CHAPTER 4

The Role of Finance

1 BUYING DEFENSE

WE HAVE emphasized that it is not money, but men, materials, and machines that constitute the sinews of war. We have seen that these sinews can be provided in part by expanding total production, in part by letting inventories and plants run down, in part by diverting the normal flow of savings and investment to military purposes, and in part by curtailing the production and consumption of short-lived non-military goods.[1] The kinds of civilian goods that must bear most of the curtailment have been broadly marked out, and we have considered, though merely in a general way, how the aggregate immediate sacrifice must be distributed among citizens.

The methods for accomplishing these changes fall into two classes. One is direct and detailed governmental prescription, such as drafting men for the armed forces, rationing and price fixing of raw materials and finished goods, commandeering labor and property. The other method is financial, and relies principally upon money expenditures, money raising, and market prices for the organization and guidance of economic activity. In practice, both methods must play important roles. No country, not even Germany or Russia, uses direct and detailed governmental prescription exclusively, and no country would today rely wholly upon finance. The latter method, however, is the one the United States and nearly all other countries have used predominantly in peacetime, and it is likewise the method on which they have mainly relied in preceding wars.

Under it, the government 'buys' defense. Using borrowed funds in considerable measure at the outset, it places large orders at profitable prices with manufacturers of ships, airplanes, guns, tanks, army uniforms, etc. These manufacturers, in turn, by using their own funds more actively, borrowing more funds from banks and government agencies, and selling securities in the capital markets, multiply the workers on their payrolls and expand their purchases of materials and parts from a wide array of industries and enterprises. And all along the line, the new orders tend to encourage an expansion of plant capacity.

A great stimulus to employment and output is an early result of the enlarged volume of government spending and the business and consumer spending induced by it. Under the impetus of the larger wage and other payments, and because of idle resources, the new output of military goods may be accompanied at first, as we have seen, by an expansion rather than a contraction of civilian goods and services. Indeed, if the military situation permits, the expanded production of non-defense goods in the early stages of the rearmament program may serve to build up stocks in the hands of the public against the time when radical curtailment may become necessary. The production of automobiles, electric refrigerators, houses, and house furnishings during the last half of 1940 and the first half of 1941 was in part of this character. But, as orders and production for the military program mount, they begin to compete with civilian goods in one sector after another for the supplies of various materials, skilled labor, specialized capital facilities, and managerial experience. This kind of competition had become conspicuous in the United States even before the end of 1940 for some steels, tool- and die-makers, machine tools, and for managerial experience in aircraft manufacture. By the end of 1941 it had become a ruling condition in a wide range of basic materials and manufactures.

When such competition is encountered, 'buying' defense calls for measures that will enable the military demand to outbid the civilian for scarce resources. The government is in a position to add to the funds at its own disposal for this purpose by taxation, borrowing, and even printing money, while it may reduce the funds available for private spending by taxation and borrowing, and by forcing a curtailment of bank and other credit. Its procurement agencies, with the long purse of the Treasury behind them, have an obvious advantage in bidding against most private buyers for goods and labor. The same is true in only slightly less degree of enterprises holding government contracts guaranteeing them full reimbursement of costs (in addition to a fixed or variable fee), and of enterprises with profitable subcontracts, and even of those supplying essential materials to producers of military goods. In this process of bidding, numerous price rises occur. In many cases these serve the useful functions of curtailing non-military demand, of facilitating transfers of resources from civilian to military use, and of stimulating output. Thus, through favorable prices and profit margins, full utilization of productive capacity is encouraged and military production is given a preferential call on economic resources.

For reasons discussed presently, the process outlined above cannot be relied upon alone to work smoothly, adequately, and without undesirable repercussions. Hence, as in the United States today, the direct controls of priorities, rationing, and price fixing may enormously reinforce and supplement the command of the market gained by the government's superior buying power.

2 LIMITING AND CURTAILING NON-MILITARY SPENDING

The government's spending and the business spending induced by it provide the positive force that elicits, mobilizes, and diverts resources for defense through the methods of finance. But this is not the whole story. The other part is the limitation and curtailment of non-defense spending, which speeds diversion by releasing men, materials, and machines from civilian use. This is the primary function of taxation and borrowing in wartime. It is also the purpose of reductions in the non-military outlays of the government. Likewise, it is a major reason for controlling commercial credit expansion. And it is a conspicuous objective of direct rationing. Other important purposes also are served by these fiscal and related measures, such as to modify the *distribution* of sacrifices among our population; but curtailment is their primary function.

Few statesmen or economists understood clearly in the first World War that the limitation or actual curtailment of private spending lies behind the mere raising of funds and is the fundamental purpose of taxation and borrowing in war finance. Legislators and Treasury officials everywhere tended to view the financial task as one of raising funds in the most immediately expedient manner, regardless of their source. New excise taxes were levied alike on goods that competed with, and on those that did not compete with, the war effort, no matter how needless or wasteful was the curtailment of consumption sometimes involved. If, for example, motion picture theatres or opera houses are allowed to operate at all, no additional sacrifice to the war effort is entailed when they play to full houses rather than to half empty ones, and the admissions taxes might well be determined with this in mind. Indeed, the positive encouragement of additional consumption of goods and services that are in abundant supply may itself serve to divert private expenditures from scarcer goods. On the other hand, excise taxes levied on goods and services people regard as necessities, such as tobacco and coffee, may be adopted not so much to discourage their consumption as to curtail purchases of *other* goods, by absorbing funds that would have been spent on these other goods.

Understanding of what public borrowing meant was especially faulty. With the aid of a nationwide intensive selling campaign, Treasury bonds and notes were sold not only to individuals and business enterprises that bought them out of their current gross incomes, but also to banks and to those who borrowed from banks to finance these purchases. Many of the bank loans were soon repaid, for the borrowers were stimulated to save more in order to repay their debts. Nevertheless, in the aggregate, about one-third of the government's total deficit in the two fiscal years 1918 and 1919 seems to have been met by an expansion of bank credit brought about in this manner.[2] Treasury securities were also sold to persons who paid for them by reducing bank balances that would otherwise have remained idle or by liquidating savings accounts, corporate stocks and bonds, and other assets.

Now, the underlying difficulty with all these sources of borrowed money, except the first (current gross income), was and is precisely that they commonly entailed a far less than commensurate curtailment in current private spending, including investment spending. Savings bank depositors who withdrew their savings to buy Liberty Bonds could, and in many cases no doubt did, continue their current spending undiminished. Their withdrawal of funds merely forced savings institutions to pay out free funds that otherwise could have been invested in Treasury securities, or to liquidate securities, perhaps Treasury obligations, the sale of which competed with new Treasury offerings for the funds of savers. Similarly, Liberty Bond purchasers who procured funds by selling other assets, such as corporate securities, were not forced to curtail their current spending. Nor did the sale of such assets usually increase the aggregate saving of others: it merely absorbed funds that would have been saved anyhow and that might otherwise have been invested directly in Treasury obligations. Likewise private spending was not curtailed when the Treasury sold its securities to commercial banks or to buyers who borrowed the purchase funds from banks. In both cases, the securities were paid for by the creation of new bank deposits rather than by a reduction in the dollar volume of private spending.

At a time when the use of all the readily available productive resources of the country is demanded by a major military effort, it is not the act of buying a bond or paying a tax that constitutes the real aid to the government: the real contribution is the curtailment of private spending by the purchaser or taxpayer. It is this curtailment that releases resources for the government's use and that operates to prevent inflation.

When unemployment of labor and plant capacity is widespread, the need for limiting and curtailing non-defense spending is negligible. But it becomes urgent long before employment is 'full'. As previously noted, time is required to organize unemployed resources and, because various kinds of resources are not quickly or fully interchangeable, the surpluses in some lines cannot make up for the shortages in others. We cannot quickly turn cotton into aluminum or wheat into steel. Consequently, temporary but resistant 'ceilings' to the production of various basic materials, tools, machines, and sub-products are reached considerably before all resources have been put to work.

Meanwhile, civilian demand for such scarce goods, in competition with military demand, naturally mounts with the rise in the flow of money incomes to individuals and business enterprises that is generated by the military spending, unless these larger money incomes are absorbed or otherwise offset by appropriate measures. An addition to money income is enjoyed by the worker who leaves the WPA rolls for a job at regular wages; by the mechanic who gets more in his pay envelope because of overtime; by families in which wives and daughters are induced to enter steady employment because they can easily get regular jobs at good wages; by the corporation that receives sufficient new orders to add a second or third shift in the operation of its plant; by the stockholder who receives bigger dividends; by the retail stores that sell more goods; by the doctor and dentist whose services are in greater demand and who collect more on outstanding bills.

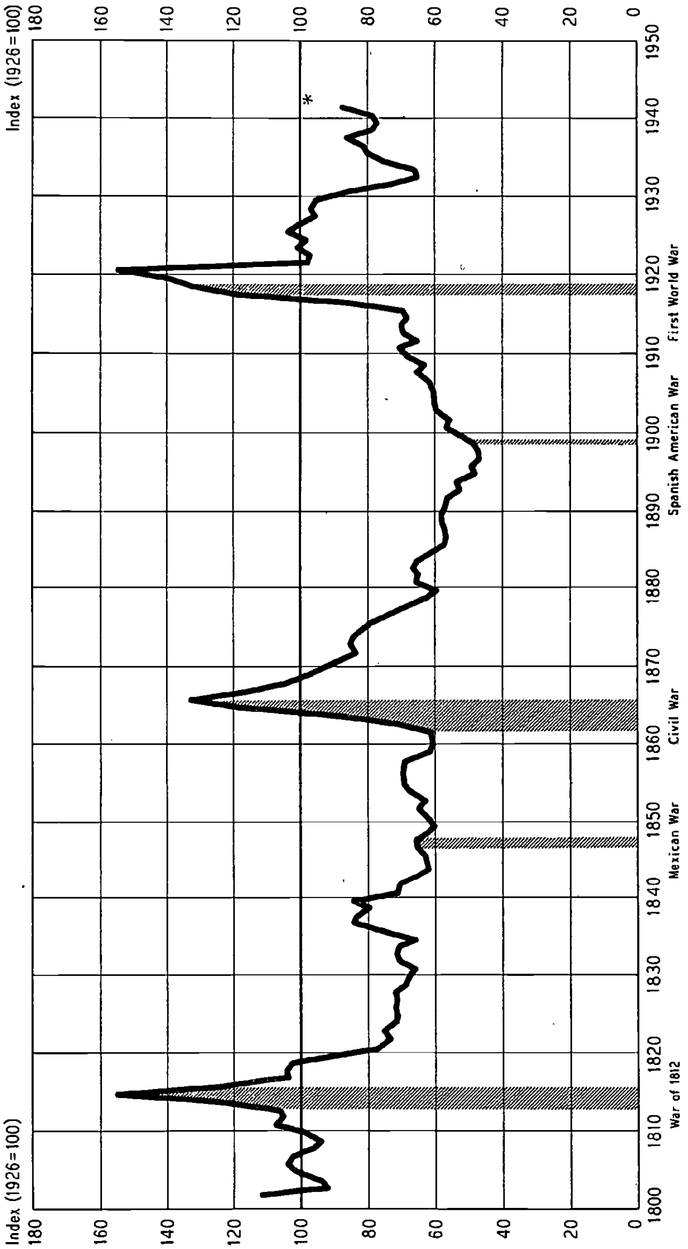
These additions to the money incomes of consumers and business enterprises may represent fully corresponding additions to the output of real goods and services. But the additions to output must take the form largely of military goods on which civilians cannot spend the additions to their money incomes. If the government does not absorb these additions by taxation or borrowing, or render them powerless by rationing, they will be spent chiefly on civilian goods. Of the two consequences then likely, both are undesirable: either more civilian goods will be produced in response to the demand for them, at the expense, in part at least, of our military needs; or, if the output of civilian goods is limited by direct government restriction, their prices will tend to rise because the increase in the money demand for them exceeds the increase in their output. The evils of an inflationary rise in prices will be discussed presently.

3 SOURCES OF PRICE INFLATION

Before the present conflict, apparently no nation succeeded in conducting a major modern war without serious price inflation; that is, without a pronounced rise in the general level of prices. The price inflations (and subsequent deflations) in the United States that accompanied the War of 1812, the Civil War, and the first World War are portrayed in Chart 2. A great military program not only involves large-scale spending by the government, but, as we have seen, it also provides a powerful stimulus to business and consumer spending: employment is fuller, money incomes are rising, goods are purchased to avoid expected shortages or price rises, and sustained business activity is in prospect. At the same time, the output of non-defense goods tends sooner or later to slacken materially. An expanding money demand, together with shrinking supplies of civilian goods, forces prices up. The immediate cause is simply a greater increase in total dollar spending than in the output of goods and services available for purchase.

CHART 2

Wholesale Price Indexes since 1800, Yearly Averages



U. S. Bureau of Labor Statistics

* First five months of 1942.

However great the government's military outlays, a serious inflation could not occur if all increases in the government's spending in excess of the current additions to the total output of real goods and services were accompanied by corresponding reductions in private spending. While increases in taxation and in government borrowing from private income do not always involve equivalent reductions in private spending, their powerful tendency in this direction constitutes their outstanding merit as sources of the government's funds in periods when substantial increases in output are no longer readily possible. If these measures, supplemented perhaps by direct restrictions upon spending, succeeded in sufficiently reducing private expenditures, substantial changes might continue in the prices of some goods relative to the prices of other goods, but a violent and irresistible tendency for prices in general to rise would be unlikely. In short, the effective cause of wartime inflation is inadequate curtailment of civilian spending.

Monetary Sources of Inflationary Spending

The necessity of curtailing civilian spending has commonly been obscured in the past, and the difficulties of doing so increased, by the ready availability of three sources of funds for a simultaneous expansion of both military and civilian spending:

1) More active use of currency and bank credit
2) Creation of new money by the government directly or by the banking system on behalf of the government
3) Creation of new money for business and consumer spending through the expansion of bank credit

More Active Use of Currency and Bank Credit

In the heightened business activity that accompanies a great military program, business enterprises and consumers may increase their spending merely by turning over their funds more rapidly. When this occurs, increases in taxation and the borrowing of savings will achieve less than equal reductions in private spending. Taxes themselves may be paid, and government securities purchased, with previously accumulated bank balances rather than with funds derived from current income. An individual or business enterprise that purchases government obligations ordinarily acquires securities which can readily be sold in case of need; the purchaser can therefore afford to carry less idle cash for contingencies. A corporation that has been maintaining an average bank balance of half a million dollars against average monthly purchases of goods of the same amount may conceivably double its monthly purchases and sales without raising the average level of its bank balance. Such possibilities of financing an aggregate increase in the nation's spending merely by a more rapid turnover of existing funds are substantial. They give considerable significance to the fact that at the end of April 1942 the aggregate amount of currency in circulation in the United States (currency outside the Treasury and the Federal Reserve Banks) was about $11 billion, as compared with less than $5 billion at the end of 1929, and that, on December 31, 1941, the aggregate amount of bank deposits, exclusive of interbank deposits, approximated $71 billion, as compared with $55 billion at the end of 1929. If the average rate of turnover of money and bank deposits were to rise to the rates that prevailed in 1929, aggregate spending could expand enormously without increasing currency or bank deposits.

On the other hand, a declining rate of activity in the use of funds was a conspicuous characteristic of the nineteen-thirties, though it seems to have since been arrested and, temporarily at least, reversed. A sharply enhanced desire for liquidity has been noticeable on the part of both individuals and business enterprises (including banks) since the banking difficulties and the depression of the early 'thirties. About a third fewer banks were operating in the United States at the end of 1941, mainly because so many had failed, than ten years before; and in some communities inadequacy of banking facilities has led residents to hold considerably larger amounts of currency than before. The uncertainties and governmental restrictions upon purchases arising from the war, together with the continuing influence of other developments of the last decade, may conceivably maintain or accentuate the tendency for a low rate of activity in the use of funds; although the possibility of an opposite movement must always be kept in mind. Finally, while a real possibility exists that a significant degree of inflation may materialize even if no enlargement takes place in currency and bank deposits, all the more serious inflations of the past have been conspicuously facilitated by the creation of new money.

Creation of New Money for the Government

An expansion in aggregate spending is enormously facilitated when the government's funds are obtained by the creation of new money, either by the government directly or by the banking system on behalf of the government. During the Civil War the United States issued some $431 million in paper money, later known as 'greenbacks', the issue and spending of which contributed greatly to the marked price inflation of the Civil War period. A portion of the issue has been retired, but some $347 million are still outstanding. At the end of 1941, the President and the Secretary of the Treasury held latent powers to increase the currency by about $14.5 billion under various acts of Congress passed during and shortly after the banking crisis of 1933 and subsequently renewed from time to time.[3] No use of these powers, which include presidential authority to raise the monetary value of gold and silver and to issue $3 billion of paper currency under certain conditions, is contemplated at this time so far as is known.

During the first World War and since, creation of fresh money in the United States has commonly taken the form of bank credit expansion rather than the printing of paper money. The fact that most of us are willing to regard the deposit liabilities of banks to us as our cash, preferring such deposits to lawful currency itself for all except small amounts, enables the banks, subject to reserve requirements imposed by law and expediency, to add to the country's effective supply of money simply by adding to their deposit liabilities. Accordingly, when the United States Treasury makes a public offering of new securities, the banks are ordinarily permitted to subscribe and pay for them merely by crediting the account of the Treasury with the value of the securities purchased. Funds obtained in this way do not come out of the accounts of any other customers of the banks or from the funds of the banks themselves. From time to time, of course, the Treasury orders certain banks to transfer funds for its account to the Federal Reserve Bank of New York, for disbursement by government check to contractors and other creditors of the government. But these and other banks are at the same time receiving from their customers deposits of similar checks and of other checks based on them. Hence, even if a particular bank suffers a net loss of funds in the process, the banks as a whole do not, for the gain in other banks offsets this loss. In consequence, the sale of its obligations to commercial banks provides the government with funds that are not taken away from others but instead constitute net additions to the country's supply of money.[4]

The same is true of sales of government securities to individuals and business enterprises that borrow the purchase funds from commercial banks. In this case also, the funds received by the government are newly created by the banks, and do not represent a commensurate curtailment of spending by the lenders. As already noted, during the first World War both in this country and abroad, great public campaigns were waged to induce people to borrow from the banks in order to buy government bonds. In part, these campaigns were the products of a mistaken emphasis upon the raising of money as such regardless of its source.

However, such campaigns can sometimes induce more real saving than would otherwise take place. Conducted with intensity for brief periods at intervals of six months or more, they may arouse great enthusiasm and cause many persons to buy more bonds, with the aid of bank loans, than they would have bought out of income during the next six months or year. Thereupon the purchasers might increase their savings to pay off the debt. It is often observed that many individuals can bring themselves to save greater sums over a given period by first going into debt, then saving to repay the debt, than by the ordinary accumulation of savings. The initial use of bank credit in these cases to pay for the bonds and thereby to finance the government's expenditures is inflationary; but if it induces a greater aggregate saving over a period than would otherwise take place, its ultimate net effect will be in the opposite direction.

In various European countries, government securities were sold in large quantities to central banks as well as to ordinary commercial banks. Because the use of checking accounts was far less common than in the United States, much of the credit expansion took the form of bank note currency issued by the central banks in payment of checks drawn by the government against the proceeds of its loans from the central bank. Whether or not paper currency is issued by the central bank, direct borrowing by the government from the latter, such as is possible in the United States through the sale of Treasury securities to the twelve Federal Reserve Banks, is capable of being more inflationary than the sale of government obligations to commercial banks because it leads to increases in the reserves of the latter, thereby promoting credit expansion on their part.

The creation of new money permits the government to increase its spending without reducing the dollar volume of private spending. The result, other things being equal, is a net increase in the total dollar volume of spending in the country as a whole. When unemployment is widespread, an increase in government spending brought about in this way may serve as a useful offset to deficiencies in private spending and may stimulate the latter as well as total production and employment. But when all the readily available productive resources are in demand for the military effort, and the quantity of goods for civilian consumption is necessarily being diminished rather than increased, the situation is quite different. Then the extensive creation of fresh money as a method of financing, unless counteracted by rationing and similar restrictions upon private spending, tends to bring about a rapid, pronounced, and prolonged advance in general prices—price inflation.

Bank Credit Expansion for Business Purposes

An expansion in aggregate spending is facilitated not only by the creation of bank deposits for the use, initially, of the government, but also by the creation of deposits for business enterprises and individuals. Whenever banks make additional loans to their customers or add to their holdings of corporate and other securities, they create nearly equal additions to bank deposits. The heightened tempo of business activity produced by the arms program, coming at a time when the banks possess substantial reserves of unused lending power, can stimulate business borrowing on a large scale.

The important role of bank credit expansion for business purposes in the price inflation of 1916–20 in the United States is indicated by these figures: during the three years ended June 30, 1919, commercial banks added $2.6 billion to their collateral loans and $4 billion to their other loans, as well as $4.4 billion to their holdings of United States government securities, and about one-third of a billion to miscellaneous securities.[5] The aggregate, $11.3 billion, constituted a rise of more than 50 per cent in their total loans and investments. During 1920, when the postwar inflation reached its peak, a further expansion of bank loans to business added nearly $5 billion of fuel for the inflation.

In part, the growth of business borrowing from banks during a military emergency may be merely a preliminary substitute for government borrowing. The loans finance contractors and their suppliers in the production of war materials, and are retired when payment is received from the government, the government itself obtaining the funds by the sale of securities to the banks. Business loans for war work have been greatly facilitated by an Executive Order issued March 26, 1942 which authorized the War and Navy Departments and the Maritime Commission to make loans, advances, and commitments, and to guarantee those made by banks and other financial institutions, for the purpose of financing contractors or others "engaged in any business or operation which is deemed . . . to be necessary, appropriate, or convenient for the prosecution of the war".

In further part, however, the growth of bank loans may reflect the expansion of non-defense enterprises, which are benefiting from the rising level of consumer incomes, and an increase in the loans made to traders and others to finance enlarged speculative purchases of goods in anticipation of higher prices. Credit extended for such private purposes may be used to divert productive resources to non-military uses and to raise the aggregate dollar volume of spending in the country by more than the concurrent increase in the quantity of non-military goods available, with a consequent inflationary rise in the price level.

In the sphere of installment credit our banking officials have attacked this danger directly. The severe restrictions imposed by the Board of Governors of the Federal Reserve System have reduced installment buying markedly. The new rules, covering personal loans and many consumer durable goods, require substantial down payments and severely limit the period during which the credit must be repaid. They tend to reduce consumer buying directly and to reduce the volume of bank credit used to finance the installment sales of dealers, as well as the inventories of manufacturers, wholesalers, and retailers of the articles affected.

Even more important in restricting credit extension for non-essential purposes have been the drastic limitations or outright prohibitions imposed by the War Production Board upon the manufacture of numerous products and upon the accumulation by any business enterprise of inventories of goods useful in the war effort. The contraction in the bank credit employed in the restricted lines partly offsets the expansion of credit in war work; and the prohibition against unnecessary inventory accumulation, together with the actions of the Office of Price Administration in imposing ceilings on the prices of nearly all commodities, will tend to minimize the competitive scramble to build up inventories, and the expansion of bank credit in connection therewith. The prompter, more comprehensive, and more effective application of these and other direct controls greatly reduces the danger of an excessive extension of bank credit to business for non-military purposes, such as occurred in World War I.

Possible Need for Strengthening Reserves and Capital Resources of the Banking System

Were it not for the indefinitely large demands that may be made upon the banking system to aid in financing the war, the reserve position of American banks would be regarded as extremely easy, perhaps dangerously so. This easy position is mainly due to gold imports, approximating $14 billion, since 1933.[6] Although the legal reserve requirements have been doubled since 1936 in an effort to mop up some of the redundant reserves and thereby to reduce the danger of a runaway credit expansion, the excess reserves of the member banks of the Federal Reserve System on June 3, 1942 approximated $2.8 billion, each dollar of which was legally sufficient, on the average, to support about $5 of additional deposit liabilities.

Partly in response to their easy reserve positions and partly because of the expanded demands for business and other loans, including large amounts to finance defense orders, the member banks of the Federal Reserve System had created a striking increase in credit during the two and three-fourth years between June 30, 1939 and April 4, 1942. Their loans rose $4.7 billion, or 36 per cent; their holdings of government securities, $6.7 billion, or about 48 per cent; and their total adjusted demand deposits,[7] $11 billion, or about 47 per cent.

This easy ability to expand credit, though dangerous if misused, is essential during the war emergency, for the government must be assured of flexible access to ample funds. It may need to anticipate for short periods prospective receipts from taxes, and it must have a means of creating funds equal to such current savings as the public prefers to hold in the form of cash and bank deposits. To assure an ample supply of bank credit, action to offset the restrictive influence of two important factors now operating may be required. One is the remarkable and continuing rise in the amount of money in circulation, for this rise drains reserves from the banks. Between the end of 1939 and the end of 1941, money in circulation rose $3.5 billion to a new high of $11 billion; and in the first four months of 1942 it rose $600 million more, with no sign that the rise would soon stop. The second factor is the small amount of capital resources held by many banks in relation to their total assets and deposit liabilities. The fact that their margin of owned resources is so small is deterring many bankers from utilizing their excess reserves freely. To enable the banks to provide adequate assistance to the government in financing the war and to prevent a costly rise in interest rates, probably the reserve position and perhaps also the capital resources of the banking system will have to be strengthened. Such strengthening could be achieved in any one or more of several ways, including the provision of additional private capital, reductions in the reserve requirements, the provision of additional bank reserves by open market purchases of government securities by the Federal Reserve Banks, and supply of additional capital by the government.

However, no degree of facility on the part of the banking system in absorbing government securities and in making loans to business for war work can substitute for a reduction in civilian spending, if inflation is to be avoided.

4 INFLATION A NET PRODUCT OF DIVERSE INFLUENCES

We have seen that increases in the government's dollar volume of spending may take place without corresponding reductions in private spending to the extent that:

Taxpayers pay their taxes and investors buy government securities with previously accumulated bank balances and other funds rather than from current income; business enterprises and consumers accelerate the rate of their spending by using their cash and bank balances more actively;

The government's spending takes place from newly created money which it obtains by (a) printing it; (b) borrowing it from commercial banks or the Federal Reserve Banks, which create it by establishing bank deposits in the government's name; (c) borrowing it from individuals and business enterprises that obtain it by borrowing from commercial banks; and,

Business enterprises and individuals finance increases in their spending by borrowing from commercial banks.

And we have further seen that when aggregate dollar spending increases faster than supplies of goods, an inflationary rise in prices tends to be induced.

In contrast to the increase or maintenance of civilian spending that is facilitated by the use of the foregoing sources of funds is the limitation or curtailment that tends to be effected by taxation, the borrowing of current savings, and reductions in the non-military outlays of the government:

By imposing high taxes on goods that compete directly with the defense program, the government can make them so expensive as greatly to discourage their production and purchase, though leaving the funds that would otherwise have been spent for them in the hands of consumers.

By increasing taxation broadly, through manufacturers' sales taxes, retail sales taxes, or corporate and individual income taxes, the government may bring about a general curtailment of private spending, including investment spending.

By borrowing a part of the remaining current income of the public, including funds destined for the increase and the replacement of capital goods, the government may further reduce private spending for consumption and investment purposes, and may even draw upon the economy's past accumulation of capital.

By curtailing its own outlays for roads, bridges, building construction, etc., the government (including here the states and local governmental units) may directly reduce non-military spending and release resources for the war.

Although a useful distinction can be drawn, as we have done, between methods of financing government spending that characteristically exert an expansionary influence upon the nation's total spending and those which do not, it must be applied cautiously. Inflation is not, strictly speaking, the result of specific methods of governmental finance. It is the result of an excessive increase, however brought about, in the aggregate spending, public and private, of the whole nation —excessive in relation to the increase in supplies of goods. Forces besides governmental financing methods affect the amount of private spending: the mere temper of the times is one of them; and changes in the volume of private spending caused by such other factors may offset or accentuate the effects of expansionary finance by the government. The public, for example, may increase its current savings and yet prefer to hold the increase in the form of additional cash or bank balances to investing it in government or other securities. In such circumstances, the sale of an equivalent amount of government obligations to commercial banks and the spending by the government of the additional bank deposits thereby created would only offset the diminished spending of the public, instead of exerting a net expansionary influence. On the other hand, a balanced governmental budget would not provide a guarantee against inflation under all conditions; an excessive increase in private spending could bring inflation. Finally, as we shall have occasion to note at greater length in Chapter 6, the restrictive effect of taxation and borrowing upon private spending varies considerably according to other circumstances.

5 DISADVANTAGES OF INFLATION

Some of the most serious evils of inflation arise because the prices of different goods and services increase in different degrees and at different speeds. These differences occur not only in proper response to changes in the relative importance of different goods and services, but also because of the accompanying adventitious alterations in the distribution of incomes and in response to such adventitious factors as differences in market organization, custom, contract periods. The wholesale prices of raw materials and basic processed goods tend to rise much faster than the prices of their products, mainly because of the speculative demand that becomes conspicuous in wholesale markets when price advances are expected. Railroads and other public utilities and enterprises supplying goods on long term contracts find it difficult or impossible to raise their prices to keep pace with their costs. The increase in the cost of living, as well as in other prices, causes creditors and others receiving fixed incomes, such as bondholders, annuitants, pensioners, and many salaried persons, to suffer a disproportionate decline in the purchasing power of their incomes, while debtors, including corporation stockholders, enjoy a corresponding gain. Likewise, individuals who are paid by commissions based upon selling prices and those employed in enterprises producing military goods on a cost-plus basis, as well as many traders and speculators who reap large windfall profits from the rise in the money value of their stocks of goods, are enabled to maintain or even to better their standards of living, at the expense of less fortunately situated persons. Chart 3 portrays some of the enormous disparities in the changes in the real income of different groups of wage earners during the inflationary period 1915–18.

For many business men, money making becomes easy during an inflation, and wastes and inefficiencies creep into business. The enterprises that enjoy abnormal increases in profits by reason of the inflationary rise in prices are by no means likely to be limited to industries producing military goods; and the rising profits of various non-defense enterprises stimulate them to expand their use of labor and materials at the expense, in varying degree, of the military program.

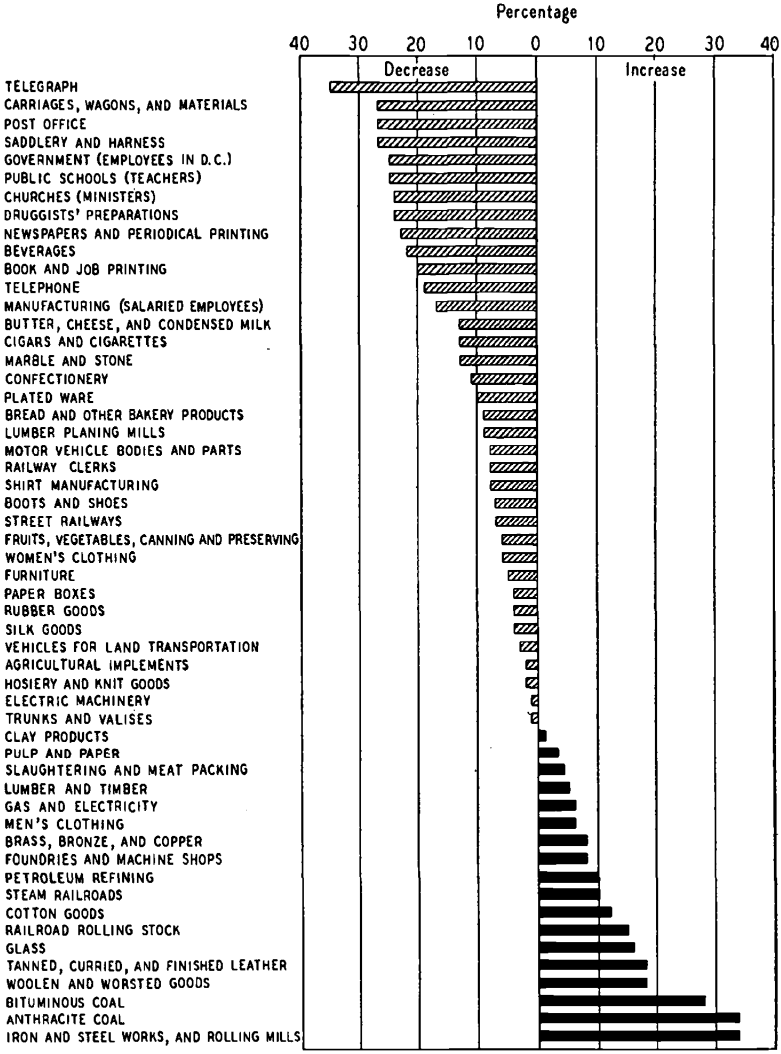
In consequence of countless inconsistent and disorderly variations of this character in the price responses of different goods and services to inflationary developments, distortions and tensions are created throughout the price structure. These distortions obstruct the prompt and adequate diversion of resources to the military effort; and, by creating great inequities in the sacrifices imposed upon different parts of the population and by disrupting customary price and debtor-creditor relationships, incite social unrest.

New elements of uncertainty and instability are injected into all economic relationships. It becomes impossible to make contracts requiring close calculation for more than a short time in advance. Planning for the future by government or business is therefore made enormously more difficult, as is the planning of personal and family programs of security. The latter programs commonly lean heavily upon savings accounts, insurance policies, and other contracts calling for the payment of fixed sums; when the future purchasing power of the dollar is a question mark, these fixed sums lose all precise meaning.

The rise in prices progressively increases the money costs of the military program. The money cost to the United States of the first World War was increased many billions by inflation. To the extent that such money costs are financed by borrowing, whether of bank credit or of genuine savings, an

CHART 3

Percentage Change in Annual Real Earnings of Wage Earners by Industries, 1915–1918

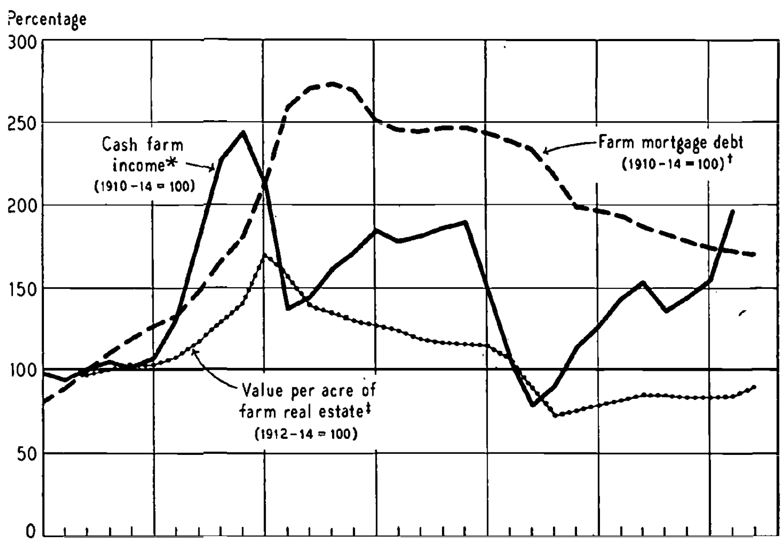


Computed from Paul Douglas, REAL WAGES IN THE UNITED STATES, 1890–1926, Houghton Mifflin Co., 1930 inflated money debt is created which, too often in the past, has had to be serviced and repaid during a period of much lower prices and incomes. This was the case in the United States after the first World War. It cannot be said that every inflation must inevitably be followed by deflation. Nevertheless, each great price rise that has accompanied the major wars of the United States has been followed by a drastic decline, with a resultant sharp increase in the real burden of public debts contracted during the period of higher prices.

Long term private debts, also, are sometimes substantially increased during inflations, with highly injurious consequences to the debtors in the event of falling prices in the ensuing periods. This was notably illustrated by farm mortgages in the United States (Chart 4). Farm mortgage indebt-

CHART 4

Cash Farm Income, Farm Mortgage Debt, and Value per Acre of Farm Real Estate, 1910-1942



*Calendar year, including government payments. † January 1 ‡ March 1

U. S. Department of Agriculture Bureau of Agricultural Economics edness was vastly expanded by speculative purchases of farm lands during the war and postwar inflation of 1917–20. The fall in prices in succeeding years created great difficulties for the farmers in meeting their interest charges and principal maturities, difficulties that were accentuated by the disproportionate declines in the prices of farm products as compared with those of other goods. As it happened, American agriculture was laboring at this time under difficulties independent of those directly attributable to inflation and deflation: from the impact of certain important structural changes, such as the growing competition of countries in the Southern Hemisphere for the European markets once held securely by American farmers, and the substitution of automotive for horse-drawn vehicles in transportation. The effect of the inflation and subsequent deflation was therefore to aggravate difficulties which would have been serious enough in any case.

Inflationary price rises have a strong tendency to feed upon themselves. The mere fact that prices have recently been rising leads to expectations of further rises and induces advance spending in anticipation of them. As the prices that constitute business costs go up, the prices of finished goods tend to be raised. Then wage earners are likely to demand wage advances to cover the higher cost of living. An advance in wages tends to increase business costs further, and so to bring about a further rise in prices. Clearly, a spiral rise of this character, once begun, may feed upon itself without any early effective check.

Under exceptional circumstances, the advance in prices may proceed so rapidly and so far that a considerable part of the purchasing power of the monetary unit is lost before effective measures of control can be instituted. The currencies of France, Belgium, and Italy depreciated 80 per cent or more before they were stabilized after the first World War. The German postwar inflation of 1919–24 was so extreme that the mark lost virtually all value and had to be replaced by a new currency unit. The 'Continental' currency issued during the American Revolution and the Confederate currency issued during the Civil War suffered a similar fate.

But such extreme cases of inflation are exceptional. More often, the price advance is slowed by restraint in the use of inflationary methods by the government, by direct governmental price and other controls, by continuing increases in the output of goods and services, and by various factors that operate directly upon business and consumer confidence to discourage large increases in spending, such as unwelcome changes in the political outlook. For these reasons, a moderate degree of inflation must not be interpreted as inevitably heralding an extreme depreciation of the dollar. But the tendency of inflationary price advances to feed upon themselves and sometimes to get out of hand constitutes another disadvantage of inflationary methods of finance.

6 INFLATION DOES NOT LESSEN THE NEED FOR IMMEDIATE CURTAILMENT

In the light of the oft demonstrated evils of inflation, the reader may well ask why sane men ever embark upon a course of action that brings it about. The answer is that inflation is rarely chosen as a deliberate policy. It is rather the result of ignorance, drift, practical obstacles to alternative courses, and political weakness.

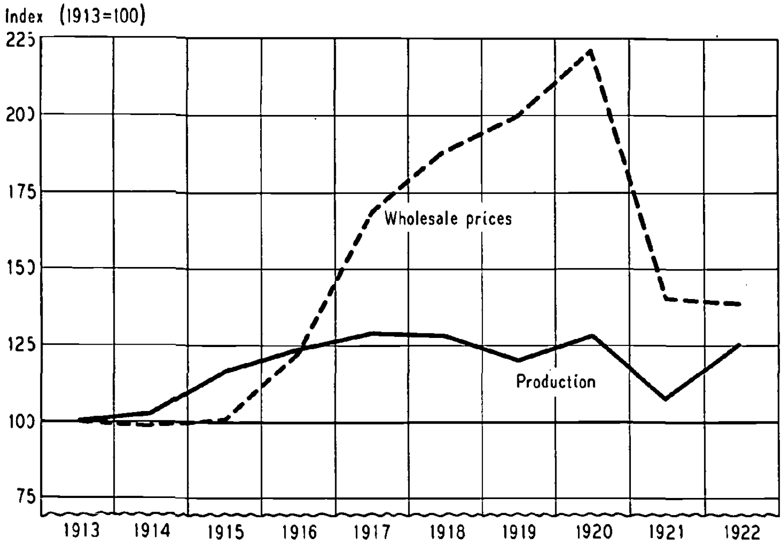
Higher taxes impose direct and immediate retrenchment upon the public, and hence are politically difficult to enact. Borrowing appears easier because it seems to postpone the immediate sacrifice. It appears easier still if the loans can be obtained from banks and others with idle funds whose lending would involve no curtailment in their current spending. As we have seen, however, what lies behind the funds the government must have is command over labor, materials, and factories. After all the readily usable productive resources have been put to work, the transfer of *any* given amount of funds will be inadequate unless accompanied by a commensurate curtailment by taxpayers and lenders of their current spending (including spending for capital goods). If the sums raised by taxes and loans do not entail a corresponding reduction in the use of real resources by civilians; if, for example, the funds come from reductions in idle balances or from new extensions of bank credit, the government will be forced to raise enough more money to outbid the public for the real resources it needs. But a greater increase in the nation's aggregate dollar spending than in its output of real goods and services must produce an inflationary rise in prices. Through the rise in prices, the real purchasing power of the increased money incomes of civilians tends to be reduced to approximate equality with the amount of non-defense goods available. A rise in the cost of living and in other prices takes the place of non-inflationary measures in bringing about the necessary curtailment of civilian consumption and investment. Money wages and other prices may be increased again and again in response to the attempts of various groups to maintain or enlarge their real purchasing power in the face of continued rises in prices; and some groups may indeed succeed in raising their real incomes at the expense of other groups—witness Chart 3. But, obviously, no system of price increases and no method of financing can enable the civilian population as a whole to maintain its real purchasing power intact when supplies of civilian goods are being reduced. Accordingly, inflation caused by an increase in governmental spending that is not sufficiently offset by a contraction in private spending acts in the end no less than taxation to curtail private consumption and investment. In short, to the extent that inflationary spending is successful in meeting the government's military needs, it requires *just as great* current sacrifices from the public, in terms of physical curtailment of consumption, as non-inflationary measures. In addition, it imposes other burdens of the kinds described above.

7 SOME RISE IN PRICES UNAVOIDABLE AND USEFUL

Some rise in the general level of prices is almost inescapable in a military emergency because the natural increases in the prices of some goods are not readily offset by compensating declines in other prices. Price increases are to be expected for goods whose real costs are increased, such as those made from imported materials and those in which a needed expansion of output can be obtained only by resorting to inferior sources of supply, such as various minerals. Further, certain goods become relatively more important than others. If the general average of prices is to remain stable, all cases of price increase must be offset by declines in the prices of other goods. But such factors as custom, trade position, and bargaining power operate to delay or prevent the compensating declines in other prices.

CHART 5

Production and Wholesale Prices, 1913–1922



Sources: U. S. Bureau of Labor Statistics
F. C. Mills; ECONOMIC TENDENCIES IN THE UNITED STATES (National Bureau, 1932)

Because a rise in money wages and other prices induces some persons to seek employment who would otherwise remain idle and encourages others to work more intensively or to utilize their properties more fully, a moderate rise in the general price level tends to stimulate output. It also facilitates the transfer of productive resources from non-defense to defense purposes because less resistance is encountered to disproportionate price rises for goods needed in defense as compared with those of other goods than would be encountered if the attempt were made to force resources out of non-defense uses by price declines. But these useful purposes of a rise in prices are likely to be amply served by the moderate rise which seems inevitable in a war emergency for the reasons indicated above.

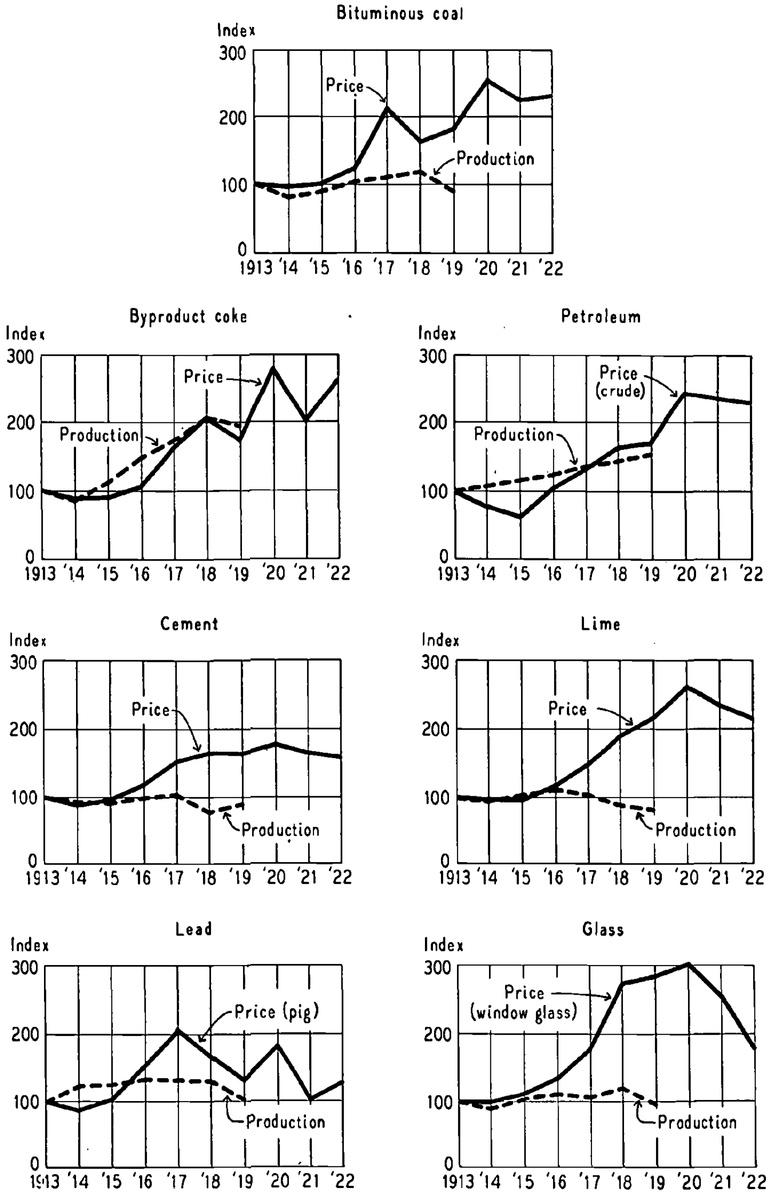
Those who welcome a substantial measure of inflation, on the other hand, are often uninformed or misguided. Many look no further than the customary association of rising prices with prosperity. That rising prices may be associated with an unchanging or declining output of real goods during a major inflation is well illustrated by Charts 5 and 6. Some who recognize the unfortunate social consequences of inflation nevertheless welcome it as an opportunity for private profit through their superior knowledge. And some are won over by the thought that the payment of governmental costs through issues of new paper money will avoid both the immediate pain of taxation and the interest cost and principal repayments involved in borrowing, and by the further thought that the rise in prices will eliminate much of the real weight of the previously accumulated public debt. But the history of wartime inflations teaches us that all such supposed advantages are purchased at excessive cost.

8 PRICE RISE SINCE THE MIDDLE OF 1941 SUBSTANTIAL

The rise in prices during 1941 was substantial but not alarming. The cost of living, which rose about 5 per cent between

CHART 6

Prices and Production of Seven Commodities, 1913–1922



Sources: Bureau of Labor Statistics; REVIEW OF ECONOMIC STATISTICS, 1920, 1921.

the middle of 1940 and the middle of 1941, rose roughly 10 per cent in the next twelve months, as measured by the index of the United States Bureau of Labor Statistics. Wholesale prices, which rose about 12 per cent between the middle of 1940 and the middle of 1941, rose about 15 per cent more in the next twelve months, as measured by the Bureau's wholesale index. The average monthly rise in living costs between the middle of 1941 and the middle of 1942 was the greatest since the first World War inflation, when it approximated 1.0 per cent in 1916, 1.6 per cent in 1917, 1.7 per cent in 1918, 0.4 per cent in the first half and 2.0 per cent in the second half of 1919, and 1.7 per cent in the first half of 1920.[8]

Obviously, a rise of 1 per cent a month in living costs would become quite serious if long continued. It would be enough in three years to raise the cost of living 50 per cent. But in view of all the factors at work, the price advance in 1941–42, while enough to occasion serious concern about the steps needed to restrain the rising tendency, should not be considered proof that a drastic inflation is inevitable. Part of the rise must be attributed to increases in the real costs of imported materials and products; and another part to the speculative anticipation of rising prices, which was natural under the circumstances and caused both business enterprises and consumers to buy in advance of need. The most important single factor in the rise, moreover, was the great advance in agricultural prices, which owed much to the government's actions in raising the loan values of certain crops for loans to farmers by the Commodity Credit Corporation, and in purchasing large quantities of other crops for export to Britain, Russia, and China under the Lend-Lease Act. Governmental restraints on price advances, on the other hand, and governmental restriction of demand by priorities, allocations, and rationing were only gradually extended during the period. Finally, because of the usual lag in federal income tax collections, a considerable part of the increase in federal revenues attributable to the tax legislation and the incomes of 1941 was not payable until the latter part of 1942 and hence did not exert its full restraining effect upon private spending earlier.

On the other hand, one powerful restraint upon rising prices that was vigorously operative during much of 1941 can be expected to operate in reverse during the remainder of the war: an expanding physical output of civilian goods. In view of the enormous importance of this factor and of the continued rise to be expected in money incomes, we may reasonably conclude that the prevention of more than moderate further increases in prices is likely to require far more in the way of fiscal, as well as direct governmental, controls during the remainder of the war than was the case in 1941–42.

On April 28, 1942, Price Administrator Leon Henderson issued a General Maximum Price Regulation which set price ceilings on nearly all goods and services, at retail as well as wholesale, equal to the highest prices reached in March 1942. Sellers were forbidden to receive and buyers to pay higher prices. Despite the notable exceptions to the order, principally wages and other compensation for personal services, prices of raw agricultural products when below the ceilings provided in the Emergency Price Control Act of 1942, and prices charged by restaurants, public utilities, and places of entertainment, the order may be expected to exert a strong stabilizing influence upon the price level, provided the surplus money incomes of consumers are absorbed by adequate taxation and borrowing policies. Price ceilings remove some of the upward pressure upon prices by cutting down the incentive to forward buying. If the demand at the fixed prices exceeds supply, those who come first will take up the entire supply, unless rationing is used to supplement the price ceilings. But if these measures are not accompanied by tax and borrowing policies that absorb the surplus money incomes of consumers, the pressure upon the fixed prices is likely to become enormous. Under such circumstances, the administrative difficulties of general price control might well prove unmanageable. Responding to the pressure of excessive money incomes in relation to the available goods, the price inflation held in check by statute in the lawful markets would tend to break out the more violently in 'black' or underground markets.

NOTES

[1] Circumstances are conceivable, though unlikely in the near future, in which we might also make significant net additions to our supplies of military goods from abroad: by obtaining these and other goods in exchange for portions of our gold stock, of our foreign investments, and direct titles to American property, including equity and debt securities issued by Federal, state, and local governments and business enterprises.

[2] A. G. Hart, E. D. Allen, and others, *Paying for Defense* (Blakiston, 1941), p. 15.

[3] These powers are summarized in the following table:

Potential Increases in Lawful Money from the Exercise of Monetary Powers of the President and the Secretary of the Treasury, as of December 31, 1941

	BILLIONS OF $
1 Use the Stabilization Fund to purchase government securities	2.0
2 Revalue silver bullion in General Fund from cost value to official monetary value of $1.29 an ounce and issue silver certificates and coins therefor [a]	1.7
3 Raise monetary value of silver from $1.29 to $2.19 an ounce (the same percentage increase as was made in the case of gold) and spend the 'profit' [a]	2.6
4 Reduce the weight of the gold dollar to one-half of its pre-1934 weight (raise the price of gold from $35 to $41.34 an ounce), and spend the 'profit' [a]	4.1
5 Raise the monetary value of silver to $2.59 an ounce (to a ratio of 16 to 1, with the weight of the gold dollar as reduced in 4), and spend the 'profit' [a]	1.1
Subtotal	11.5
6 Issue circulating currency notes under the Emergency Farm Mortgage Act of 1933 [b]	3.0
Total	14.5

[a] Possibilities 3 and 5 assume that 2 has been done. Further additions can be made beyond the amounts noted by acquisitions of silver and gold bullion at prices below their possible monetary values.

[b] Circulating currency notes may be issued under the Emergency Farm Mortgage Act of 1933 if the President finds that this is necessary in addition to certain open-market operations authorized by the Act to be conducted by the Federal Reserve Banks, or if the Secretary of the Treasury is unable to get the consent of the Federal Reserve Banks and the Board of Governors of the Federal Reserve System to such open-market operations; and the notes can be

issued "only for the purpose of meeting maturing Federal obligations to repay sums borrowed by the United States and for purchasing United States bonds and other interest-bearing obligations of the United States. . . ."

4 The ability of the banks to create additional deposits in this fashion is limited by the requirement of law as well as of custom and expediency that they maintain cash or equivalent reserves equal to a certain proportion of their deposit liabilities. Hence, the banks must possess reserves in excess of the required proportions in order to expand credit. Since the reserve requirements are normally only a small or moderate fraction of deposits—they average about 20 per cent for member banks at present—the banks are able to expand their credit by several times the amount of their surplus reserves. Within the limits of their credit-expanding power, the funds with which the banks buy government and other securities need not be taken away from other depositors but constitute net additions to the country's supply of money.

5 From data compiled by the Division of Research and Statistics, Board of Governors of the Federal Reserve System.

6 The $4 billion of monetary gold possessed by the United States at the end of 1933 was increased in value to $6.8 billion by the upward revision of the monetary value of gold by the President on January 30, 1934. The remaining increase in our gold stocks occurred through new acquisitions at the revised value.

7 Demand deposits other than interbank and U. S. government deposits, less cash items reported as in the process of collection.

8 Hart, Allen, and others, *op. cit.*, p. 185.