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rent assets and short-term debt, given the inflated financial stru
ture of 1920, was desirable from the standpoint of the long-ru
prosperity of the whole economy; and as to whether business ente
prise could have avoided participating so extensively in the postw
accumulation of inventory, of current debt, and of forward cor
mitments to buy and sell. Business concerns were, of course, follo
ing long-established practices of financing current operations, ar
their policies were formulated by executives whose experience di
not embrace a single period of drastic price deflation. Furthermor
the business contraction and price deflation of 1920-21 was mo
than a crisis of commitments, inventory and current debt; irr
sponsible cancellation of orders and the heavy liquidation of i
ventory and business debt seem mainly to have made the contra
tion more severe. Nevertheless, it was unfortunate that the postw
environment induced such widespread disregard of financial pr
dence.

In drawing general conclusions from this paper, it should b
borne in mind that only a limited segment of the economy is dea
with here, and only a few of the factors involved. Many elemen
other than those associated with the financing of manufacturin
and trade enterprise determined the course of the war period fina
cial expansion, and many other elements, international as well
domestic, operated to bring about the postwar liquidation. Th
difficulties that beset any effort to obtain a completely comprehe
sive view are so great, however, that use must be made of invest
gations of more limited scope. Only by comparing the views of
number of different observers will it be possible to develop th
entire record of World War I and absorb fully the economic lesso
of that period.

FINANCING TENDENCIES, WORLD WAR II — A PRELIMINARY COMPARISON

Compared with the present conflict, World War I was part-tim
Even in 1918, the year of greatest effort, probably only a little mo
than a fifth of the national product was devoted to war. Milita
output made no serious inroads on civilian supplies until the secon
half of 1918, and by the end of that year hostilities had ceased an
demobilization was in full swing. But in 1941, before the count
was directly involved in World War II, one-tenth of the nation

roduct was absorbed by military outlays; in 1942 war took one-
ird of the national product, and in 1943 it will take at least one-
alf.[3] The business financing problems precipitated by this greater
ncentration of effort upon war needs, while they find some paral-
ls in World War I experience, are much more complex and diffi-
lt than the ones which arose in the earlier period.

At the outbreak of World War II the pattern of business debt
nong manufacturing and trade companies, in relation to size of
terprise, was similar to that at the outbreak of World War I.
roadly speaking, equity was high and debt was low for large cor-
rations and very small corporations, the highest ratios of debt
equity occurring in the medium and small enterprise classes; an
ception was wholesale trade, where the debt ratio rose with size.
ut economic changes that occurred between 1914 and 1939 had
tered the significance of the pattern. First, the composition of
anufacturing and trade was considerably different in terms of ac-
vities, as a result of the integration of business processes, of the
owth in the importance of durable goods, and of other changes
the structure of the economy. Second, the average size of enter-
rises was greater, and a slightly greater proportion of enterprises,
artly because of the many consolidations and mergers of the
os, were in the large-size-high-equity category, which includes
ose with total assets in excess of $5 million; in consequence, for
anufacturing and trade as a whole, the relative importance of debt
financial structure had declined.[4]

Also the financial expansion that has taken place in manufactur-
g and trade enterprise since the beginning of World War II re-
mbles, in several important respects, what occurred during the
Vorld War I period. Sales of large corporations (particularly in
anufacturing) have increased more than those of medium and
nall-size companies (except for smaller companies whose products
e essential to the war effort, such as aircraft and machine tools).
sset investment, especially of large corporations in strategic in-
ustries, has once more been greatly accentuated. Current assets of

[3] Milton Gilbert and George Jaszi, "National Income and National Product in 1942," *Survey of Current Business* (March 1943) pp. 10-19.

[4] These general observations are drawn from an unpublished study by Sidney S. Alexander, *Changes in the Financial Structure of American Business Enterprise, 1900-40*, National Bureau of Economic Research, Financial Research Program (ms. 1943).

manufacturing and trade – cash, marketable securities, receivabl and inventory – have again expanded in relation to total assets, ar current debt too has risen.[5]

But there are also conspicuous differences between the two w period expansions. Because of the increased mechanization of mo ern warfare the need for specialized productive plant is immeasu ably greater in World War II than it was in World War I; and tl loss of shipping facilities and of foreign sources of supply – of t and rubber, for example – has greatly extended the number ar variety of goods that must be produced. Much of the industri plant capacity needed for the present war has had to be newly co structed. At the end of 1939 the total book value of plant and equi ment in all manufacturing industry, net of accrued depreciatio amounted to about $23 billion; by mid-1943 almost $20 billi of new plant capacity for war production was either finished or process of construction,[6] substantially over half of which was in i dustries whose facilities may have some peacetime application.

Approximately 80 percent of this new construction has be publicly financed, either under Emergency Plant Facilities Co tracts of the Army, the Navy or the Maritime Commission, or t the Defense Plant Corporation, the Reconstruction Finance Co poration,[7] or the British government. In comparison with a figu of about $15 billion of publicly financed additions to industri plant made during the present war, the amount so spent duri World War I probably did not exceed $750 million,[8] and the bu of this investment was for production of munitions and ships. F the most part the financing of World War I additions to manufa

5 See Roy A. Foulke, *Our Critical Wealth in Inventories,* Dun & Bradstreet, Inc. (N York 1942) pp. 37-39 and 52-71, which gives a significant summary report of fina ing tendencies in 70 lines of business activity (42 manufacturing, 21 wholesaling a 7 retailing) for the years 1937-41.

6 Based on War Production Board press release, June 30, 1943.

7 As of November 1, 1942, the Reconstruction Finance Corporation and its su sidiaries had financed or contracted to finance the construction, equipment or expa sion of 1,337 plants for the production of war materiel, the total cost being in exc of $8.3 billion.

8 Lowell J. Chawner, "Capital Expenditures for Manufacturing Plant and Equipme 1915 to 1940," *Survey of Current Business* (March 1941) p. 10, gives a figure of $ million total publicly financed additions to manufacturing facilities, 1917-19. though information is not available, it appears that some additional facilities w financed by Allied governments, 1915-17.

uring capacity was effected through industrial channels without lirect participation by the Federal government in the risks of own-:rship, and such additions were on a moderate scale in comparison vith those in the present war. Thus there was no serious legacy of ;overnment-owned plant and facilities to be disposed of by dis-nantlement and scrap, by public operation, by outright or instal-nent sale to private interests, or by lease.

What differences World War II plant expansion may make in ɔostwar property expenditures cannot be foreseen, but they are ılmost sure to be relatively large, as they were in the first postwar ɔeriod, because of heavy reconversion and replacement outlays. Property expansion in trade during World War II has probably ɔeen more severely curtailed than during World War I.

With the wartime increase in consumer incomes, retail and wholesale trade lines have prospered in terms of sales during World War II, as they did in World War I. But although the growth of :rade inventory was stimulated in both war expansions, in World War II the sharp curtailment of production of civilian supplies has ıbruptly checked the increase in trade inventory and has resulted in depletion of accumulated stocks in spite of the imposition ɔf a general price ceiling, and the introduction of consumer ration-ing. Thus while trade concerns generally were well stocked in No-vember 1918, the shelves and warehouses of many such enterprises may be almost empty at the end of World War II. As for manufac-turing industry, durable and non-durable goods producers appear to have increased their dollar inventory at approximately the same rate during World War I, but during the present war the rate of inventory growth of durable goods producers has greatly exceeded that of non-durable goods manufacturers.

Throughout World War I the risks of current inventory accu-mulation were to a large extent a primary responsibility of private enterprise, though in war production there were contract cancella-tion clauses that provided compensation for the purchase of mate-rials needed in filling orders for war supplies. During World War II, on the other hand, special public financing agencies, mainly subsidiaries of the RFC, have undertaken to share in risks attendant ɔn inventory accumulation for war output: by agreeing to purchase inventories for prospective war contractors, whether prime or sub-:ontractors, in advance of visible sales to public agencies; and also

by direct acquisition of inventory of strategic supplies, holding an selling it as needed. In addition, these agencies have undertaken t finance inventory immobilized by rationing or other restriction or have committed themselves to purchase it. No estimate of th total World War II participation by public agencies in the risks o inventory accumulation is possible, but fragmentary informatio indicates that in manufacturing alone it may have amounted to a much as a fifth of total inventory by the beginning of 1943.

In World War I, manufacturing and trade companies commonl valued inventory by methods that approximated the first-in, first-ou ("fifo") principle, which operated in a period of rising price to inflate book profits, and in a period of falling prices to accentu ate book losses. Realization of this fact led a few manufacturin concerns to introduce, during the '20s, the last-in, first-out ("lifo" method of inventory valuation, which moderates the effects o profits of rapid changes in inventory values. The price deflation o the '30s increased the use of this method of inventory pricing i manufacturing, and the outbreak of World War II greatly acceler ated its application, especially among large concerns.[9] A numbe of trade concerns, while precluded by their inventory control meth ods from a strict application of the last-in, first-out method of inven tory pricing, have sought to obtain comparable results by adjustin their closing inventory on the basis of a retail price index to a valu approximating "normal or average" cost.[10]

During World War I the financing of working capital require ments of manufacturing and trade was chiefly by private enterpris itself, through short-term credits from banks and trade sources. I World War II these sources have again been important, but trad credit and deferred tax payments, that is, tax accruals, have playe a larger role than in the last war period. Whereas total loans an discounts of all banks increased 39 percent over the first three year

9 "It is interesting to note the increasing use of the last-in, first-out method. With gen erally increasing prices of materials, more and more people object to showing profit and paying taxes on what, under the first-in, first-out method, is merely an increas in the price level for the same inventory quantities and not a real profit." C. Olive Wellington, "Financial Statements in Wartime," *Journal of Accountancy* (July 1943) p. 57.

10 See the *New York Sunday Times*, June 27, 1943, Section 3, p. 6, in which close t 100 retail concerns are credited with applying this method in filing their income ta returns for 1941-42.

World War I, they decreased by 7 percent over the equivalent riod of World War II. Commercial and industrial loans have en, as in the first war, but thus far they have been quite a small ctor in the total wartime inflation of bank credit.

Cash balances of medium and small business concerns in manucturing and trade increased about in proportion to demand desits of banks during the war years 1915-18, while those of large rporations increased somewhat more rapidly. In the early stages World War II, cash balances of business concerns of all sizes ew in rough proportion to demand deposits, but after late 1942 ey increased at a substantially greater rate.[11] This reflects an creased need for cash to meet the greatly expanded volume of warne disbursements; it also reflects, in many cases, the liquidation inventory and receivables, the postponement of maintenance and placement expenditures, the accumulation of reserve funds, the crual of tax liabilities, and the failure to reinvest retained earngs in other assets. The fact that the cash balance gains of manucturing and trade enterprise during 1915-18 were not lost in the mediate postwar years may have prophetic significance.

Progress payments and, in some industries, advances on war conacts helped to meet working capital needs in World War I. The oader scale of World War II, and the greater number of prime d subcontractors, have magnified the problem of providing workg capital aid to war production industries. To expedite the financg of subcontractors, and to alleviate the dependence of prime ntractors upon contract advances and progress payments, comercial banks have been guaranteed since May 1942 by the Army, e Navy and the Maritime Commission against losses on loans to r contractors arising out of the cancellation of war contracts. lvances outstanding under loan agreements, guaranteed through e Reserve Banks as agents (under Regulation V of the Board of overnors of the Federal Reserve System), amounted to about e-tenth of total commercial and industrial loans of all insured nks by the middle of 1943, and total loans authorized exceeded e-third of total commercial and industrial loans outstanding. To

ee the results of the survey by the Federal Reserve System, "Ownership of Bank posits," *Federal Reserve Bulletin* (October 1943) pp. 917-22; also C. R. Whittlesey, *e Effect of War on Currency and Deposits*, National Bureau of Economic Research, ancial Research Program, Occasional Paper 11 (1943) pp. 20-24.

help meet the special financing needs of small business concerns
gaged in producing war materials or essential civilian goods,
Smaller War Plants Corporation instituted in November, 194
repurchase plan for bank loans up to $25,000 extended to small-sc
producers. Restrictions on consumer credit, and limitations on
ventory accumulation as a result of rationing, have operated to h
down the expansion of working capital in trade, and hence h
checked demands for short-term bank credit in this field.

Complete information on the total amounts that were involv
in contract cancellations at end of World War I is not availab
but it has been estimated that war agencies terminated appr
imately 32,000 separate contracts, with an aggregate uncomplet
value of about $5 billion.[12] In the neighborhood of 7,000 contra
remained unsettled one year after termination, of which about 8
contracts were ultimately adjudicated through the United Sta
Court of Claims at an average time expenditure of three and o
half years. On the basis of the production program of World War
it is estimated that the end of hostilities will witness cancellati
in excess of a hundred thousand contracts, having an uncomplet
value anywhere from $60 to $75 billion, and involving inventor
on hand of from $10 to $15 billion.[13] Sheer number of contra
and the magnitude of sums involved makes the problem of contr
termination after World War II vastly more complicated than af
World War I. Many manufacturing companies, prime and s
contractors, face the possibility of having to finance postwar rec
version from working capital, whose liquidity is dependent up
the fair and speedy settlement of war contracts when canceled
the close of hostilities.[14]

12 Report of the Research Committee, Committee for Economic Development, *Post
Employment and the Settlement of Terminated War Contracts* (October 1943);
J. Donald Edwards, *Termination of Ordnance Contracts, 1918*, U. S. Bureau of L
Statistics, Historical Study No. 57 (January 1943); and Lieut. Col. Harold Sheph
Settlement of War Contracts, Army Ordnance Report No. 2, Army Ordnance Ass
tion (August 9, 1943).

13 Report of the Research Committee, Committee for Economic Development, *op*
also M. R. Gainsbrugh and M. N. Struever, "Cancellation of War Contracts, W
War I," National Industrial Conference Board, Inc., *The Conference Board Econ
Record* (March 1943) pp. 55-59; and "The Settlement of War Contracts," *Nati
City Bank Letter* (March 1943) pp. 29-32.

14 The standard contract termination clause used by the War Department is discu
in Shepherd, *op. cit.*

The war finance mechanism of World War I made no advance rovision for the impact of war contract termination; the World Var II situation in this respect is strikingly different. To the extent hat war contract inventory is covered by government purchase ommitments, the threat of partial freezing of corporate working apital during contract settlement is lessened. Moreover, where orking capital needs for war contracts have been financed with the id of Regulation V loans, there are provisions for the automatic xtension of outstanding advances, upon cancellation of contracts, nd for relief from interest and principal repayments until settle- ent of contracts.[15] Finally, new regulations have been issued for loans, called VT loans, under which guaranteed credits may be xtended with the object of freeing business working capital in the vent of war contract termination in response to swiftly changing ar requirements, subject like Regulation V loans to the same auto- atic relief from interest and principal repayments until settle- ent of canceled war contracts.[16] While Regulation V and VT loans rotect war contractors against the necessity of liquidating current ebt suddenly, and thus assure maintenance of postwar working apital positions, there are some who feel that the contract termina- on problem cannot be fully met in this way, and that some new echanism for settling war contracts quickly and equitably must be rovided.[17]

Maintenance expenditures have necessarily been postponed by riorities and material shortages, and this deferment has tended, specially in non-war enterprises, to inflate corporate profits sub- ect to taxes — regardless of any impairment of the productivity of hysical plant that may affect the profitability of operations in the ostwar period. Material shortages were less stringent during World Var I, and thus profit inflation arising from postponed mainte-

The relation of Regulation V loans to contract cancellation is clearly shown in oy A. Foulke, "Let's Tackle the First Post-War Problem Now," *Dun's Review* (May 943) pp. 7 ff.

Effective September 1, 1943; see the *Federal Reserve Bulletin* (September 1943) p. 849-50.

Report of the Research Committee, Committee for Economic Development, *op. cit.*, which special legislation is recommended to create a contract settlement board with road powers, to provide "loans" on unsettled contracts awaiting verification of claims, establish a uniform formula for contract settlement, and to provide for expansion legal machinery to expedite appeals of dissatisfied contractors.

nance expenditures was probably a less important factor at th time in the financial experience of manufacturing and trade.

With regard to the taxation of corporate income in the two wa periods, several factors are noteworthy:

First, the over-all tax burden was considerably lighter in the fir war than at the present time — 45 percent of net income in 1918, th year of heaviest taxes, as compared with a maximum effective ta rate of 80 percent under the Revenue Act of 1942. Not only is th total amount of the tax substantially larger at present, but also th structure of corporate income taxes is different: in 1918 there was 12 percent normal tax, no surtax, and an 80 percent war and exce profits tax; under the tax law of 1942 the combined normal and su tax is 40 percent and the excess profits tax 90 percent. This diffe ence in the structure of tax rates means that a smaller component the total annual tax assessment is considered an abnormal wartim levy, while a larger component is regarded as a normal, continuin charge against annual earnings. Business expectations as to possibl postwar reductions in corporate taxes must take this fact into a count.

Second, as an incentive to expansion of industrial capacity, co porations in World War I were allowed to accelerate depreciatio on specially constructed war plant and facilities. However, th amount of accelerated depreciation was left to be determined unde normal peacetime conditions, so that tax relief was only realized i the early '20s when economic obsolescence could be establishe in conformity with tax laws. In World War II, concerns expandin plant and facilities under emergency conditions have been pe mitted to amortize costs of expansion over a 60-month period (o less, if the emergency ended sooner), provided these facilities ha been certified as necessary for national defense or war purposes. Immediate tax relief by virtue of accelerated depreciation has thu been available currently on the basis of proper certification by th contracting government agency. The prospect that postwar ta rates may be lower has been the principal incentive for taking a vantage of accelerated depreciation on privately constructed wa

18 Effective June 10, 1940 through October 5, 1943. An illuminating account of th role of accelerated depreciation in World Wars I and II is given by E. Cary Brow and Gardner Patterson, "Accelerated Depreciation, A Neglected Chapter in W Taxation," *Quarterly Journal of Economics* (August 1943) pp. 630-45.

ants. Over $5.5 billion worth of private investment in World War facilities has been certified for accelerated depreciation, against ound $700 million worth of facilities so amortized under World ar I tax law.

Third, in view of the high level of taxes attained in World War the government has assumed some responsibility for providing siness with funds from which to meet postwar conversion and justment expenses. The Revenue Act of 1942 allows a postwar edit amounting to 10 percent of excess profits taxes, with a pro- so that corporations retiring debt may under certain conditions ail themselves of this credit immediately.

Fourth, as a result of the carry-back provision applicable to net erating losses, a corporation whose deferred maintenance and re- justment expenditures are so large as to result in postwar operat- g losses is entitled to apply these losses against earnings of the two eceding years, and to claim a refund of taxes paid; in like manner may carry any remaining loss balance forward as an offset to suc- eding years' profits. There is a similar provision with respect to used excess profits tax credits, and a carry-forward provision ap- ying to capital losses, both of which may be expected to influence stwar replacement and reconversion decisions. The contribution these provisions may prove very great, but their efficacy remains be tested.

In the period of World War I larger companies established re- ves for possible postwar contingencies and future declines in the irket value of inventory, but the amount of such reserves was in ost cases relatively small. The experience of the last war, and the ogress made by accountants in evaluating economic conditions, ve, in the present war, led a much larger number of companies set up such reserves and to make substantial allocations to them. ie American Institute of Accountants took early recognition of : problem, and in January 1942 its committee on accounting pro- lure issued a bulletin recommending to corporate management d accountants the principles to be followed in accounting for cial reserves arising out of the war.[19] A recent survey, based on 41 fiscal year-end reports of 429 large companies in 15 trade and nufacturing industry groups, reveals that about one-fifth of the

merican Institute of Accountants, *Accounting for Special Reserves Arising Out of War*, Accounting Research Bulletin No. 13 (January 1942).

companies had established contingency reserves of one type or other for such postwar purposes as: reconversion of plant and fac ties; deferred maintenance and repairs; dismissal compensati and inventory revaluation.[20] Tabulations of corporate annual ports for 1942 show a considerable increase in the proportion companies providing postwar reserves by charges against earned come or by earmarking other reserves. In contrast to World Wa experience, the sums involved in such reserves were in most ca substantial.[21]

The likenesses and differences between financing tendencies World Wars I and II, as observed at this stage of the second confl provoke conjecture regarding the future. It is clear that some of differences arise from the larger scale of the present war effort, a that some of them grow out of the financial lessons learned duri the first war and in the intervening years. It remains to be se whether from now on the resemblances will increase or dimini The war and postwar record of the World War I period, althou not an infallible guide, is certainly suggestive of problems that m have to be met, and of experiences that may have to be avoid

20 The survey was conducted by the Research Department of the American Insti of Accountants. See *Journal of Accountancy* (August 1942) pp. 125-32, and (Novem 1943) pp. 391-408.

21 The question of postwar reserves is treated at some length in Mark S. Ma *Business Reserves for Postwar Survival,* National Planning Association, Plann Pamphlets Nos. 19-20 (April 1943).