Memorandum on the Question: "The claim is made that private industry by itself cannot profitably absorb current savings. Were this true, a continued high national income would be impossible unless the Government provided investment opportunities for capital through public works, etc. What evidence is there that supports this claim?"

It is now generally recognized by students that the economic problem facing America is not a temporary or emergency one. The violence of the depression following 1929 obscured for some time the fact that a profound change of a chronic or secular nature had occurred. It is now becoming clear that for the first time in our history our inability to find outlets for our potential savings on the basis of a high national income, condemns us to a low national income where we can find outlets for the reduced volume of savings. The outlets for savings in the twenties arising from the rapid growth in population, the growth of the giant automobile industry, foreign loans, municipal capital expenditures, and brokers' loans are gone, and nothing comparable, apart from federal government borrowing, is in sight to take their place. Our potential savings on the basis of a high national income, on the other hand, are larger than ever.

It is sometimes implied that the volume of capital expenditures in the twenties, or the spending in excess of current income financed by installment credit or brokers' loans, was excessive. Actually, every cent of it was necessary to keep up the volume of employment in the twenties and provide for a steady rise in the national income. What was excessive was the volume of savings that had to be spent in capital formation or siphoned back into consumption directly if the national income was not to decline.

This is the fundamental reason why the program of "pump priming", as such, is doomed to failure. No matter how much "priming" is done, there are simply not sufficient private outlets for the growth of savings that occurs with a rise in the national income. Consequently, any attempt by the federal government, under existing conditions, to cease supplying an offset to savings will be promptly followed by stagnation or recession. Unless consumption can be considerably increased relative to income, a continuing federal contribution to buying power appears indispensable for any sustained recovery to an $80 billion or $90 billion national income level. A program of budget balancing, given the present capacity to save in relation to the economic need for capital equipment, can have no other effect than the continuance of a low level of national income and of saving and a high level of unemployment.

Statement of the Problem in Quantitative Terms

The problem may be broken down in the form of two questions: How much capital investment is necessary to generate an $80 billion or $90 billion national income? What are the prospects of securing this necessary amount in the form of private capital expenditures?

As a starting point in answering the first question we may consider past experience. During the relatively prosperous years of the twenties capital expenditures plus net contribution of public bodies bore a stable relationship to the gross national product, the annual percentage being between 18 and 19, with the exception of 1928. Assuming that in the near future a net national income of $80 billion would correspond

with a gross national product of $88 billion, the lower percentage would call for nearly $16 billion of capital investment; the higher, for nearly $17 billion.

There are some grounds for believing that it will require more capital investment to generate the same volume of income in the future than was true in the late Twenties. For one thing, the percentage got back to 17.8 percent in 1937, when the national income was some $10 billion less than in 1929. It seems reasonable to assume that a higher proportion of an additional $10 billion of income would be saved than of the $70 billion income, and that, therefore, the percentage of capital expenditures to income would have to be higher.

In the second place, the percentage of 18 in 1929 was unquestionably kept down because of the very large volume of negative saving or dissaving induced by the stock market boom. Owing to the cancellation of positive savings through the borrowing on stocks for consumption purposes, and to the psychological incentive to spend more out of current income because of a rise in stock values, a given volume of capital expenditures could support a higher national income than would be true now. If we assume the magnitude of this influence to have been one to two billion dollars, we would have to raise the estimate of the necessary volume of capital expenditures to generate $80 billion income to $17 to $18 billion.

It is interesting to note that Miss Kneeland's estimate of the volume of consumer savings on an $80 billion income, based on the N.R.C. Report on Consumer Expenditures, is $12 billion. Business savings of

only $6 billion would give a total of $18 billion.

The magnitude of this figure may be grasped by comparing it to the volume of producers' durable goods plus residential building expenditures of $13.6 billion in 1929 and $9 billion in 1937. The total income-generating expenditures in 1937 of $14 billion included nearly $4 billion of inventory accumulation and $1 billion of net federal contribution.

The problem, evidently, is not that of securing an increase in private capital expenditures but of securing a requisite increase. Our problem, in other words, is a quantitative one. The fields most commonly thought of in connection with income-generating types of expenditures are manufacturing and mining, utilities, railroads and residential construction.

Manufacturing and mining.

The annual volume of expenditures for plant and equipment in the field amounted to around $3 billion for the years 1923-1928. In 1929 it rose to nearly $4 billion. In 1937 it amounted to $3.2 billion. As indicated in the accompanying chart, the volume of capital expenditures in this field appears to bear a definite relationship to production. Thus a yearly average index of production of 120-130 might, on the basis of past experience, be expected to be accompanied by around $4 billion of capital expenditures in this field.

Utilities.

The 1929 volume of capital expenditures in the utilities (including electric, telephone, transit and others) amounted to nearly $2 billion.

In 1937 it amounted to slightly over $1 billion. The main determinant of investment in this field, particularly in electric power, appears to be output in relation to generating capacity. This is illustrated in an accompanying chart. Separate analyses of prospects of capital expenditures in the various categories of utilities offer little hope that the yearly volume of expenditures will exceed the 1929 figure even if full employment is attained in the next few years.

Railroads.

Throughout most of the twenties, the yearly volume of capital expenditures by railroads amounted to between $700 million and $900 million. The retirement of equipment in excess of additions in the past eight years has created a real backlog of demand should railroad traffic increase. On the other hand, the absence of secular growth in freight traffic, the increasing efficiency of equipment and the poor financial condition of many roads, tend to hold down capital expenditures. It may be doubted, therefore, whether the yearly volume of expenditures, even under the influence of full employment, will exceed $800 million. The volume in 1937 was $500 million.

Residential Construction.

It is apparent that the volume of capital expenditures that can reasonably be expected to occur in mining and manufacturing, utilities and railroads, even under the most optimistic conditions, will not begin to provide the necessary offsets to the savings of a high national income. Prospects in private residential building, therefore, are

peculiarly important. It has been estimated that, in addition to the normal growth in families, there is a special demand for housing of around one million units arising from the after effects of the long depression. Assuming that this demand could be made up evenly in a five-year period, and that the normal yearly growth of 500,000 families is met, a housing market for some 750,000 units is available. This would amount to between $3.5 and $4 billion yearly. The attainment of this yearly volume, however, depends upon the failure of costs to advance significantly, upon the growth in consumer income, and upon the present backlog being made up. Given these favorable factors, a larger volume of construction than just mentioned would depend upon demolitions of existing structures. Evidently, this is the most promising field for capital expenditures.

Other Capital Expenditures.

It is problematical whether the special factors that gave rise to a yearly expenditure of nearly $2 billion in the late twenties on commercial buildings and construction by non-profit institutions (churches, colleges, etc.) will be duplicated in the near future. Capital expenditures in agriculture, which amounted to $1 billion in 1937 as contrasted with $960 million in 1939, may be expected to increase little further.

Conclusion.

When a canvass is made of the possible outlets for savings in the various fields of private capital expenditures, it becomes evident

that the total that could reasonably be expected on the basis of full employment, does not add up to enough to match the savings even of an $80 billion national income. Consequently, in the absence of government action, war, or sporadic inventory bulges, the national income must remain sufficiently low so that the consequent low volume of current saving can be matched by investment.

Broad Type of Solution Indicated

Since our problem is that of excessive potential saving relative to potential outlets for private capital expenditures, or, to put the same thing in different terms, inadequate consumption relative to income, the solution must be found in increasing the outlets for saving and/or decreasing saving by increasing consumption relative to income. More specifically, the indicated attack on the problem should be directed towards (1) such revision of the tax structure as will increase consumption relative to income, (2) a continuing volume of public investment as an offset to part of the community's savings and (3) the stimulation of private investment directly, particularly in the fields of residential construction and railroad equipment, and the stimulation of exports.

Such evidence as exists indicates that England, up to 1938, managed to keep its economy in fairly full operation by (1) greatly increasing the proportion of her income that went for consumption, in comparison with pre-war days, and (2) by enjoying a sustained large volume of residential building. In the former case, the role played by high

inheritance and income taxes in conjunction with the provision of social services was important. In the latter, the earlier housing subsidies and the arrangements made to restrain cost advances were important. By 1938, the decline in building and in general business activity indicated that the outlets for even the reduced volume of saving were becoming inadequate and for this reason various economists approved the Government's decision to finance the substantial portion of the increased armament costs through borrowing.

It is important to note that in dealing with saving and investment we are dealing with high-powered money. An increase of $1 billion in consumption relative to income will not increase consumption merely by $1 billion, but, in terms of the relationship discussed at the beginning of this paper, will increase the national income by some five times that amount. The difference between a $15 billion capital investment and a $19 billion capital investment may be the difference between prosperity and depression. Hence, the problem for the Government is not that of attempting to bridge the gap in expenditures between a $60 and $70 billion national income and a $90 billion national income, but rather of securing some relatively small adjustments as would make possible a manifold increase in private expenditures and incomes.

Putting the problem in historical perspective, certain adjustments in taxation and public investment are now rendered necessary because of a change in our economic environment. With a slackening in population growth, the absence of new great outlets for savings in private

enterprise, and the only partial utilization of our existing stock of capital and labor, we should now, as a community, increase our consuming power relative to our savings and should devote more resources to public investment such as roads, hospitals, slum clearance and other public works. In other words, we are in a position to enjoy the fruits of our previous savings in increasing consumption and hence in a higher standard of life.