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# AN APPRAISAL OF INDUSTRIAL MOBILIZATION IN WORLD WAR II, 19 March 1946.

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GENERAL ARMSTRONG:

Gentlemen, I was telling our speaker a moment ago that twenty years earlier the Industrial College was not so greatly concerned with problems of prices and basic fundamentals of economics as it is today. We were much more concerned with strategic raw materials, facilities, and things of that sort. But I think that by this time you gentlemen all understand the importance we in the Industrial College attach to problems of prices. You have had a series of lectures on pricing policies, and you know our basic concern with this subject.

There are some of our speakers who, because of their great distinction, need no introduction. I think if I were to remind you that Mr. Eccles has been the Chairman of the Board of Governors of the Federal Reserve System of the United States for the past ten years, that will be ample to introduce our distinguished speaker who honors us this morning with his presence.

MR. ECCLES:

General Armstrong and officers of the Army and Navy: I am glad to note that the Army and Navy are proceeding to get together.

I recently had to speak before the editors of the McGraw-Hill Publishing Company. I was not sure whether I had spoken to that group before. There were quite a number of them that I knew. My assistant, Mr. Thurston, was with me on that occasion. I turned to him and said, "Elliott, do you recall whether or not I have ever spoken to this group before?" He said, "Well, I'm quite sure you haven't or I don't think you would be here today."

I have always remembered that. Probably the only reason I am here today is because I have not addressed this group before.

In coming across the bridge this morning I thought of a story I heard yesterday; possibly it is an old one. But there was a man standing on a bridge with his coat off, ready to jump into the water. A policeman yelled to him, "Wait a minute!! Let's talk this thing over." The fellow stopped and said he was willing to talk it over. He took up the discussion with the policeman and pointed out to him the high cost of living, the high taxes, dangers of inflation, the dangers of war. Finally the policeman said, "Well, all right, let's both jump in."

So I hope in talking to you today I will not have such a disastrous effect as that.

I think it is a very, very desirable undertaking in which you men are engaged. I am sure there is a great deal to learn out of a study of what has happened, at least from the standpoint of the economic aspects of conducting the war so that we may make fewer mistakes in the future.

We sometimes I think feel, with justification, if we should get into another war it will not make very much difference how many mistakes we make. Now, of course, we cannot proceed to live on that basis. We must consider the mistakes of the past to avoid them in the future.

In appearing before you, I am, of course, expressing the point of view of a civilian. The criticisms I shall make I hope may be constructive. Surely you need no commendation. You won the war; that speaks, I think, for itself.

The thing we, of course, are interested in now is considering--at least from my own point of view--how we may have won the war with less disastrous effects in winning the peace. After all, the problems of the peace are the outgrowth of the economic consequences of war. So, it is in that connection I would like to talk to you. I assume, in talking to you, this is off the record in so far as the press is concerned.

GENERAL ARMSTRONG:

Yes, sir; that is correct.

MR. ECCLES:

In speaking of the economic consequences of the way in which we financed the war, that is, the effect of the war on the postwar economic situation, I would like to remind you that government cost after the Civil War was seven times higher than it was before; that the cost of government after World War I was four times greater than it was before the war. The government cost after World War II is not likely to be less, at any time, than three times its cost even in what people choose to call, "the extravagant, expensive days of the New Deal."

That situation is a result largely of war. In 1940 the total cost of what we speak of as "national defense," veterans' pensions, benefits and interest, which is the carryover from previous wars, was 3 billion 171 million, or 35 percent of the total cost of our Government.

General government expenses, including the Legislative, the Judicial and the entire Executive branches of the Government, the civilian departments and agencies, totaled 989 million in 1940. We hear much talk about this terrific government expenditure, but if all of these departments were whittled away entirely it really would not save very much.

Expenditures such as public works, aid to agriculture, work relief, amounted to 4 billion 838 million dollars, or a total expenditure of 8 billion 998 million.

Looking ahead to the Fiscal Year 1948, when the readjustment is pretty well completed as a result of World War II, it is expected the total cost of the Military Establishment would be about 8 billion dollars, 4 billion for pensions and other benefits to veterans and interest, and the public debt would be 5 billion; that is, assuming a balanced budget and no increased cost, in interest. Should we increase interest rates, as some of the bankers think we should, that 5 billion dollars would go up accordingly. That 5 billion reflects the interest charge on the public debt at the present level of interest rates.

All other expenditures of the Government we estimate to be approximately 8 billion dollars, or a total cost of around 27 billion dollars. So it would seem that government expenditures are somewhat following the pattern they followed after previous wars. They will be, I think, not less than three times the government expenditures--"extravagant" expenditures in general public opinion--of the period prior to the war.

We cannot consider lightly the effects of war upon the postwar economy. It is not possible to adjust the price level after a war to the prewar level without a severe deflation. There is always a substantial degree of inflation incurred in the course of war. Should the price level go down to the prewar level, after a few years we will find that this would bring in its wake great unemployment and general bankruptcy. That always seems to be what happens. The price level of 1931 and 1932, that brought such financial collapse in our country, was about as low as that of 1914 before the First World War when we had reasonably full employment and prosperity. But we could not make the adjustment without the financial distress that always comes in the wake of a deflation.

It seems to me, if we should again have a serious deflation, that before the price level or cost of living returns to the prewar level we will in all probability do something to stop it; that we will not be able to stand the financial and the economic pressures of such a deflation, which would entail widespread suffering.

However, inflation which is the forerunner of deflation, bears most heavily on the fixed income of groups, including professional people in Government and in the Armed Services. The incomes of these people become entirely inadequate, and are not as a rule adjusted to meet the increase in the cost of living. That is true with reference to fixed salaries and fixed charges of all kinds. There is no ready adjustment and these fixed salary or income groups are greatly penalized as a result of the inflationary development. I know of no group that should be more interested in avoiding an inflationary development than those in the military services.

Moreover, to the extent that we get a serious inflationary development, the problem of maintaining economic stability becomes that much greater. The subsequent deflation brings in its wake mass unemployment, with all of the social and political dangers that such an economic upheaval brings about. That is why it is so important at the present time to maintain prices, the cost of living, as nearly as possible at present levels. Whether that can be accomplished, the future alone can tell. Certainly it will not be accomplished unless Congress is willing to provide the necessary extension of controls. Too many controls have already been eliminated.

I would like to discuss here how this inflationary situation has been brought about and to show that it is a direct result of the way in which the war was financed.

I, personally, felt in the fall of 1944 that we had done a pretty good job in holding inflation in line and in holding down our military costs. I felt pretty optimistic about our ability to deal successfully with the inflationary postwar effects of our war expenditures.

However, I became very discouraged in January and February 1945, I worked up these tables and discussed them with General Somervell, General Clay and also with Secretary Vinson, who was Mobilization Director at the time. Later on I discussed them with President Truman.

I felt the Military had really gone overboard. Both the Army and Navy expenditures were getting out of hand. There seemed to me to be little justification for some of the things I knew were going on. I got word from all of the Federal Reserve Districts, through the principal bankers in the financial areas, that the contracts that were being let were very disturbing not only to the bankers but also to some of the industrialists who were getting them. They were amazed at the procurement program at that late date. It had a very serious effect, I know, on the financial community.

In January 1945, for our war activities and national defense we spent seven and a half billion dollars, just for that month. In February we spent 7 billion dollars. In March 1945 we jumped to 8.2 billion, which was the highest for any month during the war up to that time. In April we spent 7 billion; in May, 8 billion. That is for the Military. The total expenditure of the Government was approximately one billion dollars more than that each month; but nearly nine-tenths of the total government expenditure during the war was military.

In June we spent 7.8 billion. In July--this is after, you will recall, the Germans were out of the picture--7.3 billion. In August there was a substantial cut, 6.3 billion; September, 5.3 billion; October, 5 billion; November, 4.2 billion; December, 4.2 billion.

For the year 1945, in which the German war lasted less than half of the year and the Japanese war about two-thirds of the year, our expenditures were 90 billion dollars. They were 3 billion more than in 1944 and 18 billion more than 1943.

It seemed to me that the 1945 expenditures bore little relationship to the strength of the enemy; that with the German Air Force practically destroyed and with the Japanese Air Force almost out of the picture and the Japanese navy out of the picture--that is even before 1945--we were expending money on a very terrific scale.

I was much concerned about the situation and used this newspaper item in discussing it with General Clay. I discussed it, I am sure, with Mr. Byrnes, who was also there at the time. There was a report in the press that 84 additional ships were to be ordered for the Navy--this is the NEW YORK TIMES of March 6. The program already had 288 ships on the way.

Now in this proposed group of 84 ships, which were in addition to th 288 contracts were being let in March 1945. The proposed included aircra carriers of the 45,000-ton class, as well as 45,000-ton battleships. It was pointed out in the press report that many of these ships would not be finished until late in 1947.

I thought our military people had lost all sense of the effects upon our economy; that we might win the war and lose the peace; that we might create a domestic situation, an inflationary situation, which we would not survive. Very shortly after this came out, however, I was delighted to see that Mr. Byrnes moved to cancel a good many of these ships.

Another indication which seemed to me to be a failure of the Military to appreciate both the psychological as well as the financial effect of their action on the civilian economy was the size of the military forces. In April the total strength of the Armed Forces was 12 million 96 thousand men. In May it went up to 12 million 213 thousand. In June it went up to 12 million 293 thousand. In July, 12 million 298 thousand. Now, remember, Germany was out of the war at this time. In August, 12 million 250 thousand; September, 12 million 82 thousand.

Had there been a more reasonable approach to the civilian interest, to the civilian needs, to the civilian pressures; had there been what would appear to the civilian to be a more rational approach to the situation, I think the reaction which set in against the Military would have been very much less severe than appears to be the case at the present time.

I made this statement to General Somervell, General Clay, Secretary Vinson, and several others. Also, I was out at a dinner with seven Senators and Mr. Patterson one evening in March of this same year. I felt this whole thing so keenly I let the Senators get me into a discussion of the inflationary dangers. I might say I do not think it was particularly approved of by Secretary Patterson; however, we were good friends and could disagree objectively.

I pointed out that we had three fronts; they were possibly equally important. First, we had the European front. At that time there was no question about a pretty short ending of the German war because the Rhine had been crossed. It was just a question of months or weeks. There was not the remotest doubt it was going to end very shortly.

Second, there was the Japanese war which was very far advanced. The Japanese fleet had been practically destroyed. The Japanese air force had been practically driven out of the skies. The Japanese islands had been practically surrounded.

Then there was the home front.

It seemed to me that unless we considered all of these fronts and their relationship, we were going to have very great difficulty in the postwar period in winning the peace. I said we could not support the Military on the scale of manpower, materiel and expenditures in the Pacific war according to its plan, and at the same time meet the urgent postwar problem in Europe and win the peace there, while avoiding a disastrous inflationary impact in the home country. But unless we could find a way of cutting back drastically our expenditures and manpower, in so far as the Pacific war was concerned, and get a gradual reconversion within our own country and start immediately to rebuilding some of the devastation in Europe, we would have chaos in Europe; we would completely lose the peace there and we would likely be unable to control inflationary developments here.

It seemed to me a little less might have been taken to fight the Japs at that stage. A war of attrition might have been waged. Instead of huge landing forces we might have continued our bombing and kept them surrounded with a blockade and starved them of material and food. Starvat and bombing are difficult to resist; much more difficult than landing forc A war of attrition would have permitted us, instead of demobilizing all at once, with the abrupt impact that causes so much disruption, we could have demoblized gradually. Some people said, "We are going to have an all-out war and an all-out peace". That is just what makes for the greatest economic difficulty.

We should have undertaken to relate our military activity to the strength of the enemy. It seems to me it has always been a policy of military strategy or military planning that at the time the last enemy is defeated military supply and production, the war potential, is at its greatest. Now, not knowing anything about it I can talk as freely as I am talking. But it seemed to me we started here (indicating point on chart with our production, our manpower, at almost zero. The enemy is up here (indicating) with great strength. As we pulled up, the enemy went down. We cross the line there (indicating). When the enemy reaches zero we are a the very highest potential. Whether we have one enemy or two enemies or three enemies, or irrespective of the strength of our enemy, the record would seem to indicate just that.

I think we should learn something from these economic and political lessons of this war. I do not know whether it is possible for the Militar to exercise immediate self-discipline in matters of manpower and expenditur I know it is quite difficult. They are no different from any other organization when they get into power. That is true with every civilian organization, both public and private, with some rare exceptions. It is strange how we react when it comes to our own immediate interests. We all want to have a bigger and a better share, whether we are operating in the military field or in the civilian field. I suppose it is human nature. We may not overcome that; but it is a very serious matter and one I think the Army and Navy should take into account.

When I made these arguments I knew nothing about the atomic bomb or the agreement with the Russians to enter the war. Certainly there was less justification for the program that was pursued, in the light of the atomic bomb and in the light of the agreement with Russia, than I thought there was--and I did not think there was very much.

Now with reference to the European front during the early months of peace--we did little or nothing simply because we could not. The civilian front had been stretched right to its limit. But no country, except Germany and Russia, during the war diverted as much of its manpower and its production for war as we did. Approximately 45 percent of our entire production of goods and services, was diverted to the military.

We had a national product of approximately 200 billion in our peak of production and of that amount 90 billion went for war expenditures. That is an unusual achievement in a democracy and particularly in a democracy that was not being invaded and had not been bombed; that was removed great distances from the scene of combat. That is a most unusual civilian effort. We were put, almost to the breaking point on the civilian front.

So that so far as Europe was concerned they got little or nothing. We have been able to do little toward rehabilitating western Europe, and where you do not have employment, production and order, Communism usually takes over, because it seems to be the only kind of system that can deal well with chaos. Democracy does not deal well with chaotic economic situations, and the condition in France, western Germany, in Holland, Belgium, western Europe today is very bad. We are unable to do very much about it.

Now if we had had five to ten billion dollars of the military expenditure of a year ago to go in there with civilian goods to back up the democratic governments it would have been a great help. They need trucks; they need railroad equipment; they need port facilities; they need coal-mining equipment; they need machine tools and they need raw materials in order to get along. We were about the only place left in the world that could supply those essential needs in order to establish order in a war-torn Europe. We were unable to do much about it. The result is we are a long way from winning the peace. That is an important aspect of the problem.

We at home are struggling today against a potential inflation that is far from being overcome. I do not think there is any assurance that we will succeed in preventing a much greater inflation than you have yet seen. All this is the result of the manner in which we financed the war, in money, men and material.

I should like to show you what we did in relation to all other countries since we entered the war in 1942. These figures are up to the end of 1944, I think. In those years (1942, 1943 and 1944) there was a total expenditure throughout the Allied countries of 367 billion dollars. Of this amount in that period 60 percent was provided by the United States and 40 percent by all of the rest of the countries engaged. In the one year 1944 we supplied 88 billion 400 million; the other countries 52 billion: With a total of 140 billion, 63 percent of the total was supplied by the United States, and 37 percent by the rest of the world.

In 1945 the United States went up to a total of perhaps as much as 80 percent of the aggregate amount of expenditures.

Going back to 1938 up to 1945 expenditures for war and for the preparation for war in these countries (the United Kingdom, Canada, other British Empire countries, Russia, France, and the United States) amounted to about 500 billion dollars. Our expenditures in that period, from 1938 to 1945, inclusive,--even though we were only actually in the war for three years of the time--were 60 percent of the total war expenditures of all the Allies. In dollars, it was close to 300 billion.

Table I. Federal Budget, war and transition

Total Funds Raised

(in billions of dollars)

| Period | From Taxes | From Borrowing 1/ | Total | Taxes a Percenta of Tot |
|---|---|---|---|---|
| Fiscal year ending June 30. | | | | |
| 1940 | 5.4 | 2.5 | 7.9 | 68.4 |
| 1941 | 7.6 | 6.9 | 14.5 | 52.4 |
| 1942 | 12.8 | 21.8 | 34.6 | 37.0 |
| 1943 | 22.3 | 63.0 | 85.3 | 26.1 |
| 1944 | 44.1 | 61.6 | 105.7 | 41.7 |
| 1945 | 46.5 | 55.7 | 102.2 | 45.5 |
| 1946 | 38.6 | 16.1 | 54.7 | 70.6 |
| 1947 | 31.5 | -3.6 | 27.9 | 112.9 |
| 1940-1945 | 138.7 | 211.5 | 350.2 | 39.6 |
| 1940-1946 | 177.3 | 227.6 | 404.9 | 43.8 |

1/ Change in interest-bearing debt, direct and guaranteed.

Note: "Total Funds Raised" is defined to include (1) net receipts, gene and special accounts, and (2) the increase in total interest-bearing di and guaranteed securities. Note that for any single year expenditures m fall short of or exceed funds raised, depending on changes in Treasury balances.

In order to give you some idea of why I was disturbed a year ago when I got the reports from the banking districts on what was going on by way of procurement and on the manpower front, I tried to put the thing down so I could see it visually and so that I could effectively present this case to some of the military people and people like Mr. Vinson.

You will notice here that in 1940 total funds raised, (See Table I) by the Government were 7.9 billion dollars. At that time we were very much appalled in this country about our "extravagant" expenditures. You will recall in the last half of 1940 we had adopted a defense program. When the Germans went into Paris we became very busy and Congress authorized a two-ocean navy. There were some other expenditures that looked very big by comparison with any military expenditures we had had in peacetimes.

You will notice what has happened to these figures. For the fiscal year ending 30 June 1945, the amount was 102 billion dollars. The estimate for the year ending 30 June 1946 is 54.7 billion. Now here is the serious part of it when you consider the borrowing that has taken place. The basis of inflation, of course, comes through the monetary development. I am going to talk to you primarily with reference to how we financed the war and why it is inflationary, and why there continues a higher level of prices after the war than prevailed before the war. The total borrowing during this period was about 228 billion dollars. (See Table I)

We went into the World War with practically no public debt and came out of that war with a public debt of about 25 billion dollars. During the Twenties it was reduced to 16 billion, (See Table II) During the depression commencing after 1929 and going over to June of 1933--that is right after the Bank Holiday--we did not increase the debt by increasing government expenditures because, as you will recall, there were a great many people who thought the way to get over a depression was to balance the budget in a depression, which was exactly the opposite from what we should have done to get over it. There was a deficit in that period of five and a half billion. It might be called the "Hoover deficit" because during that period our national income fell from 80 billion to 40 billion. The tax revenues practically disappeared. Government expenditures were actually decreased in that period but they did not decrease as fast as the revenues decreased so that some deficit was created, not because of Government expenditures, but because of a loss of revenue due to idle men and idle factories and a loss in national income.

The period up to the Defense Program comprised the eight years of New Deal expenditures. Public Works, the W.P.A., Civilian Conservation, and all of the expenditures during that period (what we call Relief and Recovery) created a deficit of 26 billion. (Table II). So that we really started our Defense Program with a total debt of 48 billion dollars, which was practically twice as high as the public debt had ever been in our history before.

Then here is what happened (Táble III) these figures do not show the total cost of the war; but the public debt, that is, the amount spent for war which we failed to collect back from the public in taxes.

Table II

Table II. The Federal Debt

Deficits from War and Depression

(in billions of dollars)

| Period | Dates 1/ | Interest-bearing Debt: Change During Period | Interest-bearing Debt: Outstanding End of Period |
|---|---|---|---|
| World War I | 1916-1919 | + 24.2 | 25.2 |
| Reduction in ' Twenties | 1919-1930 | - 9.3 | 15.9 |
| Early Depression | 1930-1933 | + 5.5 | 21.4 |
| Relief and Recovery | 1933-1940 | + 26.5 | 47.9 |
| World War II | 1940-1945 | +211.5 | 256.8 |
| | 1945-1946 | + 16.1 | 272.9 |
| | 1946-1947 | - 3.6 | 269.3 |

1/ All figures apply to 30 June dates with the exception of 1930 which applies to 31 March.

Note: All interest-bearing direct and guaranteed securities are included.

Table III. Total public and private gross debt 1/

(in billions of dollars)

| Type of Debt | End of Calendar Years | | | | |
|---|---|---|---|---|---|
| | 1929 | 1933 | 1940 | 1944 | 1945* |
| Total | 213 | 187 | 215 | 419 | 453 |
| Public | 35 | 45 | 74 | 260 | 298 |
| Federal | 18 | 25 | 54 | 242 | 282 |
| State and Local | 17 | 20 | 20 | 18 | 16 |
| Private | 178 | 142 | 141 | 159 | 155 |
| Corporations | 109 | 94 | 91 | 110 | 107 |
| Other | 69 | 48 | 50 | 49 | 48 |

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1/ From "United States Debt Pattern in War and Peace" by Alvin Slater, Survey of Current Business, September 1945.

* Estimated.

Note: The table shows the gross debt, public and private. The figures for 1929 to 1940 are from Survey of Current Business, Department of Commerce, July 1944; figures for later years are estimated.

It is the money which we borrowed from the public together with the money we created by the borrowing from the banks.

In 1929 the total corporate debt amounted to 109 billion, that is all of your railroad bonds and your utilities and industrials and every type of bank loan and obligation of every corporation in America.

The total private debt was 178 billion. That includes all outstanding actual consumer credits; farm mortgages, home mortgages, every dollar of non-corporation obligation of a private nature, as well as corporate debt.

Finally there is the total city, county and what we call municipal. Then there is the Federal Government debt. Comparing 1933 with 1929, you see the process of liquidating private and corporate debt--the process of deflation which practically closed all the banks. It brought general bankruptcy in the process of trying to squeeze out that much debt, because when people pay their obligations and when corporations pay their obligatic they are not consuming. When they fail to consume, the market disappears, unemployment develops and a cycle of deflation results.

It just took that much to bring the national income down from 80 billion in 1929 to 40 billion in 1933. The amount of debt liquidated in that period was less than the difference in the national income between 1929 and 1933. Just the one year's loss in income through unemployment equalled more than the total amount of debt that was paid during the depression. So, we did not solve a thing by the process of liquidation.

After 1933, you will notice that the level of private debt held about even up until 1940. It went up slightly since then.

Speaking in terms of figures at the end of 1945 we had a total debt of 453 billion. The Government debt was 282 billion; the city, county and states had been reduced from 20 billion to 16 billion; the total privat debt which was 178 billion in 1929, is now 155 billion. The total private debt is 23 billion less now than it was in 1929, whereas the Federal Government debt has gone up from 18 billion in 1929 to 282 billion.

Whereas the public debt, in our financial operations, was not an important factor prior to the war, today it is the determining factor. The question of interest rates must be determined, on a basis of the effect on the public debt. The necessity of managing the public debt so as to prevent an increase cost to the Government and the taxpayer is a matter of first importance.

The private debt has become of secondary importance. Thus we have made a very basic and fundamental change. This change in our structure has affected very seriously our economic-political situation. You can all see from these figures that the management of the public debt is going to be the criterion in debtor-creditor relationships.

There is going to be little or no freedom with reference to the question of interest rates. The economy is going to have to be managed with less use of the traditional practice of raising the interest or the discount rate in order to curb inflationary developments or on the deflationary side to reduce interest rates in order to create a favorable climate for expansion.

That use of the interest rate by the central banking system is not applicable today because of the serious impact which it would have upon the public debt. A fraction of one percent change in the interest rate would add a billion dollars to the interest cost and to the tax structure. To ask the taxpayers to pay a billion dollars more in taxes so as to pay that much more interest on the public debt held to a large extent by the financial institutions would not be readily accepted.

Here is what we call the inflation potential. (See Table IV). These are the government securities held outside the banks. (The figures exclude also the holdings by insurance companies, the mutual savings institutions, the building and loan companies, various retirement funds, such as the social security, veterans retirement and railroad retirement.) The amount is slightly over 100 billion dollars.

Going back to 1920 when we had the inflation following World War I the total inflation potential was 58 billion. Currency in circulation was 4 billion and amounted to 18.6 billion. This includes checking account, not savings.

We had quite a little inflation there, if you will recall. In 1929 there was no inflation in the cost of living. It was an isolated phenomena in the economy. There was not a general inflation as some people think, because the actual cost of living in 1929 was 10 percent less than it was in 1924. In the middle of 1929 there was more unemployment than there was in 1928 and 1927. So you did not have an inflationary force at all.

Now liquid assets have increased enormously from a comparatively small amount in 1940. We will take this year because I think it is much closer to our situation now than, say, 1929. In 1940 there was a total of 60 billion of deposits. There was a total of 6.5 billion of currency and of government securities held by all corporations and individuals amounted to 12.8 billion. Since then, the deposit structure has increased from 60 billion to 150 billion; currency has come up from 6.5 billion to 26.8 billion. The public debt held by individuals has come up from 12 to 100 billion. There is the inflation potential: 275 billion dollars at the end of 1945 as against, in 1940. 80 billion dollars.

To the extent that we financed the war out of taxes, there was no inflationary effect. The unfortunate thing is that we only financed 44 percent out of taxes. That inclused the fiscal year 1946, up to 30 June 1945. The ration would be less than 40 percent. (See Table I.)

No country has ever financed a war without borrowing money. It is politically impossible to levy taxes heavy enough to do it. I understand that a small country like New Zealand, paid for two-thirds of her war costs out of taxes. Russia has prevented inflation pretty well. She has financed her war quite differently from the way we financed ours. She owns all of the banking system and assumes direct control which, of course, in a democracy is not possible.

Table IV. Inflation potential in liquid assets

(in billions of dollars)

| Type of Asset | June 30 1920 | 1929 | 1933 | 1940 | 1944 | 1945 | Dec.31 1945 |
|---|---|---|---|---|---|---|---|
| Deposits | | | | | | | |
| Demand1/ | 18.6 | 22.5 | 14.4 | 31.9 | 60.0 | 69.0 | 75.9 |
| Time | 15.8 | 28.6 | 21.7 | 27.4 | 35.7 | 44.3 | 48.4 |
| U. S. Gov't | 0.3 | 0.4 | 0.8 | 0.8 | 19.5 | 24.4 | 24.6 |
| Total | 34.7 | 51.5 | 36.9 | 60.1 | 115.2 | 137.7 | 148.9 |
| Currency2/ | 4.1 | 3.6 | 4.8 | 6.5 | 20.7 | 24.9 | 26.8 |
| U.S. Securities3/ | 18.9 | 10.0 | 10.3 | 12.8 | 74.0 | 93.7 | 100.1 |
| Grand Total | 57.7 | 65.1 | 52.0 | 79.4 | 209.9 | 256.3 | 275.8 |

1/ Demand deposits adjusted
2/ Currency outside banks
3/ Excludes holdings by U.S. Government Agencies, Federal Reserve Banks, Commercial Banks, Mutual Savings Bank, and Insurance Companies.

The British, I understand, have financed about 52 percent of their war costs out of taxes; Canada, about 50 percent.

We have paid for about 40 percent of ours. We did not do as good a job in taxing as we should. It was not the fault of the Administration--as you will recall, it was the Congress--because The President saw this danger. The Treasury and the Federal Reserve people were very much in favor of increasing taxes further to take off the inflationary pressure for goods and services. What the people pay in taxes, they do not have to spend. Thus we were interested in heavy wartime taxes from the standpoint of reducing the inflationary pressure as well as keeping down the expansion of the public debt.

You will recall the President vetoed the tax bill that was sent to him and Mr. Barkley, his own leader, assailed the President and the Administration and led the fight through Congress to override the veto and put through a tax bill which yielded far less than Mr. Roosevelt was insisting upon. So everything that could be done politically to get more taxes was done.

Let us consider the difference between the 40 percent that was collected in taxes and the 60 percent that was borrowed. Now if the entire 60 percent had been borrowed from individuals and corporations, if it had been borrowed from the public exclusive of the banking system, the commercial banking system, then you would not have expanded the deposit structure at all.

To the extent that individuals, corporations, savings banks, insurance companies, etc., purchase government securities, these funds are taken off the market for civilian goods and services and are passed on to the treasury. In the process no new money is created.

But actually we did a fairly poor job of distributing government securities to the public by comparison with what some of the other countries have done. We relied extensively upon borrowing from the banks. A short time ago I received a letter and a report from the Governor of the Bank of Canada giving an analysis of the Canadian picture and of war financing in Canada. As I recall, 38 percent of the debt was placed in the hands of individuals--not corporations--as against 21 percent of the debt in this country taken by individuals. We consequently got much more of the debt financed by corporations and by the commercial banking system.

Without taking the time to go into the technical analysis as to the difference between commercial banks buying bonds and nonbank investors, whether individuals or corporations, buying them, suffice it to say that when commercial banks buy government securities new money is created. It is exactly the same as printing-press money which, in effect, is the creation of money by credit.

Our whole source of money is basically credit. When private financing is undertaken through the banking system, that creates money. Whenever a bank makes a loan it creates a deposit which did not exist before the loan was made. That deposit can be drawn out in currency. Therefore, the volume of currency is controlled not by the banks or the Federal Reserve Bank at all; it is controlled by the owners of the deposits.

The way the banks are able to make loans, either to individuals or corporations or to the Government is through the reserve that is given to them by the central bank. They operate on what we call a fractional-reser basis. It used to be 10 for 1--for every dollar of reserve they could create ten dollars of credit. Under existing reserve requirements, for each dollar of reserve they can create about six dollars of credit. As you may recall, in World War I the Government started out with a 3 percent rate and ended up with a 4.75 percent rate. Certainly if we had anything like that rate now we would have a 15 billion dollar interest charge instea of five billion. We would have a simply fantastic situation if the interest rate were that high, because the earnings of the commercial banks at the present time, after taxes, are higher than they have ever been at any time in their history, as a result of profits and interest on government securities, which are, of course, riskless investments. The banking system through central banking operations provided the money that was not provided in taxes or by nonbank investors.

The Federal Reserve now holds some 23 billion in government securities as a result of what are called open-market operations. These operations offset currency withdrawals and gave member banks reserves to buy government securities.

Had we been able to finance the war more out of taxes and out of savings, we would have had to sell fewer government securities to the commercial banking system, of course, and this would have resulted in creating less money and thus less of an inflationary situation. There is much less danger in having this potential inflation in securities than there is in having it in money. People who buy Series E, F, and G Bonds, or who buy investment securities, are much less likely to sell those securities to buy something else than they are to spend currency or their money in a checking account. But should they lose confidence in the purchasing power of money, in our ability to prevent an inflationary development, the danger is that there might be a flight from Government securities. In that case the market would have to be supported. The Federal Reserve would have to provide the support and give reserves to the banks so that the banks would also buy the bonds. As a result instead of the security holdings, you would have an increase in deposit holdings.

Our problem in managing the public debt today is to maintain confidence in the purchasing power of the dollar so as to persuade people not only to hold on to the securities which they now have but also to buy additional securities so as to take the pressure off the market where the supply of goods is still short. It is just as necessary today to get the public to continue to put savings into government securities, because if they buy them today, this will reduce the amount of deposits and increase security holdings. You can reverse the increase in deposits by continuing to sell bonds to the public. The money thus borrowed from the public can be used to pay off the bonds that are held by the banks. Hence it is vitally important today that we hold this line against inflation so that the general public will continue to have confidence in their money and thus in holding their government securities and buying more of them.

I believe there is going to be a balanced budget in the fiscal year 1947. It appears now we are going to be able to redeem debt, in the calendar year, out of balances held by the Treasury and cancel tax revenues by possibly 15 to 20 billion dollars. On 1 March there was a reduction of one billion dollars of Treasury Certificates that fell due. On 15 March there was one billion 800 million of notes and bonds that fell due that were paid. There is going to be two billion of certificates paid on the first of April.

All of this is in the right direction. If we can induce Congress not to decrease taxes at this time but to hold them where they are until there is an adequate supply of goods and the inflationary danger is over; if we can induce Congress to extend O.P.A. before their organization falls apart, and without amendments that will so cripple it, it cannot function; if we can avoid future disastrous strikes which curb production; in other words if we can get increased civilian production, we can avoid a further increase in the public debt and start decreasing it.

If we can bring about some reduction in the supply of money through a balanced budget and through the payment of some of the debt out of the existing balances the Treasury has; if we can maintain our tax structure as it is, and keep out of another war, we have a good chance of winning the battle against a disastrous inflation.

General Armstrong, I have talked an awfully long time here. I should apologize to all of you for trying to cover so much territory. I have talked off the cuff. I possibly could have said all that was worthwhile saying in a very brief period had I written it out, but I did not have time to do that. I hope you will forgive me if I have taken up too much time.

I thank you.

GENERAL ARMSTRONG:

Mr. Eccles, I want to thank you, sir. I am very glad you did not write your speech. I would like to make this comment, and I am not being on the defensive.

MR. ECCLES:

Oh, the Army never goes on the "defensive"!

GENERAL ARMSTRONG:

In 1944 the Army--I can only speak for the Army--tried to anticipate the end of the war. They cut and cancelled contracts all over the place. That was in the early fall, or the fall of 1944. Then along came the Battle of the Bulge. All those contracts had to be started up all over again and the Army lost faith in its ability to guess the end of the War.

In other words, the element of surprise in warfare is such an important element and the responsibility of military and naval leaders is so great they are naturally reluctant, I think, after the experience of the Bulge, which was extremely perilous, to go too far in anticipating there would not be any more surprises. Suppose that it was the enemy who had develope the atomic bomb ahead of us; why then the foresight (you would have called that then) of the military and naval leaders in having adequate preparatio of material resources would have possibly saved the country in the long run.

I simply mention that because I think that, as you said, sir, we must remedy the misunderstandings that grew up between the civilian agencies and the military and naval establishments. It is something we must take care of in the future.

I hope, sir, when we start our first regular course in September that it will be possible to include in the student body, which will be about 100 from the Army, Navy and Air Forces, at least one representative from the Federal Reserve Board, a man high in your organization, who can come in and spend the year or 10 months in the College, learning the point of view of the Army and giving us, above all, the point of view of the Federal Reserve Board in this business of the conduct of war.

I want to say to you, Mr. Eccles, we are extremely grateful to you for the time you have given us for this presentation this morning. We are highly honored and deeply appreciative of your contribution.

Than you very much.

(24 July 1946--200.)S