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Mr Eccles

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM

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Office Correspondence

Date January 25, 1937

To Mr. Morrill

From Mr. Currie

Subject: Would a Further Expansion of Money be "Injurious"?

I am enclosing a memorandum expanding my remarks at the Board meeting last Tuesday for distribution to Board members and others who may be interested.

Lauchlin Currie
January 25, 1937.

WOULD A FURTHER EXPANSION OF MONEY BE "INJURIOUS"?

The Problem

In the past three years the volume of circulating deposits (adjusted demand deposits) plus currency outside banks has expanded by over $11 billion or 55 percent. It is approaching $5 billion in excess of the figure in 1929. Excess reserves are well over $2 billion. The Board has the power to raise reserve requirements further "to prevent injurious credit expansion". The problem is to determine whether the present volume of money is deficient, adequate or excessive. Another way of stating the same thing is to determine whether any further expansion is justified and if so how much, or whether and at what point further expansion will be "injurious".

An attempt at the solution of the problem entails a discussion of what criterion can be used to determine the adequacy or excessiveness of the volume of money and what the prospects are for further expansion if no action is taken.

Elements of the Problem

It is obvious that the present supply is not excessive in the sense of promoting too much spending at the present time. The question, however, is whether it is excessive for conditions of relatively full employment; whether, in other words, the present supply is such as to facilitate too great an expansion of incomes and prices in the future.

An expansion of incomes (or the value of output) may be excessive on two counts. It may come about because of too rapid a rise of prices in general, or it may come about because of too large a volume of production resulting from widespread night work, over time, and employment of people not usually employed in industry. Usually these two factors go together. An adequate amount of money would be such as to correspond with full production without undue strain and with only a moderate and unavoidable rise of prices. In other words, the value of output and the national income should increase by little more than the increase in the physical production of goods and services.

The elements in the problem, then, are as follows:

1. The increase in physical production that can be achieved without strain.

This depends on such things as man power, physical equipment, and technical knowledge.

2. The cost (including profits), or value of total production.

This depends, in turn, on the increase in production and the price level of production. This, in turn, equals the total money cost, including profits, of production.

3. The total money cost (including profits) of production or the national money income may be further broken down into the amount of money and the rate of income velocity of money.

If we know the amount of money and we can estimate the probable income velocity of money, we can estimate the probable total money cost of production, or the national income. We may then compare this with an estimate of the total value of production which we think the community could produce without strain and at a price level which would not invite commodity speculation, etc. If our estimated probable national income is in excess of this figure it means that prices will rise more than we think advisable. In these circumstances the supply of money will be excessive and any further expansion would be injurious.

<u>The Probable Increase in the Rate of Turnover of Money</u>

It is generally believed that the turnover of money is subject to such wide swings that it is useless even to speculate on the probable turnover in the event of full recovery. This belief is reinforced by inspection of the variations in the crude or transactions velocity of money, that is, the rate of turnover of money for every purpose. The concept of velocity which is relevant here, however, is not crude velocity, but income, or as some people prefer to call it, circular velocity. Crude velocity includes the turnover of money for all purposes, most of them of little economic significance. An increase of $10 billion in speculative transactions -- swapping stocks for example -- while it may be important from the point of view of the technical position of the market, has nowhere near the same economic significance as an increase of $10 billion in incomes or consumers' purchases. In 1929 consumers' expenditures amounted to less than five per cent of total bank debits.

The concept of velocity that is more significant for our purposes, therefore, is that known as the income velocity of money. It is obtained by dividing the annual national income by the average amount of money, and represents the number of times on the average the total stock of money is turned over to income receivers in the course of the year. It is true that this is a simple arithmetical ratio, but it has the merit of permitting a shorthand expression of the net resultant of the myriad of forces that enter into the determination of the national income.

The interesting thing for our purposes about this type of velocity is that it does not show such wide fluctuations as crude velocity. The income velocity of money remained very steady from 1923 to 1929 at around 3. The new money created did not result in any change in the rate at which the total stock of money was being turned over to income receivers. The nation as a whole held a stock of money equal to about the value of four months' production of goods and services. The reason for the steadiness was probably that consumers kept a more or less definite ratio of their balances to their incomes and business kept a more or less definite ratio of its balances to its output. There were, of course, random fluctuations but over the whole of the economy definite and comparatively steady ratios obtained.

From 1929 to 1932 the income velocity of money declined from over 3 to less than 2. In other words, a considerably decreased supply of money became equal not to the value of four months' production, but to the value of over six months' production.

From 1932 to 1936 the income velocity of money has apparently remained fairly stable around 2, slightly above its low point in 1932. The large addition to the supply of money did not, in other words, bring about a significant change in the rate in which the total stock was being turned over.

In the event of full recovery, may we expect the income velocity of money to increase, and if so, by how much? An alternative way of stating this question is: What reasons are there for thinking that the relationship between money and income prevailing from 1923 to 1929 will not be restored in the event of full recovery? Are public bodies, financial institutions, business men and private individuals likely to hold larger or smaller balances in relation to income and the volume of their operations in the event of full recovery than they held from 1923 to 1929?

We may first consider the possible behavior of consumers in this regard. One factor that may cause consumers to maintain larger balances in relation to their incomes is the widespread initiation of service charges since 1929. Another factor is the increased emphasis on liquidity, although this is probably of minor significance in the case of the bulk of consumers. In any case, there is considerable evidence that consumers' checking accounts are not very important quantitatively, amounting to possibly only 15 percent of the total. A moderate increase in the ratio of consumers' balances to incomes in comparison with the ratio prevailing before the deflation would not, therefore, alter the income velocity of money significantly.

Let us now turn to a consideration of whether there are any new elements in the situation that might cause business to maintain larger holdings of demand deposits in relation to output than in 1923-29 in the event of full recovery. There appear to be several.

In the first place, one effect of the depression that will probably persist for some time is an increased emphasis on liquidity. It is quite true that a desire for liquidity can be satisfied in other ways than by holding demand deposits. The important thing for our purposes, however, is not only that there may be a greater desire for liquidity but in addition relatively less desire and ability to secure liquidity through the holding of assets other than demand deposits. For one thing, there are increased restrictions on time deposits and so long as low interest rates persist, bankers are reluctant to accept large time deposits. Again, one source of liquidity in 1929, call loans of businesses to brokers, is no longer available. So long as the yields on Treasury notes and bills remain so low, business hardly finds it worthwhile to hold Governments in place of demand deposits. If, as seems likely, the Treasury should retire and refund a substantial portion of the short term debt, the rates on the remaining short term debt outstanding would remain very low.

There are indications that financial institutions, wealthy individuals and public bodies hold very much larger balances than they did in the 20's. There appear to be no very good reasons for believing that when favorable opportunities for investment reappear balances held by financial institutions and wealthy individuals will not return to levels more comparable with those that prevailed before the depression. The Federal Government, on the other hand, is likely to hold large balances.

On the whole it would appear that while we may expect a considerable expansion in the income velocity of money the probabilities appear to be against its going above 3.

The Supply of Money

The latest figures available for adjusted demand deposits of all banks are for June 30, 1936. On that date the total adjusted demand deposits plus outside currency amounted to approximately $30 billion. Judging from the increase in adjusted demand deposits that has since occurred in reporting member banks, it appears safe to say that the total volume of money now amounts to at least $31 billion.

The Desirable National Income

We now come to the hazardous task of estimating the figure of national income that would correspond with relatively full employment under conditions that we might hope to maintain. This is both a question of physical output of goods and services and of the price of that output. We may first dispose of the price aspect.

While a case could be made out for the desirability of maintaining the present level of prices, this does not appear to be possible. The recovery movement does not proceed evenly in all industries. Owing to relative changes in demand since 1929, some industries may be working at capacity, while others may be relatively slack. It would be very difficult to absorb the unemployed in the laggard industries while preventing a rise of prices in the industries which are being pushed to capacity. Hence, as one industry after another approaches full capacity we may expect price advances which will raise the general average. The more gradual the recovery movement, the more opportunity there will be for building up capacity where it is deficient and for moving and training labor and, hence, the more moderate will be the rise in prices. In view of the prospects for an orderly recovery and the existence of a wide range of inflexible prices, we may perhaps posit a ten percent advance in the general level of prices over the present level as being the upper limit to which it is desirable that prices should rise.

We may now attempt to estimate the value of production with relatively full employment and with prices ten percent higher than at present. It is obvious that we cannot expect full employment immediately. For our present purposes we will assume that it will be reached by 1939.

The method of procedure adopted was to estimate the average number of unemployed in 1936 at 9.5 million, add 1.8 million workers as the addition to the labor market in the next three years and deduct an estimated 3 million workers as constituting the more or less irreducible minimum of unemployed workers, leaving 8.3 million workers to be absorbed in the next three years. Assuming that the average number of workers in 1936 was 43 million, this would represent a 19 percent increase.

Deducting from an estimated national income of $61 billion in 1936 the figure of 1.5 billion as representing the wages of people on work relief, and then assuming that the national income will be increased 19 percent by the increase in the number employed, 6 percent by the increase in output per worker 1/, and 12½ percent from higher prices (10 percent over present prices equals 12½ percent over the average for 1936), we arrive at a final figure of $84 billion. This figure, which can hardly be classed as more than an intelligent guess, represents the estimated national income that would correspond with relatively full employment at prices 10 percent higher than at present.

Tentative Answer to Question, Would a Further Expansion of Money be "Injurious"?

We may now attempt to gather together the various threads of the argument to this point. Our first conclusion was that the total supply of deposits subject to check and currency outside banks is at present around $31 billion. There is some reason for believing that three represents the upper limit to which the income velocity of money may go. On the basis of $31 billion of money this would mean a national income of $93 billion. If, on the other hand, the income velocity of money increases only to 2 3/4 this would mean a

1/ Half of the rate of increase in the past two years projected over the next three years. This estimate appears adequate in view of the necessity of resorting to less efficient labor and plant and in view of the lessened possibility for extending working hours.

national income of $85 billion. It will be observed that this latter estimate of the probable national income corresponds quite closely with our estimate of a desirable national income of $84 billion in three years' time.

The general conclusion is that the present volume of checking accounts and outside currency is probably adequate for conditions of relatively full employment with prices moderately higher than at present. Should the volume of money be further increased or should the income velocity of money regain or exceed the velocity prevailing throughout the Twenties, the volume of money might be excessive in the sense of corresponding with too rapid an increase in prices and too high a total value of output. A case can be made out, therefore, for the contention that a further expansion of money might prove to be injurious.

Prospects for a Further Expansion of Money

The most likely ways in which a further expansion of deposits subject to check may occur are through an expansion of banks' earning assets or through further inflows of gold.

A previous memorandum discussed the prospects for the demand for bank loans of various types in the next few years. It was there concluded that the demand for security loans would increase only moderately owing to the relatively high marginal requirements; that real estate loans might double their present level of $2 billion; and that all other loans might expand by some $3 or $4 billion.

Whether the satisfaction of this demand, should it materialize, would result in an expansion of checking accounts, depends mainly on the action of the Federal Reserve authorities and of the Treasury. Should Federal revenues and expenditures be such as to permit the retirement of a substantial amount of short-term debt, as seems likely, or should the Treasury decide to refund a substantial portion of this short-term debt, the contraction of the banks' holdings of governments might offset the expansion of other earning assets.

Similar uncertainty arises with respect to further inflows of gold. While we may be fairly confident that the inflow of capital in the form of gold will continue and will result in the creation of new deposits if no action is taken, there is a possibility that action may be taken to discourage further capital inflows.

Assuming that excess reserves are left with banks, the prospects for further expansion of demand deposits are uncertain. It might conceivably happen that further inflows of gold would be checked and that the retirement and refunding of short-term governments would offset the expansion of banks' other earning assets, so that demand deposits might remain unchanged. The balance of probabilities, however, appears to favor a further expansion of money, particularly in the next half year or so.

Conclusion

There are grounds for believing that the present volume of money is adequate to finance a period of full and healthy recovery three or four years hence. Any further expansion entails some risk. On balance, the probabilities appear to suggest that further expansion will occur unless checked. Adequate monetary grounds exist, therefore, for taking action to prevent an injurious expansion of credit.