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## **FINANCE IN WAR**

A lecture delivered by  
*Professor Raymond Rodgers*  
at the Naval War College  
March 2, 1949

The subject I am going to talk about today is a great mystery to most people. Yet most people use credit and that is largely what I am going to deal with. It is very much as the colored boy down south viewed the problem of a mule that he had bought. He was bringing this mule home when he ran into a friend of his and the friend asked, "How much money did you pay for him?" He replied, "O, I didn't pay no money. I got him on credit. I gave my note." The other fellow said, "You sure got him cheap." Now that is the problem that we have to keep in mind going through here. You can do wonders with credit if you don't overdo it. You can stretch a thing just so far, and with credit you don't know how far you can stretch it until it is too late.

This whole question of financing war, as it is done nowadays, is not fully understood. In bygone days it had to be done by inflating the currency, and before that by hoarding up treasure or hoarding up actual gold value of one sort or another. Nowadays we have a different system, and in some sense a much better system but, as I intimated a moment ago, it is a system that works so wonderfully that there is always the danger of saying, "Well, if we did two hundred fifty billion, why not do five hundred billion?" After all, that is only another one hundred per cent. We went from fifty to two hundred and fifty, that's five hundred per cent so why not go again and so on, and that's what we have got to watch.

The actual cost of war cannot be put off, in an economic

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sense. You cannot postpone it; everyone suffers in time of war. The ships, the planes, the guns, everything that is destroyed has to be produced in time of war and it has to come out of the economy. Civilians have to do without things. These sacrifices cannot be postponed. Finance cannot shift the economic burden. It can, however, shift the burden as between classes of the population, so we start out here at the beginning with a very encouraging note for you professional gentlemen!

No modern war has ever been lost because of finance, that is, if you have a modern banking system, and we certainly have one in the United States. (Maybe it is a little too modern!) There is no excuse for losing a war because of the financial side. (We could go ahead and talk about how a modern war involves mobilization of our resources and so on, but I don't think that is necessary for it must be an old story to you officers by now.)

Now the first and simplest way to finance a war is by taxation, and, by all means, it is the best. Then there is no fooling around about it. You have the economic burden and the financial burden right at the same time. Prices don't get out of order, nothing gets out of line, and the purchasing power of the people does not increase. Everybody knows right where he stands. However, you can't do that in a democracy. You can't even do it in an autocracy, and certainly you couldn't do it in America. You have to hold a carrot out in front of the mule, as they say in England. You have to give the boys a little extra overtime pay. You have to give labor a little incentive to produce extraordinarily. Of course, patriotism is a great help, but something in the pay envelope also comes in handy! So we can't, especially in America, get away with financing a war by taxation no matter how sound it may be in theory.

Now let us see why it is so sound in theory. You have no increase in the public debt. You don't have any back-log of pur-

chasing power built up. You don't have the American people holding two hundred billion dollars of liquid assets and no place to spend it—nothing to buy with it. Financing war by taxation would mean you wouldn't need the OPA; you wouldn't need price control. You wouldn't need such regimentation if you financed by taxation.

As a matter of fact, gentlemen, if you financed by taxation, instead of war creating inflation, it would actually create deflation, because you would not increase your purchasing power. Every increased dollar would be taken right back by the government. You know, the Lord gives and the Lord takes, meaning the sovereign, so it will be taken right back. You hand it to the boys and you take it away from them Saturday night, or at least at the end of the month. But I say, you can't get away with it. The Congress wouldn't like it, the voters wouldn't like it and, no nation, not even Stalin with his Politburo can get away with financing a war in that fashion.

Now the next best method is to borrow the amount that you do not raise by taxation. The question is who to borrow from. Well, obviously the best place to borrow is from the real investor, the fellow who has real capital, and from the earner by payroll deduction—that's the real McCoy! Take back that purchasing power—that's the idea. Borrow from the investors, borrow from the insurance companies because they get premium income continually. They get real capital, the largest source of new real capital in this country. Their investment capital each year is the premiums that are paid in on the life insurance policies. It runs around three and one half to four billion dollars a year, and that means that someone has done without something. That means that people have paid that purchasing power to an insurance company instead of going out and buying the things they could have bought. There is no credit expansion there. As I said before, it is the real McCoy. It is simply a shifting of purchasing power from the man who has

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the insurance policy to the insurance company, which in turn shifts it to the government through the purchase of bonds.

Now, the same thing is true of the payroll deduction plan. You gentlemen, who contributed so nobly by having bond deductions made from your pay, gave real purchasing power to the government. There was no indirection about that. There was no hocus-pocus; it was the real thing. If you had not done that, you could have gone out and spent the money for something. Don't worry, we won't go into the matter of what you might have spent it for, but you could have!

We call that the ultimate investor where you just have a transfer of purchasing power and not a creation of new purchasing power; the ultimate investor, where people give up part of their own purchasing power and turn it over to the government, partly as a patriotic gesture and partly because they have coupons on that green paper that you get from the government and you get paid a little thing called interest!

Borrowing from ultimate investors really means from every source from which the government gets money, every source to which they sell bonds except the commercial banks and the Federal Reserve banks. Those two groups of institutions have what we call "credit expansion power." They can take what *you* might call *nothing* and make *something* out of it. They can give you a deposit on their books and you can go and buy things with it, and that goes for your Uncle Samuel, too. They can credit Uncle Sam on the books and Uncle Sam can buy things with it. As a matter of fact, that *is* the way the government does it. But please note: what I am saying does not go for the savings banks. In theory and in practice they are as far removed from the commercial banks as possible. It is only the commercial banks and the twelve Federal

Reserve Banks which have this expansion power. They can make an entry in an account on their books, called a deposit account, and then you draw chits on that—that is, pieces of paper called checks. And you can pay debts; you can buy things. You can make the wheels go around with that.

Now *you* can't do it. If *you* set up an account and try it, *you* go to jail, but the bank has a "system" and you pay interest for the use of the system and what you pay is very well worth it. Don't misunderstand me. This is another one of those instances where a little knowledge is a dangerous thing. I don't want you to get the idea that bankers sit down in a back room and through some hocus-pocus eventually come up with something that was never seen on land or sea and shouldn't have been seen anyway! It is not like that at all. There is a system to it. Its creation is something that is real and substantial. If it is not done properly, the bubble bursts and every man for himself!

So when you borrow from the ultimate investor it is very sound. However, you do put off the day of reckoning in one sense. It means that you have to pay the interest through an increase of the tax burden. It does effect the budget immediately where taxation didn't. It means that government expenses go up; but it is not inflation.

Our whole problem under this modern system of financing war is to prevent inflation. Inflation is the greatest economic and social curse known to man and I mean exactly that. It impoverishes the wrong people. It puts money in the hands of the wrong people. We can say that it is also the greatest curse of war because that is when you usually have your inflation—at least the most serious inflation, but not always.

If you finance by selling these bonds to the ultimate investors, you create a cushion of purchasing power which can be

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used at the end of the war and thus help in the reconversion period. It helps bridge the gap of greatly stimulated production for war purposes over to the lower peacetime production. We got over it better this time than we were entitled to. We did not have the eight million unemployed as the bureaucrats insisted we were going to have visited upon us. We did right well, thanks again to the miracle of American industry.

I don't get paid a dime by the Association of Manufacturers for telling you that either. Another thing, I don't want you to misunderstand my politics. I am not sent here by the Republican National Committee. I was born in Kentucky, a Democrat, and they don't come any worse than that!

In this country we didn't sell as many bonds to the ultimate investors as they did in Canada or as they did in Great Britain. We can't be too proud of ourselves about it. On the other hand, we did get away with it and we did win the war, so let's not lament too much about what they did in Canada and what they did in Britain.

We now come to the sixty-four dollar question—borrowing from the commercial banks. Here is where you are liable to be hit twice by that terrible two-edged sword of economics. In economics practically anything is liable to hit you going and coming, and it's bad when you get that. So, let's watch this very carefully. As a matter of fact, it wouldn't be necessary for me to come up here today if it was not to elucidate this point, and it is a point that isn't understood even by some bankers. They have a system, as I told you before, and it is chiefly that system which I want to talk about to you today.

When the government borrows from the banks it causes an increase in bank deposits and this is the way it is done. I want

to give you the actual mechanics. A bank can buy a bond from the government in two ways. One is to hand a messenger some cash and say, "Take this cash over to the Federal Reserve and get us a bond." Gentlemen, that would be very crude. They have a much better arrangement than that. That's what we call exchanging assets—buying them for cash. Now any banker who did much of that would be out of the banking business before the messenger got back. It is like going home with the blue chips. It can't be done—not and keep the game going right!

No, the way to do it is this: They send those dollars over to the Federal Reserve Bank for what the banker calls "reserves". The banker has to have a reserve over at the Federal, depending on whether it is a bank in New York City or Chicago. There, at the moment they have to have twenty-six per cent—in the war they had to have less—about twenty-two per cent. In the next group of banks, the next category of reserve cities, the banks have to have a lesser reserve, and then you come down to the country banks where they are permitted to have a still smaller reserve. During the war the banks had to have, at the Federal, about fifteen per cent of their deposits in their reserve balance. In other words, if a country bank had a hundred thousand dollars of deposits, they had to have a fifteen thousand dollar reserve account also. You may ask where did they get those deposits? In the next thing here, the hand is quicker than the eye—if I lose you here, you *will* be lost; you will be in the wilderness when I finish. First thing, you must think of these deposits as in a commercial bank account. When I say bank, I mean only commercial banks. You probably think that people come to the window and hand that pale, young man back of the wicket a dollar and say, "I want to deposit a buck before I spend it." No, that's not the way it is done. That's largely window dressing and not even very good window dressing. The dollar that is brought in over the window is put into the reserve deposit account



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by the banker and he credits several times that amount to the account of some borrowing customer.

Let us digress for an instance. You go to the bank and borrow a hundred thousand dollars. Happy thought! What does the banker do? You sign a piece of paper called a note and he adds it to loans and discounts. That's the debit; that's on the left hand side of the balance sheet. The banker writes a hundred thousand dollars on the right hand side of an account called "John Q. Public—\$100,000"; that's a deposit account. To the bankers that's a liability. To you it is an asset, but to the bankers it is a liability—\$100,000. Now where did that deposit come from? Did anybody sacrifice? Did anybody do without anything? They did not. The banker made a double entry. He had to enter on both sides of the books or they would send him to jail. Like the Navy, they have to balance things. When the banker increased loans and discounts he had to increase deposits—his liability. Now those deposits did not come from *without* the bank; they came from *within* the bank.

One of the questions we frequently ask our doctoral candidates—"Do deposits come from loans or loans come from deposits?" Some ninety-five per cent of them will answer that they come from deposits—that the banker lends out money that he has, which is not the case at all. The deposits come from the loans. If you have ever (and I hope you have not) sweated over a bank deposit ledger as I have, you would know that for every dollar that the teller sent up to you, the Loan and Discount and the Investment Departments send up tickets to credit accounts for ten or maybe even twelve dollars, and thus the deposits actually come from *within* the bank!

This loan expansion you may call it, is really *deposit expansion* power. In order to expand your deposits you have to have that reserve with the Federal—you must get it over there in some way. So whenever anyone brings a dollar in at the window

the banker sends that in to the Federal to his fifteen per cent reserve. Then he can buy five or six dollars worth of government bonds or make loans to an equivalent amount.

We are going through it again now, using bonds. The way the banks buy bonds is by means of using an account that was started in World War I. The title of the account is "War Loan Account, Treasurer of the U. S." That was set up at the beginning of World War I, and has been going ever since, and if one of your shades should come back to referee a World War two hundred generations hence, you would probably find the same account right on the books!

Here is what happens. One day the banker gets a letter from the Fiscal Agent for the government saying, "The Treasury is offering, as of such and such a date, fifteen billion dollars of which so many billion dollars will be eligible for bank purchase. We invite you to subscribe up to a maximum of ———." They will give as a maximum a certain percentage of capital and surplus. Why do they put a maximum? Because the banks want more. So would you if you could *write* on both sides of an account and get one or two per cent! You wouldn't mind. You would want more. So they notify the Federal. And in due time the banks are notified that as of a certain day they can make the entry, and as of that day what does each bank do? They make this entry I am talking to you about. Suppose a bank was told that they could have one hundred thousand dollars worth of "Governments". As of the authorized day, they *debit* government investments, and *credit* "War Loan Account, Treasurer of the U. S."—\$100,000.

Now the government does not draw checks on commercial banks. The government used to do that fifty or sixty years ago, but charges of politics were made and presidents had trouble and things of that sort, so the government plays it safe now. As you

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gentlemen know, they draw checks only on the Treasury but they are payable at the Federal so the government, by telegram, transfers this balance in War Loan Account to the Federal, pays it out and it comes back to the commercial bank—but all of that has nothing to do with what I am explaining this morning. That's merely because of the auditing practices of the government.

Eventually, the plane manufacturer or the munition manufacturer gets a check from the government on the government's account at the Federal. What does that munitions manufacturer do? He doesn't have an account at the Federal, but he does have an account at the State Street Trust Company or the Chase National Bank, or some other good bank so he takes that check in to them. His account is credited, so the government's account—the War Loan Account which went to the Federal—is debited and ends up in the account of the manufacturer at the commercial bank. In other words, all we have there is a transfer via the Federal, from the account of Uncle Sam to the account of "John Q. Public." That's the way it happens. They keep repeating that process over and over.

Here is the thing to keep your eye on; watch the ball now! Each time the government sells a billion dollars worth of bonds to the banks in this way, it results first in an increase in War Loan Account of a billion dollars and then, as the government sends the money over to the Federal and it comes back, it results in an increase of a billion dollars in the deposit accounts of the American people—money which they can spend and buy things—ordinary deposit accounts. It is just as good as if they had taken actual money down and left it with the teller. It is just as good as if they had borrowed it themselves. The only difference is that the government borrowed it for them. In this way we have had an expansion of deposits.

Now here is the ball I told you to watch—that expansion of deposits can then be used by the public, *over, and over again*, to buy more government bonds or to buy whoopee or anything the public wants to buy with it. It is their money. It has been transferred from the government's account to "John Q. Public".

In sharp contrast, when a member of the public buys a government bond, all you have is a shift from one deposit account to another. He draws a check on his own account (That's the way you pay for it) and what does the government do with that check? The bank debits the deposit account of the bond purchaser so that his deposit goes down, and they credit the deposit account of Uncle Sam. This does not go into the War Loan Account. This is not credit expansion. This is a *transfer* of purchasing power. It is no increase—only a transfer and thus not inflationary.

During the war our commercial banks reached a total investment of some eighty-eight billion dollars worth of government bonds. Thus the government borrowed more than eighty billion dollars from the banks through this process which I have just described. Let us see what that means. It means that each time they borrowed, the total of deposit accounts, first, of the government went up, and then later, of the American people. In plain English it means, at the moment, that the American people have sixty-three billion dollars of deposit accounts that they would not have had if the government had not sold sixty-three billion of bonds to the banks and if they had not held them. We thus have that purchasing power which would not have been in existence. You may ask how long it will be there? The answer is: *It will be there as long as the bonds are on the asset side of the balance sheet!* So long as the banks have sixty-three billion dollars worth of government bonds, they have to have sixty-three billion dollars worth of bank deposits. It may not be in the same bank; it may

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move from bank to bank, but it has got to be in the system. It can't exist any place else. As you know, if you have the debit, you have to have the credit.

It is very difficult for many to see the impact of this—to see its importance. Since the government began to borrow from the banks in 1934 there have been many wrong guesses as to how much can be borrowed in this way. I don't know what the upper limit is, as it is a case where "you furnish your music as you go along." Every time the deposits in the banks went up a billion dollars, a billion dollars was put in the hands of the people with which they could be patriotic and they, in the next bond drive, could give up a billion dollars in checks to the government. Their accounts would go down a billion and the government's account would go up a billion, and then what would the government do? It would spend a billion to pay for military services or supplies or whatever they spend the money for, and the deposit would then move out of the government account, back into the individual's account, over and over again, until the end of time, or until those bonds come off the asset side of the balance sheets of the banks. Gentlemen, don't try to make something mysterious out of this or something difficult. It is the simplest thing in the world.

With all of this borrowing by the government and by business, why are interest rates so low? Prices are higher than they were before the war; also there is more business activity than ever before. There is more demand for credit. Why then is money so very easy? The answer is simple: *We have sixty three billion dollars of credit—sixty three billion dollars of purchasing power in the banks* because of the method of financing the war through the banks. It is not folding money but it will do until the folding money comes along. It is sixty-three billion of purchasing power that is being used, over and over again, week after week. This is the main answer as to why interest rates are so low.

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There is one more thing I want to call to your attention. In America, we can borrow our reserves. Of course that is subject to the limitation of the total of gold. We have to have a certain amount of gold back of those reserve balances. But we have had, since World War I, which made us the unwilling recipient of the gold of the world, too much gold in this country. We have had no problem on gold back of our reserves. A lot of people, particularly professors, have been trying to make a problem of this, but we really had no problem on it. We can get the gold we want, any time we want, as long as we have the military power, the economic power, the industrial might. We can get gold; that is no problem at all. If, however, in time of war, our gold reserve (which was legally 25% during this war) falls below or shows that it is going to fall below, all we need to do is reduce the reserve requirement and we will get away with it. We used to have thirty-five per cent of gold back of those deposits. We cut it to twenty-five per cent but nobody worried about it.

During the war, the Federal held twenty-three billion dollars worth of government bonds. How did the Federal get those bonds? They bought them by crediting the account of the government. Thus to make it easier for the commercial banks to buy government bonds, the Federal Reserve Banks created twenty-three billion dollars of reserve, right on the barrel head. All during the war there was never any shortage of reserves. No bank had to send over any consequential amount of its government bonds to borrow to create its reserves; the government beat them to it. The Federal Reserve bought bonds and created the reserve account. On the basis of their reserve accounts the banks can create deposits. The member banks can then buy bonds and credit the government in the special deposit account called "War Loan Account", as explained before, and from there the purchasing power is transferred to the deposit accounts of the American people.

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That is modern banking; that is the one thing that our commercial banking system does that no other part of our economic system can do. It is a remarkable service that they perform for us. It is really a wonderful thing. *However*, to make the system work we have to have public confidence and I am sure I do not have to tell you boys where you fit in that picture. *As long as the public has confidence* in that system, there seems to be no limit to it. After the war we ran the debt up to 276 billion dollars. Unfortunately, it now appears that there are some “boys” in Washington who think there is no limit. Now there is a limit even though we don’t know exactly where it is.

I want to conclude by saying that the role of finance has declined in importance under modern warfare. To say this is probably unwise. As you know the customary thing to do is to tell you that finance is the most important thing in the world, and to listen very carefully or you are going to miss the boat and all that sort of thing. Well, that is a lot of nonsense. As I told you at the very beginning, you boys don’t have to worry about it too much. I don’t mean that you should go hay-wire or anything like that, but I do mean that with our modern banking system, the problem of financing war is greatly simplified. This was especially true during World War II. During the past war we did a much better job than we did in World War I.

The banks in this war did a good deal of financing for one-third of one per cent per annum on Treasury bills. Now ponder that. If anyone tells you that the banks profiteered, remember, as bookkeepers they have to get *something*, and one-third of one per cent isn’t much. They are entitled to something for working out such a system. They got eighty seven and one half hundredths of one per cent on Certificates of Indebtedness. In addition, the banks were able also, to buy long term bonds, on which they got less than two per cent, after taxes. All in all, they did a magnificent job.

So, in conclusion, I want to say that we financed this war very nicely, very neatly. There are lots of things that were done in Washington that I could criticize, but everything considered, the boys did a grand job.

During the war, and since, they have done a magnificent job of managing the public debt. We have a public debt now, as you know, of a quarter of a trillion dollars, and some people say the problem is whether we are going to pay it off, manage it, or repudiate it, or what not. Certainly we are not going to repudiate it, and in my humble opinion and *within this room*, there is no real need for us to pay it off. We will, of course, pay off some of it, but, as a matter of fact, I don't think the American people want it paid off. We are going to manage it, because if we don't manage it, gentlemen, it will manage us. The way the Federal Reserve authorities and the Treasury have fought inflation with one hand by raising the reserve requirements, raising interest rates, and with the other hand bought government securities and kept up the price of government bonds until they finally passed the crucial test has really been magnificent. When you can push up with one hand and push down with the other and get away with it, you are pretty darn good. As I said, they did that and I believe in giving credit where credit is due. I had no hand in it; moreover I have never gotten a dime from the Treasury or the monetary authorities for defending them. I did get \$15.60 a month in World War I from the government as an enlisted man in the Navy. I earned it; the officers saw to that. My conscience doesn't bother me one bit. So I want to make it clear that I don't come here as an apologist for anything that I had anything to do with and I don't come here to whitewash anybody.

Clearly, *the way we financed this war is the way we will finance the next one*. I do hope we will finance more of the next



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one by means of taxation although the taxes were high enough in this one for me. When a college professor has to pay fifty cents out of an income dollar as income taxes, taxes are certainly high. Nonetheless, we do have to recognize that taxation right up to the breaking point, but not beyond it, is the soundest way to finance war. Any additional amounts needed can be supplied through credit expansion by our marvelous banking system.

That concludes my story, and thank you very much for your close attention.