere piece of paper or allotment of bank credit.

To get down to fundamentals, when we speak of prices in terms of dollars, we are really discussing the exchange ratio of given quantities of gold and certain commodities. So long as a dollar is defined in terms of gold, this must continue to be the case. Monetary experimentation may introduce temporary difficulties and unusual fluctuations in the exchange relationships, but a standard for measuring purposes must consist of a definite amount of something and, for many years past, the dollar has been a definite amount of gold. The mere fact that the precise amount of gold involved has now been altered does not change the basic principles involved.

Sometimes, the relationship between gold and goods in general, in other words, the price level, is dismissed with the casual assertion that it is merely the effect of the laws of supply and demand. That loose and unsatisfactory explanation will hardly serve here. We must seek for the real meaning behind the so-called supply and demand relationships.

Gold Production

Turning now to a consideration of gold production, certain basic features are obvious. In the first place, producers of gold are not different from producers of other commodities in their desire to operate their businesses at a profit. Generally speaking, their costs are dependent upon the general level of wholesale commodity prices and wages. This connection is hardly instantaneous in operation, but it is common knowledge that high prices for the general run of goods tend to draw labor and other elements of production from gold mining to the more lucrative forms of endeavor. In general, it is sufficient to say that the costs of producing gold rise when commodities in general rise and fall when they fall.

The effect of increasing costs in the gold mining industry is necessarily to curtail profits and discourage production of gold. It may not result in the closing of mines already in operation, but it will certainly tend to prevent the flow of new capital and new labor into the gold mining industry.

In addition to the effects on gold production which changes in the price level must have, history has shown that there may be changes due to new discoveries of large ore deposits. Of course, such discoveries on a scale which will materially affect the rate of current production are hardly likely now, inasmuch as such a large part of the world has been already explored. Furthermore new gold discoveries, even if comparable to the finding of gold in California in 1849, would not now have a percentage effect on the rate of current production that those discoveries did. It is also true that depletion of old mines may tend to cause decreasing gold production, but as a general rule, such depletion does not occur on a large scale in any one year. Fluctuations in the production of gold are therefore primarily due to the encouragement or discouragement which may result from fluctuations in commodity prices.

But all the new gold which is mined, with the exception of that which becomes jewelry or is hoarded, is taken to the mints of the world and there converted into circulating purchasing power. This purchasing power may be in the form of gold coins or gold certificates representing those coins, or other paper money based on gold, or credits to individuals' checking accounts in amounts which correspond to their deposits of gold bullion.

In any event, the new purchasing power placed in circulation as the result of new gold production makes possible an increased demand for goods, which in turn tends to raise prices. Furthermore, the accumulation of new supplies of gold in the banking systems of the world means increased reserves, which in turn make possible larger originations of credit, usually in the form of individuals' checking accounts. These checking accounts, which are pure credit made possible by increased gold reserves and which are over and above the original credits representing, or given in exchange for the gold itself, constitute an even greater enlargement of total purchasing power and, of course, tend to affect prices.

It is seen, therefore, that there is a triangular relationship between gold production, total purchasing power in use, and the price level. If prices rise, gold production is discouraged, thereby curtailing new increments of purchasing power. This in turn must mean a curtailment of demand and, if production is following a long term upward trend, this lowering of demand and increasing of supply will result in lower prices. But lower prices will encourage gold production, in turn augmenting total purchasing power, thereby making higher prices possible. The tendency is for these three factors to work toward equilibrium.

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*"Mathematical Analysis of Post-War Price Falls—13.6 Years to 1913 Level," The Annalist, August 26, 1932.

**"The Future for Commodity Prices," Barron's, March, 1933.

In this connection, it must not be forgotten that the banks can and sometimes do create inflationary purchasing power, as they did during the World War, for example, and again in the period 1922-1929. When this inflationary credit in the form of individuals' checking accounts is used, the effect is to augment demand, thereby forcing prices upward. The rising prices due to inflation discourage gold production and bank reserves fail to increase in spite of the stimulation that rising prices give to business activity. Bank reserves then become insufficient to provide the purchasing power needed to support the high price level and an enlarged volume of business, with the result that inflationary loans have to be curtailed and deflation begins. This triangular relationship between gold production, purchasing power, and prices therefore tends to act as a stabilizing factor and, to the degree that it is permitted to be effective, it prevents a run-away inflation such as that of the German mark.

With the foregoing in mind, it is now possible to define more accurately what is meant by the normal level of prices. Prices may be considered normal when the rate of gold production, creation of new purchasing power, and the level of business activity are moving along parallel lines and price changes are minor. Prices are then such that production of gold is sufficient to maintain them. In other words, prices are normal when gold production is thereby encouraged to increase at a rate which preserves equilibrium.

It is more or less obvious from recent experience that prices will fall when there is hoarding of gold. This is only to be expected, inasmuch as hoarding has the same effect as though the gold were never produced. On the other hand, prices may be above normal, due to the effects of inflation. As pointed out in last month's bulletin, "inflation" is used to mean the existence of an excess of purchasing power in the business world with respect to that justified by the volume and value of current production. When there is a marked tendency for labor and capital to avoid the gold mining industry in favor of the production of other goods, or when the tendency in the other direction is especially marked, it is plain that abnormal conditions prevail.

Checking with the Facts

It is always advisable to check theoretical explanations of the course of events against the facts of recorded history. In view of space limitations, we shall confine the present discussion to a brief survey of the recent factual data which have made it possible to determine within a reasonable margin of error the present normal price level. In next week's issue, it is planned to devote some space to further comment on the historical record of the more distant past.

Following the sharp down trend in prices which began in 1929, gold production turned upward and, in 1932, the industry made one of the greatest percentage increases in productive activity which has ever been recorded. During that year, gold production moved definitely above what may reasonably be considered its long term trend line.

In 1933, however, the increase in annual rate of gold production was only enough to keep total production slightly above this long term trend line. That is to say, although there was an increase in gold production during 1933, it was very small and was not sufficiently great to equal the normal increase.

It will be recalled that the price level during the summer of 1932 reached extremely low figures, and that there was a substantial recovery in the fall of that year. Keeping in mind the fact that changes in gold production, in response to changes in the price level, involve a substantial lag of several months duration, it seems reasonable to draw two conclusions from the figures just mentioned. In the first place, the severe drop in prices through 1931 and early 1932 obviously greatly encouraged producers of gold. It is difficult otherwise to account for the very substantial increase in production during 1932. Secondly, the sharp upward movement in prices which began in the summer of the same year apparently led many gold producers to believe that the price level had finally hit bottom and was due for a considerable recovery.

The devaluation of the dollar in 1933 and subsequent further decline in prices in terms of the former gold dollar again encouraged producers of gold. In 1934, we find by far the greatest production of gold on record, approximately 10 per cent. above the 1933 rate. This annual rate of increase is, of course, very much more than is indicated by the normal long term trend. Apparently, therefore, the low level of prices in terms of the normal gold dollar at present existing is such as to encourage substantially greater than normal gold production.

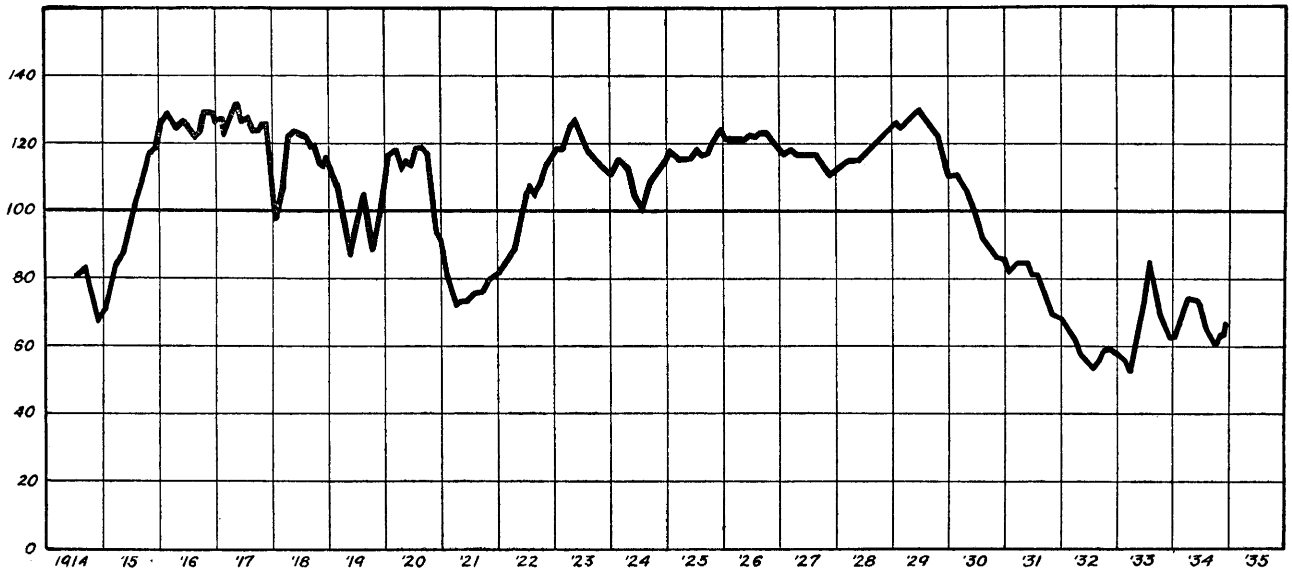
Since the sharp price decline of 1931 and early 1932 was sufficiently encouraging to producers of gold so that production was stepped up above its long term rate, and since the slight rebound in prices in the fall of 1932 was sufficient to reduce the increase below its long term upward trend, it is a justifiable conclusion that the 1932 level of prices was somewhat above that needed for long term equilibrium.

The 1934 level of prices is obviously too low for a long term equilibrium in view of the recent increase in gold production. After a careful study of the facts involved, especially of the relative rates of increase in annual gold production during the past few years, we have concluded that the present normal level of prices is somewhat lower than that of 1932 and substantially higher than at present (in terms of the former gold dollar and, of course, 67 per cent. higher in terms of the present dollar). The estimate finally made places the normal level at approximately one-third of the difference between these two, below the 1932 level.

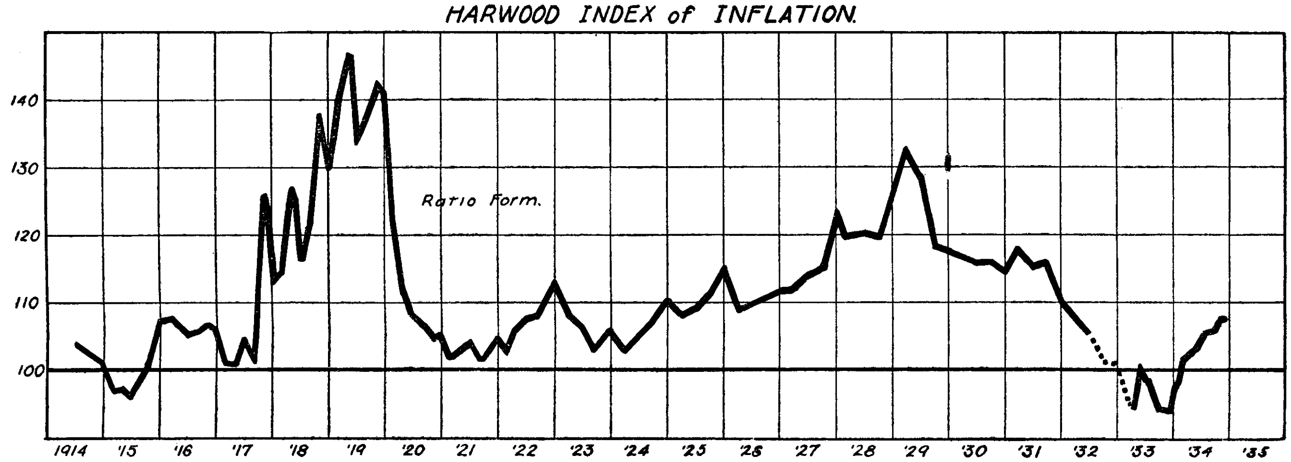
The normal line indicated on the chart of wholesale commodity prices passes through the approximate average of prices for 1913 and through the point which was determined, as has just been described. The monthly index of prices during the period covered has been divided by the level of the normal line in terms of $1913 = 100$, with the result that a new index has been derived showing the course of prices in terms of the normal which has been established.

Referring to the chart on the fourth page, it will be observed that prices in terms of the former gold dollar are still substantially below the normal line. It is safe to say, therefore, that the trend for the next few years will be upward as the price level approaches, and possibly rises above, the indicated normal.

INDUSTRIAL PRODUCTION.



HARWOOD INDEX of INFLATION.



COMMODITY PRICES.