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Appendix

Further Notes on National Balance Sheets

Derivation

In order to set forth the salient points in the derivation of national balance sheets from the underlying statements of assets and liabilities of individual economic units, it will suffice if the myriads of them — in the United States at the present time nearly sixty million of households, unincorporated business enterprises, corporations, private nonprofit organizations, and governmental units — are arranged into only four groups, viz. financial intermediaries, other business enterprises, households (including private nonprofit institutions and trust funds), and government; and if only three types of assets and liabilities are distinguished, viz. tangible assets, claims (and their obverse: debt), and equity securities (including the net worth of unincorporated business enterprises). Appendix Table A-1 shows the skeleton of the resulting group balance sheets.

In this arrangement households comprise nonfarm households and nonprofit organizations excluding those of the business type i.e. educational institutions, hospitals, churches, foundations, and labor unions. Business enterprises include corporations other than financial intermediaries; unincorporated business enterprises; farms; and business-type nonprofit organizations such as cooperatives. The treatment of business enterprises owned and operated by the government depends primarily on the availability of data. Theoretically, it would be preferable to combine them with business enterprises, but in practice it is often necessary to include them with government.¹

¹ In the case of government lending agencies the estimates of intangible assets and liabilities of government corporations and agencies in R. W. Goldsmith, *A Study of Saving in the United States* (Princeton University Press, 1954) have been used. These figures do not exactly correspond conceptually to the consolidated balance sheet of government lending agencies. First, they do not include the tangible assets of government lending agencies, the most important of which are the inventories held by the Commodity Credit Corporation, but this omission may be regarded as an advantage for a study of financial intermediaries. Second, they include some assets not belonging to government lending agencies, properly speaking, particularly the Treasury's investment in the International Monetary Fund and in the International Bank for Reconstruction and Development. On the other hand, they do not include the assets of the Fund or the Bank since these are not United States

The types of organizations included under financial intermediaries have already been listed. It will be noted that in addition to financial corporations they include some business-type nonprofit organizations such as mutual savings banks, savings and loan associations, mutual insurance companies, and credit unions and also cover some government organizations such as the Federal Reserve banks and the Postal Savings System.

The limitation to only three types of assets and liabilities naturally requires considerable condensation and combination of categories shown separately in the balance sheets published by corporations or filed with the Bureau of Internal Revenue, let alone the balance sheets in the detail prepared for management or for certain government regulatory agencies. For the purpose of Appendix Table A-1 intangible assets like patents and good will are entirely omitted, primarily because they are entered into actual balance sheets only sporadically and unsystematically. Accruals may be regarded as included with claims and debt, while prepaid expenses may be treated as part of net worth. Cash is treated as a claim either against financial intermediaries or against the government. Reserves are regarded as distributed according to their character between debt and net worth. Equity securities are meant to include the net worth of unincorporated business enterprises and of business-type nonprofit institutions. Foreign liabilities, finally, include the ownership of domestic securities by foreigners.

The balance sheet of each of the three groups may be put together in one of two ways. It may be the result of either the combination or of the consolidation of the balance sheets of all units belonging to the group.² Combination is simply the addition of identical items of assets, liabilities or net worth in the accounts of all the units to be combined with the aid of obtaining a total for the group of units. It is a purely arithmetical operation that poses no accounting problems. The distinctive feature of consolidation, on

government agencies, but might well have been included as being financial intermediaries in their own right.

Use of the figures prepared for *A Study of Saving in the United States* has been motivated primarily by considerations of expediency. It would have been difficult and laborious to prepare a consolidated balance sheet covering just those corporations and agencies that were to be regarded as government lending institutions, particularly before 1945. To do so might also have constituted a duplication of effort since an extensive study of government lending operations is being conducted in the Financial Research Program of the National Bureau of Economic Research, the results of which were not available when these estimates were made. It is not believed that the differences between the figures used in this paper and those which would have been obtained from a more thorough and adequate treatment are great enough to alter any of the major characteristics of the relationship between the assets of financial intermediaries and national wealth.

² This paragraph is adapted from Goldsmith, *op. cit.*, Vol. II, Chap. I, Sec. 5, in which the problems are treated in more detail. See also R. W. Goldsmith in *Studies in Income and Wealth, Volume Twelve* (National Bureau of Economic Research, 1950), pp. 37 ff.

the other hand, is that it eliminates creditor-debtor relationships among units whose accounts are being consolidated, as well as participation by one unit in the net worth of another unit. The consolidated balance sheet of a group thus does not show claims or liabilities among units belonging to the group or the ownership by one unit of equity securities of another unit within the group.

APPENDIX TABLE **A-1**

Main Components of National Balance Sheet

FINANCIAL INTERMEDIARIES	
00	Tangible Assets
01	Claims against other financial intermediaries
02	<i>Claims against business enterprises</i>
03	<i>Claims against households</i>
04	<i>Claims against governments</i>
05	Equity securities of financial intermediaries
06	<i>Equity securities of business enterprises</i>
07	Foreign assets
08	Total Assets
10	Debt to other financial intermediaries
11	<i>Debt to business enterprises</i>
12	<i>Debt to households</i>
13	<i>Debt to governments</i>
14	Equity securities held by financial intermediaries
15	<i>Equity securities held by business enterprises</i>
16	<i>Equity securities held by households</i>
17	<i>Equity securities held by government</i>
18	Foreign liabilities (including equity securities held by foreigners)
19	Total liabilities and net worth
BUSINESS ENTERPRISES	
20	Tangible Assets
21	Claims against other business enterprises
22	<i>Claims against financial intermediaries</i>
23	<i>Claims against households</i>
24	<i>Claims against governments</i>
25	<i>Equity securities of financial intermediaries</i>
26	Equity securities of other business enterprises
30	Debt to other business enterprises
31	<i>Debt to financial intermediaries</i>
32	<i>Debt to households</i>
33	<i>Debt to governments</i>
34	<i>Equity securities held by financial intermediaries</i>
35	Equity securities held by other business enterprises
36	<i>Equity securities held by households</i>
37	<i>Equity securities held by government</i>
38	Foreign liabilities
39	Total liabilities and net worth
27	Foreign assets
28	Total Assets

Italics denote items retained in group consolidation; boldface denotes items retained in national consolidation.

APPENDIX TABLE A-1 (cont.)

HOUSEHOLDS	
40	Tangible Assets
41	<i>Claims against financial intermediaries</i>
42	<i>Claims against business enterprises</i>
43	<i>Claims against other households</i>
44	<i>Claims against governments</i>
45	<i>Equity securities of financial intermediaries</i>
46	<i>Equity securities of business enterprises</i>
47	Foreign assets
48	Total Assets
50	<i>Debt to financial intermediaries</i>
51	<i>Debt to business enterprises</i>
52	<i>Debt to other households</i>
53	<i>Debt to governments</i>
54	Net worth
55	Foreign liabilities
56	Total liabilities and net worth
GOVERNMENTS	
60	Tangible Assets
61	<i>Claims against financial intermediaries</i>
62	<i>Claims against business enterprises</i>
63	<i>Claims against households</i>
64	<i>Claims against other governments</i>
65	<i>Equity securities of financial intermediaries</i>
66	<i>Equity securities of business enterprises</i>
67	Foreign assets
68	Total Assets
70	<i>Debt to financial intermediaries</i>
71	<i>Debt to business enterprises</i>
72	<i>Debt to households</i>
73	<i>Debt to other governments</i>
74	Net worth
75	Foreign liabilities
76	Total liabilities and net worth
NATION — COMBINED	
80	Domestic tangible assets
81	<i>Claims of one domestic unit against another</i>
82	<i>Equity securities of domestic corporations held by domestic units</i>
83	Foreign assets
84	Total Assets
90	<i>Debt of one domestic unit to another</i>
91	<i>Equity securities of domestic corporations held by domestic units</i>
92	Net worth of domestic households and governments
93	Foreign liabilities
94	Total liabilities and net worth
NATION — CONSOLIDATED	
100	Domestic tangible assets
101	Net foreign assets
102	National wealth
110	Net worth of domestic households and governments
111	National net worth

Italics denote items retained in group consolidation; boldface denotes items retained in national consolidation.

The footings of the consolidated balance sheet for a group of units (i.e. aggregate assets or aggregate liabilities plus net worth) are, therefore, always smaller than the footings of the combined balance sheet for the same group. This follows necessarily because elimination of intragroup creditor-debtor and owner-issuer relationships is the essence of consolidation. The difference between the consolidated and the combined footings has a tendency to grow, both absolutely and relatively, as the group of units whose balance sheets are being consolidated widens.

Appendix Table A-1 has been drawn up to facilitate envisaging the results of the combination or consolidation of the balance sheets of economic units into balance sheets for the four main groups of financial intermediaries, business enterprises, households, and governments and finally, into a national balance sheet. To that end the items retained in group consolidation are shown in italics, and those remaining in consolidation on a national basis are indicated in bold face. In other words, the items in ordinary type disappear when the balance sheets of economic units belonging to one of the four groups are consolidated; and those in italics are eliminated when the four group balance sheets are consolidated into a national balance sheet. Combination, either on the group or the national level, obviously does not eliminate any of the items shown in the table, as it is nothing but a summation of the balance sheets of all individual units belonging to the group or nation.

In the consolidation of balance sheets at a group level the claims of one unit against another unit in the group cancels against the second unit's debt to the first. Similarly, the equity securities of one member of the group owned by another member and carried among its assets is offset by the corresponding net worth in the balance sheet of the unit issuing the security. Among business enterprises, for instance, Item 21 of Appendix Table A-1 cancels Item 30, and Item 26 is offset by Item 35. Similarly, Items 01 and 06 in the balance sheet of financial intermediaries cancel Items 10 and 14, respectively; while Items 43 and 64 in the balance sheets of households and governments are offset by Items 52 and 73, respectively.

In consolidation on a national basis all items cancel except tangible assets (Items 00 + 20 + 40 + 60) and net foreign balance (Items 07 + 27 + 47 + 67) - 18 - 38 - 55 - 75) on the left hand side; and the net worth of households and governments (Items 54 and 74) on the right hand side. This result is but another way of stating that national wealth is equal to domestic tangible assets plus net foreign balance, and is necessarily equivalent to the net worth of all ultimate economic units within the nation, the net worth of business enterprises and financial intermediaries having been allocated to the ultimate economic units who are to be regarded as their owners.

These offsets, which are required to arrive at a properly consolidated total, presuppose that the same item is identically valued in the balance sheets of the creditor and of the debtor, or in those of the owner and of

the issuer. Specifically, they presuppose that a claim appears with the same amount among the assets of the creditor and the liabilities of the debtor and that an equity security is carried at the identical value on the left hand side of the owner's balance sheet and the right hand side of the issuer's. When these conditions are not met, a separate item must be introduced to restore the equality of footings on the left and right hand side. This item will appear among the assets if the carrying value of a claim or equity security in the owner's balance sheet is below the value at which it is carried in the balance sheet of the debtor or issuer. It will be entered on the liability side if the opposite relation prevails, i.e. the carrying value in the owner's balance sheet exceeds that at which it is entered in the debtor's or issuer's balance sheet.³

In practice, differences between valuation of identical items in the balance sheets of the creditor and debtor, while not absent, are not too common, or if present are usually of relatively small size. Differences between the valuation of the same equity security in the balance sheet of the owner and the issuer, however, are the rule rather than the exception. These discrepancies could be avoided if either the owners of securities were to carry them in their own balance sheets at the book value of the securities in the issuers' balance sheets, or if the issuers of equity securities, as well as the owners, were to carry them in their own balance sheets at market value. To spell out these conditions is sufficient to indicate that they are not and cannot be met by existing balance sheets drawn up in accordance with the principles of business accounting. They can only be applied to group and national balance sheets constructed by outside investigators on the basis of consistent social accounting methods.

Another type of discrepancy which plagues combined as well as consolidated national balance sheets arises from the fact that the same transaction is entered in the accounts of the two units involved at different times, even though the difference is usually as short as a few days. The best known discrepancy of this type is the "check float," which is due to the practice of the drawer deducting the amount of the check from his bank balance the moment the check is written and mailed to the payee, while the payee enters it in his bank balance only when he receives the check.⁴ In consolidations, as of one given date, the sum of the bank balances of drawer and payee on the books of the banks will therefore exceed their combined deposits as shown on

³ See R. W. Goldsmith in *Studies in Income and Wealth, Volume Twelve*, as cited, pp. 68-69.

⁴ This is the so-called "mail float." There is also a "bank float," which reflects the time it takes to clear a check within the banking system. Similar discrepancies arise in shippers' posting accounts receivable when the merchandise leaves their premises, but buyers' entering the same shipment under accounts payable only when it is received, and in many other quantitatively less important instances.

the holders' records, and introduction of a separate item on the left hand side of the consolidated balance sheet is necessary to restore equilibrium.

Valuation

Up to this point the problem of valuation has been avoided, or evaded—except in connection with the offsetting of claims and liabilities in group or national consolidation—by assuming that all entries in the balance sheets of individual economic units were made at market value and by disregarding any differences between the valuation of the same item in the balance sheets of the creditor or the debtor or, in the case of equity securities, in that of the holder and the issuer. These assumptions, unfortunately, are not realistic when applied to the balance sheet data that are available. The failure to secure comparable valuations in available balance sheet data lies at the bottom of many of the difficulties encountered in making detailed comparisons between the assets and liabilities of financial intermediaries and of the relevant national totals. Indeed, one may say that for a large part of the items it is not possible to obtain market values from published balance sheets; that as a rule the valuation of the same item is different in the balance sheet of the creditor or owner from that of the debtor or issuer; and that the actual extent and direction of these differences is only very imperfectly known. Yet this report proceeds on the basis of values of assets and liabilities as they appear in the balance sheets or similar statements of financial intermediaries and of estimates of the aggregate face or market value of certain assets and liabilities in existence within the nation. This is done because of the conviction—some support for which will be presented below—that if some adjustments are made, the differences, though very aggravating to our sense of precision and neatness and far from negligible from any point of view, are not so large as to invalidate the comparisons in which we are interested.

In discussing these difficulties, we shall disregard the "higher criticism" sometimes directed at the concept of market value applied to the balance sheet of groups of the nation. The essential point in this criticism is that one cannot speak of market value of such large asset aggregates because for any type of asset only a small part of the entire stock actually changes hands during a period reasonably close to the balance sheet date and because some types of assets do not change hands at all. These facts are uncontested, but they are not regarded as valid objections to the use of market value, or an approximation to it. This point, however, will not be argued here.⁵ It may be noted, however, that acceptance of market value as a basis of valuation in national balance sheets should be facilitated by consideration of the alternatives. Available balance sheets are, as a rule, based on the original cost of

⁵ For some discussion see R. W. Goldsmith in *Studies in Income and Wealth, Volume Twelve*, as cited, pp. 55-72.

the different types of assets and liabilities to the unit which owns them at the date for which the balance sheet is struck. These values obviously have little in common as between different economic units, since they include assets and liabilities acquired immediately before the balance sheet dates or many decades earlier; acquired for cash or inherited from predecessors; depreciated according to the most varying methods; and assets revalued once or several times, as well as those still carried at their original cost. In other words, the addition of values found in the balance sheet of large numbers of economic units results in aggregates that cannot be related to the level of valuation prevailing at any one given date or during any given period. Consistent valuation at market prices, or at approximations to it, at least has the advantage that all values refer to one identifiable point of period of time and hence are comparable to that extent.

Unadjusted balance sheet values are, therefore, not acceptable for economic analysis from a theoretical point of view, but there is a great deal of difference in practice among different types of assets and liabilities and also among balance sheets for different historical periods. Objections to the use of figures taken from published balance sheets obviously depend on the difference between market values and book values, and this difference in turn is larger for some types of assets and liabilities than for others and at some periods than at others. Short-term claims, for instance, generally have no market value in the strict sense; and to the extent that a market price exists, it is usually very close to the face value of the claim which, in turn, is usually identical with its book value.⁶ For long-term claims, differences between face, book, and market values occasionally become very substantial, as happened during the Great Depression. As a rule, however, the market values of such claims do not deviate very much — say by more than 10 to 20 per cent — from their face value or from the values at which they are carried in the books of their owners. The fluctuations in value are, as a rule, much more substantial for holdings of equity securities; but such securities are, fortunately, often valued at market price in the balance sheets of the owners or in supplementary statements. Inventories are, as a rule, carried at market or cost, whichever is lower, with the result that due to the relatively rapid turnover the difference between market and book value tends to be small. Substantial differences may, however, develop where inventories are valued by the LIFO, base stock, or similar methods. The most serious differences and difficulties arise in the case of other tangible assets. These are customarily valued at depreciated original cost. The concept of market value is not strictly applicable to most of them except for some categories like residential dwellings and motor vehicles. At the same time the fluctuations in the replacement cost of such assets have during certain periods been very considerable. This conjunction of circumstances has led to the use of a modified form of replacement cost, viz. depreciated original cost adjusted for price changes as a

⁶ The usual interest accruals or discounts are not relevant in this connection.

standard measure for reproducible tangible assets other than inventories.⁷ Land is generally carried, like other tangible assets, at original cost to the owner. Unlike most other tangible assets, however, most types of land do have a market price, and it is therefore generally possible, at least conceptually, to adjust the reported valuations to the basis of market values.

Turning now to the available data on assets and liabilities of financial intermediaries, we find that almost all balance sheets of financial intermediaries, or similar statements, are prepared in accordance with the principles of business accounting, modified in some cases by special statutory provisions or by rules of regulating agencies or of the Bureau of Internal Revenue. Under these principles valuation is generally based on original cost. Numerous modifications are permitted or implied — for example, on the occasion of merger or reorganization — which generally have the tendency of bringing book values closer to market values. This tendency, however, works unsystematically and, of course, still leaves, as a rule, a difference between the two values. There is thus hardly any group of financial intermediaries for which the basis of valuation of assets and liabilities in the available financial statements is exactly known. Still less is known in quantitative terms about the difference between book, par, and market values for entire groups of financial institutions. Sometimes, it is true, detailed material is provided for some assets; e.g. in the case of the securities held by life insurance companies the book value is shown issue by issue for every company in their detailed annual statements of condition. This material, however, has never been summarized, and it was well beyond the resources of this study to undertake the task. In most other cases there is no possibility of determining the exact relationship between book and market values. The case of the New York savings banks for which aggregate statistics of original cost, par, and market value are available is the exception rather than the rule.⁸

⁷ See R. W. Goldsmith in *Studies in Income and Wealth, Volume Fourteen* (National Bureau of Economic Research, 1951), pp. 10 ff., particularly p. 15.

⁸ For all bonds and stocks together, differences between par and market values, as given in the annual reports of the New York Commissioner of Banks, were hardly ever in excess of 10 per cent and, as a rule, were below 5 per cent. For the benchmark dates the relations were as follows (par value = 100):

	Original Cost (%)	Estimated Market Value (%)	Differ- ence (%)
1900	+7	+9	+2
1912	+6	-2	-8
1922	-1	-8	-7
1929	+0	-1	-1
1933	+2	-8	-10
1939	-1*	-1	0
1945	-1*	+1	+2
1949	+0*	+3	+3

* Amortized original cost.

In this situation a compromise solution has been adopted which is admittedly not entirely satisfactory, but seems the best that can be achieved in the present state of the basic data and with the available resources. In the tabulations of assets and liabilities of the various groups of financial intermediaries, book values have been accepted, and no attempt has been made to adjust them systematically to market values.⁹ In comparing total amounts outstanding with the holdings of financial intermediaries, par values have been used for all claims outstanding, including corporate and government bonds, but market values for corporate stock and for tangible assets. This introduces discrepancies in the valuation of the numerator (assets and liabilities of financial intermediaries) and the denominator (total amount outstanding). These discrepancies have not been eliminated because, with the resources available for this study, no adjustment of the book value of the assets and liabilities of financial intermediaries to their par or market value could be made with sufficient confidence. It has, therefore, been necessary to take account of the discrepancies only in textual comments and in the evaluation of the ratios which, as they stand, are affected by the differences in valuation between numerator and denominator. These discrepancies, however, probably are not very important numerically: the deviation of book values from par values is relatively small for bonds and mortgages, except for the benchmark dates of 1933 and 1939, and virtually negligible for short-term claims, while book values reflect market values for the most important holdings of stock by financial intermediaries. The discrepancies, therefore, affect the level of the ratios, although even these only to a minor extent; they certainly are not sufficient to falsify or obscure trends, once adjustment is made for the unusual deviation between book and market value in the Great Depression.¹⁰

⁹ Personal trust departments constitute an exception because the figures were entirely derived by estimation, and an attempt was made in that process to adhere to or to approximate market values. The data available for investment companies also are generally based on market values.

¹⁰ While the differences between par, book, and market values do not rule out, or even severely limit, the use of the figures derived from the balance sheets of financial intermediaries in determining the levels and trends of their holdings or the proportion of their holdings to amounts outstanding, they become important in a comparison of institutional and noninstitutional holdings when the share of financial intermediaries' in total outstanding is high. Assume, for instance, book value of financial intermediaries' holdings to be 10 per cent above par for a type of asset for which the book value of holdings of financial intermediaries is equal to 80 per cent of the total par value outstanding. In such a case noninstitutional holdings appear to amount to 20 per cent of outstanding or 25 per cent of financial intermediaries' holdings. Actually, however, the share of noninstitutional holdings.

(Continued on page 116)

measured by the uniform standard of par value, is 27 per cent of total outstanding or 37 per cent of the holdings of financial intermediaries.

Comparison between the trend of holdings of different groups of financial intermediaries is not likely to be much affected by these differences between par, book, and market values as level and movements of the ratios of book to market or book to par values are likely to show some parallelism for the different groups. The same considerations apply, although with more restrictions, to a comparison between the ratios of financial intermediaries' holdings in different types of assets at one given date.

APPENDIX TABLE A-2
Securities and Mortgages Outstanding
 (millions of dollars)

	1900	1912	1922	1929	1933	1939	1945	1949
1 U. S. government securities	1,239	1,191	22,995	16,301	23,994	47,646	278,682	257,160
2 State and local government securities	1,730	3,823	8,951	14,595	17,481	18,026	14,831	20,742
3 Domestic corporate bonds	6,878	17,442	24,204	38,549	38,198	32,952	26,530	39,967
4 Domestic preferred stock	2,500	6,600	9,600	14,400	8,700	11,600	12,600	14,500
5 Domestic common stock	9,300	25,600	47,500	135,200	55,200	70,700	115,100	117,100
6 Foreign bonds	120	623	4,000	7,375	5,400	2,600	3,050	2,810
7 Foreign stocks	39	200	700	2,200	800	1,700	2,150	2,300
8 Nonfarm mortgages	4,414	7,491	16,285	37,294	33,458	32,046	33,146	60,758
9 Residential	2,957	5,019	11,123	27,815	24,660	24,351	25,753	47,508
10 One-to-four family	2,661	4,216	8,676	19,726	16,929	17,948	19,653	39,108
11 Farm mortgages	2,312	4,348	10,786	9,631	7,685	6,586	4,682	5,413

Notes to Appendix Table A-2

- Line
- 1 Includes direct and guaranteed issues, United States savings stamps, and for 1945 and 1949 special notes issued to the International Bank and Monetary Fund. Figures differ from those given in *Survey of Current Business*, October 1950, p. 11, primarily because in the calculations in R. W. Goldsmith, *A Study of Saving in the United States* (Princeton University Press, 1954), gross federal agency debt less that held by United States Treasury and other federal agencies is not entirely included in federal government debt, as in the Commerce series, but split according to guaranteed and not fully guaranteed issues, the former portion being included in federal government debt and the latter in corporate debt.
 1900-1912: *Daily Treasury Statements*, issues of December 31.
 1922-1939: *Banking and Monetary Statistics*, pp. 509-12.
 1945, 1949: *Treasury Bulletin*, various issues.
 - 2 1900-1949: Excludes sinking fund holdings. Total outstanding derived for 1900-1929 from R. W. Goldsmith, *op. cit.*, Table G-22, column 1, converted to year-end figures by simple arithmetic averaging, plus column 2 and for 1933-1949 from *ibid.*, Table V-11, column 3. Sinking fund holdings for 1900 is a rough estimate based on figures for later years; for 1912-1949 derived by multiplying total outstanding by ratio obtained by arithmetic averaging of the ratio of sinking fund holdings to total outstanding for fiscal years obtained from data given in *Annual Report of the Secretary of Treasury*, 1946, p. 669, and 1949, p. 591, and *Survey of Current Business*, September 1951, p. 22.
 - 3 1900-1949: Appendix Table A-3, line 1.
 - 4,5 1900-1949: Estimates to be explained in Appendix to full study. The figures shown are preliminary; final revision will be incorporated into the full study.
 - 6 Includes American holdings of foreign securities but excludes all amounts of foreign issues held outside the United States.
 1909-1922: From R. W. Goldsmith, *op. cit.*, Table K-7, line 4.
 1929, 1939: *Ibid.*, Table K-7, line 3 plus line 4.
 1933, 1945
 and 1949: Rough estimates largely developed according to the procedure for other years described in notes to *ibid.*, Table K-7.
 - 7 1900-1929
 and 1939: *Ibid.*, Table K-7, line 5.
 1933, 1945
 and 1949: Same procedure as for line 6.
 - 8-10 1900-1949: Derived according to procedure described in notes to R. W. Goldsmith, *op. cit.*, Tables R-34, R-35, and M-12, using the revised Home Loan Bank Board figures (*Statistical Summary*, 1951, p. 18). Figures include mortgages on nonprofit institutions.
 - 11 1900-1949: From R. W. Goldsmith, *op. cit.*, Table A-54, column 2.

APPENDIX TABLE A-3
Corporate Bonds Outstanding
(millions of dollars)

	1900	1912	1922	1929	1933	1939	1945	1949
1 Total	6,878	17,442	24,204	38,549	38,198	32,952	26,430	39,867
2 Corporate straight	6,514	16,073	20,320	27,194	27,841	25,361		
Railroad	4,917	9,118	9,719	10,728	11,159	10,827		
Public utility	1,236	4,689	6,738	11,179	12,108	11,078		
Other	361	2,266	3,863	4,287	4,575	3,455	22,830	35,773
3 Railroad, equipment trust	64	343	725	997	654	431		
4 Railroad, income	219	259	364	366	332	313		
5 Income, serial and equipment, public utilities and industrials	46	637	1,094	1,123	1,069	1,166	2,090	1,830
6 Real estate	35	130	807	6,219	5,952	3,000	312	306
7 Investment company	...	...	25	728	522	295	522	772
8 U. S. government, not fully guaranteed	...	...	...	50	128	359	643	717
9 Federal land banks	...	...	643	1,188	1,192	1,746	0	0
10 Joint-stock land banks	...	...	208	572	367	97	105	105
11 Customer ownership	...	...	13	89	105	105	128	364
12 Sold directly to independent pension funds	...	...	5	23	36	79		

Notes to Appendix Table A-3

Figures generally are par amount value, except for real estate bonds, the series for which is a mixture of par (up to 1933) and market values (from 1939 on).

Totals given in line 1 should be regarded as minimum figures for domestic non-government bonds outstanding, since no estimates were made for certain types of bonds, e.g. church and timber bonds, outstanding amounts of which are known to be small, and for some other minor types the size of which is not well known.

Comparison of line 1 with the Department of Commerce series for corporate long-term minus mortgage debt (*Survey of Current Business*, October 1950, p. 11) indicates that estimates derived from the National Bureau of Economic Research Corporate Bond Project statistics are somewhat lower. The difference is partly accounted for by the fact that the National Bureau series (even as adjusted in Appendix Table A-2) is limited to bonds, while the Department of Commerce figures include other types of long-term debt. Corporate bonds issued to the Reconstruction Finance Corporation bonds and debentures of finance companies, for example, are omitted from Appendix Table A-2. The Commerce series also includes term loans. Whether these should, for the purposes of this study, be included in a series of corporate bonds outstanding depends on how they are treated by the respective holder groups. For the two institutions—banks and life insurance companies—for which term loans have since 1939 constituted a significant item in security holdings, term loans were as a rule not included in reported corporate bond holdings. If this is the prevalent practice, omission of term loans from total bonds outstanding as shown in Table A-2 is the appropriate treatment.

In the absence of conclusive evidence as to whether the National Bureau or the Commerce series more nearly represent the true amount of corporate bonds outstanding, it was decided to use the National Bureau series (as adjusted in Appendix Table A-2) since its composition is described in detail, while the scope of the Bureau of Internal Revenue figures, basis of the Commerce series, is not exactly shown.

Line

- 1 1900-1949: Sum of lines 2 to 12.
- 2 1900-1939: W. B. Hickman, *The Volume of Corporate Bond Financing since 1900*, Table A-2 (National Bureau of Economic Research, 1953).
- 1945, 1949: From the writer's forthcoming publication *A Study of Saving in the United States* (Princeton University Press), Table V-14, column 2, cumulated from the 1943 Hickman figure. As brackets in table indicate, figures include lines 2, 3, 4, and 5.
- 3 1900-1912: *Ibid.*, Table V-26, column 4.
- 1922-1939: *Ibid.*, Table V-26, column 3.
- 1945, 1949: See notes to line 2.
- 4 1900-1912: *Ibid.*, Table V-26, column 2.
- 1922-1939: *Ibid.*, Table V-26, column 1.
- 1945, 1949: See notes to line 2.
- 5 1900-1939: Hickman, *op. cit.*, Tables A-3, A-4, and A-5.
- 1945, 1949: See notes to line 2.
- 6 1900-1912: R. W. Goldsmith, *op. cit.*, Table R-41, column 1.
- 1922-1939: *Ibid.*, Table R-43, column 1.
- 1945, 1949: *Ibid.*, Table V-14, column 4, cumulated from the 1942 figure.
- 7 1900-1949: Estimates to be explained in Appendix to full study.
- 8 1929-1949: R. W. Goldsmith, *op. cit.*, Table V-5, column 1 minus column 8.
- 9 1922-1949: *Ibid.*, Table V-78, column 11.
- 10 1922-1949: *Ibid.*, Table V-77, column 8.
- 11 1922-1949: Cumulation of *Ibid.*, Table V-14, column 8.
- 12 1922-1949: Cumulation of *Ibid.*, Table V-14, column 9.

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