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(Revised from original)
Feb 1937
1936

CONFIDENTIAL
Notes on meeting of May 18, 1936
Led by Mr. Currie

(Board Staff Meetings)

A
Budget 1936

SOME MONETARY ASPECTS OF THE EXCESS RESERVE PROBLEM

Excess reserves constitute a problem because they may lead to an excessive expansion of deposits. Adjusted demand deposits have increased some \$8,000,000,000 since 1933 and are larger than in 1929. It would be generally agreed that an additional expansion of \$30,000,000,000 of deposits would be excessive in terms of our objective, which is long-term prosperity, or, more precisely, as full a utilization of our productive resources as can be continuously sustained. The problem, however, is whether any further expansion would be advisable. This problem is easier to state than to answer, but an effort must be made to solve it even though much of the essential information is lacking.

For the country as a whole, unused capacity is measured by unused man power. On the basis of past experience, what figure of national income might correspond with relatively full employment? During the period 1923-1929, although complete statistics of unemployment at that time are not available, the general impression is that it was not excessive. For March 1929 Mr. Lubin estimates unemployment at 2,250,000, or about 5 percent of the gainfully employed. It is doubtful whether the slack in the system represented by 5 percent unemployed could have been substantially reduced without incurring the risk of a boom. The general price level was declining gently and the quality of goods was improving.

It may be justifiable, therefore, to take the trend of national income from 1923 to 1929 as corresponding with relatively full employment. In that period the estimated national income paid out increased from \$63,000,000,000 to \$79,000,000,000, or by 3.8 percent per annum. In arriving at some approximation of the figure of national income that would correspond with conditions of relatively full employment in the next few years, therefore, the trend of national income from 1923 to 1929 may be taken as a starting point. A rough approximation of the figure of "proper" national income now or in the near future may be arrived at simply by projecting the trend of national income from 1923 to 1929 on to date, if we assume that the number of workers, additions to capital equipment, efficiency, and prices had maintained the trends evident from 1923 to 1929. These factors should be considered separately.

The number of available workers has continued to increase since 1929, at a rate not markedly different from that which prevailed from 1923 to 1929. Mr. Lubin estimates the addition to the labor market since 1929 at 3 1/2 to 4 million. Technological improvements in the form of better organization and new inventions have continued since 1929, though one cannot be sure whether they were accelerated or retarded by the depression.

The index of commodity prices is somewhat lower than the trend of 1923 to 1929 projected to date. For the present purpose, however, the discrepancy is less than appears at first sight. For one thing, the index does not give proper weight to the inflexible prices of finished manufactures, nor to freight or power rates. Moreover, some further rise of prices may be anticipated as one industry after another approaches capacity production. The present lower level of prices

does not, therefore, call for much of a downward adjustment of the projected figures of national income.

The factor that does call for a drastic downward adjustment ^s in the trend of capital equipment. A substantial part of the increase in physical production, which permitted increasing income to correspond with gently falling prices from 1923 to 1929, was due to the annual increment in our stock of capital goods. Since 1929 capital equipment has probably diminished rather than increased. New construction has been confined largely to public works and industry has not fully maintained its plant. If the stock of capital equipment is not greater than in 1929, production could be greater only because of increased man power and efficiency arising from technological improvements. Making a rough allowance for the failure of capital equipment to increase and assuming slightly higher prices, we may hazard the guess that the dollar value of output under conditions of relatively full employment today would lie somewhere in the range of \$85,000,000,000 to \$95,000,000,000. The longer it takes to get full recovery or the more prices rise, the higher would the figure become.

Whether the present stock of money is likely to be compatible with a national income of this size depends on the probable turnover of money. 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" velocity of money, that is, the rate of turnover of money for every

(Transactions)

purpose . The concept of velocity which is more pertinent here, however, is "Income" velocity. "Crude" velocity includes the turnover of money for all purposes, including numerous duplications, and is greatly affected by speculation. In 1929 consumers' purchases amounted to less than five percent of total bank debits.

Income velocity is obtained by dividing the annual national income by the average amount of money, as measured by currency outside banks plus demand deposits, and represents the number of times on the average the stock of money is turned over to income receivers in the course of the year. This is a simple arithmetical ratio that permits a shorthand expression of the net resultant of the myriad of forces that enter into the determination of the national income.

Income velocity remained comparatively steady from 1923 to 1929 at slightly under 3. Professor Angell obtains substantially the same result with somewhat different series of money and income, extending back to 1910. The new money created did not appear to affect significantly the rate at which the stock of money was being turned over to income receivers. The community on the average held a stock of money equal to slightly less than four months' production of goods and services throughout the period. The reason for the steadiness was doubtless because consumers on the average 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 the value of its output.

From 1929 to 1933 the supply of money and its income velocity both declined by about 25 percent. From 1933 to 1934 the income velocity changed but little. The stock of money equalled the value of 5 1/2 months' production. The crucial question is whether income velocity will increase, in the event of full recovery, to its 1923-1929 range. If it does, the present stock of money plus the probable increase in the immediate future could support a national income of about \$90,000,000,000.

In estimating probable income velocity in the future it is important to consider whether new conditions have arisen which will lead individuals and businesses to keep larger or smaller balances relative to their incomes and output.

One factor of undetermined importance that may cause consumers to maintain larger balances in relation to their incomes is the widespread initiation of service charges since 1929. In the Large Deposit Study, however, evidence was cited to the effect that consumers' balances are not very important quantitatively. A moderate increase in the ratio of consumers' balances to incomes would not, therefore, alter income velocity significantly.

Of much more importance is the relation between business and financial deposits and the value of output. The Large Deposit Study indicated that the bulk of demand deposits in 1933 appeared to belong to business, public bodies, and financial holders, and that business deposits increased as rapidly as those of other groups. It is fairly safe to say that business demand deposits are now as large as in 1929 and that business could easily increase its disbursements and output without increasing its balances further. If this happened,

larger balances
(mostly)

Curve
on Dm in 1936-37

Net increased
demand →
massive

the proportion of balances to output would decline, or, in other words, income velocity would increase. Insofar as larger balances represent funds accumulated in deferred maintenance and depreciation accounts, or funds earmarked for other specific purposes, they are likely to be utilized as recovery proceeds.

Financial deposits have increased rapidly since 1933 and are in excess of normal requirements. The same is true of balances of public bodies. Even without further expansion of money, therefore, business and personal deposits could be increased substantially by a transfer of balances from financial and public bodies. Hence, even should business maintain the same ratio between output and balances as prevails now, an increase in income velocity could occur.

There are several new elements in the situation that might cause business, in the event of full recovery, to maintain larger holdings of demand deposits in relation to output than in 1923 to 1929. One effect of the depression that will probably persist in some degree is an increased emphasis on liquidity. Not only may there be a greater desire for liquidity, but this desire may be satisfied more by holding demand deposits than by holding other assets. 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, call loans of businesses to brokers are no longer available as in 1929, and so long as the yield on short-term governments remains so low, business does not find it worth its while to hold governments in place of demand deposits. Too much weight should not be attached to these considerations, since they depend in large part on the continuance of very low short-term interest rates.

transition to
liquidity? (No
; May 36)

✓ ✓

On the whole, it would appear that some increase in the income velocity can be expected, though whether the velocity will increase to 3 or higher is uncertain. It would, however, be dangerous to rely upon the continuance of the present velocity and to increase the supply of money sufficiently to get an income of \$90,000,000,000 with the present velocity. As an aid in interpreting business developments and formulating policy, it is of the highest importance that the Board have current information on the holdings of demand deposits of different groups and on the national income.

The tentative conclusion is that the existing supply of money, plus the expansion which will take place in the immediate future, may very well prove adequate for conditions of relatively full employment and that still further expansion involves some risk. If further expansion were vital for recovery, there might be some justification in assuming the risk. If little additional help to recovery will be afforded by further expansion, however, it appears prudent, until we can see the way more clearly, to discourage further expansion by raising reserve requirements in the near future.

(This was done, in Summer of 1936, raising up \$1.5 bn - see LL HOPE 1980: p 325/6.)