Reprinted from the AMERICAN ECONOMIC REVIEW SUPPLEMENT, Vol. IX, No. 1, March, 1919, published by the American Economic Association. Inquiries in regard to membership should be made to Professor A. A. Young, Cornell University, Ithaca, N. Y.

After-War Readjustment: Liberating Gold

A. C. MILLER

AFTER-WAR READJUSTMENT: LIBERATING GOLD

By A. C. Miller
Federal Reserve Board

During the past four years gold has sustained a most serious fall of value. Tested by price levels in leading markets, it has lost about one-half of its purchasing power since the beginning of the European War. Never before in its history has gold experienced any such change of value in so short a period of time. Moreover, this great decline in its value has not been occasioned by an increase in its production. While the value of gold has been falling, its production has been declining (the decline for the year 1917 being an amount equal to 7 per cent of the gold output of 1916, the estimated production for 1918 being 11 per cent below that of 1917). Contrary to previous experience it is the fall in its value that has occasioned the fall in its production. Gold mining has become unprofitable, except for the best situated mines, because of the diminished purchasing power of the dollar.

So serious a decline in the value of the standard is naturally calculated to awaken concern. Unless the decline is to be treated as a transitory phenomenon, there would be reasonable ground for dissatisfaction with the continued use of the gold standard. Such dissatisfaction was voiced even before 1914, because of the instability that was exhibited by the gold standard. It is not surprising, therefore, that in view of the spectacular decline of the past four years, question should have been raised as to the continued desirability of the gold standard, at any rate, unless some method of providing protection against its fluctuations should be made a part of it. Looked at from this point of view the immediate problem presented by the gold standard is that of restoring its lost value and insuring the stability of that value.

But this is not the only anxiety that has been occasioned by the peculiar behavior of gold. Fear has oftentimes been expressed that the vast financial and credit structure that has been built up on the gold basis during the last four years is insecure because of an inadequate gold reserve, a condition which it is said threatens to become worse with diminishing production of gold. The gold standard, it is said, has been put in jeopardy because the supply of gold is insufficient, and heroic measures must, therefore, it is said, be taken to stimulate the production of gold. The particular measures suggested for this purpose are the exemption of gold mining from taxation, the granting of bounties to gold producers, and, as a much more radical proceeding, the diminution of the gold content of coins.

Gold has fallen in its purchasing power, because it has shared the fate of paper from rising prices. Prices at wholesale are "up" about 100 per cent or more in leading markets in countries where the gold standard still obtains.

Why are prices up, and are they destined to stay up? These are obviously questions that must be answered in undertaking to estimate the prospects of gold. Prices began to go up in the United States about the end of 1915, partly in consequence of heavy demands for goods for use in the belligerent countries of Europe, and partly in consequence of the easy credit conditions that prevailed in the United States, and the growing abundance of money following the steady inflow of gold from Europe in payment of purchases made here. That movement continued through the year 1916, and into the year 1917. Prices steadily continued to rise. They have gone on rising since we entered the war, being now 100 per cent or more above the June, 1914, level for wholesale, and 73 per cent for retail, prices.

Not until much patient and exhaustive investigation has been made can it be determined, with anything like satisfactory accuracy, to what extent the great rise of prices, which has taken place in the last four years, is to be explained by relative shortage of leading materials and commodities, and to what extent it is due to the artificial abundance of money. No doubt, both factors have been at work, and the high prices which have prevailed are partly to be regarded as indicating "scarcity values" and partly as indicating inflated prices. The scarcity prices will, no doubt, correct themselves and disappear as industry returns to a normal condition. Inflated prices, however, present a more difficult situation. Their corrective must be sought mainly in a diminution in the volume of purchasing power, and must come in the United States mainly in the liquidation of war business and war borrowings.

The expansion of circulating bank-deposit credit in the United States during the past four years may be conservatively estimated at from 40 to 50 per cent. The amount of securities issued by the government in the process of negotiating the great war loans—in the form of bonds and certificates of indebtedness—which there is good reason for believing have not yet been absorbed by permanent investment, may be estimated at six billions of dollars.

A considerable part of our expanded credit and currency structure is therefore undoubtedly to be accounted for by the large volume of war securities being carried by or in the banks. It is the considerable addition to the volume of our currency and circulating bank credit thus occasioned that explains much of the rise of prices that we have been experiencing.

In the United States prices are gold prices, all of our paper currency being interchangeable with gold, and therefore, at a parity with gold. In part, gold prices have risen because of the abundance of gold, our stock having been increased by more than one thousand millions of dollars since 1914. However, it is not the direct, but the indirect, effect of this gold that has sustained the upward flight of prices. It is the great volume of circulating credit and currency based upon it that has put or kept prices up.

Are prices to be kept up? Can they be kept up, and will they be kept up?

The fate of gold and the future of the gold standard will depend mainly upon the answers given to these questions. More than this, the character of the whole post-war period, and the nature and length of the readjustments which it is admitted must be worked out, will depend upon these answers.

Gold will not recover its lost purchasing power until prices decline. Financial, credit, and business relationships, which have been thrown into confusion by reason of the rise in prices, will not be straightened out until the price situation is rectified. But the price situation will not be rectified until the expansion of our currency and credit attributable to the buying of war securities on credit has been eliminated, and the volume of credit and currency has once more been brought back to a normal economic volume—that is to say, a volume corresponding to the needs of industry and trade for the production and exchange of goods at normal values.

The only reason for doubting whether the existing gold stock of the leading western countries is sufficient to hold out the expectation that the monetary practices associated with an effective gold standard can soon be resumed, is the doubt as to what the attitude of the leading countries of the commercial world will be toward a continuance of the present inflated price structure. The whole commercial world is on an inflated basis. The situation is worse in some countries than in others; in some the inflation is a gold inflation, in others, it is a paper inflation; but in all a situation has been produced, either by reason of the abundance of gold or the abundance of paper and credit currency, that calls for much the same sort of general treatment, unless the present inflated level of prices is to be continued by acquiesence of the leading countries. It is doubtful whether any one country could move very far or very rapidly without affecting others in ways that would probably be regarded as detrimental and inimical.

The price problem is an international or world problem, and the same may be said of the problem of gold. Gold will not recover its lost value until present inflated prices disappear. Action by any one country, however, in proceeding to rectify its price situation would probably do much to focus international attention on the problem and to suggest the advisability of taking similar action. Indeed, the recent reports of the British Committee on Currency and Foreign Exchanges After the War and of the Committee on Financial Facilities of Trade After the War show that the matter is having the studied attention of the most competent authorities in Great Britain, and that there is unanimity in the opinion that the restoration of an effective gold standard is one of the best forms of protection against a further increase of inflation. It may be added, it is also one of the best remedies for the inflation which already exists.

If policies and views in our own and other leading commercial countries run in favor of reducing price levels by a process of liquidation and contraction, there is nothing at all to fear from the present diminished production of gold. The restoration of the gold standard and the monetary practices associated with it in the leading gold standard countries could soon be resumed, thus restoring gold to the exercise of its important prewar function, namely, that of regulating through its international flow price levels in the different countries in accordance with international conditions of demand and supply, a function which has been pretty much in abeyance throughout the last four years. But even if only moderate progress should be made in liquidation of war credits and much of the present inflation in the western world be continued, there is nothing in the present diminished production of gold that need awaken serious concern, much less alarm, and least of all in the United States.

Much as I believe that the permanent economic interest of the

United States and of the nations with which we have been associated require that the inflation produced by the war should be cured by a diminution of banking liabilities, I still believe that the supply of gold possessed and controlled by them is large enough to supply a banking reserve adequate to maintain an effective gold standard, if the light thrown by the experience of the war upon the ability of a given unit of metallic reserve to sustain a much larger volume of credit than was assumed in prewar days may be taken as a guide in the future, provided that the supply be redistributed, and that some of the monetary practices begun during the war, which have resulted in great economy in the use of gold, be continued.

Following the classic example of England, the gold standard countries before the war pretty generally pursued the policy of maintaining a considerable volume of gold coin in actual circulation. "No gold standard without a gold currency" represented the orthodox view. During the war the policy of concentrating the gold scattered in the channels of circulation and the pockets of the people into great reserve institutions has been systematically followed with results that are reflected in the vast increase in the gold holdings of our Federal Reserve Banks and many of the central banks in other countries, at a rate far in excess of the annual output of gold from the mines. Gold holdings of the world's fifteen principal banks of issue increased from $3,646,000,000 in July, 1914, to $6,258,000,000 in November, 1918, a gain of $2,600,000,000 or more than $800,000,000 in excess of the total new gold taken from the mines during this period. It does not seem probable that, for many years to come, if ever, there will be a return to the old practice of maintaining a large body of gold in circulation. The gold, which has been concentrated in the great reserve and note-issuing banks, is likely to be kept there. The gold standard will henceforth be dissociated from the widespread use of gold in circulation. The problem of maintaining an effective gold standard, therefore, becomes more than ever a problem of banking, and especially one of the management of the reserve.

Considering the great importance of the subject and the length and variety of the experience, it is surprising how little there is that can be called a science of banking reserves. Not only has there been great diversity of practice among leading gold standard countries with reference to reserves, but there has also been more or less diversity of opinion on the subject in each of the principal countries. More than that, if we compare the fifteen years preceding the outbreak of the war with earlier periods of similar length, we find that there was a marked tendency of reserve ratios to rise with the increase in the production of gold since the beginning of the century. More and more have the great banks become repositories of gold, a large part of the new gold taken from the mines having found its way into the banks, there constituting more or less of a dead asset. Reserve ratios in leading banking systems seldom ran so uniformly high as during the period 1900-14; indeed, they were so high as probably to be regarded from an economic point of view as in excess of reasonable requirements.

The contingencies against which a banking reserve of gold was required in prewar times may be set down as three: (1) to maintain the parity of internal circulation with gold by freely providing gold to meet a foreign drain; (2) the psychological function of inspiring confidence in the strength, stability, and safety of a country's financial and credit system; and (3) to provide a store of purchasing power for use in times of national emergency, such as war.

Of these functions, the first is by far the most important from a banking and economic standpoint. It must be mainly by its ability to provide gold for meeting and thereby correcting an adverse balance of trade that the adequacy of the banking reserve carried in any country of centralized reserves must be tested. It is of course through the medium of changes in the amount of its banking reserve—flowing out and diminishing when the balance is adverse, flowing in and increasing when the balance is favorable—that the general price level in gold standard countries is kept in proper relation to the world level of gold prices; prices falling as an adverse balance is in process of correction through an outflow of gold and rising as a favorable balance is in process through an inflow. Looking at the matter of reserves from the economic point of view, the adjustment of the volume of a country's credit and banking currency to what is necessary to maintain prices at their proper economic level may be described as the most important function of a nation's banking reserve. The gold of the world and the new gold as it comes from the mines is constantly in process of distribution and redistribution. It is thus that the international price level is maintained or rectified in accordance with underlying conditions governing the equation of international demand and supply of the different countries. As such, the gold reserve is an economic regulator of the very first importance. It is a method of testing the character and volume of a country's credit and currency and so keeping it from getting out of line with economic requirements, particularly in relation to world conditions. As regards this function of a regulator, it seems obvious that it is not the absolute level of the reserve ratio that is significant, but the variations in it which take place. The decline of an absolutely low reserve ratio will serve just as well to indicate an undue growth of banking liabilities as the decline of a higher one. Indeed there is much warrant, especially in view of recent war experiences, to justify the opinion that a reserve of moderate height is a more sensitive indicator and therefore a better regulator of banking operations than one of greater height.

With respect to the function of providing gold to meet foreign demands, it is the absolute quantity of gold held under banking control, rather than the reserve ratio, that counts. The concentration, therefore, of the bulk of the stock of monetary gold in all the leading countries under banking control means a great extension of the facilities for the international mobilization of gold—the loss of a given amount from a large reservoir of gold bulking as a lesser loss than the same amount from a smaller reserve, even though the reserve ratio in the latter case was in first instance higher than in the former. The gold strength, for example, of the Federal Reserve System internationally considered is to be found in our holdings of more than two thousand millions, quite irrespective of what the reserve percentage of the system as a whole might happen to be at any moment. The loss of what in prewar days would have been considered a very serious drain can now be faced with comparative equanimity.

With respect to the national emergency function of the reserve—that is, making provision by the accumulation of something like a national gold hoard against the vague contingencies of international politics—much will depend in the future upon the basis on which the affairs of the world are to be re-ordered as a result of the peace settlement. If the League of Nations, reduction of armaments, and the like become realities, then the accumulation of hoards of gold under the impulse of national fears or ambitions must be suffered to go the way of other outworn practices. Thus will the functions of banking reserves be reduced more nearly to the purely economic requirements and reserves which have been thought to be inadequate in the past be quite adequate in the future.

As regards the vague function of inspiring public confidence, the matter is mainly one of psychology. *A reserve is adequate if it is thought to be adequate.* The events of the last four years have thrown the matter of the importance of a banking reserve from the psychological standpoint into a diminishing perspective. Not the least of the remarkable financial by-products of the war has been the ease with which popular expectation, confidence, and practice have adjusted themselves to the substitution of fiduciary notes for gold currency. That the spirit of patriotic fervor in war times has had much to do in inducing this change of attitude is unquestioned. The fact that, even in countries which suspended specie payment, there has been no premium on gold or discount on paper has also had much to do with breeding a spirit of indifference. It seems not unlikely that a permanent impression has been made upon monetary habits as a result of the war, which will give to the large reserve, as a means of inspiring confidence in the integrity and solidity of a country's financial system, a steadily diminishing importance in the future. Suggestion, experience, and education have much to do with this sort of matter. Just as prejudice, ignorance and habit had much to do with reserve ideas and practices before the European War, now that a definite break with the past has been made new ideas and more economical and rational practices will stand a better chance of acceptance. A considerable revision of monetary and reserve practices seems not an unlikely result of the financial experience of the war and the immediate necessities of the after-war situation.

The United States is in an exceptional position for taking the initiative in revising banking practices along more economical and rational lines: (1) because of our assured creditor position; (2) because of our unprecedented gold position; (3) because of our great banking and financial strength.

We are a creditor nation to the extent, if not at the moment, at no distant time in the future, of five hundred million dollars a year. We have increased our stock of gold since the beginning of the European War by fully 50 per cent. At the same time by the Federal Reserve Act, we have reorganized our banking reserve in such a way as greatly to economize its use and efficiency, making our banking position as a whole one of far greater strength and safety than ever before. More than two thousand millions of gold concentrated in the hands of the Federal Reserve Banks constitutes it the greatest gold reserve the world has ever known.

We are, therefore, in a matchless position to assume the function of a free-gold market, a function which the world in the process of economic readjustment and recovery will sorely need. There must somewhere be a market in which claims can be established in gold with a certainty that they can be cashed in gold and that gold will be forthcoming for foreign shipment. Whatever might have been said in justification of the embargo on gold shipments, which the United States in common with the other belligerent nations have practiced as a matter of admitted military necessity, the embargo should be lifted at the earliest practicable moment; that is, as soon as our international financial relationships are such that we are no longer under the necessity of taking care of adverse balances of the nations with which we have been associated in the war arising out of their trade with neutral countries.

We must deal with our great gold stock in a spirit of liberality. We have far more gold than we need to do our money and banking work. The surplus was obtained from other countries largely because of their necessities. They need it back in order to effect the restoration of their finances, more particularly to insure the resumption and maintenance of gold payments. We should not hesitate to part with much of it if we could have the assurance that the countries receiving it would proceed to lift their embargoes and restrictions and deal in the future with gold in the spirit of the new international reciprocity which is expected to be one of the consequences of the war.

AFTER-WAR READJUSTMENT: LIBERATING GOLD-DISCUSSION

ELISHA M. FRIEDMAN.—There are three statements in Dr. Miller's presentation which merit discussion:

1. The paper of Germany was at a discount with respect to gold while that of France and Great Britain was not.

2. The Federal Reserve System has been patterned too much after German banking models.

3. We ought to release our mobilized gold.

1. There have appeared statements to the effect that French and Italian paper were at a discount with respect to gold. But the vital distinction between the weakness of German finance as compared to that of the Allied Powers is that the latter had a great financial reserve to draw on,—the loans raised in the United States while it was neutral, and the government credits extended after it entered the conflict.

Our entry into the war solved the financial difficulties of the Allies. The United States Government advanced credits to cover purchases made here. The financial strength of our associates in the war was derived from their affiliation with the United States, just as Germany's weakness consisted in her isolation. The increase in her paper money and the decline in the ratio of gold to notes was not very different from that of either France or Italy.

The difference contains a post-war moral, the value of coöperation in the attempt to reëstablish international credit.

2. The statement that the Federal Reserve System has developed along German lines is subject to qualification.

The outstanding feature of the German banks is the alliance between industry and the banks. The Norddeutscher Lloyd and the Deutsche Bank, the Allegemeine Electricitaets Gesellschaft, and the Berlin Handelsgesellschaft are illustrations in point. The banks in each case function as underwriters and issue the securities of the related industry. By contrast, our Federal Reserve members are more strictly banks of deposit, like the British and French banks. However, the English think so well of the union of industry and finance that they founded the British Trade Corporation to secure the benefits thereof. As for the French, Deputy Victor Boret, in his *Credit de Demain,* laments the rigidity of the French banking system and lauds the elasticity of the German. Eugene Le Tailleur, author of *Pour Renaitre* and of *Vers la Democratie Nouvelle,* says, "The nameless