

SUMMARY AND PROJECTIONS
Lecture 5 of the 1943 Seminar
Philadelphia Chapter A. I. B.

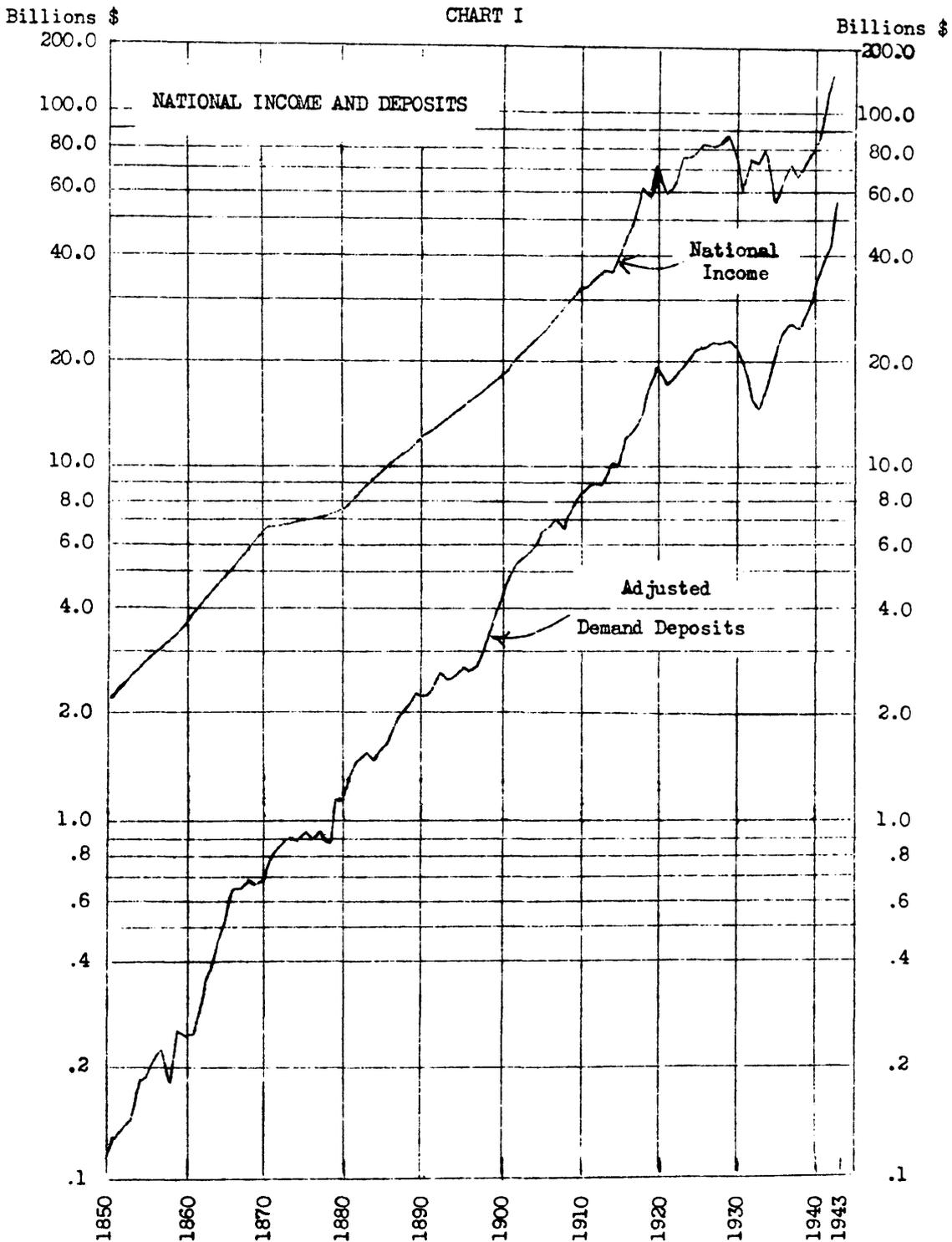
Karl R. Bopp

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content explained!
OKW*

To summarize eight hours of addresses by four experts, comments and questions by twelve members of panels and forty members of the audience is a man-sized job. But it is only a third of the topic assigned to me this evening. Another third is to indicate some practical implications of our four discussions. Finally, I am expected to make some "predictions of things to come." You have a right to question all judgments of any individual who allows himself to be placed in my position. I can assure you only that I have made a genuine effort to discharge my responsibilities because I believe that bankers are going to be expected to accomplish great things and because I believe that to attempt the impossible is preferable to doing nothing at all.

To distill the essence of the several contributions, I have cornered each principal speaker, and we have continued the discussion - at times into the next morning. Nevertheless, I am fully aware that far better men have failed at lesser tasks. Four charts, which have been prepared to facilitate discussion, will be distributed among you at this time. With one exception, these charts contain new information of a surprising character.

One conclusion on which Mr. Young and Mr. Sienkiewicz agree is that deposits after the war certainly will not return to their pre-war or even to their present level and probably will not experience any major reduction at all. This conclusion is supported by both historical and analytical evidence. The historical evidence is presented in Chart I, which shows the growth of national income and the growth of deposits over roughly the past century.



1. National income has increased from \$2.2 billion in 1850 to an estimated \$144 billion this year or at a rate of 4.6 per cent per year, compounded annually.
2. Deposits have increased from \$110 million to \$56 billion over the same period or at a rate of 7.0 per cent per year, compounded annually.
3. Only once in a century - during the Great Depression of the 1930's - have deposits declined as long as two years in succession. After the Civil War, after the Spanish American War, and after World War I either there was no decline at all or the decline was comparatively small and short-lived.

Alternating moments of optimism and pessimism become blurred in the perspective of a century which shows clearly

- (1) that the most significant characteristic of both income and deposits is one of rapid growth;
- (2) that the rate of growth of deposits has been far more rapid than the rate of growth of income;
- (3) and most amazing, that only once in a century - during the Great Depression of the 1930's - have deposits declined as long as two years in succession. After the Civil War, after the Spanish American War, after World War I either there was no decline at all or the decline was comparatively small or short-lived.

The purely statistical facts, therefore, support the conclusion that deposits will not decline severely or permanently after this war. But statistical grounds alone are inadequate. Valid conclusions must be supported by analysis. What does the analytical evidence show?

In its study of Markets After the War the Department of Commerce estimates that if the universally accepted goal, a high level of productive employment, is achieved after the war, net national income in 1946 may reach \$135 billion in terms of 1942 dollars. This would be an increase of 75 per cent over the \$78 billion national income of 1940. Since deposits in June 1943 were only 60 per cent above those in June 1940, it is reasonable on this ground also to expect that post-war deposits will not fall below present levels even with a return of prices to their 1942 level.

The increase in deposits since the early 1940's has been a result of bank purchases of Government securities. A considerable decline could occur only as a consequence of a reduction in earning assets of the banks. Let us examine the two major groups of these assets - loans and Government securities.

Mr. Young gave you reasons for believing that if bankers are progressive and forward looking, the post-war period may well be marked by con-

siderable expansion in loans though they may not be of the traditional type. What is progressive and forward-looking banking? It involves a critical re-examination of the standards that have been applied to prospective borrowers. New standards should not foster policies on the part of prospective borrowers that will drive the best of them away from the banks.

Some of our older standards did just that. Let us look, for example, at the most hallowed standard - the current ratio. Broadly speaking, a concern that is expanding can increase its current ratio only by increasing its equity or its funded debt - in other words, by getting funds from sources other than banks. The applicant who had secured all his funds from equity and funded debt would have the highest ratio and would be the ideal borrower. Unfortunately, typically he would not need a bank loan. Exaggerating, to sharpen the point, indiscreet application of a current ratio test forced prospective applicants outside the banks to secure funds. Gradually they stayed out. Obviously, this was not the only or even the most important influence in the decline of bank loans, but it was a factor and shows that lending criteria should be devised that will not tend over the long run to drive the most desirable lenders from the bank.

One counterpart of this development is that banks continued to supply indirectly a considerable part of the funds that borrowers were getting elsewhere in the first instance. Banks bought bonds - including those of corporations whose current ratios would have excluded them from securing loans. The bond was engraved and the loan was only typed, but both were extensions of credit to borrowers and the same fundamental standards might reasonably be expected to apply to both. A re-examination of credit standards is an imperative for banking.

To return to our major topic! One might take a much more pessimistic view than Mr. Young and still conclude that loans will show no considerable decline at least relative to total earning assets rather than to total loans. I know no informed person who anticipates any great decline in deposits resulting from declines in loans.

What are the prospects that the other major earning asset - bank holdings of Government securities - will decline appreciably in the post-war period? There are two circumstances under which such a decline could take place. The first is in a reduction in total Government debt and the second is a redistribution of the ownership of the debt.

As to the first, not even the most ardent optimist believes there will be any considerable decline in Government debt immediately after the war. On the contrary, for the reasons advanced by Mr. Sienkiewicz, it is probable that it will increase, at least for a time, irrespective of the administration in power.

As to changes in the ownership of Government securities, we may assume that banks are the "residual" owners, adjusting their holdings to meet the needs of other investors. What is the probable post-war absorptive power of these other holders? They may be classified into two groups: first, those owners - primarily Government agencies and trust funds and insurance companies - which may be expected to have regular additions to funds available for investment; and second, those groups - primarily corporations and individuals - whose saving and investment patterns fluctuate widely from time to time. Let us examine these two types of holders in turn.

Barring changes in legislation, the U. S. Government agencies and trust funds may increase their holdings by approximately a billion dollars a year. Over any considerable period of time - barring liquidation of other

assets - the maximum net addition of Government securities that insurance companies could be expected to acquire would be an amount equal to their annual increase in admitted assets, namely, \$1½ to \$2 billion a year. These sources, therefore, cannot reasonably be expected to acquire more than about \$2½ billion of Government securities a year, and their actual acquisitions may be less.

What about individuals and corporations? On balance, we cannot expect them to increase their net holdings of Government securities in the early post-war period. On the contrary, it is extremely likely that they will liquidate their holdings at a higher rate than \$2½ billion a year at the conclusion of the war. Certainly many of the securities are now being acquired for this purpose.

The conclusion of Mr. Young and Mr. Sienkiewicz that there is little likelihood that deposits will decline considerably in the post-war period, therefore, is supported by both the analytical and the statistical evidence.

What are the implications of this conclusion for you as individual bankers? In the first place, since there is no prospect that the total number of banks will increase appreciably, it is evident that on the average individual banks will have permanently larger deposits.

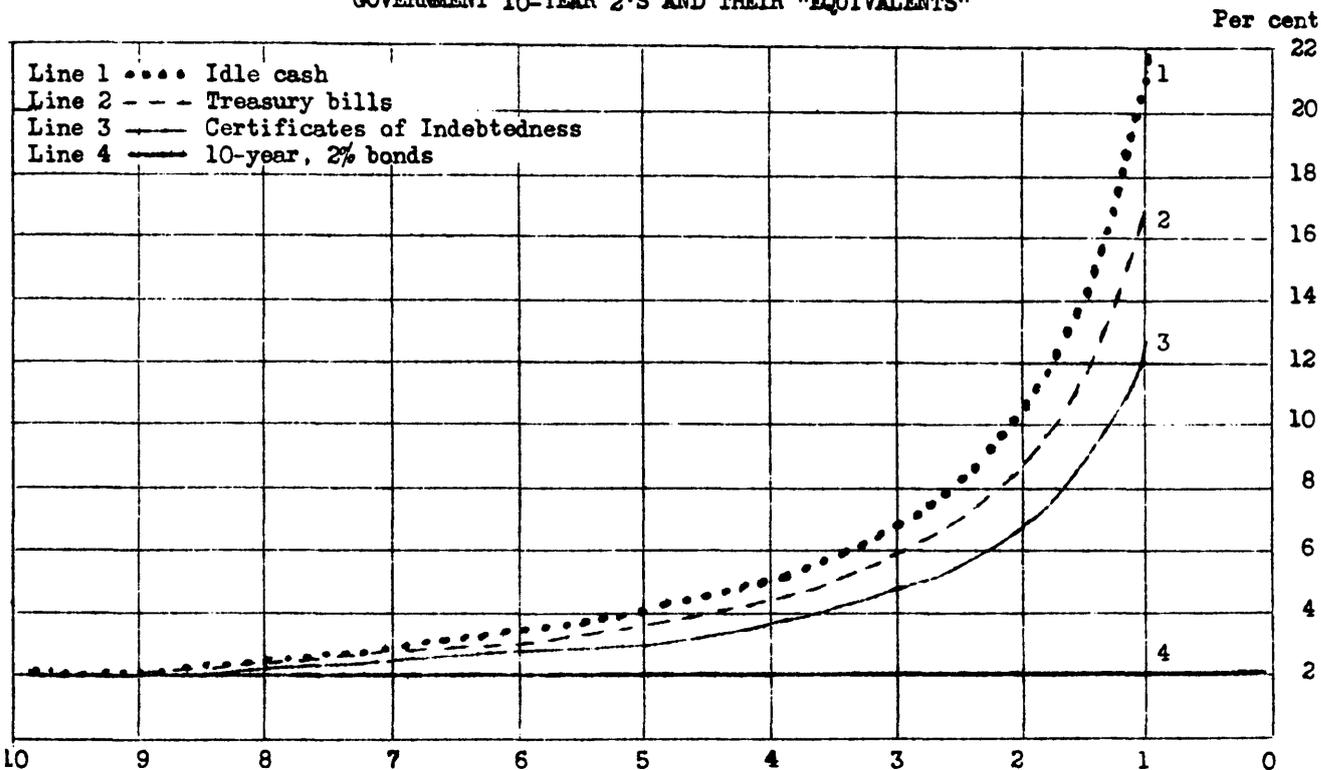
At this point I part company from those advisers who urge that all banks build and maintain a portfolio of Governments more or less equally distributed among maturities up to ten years. If your problems were as simple and as uniform as this recommendation implies, you would have very little justification for a continuation of the traditional American unit bank. The unit bank is justified in part because problems confronting individual banks are not the same. In my opinion, each bank must devise a loan and investment policy tailor-made to fit its own circumstances. A universal, ready-made policy would fit individual banks about as well as a standard uniform would fit all the members of our armed forces.

I also disagree with those who advise banks to keep all of their increase in deposits in idle cash, Treasury bills, or certificates of indebtedness. This advice apparently is based either on the negative attitude that since nobody can tell precisely what is going to happen we had better assume the worst, or on the assumption that interest rates are going to rise and that funds should not be invested until they do. Many bankers, I am told, have maintained an extremely liquid position on the expectation or in the hope that higher interest rates were "just around the corner." Without attempting to predict the future of interest rates, I should like to point out that even though this second assumption turns out to be correct, it may be very expensive to follow the advice presumably based upon it. The mere possibility that interest rates may rise is not sufficient ground to defer investment in, say, ten-year bonds. The crucial questions are (1) How fast and how far must they rise to justify the delay? and (2) what is the likelihood that they will rise sufficiently? The answer to the second question involves judgment. You will appreciate why I shall make no effort to answer it this evening. The first question, however, is purely technical, and Chart II has been constructed to answer it. It shows how fast interest rates must rise to enable a bank to retain liquid funds and still not lose money over the next ten years.

(Discussion of Chart II)

It should be mentioned, incidentally, that it is not the ten-year rate that must rise in the way indicated; it is shorter-term rates. As an illustration, the one-year rate must rise from $7/8$ per cent to 21.9 per cent at the end of nine years to warrant retention of funds for nine years as **excess reserves**. In other words, even though the hope of some for a rise in

CHART II
GOVERNMENT 10-YEAR 2'S AND THEIR "EQUIVALENTS"



This chart shows at the beginning of each year the rates at which "available" funds would have to be invested to yield as much in 10 years as 2 per cent bonds, compounded, will yield, assuming

- Line 1 - that the funds are held idle until they are invested.
- Line 2 - that the funds are "placed" in Treasury bills at 3/8 per cent until they are "invested" for the remainder of the period.
- Line 3 - that the funds are "placed" in certificates of indebtedness at 7/8 per cent until they are "invested" for the remainder of the period.

Illustrations:

- A. If a bank invests \$100.00 in 2 per cent 10-year bonds at par, it will have, with compounding, \$121.90 at the end of 10 years.
- B. If a bank holds the \$100.00 idle for 5 years, it will have to invest it at 4.1 per cent compounded to have \$121.90 at the end of 10 years.
- C. If a bank places the \$100.00 in Treasury bills at 3/8 per cent compounded for 5 years, it will have "available" \$101.89 which must be invested at 3.7 per cent for the remainder of the period to have \$121.90 at the end of 10 years.
- D. If a bank places \$100.00 in certificates of indebtedness at 7/8 per cent compounded for 5 years, it will have "available" \$104.46 which must be invested at 3.1 per cent for the remainder of the period to have \$121.90 at the end of 10 years.

If the period prior to "investment" is 8 years instead of 5, the corresponding investment rates would be: for cash, 10.4 per cent; for bills, 8.8 per cent; for certificates, 6.6 per cent.

rates materializes, they will still lose earnings unless the rise comes soon and is comparatively large.

Of course, no one intends to keep funds idle for two years, five years, or ten years. Many have intended not to for ten years - ten years over which 20 per cent was not earned - always in the hope for the rise that never came.

It should be mentioned that in constructing this chart I have made the most unfavorable assumption for the investor in longer term securities, namely, that neither the present general level nor the present structure of rates will be maintained - in other words, that the securities must be held until maturity.

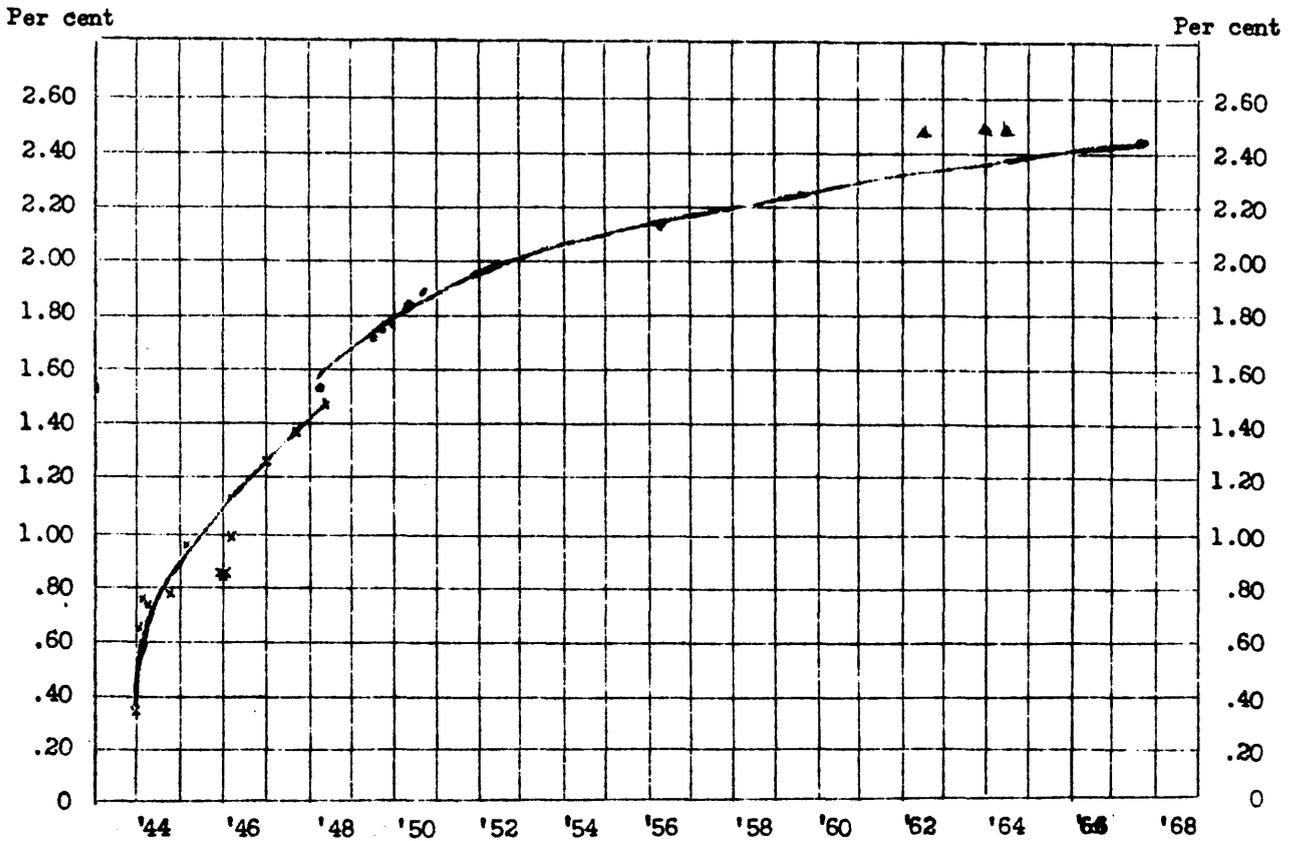
If we assume that the present general structure and level of rates are maintained, the results will be even more favorable to those who buy longer maturities at the present level. Chart III, taken from the official Bulletin of the United States Treasury, shows the structure of rates on September 30. It shows the familiar pattern of $\frac{3}{8}$ per cent at three months, $\frac{7}{8}$ per cent at one year, 2 per cent at ten years, $2\frac{1}{2}$ per cent at twenty years. Plottings above the curve indicate issues that are technically "weak" in the market; those plotted below the line are issues that are exceptionally strong. The general principles of purchase and sale of particular items in a general market apply here also, and I needn't go into the details.

If one assumes that this pattern of rates is maintained, he can construct the price history of a bond. A history of a 2 per cent taxable and callable Treasury bond is shown in Chart IV. If the present pattern of rates is maintained - or if only that portion of it which exceeds two or three years is maintained - it is possible to secure a minimum effective yield of approximately $2\frac{1}{2}$ per cent irrespective of what happens to shorter term rates.

CHART III

YIELDS OF TAXABLE TREASURY SECURITIES, SEPTEMBER 30, 1943

Based on Mean of Closing Bid and Asked Quotations



Key

Available to all investors:

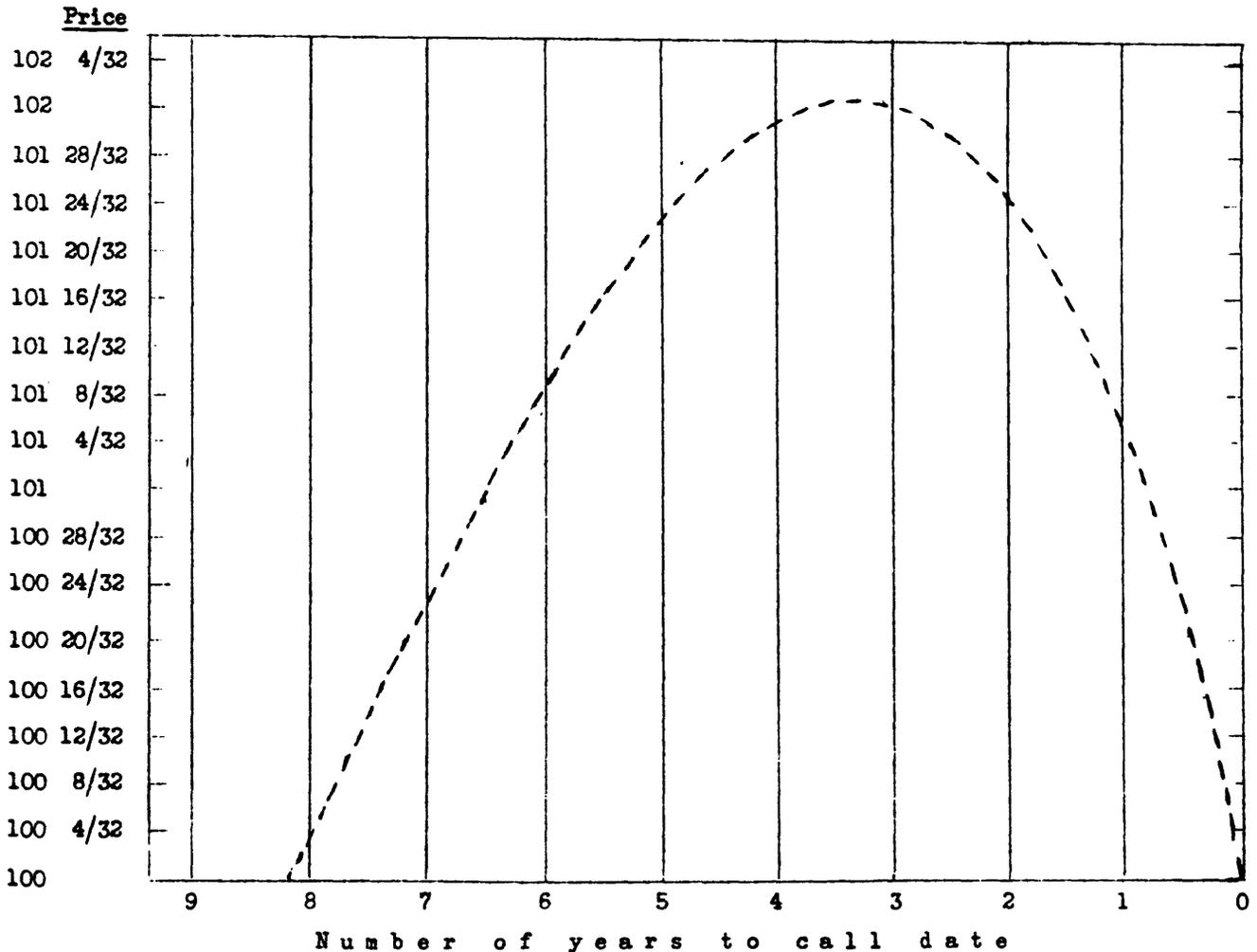
- × Fixed maturity issues
(except notes at a discount)
- * Notes at a discount
- Callable issues

Available to investors except commercial banks:

- ▲ Callable bonds

Source: Bulletin of the Treasury Department, October 1943, p. 65.

CHART IV
PRICE EQUIVALENT OF TAXABLE 2% TREASURY BONDS
INTERPOLATED FROM HYPOTHETICAL YIELD CURVE



The price of a Treasury bond is determined by:

1. The nominal rate
2. The yield
3. The maturity

This chart of the price equivalent of taxable Treasury bonds is based on (1) a nominal rate of 2 per cent, (2) the existing structure of interest rates (see Chart III), and (3) the assumption that the bonds will be called. The bonds are issued and redeemed at par. While they are outstanding, they are valued at various prices above par because the nominal rate is greater than the yield.

It is against this general background that the individual banker must shape his own policy. No one can do that for him. Meetings such as this can be helpful in indicating some of the important factors that should be taken into account and in outlining a method of approach. For the individual banker the important thing is to analyze the position of his community in the post-war world. Just as the uneven stimulus given by the development of war industries and military centers has resulted in an uneven distribution of deposits - described by Mr. Sienkiewicz in his discussion - so the banker must expect shifts of deposits after the war; some communities will gain, others will lose. His community will tend to gain deposits as its businesses and individuals sell their products and services outside and will tend to lose deposits as they buy elsewhere. The community's net position will be influenced by such factors as changes in population and working force, the adaptability of local productive facilities to the satisfaction of post-war demands, the expenditures of the inhabitants especially for durable consumers' goods, and the needs of business establishments for reconversion to a peacetime basis.

The first step for the individual banker, therefore, is to analyze his deposit structure. It is to facilitate this analysis that the Federal Reserve System recently asked you to classify your deposits. The analysis of the information that you submitted to us appears in our Monthly Review that will be sent to you the first part of next week. The purpose of collecting this information is not to keep us busy at the Fed, but it is to assist you in meeting the very difficult problems that you face.

Along with the analysis of his deposits the individual banker will wish to study his prospects for loans. Although available evidence indicates that business in general is becoming more liquid and that many concerns may be

able to finance post-war conversion costs out of their own resources, the banker will wish to study particularly those businesses which are low in cash and securities and high in inventories and receivables as prospects for loan accommodation.

After he has completed the analysis of deposits and prospects for loans, the banker will be in a position to determine his investment policies. It is hoped that the charts and discussions which have been presented will be of some assistance in formulating such policies.

II

I have spent considerable time to discuss Government securities because they are of outstanding importance at the present time. But I must now travel with "seven-league boots" to complete my assignment of predicting things to come. First permit me to catalogue some factors of outstanding importance but concerning which only those who commune with the Burning Bush dare prophesy:

- (1) The duration of the war in Europe and the Far East
- (2) Governmental policy with respect to renegotiation and cancellation of contracts, including rapidity of settlement
- (3) Governmental policy with respect to stock piles
- (4) Governmental policy with respect to Government-owned plants and facilities
- (5) Governmental policy with respect to demobilization
- (6) The tax structure

Next there are factors about which we may be reasonably certain:

- (1) The total deposits will be far higher than before the war
- (2) Federal Reserve will have larger amounts of short-term Government securities

- (3) Taxes are bound to be on a permanently higher level
Total, say, \$15-20 billion a year (interest charges \$4-6 billion;
armed forces 5-6 billion)
In the 1930's expenditures never over \$8 billion
In the 1920's not over \$4 billion
- (4) Prices probably will be higher than in the 1930's
- (5) Large deferred demand in the post-war period
- (6) Controls will continue for a time

In time you may prove me wrong on these predictions on the analysis.

In self defense, therefore, I shall make some predictions concerning which you will not be able to prove me wrong - because neither you nor I will be here at the time. We are fighting this war not only for ourselves but for our children and grandchildren. It may, therefore, be worthwhile to consider the economic possibilities of our grandchildren. These possibilities, in my opinion, are much less influenced than is commonly supposed by the amount of destruction that is ~~now going on.~~ ^{likely to occur for} It is true, though incredible, that at the present rate of saving we could raze physical America except for land and people and could reconstruct it in two to three years. The economic possibilities of our grandchildren are more dependent upon the rate of invention and its effect upon output per manhour. ~~Assuming~~ ^{Analysing} the possibilities, we find that output per manhour in industry, in physical terms, practically doubled between 1923 and 1943, increasing from \$2 to \$4 in terms of 1939 dollars. This is at a rate of 3 per cent compounded annually. In agriculture the rate was 1.2 per cent per year. Similar rates of growth have continued for well over a century despite minor variations between periods of war and peace, prosperity and depression, old deals and new deals.

Successful invention moves irreversibly in one direction, namely, to reduce ^{real} costs. The picture varies widely among various branches of activity. In some, progress is sporadic with occasional revolutionary discoveries raising

output to new and higher plateaus. In others, smaller innovations are frequent, and progress is more regular. But the effect on over-all activity is a comparatively steady increase in human efficiency, which varies somewhat in rate but not in direction.

Of course, there are always Cassandras who cry that this process must stop sometime. Henry L. Ellsworth, Commissioner of Patents, raised his voice to this effect almost exactly a century ago in his report of January 31, 1844, to Congress: "The advancement of the arts, from year to year, taxes our credulity and seems to presage the arrival of that period when human improvement must end." The war itself has demonstrated that the possibilities of increased efficiency have scarcely been tapped. It has demonstrated that our population possesses latent abilities far beyond those that management has utilized in the past. Through careful training programs, skills that once were acquired only after very long periods of apprenticeship are now developed almost literally overnight.

What are the economic possibilities of our grandchildren if we capitalize on our war experience? In the past, output per manhour has doubled in twenty years. If it continues to do so for forty more years, our grandchildren in 1983 will have the following options:

- (1) Real incomes four times our own
- (2) Real incomes twice our own with a twenty-hour work week
- (3) Real incomes equal to ours with a ten-hour work week

At this point you may feel that you were born too soon. But I have not said our grandchildren will have no problems. I have said merely that with intelligence "the economic problem" as we have known it can be solved. They will have to face the problems that arise from leisure. These problems are by no means unreal. One of the advantages of a long work week is that it

takes us out of ourselves for considerable periods of time. Many people, I am told, could not live with themselves for any extended period. ^{Nevertheless, our grandchildren will have the opportunity to} ~~They can~~ concentrate on the real human problems: the problems of the good life.

In that era the economist may be permitted to perform his real function which is analogous to that of the dentist. His customers, we hope, will not wait until they have a toothache to visit him but will see him "at least twice a year."

In charting a course of action for the future I think we may be guided by a statement of one of my early teachers, Myron W. Watkins, then of the University of Missouri, now of New York University:

"Pursuing this middle-ground policy in this tentative, adaptive manner will not appeal to those impetuous persons who, according to their temperament, demand that either unrestricted freedom or unlimited authority shall prevail. They foresee, moreover, only complete ruin from a failure to adopt the favored principle forthrightly, and they promise an earthly paradise immediately that the right policy is embraced. But centuries of experience have slowly been maturing in the mind of the common man the conviction which philosophers reached in old Greece when thought was first turned inward upon man himself and his social life, that visionaries and cynics alike are unsafe guides on society's great adventure."