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Compiled Balance Sheet
of
Manufacturing Enterprises

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National Industrial Conference Board

THE ESTIMATES COVER ALL ACTIVE CORPORATE and noncorporate enterprises engaged in manufacturing industries as defined in the Standard Industrial Classification. This classification was adopted by the Bureau of Internal Revenue and of the Census in 1938 for *Statistics of Income* and the *Census of Manufactures*,¹ the two main sources used in this paper. However, as the industrial classification in *Statistics of Income* is based on the predominant business of the corporations filing income tax returns, the 'manufacturing' group does not contain corporations engaged solely in manufacturing, owing to the diversified industrial activities of many corporations.² Inactive corporations, i.e., those that did not report income or balance sheet data to the Bureau of Internal Revenue, are not covered. Establishments that were idle throughout the year or that manufactured products valued at less than \$5,000 (the latter are negligible) are not included in the *Census of Manufactures*.³

Statistics of Income embraces the forty-eight states, the District of Columbia, Alaska, and Hawaii. We deducted assets owned by manufacturing enterprises in Alaska and Hawaii so that our estimates cover only the continental United States. As the data include the American assets of resident foreign corporations, i.e., foreign corporations engaged in trade or

1 Data for 1929 were adjusted accordingly. No changes in industrial classification affecting the 'manufacturing' group as a whole were made between 1938 and 1944.

2 The industrial classification in *Statistics of Income* for 1929 and 1944 is based upon the predominant business of groups of corporations filing a single consolidated return.

3 In the earlier quinquennial censuses, establishments with products valued at \$500 or more were included. The difference in coverage, in terms of value of product, was 0.3 percent in 1921 (*Census of Manufactures, 1939*, I, pp. 1-2). In 1929 and 1939 the importance of establishments with products valued at less than \$5,000 was presumably even smaller. Establishments with products valued at \$5,000-20,000 produced only 1.1 percent of the total annual product in 1929 and 0.9 percent in 1937 (Solomon Fabricant, *Output of Manufacturing Industries, 1899-1937*; NBER, 1940; p. 329).

The definition of 'establishment' was modified in 1937. Prior to that year one return was usually counted as representing one establishment, although it might cover two or more plants operated under the same management. In 1939 the number of establishments represented by a return depended upon the number of plants covered by it.

business or having an office or place of business in the United States, domestic manufacturing assets cannot be strictly segregated on the basis of the residence of their owners or of the location of physical assets.

The estimates must be used with caution for the following reasons: Data in *Statistics of Income* for 1929 and 1944 were adjusted to represent a situation as if the privilege of filing consolidated returns had not existed in 1929 and 1944 (see App. C). Hence the estimates for 1929 and 1944 are only approximately correct. In comparing data for 1929, 1939, 1944, and 1946, it must be kept in mind that mergers of parent companies and their subsidiaries and mergers generally during this period cannot be accurately evaluated.

Because Census data for years later than 1939 are lacking, estimates for the noncorporate sector in 1944 are highly tentative. All estimates of inventories for 1946 are also highly tentative since the basic statistical material is not yet available.

The corrections for changes in the price level between 1929 and 1939, 1939 and 1944, and 1939 and 1946 are extremely rough, reflecting trends rather than absolute levels.

A CHANGES IN THE PRICE LEVEL AND THE MEANING OF BOOK VALUES

Comparisons of balance sheet data for different years cannot be meaningful—especially in periods of rapid and substantial price changes—unless amounts in current dollars are reduced to an approximately uniform price level. This task is highly complicated for several reasons:

1) Changes in prices are not isolated phenomena. Influencing the development of prices while being influenced by it, the production and supply of goods change, as well as the character of the demand. This is particularly true for the transition from a peace to a war economy, and vice versa.⁴ In the whole-

⁴ For a discussion of these and related problems see Carl Shoup, *Principles of National Income Analysis* (Houghton Mifflin, 1947), pp. 216-21, and the literature cited there. See also Simon Kuznets, *National Product, War and Prewar*

sale price index of the Bureau of Labor Statistics, the price for each commodity is usually weighted by a factor representing the average quantity of the commodity marketed in 1929-31. In addition, for some goods no price quotations were available during the war, and new goods were added during the period examined.

2) Price indexes are inadequate also as a measure of actual prices paid. The wholesale price indexes of the Bureau of Labor Statistics are usually based on prices for certain standard grades of articles; hence they do not provide complete coverage.

3) The date of the price index to be applied is uncertain, as some balance sheets are not drawn as of December 31. A considerable number of fiscal year companies reported in 1929 as well as in 1939 and 1944. Their importance cannot be evaluated for the manufacturing group. For all industry groups, the income tax paid by fiscal year companies amounted to about 17 percent of the income tax paid by all corporations in 1939, for example. In our estimates the December index was usually taken.

4) Balance sheet figures are not stated in current prices, but are rather the result of special handling of book values in accordance with established accounting practice. The following groups of balance sheet items may be distinguished:

a) Cash and deposits in banks, receivables, investments in government obligations, notes and accounts payable, and other debt, as entered in the books, may be considered to fluctuate in value with the purchasing power of the currency. The wholesale price index of the Bureau of Labor Statistics for all commodities (December) was applied to transform these balance sheet items into units of constant purchasing power.⁵ Three and a half billion dollars in cash and bank deposits of manufacturers at the end of 1929 could buy fewer goods than at the end of 1939. The use of the wholesale price index is

(NBER, *Occasional Paper 17*, 1944), pp. 6 ff., and *National Income: a Summary of Findings* (NBER, 1946), pp. 128-34.

⁵ The index was 93.3 in December 1929, 79.2 in December 1939, 104.7 in December 1944, and 140.9 in December 1946. 'Other assets' were deflated similarly.

justified for cash and bank deposits as far as they serve to buy new stocks of goods or capital assets.⁶ The movement of the Conference Board wholesale price index for ten industrial raw materials (1929, 1939, and 1946) is similar to that of the BLS wholesale price index for all commodities. The index of industrial building construction cost (Aberthaw) diverges considerably from the wholesale price index for all commodities in 1939, but shows a similar relationship between 1929 and 1946.

To the extent that cash is used for paying wages, an index showing 'unit labor cost'—the ratio between output per man hour and gross hourly earnings—might be more appropriate. Discrepancies that may have existed between the wholesale price index and such a unit labor cost index during the period examined were not taken into account.

Obviously, whenever cash or government securities are held through a period of high prices until the turn of the tide, they rise in value. Such assets, therefore, have a larger value as bad weather reserves than would be gathered from the deflated figures. Notes and accounts payable in the amount of \$10 billion could be more easily paid at the end of 1929 because prices paid to manufacturers were higher than in 1939. As regards long term debt, the argument might be advanced that the purchasing power of a currency when the debt is due determines the true value of the amount owed. However, to the degree that the long term debt is of a marketable character, a point may be made for applying the price index prevailing at the time the balance sheet is drawn up.

b) Book values for inventories, capital assets, and investments other than in government obligations do not fluctuate with the purchasing power of the dollar.⁷

i) Inventories are entered according to various methods: at cost or market, whichever is lower (probably the most extensively used method); at cost; at market after deducting a dis-

⁶ It is likewise justified to the extent to which current assets represent depreciation reserves.

⁷ See Copeland and Martin, 'The Correction of Wealth and Income Estimates for Price Changes', *Studies in Income and Wealth, Vol. Two*, pp. 88 ff.

count. 'At cost' may mean different things depending upon whether the last-in, first-out method (allowed for tax purposes generally since 1939)⁸ or another method is used.⁹ 'At cost' is ambiguous also in that it depends upon the interval goods are held in stock, the interval between ordering and receiving them, and similar factors. 'At market' may mean current replacement cost or sales price.¹⁰

In our estimates amounts for inventories in current dollars were adjusted in accordance with the price index implied in the inventory valuation adjustments by the Department of Commerce for inventories held by manufacturing firms.¹¹ This index was 128.0 in 1929, 100 in 1939, 121.0 in 1944, and 140.1 in 1946.

ii) Tangible capital assets except land (plant, machinery, and equipment) are entered at cost in tax reports. Deductions are made for depreciation, or a depreciation reserve is set up. Usually amounts entered for depreciation do not necessarily indicate the change in the intrinsic values of the assets. Thus, book values of capital assets, net, show the amount of capital invested in fixed assets and not recaptured by depreciation allowances, as permitted by the Bureau of Internal Revenue. The meaning of the book value of capital assets depends upon various factors:

Method of depreciation. Depreciation is usually on a straight line basis.¹²

Rate of depreciation, computed in a 'liberal' or conservative way (compare differences in the rates of depreciation in the

⁸ Revenue Act of 1939. According to the Revenue Act of 1938, the LIFO method was allowed for tax purposes to tanners and to producers and processors of non-ferrous metals.

⁹ Internal Revenue Code, Sec. 22 (d), and Regulation III, Sec. 29.22 (d), provide for the elective use of "any . . . proper method which in the opinion of the Commissioner clearly reflects income," provided it is applied consistently.

¹⁰ See Simon Kuznets, *Commodity Flow and Capital Formation* (NBER, 1938), I, 405 ff; J. C. Bonbright, *Valuation of Property* (McGraw-Hill, 1937) II, 1014; C. F. Schlatter, *Cost Accounting* (Wiley, 1947), pp. 80-1, 232, 618 ff.

¹¹ *Survey of Current Business*, July 1947, Supplement, p. 45, Table 33.

¹² See Solomon Fabricant, *Capital Consumption and Adjustment* (NBER, 1938), pp. 66-7, Table 13.

1931 report of the Bureau of Internal Revenue and Bulletin F of 1942).

Volume of maintenance.

Differences between original and reproduction cost.

Retirement curves involved.¹³

The stage of the various property groups. Have annual retirements and renewals reached an even level, equal to the annual depreciation reserve credit, so that the situation can be considered stable? ¹⁴

Importance of extraordinary obsolescence, which rises in periods of rapid technological changes.

Writedowns.¹⁵

This brief summary of the factors that determine book values of capital assets makes it appear doubtful whether book values are suitable as a measure of the adequacy of our manufacturing plant or of its reproduction cost. Economists, in measuring capital assets, have often relied solely on book values.¹⁶ Contrariwise, management in many cases has deemed such data insufficient. In the last few years, particularly, the practice seems to have spread among industrial concerns having large investments in fixed assets to keep property records which, among other things, show reproduction cost as well as original cost and accrued depreciation. Many concerns make periodic appraisals of property (say, every five years) and adjust

¹³ See Robley Winfrey and E. B. Kurtz, 'Life Characteristics of Physical Property', *Iowa Engineering Experiment Station Bulletin 103* (1931); Robley Winfrey, 'Statistical Analyses of Industrial Property Retirements', *ibid.*, 125 (1935); Robley Winfrey, 'Depreciation of Group Properties', *ibid.*, 155 (1942).

¹⁴ *Ibid.*

¹⁵ Such writeups or writedowns are generally not recognized by the Bureau of Internal Revenue, it is true. In certain cases, however, the basis of depreciable property may be lowered. In the case of bankruptcy, for example, the basis of depreciable property may be lowered to the fair market value as of the date of entry of the order confirming the plan or arrangement; Public, No. 699, July 1, 1940 (retroactive to June 22, 1939). Similarly, the basis of depreciable property may be lowered in certain corporate liquidations; Internal Revenue Code, Section 113 (a) (7) and (18).

¹⁶ E.g., Slichter for determining the adequacy of capital assets at various points in the past seventeen years.

them annually to determine values for fire insurance coverage.¹⁷ Similarly, some manufacturers have applied a dual system of depreciation rates, especially since 1936. Some firms even maintain three sets of books: one for cost purposes, one for tax purposes, and one for appraisal purposes.¹⁸

In view of these complex problems, it is doubtful whether compiled book values of tangible capital assets as based on *Statistics of Income* can ever be satisfactorily deflated for changes in the price level. Moreover, "capital assets are rarely replaced in kind. Indeed by and large, they are replaced because different and better assets are available."¹⁹ This reduces the validity of a capital equipment index. As a matter of fact, the Department of Commerce has refrained from publishing a capital equipment index for 1943-47.²⁰ Accordingly, the Department, the Federal Reserve Board, and the SEC give estimates of plant and equipment expenditures for the war and postwar years in current dollars only.²¹

Fabricant's method of constructing an index of prices underlying depreciation charges and an index of prices underlying book values of capital assets cannot satisfactorily be applied to the years following 1939 because of the lack of Census data.²² In this paper an attempt was made to supplement the data on

¹⁷ C. V. Armstrong undertook a study in 1939 with the aim of showing that "it is economically feasible for an enterprise having widespread physical property to establish and maintain property records" ('Industrial Property Records for Accounting and Valuation Uses', *Iowa Engineering Experiment Station Bulletin* 160, 1944, p. 6).

¹⁸ H. G. Avery, *Accounting for Depreciable Fixed Assets* (Columbia University Press, 1940), p. 106.

¹⁹ George Terborgh, NICB, *Studies in Business Policy*, 27 (1948), p. 5.

²⁰ The latest figure given by Henry Shavell, 'Price Deflators for Consumer Commodities and Capital Equipment, 1929-42', *Survey of Current Business*, May 1943, pp. 13-21, is for 1942; the latest figure given by Kuznets (*National Product since 1869*; NBER, 1946; p. 36) is for 1943. Construction estimates were made also in 1939 prices (Bureau of Foreign and Domestic Commerce, *Construction and Construction Materials, Industry Report*, Statistical Supplement, May 1947, pp. 25 ff).

²¹ See, for example, M. L. Merriam, 'Current and Prospective Plant and Equipment Expenditures', *Survey of Current Business*, April 1948, p. 12.

²² *Capital Consumption and Adjustment*, Ch. 10.

book values of capital assets with some measures of physical capacity.²³

iii) Land, like reproducible tangible assets, is entered at cost. But the original capital outlay is usually not written off until the property is sold or otherwise disposed of.²⁴ During the war, even land (purchased for the purpose of emergency facilities necessary for national defense) could be amortized.

iv) Intangibles are likewise booked at cost. Many firms have written this item off after 1929.²⁵

v) Investments, other than government obligations. Long term securities are originally booked at cost and not subsequently altered when market values change. Short term issues are usually valued at the lower of cost or market.²⁶ Thus long term investments made in years of low prices (in the 1930's, for example) appear in balance sheets for 1944, for example, at cost.²⁷

In this paper the following compromise was made. Like the other adjustments for changes in the price level, its aim is merely to present approximately comparable figures for the

²³ To get consistent estimates in 1939 dollars in Table 1, the book values for capital assets at the end of 1929 were deflated 3 percent in accordance with Shavell's wholesale price index for capital equipment (average of yearly indexes for 1939 and 1940 on the average of 1929 and 1930 as a base). Book values for 1944 and 1946 were not deflated except for the net additions to capital assets (expenditures on plant and equipment minus depreciation) in 1940-44 and 1940-46.

²⁴ Bonbright, op. cit., p. 904.

²⁵ A sample study of the balance sheets of 346 industrial corporations published in *Moody's Manual of Investments, Industrial Securities* showed that the book value of intangibles decreased 52.5 percent and the number of firms recording intangibles at cost decreased 27 percent between 1929 and 1939 (H. G. Avery, 'Accounting for Intangible Assets', *Accounting Review*, 1942, Vol. 17, pp. 354-63). See also W. A. Paton's statement: "In the case of goodwill and allied intangibles . . . it has long been common practice to write off the total cost as soon as this could be done without impairing the showings of income too seriously, without regard to the actual status of the assets" ('Accounting Procedures and Private Enterprise', *Journal of Accountancy*, April 1948, p. 282).

²⁶ Bonbright, op. cit., pp. 949-50.

²⁷ Securities that give a dominant control are sometimes valued at cost plus or minus changes in their share of the surplus of the company that has issued them (Bonbright, op. cit., p. 950). But this does not seem to have been done to an appreciable extent in the 1940's.

various years, not to get accurate estimates. The item or entry 'investment' in 1929 was deflated by the wholesale price index for all commodities. Book values of investments for 1944 were not deflated, except for the increase between 1939 and 1944. Book values of investments, as well as deflated amounts, were assumed to be the same in 1946 as in 1944.

c) Net worth is here treated as a residual. Amounts for net worth in current dollars were not deflated independently; rather net worth in 1939 dollars was automatically determined as a residual.

Similarly, total assets after adjustment for changes in the price level are the sum of the various assets adjusted as described above.

Wages and salaries were adjusted for changes in the purchasing power of the dollar on the basis of the consumer price index (annual average) of the National Industrial Conference Board.²⁸

B SUMMARY OF FINDINGS

As shown in Table 1, total assets of American manufacturing enterprises amounted to \$72.5 billion at the end of 1929 (\$64 billion in 1939 prices), \$61.5 billion in 1939, \$102 billion in 1944 (\$87 billion in 1939 prices), and approximately \$100 billion in 1946 (\$76 billion in 1939 prices).

Net worth, in current dollars, followed the same trend. It dropped from \$53 billion at the end of 1929 to \$46 billion in 1939, and rose to almost \$67 billion in 1944, and further to about \$73 billion at the end of 1946.

In 1939 dollars net worth followed a somewhat different trend. It too was slightly lower in 1939 than in 1929. But while total assets increased nearly 41 percent from 1939 to 1944, net worth rose only 31 percent. Contrariwise, total assets decreased between 1944 and 1946, while net worth presumably went up from \$60 billion to nearly \$61 billion.

²⁸ The index (1923:100) was 100.1 for 1929, 84.5 for 1939, 104.6 for 1944, 113.2 for 1946.

Table 1
 Compiled Balance Sheet of Manufacturing Enterprises, Corporate
 and Noncorporate, End of Year, 1929, 1939, 1944, 1946
 (billions of dollars)

	Book Values				1939 Prices			
	1929	1939	1944	1946	1929	1939	1944	1946
1 Cash & bank deposits	3.6	5.0	12.5	11.7	3.0	5.0	9.5	5.6
2 Notes & acc. rec.	12.0	8.1	16.3	12.7	10.1	8.1	12.3	7.1
3 Inventories	13.2	11.8	19.3	22.9	10.3	11.8	16.0	16.3
4 Investments, govt. obligations	1.8	1.3	11.8	8.0	1.5	1.3	8.9	4.5
5 Other investments	7.0	9.1	11.1	11.1	5.9	9.1	10.6	10.6
6 Capital assets (less deprec.)	27.7	25.0	27.4	30.0	26.8	25.0	26.8	28.3
7 Misc. assets	7.2	1.3	3.6	3.6	6.0	1.3	2.7	2.7
8 Total assets	72.5	61.5	102.0	100.0	63.7	61.5	86.8	76.1
9 Accounts payable	10.0	5.2	10.6	9.0	8.4	5.2	8.0	5.1
10 Bonds, notes, mortgages pay.								
11 Less than 1 year	n.a.	2.4	3.4	10.2	n.a.	2.4	2.6	5.7
12 1 year or more	5.2	5.7	6.6		4.3	5.7	5.0	
13 Misc. liabilities	4.5	2.2	14.8	8.1	3.8	2.2	11.2	4.6
14 Net worth	52.8	45.9	66.6	72.7	47.2	45.9	60.0	60.7
15 Total liabilities & net worth	72.5	61.5	102.0	100.0	63.7	61.5	86.8	76.1
16 Reserves for bad debts	0.3	0.2	0.3	n.a.	0.2	0.2	0.3	n.a.
17 Tangible capital assets								
18 Gross	27.9	40.9	53.3	n.a.	...	...	...	...
19 Reserves	4.0	19.8	27.7	n.a.	...	...	...	...
20 Intangible assets								
21 Gross	n.a.	2.2	n.a.	n.a.	...	...	...	...
22 Reserves	n.a.	.2	n.a.	n.a.	...	...	...	...
23 Land	3.7	2.1	1.9	n.a.	...	...	...	...
24 Wages & salaries	16.1	13.6	42.9	36.4	13.7	13.6	34.7	27.1

Because of rounding, components do not necessarily add up to total.

n.a.: not available.

LINE

- 2 Minus reserves for bad debts; see line 16.
- 3 Raw materials, work in process, finished goods, and supplies. Data for 1939, 1944, and 1946 were taken from Table 14 below.
- 4 Obligations of the United States, its possessions, or instrumentalities, and obligations of the states, territories, or political subdivisions thereof, or the District of Columbia.
- 5 Stocks, bonds of domestic and foreign corporations, mortgages, real estate, and all other investments or loans.
- 6 Tangible assets and land. Intangible assets are not included in 1929 but are in 1939, 1944, and 1946.
- 7 Sinking funds; other funds; deferred charges; organization expenses; suspense items; prepaid items (prepaid insurance, prepaid taxes, etc.); interest, discount coupons, and dividends receivable; guaranty deposits, and deposits on contracts, meters, and leaseholds. Including intangible assets for 1929.
- 9 Including notes payable with original maturity of less than one year for 1929.
- 13 Accrued expenses (interest, taxes, etc.); deferred and suspense items; funds held in trust, borrowed securities; discount and dividends payable; outstanding coupons and certificates; overdrafts; etc.
- 17 Buildings, fixed mechanical equipment, manufacturing facilities, transportation facilities, furniture, fixtures, and other depreciable assets, and natural resources.
- 18 Amount for 1929 was estimated by deducting, from the 1939 figure, expenditures on new plant and equipment in 1930-39; see Table 4.
- 19 Amount for 1929 was estimated by deducting from the 1939 figure \$16 billion for depreciation charges in 1930-39; see Lowell Chawner, 'Capital Expenditures for Manufacturing Plant and Equipment—1915 to 1940', *Survey of Current Business*, March 1941, p. 12, Figure 5.
- 20 Patents, franchises, formulas, copyrights, leaseholds, good will, trademarks, and other intangible assets. For 1929 data on intangible assets are included in 'Miscellaneous assets'. For 1944 intangible assets are included in lines 18 and 19 because separate data are not available.
- 23 Amount for 1929 computed as a residual from lines 6, 18, and 19.
- 24 *Survey of Current Business*, July 1947, Supplement, p. 27, Table 14.

1 *Balance Sheet Items, 1929 and 1939*

The summary is divided into two sections because 1939 is the last year of the peacetime economy and also the last year for which complete statistical data are available. Holdings of liquid assets, as a percentage of total assets, were about the same in 1939 as in 1929. Cash and bank deposits were larger, even absolutely, both when amounts in 1929 dollars are deflated for changes in the price level and when amounts in current dollars are compared (increase of 67 and 39 percent respectively). Receivables were considerably smaller, reflecting the smaller volume of business in 1939.²⁹ Corporations held slightly higher reserves for bad debts in 1929 than in 1939 (2.21 and 2.18 percent of the respective gross amounts in current dollars). Holdings of government obligations decreased 31 percent (in current dollars).

At the end of both 1929 and 1939 inventories were unusually high. In 1939 prices the increase was 15 percent. However, nearly 47 percent of the amount for 1939 represented stocks of goods held by war industries (Table 2).

Table 2
Manufacturers' Inventories, War and Nonwar Industries,
1939 and 1943
(millions of current dollars)

	WAR INDUSTRIES		NONWAR INDUSTRIES	
	Raw material & work in process	Finished goods	Raw material & work in process	Finished goods
Dec. 31, 1939	3,194	1,725	3,120	2,530
Sept. 30, 1943	8,130	1,887	5,180	2,522

Survey of Current Business, Jan. 1944, p. 9. Munitions output reached a peak in 1943.

'Other investments', comprising stocks, bonds of domestic and foreign corporations, mortgages, real estate, and other investments, increased considerably, about \$2 billion, between 1929 and 1939. A group of large manufacturing corporations (representing less than a third of all manufacturing corpora-

²⁹ Cf. data on corporate sales, *Survey of Current Business*, July 1947, Supplement, p. 41, Table 29, line 'Manufacturing'.

tions in terms of total assets) increased their investments in subsidiaries and affiliates \$1 billion (Table 3).

Table 3

Number of Mergers and Acquisitions in Manufacturing and Mining Compared with Increases in Investments in Subsidiaries and Affiliates of a Sample of Large Manufacturing Corporations, 1929-1939

	No. of Mergers & Acquisitions	Increase in Investments (millions)
1929	1,245	\$586
1930	799	291
1931	464	183
1932	203	54
1933	120	98
1934	101	53
1935	130	39
1936	126	36
1937	124	47
1938	110	50
1939	87	95

A. R. Koch, *The Financing of Large Corporations, 1920-39* (NBER, 1943), p. 38, Table 6; W. L. Thorp, *The Structure of Industry* (TNEC Monograph 27, 1941), p. 233.

The \$9 billion for 'Other investments' in 1939 reflects the practice of accounting for such investments at cost, or at the lower of cost or market. Measured by the income derived from these investments their value was apparently higher. Corporations received nearly half a billion dollars in dividends alone, not counting interest payments (\$120 million from foreign corporations and \$367 million from domestic corporations).³⁰ *Statistics of Income for 1929* does not present data on dividends received from foreign corporations. But the amount received by corporations in dividends from domestic (1929 classification) corporations alone, \$584 million, indicates that the entries for 'Other investments' minimized their value even more than in 1939. The capitalized value of dividend payments from domestic corporations in 1929 has to be raised because income from consolidated subsidiaries did not appear as dividends on the books; on the other hand, dividends received by

³⁰ Interest received, other than on government obligations, amounted to \$104 million in 1939.

subsidiaries not engaged in manufacturing have to be deducted. The value of foreign investments at the end of 1939, of course, was affected by the war in Europe, which caused many companies to write off their European investments in part (e.g., Eastman Kodak).

The decrease in book values for capital assets (minus depreciation), about 16 percent (in current dollars),³¹ is due, at least partly, to the following factors:

1) The high book values for capital assets in 1929 were due to large additions at relatively high costs during the preceding years (see Table 4).

³¹ From the amount in Table 1, line 6, for 1939, Intangible assets, net (line 21 minus 22) must be deducted, as 1929 data on capital assets do not include intangibles. Note that the depreciation reserves (about \$20 billion at the end of 1939) were accumulated only in an accounting sense.

Table 4
Private Expenditures for New Manufacturing Plant and
Equipment, 1921-1946
(millions of dollars)

	Current prices	1939 prices
1921-24 (4-year total)	6,690	6,752
1925-28 (4-year-total)	8,733	8,698
1929	2,739	2,683
1930	1,908	2,028
1931-36 (6-year total)	5,997	6,887
1937	2,160	2,191
1938	1,393	1,405
1939	1,572	1,572
1940	2,580	n.a.
1941	3,400	n.a.
1942	2,760	n.a.
1943	2,250	n.a.
1944	2,390	n.a.
1945	3,210	n.a.
1946	5,910	n.a.

1921-39: Lowell Chawner, 'Capital Expenditures for Manufacturing Plant and Equipment—1915 to 1940', *Survey of Current Business*, March 1941, pp. 10, 11, Tables 1 and 3; 1940-46: SEC, Statistical Series, Plant and Equipment Expenditures of U.S. Business.

The data for the two periods are not strictly comparable in that service, maintenance, selling and other activities are not included in Chawner's series; for other differences, see G. B. Wimsatt, *Survey of Current Business*, Dec. 1946, p. 20.

n.a.: not available.

2) During the depression of the 1930's many enterprises wrote down their fixed-asset values to lower 'going-concern' values or to estimated replacement cost. Actual retirements seem to have been smaller than depreciation charges. When the value of capital equipment went up again at the end of the decade, book values of capital assets were not written up. Some studies have shown that during 1930-33 about 40 percent of the companies reporting wrote down their assets.³² Writeups or writedowns are generally not recognized by the Bureau of Internal Revenue, as pointed out above. However, exceptions to the general rule were apparently numerous enough in the 1930's to lower appreciably the compiled total for capital assets of manufacturing corporations as reported in *Statistics of Income for 1939*, the basis of our estimates for 1939.

3) In the early 1930's "deductions for depreciation claimed [and allowed] in income tax returns were in many instances excessive", according to the Commissioner of Internal Revenue.³³ This was possible under regulations of the Bureau of Internal Revenue which provided that "deductions will not be disallowed unless shown by clear and convincing evidence to be unreasonable".³⁴ Beginning with 1934 the burden of proof was put upon the taxpayer without any qualification.³⁵ This change was expected to reduce total annual depreciation charges by corporations about one-third.³⁶

³² For details, see Avery, *Accounting for Depreciable Fixed Assets*, p. 142. F. C. Dirks estimated, in 'Postwar Capital Formation and Its Financing in Manufacturing and Mining Industries' (Federal Reserve Board, *Postwar Economic Studies*, 5, Sept. 1946), p. 11, that "the gross value of plant facilities at the beginning of 1941 is probably 20 percent or more understated owing to various write-downs . . ."

³³ *Annual Report, Fiscal Year ended June 30, 1934*, pp. 9-10. This view has been disputed; see citations in L. H. Kimmel, *Depreciation Policy and Postwar Expansion* (Brookings Institution, 1946), p. 26.

³⁴ Regulations 74 and 77, Art. 205.

³⁵ Decision 4422, approved February 28, 1934.

³⁶ For comment on this change of policy see, for example, E. A. Saliers, *Depreciation Principles and Application* (Ronald Press, 3d ed., 1939), p. 201, and Fabricant, *Capital Consumption and Adjustment*, pp. 85-6. Avery, *Accounting for Depreciable Fixed Assets*, p. 14, pointed out that "comparatively little consideration was given to the proper accounting of fixed assets in the 1920's and early 1930's," i.e., before T.D. 4422.

4) The trend in the change of the ratio of expenditures for equipment to total new plant and equipment outlays continued in the 1930's (also in the 1940's). A constantly increasing percentage of total expenditures has been going into new equipment and a steadily decreasing percentage into new plant.³⁷ By this standard alone, total expenditures for plant and equipment have increasingly become more efficient per dollar value of investment, if changes in the price level are not considered. The division for 1939 is shown in Table 5.

Table 5
Expenditures for Plant and Equipment by Type, 1939

	\$ million	% of total
New construction & major alterations of buildings	391	29
New machinery & operations equipment	855	64
Plant & equipment acquired in a 'used' condition	78	6
Total	1,338	100

Census of Manufactures, 1939, I, 364.

LINE

- 1 Includes other fixed plant and structures.
- 3 From other owners and expenditures for land.
- 4 About 1 percent of the total is unclassified.

5) Technological changes in the 1930's were "directed primarily at improving the existing industrial technology in contradistinction to the earlier changes which tended to make the prevailing techniques and the existing equipment obsolete"³⁸ and, according to this view, brought about a decrease in the need and demand for new capital assets.

³⁷ For manufacturing and mining the average for 1919-21 was 51.0 percent; for 1927-29, 59.6 percent; for 1937-39, 64.1 percent (*Survey of Current Business*, April 1948, p. 14); for manufacturing alone, see Chawner's estimates, *Survey of Current Business*, March 1941, pp. 10, 11.

³⁸ David Weintraub, 'Effects of Current and Prospective Technological Developments upon Capital Formation', *American Economic Review*, Vol. 29 (1939), Part 2, pp. 15-32, refers especially to the increasing utilization of large-capacity equipment with resulting lower cost per unit of capacity and smaller floor space required per unit of capacity, the increasing importance of industrial measuring and controlling devices, improvements in the composition of metals, extending the life of equipment, chemical advances frequently accomplished without any or relatively small capital expenditures.

In the light of the above mentioned factors, the decrease in book values for net capital assets between 1929 and 1939 takes on a different aspect. Even if depreciation charges could be assumed to measure exactly the consumption of capital and if the original cost could be accurately adjusted for changes in the price level, an intertemporal comparison of the thus adjusted book values for capital assets, net, has only limited justification. It considers the volume of replacements and additions to be the decisive criterion. However, in a dynamic economy, 'replacement' actually in most cases means not replacement by identical producer goods, but replacement by producer goods of higher efficiency.³⁹ This fact is at the bottom of the discrepancy between the picture presented by measures of capacity or productivity and the one presented by book values.

Measures of productivity, such as horsepower or output per man hour, showed an increase of 25-30 percent between 1929 and 1939.

Horsepower: Electric motors of all manufacturing establishments increased from 34 million horsepower to 45 million; generating capacity similarly rose one-third. Total horsepower rose from 41.1 million to 50.5 million. Horsepower per 100 wage earners increased 30.8 percent.⁴⁰

Output per manhour: The Federal Reserve Board index of

³⁹ For an interesting analysis of the problem, see A. C. Pigou, 'Net Income and Capital Depletion', *Economic Journal*, Vol. 45 (June 1935), pp. 235-41, at 239: "Will depletion be offset by the manufacture of an element like the original element or by the engagement in creating capital of a quantity of resources equal to the quantity that was engaged on the original element? If the cause of the discarding is a valuation change, there can plainly be no question of reproducing the discarded element. . . . The right solution is . . . as follows. When any discarding has occurred, in order to make good the depletion of capital implied in it, that quantity of resources must be engaged which would suffice in actual current condition of technique to reproduce the discarded element. But the direction in which this quantity of resources is engaged should be determined without reference to what the discarded element has been; it should be so chosen that the maximum possible addition is made to the present value of the stock of capital."

⁴⁰ K. C. Stokes, 'Shifts in Installed Horsepower in Manufacturing', *Survey of Current Business*, Jan. 1943, p. 26.

industrial production for all manufacturing industries decreased slightly, from 110 in 1929 to 109 in 1939. This decrease, together with the drop in the number of full-time equivalent employees (from 10,428 thousand to 9,967 thousand)⁴¹ and the considerable shortening of the actual work week,⁴² explains why the index of manhours per unit of output fell 24 percent.⁴³ Output per manhour, it is true, is not a perfect yardstick for measuring the productive capacity of capital stock. Differences in the intensity of work performance have to be considered between periods of full employment and of considerable unemployment, as well as changes in the educational level and the distribution between skilled and unskilled labor. Another important variable is the amount of idle equipment or the degree of capacity utilization. Improvements in 'managerial' techniques also have to be kept in mind.⁴⁴

Measures of capital in terms of equipment show a different picture. Few data on equipment used by manufacturing industries are available. According to the *American Machinist*, which takes a quinquennial survey of machine tools owned by the metal working industries, the number of machine tools in place decreased more than 10 percent between 1930 and 1940, while tools over ten years old increased from 49 percent of the total number of tools in 1930 to 72 percent of the total number in 1940.⁴⁵ Was the smaller number of tools in place in 1940

⁴¹ *Survey of Current Business*, July 1947, Supplement, p. 36, Table 24.

⁴² From 48.3 to 37.6 hours for production workers in 25 manufacturing companies (NICB, *Economic Almanac*, 1948, p. 113).

⁴³ From 42 in 1929 to 32 in 1939 (Solomon Fabricant, *Employment in Manufacturing, 1899-1939*; NBER, 1942; p. 331). The increase in productivity and decrease in manhours per unit of product varied widely. Output per manhour increased 229 percent in the rayon industry but only 11 percent in bread and other bakery products (*Productivity and Unit Labor Cost in Selected Manufacturing Industries, 1919-1940*; BLS, 1942; pp. 90 and 6).

⁴⁴ On the latter point, see examples given by Weintraub, op. cit., pp. 15-16, 32, at p. 24. Important 'managerial' improvements during the depression brought about the reduction of floor space per unit of output or an increase in productivity with only modest, if any, capital expenditures.

⁴⁵ *American Machinist*, July 5, 1945, pp. 97-112; Dec. 6, 1945, pp. 105-20.

Table 6
Index of Machinery Production and Exports of Machinery,
1923-1946

	Index of machinery production (1935-39 av: 100)	Exports of machinery (monthly average; \$ million)
	(1)	(2)
1923	86	23.5
1924	81	25.9
1925	89	30.6
1926	102	33.3
1927	99	36.2
1928	106	41.1
1929	130	50.6
1930	100	43.0
1931	66	26.4
1932	43	11.0
1933	50	11.0
1934	69	18.2
1935	83	22.1
1936	105	27.9
1937	126	40.0
1938	82	40.6
1939	104	41.9
1940	136	56.1
1941	221	61.7
1942	340	63.5
1943	443	99.5
1944	439	123.1
1945	343	99.2
1946	240	114.0
Average 1923-29	99	34.5
Average 1930-39	83	28.2
Average 1940-46	309	88.2

Survey of Current Business, Supplement, 1942, p. 7 (1923-38); Supplement, 1947, pp. 10, 100.

COLUMN

- 1 Includes electrical machinery. The series begins in 1923.
- 2 Includes agricultural, electrical, metal working and other industrial machinery. Data in current dollars.

not more efficient than the larger number of tools available for 1930, owing to changes in quality? ⁴⁶

The annual average of machinery supplied in 1930-39 was about 16 percent less than in the seven-years 1923-29. For 1933-39, the decrease is only 11 percent (Table 6). The FRB

⁴⁶ See Andrew T. Court (General Motors Corporation, Labor Economics Section), in NICB, *Studies in Business Policy*, 15, pp. 14-7, at 15: "A . . . major advance in metal cutting technology began about 1930 with the introduction of tools tipped with tungsten carbide or similar carbide-composition cutting edges. Again, these cutting edges required new, more powerful, and more rigid

index for machinery includes machinery other than that used by manufacturing industries, it is true. Exports likewise would have to be deducted.⁴⁷ However, the proportion of total production going to domestic manufacturing industries presumably did not change sufficiently to affect the validity of the above comparison.

Data on the volume of domestic shipments (or similar information) concerning specific types of manufacturing equipment are usually not available, most series being given in dollars. The annual average of domestic shipments of industrial electric trucks and tractors, for example, decreased 25 percent between 1925-29 and 1935-39 (Table 7).

There was 144 percent more floor space in manufacturing buildings ten years old or less at the end of 1929 than at the end of 1939, according to Chawner's estimates of new floor space added in 1920-39.⁴⁸ Plant expenditures (1939 prices) were 78 percent bigger in 1920-29 than in 1930-39 (Table 4).

These data, as well as the decline in the proportion of total expenditures (plant and equipment) going into new plants,⁴⁹ clearly show a trend to the more 'intensive' building of factories; in other words, an increase of productive capacity per unit of floor space.

The value of 'Intangibles', including patents, in 1929 and 1939 cannot be compared because of lack of data for 1929. A

machine tools. Beginning about 1935, when the price of the new cutting material had dropped, many of the machine tools for the mass-production industries were built primarily to take advantage of the full capacity of carbide tips. The resulting increase in the effective rate of metal cutting probably offset the restrictive practices introduced by unions . . ."

According to a survey of machine tool users covering 251 plants employing 200,000 workers in 1938, of 11,610 machines purchased in 1936 and 1937, 4,666 were acquired for the specific purpose of replacing old ones and were substituted for 7,377 machines. As those were years of increasing production the total capacity of the machines used for replacement was presumably at least equal to that of the machines scrapped (Weintraub, op. cit., p. 22).

⁴⁷ Exports in 1939 amounted to approximately 10 percent of the value of products of the industrial groups 'Electric Machinery' and 'Machinery (except Electrical)'.

⁴⁸ *Survey of Current Business*, March 1941, p. 11, Table 2.

⁴⁹ *Ibid.*, pp. 10, 11, Tables 1 and 3.

Table 7
Shipments of Selected Durable Equipment, Number of Units,
1929-1946

MONTHLY AVERAGE	Mechanical stokers Sales ^a	Industrial electric trucks & tractors Domestic Shipments ^b	Furnaces, elec- tric, indus- trial (1,000 kw.) ^c
1929	n.a.	160	n.a.
1930	n.a.	90	n.a.
1931	n.a.	44	n.a.
1932	n.a.	20	n.a.
1933	143	42	n.a.
1934	178	47	n.a.
1935	193	71	n.a.
1936	281	97	4.7
1937	274	145	4.1
1938	201	56	1.4
1939	261	76	3.6
1940	235	131	10.1
1941	307	236	15.4
1942	375	364	40.9
1943	507	357	13.1
1944	323	365	10.9
1945	349	302	8.7
1946	340	226	6.6
AVERAGE			
1925-29	n.a.	119	n.a.
1933-39	219	76	n.a.
1936-39	254	94	3.5
1940-46	348	283	15.1

Survey of Current Business, Supplement, 1942, p. 145; Supplement, 1947, p. 155.

n.a.: not available.

^a Classes 4 and 5, i.e., for large commercial and high pressure steam plants. The reporting manufacturers produced approximately 95 percent of the total value of output of the industry in prewar years; since then nearly 100 percent.

^b Data cover the entire industry. The series begins in 1925.

^c Sales, comprising 85 to 95 percent of total sales for industrial purposes.

comparison of compiled book values for intangibles would not be very meaningful in any event, since many companies wrote down their intangibles to zero during the 1930's.

The sharp drop in 'Miscellaneous assets' is due mainly to the fact that the returns of corporations became more complete with respect to the definite allocation of their types of assets.⁵⁰

As for the liabilities of manufacturing enterprises in 1929 and 1939, the amount for accounts and notes payable within one year decreased substantially, paralleling the decrease in

⁵⁰ Intangibles were included in 'Miscellaneous assets' in 1929.

receivables, while long term debt increased about 10 percent in current dollars. The net effect was a decrease in the ratio of receivables to payables, from 0.8 to 0.6. Had the 1929 data not been deconsolidated—or if figures in *Statistics of Income* are compared—it would seem as though accounts and notes payable within one year had decreased only slightly.

Net worth decreased about 13 percent between 1929 and 1939, when amounts in current dollars are compared. When 1929 figures are deflated for changes in the price level, the drop is only about 3 percent. A comparison based on figures for 1929, which are not deconsolidated and reclassified, would obviously be erroneous as the raw 1929 figures include the assets of mining and trading companies consolidated in the income tax returns of manufacturing corporations. Such a comparison would show a more substantial decrease in net worth.⁵¹

The aggregate market value of the stock of all manufacturing corporations cannot be ascertained. A limited sample study concerning the ratio of the market value of stock to the book value of the net worth of manufacturing companies in 1939 and 1946 showed that the ratio varies considerably as between types of company, depending on size, industry, age, dividend record, and other factors.

The price index of 365 industrial stocks was 132.7 in December 1929, 97.6 in December 1939, 106.4 in December 1944, and 128.9 in December 1946.⁵²

2 Balance Sheet Items, 1939, 1944, 1946

Generally all balance sheet items, in current dollars (except capital assets and 'Other investments' which rose less) rose substantially between the end of 1939 and the end of 1944. When figures are deflated and the special character of the book values

⁵¹ The findings regarding cash, marketable securities, receivables, and payables are in harmony, as far as trends go, with Koch's findings from his sample of large manufacturing corporations (*The Financing of Large Corporations, 1920-39*).

⁵² 1935-39:100. Standard-Poor's *Trade and Securities Statistics, Security Price Index Record* (1948 ed.), p. 84.

for capital assets and 'Other investments' is considered, the trends are more similar. By the end of 1946 all items (after deflation for the continued rise in prices) except inventories, capital assets, and net worth, which continued to rise, had apparently declined again to an intermediary position between the 1939 and the 1944 level.⁵³

Holdings of liquid assets by manufacturing enterprises as a percentage of total assets were considerably higher in 1944 than in 1939, but by 1946 had declined to the 1939 level (after deflation for changes in the price level).

The increase between 1939 and 1944 was especially marked in the holdings of cash and deposits in banks, and even more so in investments in government obligations. Large concerns put most of the increase in liquid assets into government obligations, the smaller ones into cash. The accrued income tax liability of large, but not of small, concerns was covered by holdings of marketable securities.⁵⁴ Demand deposits, and presumably the total of cash and bank deposits, continued to rise after 1944, reaching a peak in July 1945;⁵⁵ cash and bank deposits presumably declined to about \$12 billion at the end of 1946 (all in current dollars). Investments in government obligations declined from nearly \$12 billion (current) at the end of 1944 to presumably about \$8 billion at the end of 1946, paralleling the decrease in accrued taxes. The increase of notes and accounts receivable between 1939 and 1944 was somewhat milder, first because a considerable part of the 1944 output was sold to the federal government; secondly, because generally more cash purchases were made. Between 1944 and 1946 receivables presumably declined proportionately to sales. Trade credits mounted, it is true, despite the smaller sales, as larger amounts were going to civilians instead of government. On the

⁵³ Because of lack of data, 'Other investments' were assumed unchanged since 1944.

⁵⁴ F. C. Dirks, 'Wartime Financing of Manufacturing and Trade Concerns', *Federal Reserve Bulletin*, 1945, pp. 313-30; see his Table 8 for the increase in net working capital for all size groups in 1940-43.

⁵⁵ *Federal Reserve Bulletin*, 1947, p. 691, Table 4.

other hand, these increases were probably offset by payments due from the federal government.⁵⁶

Inventories were about one-third higher in 1944 than in 1939 (after deflation for changes in the price level). More than two-thirds of the increase between 1939 and 1943 was due to larger stocks of goods held by the war industries. Even so, inventories of nonwar industries were nearly 15 percent higher in 1943 than in 1939 (after deflation for changes in the price level) (Table 2). In both 1944 and 1945 there was a decrease of more than \$1 billion (after inventory valuation adjustment), due to the liquidation of war inventories.⁵⁷ During 1946 stocks were replenished with peacetime goods, so that inventories at the end of 1946 were about 40 percent higher than at the end of 1939 (in 1939 dollars). In the third quarter of 1946 inventories were approximately evenly distributed between durable and nondurable goods industries.⁵⁸

Book values of 'Other investments' increased about 22 percent (in current dollars) between 1939 and 1944, half of the increase occurring in 1944. Interest payments received by corporations, other than on government obligations, amounted to \$117 million. Dividend payments received in 1944 by corporations from domestic corporations amounted to \$394 million, from foreign corporations to \$92 million.⁵⁹ The latter amount, even in current dollars, was smaller than the corresponding amount for 1939; the decrease was due to war conditions. No dividend payments were received in 1944 from corporations in Germany, Japan, or enemy-occupied countries.

Tangible capital assets, gross, increased at least \$12 billion between 1939 and 1944 (Tables 1 and 4).⁶⁰ Total net capital

⁵⁶ See D. Stevens Wilson, 'Planned Capital Outlays and Financing', *Survey of Current Business*, July 1945, pp. 15 ff., at 17. Receivables of all business enterprises were estimated to have increased considerably in 1946 (*Federal Reserve Bulletin*, 1947, pp. 487-97).

⁵⁷ *Survey of Current Business*, July 1947, Supplement, p. 45, Table 33.

⁵⁸ *Federal Reserve Bulletin*, 1947, p. 490.

⁵⁹ Figures presented in *Statistics of Income* are not adjusted for the consolidated character of part of the returns.

⁶⁰ Additions to property account, in 1940-42 especially, were due also to transfers from surplus and idle property to active property (e.g., General Motors).

assets increased nearly 10 percent.⁶¹ The actual net increase in manufacturing plant and equipment was much larger. First, most new facilities were built with government funds, only part of which appeared on the balance sheets in 1944 or 1946.⁶² Private new industrial construction (excluding land and equipment) in 1940-44 amounted to only \$2 billion, while public new industrial construction amounted to \$7 billion.⁶³ Private expenditures on new manufacturing plant and equipment were about \$13 billion (Table 4); expenditures by the government were about \$14 billion (the latter between July 1940 and June 1945).⁶⁴ Approximately 75 percent of government expenditures went into privately operated plant and equipment, including plants operated on a fee basis by private concerns.

While some of these new facilities will be owned permanently by the federal government, others have proved to be of commercial value since the war. Contracts for the construction of such facilities contained an option for their subsequent purchase by the private operating concern. Sales of war production (manufacturing) facilities between VE-Day and June 30, 1947 amounted to \$1.7 billion in cost value, \$0.7 billion in terms of sales price. To this must be added sales to manufacturing enterprises of goods classified as 'Capital equipment and related items', amounting to \$300 million or more. These purchases seem to have been made at prices below current market prices. The process of surplus property disposal was not completed in

⁶¹ The proportion of cash and other current assets to depreciation reserves was more favorable than in 1939; this may indicate that part of the reserves had been accumulated in a real sense.

⁶² General Motors, for example, excluded from its capital assets plant and equipment used in producing war materials, supplied by, or for which the company was being reimbursed by United States, Canadian, or British government agencies. On December 31, 1946 it was custodian of plant facilities in the amount of \$88 million, i.e., 14 percent of the capital assets, net, appearing on its balance sheet.

⁶³ Bureau of Foreign and Domestic Commerce, 'Construction and Construction Materials', *Industry Report*, Statistical Supplement, May 1947, pp. 4 and 8.

⁶⁴ *Facilities Expansion, July, 1940-June, 1945* (Civilian Production Administration, Jan. 16, 1946), p. 10, Table 8.

June 1947, when more than \$2 billion worth (cost value) of manufacturing property remained to be disposed of. Although generally not or not easily convertible plant, these facilities must be kept in mind when appraising the manufacturing capacity of the country.⁶⁵

Secondly, some of the facilities constructed during the war by private companies were depreciated at a considerably higher rate than would have expressed the actual decline in commercial value.⁶⁶ Additions to manufacturing plant and facilities constructed or acquired under certificates of necessity amounted to \$4.4 billion by June 30, 1945,⁶⁷ i.e., about 30 percent of total private expenditures on manufacturing plant and equipment since 1940. This overstatement of depreciation tends to be offset by two factors: the Bureau of Internal Revenue may not have fully recognized the increased activity factor with respect to equipment not specially procured for defense production; ⁶⁸ annual additions to depreciation reserves of prewar assets are understated, or rather insufficient to cover replacement costs.⁶⁹

Most of the new expenditures on plant and equipment during the war were in the metal, munitions, chemical, ship-building, and aircraft construction industries, which largely continue to use the equipment. Differences between the various industries are due also to the different paces of technological advance.

Private expenditures for new manufacturing plant and equipment in 1945 and 1946 were more than \$9 billion (Table

⁶⁵ J. B. Epstein, 'War Surplus Disposals', *Survey of Current Business*, Oct. 1947, p. 15, Tables 6 and 7; also, *Federal Reserve Bulletin*, 1947, pp. 487-97.

⁶⁶ In some cases adjustments of wartime amortization resulted in a net increase in capital assets, net, of as much as 8 percent; see, for example, Douglas Aircraft Company, *Annual Report, 1945*, p. 13.

⁶⁷ Civilian Production Administration, 'Facilities Expansion', Jan. 16, 1946, p. 12.

⁶⁸ A maximum increase of 50 percent was granted (Kimmel, p. 32).

⁶⁹ George Terborgh estimates that of \$4 billion reported by corporations as depreciation for tax purposes, \$3 billion applies to prewar assets, and that annual depreciation of these assets is understated by \$1.5 billion (NICB, *Studies in Business Policy*, 27, p. 17).

4). Private industrial construction (excluding land and equipment) cost \$2.3 billion.⁷⁰

The increase in book values of net capital assets 1939-46 was about 20 percent presumably (Table 1, line 6). In evaluating this rise two factors in addition to those outlined in the preceding pages should be borne in mind:

The ratio of equipment expenditures to total new plant and equipment outlays continued to rise. In this way, total expenditures for plant and equipment have become even more efficient per dollar value of investment than before the war.⁷¹ During the war and immediately after, numerous and highly important improvements in machinery and production techniques were made. The WPB's Office of Production Research and Development listed 800 new methods or improvements that it disseminated to manufacturers.⁷² The significance of these changes and improvements for the value of the total stock, including the part acquired before the war, is difficult to appraise. The decisive question seems to be whether the majority of the new methods introduced permit utilization of the old stock, thereby rendering it more efficient, or whether, on the contrary, the new inventions made obsolete a large part of the prewar assets. In the opinion of tool engineers, for example, the tools that helped the United States win World War II were already obsolete by March 1948.⁷³

⁷⁰ Bureau of Foreign and Domestic Commerce, *op. cit.*, p. 4.

⁷¹ For manufacturing and mining the ratio was 64.1 percent in 1937-39 and 72.4 percent in 1945-47 (*Survey of Current Business*, April 1948, p. 14).

⁷² See Walker, 'American Productivity', *Fortune*, Jan. 1946, pp. 150-6, Feb. 1946, pp. 131-3, for a summary of industrially significant inventions.

⁷³ *New York Times*, March 16, 1948, p. 41. For an accountant's view of the matter, see W. H. Franklin, 'Productivity in Relation to Costs', *NACA Bulletin*, Vol. 28, No. 14 (March 15, 1947), pp. 859-68, at pp. 862-3: "Even though accountants have tended to use what might be considered high depreciation rates, I do not feel they have been in many cases nearly high enough. We are all of us too apt to look only at the physical life and discount the vastly more important probability, if not certainty, of early obsolescence. It is possible that many facilities are in use today, even though obsolete, because a sufficiently high enough depreciation rate has not been used."

For the opposite view, see Dirks, 'Postwar Capital Formation and Its Financing in Manufacturing and Mining Industries', Federal Reserve Board, *Postwar*

The 20 percent rise in net book values between the end of 1939 and 1946 compares with indicators of productive capacity as follows:

- 1) The generating capacity of industrial establishments for own use had already risen about 20 percent in 1945,⁷⁴ before expenditures of \$6 billion on new manufacturing plant and equipment in 1946 (Table 4).
- 2) Output per manhour increased about 5 percent on the average for all manufacturing industries between 1939 and 1946.⁷⁵ The index of manufacturing production rose as much as 62 percent, it is true. But this rise was accompanied by a more than 40 percent increase in the labor force and a lengthening of the average work week from 37.7 to 40.4 hours.

Especially as concerns 1939-46 it is doubtful that output per manhour is an appropriate index for the productivity of total capital stock. Changes in the composition of the labor force and in labor practices, as well as the accuracy of the index may affect the picture.⁷⁶ Furthermore, surplus property which was being sold to manufacturing industries during 1946 without (or without fully) participating in the manufacturing process in that year is not included in the index. The same is true, of course, for plant facilities under construction during 1946.

According to a survey by McGraw-Hill, manufacturing companies had completed 64 percent of their postwar expansion

Economic Studies 5, p. 11: "More or less offsetting the price consideration is the possibility that the increased technological effectiveness of new materials and types of equipment in many lines may have compensated for changes in the dollar cost of like amounts of physical capacity."

⁷⁴ From 10.6 million kilowatts in 1939 to 12.7 million in 1945 (*Statistical Abstract of the United States, 1946*, p. 814, Table 931). These data include only establishments with capacities of 100 kilowatts or more. In view of the increase in the importance of small establishments in the 1940's, the change was presumably much larger.

⁷⁵ Output per manhour in the rayon industry increased as much as 51 percent between 1939 and 1945; in the ice cream industry 53 percent; in several industries it fell (BLS, *Productivity and Unit Labor Cost in Selected Manufacturing Industries, 1939-1945*, May 1946, pp. 9, 7).

⁷⁶ See Frank R. Garfield, 'Measurement of Industrial Production Since 1939', *Journal of the American Statistical Association*, Vol. 39 (1944), pp. 439-54, and the literature he cites on p. 439, n. 1.

program by 1948. Under the program as a whole, capacity was expected to be 52 percent higher than in 1939.⁷⁷

3) At the beginning of 1945, 70 percent more machine tools were used by private metal working industries and owned by the federal government than at the beginning of 1940.⁷⁸ Tools over ten years old declined from 72 percent of the total number of tools in 1940 to 38 percent in 1945 (if tools owned by the federal government are included); 54 percent (if tools owned by the federal government are not included). Production equipment other than machine tools increased 55 percent (including equipment owned by the federal government). In 1940, 65 percent of the equipment was over 10 years old; in 1945, only 39 percent (60 percent if equipment owned by the federal government is not included).⁷⁹

The doubling of accounts payable between 1939 and 1944 paralleled the increase in production (in current dollars). The ratio of receivables to payables (accounts payable, bonds, and notes payable) was about the same in 1944 as in 1929 (0.8). Bonds, notes, mortgages payable with a maturity of less than one year rose more than those with a maturity of more than one year. If the higher price level of 1944 is taken into consideration, the two items together decreased slightly since 1939. This, of course, reflects the stronger financial position of manufacturing enterprises in 1944 due to high wartime profits, part of which had been used to retire debt in 1942 and 1943. Between 1944 and 1946 accounts payable presumably decreased because of the smaller volume of business. Bonds, notes, and mortgages payable amounted to about \$10 billion in 1944 and 1946.⁸⁰ They were at a lower level, in dollars of constant purchasing power, in 1946 than in 1939. All bank loans (by members of the Federal Reserve System) outstanding on November 20, 1946 from

⁷⁷ *Business Week*, Feb. 7, 1948, pp. 65-72.

⁷⁸ More than a third of the total number of machine tools in place in 1945 were owned by the federal government.

⁷⁹ *American Machinist*, July 5, 1945, pp. 97-112; Dec. 6, 1945, pp. 105-20. Of course, the decade figure is not a perfect measure of obsolescence.

⁸⁰ Wilson, p. 19.

Table 8
 Current Assets and Liabilities of 812 Registrants with the SEC
 Classified as 'Manufacturing', 1943, 1944, 1946
 (millions of current dollars)

	1943	1944	1946
Cash on hand & in banks	5,940	5,832	5,264
U.S. tax & savings notes	2,731	2,751	1,096
Other U.S. govt. securities	2,680	3,734	3,007
Other marketable securities	173	175	136
Receivables from U.S. govt.	3,761	3,536	328
Other notes & accounts receivable	3,160	3,201	4,399
Inventories	9,685	9,551	11,596
Other current assets	100	102	413
Total current assets	28,230	28,882	26,212
Notes payable to banks	1,000	1,219	875
Advances & prepayments, U.S. govt.	1,715	1,455	73
Other trade notes & accounts payable	3,049	3,133	3,035
Federal income taxes accrued	5,694	5,328	2,389
Other taxes accrued	757	764	509
Renegotiation provisions	956	561	61
Other current liabilities	1,323	1,377	1,427
Total current liabilities	14,494	13,837	8,369

SEC, *Statistical Series*, Supplement to Release 775, June 26, 1947, Table 2.

manufacturing enterprises amounted to approximately \$5 billion; loans with an initial maturity of more than one year to about \$2 billion. To this must be added nearly half a billion for loans by nonmember banks.⁸¹

'Other liabilities' rose from \$2.2 billion in 1939 to almost \$15 billion (current) in 1944, and presumably amounted to about \$8 billion (current) in 1946. These sharp fluctuations are due to three factors:

1) The largest item embraced in 'Other liabilities' during the war was accrued income tax liabilities, estimated to be more than \$10 billion at the end of fiscal 1944.⁸² Federal income taxes, accrued, of 812 manufacturing corporations registered with the Securities and Exchange Commission amounted to \$5.3 billion at the end of 1944, declining to \$2.4 billion by the end of 1946 (Table 8).

⁸¹ For details, see Duncan Holthausen, 'Term Lending to Business by Commercial Banks in 1946', *Federal Reserve Bulletin*, 1947, pp. 498-517, at 504; Charles Schmidt, 'Member Bank Loans to Small Business', *ibid.*, pp. 963-78, at 965.

⁸² Wilson, p. 18.

2) 'Provisions for war and postwar adjustments' also helped to swell 'Other liabilities' in 1944 as well as in the other war years. Some companies, e.g., E. I. du Pont de Nemours, doubled their reserves for contingencies between 1939 and 1944, and kept them at a high level through 1946. Other companies, e.g., Douglas Aircraft, restored substantial amounts that had been booked under 'contingencies' during the war to surplus in 1946.

Reserves for contingencies during the war were increased partly because of the general uncertainty regarding the postwar situation, partly for special reasons. For example, Eastman Kodak and many other companies charged investments in subsidiaries and branches in war areas to reserve for contingencies. These amounts were at least partly recovered by the end of 1946.

Higher replacement costs of capital assets were another reason for increasing reserves. According to a survey of business practices by the National Industrial Conference Board, "one out of seven companies has established special reserves out of earnings after taxes to provide at least in part for the higher cost of replacement".⁸³ Replacement reserves, however, have not been recognized as deductible by the Bureau of Internal Revenue.⁸⁴

3) Government contract advances and liabilities under renegotiation agreements were substantial in 1944, but had been nearly eliminated by 1946 (Table 8).

Net worth increased from \$46 billion in 1939 to \$67 billion in 1944 and to nearly \$73 billion in 1946 (\$60 and \$61 billion after deflation of the balance sheet items). The increase since 1944 is due partly to the methods of accounting, according to which exceptionally large amounts were booked under 'con-

⁸³ *Conference Board Business Record*, Aug. 1947, p. 231. See also W. A. Cooper, 'An Integrated Plan for Postwar Reserve Allowances', *Journal of Accountancy*, Vol. 76 (1943), p. 192.

⁸⁴ Note the distinction between valuation reserves and surplus reserves made in 'Postwar Expenses Related to Wartime Income', *Revenue Revision of 1943*, Hearings before the Committee on Ways and Means, 78th Cong., 1st Sess., p. 135.

tingencies' during the war and restored to surplus in 1946.⁸⁵ To this extent, net worth is understated for 1944.⁸⁶

⁸⁵ In view of Section 102 of the Internal Revenue Code, some concerns have refrained from building up surplus rapidly.

⁸⁶ For data by asset size groups, and durable and nondurable goods industries, see Dirks, *Federal Reserve Bulletin*, 1945, pp. 313-30; A. R. Koch and E. J. Stockwell, 'The Postwar Financial Position of Business', *ibid.*, 1946, pp. 1335-44; Warner and Koch, 'Financial Developments among Large Manufacturing Corporations, 1945', *ibid.*, pp. 1106-14. See also A. R. Koch and C. H. Schmidt, 'Financial Position of Manufacturing and Trade in Relation to Size and Profitability, 1946', *ibid.*, 1947, pp. 1091-102.

APPENDIX

A *Affiliations with Subsidiaries*

Corporations owning nearly two-thirds of total assets of all manufacturing corporations had affiliations with subsidiaries in 1929 that made it advisable to file a consolidated return for the affiliated group. In 1939 the privilege of filing a consolidated return was not open to not fully consolidated groups of manufacturing corporations.

The degree and character of the consolidation of registered manufacturing corporations at the end of the 1930's can be gathered to some extent from balance sheet data based largely on consolidated statements and published by the Securities and Exchange Commission. In 1937 only 293 of 1,021 registrants in the 'manufacturing' group had no subsidiaries (Table 9). It has been the practice of the SEC to accept consolidated statements whenever submitted by registrants.¹

For 1937 alone is information available on the number, character—domestic or foreign, active or inactive, consolidated or not—and distribution of subsidiaries of registrants with the SEC in 'manufacturing' and all its subgroups. For other years similar information is available only for individual registrants.

¹ *Statistics of American Listed Corporations*, Part 2, pp. 21-2.

Table 9
Number and Types of Subsidiaries, 1937
(Based upon statements of 1,961 registrants with the SEC classified
as 'manufacturing')

Number of Registrants ^a	
Total	1,021
Without subsidiaries	293
With subsidiaries	
No active subsidiaries	67
1-10 active subsidiaries	542
11-20 active subsidiaries	52
21 or more active subsidiaries	67 ^b
Number of Subsidiaries ^c	
Total	7,804
Domestic and foreign consolidated	5,335
Domestic and foreign active	6,103
Domestic, total	5,763
Of which 95% & over are controlled ^d	4,395
Foreign, total	2,041
Of which 95% & over are controlled ^d	1,534
Domestic inactive, total	1,425
Of which 95% & over are controlled ^d	1,241

SEC, *Statistics of American Listed Corporations*, Part 1, pp. 160-1, 163-4.

^a Excluding registrants that are consolidated or unconsolidated subsidiaries of other registrants. Consolidated subsidiaries are those in which the registrant owns directly or indirectly more than 50 percent of the voting stock and that were included in the registrant's consolidated statements. Subsidiary refers to an affiliate controlled by the registrant directly, or indirectly through one or more intermediaries.

^b Steadily declining numbers in the brackets 21-30, 31-50, 51-100, 101 and more.

^c Including registrants that are consolidated or unconsolidated subsidiaries of other registrants.

^d 95 percent and over are controlled by intermediate parent. The remainder is less than 95 percent controlled or the percentage of control was not indicated in the report. The degree of control by the immediate parent is measured by the percentage of voting power represented by securities of the subsidiary owned by the immediate controlling parent.

The figures for 1937 may give an approximate picture of the situation in 1939. The increase of investments in affiliates from 3.2 percent of net worth in 1937 to 4 percent in 1939 may indicate a trend toward expansion and stronger consolidation. However, it may be due partly to a change in accounting practice as a result of war conditions: some companies did not consolidate various foreign subsidiaries that had been consolidated in prior years.²

² *Ibid.*, p. 7, n. 1.

More than a fourth of all subsidiaries were incorporated abroad. Most inactive subsidiaries were domestic. The average number per registrant in the manufacturing group reporting active subsidiaries was 9.2. The smallest registrants, i.e., with assets of less than \$1 million, averaged only 2.4 active subsidiaries per registrant for all industries; the corresponding figure for registrants with assets of \$500 million and over was 72.6.³

Direct subsidiaries—active and inactive, domestic and foreign—represented 74 percent of the total in 'manufacturing', the remainder being two or more steps removed; the corresponding percentage for domestic active subsidiaries was 78.5. For all industries, registrants with assets of less than \$1 million directly controlled 93 percent of the total number of their subsidiaries, while the corresponding percentage for registrants with assets of \$500 million and over was 52.⁴

The total assets of the 1,030 registered companies (including their consolidated subsidiaries) that were classified by the SEC statistics as manufacturing, amounted to 58 percent of the assets of all corporations classified as manufacturing in *Statistics of Income for 1939*. If the SEC data are adjusted to allow for the overstatement due to the different industrial classification and for the consolidated character of the statements, this percentage is reduced to about 51. The adjustment is based on the assumption that total assets are decreased 12 percent after deconsolidation and reclassification, a percentage computed for the corporations that submitted consolidated returns for 1933 (Table 10).

At the end of 1943 the total assets of 1,087 corporations registered with the SEC amounted to 52.6 percent of the total assets of all corporations classified as manufacturing in *Statistics of Income for 1943*.⁵ After deconsolidation and reclassifica-

³ *Statistics of American Listed Corporations*, Part 1, presents data also on subsidiaries by asset size groups of registrants, but not classified by industry groups.

⁴ *Ibid.*, pp. 29-30, 160-1, 163, 164.

⁵ Comparable data for 1944 have not been published by the SEC.

Table 10: Effect of Deconsolidation in 1934 on Manufacturing Corporations (millions of dollars)

	RETURNS CONSOLIDATED IN 1933				RETURNS NOT CONSOLIDATED IN 1933				Effect of Deconsolidation as % of (12)
	1933 ^a (1)	1934 ^b (2)	Change 1933-34 as % of (3)	1934 ^c (5)	Change 1933-34 (4)	1933 ^d (8)	Change 1933-34 (9)	1934 ^e (10)	
Cash	1,518	1,613	95	6.25	-270	1,567	191	12.19	-24.1
Notes & acct. rec.	3,510	6,969	3,459	98.55	764	3,255	-46	-1.41	23.2
Inventories	3,792	4,062	270	7.12	-22	4,292	257	5.99	-7.6
Investments, tax-exempt	710	696	-14	-1.97	-193	1,086	-187	-14.69	-25.2
Investments, other	6,681	12,601	5,920	88.62	-1,374	2,817	-70	-2.48	-18.1
Capital assets	14,403	13,136	-1,267	-8.79	-3,705	9,982	-229	-2.29	-16.9
Other assets	1,712	2,334	621	36.27	-218	2,241	-129	-5.76	-7.0
Total assets	32,326	41,411	9,084	28.11	-5,019	25,427	-212	-0.83	-11.6
Notes & acct. pay.	2,870	6,797	3,927	135.1	1,042	2,852	3	0.105	36.2
Bonds, mortgages	3,496	3,674	178	5.1	-919	1,525	-77	-5.05	-21.2
Other liabilities	2,103	2,802	699	33.2	-245	1,564	1,721	10.04	-21.7
Capital stock	16,545	19,798	3,253	19.7	-3,163	13,853	13,549	-2.19	-15.2
Surplus less deficit	7,311	8,340	1,029	14.1	-1,732	5,632	10	0.18	-11.6
Total liabilities	32,326	41,411	9,084	28.11	-5,019	25,427	-212	-0.83	-11.6

^a Consolidated returns for corporations submitting balance sheets and reporting on a consolidated basis in 1933, by their 1933 industrial classification; *Statistics of Income for 1934*, Part 2, Table 11, p. 146.

^b Unconsolidated returns for corporations reporting on a consolidated basis in 1933, by their 1933 industrial classification; *ibid.*, Table 14, p. 186.

^c Unconsolidated returns for corporations reporting on a consolidated basis in 1933, by their 1934 industrial classification, *ibid.*, Table 12, p. 170.

^d Not needed for computing col. 12.

^e Unconsolidated returns for corporations not reporting on a consolidated basis in 1933, by their 1933 industrial classification, *ibid.*, Table 11, p. 154.

^f Unconsolidated returns for corporations not reporting on a consolidated basis in 1933, by their 1934 industrial classification, *ibid.*, Table 12, p. 170.

Table 12, pp. 162-3. 'Unconsolidated' in notes b-e, except for fiscal year companies.

tion of the SEC data and the consolidated data in *Statistics of Income*, the percentage is reduced to about 47.⁶

B *Relative Importance of Corporate and Noncorporate Enterprises*

Noncorporate enterprises decreased in relative importance between 1929 and 1939. In 1929 noncorporate enterprises accounted for 8.1 percent of the total value of product of manufacturing enterprises; in 1939 for only 7.4 percent. Inventories held by noncorporate enterprises similarly declined about 1 percent, from nearly 7 percent at the end of 1929 to nearly 6 percent of total inventories at the end of 1939.⁷

Data on the value of product of noncorporate enterprises are not available for years since 1939. Operating manufacturing firms increased from more than 214,000 at the end of 1939 (236,000 at the end of 1944) to more than 305,000 at the end of 1946 (Table 11) apparently because of the growth of the noncorporate sector.⁸

⁶ Comparisons of SEC and *Statistics of Income* balance sheet data for the manufacturing group are rather hazardous, mainly because of differences in classification arising from the use of consolidated statements in the SEC statistics, on the one hand, and the use of unconsolidated statements in *Statistics of Income for 1939* and the small importance of consolidated statements submitted to the Bureau of Internal Revenue for 1944, on the other. In general, the end product or operation (determined in most cases by the principal source of gross revenue) was the basis of industrial classification for the SEC data. This resulted in an understatement of the number of companies engaged in certain primary activities. For example, many of the leading metal mining companies appear among manufacturing industries. Furthermore, since the unit of classification was the company and its consolidated subsidiaries, several companies generally reported as holding companies whose assets consisted mainly of securities of operating subsidiaries were classified as operating companies (*Statistics of American Listed Corporations*, Part 1, pp. 6-7; Part 2, pp. 7-8). These methods of industrial classification and the consolidated character of the statements submitted to the SEC lead to an overstatement of net assets, total assets, and all other balance sheet items except receivables and payables.

⁷ The percentage for 1929 in Table 11 was derived from consolidated data. The percentage given here was computed after deconsolidation.

⁸ The number of manufacturing corporations filing income tax returns declined from 86,183 in 1939 to 76,619 in 1944.

Table 11
Corporate and Noncorporate Manufacturing Enterprises,
1929, 1939, 1944, 1946
(millions of current dollars)

	1929	1939	1944	1946
1 Corporate profits before taxes	5,038	3,712	13,741	10,858
2 Income of unincorporated enterprises	512	378	1,536	1,906
3 Line 2 as % of line 1 plus 2	9.2	9.2	10.1	14.9
4 Inventories, noncorporate as % of total	6.4	5.8	n.a.	n.a.
5 Value of product, noncorporate as % of total	8.1	7.4	n.a.	n.a.
6 No. of operating business firms (000)	211.0 ^a	214.2 ^b	236.2 ^b	305.1 ^c
7 No. of active proprietors of unincorporated enterprises (000)	133	124	133	164

n.a.: not available.

^a Number of establishments or groups of establishments under the same management and in the same city, classified as manufacturing by the Census of 1929.

^b September 30.

^c December 31.

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1-2 *Survey of Current Business*, July 1947, Supplement, Tables 16-17.

4 Computed from Table 14 (1929 and 1939).

5 *Census of Manufactures, 1939*, I, 228-30.

6 Col. 1: *ibid.*, 1929, I, 95, Table 2; col. 2 and 3: *Survey of Current Business*, Jan. 1947, p. 18, Table 6; col. 4: *ibid.*, Sept. 1947, p. S-3.

7 *Economic Almanac for 1948*, p. 77.

Demand deposits owned by noncorporate manufacturing and mining enterprises increased from about 9 percent of demand deposits owned by both corporate and noncorporate enterprises at the end of January 1945 to 10.5 percent on February 26, 1947.⁹

C Method of Computations

I Data for All Corporations

Statistics of Income presents balance sheet data for all corporations submitting complete balance sheet data. These data were raised to comprise *all* active corporations on the basis of the ratio of "taxes paid other than income tax" by all corporations divided by "taxes paid other than income tax" by balance sheet corporations.

⁹ *Federal Reserve Bulletin*, 1945, p. 332; *ibid.*, 1947, p. 690.

For 1929 data on "taxes paid . . ." by balance sheet corporations are not given in *Statistics of Income*. Hence the ratio prevailing in 1931, the first year for which such information is available, was projected back to 1929.

The ratio was 1.0083 in 1931, 1.0088 in 1939, and 1.008 in 1944. In other words, the compiled balance sheet data in *Statistics of Income* did not have to be raised by more than about 1 percent, so that any deficiencies in the method are presumably irrelevant.¹⁰

In any event, this method seems preferable—for the purposes of this study—to raising balance sheet data to cover all corporations on the basis of data on gross sales; for the ratio of gross sales to total assets is larger for small corporations, which do not submit balance sheets, than for others. Even on the basis of gross sales, the compiled balance sheet data in *Statistics of Income* would have to be raised only slightly more than 1 percent.¹¹

In computing net changes in inventories, Kuznets raised the figures for inventories held by corporations submitting balance sheets to comprise all corporations on the basis of data for costs of goods sold.¹² For computing inventories this method may be preferable to the one applied uniformly to *all* balance sheet items in this study. Kuznets' estimate of inventories held by all manufacturing corporations at the end of 1929 differs from ours because (a) a different ratio was used and (b) Kuznets' estimate is the sum of the estimates for each minor industrial group.¹³

¹⁰ The same ratio was applied to all balance sheet items although the distribution of assets and liabilities of small corporations not submitting complete balance sheet data may not be the same as that of the others, on the average. Also, figures on "taxes paid other than income tax" in *Statistics of Income* are slightly incomplete; see C. J. Hynning, *Taxation of Corporate Enterprise* (TNEC Monograph 9, 1941), p. 135.

¹¹ Compare C. A. Bliss, *The Structure of Manufacturing Production* (NBER, 1939), App. VI, pp. 204-6.

¹² *Commodity Flow and Capital Formation* (NBER, 1938), I, Table VII-2, Note A.

¹³ Kuznets' 1929 figure (in current prices) for inventories held by manufacturing corporations is about 0.5 percent larger than our estimate.

2 Changes in Industrial Classification

The industrial classification in *Statistics of Income* was not changed between 1939 and 1944 in any way that would have affected the entire 'manufacturing' group, but several industrial activities were shifted from 'manufacturing' to other groups, and vice versa, between 1937 and 1938.¹⁴ The sole major change was the transfer of 'ship and boat building' from 'construction' to 'manufacturing.' The gross income of corporations classified under 'ship and boat building' in 1929 was computed as a percentage of the gross income of all manufacturing corporations and this percentage (0.15 percent) added to the balance sheet data for all corporations classified as 'manufacturing' in 1929.¹⁵

3 Deconsolidation and Reclassification of the Data for 1929 and 1944

In the middle of the decade 1929-39 the nature of the statistical data available changed fundamentally because of the withdrawal, in 1934, of the privilege enjoyed by corporations under certain conditions to file consolidated income tax returns.

¹⁴ Industrial activities not included in 'manufacturing' in 1929, but in 1938 and the following years: salt (except mining of rock salt), logging, publishing directories and time tables, natural ice, retreading tires, ship and boat building.

Industrial activities included in 1929, but not in 1938 and the following years: roasting and shelling nuts, repairing of machinery, mineral and spring water bottling, armature rewinding, welding, blocking and renovating hats, publishers' representatives (*Statistics of Income for 1938*, Part 2, pp. 243 ff.).

No data are presented on these activities in *Statistics of Income* or the *Census of Manufactures*. According to the *Census of Manufactures, 1929*, the value of product of corporate enterprises classified under 'Salt, obtained by mining or evaporation' was only about 0.05 percent of the total corporate product.

¹⁵ Instead of computing the gross income of corporations classified under 'ship and boat building' as a percentage of the gross income of all manufacturing corporations, it could be computed as a percentage of the gross income of the 'construction' group; then the balance sheet data of corporations engaged in ship and boat building could be estimated on the basis of the balance sheet data for 'construction'. The difference in the amounts for total assets of 'manufacturing' as defined in 1939 is negligible. For other balance sheet items the differences are somewhat larger.

Subsidiaries that had until then been unavoidably classified with the parent corporation, although actually engaged in differently classified lines of business, were now classified separately. The problem was to find the percentages that had to be deducted from or added to the otherwise adjusted balance sheet data of manufacturing corporations in 1929 to make the 1929 figures comparable with the 1939 figures. This entailed, among other things, use of figures for 1929 adjusted to represent a situation as if the privilege of filing consolidated returns had not existed in 1929.

For 1933 and 1934 separate data are available for corporations that did and did not file consolidated returns in 1933 (Table 10). The percentage changes in the balance sheet data for 1933 due to the deconsolidation and the ensuing industrial reclassification of subsidiaries were estimated after deducting changes caused by economic factors (temporal changes) between December 31, 1933 and December 31, 1934. It was assumed here, in the absence of data to the contrary, that purely temporal changes affected corporations filing and not filing consolidated returns in the same way. For example, it was assumed that 'investments, other' of both corporations filing and not filing consolidated returns would have decreased 2.48 percent (Table 10, col. 11), the amount of the temporal change between 1933 and 1934. 'Investments, other' of corporations filing consolidated returns in 1933 decreased 20.57 percent (col. 7), because of temporal changes, deconsolidation, and reclassification. The difference between 20.57 and 2.48 percent, or 18.1 percent (col. 12) is consequently the decrease that can be attributed to deconsolidation and reclassification.

For 'cash', 'inventories', 'investments, tax exempt', and 'capital assets', it was not considered necessary to resort to the assumption explained in the preceding paragraph. It is believed that deconsolidation as such (without industrial reclassification) did not affect these items, and that the temporal changes are therefore directly expressed by columns 3 and 4.¹⁰

¹⁰ Total assets were computed as the sum of all assets, and net worth as a residual.

Table 10, column 12, presents the approximate percentage changes due to deconsolidation and reclassification in 1933, after temporal changes were taken into account.¹⁷ In applying these percentage changes to 1929 data, the following facts must be kept in mind:

a) Fewer consolidated returns were filed beginning in 1932 when higher income tax rates were applicable to consolidated returns (Table 12).¹⁸

b) Mergers and acquisitions occurred in manufacturing for various reasons between 1929 and 1933 (Table 3). Some were presumably prompted by the discontinuation of the privilege of filing consolidated returns. For these reasons the relative size of the segment of manufacturing corporations that filed consolidated returns declined from 63.3 percent in 1929 to 54.2 percent in 1933, in terms of "taxes paid except income tax". Consequently, the percentage changes due to deconsolidation and reclassification found for the corporations that

¹⁷ Because of the nature of the data, these percentages are somewhat smaller than they would be if deconsolidation in 1934 had been complete. Fiscal-year companies were permitted to file consolidated returns in computing their 1934 income tax, and the new rule applied to them only from 1935 on. Consequently, the data for 1934 in Table 10 for corporations that had filed consolidated returns for 1933 include consolidated returns for 1934 by corporations with fiscal years ended before December 31, 1934. The gross income of manufacturing corporations that filed consolidated returns for 1934 was 5.9 percent of the gross income of all manufacturing corporations. From these data we cannot estimate precisely the effect deconsolidation would have on balance sheet data. If data for 1935 were available comparable to those in Table 10 for 1934, the percentage changes due to deconsolidation and reclassification would be slightly larger than those in Table 10, col. 12 (for total assets presumably -13 instead of -11.6 percent). For the entire 'manufacturing' group the difference is negligible.

To the extent that mergers occurred in 1933-34 between corporations that took advantage of the privilege of filing a consolidated return for 1933, the comparison of 1933 and 1934 data in *Statistics of Income for 1934* (Table 10) does not show as big a change as it would if all corporations had switched to filing deconsolidated returns. However, no suitable data on mergers for manufacturing corporations between 1933 and 1934 seem to be available. Mergers and acquisitions in manufacturing and mining were fewer in 1934 than in any year 1929-33 (See Table 3).

¹⁸ Additional tax of .75 percent for 1932 and 1933, Revenue Act of 1932, Sec. 141 (c); 1 percent, National Industrial Recovery Act 1933, Sec. 217 (e).

Table 12
Consolidated Returns, Manufacturing Corporations,
1929-34, 1942, 1944

	1929	1930	1931	1932	1933	1934	1942	1944
Gross income reported on consolidated returns as % of total gross income reported on all returns	57.2	60.0	56.7	49.2	46.3	5.9	12.0 ^a	15.0 ^a
Assets of corporations filing consolidated returns as % of assets of all corporations ^b	n.a.	n.a.	n.a.	n.a.	56.0	n.a.	n.a.	n.a.
'Taxes paid . . .' reported on consolidated returns as % of 'Taxes paid . . .' reported on all returns	63.3	n.a.	n.a.	n.a.	54.2	n.a.	n.a.	n.a.

Statistics of Income.

n.a.: not available.

^a Total compiled receipts reported on consolidated returns as percentage of total compiled receipts reported on all returns. Gross income is smaller by the amount of wholly tax-exempt interest.

^b Submitting complete balance sheet data.

filed consolidated returns for 1933 were applied to 63.3 percent of the total balance sheet data for 1929.¹⁹

The following assumption, which apparently cannot be verified, must be made when applying the changes caused by deconsolidation in 1934 to the percentage of consolidated returns in 1929: as a whole, the corporations that filed consolidated returns in 1929 and that merged between 1929 and 1933 had a distribution of assets, affiliations with trade and mining subsidiaries, and financial intercorporate ties that paralleled the pattern of the entire group of corporations filing consolidated returns. If, for example, the corporations that filed consolidated returns for 1929 and that subsequently merged had larger subsidiaries engaged in mining than corporations that subsequently did not merge, the decrease in assets due to the fictitious deconsolidation and reclassification would be larger than appears from our computations.

¹⁹ No balance sheet data, but only income data of corporations submitting consolidated returns, are presented in *Statistics of Income for 1929*. A comparison of the percentage of "taxes paid . . ." by corporations filing consolidated returns (54.2) with the percentage of total assets owned by such corporations in 1933 (56.0), the only year when such a comparison is possible, shows that "taxes paid . . ." is a fairly adequate measure (see Table 12).

Mergers in 1934-39 also would have to be taken into account to make the comparison between 1929 and 1939 exact. The balance sheet data for 1939 would have to be deconsolidated to the extent of such mergers. While the data are insufficient for making such an adjustment, we may conclude that mergers in 1934-39 were not of such a magnitude as to affect appreciably the validity of our estimates.²⁰ The omission of the adjustment of 1939 data tends to be balanced, with respect to the final comparison of 1929 and 1939 data, by two errors in the other direction: (a) A slight underestimate of the effects of the fictitious deconsolidation in 1929. We assumed that the ratio of assets owned by corporations filing consolidated returns in 1929 to all corporations equals the ratio of "taxes paid . . ." by them to "taxes paid . . ." by all corporations. (b) An underestimate of the effects of deconsolidation in 1934 on two counts: fiscal year companies still took advantage of the privilege of filing consolidated returns in 1934, and any mergers that may have occurred between 1933 and 1934 had to be neglected.

Summarizing the effects of this fictitious deconsolidation and reclassification of the 1929 data it can be said that net worth, total assets, and all other balance sheet items except receivables and payables became smaller in the process. The two exceptions became substantially larger (14.7 and 22.8 percent). The decreases were especially marked for cash, tax exempt investments, bonds and mortgages, and 'other liabilities'.²¹

²⁰ Mergers and acquisitions in manufacturing and mining (excluding mergers with subsidiaries) during 1934-39 were fewer than half those during 1930-33. Similarly, the increases in investments (without mergers) in subsidiaries and affiliates of a sample of manufacturing corporations in 1934-39 were about half of the corresponding figure for 1930-33, as shown in Table 3. Little change in the relations between manufacturing corporations and their subsidiaries also seems to follow from the compiled balance sheet data of 892 registrants with the SEC 1935-39. The percentage of the net worth of the registrants that was invested in nonconsolidated affiliates was almost the same in 1935 and 1939 (4.2 and 4 percent respectively). See *Statistics of American Listed Corporations*, Part 2, Tables 5 and 6.

²¹ Compare W. L. Crum, *Corporate Size and Earning Power* (Harvard University Press, 1939), pp. 359 ff. The decrease in inventories is slightly larger, of course, when 1929 data are deconsolidated than the discrepancy between the two amounts for inventories in 1934, presented by W. D. Hance, *Survey of Current*

From 1935 to 1941 manufacturing corporations and the corporations closely affiliated with them were not permitted to file a single consolidated return (unless they were fully consolidated), while certain types of corporation did enjoy this privilege.²² The privilege was extended to all affiliated corporations for taxable years beginning after December 31, 1941, under certain conditions regarding their connection through stock ownership with a common parent corporation.

Thus the balance sheet data in *Statistics of Income for 1944* are in part based on consolidated balance sheets. Consolidated returns played a smaller role in 1944 than in 1929, chiefly because of the higher tax rate.²³ Total compiled receipts reported on consolidated returns amounted to only 15 percent of total compiled receipts reported on all returns of manufacturing corporations (Table 12).

Apparently no data are available that would permit an accurate estimate of the nonconsolidated balance sheet data of the manufacturing corporations that submitted consolidated returns for 1944. On the assumption that the effects of consolidation, as far as trends go, were similar to those in 1933, the estimates for 1933 were applied to 15 percent of the data for 1944.²⁴ They probably should have been applied to a somewhat larger percentage, for the importance of consolidated returns is presumably somewhat underestimated by taking

Business, Sept. 1942, p. 18. Similarly, the decrease in capital assets is larger when 1929 data are deconsolidated than when 1934 figures are adjusted (Fabricant, *Capital Consumption and Adjustment*, Table 54, p. 247).

²² Railroads, including electric railways after 1935, trackless trolley and bus systems after 1937, and—beginning with 1940—Pan-American trade corporations (*Statistics of Income for 1940*, Part 2, pp. 13, 37).

²³ For 1932-33 the income tax to be paid by corporations submitting consolidated returns was 0.75 percent higher than otherwise. For 1944 the surtax for consolidated returns was 2 percent higher than for nonconsolidated returns.

²⁴ The compiled balance sheet data for 1943 of 1,087 registrants with the SEC classified as 'manufacturing' represent percentages of the thus adjusted compiled balance sheet of all corporations which are similar to the corresponding percentages for 1939. Receivables, for example, of the SEC corporations amounted to 41 percent of the receivables of all corporations at the end of 1943, before deconsolidation. After deconsolidation, the percentage is 39, as compared with 36 for 1939 (see Tables 1 and 13).

total compiled receipts as a measure (see Table 12). The changes due to fictitious deconsolidation and reclassification were less than a billion, except for net assets and total assets.

Table 13
Compiled Balance Sheet of Registrants with the SEC Classified
as 'Manufacturing', 1939 and 1943
(millions of current dollars)

	1939	1943
Number of registrants	1,030	1,087
Cash & cash items	3,520	6,538
Marketable securities	955	4,167 ^a
Trade receivables, net ^b	2,704	6,248
Inventories, net ^b	6,409	10,648
Investments in affiliates, net ^b	1,045	1,098
Other investments, net ^b	1,338	1,276
Land, buildings, & equipment, net ^b	15,672	16,526 ^c
Treasury stock	65	8
Intangibles, net ^b	692	627
Deferred charges	359	437
Other assets, net ^b	592	2,976
Total assets	33,352	50,548
Notes payable	346	1,123
Accounts payable	1,120	3,341
Accrued items	1,190	7,498 ^d
Long term debt, instalments due in 1 year	43	30
Total long term debt less instalments due in 1 year	3,410	3,612
Other liabilities	573	2,345
Other reserves	1,026	2,620
Minority interest ^e	362	329
Total liabilities	8,070	20,898
Total stock	15,838	16,057
Total surplus ^f	9,444	13,594
Total liabilities & net worth	33,352	50,548

SEC, *Survey of American Listed Corporations, Balance Sheet Data, 1939-1943*, Part II, pp. 2-3.

^a Including nearly one billion for United States tax notes.

^b After reserves, unless registrant carried valuation reserves as liabilities.

^c Including Emergency Plant Facilities, at least half a billion dollars (full amount not stated).

^d After deduction of United States tax notes for tax provisions (\$1.8 billion).

^e Refers to the amount of capital stock and surplus applicable to interests other than the corporate entity.

^f Including surplus reserves.

4 Noncorporate Enterprises

Assets owned by manufacturing corporations were raised to include those of other manufacturing enterprises. The value of product of all enterprises divided by the value of product of

enterprises owned by corporations gives the ratio used as apparently the best for this purpose.²⁵

Another ratio that could have been used, viz., that yielded by dividing the value added by all enterprises by the value added by enterprises owned by corporations, would give a slightly higher result. However, even the former possibly overestimates somewhat the role of noncorporate enterprises.²⁶ The overestimate, if any, can be assumed to be about the same in 1929 and 1939, so that a comparison of 1929 data with 1939 data would not be affected by it.

As no Census data are available for 1944, the 1939 ratio was used to raise corporate balance sheet data for 1944 to include noncorporate enterprises.

Differences in the scope of the *Census of Manufactures* for 1929 and 1939 need not be considered here, since the 1929 ratio we used was from the *Census of Manufactures, 1939*, where the changes between 1929 and 1939 had already been taken into account. The coverage of the *Census of Manufactures, 1939*, is practically identical with the 'manufacturing' group in *Statistics of Income for 1939*.

5 Deduction of Data for Alaska and Hawaii

To get data for the continental United States alone, the percentage produced by establishments in Alaska and Hawaii in 1939, 0.3, was deducted from the total value of product of manufacturing enterprises in the continental United States plus Alaska and Hawaii.²⁷ The *Census of Manufactures, 1929*

²⁵ The same method was used by E. A. Keller, *A Study of the Physical Assets, Sometimes Called Wealth, of the United States, 1922-1933* (Notre Dame University, 1939), p. 91.

²⁶ The ratio of gross annual sales, in 1939 for example, of manufacturing corporations to capital assets increases inversely to the size of corporation. Noncorporate enterprises are usually smaller than corporate. Value of product figures differ from gross sales figures, however, mainly in that they include commodities transferred to other plants of the same enterprise. As interplant transfers are probably a larger item for corporations than for other enterprises, the overestimate that would arise from a gross sales ratio tends to be offset.

²⁷ *Census of Manufactures, 1939*, I, 19, Table I. Data on inventories at the end of 1939 are available for Hawaii (*ibid.*, III, 1137) but not for Alaska.

does not give data for the territories, and no data for 1944 are available. Consequently, the same percentage was deducted from the amounts for 1929 and 1944.

Of the 1,059 registrants classified by the SEC as manufacturing and on which 1937 data are presented in *Statistics of American Listed Corporations*, Part 1, four were incorporated in Canada, one in Hawaii.

6 Computation of the Estimates for 1946

Estimates of assets and liabilities of all manufacturing enterprises at the end of 1946 are usually based on data for the end of 1944 after adjustment for changes during 1945 and 1946. These estimates were compared with the estimates for corporations alone, by the Federal Trade Commission and the Securities and Exchange Commission for the end of the first quarter of 1947.²⁸ The FTC estimates are not strictly comparable with our series. First, they are based on highly consolidated reports, as can be seen from the following figures. Marketable securities, other than United States government securities, were estimated to be \$679 million; miscellaneous assets (including investments in nonconsolidated subsidiaries and affiliates) \$7 billion. On the basis of *Statistics of Income*, however, miscellaneous assets of manufacturing corporations (not including investments in subsidiaries) may be estimated to have been about \$3.6 billion, and investments other than in government securities about \$11 billion at the end of 1946. Secondly, the FTC estimates understate slightly the true aggregates, because neither corporations that had changed from nonmanufacturing to manufacturing activities nor all corporations organized since the end of 1943 were included.²⁹ This understatement generally tends to be balanced by the presumable overstatement due to the consolidated character of most reports.

Cash and deposits in banks of all manufacturing enterprises were estimated in the following manner. According to the

²⁸ *Quarterly Industrial Financial Report Series for All United States Manufacturing Corporations, First Quarter—1947*, p. 4, Table 2.

²⁹ *Ibid.*, p. 13.

Federal Reserve Bulletin (Oct. 1947, p. 1310) demand deposits held by manufacturing and mining corporations and partnerships amounted to \$16.4 billion at the end of July 1946 and \$16.0 billion on February 26, 1947. Cash and bank deposits held by manufacturing enterprises alone were estimated by considering the following facts. According to tabulations prepared by the Commissioner of Internal Revenue, cash and bank deposits held by mining corporations accounted for 4.2 percent of the total amount held by manufacturing and mining corporations at the end of 1944.³⁰ Currency and time deposits were 8.1 percent of demand deposits owned by nonfinancial corporations at the end of 1946.³¹ Reducing this figure by the percentage by which the comparable estimate for the end of 1944 is larger than the figure computed from *Statistics of Income* brings the amount for cash and bank deposits estimated to be held by all manufacturing enterprises at the end of 1946 (\$11.7 billion) somewhat closer to the FTC estimate for corporations (\$10.2 billion at the end of first quarter of 1947). The discrepancy between the two estimates is due to the large amounts of cash and bank deposits owned by unincorporated enterprises (see App. B); the decrease in cash and bank deposits owned by corporations in the first quarter of 1947; ³² the relatively large holdings of cash and bank deposits by small enterprises, combined with the reliance of the FTC estimates on data for large corporations chiefly.³³

Notes and accounts receivable were computed as an average of two estimates. In the first estimate, this item was assumed to have decreased 15 percent since 1944, on the basis of the decrease in corporate sales 1944-46.³⁴

³⁰ Treasury Department, Press Service S-484, Oct. 8, 1947, Table 3.

³¹ *Federal Reserve Bulletin*, Sept. 1947, p. 1104.

³² Nearly one billion for all corporations excluding banks and insurance companies; SEC, Statistical Series Release 779 (July 25, 1947) and 784 (Nov. 20, 1947).

³³ The sample for small corporations was rather small (one out of 72 for corporations with total assets of less than \$50,000); *Quarterly Industrial Financial Report Series For All United States Manufacturing Corporations, First Quarter -1947*, p. 10.

³⁴ *Survey of Current Business*, July 1947, Supplement, p. 41, Table 29.

In the second estimate, 30 percent was deducted from the amount for 1944, in accordance with the large decrease in receivables of 812 manufacturing corporations registered with the SEC (Table 8), caused by payments due from the federal government. 'Receivables from U.S. Government' was a less important item for smaller corporations.

The FTC estimates of receivables are considerably smaller (\$11.6 billion). The difference is not quite as large as it would be had receivables not increased during the first quarter of 1947.³⁵

Inventories were computed, as shown in Table 14, by adding to Hance's estimates for 1941 the annual increments in 1942-46.³⁶

Table 14
Manufacturers' Inventories, End of Year, 1929 and 1939-46
(millions of current dollars)

	1929	1939	1940	1941	1942	1943	1944	1945	1946
Corporate	12,720	11,129	12,427	16,421	n.a.	n.a.	n.a.	n.a.	n.a.
Noncorporate	875	685	734	961	n.a.	n.a.	n.a.	n.a.	n.a.
Total	13,595	11,814	12,861	17,382	19,681	20,356	19,323	18,555	22,850

W. D. Hance. 'Estimates of Annual Business Inventories, 1928-1941', *Survey of Current Business*, Sept. 1942, p. 18, Table 1 (1929-41); 1942-46 computed from *Survey of Current Business*, July 1947, Supplement, p. 45, Table 33. Hance's figures are before adjustment for changes in industrial classification and for changes due to the discontinuation of the privilege of filing consolidated returns in 1934.
n.a.: not available.

Investments, government obligations, were first based on the 28 percent decrease in holdings by nonfinancial corporations.³⁷ In the second estimate, 37 percent was deducted from the amount for 1944, in line with the decrease for manufacturing corporations registered with the SEC (Table 8). The decrease, however, occurred chiefly in holdings of United States tax and savings notes, a trend presumably not fully shared by smaller enterprises. The average of the two estimates approximately squares with the FTC estimate (\$6.6 billion) in view

³⁵ For all corporations excluding banks and insurance companies, \$1.6 billion; SEC, Statistical Series Release 784 (Nov. 20, 1947).

³⁶ Our estimate is \$0.6 billion smaller than the estimate published by the Bureau of Foreign and Domestic Commerce after this paper had been completed: *Industry Survey, Manufacturers' Sales and Inventories—Revised Series* (Feb.-March 1948).

³⁷ *Federal Reserve Bulletin*, Sept., 1947, p. 1104.

of the decrease in holdings of United States government securities in the first quarter of 1947.

Other investments, which cannot be checked with the FTC estimates, were assumed to have remained unchanged since 1944.³⁸

Capital assets, net, were estimated on the basis of expenditures for new manufacturing plant and equipment amounting to \$9 billion (current) in 1945-46, as shown in Table 4, and expenditures of \$1 billion for used plant and equipment,³⁹ minus depreciation of approximately \$7.5 billion.⁴⁰

Other assets were assumed unchanged since 1944.

Accounts payable were estimated—similarly to receivables (first estimate)—on the basis of the decrease in corporate sales, 1944-46. The FTC estimates are appreciably lower (\$6.8 billion) because most of the underlying data are based on consolidated reports.

Bonds, notes, mortgages payable were estimated by adding to the FTC estimate 7.9 percent for noncorporate enterprises.

Other liabilities were computed as a residual. The decrease since the end of 1944 in accrued taxes and renegotiation provisions of 812 registered corporations was \$3.7 billion (Table 8). The decrease in other miscellaneous liabilities, plus the drop in other liabilities of other enterprises, may have amounted to about \$3 billion. An estimated total decrease of \$6.7 billion for this item squares with its computation as a residual.

Net worth was estimated by adding to the amount at the end of 1944 the undistributed income of manufacturing enterprises in 1945 and 1946, estimated to be about \$6.1 billion.⁴¹

³⁸ 'Other marketable securities' held by 812 corporations registered with the SEC fell about 22 percent (Table-8).

³⁹ *Survey of Current Business*, Jan. 1946, p. 18; *ibid.* July 1947, p. 12, Table 5.

⁴⁰ Depreciation, depletion, and amortization (amortization according to Section 124 of the Internal Revenue Code) by all corporations in 1944 amounted to \$3 billion (Treasury Department, Press Service S-484, Table 3). Depreciation, depletion, and amortization by more than 1,100 corporations registered with the SEC amounted to \$2.1 billion in 1944 and \$2.7 billion in 1945 (SEC, *Survey of American Listed Corporations, Data on Profits and Operations*, Part V).

⁴¹ Undistributed corporate manufacturing income was \$1,981 million in 1945 and \$3,718 million in 1946 (*Survey of Current Business*, July 1948, p. 21).