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Volume Author/Editor: George E. Lent

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5

Individual Holdings of Tax-Exempt Securities

Federal Obligations

World War I Borrowing. By the end of the war period (June 1919) individuals had absorbed close to one-half of the privately held federal debt of around $24 billion. Individuals continued to increase their investments in the declining volume of Liberty bonds and notes until in June 1921 they accounted for about 57 per cent of all private holdings. This record is all the more remarkable when the limited interest of individuals in federal securities prior to the war is considered.[1]

The high rate of absorption by individuals may be explained in large part by the "borrow and buy" credit policies pursued by the Treasury, as well as by an effective promotional campaign. The tax-exemption feature probably also contributed.

While the preponderance of the war debt was composed of partially tax-exempt bonds, individuals were also entitled to surtax exemption on a maximum principal amount of Liberty 4's and 4¼'s.[2] During the exemption period these bonds were ordinarily held in such proportions and amounts as to result in complete

1 During World War I individuals absorbed a much greater proportion of the increase in the net federal debt than they did during World War II. Compared with the purchase of about 59 per cent of the increase in the net federal debt between 1916 and 1921, they absorbed only 37 per cent of the comparable increase between June 1941 and June 1947. *Treasury Bulletin,* January 1948, p. 36.

2 As amended by the Revenue Act of 1921, this exemption was limited to an aggregate principal amount of $155,000 until two years from the official termination of the war and to $50,000 for three years longer, in addition to the original exemption of $5,000, which continued for the life of the bonds.

exemption.[3] Exceptions were found where bonds were apparently held for payment of estate taxes, for which they were accepted at par.

On the other hand, individuals purchased less than one-third of the wholly tax-exempt first Liberty loan issue in 1917. Surtax rates had not been raised sufficiently by then to make such bonds attractive. When the Victory notes of 1919 offered a choice of exemption, however, subscriptions to wholly tax-exempt notes by all purchasers, including individuals, represented only 20 per cent of the total.[4] The limited surtax exemption attached to partially tax-exempt issues may have largely satisfied the demands of individuals for tax exemption. The lower interest rate—3¾ per cent compared with 4¾ per cent—also partly explains the market preference.

Liquidation of Wartime Holdings, 1921–1930. The extraordinary accumulation of wartime debt in the hands of individuals was followed by a substantial liquidation of their holdings between 1921 and 1930. Over this nine-year period individuals reduced their government investments by an average of $1 billion a year from around $13 billion to about $4 billion. Their share of the total dropped from about 57 per cent in 1921 to about 30 per cent in June 1930.

Disinvestment by individuals accounted for virtually the entire reduction in private ownership of federal tax-exempt obligations. This development may be explained on tax grounds, but other factors undoubtedly played an important part. The preponderance of federal debt was composed of issues exempt only from normal taxes (except for limited surtax exemptions).[5] Since corporation

[3] R. A. Love, *Federal Financing* (Columbia University Press, 1931), p. 180. This analysis was based upon an examination of probated estates aggregating $300 million.
[4] Individuals held an estimated 50 per cent of all federal wholly tax-exempt securities outstanding in 1920 and 1921, slightly less than the proportion of state and local securities held. But when it is considered that about $.9 billion of the $3.1 billion in the hands of the public were prewar bonds held by banks to secure national bank notes, the proportion held by individuals appears to be high (about 70 per cent of the balance).
[5] After 1921 there remained a limited amount of wholly tax-exempt bonds, including about $1.3 billion of first Liberty bonds which are believed to have been held almost entirely by individuals, and about $.9 billion of prewar bonds concentrated in commercial banks. Tax-free Victory notes expired in June 1923, as did the tax-free privilege accorded $155,000 principal amount of Liberty 4's and 4¼'s. This was fol-

normal tax rates exceeded personal normal tax rates by several percentage points throughout this period, these bonds were worth more to taxable corporations than to individuals.[6]

Of probably greater significance was the expanding supply of municipal securities which offered a higher absolute yield than Treasury bonds after 1923 (Table 3) in addition to complete tax exemption. Between 1924 and 1929, average yields on long-term governments declined from over 4 per cent to 3 per cent, while yields on high-grade municipals remained around 4 per cent. The average yield differential spread gradually to over one percentage point in 1929. The superior marketability and safety of federal securities also made them more attractive business investments and secondary reserves for banks.

Wholly Tax-Exempt Versus Partially Tax-Exempt and Taxable Issues, 1930–1953. The declining trend in individual ownership of the federal debt was reversed with the new era of governmental borrowing which began in 1931. Between June 1930 and June 1937 individuals increased their direct investment in federal tax-exempt obligations from $4 billion to a peak of about $9 billion. After 1933, however, the share of individuals in total private holdings declined from 30 per cent to a level of approximately 25 per cent.

In 1930, individual investments in federal securities were about evenly divided between partially and wholly tax-exempt issues. The year 1933 marked a turning point in the trend of individual ownership of these separate classes of securities. By 1940, individual holdings of partially tax-exempt investments rose to about three times their holdings of wholly tax-exempt investments, estimated at $2.3 billion. This development may be explained largely by the fact that the volume of partially exempt issues expanded while that of tax-free issues declined. During part of this period, however, the proportion of privately owned wholly tax-exempt governments

lowed in June 1926, by the expiration of the similar privilege accorded $50,000 principal amount of Liberty bonds. The residual $5,000 exemption was probably of negligible appeal.

[6] Between 1925 and 1930 the maximum individual normal rate was 5 per cent whereas the corporation rate ranged between 12 and 13.5 per cent.

held by individuals was about the same as that of partially tax-exempt securities.

Although their holdings of all federal tax-exempt securities dropped sharply after 1942, individuals nevertheless retained around 25 per cent of the total until the wholly tax-exempt notes expired in 1945. By June 1949 their holdings of all federal tax-exempt issues declined to about 19 per cent of the total and by 1953 to about 6 per cent.[7]

Individuals absorbed a very considerable share of World War II debt, which was entirely taxable. Comparable individual investments in tax-exempt and in all federal bonds between June 1940 and June 1947 were as follows:

YEAR	ALL U.S.	TAX-EXEMPT BONDS	
	BONDS	*Amount*	*% of*
(JUNE 30)	*(bill. $)*	*(bill. $)*	*Total*
1940	$ 9.4	$9.0	100.0
1941	10.6	8.5	80.2
1942	17.3	8.2	47.4
1943	29.6	8.4	28.4
1944	44.9	7.0	15.5
1945	58.2	6.0	10.3
1946	62.2	4.3	6.9
1947	65.4	4.0	6.1

Source: Individual holdings of all governments from Dept. of Treasury, *Annual Report of the Secretary of the Treasury, 1952,* p. 764. Treasury estimates for June 1940, the only year in which they consist exclusively of tax-exempt bonds, exceed those of this study by about $.4 billion chiefly because of differences in estimates of holdings by commercial banks and insurance companies.

Farm Loan Bonds

Tax-exempt obligations issued under the authority of the Federal Farm Loan Act (as amended) found a ready market among individuals. Their investments in these securities rose from less than $.1 billion in 1918 to an estimated peak of $1.3 billion by 1928,

[7] At this time their tax-exempt investments consisted principally of nonmarketable Series D savings bonds issued before Mar. 1, 1941. They also included some $100 million of the $112 million postal savings and Panama Canal bonds, the sole remaining federal wholly tax-exempt issues.

where they remained until 1931. During most of this period individuals are estimated to have accounted for 70 per cent or more of total private holdings. This is a somewhat higher proportion than individual holdings of either federal wholly tax-exempt or state and local securities.

Beginning in 1935, individual holdings declined with the contraction in the supply of farm loan securities. Possibly because of the greater supply of competing wholly tax-exempt issues of the federal government, the proportion also declined slightly. This class of tax-free issues finally expired in 1945.[8]

State and Local Obligations

The Expansion in Individual Holdings, 1913–1932. Individual investors (including estates and trusts) have always constituted the largest single private market for municipal securities. This was true even before the introduction of the federal income tax. In June 1913 they owned about $1.7 billion of the $3.6 billion outstanding in private hands (Chart 7).

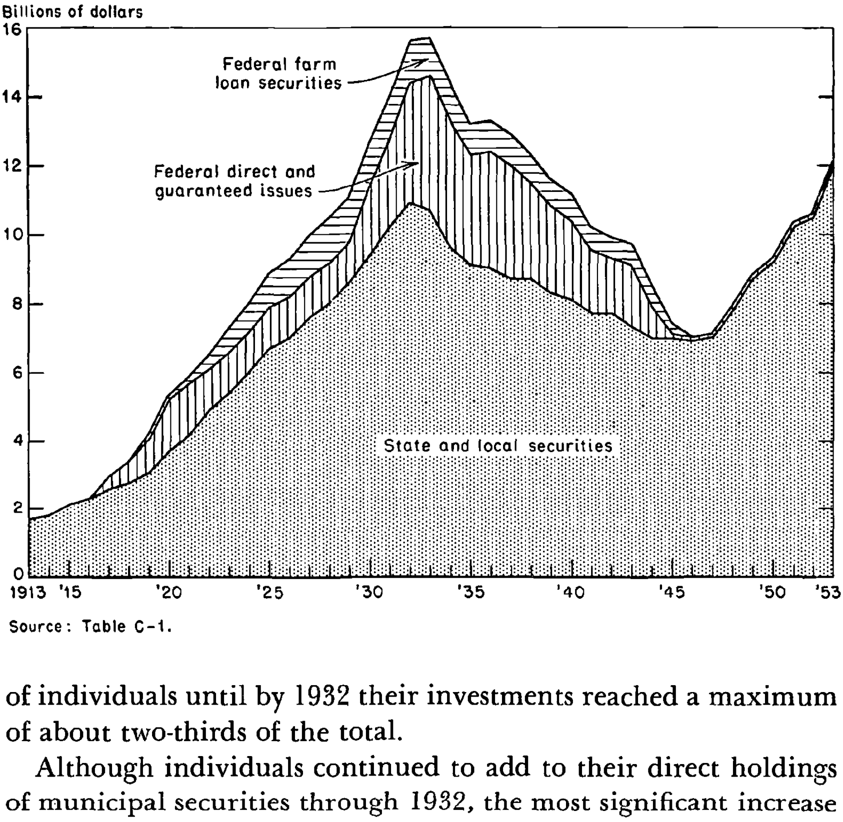
Over the war years, 1917–1919, individuals apparently absorbed about $400 million of the approximately $500 million increase in state and local securities. This accretion was of course greatly overshadowed by individual purchases of Liberty bonds in the amount of about $12 billion. Current fears over the threat of municipal bonds to the government bond market thus appear to have been greatly exaggerated. This may be explained both by patriotic appeals and by the fact that Liberty bonds were at least currently tax-exempt to most buyers.

Individuals provided a steady market for the large postwar volume of state and local obligations. Their holdings rose from an estimated $3 billion in 1919 to $11 billion in 1932, when total private holdings reached $16.6 billion. Ownership of state and local securities thus became increasingly concentrated in the hands

[8] The amount of individual holdings in various partially tax-exempt securities not guaranteed by the federal government is not considered here. These consisted of obligations of the Federal Home Loan Banks and the Federal National Mortgage Association, the total private supply of which increased from $25 million in 1937 to a maximum of $161 million in 1941. See Appendix D.

CHART 7

INDIVIDUAL HOLDINGS OF WHOLLY TAX-EXEMPT SECURITIES, 1913–1953



Source: Table C-1.

of individuals until by 1932 their investments reached a maximum of about two-thirds of the total.

Although individuals continued to add to their direct holdings of municipal securities through 1932, the most significant increase occurred between 1913 and 1923, when their proportion of total private holdings rose from 45 per cent to about 63 per cent (Chart 6, page 58).[9] Thereafter their share rose only moderately to about 66 per cent in 1932.

The enlarged role of individuals in the municipal bond market may be explained largely by the comparative level of the federal

9 Over the period from 1919 to 1932 individuals absorbed about three-fourths of the *net increase* in private holdings of state and local obligations. However, the rate of absorption changed from about 75 per cent of the increase between 1919 and 1922 to about 65 per cent between 1922 and 1928. Between 1928 and 1932 individual net purchases aggregated about 80 per cent of the net increase, owing largely to the acquisition of an estimated $1 billion between 1931 and 1932.

corporation and personal income tax rates. Over this period the corporation income tax rate ranged within the relatively modest limit of 11 to 13.5 per cent (excluding excess profits tax). Corporations could afford to bid for municipal securities at a corresponding discount from comparable taxable securities. The strength of the individual market tended to be measured by the size of income above which the corporation and personal income tax rates were equalized. Between 1917 and 1921 such marginal income for married persons ranged within the fairly low limits of $6,000–$8,000 and thus provided a fairly broad market. During the next two years, however, the marginal income rose to about $18,500.

Between 1922 and 1928, individual normal and surtax rates were gradually scaled down to a maximum of 25 per cent, yet individuals absorbed about 65 per cent of the increase in supply of municipal securities. During the years 1923 to 1930 the federal corporation tax rate was equated with personal income tax rates at a fairly high income level, ranging between $28,000 and $36,000. However, the interest differential of tax-exempts with respect to taxable securities narrowed sufficiently to broaden the market well below these hypothetical income limits.

It will be recalled that during most of this era tax-exempt mutual savings banks, once the principal institutional market, played a declining role. Commercial banks continued to hold a fairly stable share of municipal securities, while their proportion of federal tax-exempts greatly increased. Redemption of about $9 billion federal obligations by individuals between 1921 and 1930, on the other hand, made considerable funds available to them for investment in state and local as well as other securities.

The Contraction in Individual Holdings, 1933–1946. The thirteen years of postwar expansion in individual holdings of state and local securities was succeeded by an equivalent period of uninterrupted contraction. This liquidation took place in two separate stages, before and after 1941.

The contraction in individual holdings between 1933 and 1941 greatly exceeded the decline in total private holdings. During this period an increasing amount was diverted to the portfolios of commercial banks and insurance companies, whose holdings reached their peak in 1940–1941. As a result individual investments dropped from about two-thirds of the total in 1932 to about one-half in 1941. This decline was interrupted over the war period, 1942–1946, when individuals increased their share slightly to around 54 per cent.

It is difficult, on the basis of tax considerations, to account for the relative decline in individual holdings of these tax-free investments between 1932 and 1941 when personal surtax rates rose sharply. Not since 1921 had there been equivalent individual tax incentives to the purchase of tax-exempt bonds. However, the increase in corporation tax rates paralleled the rise in individual rates with the result that the two taxes continued to be equated at personal incomes of between $19,000 and $21,000 for married persons. Although somewhat lower than the comparable level during the 1920's, it remained too high to match the institutional market fortified by excess reserves of commercial banks and the plethora of loanable funds in the hands of life insurance companies.

During the war period, on the other hand, the individual market for tax-exempt securities was somewhat strengthened. This support is probably attributable in large measure to the increase in personal tax rates compared to the corporation income tax rate. Whereas the two rates had formerly been equated at personal incomes of $19,000–$21,000, the corresponding level was now reduced to between $11,000 and $13,000, where it remained until 1947. Coupled with this factor was the reduced supply of tax-exempt securities. While commercial banks continued to increase their share of the total, insurance companies found municipals less and less attractive, and mutual savings banks had long since virtually withdrawn from this field.

Postwar Developments. The share of individuals in the tax-exempt market resumed its decline in the postwar period. Between June 1946 and June 1953 private holdings of municipals increased by $14.5 billion, of which individuals are estimated to have absorbed about one-third. The proportion of state and local securities held by individuals thus dropped from about 54 per cent to about 43 per cent.

Postwar tax reductions somewhat altered the balance between corporations and individuals. Elimination of the wartime excess profits tax removed a source of corporation demand (although banks were little affected by this tax), but the income tax rate was retained through 1949 at 38 per cent—near the wartime level. On the other hand, in addition to personal income tax rate reductions, married persons enjoyed considerable tax decreases as a result of the income-splitting provision of the Revenue Act of 1948. This provision was of greatest benefit to those in the middle-income group who constitute a large segment of the market for tax-exempt securities. Its principal effect was to raise the point on the personal-income scale at which the individual rate was equal to the corporation income tax rate from around $11,000 to around $25,000.

Beginning in 1950, federal tax rates were restored to their World War II levels. By 1952, corporation income taxes were raised to a new peak of 52 per cent and reenactment of an excess profits tax raised the marginal rate to as high as 82 per cent. Although individual rates were also raised substantially, they were equated with the corporation rate at the prewar level: around $25,000 in 1950 and 1951 and at $29,000 in 1952. The individual market for municipal securities was thus placed at a new comparative disadvantage as compared with taxable corporations, particularly commercial banks.

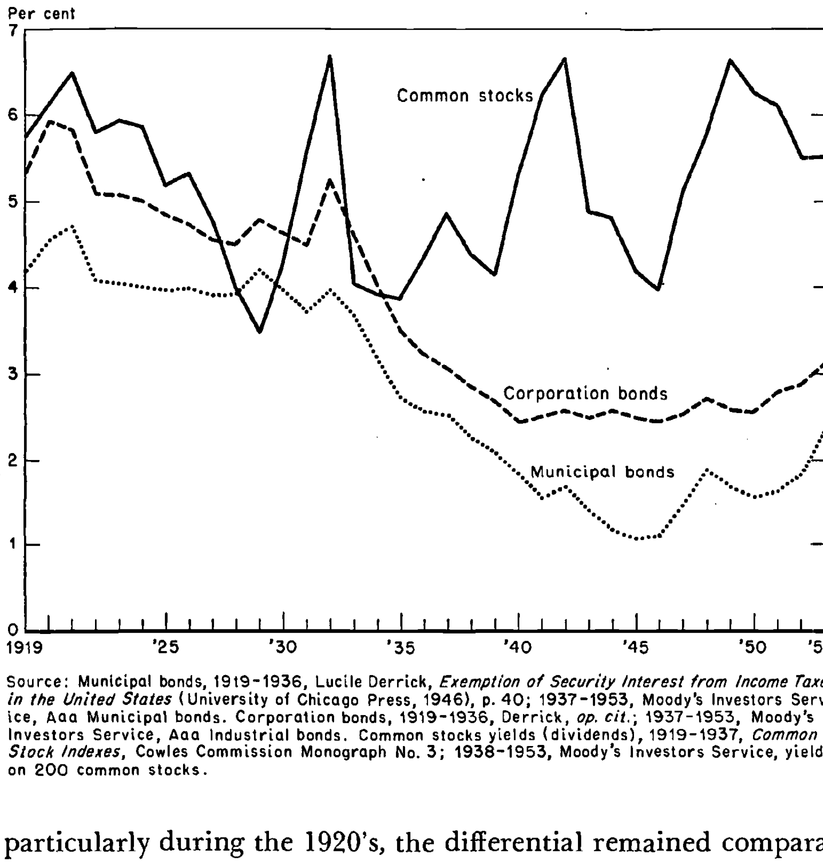
Tax Rates and the Relative Value of Tax Exemption to Different Income Groups

Purchasers of tax-exempt bonds of course ordinarily accept a lower yield on their investment than they could obtain from a security of comparable safety and maturity, before taxes (Chart 8).[10] This differential varies from time to time with the supply of tax-exempt securities, tax rates, and other market factors. During long periods,

[10] For an extended analysis of this "investment in exemption" see L. C. Fitch, *Taxing Municipal Bond Income* (University of California Press, 1950). See also Chap. 4 *supra*.

CHART 8

COMPARATIVE YIELDS ON HIGH-GRADE MUNICIPAL BONDS, CORPORATION BONDS, AND COMMON STOCKS, 1919–1953



Source: Municipal bonds, 1919-1936, Lucile Derrick, *Exemption of Security Interest from Income Taxes in the United States* (University of Chicago Press, 1946), p. 40; 1937-1953, Moody's Investors Service, Aaa Municipal bonds. Corporation bonds, 1919-1936, Derrick, *op. cit.*; 1937-1953, Moody's Investors Service, Aaa Industrial bonds. Common stocks yields (dividends), 1919-1937, *Common Stock Indexes*, Cowles Commission Monograph No. 3; 1938-1953, Moody's Investors Service, yields on 200 common stocks.

particularly during the 1920's, the differential remained comparatively small. Since 1940 or so the margin between the yield on high-grade municipals and that of industrial bonds of comparable maturity and safety has spread markedly, rising to over 40 per cent in 1941 and as high as 70 per cent during World War II. With the end of the war it dropped to an average of around 40 per cent and after mid-1952 to around 25 per cent.

At a given level of income tax rates there is a point on the income scale where the tax rate paid on the next dollar of income is equivalent to the interest differential between tax-free and taxable investments of similar characteristics. Below this point the purchaser of tax-exempt securities would sacrifice more in interest yield than he would gain by exemption; above it the advantage of buying tax-exempts increases with the marginal tax rate. There are of course other important considerations which influence investment choices, among them being the preferential treatment of capital gains,[11] the active pursuit of business opportunities, desire for control, family circumstances, and so forth.

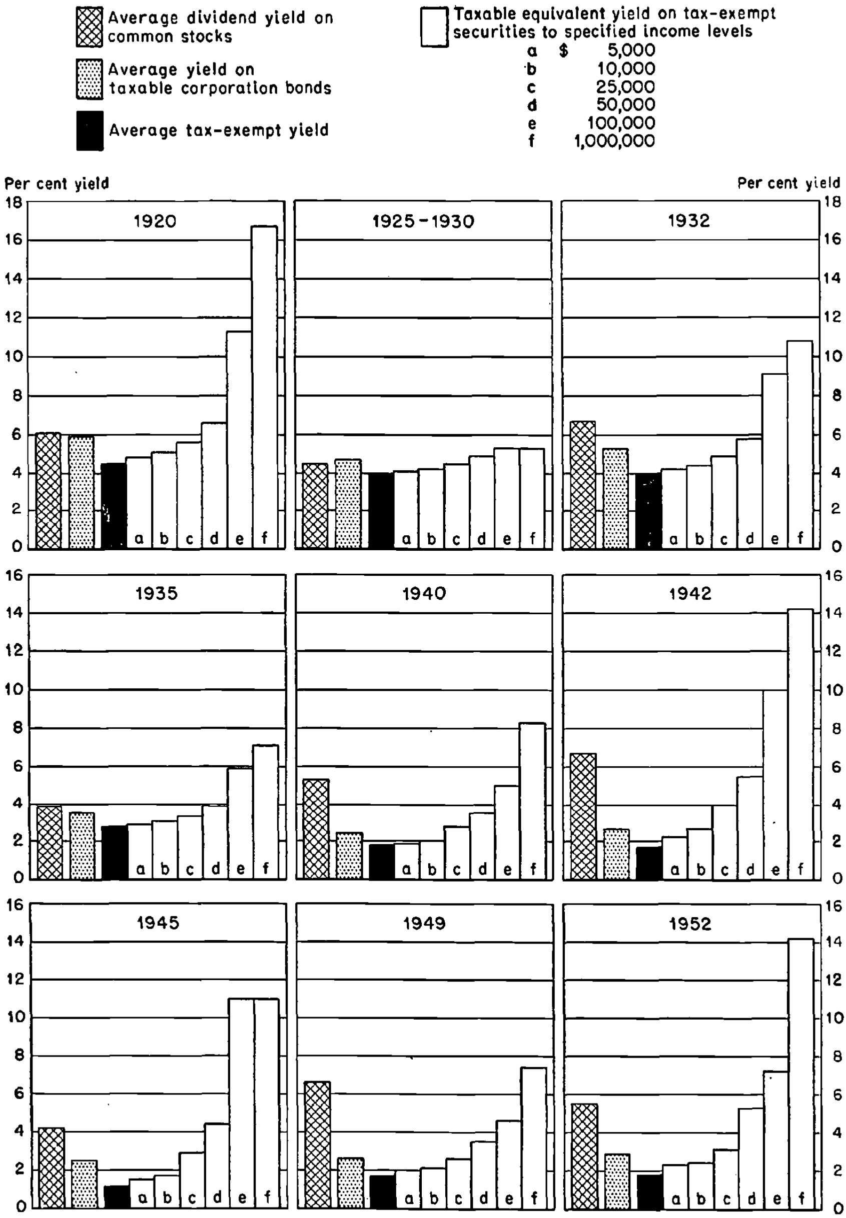
Comparison with High-Grade Corporation Bonds. The general magnitude of the value of tax-exempt investments to higher-income groups for selected years is indicated by Chart 9. The average yield on long-term high-grade corporation bonds is shown for each year in the second column. The third, black column shows the average yield of high-grade municipal securities of similar maturity. The rate of return on taxable securities which would have to be realized at different income levels to yield the equivalent tax-exempt return, at the marginal tax rate applicable, is indicated in the six columns after the black column. If one of these six columns is shorter than the second column, showing the yield on taxable bonds, it would not be advantageous for the investor with income (before personal exemptions) in that income class to buy tax-exempts.

This chart indicates that investment in municipal bonds would have been justified in 1920, in general, to a married person with two dependents only if his income was greater than about $30,000. By 1925, tax rates were reduced to a moderate ceiling of 25 per cent (including normal and surtax rates), and between 1925 and 1930 the interest on municipals averaged only about 15 per cent less than the corresponding corporation bond yield. During this period persons with taxable incomes of around $25,000 could advantageously invest in municipal securities; those with a $100,000 income, however, could realize a tax-free advantage only half of that possible in 1920. In other words, there was less incentive than before for high-income individuals to invest in municipal securi-

[11] See Lawrence H. Seltzer, *The Nature and Tax Treatment of Capital Gains and Losses* (National Bureau of Economic Research, 1951).

Chart 9

Taxable Equivalent of Average Yield on Tax-Exempt Securities Compared with Actual Average Yield on Corporate Bonds and Stocks, Selected Income Levels



Source of stock and bond yields: Same as in Chart 8.

ties, while individuals in somewhat lower brackets had greater incentive than before. The relatively narrow interest differential, together with the imponderable differences in the quality of securities and prejudices of the market, helps explain the high rate of absorption of municipal bonds by individuals during the 1920's

The surtax rate increase of 1932 was accompanied by a more highly differentiated market for tax-exempt securities. The initial effect of high surtax rates is seen in the fact that the investment of a $100,000-income person in high-grade municipals yielded the equivalent of about 9 per cent on a taxable security.

Between 1932 and 1945 successive increases in surtax rates tended to enhance the relative advantages of investment in tax-free securities by high-income groups. This tendency was largely offset, however, by the declining yields on municipal bonds, with the result that between 1935 and 1940 the $100,000-income individual buying high-grade municipals at current yields could realize the equivalent of a taxable investment returning only 5 to 6 per cent compared with yields on high-grade corporates of between 3.6 and 2.8 per cent. By 1942, wartime tax rate increases raised the equivalent return to 10 per cent on a $100,000 income and 14 per cent on a $1 million income. Because of the effective rate ceiling of 90 per cent, the comparable yields were about 11 per cent on incomes above $100,000 in 1945.

During most of the period 1932–1941 the yield on high-grade municipal and corporation bonds of similar maturity tended to be equalized for married persons with incomes of $25,000 or so. During the war years the high initial surtax rates reduced the critical income to somewhat less than $25,000.

The postwar income-splitting provision significantly reduced the tax-exemption bounty to married persons. In 1949, for example, a married person with a taxable income of $100,000 could realize an average return on high-grade municipal bonds equivalent to a taxable yield of only 4.6 per cent despite the rise in tax-exempt yields. Because of the discrimination of income splitting against single individuals, their tax-avoidance possibilities were somewhat greater. The choice of married persons with an income below $30,000 or so was still in favor of corporation bonds rather than tax-exempt securities. Beginning in 1950, temporary defense tax increases again enhanced the value of the tax-free yield of tax-exempt securities to high-income groups, particularly since municipal bond yields attained high levels in comparison with taxable securities.

Tax-Exempt Versus Dividend Yields. Common stocks are often considered speculative media which offer possibilities of capital appreciation rather than income. Although the stock market is frequently dominated by speculation, stocks may more properly be considered as investment media which are subject to speculative influences. Investment policy is thereby complicated by the problem of adjustment to speculative influences (or of insulation against these influences).

The investment alternatives presented by municipal bonds and common stocks are complex. Whereas the choice of bonds is influenced primarily by considerations of safety of principal and income, equity investments are usually associated with a large element of risk and possibilities of large gains. In contrast to the passive role of the bondholders, desire for active management and control may dictate the acquisition of equity securities. Nevertheless, the two types of investment are frequently combined in varying proportions so as to regularize return on investment without an undue sacrifice of safety. Comparative returns on tax-exempt bonds and common stocks, after income taxes, accordingly influence the shifting proportions in which the two classes of securities may be held over time by investors in different income classes.[12]

During the 1920's, yearly dividend yields declined from a high of 6.5 per cent in 1921 to a low of 3.5 per cent in 1929.[13] This

12 For an excellent analysis of such investment considerations see J. K. Butters, L. E. Thompson, and L. L. Bollinger, *Effects of Taxation: Investments by Individuals* (Harvard University, Graduate School of Business Administration, 1953), Chap. XI.

13 In the absence of a better measure of the investment return of common stocks, which should probably take account of corporation earnings as well as capital appreciation and depreciation, we shall consider their return from the standpoint of dividend yield.

decline accompanied the stock-market boom which reached a crescendo in 1928 and 1929, during which the interest in dividends was subordinate to rising stock-market values. Aside from capital-gains possibilities, the strict dividend yield between 1925 and 1930 averaged somewhat more than that possible from high-grade tax-exempt securities—about 4.5 per cent compared with 4.0 per cent—so that from an investment point of view the small-income individual would have fared better, on the average, by purchase of corporation stocks between 1925 and 1930 (but somewhat less than by ownership of corporation bonds). In view of the low surtax rates, individuals in the $10,000–$15,000 income class could have realized as much on common-stock investment as in the purchase of municipals. While those with higher incomes (say above $25,000) would have earned a net yield from municipals equivalent to a taxable yield of 4.5 per cent and more, it seems unlikely that the narrow differentials should have induced much diversion from the rising stock market.

The advent of high surtaxes in 1932 altered the balance between investments in common stocks and municipal bonds so far as yield considerations to the higher-income classes were concerned. This discriminatory effect was partly offset in most years, however, by the high annual dividend return relative to the market yields on municipal bonds. In every year average dividend returns were somewhat higher than yields on municipal bonds. Beginning in 1936 the spread began to widen until by 1941 the dividend return on common stocks was about four times that on high-grade municipal bonds, and during the war period the ratio varied between three and four times.

The depressed stock market of 1932 enabled those with incomes up to about $60,000 to realize as high a rate of return after income tax on the purchase of common stocks as they could on municipal bonds. After 1934 the higher differentials between municipal bond and common-stock yields increased the relative attractiveness of the latter despite greatly increased surtax rates. During the years 1936 to 1939 those with taxable incomes up to $60,000–$80,000 could have advantageously shifted to common-stock investments, and by 1940 and 1941 the differential widened, so that the choice of common-stock investments at current yields would have proved relatively attractive even to those in the $200,000–$300,000 income class.

Changes in the wartime level of tax rates radically lowered the critical level of income at which common-stock yields and bond yields were equalized. While the yield on municipals declined to the lowest level in history, yields on common stocks also dropped to the point where their purchase held little comparative advantage for those with incomes over a range of $45,000–$60,000.

After the war the balance shifted again in favor of common-stock investment. Income tax revision in 1948 greatly lowered rates for married persons and stocks exceeded their prewar yields, so that in 1948 and 1949 married persons with incomes of $100,000 and even higher could realize as much after taxes on common-stock dividends as they could on tax-free bonds. Post-Korean tax increases reduced this critical level to around $50,000.

Concentration in Individual Ownership

Aggregate Amounts Reported. The graduated individual surtax structure has naturally induced a high concentration in the ownership of tax-free investments by upper-income groups. One of the principal sources of information on this concentration is provided by income tax tabulations for the years 1924–1941. During this period individuals, including estates and trusts, with a net income of $5,000 and over reported total holdings of wholly tax-exempt securities of around $4 billion.[14] The comparative importance of the principal classes of such securities held is indicated by Table 5. Until 1937, state and local securities accounted for a fairly constant proportion of about 70 per cent of the total; the percentage then gradually increased to 76 in 1941. Most of the balance was represented by federal obligations, which reached a maximum of about

[14] Between 1924 and 1942 individuals and fiduciaries with income in excess of $5,000 were required to report on their tax returns their holdings of tax-exempt securities and interest derived therefrom. The latest published tabulations are for the year 1940; those for 1941 are tabulated by the Bureau of Internal Revenue in the *Statistics of Income* "Source Book"; those for 1942 were never tabulated.

TABLE 5

INDIVIDUAL HOLDINGS OF WHOLLY TAX-EXEMPT SECURITIES, 1924–1941

(dollars in billions)

	HOLDINGS REPORTED BY INDIVIDUALS WITH NET TAXABLE INCOMES OF $5,000 AND OVER							ESTIMATED TOTAL HOLDINGS BY INDIVIDUALS [a]						
	State and Local		*Federal Direct and Guaranteed*		*Federal Farm Loan*			*State and Local*		*Federal Direct and Guaranteed*		*Federal Farm Loan*		
YEAR	*Amount*	*% of Total*	*Amount*	*% of Total*	*Amount*	*% of Total*	*Total Amount*	*Amount*	*% of Total*	*Amount*	*% of Total*	*Amount*	*% of Total*	*Total Amount*
1924	$2.6	68	$ .7	20	$.4	12	$3.7	$ 6.0	75	$1.2	15	$ .8	10	$ 8.0
1925	2.5	68	.7	19	.5	13	3.6	6.7	75	1.2	13	1.0	11	8.9
1926	2.8	68	.8	19	.5	13	4.1	7.0	75	1.2	13	1.1	12	9.3
1927	3.1	71	.7	15	.6	14	4.3	7.6	76	1.2	12	1.2	12	10.0
1928	3.2		n.a.		n.a.		n.a.	8.0	76	1.2	11	1.3	12	10.5
1929	3.2		n.a.		n.a.		n.a.	8.6	77	1.2	11	1.3	12	11.1
1930	3.1		n.a.		n.a.		n.a.	9.4	74	2.0	16	1.3	10	12.7
1931	2.6		n.a.		n.a.		n.a.	10.2	73	2.5	18	1.3	9	14.0
1932	2.6	71	n.a.		n.a.		3.6	10.9	70	3.5	22	1.2	8	15.6
1933	2.5	67	1.0	25	.3	7	3.7	10.7	68	3.9	25	1.1	7	15.7
1934	3.1	69	1.1	24	.3	7	4.5	9.6	67	3.6	25	1.2	8	14.4
1935	2.6	69	.9	24	.3	8	3.7	9.1	69	3.2	24	.9	7	13.2
1936	2.6	70	.8	22	.3	8	3.7	9.0	68	3.4	26	.9	7	13.3
1937	2.9	69	1.0	23	.3	8	4.2	8.7	67	3.3	26	.9	7	12.9
1938	3.0	72	.9	22	.3	7	4.2	8.7	71	2.8	23	.8	6	12.3
1939	3.0	73	.8	20	.3	7	4.2	8.4	72	2.4	21	.8	7	11.6
1940	3.1	74	.8	18	.3	7	4.2	8.1	72	2.3	21	.8	7	11.2
1941	3.0	76	.6	16	.3	8	4.0	7.7	75	1.8	18	.7	7	10.2

[a] Holdings as of June 30.

n.a. = not available.

Source: Holdings reported by individuals with net taxable incomes of $5,000 and over: 1924–1940, Bureau of Internal Revenue, *Statistics of Income,* Part 1; 1941, *Statistics of Income* "Source Book." Data include returns of trusts and estates with net income of $5,000 and over. Estimated total holdings by individuals: Table C–1.

25 per cent during the years 1933–1935 and then dropped to 16 per cent in 1941. Farm loan securities reported by this group declined from around 13 per cent during the mid-1920's to around 8 per cent toward the end of this period.

Although the amounts reported by individuals with net incomes of $5,000 and over are far less than the total amounts we have estimated to be held by individuals, the proportions of the different types of securities are not greatly different, especially during 1932–1941. In 1924–1927, however, the over-$5,000 group reported somewhat larger proportions of federal and smaller proportions of state and local securities than our country-wide estimates indicate.

A substantial part of the difference between the total amounts reported by the over-$5,000-income group and the estimated total holdings of all individuals is attributable to underreporting. In the most recent years for which data are available, 1940 and 1941, this group reported only about $3 billion of the total of $8 billion of state and local securities held by individuals, or about 40 per cent. Somewhat smaller fractions were reported of other tax-exempt securities.[15] Since reports on holdings of tax-exempt securities were required for information purposes only, they are known to have been incomplete and were discontinued after 1942.[16]

The extent of underreporting is indicated by a comparison with dividends reported by the same income groups in 1941. In this year individuals and taxable trusts and estates with a net income of $5,000 and over reported total dividends of $2,371 million, or 53.1 per cent of net total dividend payments for this year of $4,465 million.[17] Inclusion of the estimated dividend component of fiduciary income received by individuals would raise the total to 61.1 per cent (see page 103). The comparable 1940 estimate is 64.6 per cent. Because of dividend underreporting and other factors this is probably a minimum estimate. Since the distribution of

[15] Inclusion of holdings of fiduciaries with a net income of less than $5,000 and of partnership returns allocable to individuals in the above-$5,000 class would increase the proportion somewhat, but these data are unavailable.

[16] See *Statistics of Income for 1940,* Part 1, p. 42.

[17] Dept. of Commerce, *National Income Supplement, 1951, Survey of Current Business,* p. 151; and *Statistics of Income for 1941,* Part 1, p. 228.

investments in tax-exempt securities tends to be more concentrated than that of capital stock (see below), it would be reasonable to infer that individuals with income in excess of $5,000 accounted for two-thirds or more of total individual holdings in the immediate prewar period. This would still have left a substantial proportion of such securities in the hands of relatively low income groups for whom there was little or no tax benefit at that time.

There is only fragmentary knowledge of the distribution of municipal securities in later years. Estimates based on an analysis of Wisconsin state income tax returns for 1949, for example, indicate that around 70 per cent of state and local securities were owned by individuals with incomes over $10,000, an income level which is roughly comparable with a 1941 income of $5,000.[18]

Comparison with Other Investments and Income. The high degree of inequality in holdings of tax-exempt securities within the over-$5,000-income class is indicated by Table 6 and the corresponding Lorenz curve in Chart 10. They indicate, for example, that those with taxable incomes in excess of $40,000, accounting for 3 per cent of those reporting net incomes in excess of $5,000, owned over 50 per cent of wholly tax-exempt securities held by this group.

Comparison with the ownership of other types of securities, as indicated by the income derived from them, illustrates more clearly the unusually high concentration in the ownership of tax-exempt investments. These data show that ownership of wholly tax-exempt securities was somewhat more concentrated than that of capital stock, taxable bonds and notes, and partially tax-exempt government securities.

The comparative importance of income from all wholly tax-exempt securities relative to partially tax-exempt and taxable interest income, to taxable interest and dividend income, and to total income reported by individuals and fiduciaries in various net in-

18 T. R. Atkinson, "The Pattern of Financial Asset Ownership of Wisconsin Individuals, 1949" (mimeographed, National Bureau of Economic Research, 1953), Table A-3. The reported percentage of corporate stock owned by individuals in the over-$10,000-income class was 61 per cent, which confirms other evidence that stock ownership is less highly concentrated than ownership of tax-exempt securities.

TABLE 6

AMOUNT AND PERCENTAGE DISTRIBUTION BY NET INCOME CLASS OF WHOLLY TAX-EXEMPT INTEREST AND INVESTMENT INCOME FROM OTHER SOURCES REPORTED BY INDIVIDUALS (EXCLUDING FIDUCIARIES) WITH NET INCOME OF $5,000 AND OVER, 1940 [a]

Net Income Class (thous. $)	*Number of Returns*	*Wholly Tax-Exempt Interest* [b]	*Partially Tax-Exempt Interest*	*Taxable Interest*	*Dividends*	*Income from Fiduciaries* [c]	*Total Taxable Individual Income from Dividends, Interest, and Fiduciaries*	*Total Adjusted Gross Income* [d]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Dollars in Thousands					
$ 5 and under $ 10	533,345	$ 21,043	$13,318	$128,223	$ 396,825	$120,934	$ 810,744	$ 3,986,258
10 and under 15	114,140	19,256	8,135	58,820	242,948	74,605	444,114	1,542,997
15 and under 25	71,547	25,877	9,293	59,151	310,811	96,308	528,524	1,515,517
25 and under 50	36,176	41,335	9,752	49,437	385,578	119,026	609,649	1,371,152
50 and under 100	10,285	30,415	4,100	22,590	289,561	81,734	418,156	777,625
100 and under 150	1,866	15,177	1,415	6,714	116,010	33,203	162,629	258,100
150 and under 300	1,066	17,247	1,095	5,073	125,735	38,909	174,267	248,506
300 and under 500	252	8,165	135	1,532	61,850	19,754	84,513	111,310
500 and under 1,000	112	7,924	246	1,748	45,188	20,291	68,760	86,298
$1,000 and over	49	4,470	7	1,283	60,560	27,625	89,590	102,587
Total	768,838	190,909	47,496	334,571	2,035,066	632,389	3,390,946	10,000,350

Cumulative Percentage Distribution

$ 5 and under $ 10	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 and under 15	30.6	89.0	72.0	61.7	80.5	80.9	76.1	60.1
15 and under 25	15.8	78.9	54.8	44.1	68.6	69.1	63.0	44.7
25 and under 50	6.5	65.3	35.3	26.4	53.3	53.9	47.4	29.6
50 and under 100	1.8	43.7	14.7	11.6	34.3	35.0	29.4	15.8
100 and under 150	.4	27.8	6.1	4.9	20.1	22.1	17.1	8.1
150 and under 300	.2	19.8	3.1	2.9	14.4	16.9	12.3	5.5
300 and under 500	.1	10.8	.8	1.4	8.2	10.7	7.2	3.0
500 and under 1,000	e	6.5	.5	.9	5.2	7.6	4.7	1.9
$1,000 and over	e	2.3	e	.4	3.0	4.4	2.6	1.0

[a] Includes data for 138 nontaxable returns in the net income class $5,000 and under $6,000.

[b] Interest from wholly tax-exempt and wholly tax-exempt portion of partially tax-exempt obligations for same class intervals: $36,125; $27,876; $36,122; $51,253; $34,466; $16,637; $18,368; $8,317; $8,155; $4,478. Total, $241,797.

[c] Income from estates and trusts, the major part of their income coming from dividends and interest.

[d] Includes col. 7 and Rents and Royalties, Net Capital Gains, Net Business and Partnership Profits, Wages and Salaries, Net Gain from Sales of Property, Other Income. Adjusted gross income is greater than net income (used to define the income classes) by the amount of the general deductions: contributions; interest paid; taxes paid; losses from fire, storm, etc.; bad debts; and other deductions.

[e] Less than .05 per cent.

Source: Dept. of the Treasury, *Statistics of Income for 1940,* Part 1, pp. 144–150, 187.

come classes above $5,000 is indicated by the following summary based on Table 6:

NET INCOME CLASS *(thousands of dollars)*	PERCENTAGE RATIO OF WHOLLY TAX-EXEMPT INTEREST: *To Partially Tax-Exempt and Taxable Interest*	*To Taxable Interest, Dividends, and Income from Fiduciaries*	*To Total Adjusted Gross Income*
$ 5 and under $ 10	15.1	3.2	.5
10 and under 15	28.8	5.0	1.2
15 and under 25	37.8	5.4	1.7
25 and under 50	69.8	7.3	3.0
50 and under 100	114.0	7.6	3.9
100 and under 150	186.7	9.6	5.9
150 and under 300	279.6	10.1	6.9
300 and under 500	489.8	9.8	7.3
500 and under 1,000	397.3	11.7	9.2
$1,000 and over	346.5	5.0	4.4

The shift in the sources of interest income in favor of tax-exempt securities in the upper-income groups is striking. Relative to total income from taxable interest-bearing and dividend-bearing securities, however, the shift towards tax-exempt securities is much less apparent. In relation to total income, tax-exempt interest increased from a negligible proportion in the lowest-income group to almost 10 per cent for those with incomes of $500,000–$1 million.[19]

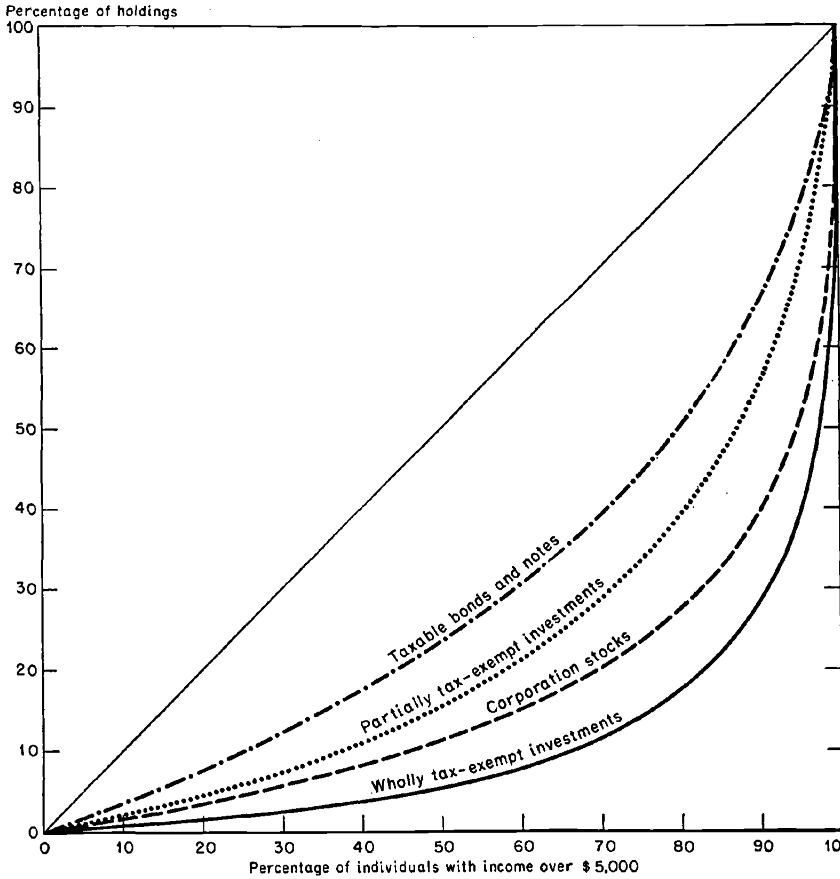
Trends in the Concentration of Ownership of State and Local Securities. The impact of changing federal tax rates on the concentration in ownership of tax-exempt investments is one of the most interesting developments over the period for which data are available. This era—covering the years 1924 to 1941—marked the gradual reduction of post-World War I tax rates to a low point in 1929 and their gradual restoration to a pre-World War II peak in 1941.

State and local securities reported by individuals and fiduciaries

[19] Whether the decline in the relative importance of tax-exempt income in the top-income group ($1 million and over) is due to underreporting or other factors is not clear; it appears in some but not all of the other years covered by the data. A similar decline appears in the top-size class of estates ($10 million and over). See pp. 113–115.

CHART 10

LORENZ DISTRIBUTION OF INCOME FROM WHOLLY TAX-EXEMPT INVESTMENTS COMPARED WITH INCOME FROM OTHER INVESTMENTS REPORTED BY INDIVIDUALS WITH INCOME OVER $5,000, 1940



Source: *Statistics of Income for 1940*, Part 1, pp. 144–149, 187.

with a net income of $5,000 and over declined from around 40 per cent of total individual holdings in the mid-1920's to about 25 per cent during the early 1930's (Table 7).[20] Between 1932 and 1941

[20] No attempt is made to adjust for underreporting. We have found no reason to believe, however, that there was any trend toward increased underreporting over this period.

TABLE 7

STATE AND LOCAL SECURITIES HELD BY ALL INDIVIDUALS (INCLUDING FIDUCIARIES) AND REPORTED BY THOSE IN UPPER-INCOME GROUPS, 1924–1941
(unadjusted for underreporting)

YEAR	ESTIMATED TOTAL [a] *(mill. $)*	OVER $5,000 NET INCOME [b] *Amount (mill. $)*	*% of Total*	PERCENTAGE OF TOTAL HELD BY *Upper 1%*	*Upper ½ of 1%*	*Upper ¼ of 1%*
1924	$ 6,350	$2,553	40.2	39.5	37.5	34.5
1925	6,800	2,452	36.1	n.c.	n.c.	n.c.
1926	7,300	2,793	38.3	n.c.	n.c.	n.c.
1927	7,800	3,064	39.3	37.5	35.5	32.5
1928	8,300	3,159	38.1	n.c.	n.c.	n.c.
1929	8,900	3,199	36.0	34.5	32.8	30.5
1930	9,700	3,110	32.1	n.c.	n.c.	n.c.
1931	10,500	2,647	25.2	24.8	23.5	21.5
1932	10,800	2,573	23.8	n.c.	n.c.	n.c.
1933	10,150	2,518	24.8	n.c.	n.c.	n.c.
1934	9,350	3,079	32.9	n.c.	n.c.	n.c.
1935	9,000	2,562	28.5	28.5	26.8	24.0
1936	8,850	2,566	29.0	n.c.	n.c.	n.c.
1937	8,750	2,912	33.3	32.5	29.8	27.0
1938	8,500	2,993	35.2	n.c.	n.c.	n.c.
1939	8,250	3,030	36.7	35.5	31.8	28.0
1940	7,900	3,105	39.3	37.5	33.7	30.4
1941	7,750	3,021	39.0	n.c.	n.c.	n.c.

[a] Estimated as of the end of the year.

[b] Includes fiduciary returns with net income taxable to the fiduciary of $5,000 and over. Such data were lumped with individual tabulations through 1937 and reported separately after 1937.

n.c. = not computed.

Source: Dept. of the Treasury, *Statistics of Income*, Part 1, and *Statistics of Income* "Source Book," 1941, Appendix C. Upper 1 per cent derived from Simon Kuznets, *Shares of Upper Income Groups in Income and Savings* (Princeton University Press for National Bureau of Economic Research, 1953), Tables 69 and 111.

the rising level of individual income tax rates appears to have been reflected in a gradually increased concentration in ownership by this group to around 40 per cent.

Comparison with the following data for dividends reported by the same group of taxpayers for the years 1935–1941 lends support to the belief that the upward trend shown through 1941 was not due to any inherent statistical bias in the nature of the data:

DIVIDENDS AND STATE AND LOCAL SECURITIES REPORTED BY INDIVIDUALS (INCLUDING FIDUCIARIES) WITH NET INCOME OF $5,000 AND OVER, PERCENTAGE OF TOTAL INDIVIDUAL AMOUNTS

Year	*State and Local Securities*	*Dividends*	
	(1)	(2)	(3)
1935	28.5	63.0	63.0
1936	29.0	56.7	65.3
1937	33.3	59.2	67.7
1938	35.2	52.0	59.7
1939	36.7	53.5	62.2
1940	39.3	55.4	64.6
1941	39.0	53.1	61.1

Columns 1 and 2: Excluding estimate of the dividend component of fiduciary income distributed to individuals.

Column 3: Including the dividend component of fiduciary income distributed to individuals, estimated by applying the ratio of dividends to total income for taxable fiduciaries to fiduciary income reported by individuals for the years 1936–1941.

Source: I am indebted to Daniel M. Holland, National Bureau of Economic Research, for the estimates of the dividend component of individual incomes from estates and trusts. Corporate total net dividend payments are from *National Income Supplement, 1951, Survey of Current Business*, p. 151. Holdings of state and local securities by individuals and taxable trusts with net income of $5,000 and over are from *Statistics of Income*, Part 1.

During the same period the percentage of dividends reported by those with incomes over $5,000 fluctuated within narrow limits, but with a downward trend as compared with the upward trend in the concentration in ownership of municipal securities.

Since taxpayers with incomes over $5,000 represented a changing proportion of the total population, the above data may not represent a true comparison of concentration over time. For this reason use was made of Kuznets' estimates of the upper 1 per cent of the population.[21] Estimated holdings of state and local securi-

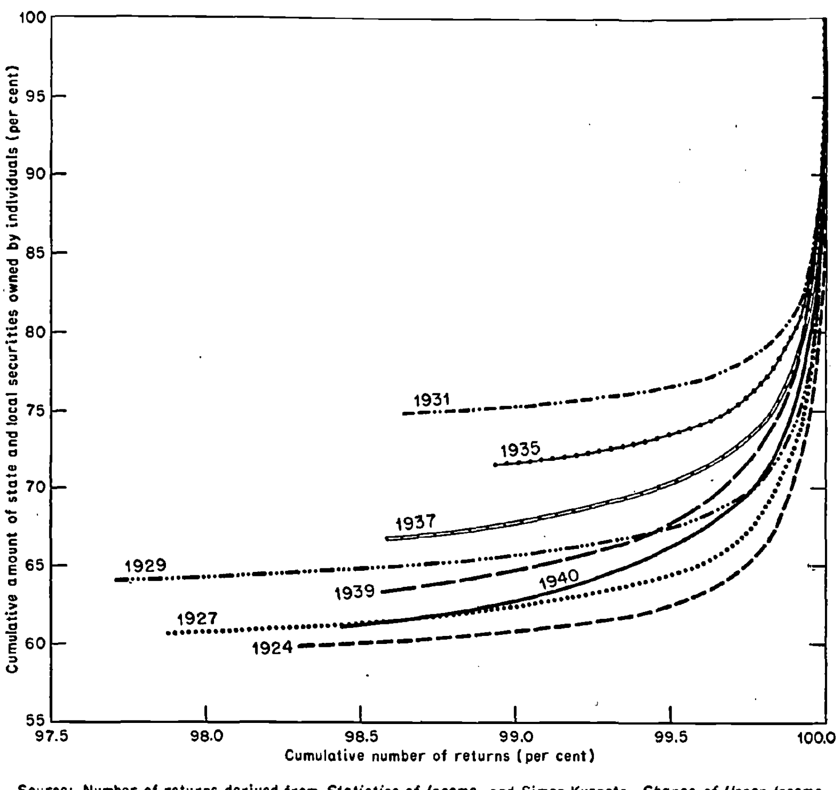
[21] Simon Kuznets, *Shares of Upper Income Groups in Income and Savings* (National Bureau of Economic Research, Occasional Paper 35, 1953), Tables 69 and 111.

ties by the upper 1 per cent for selected years, however, closely conformed with those of the $5,000-and-over group (Table 7). As illustrated by Chart 11, the concentration in ownership of state and municipal securities appears to have declined from its high point during the early 1920's, accompanying the postwar tax reduction, to a low during the 1930's. It then recovered to a level in 1940 only slightly below that of the earlier period.

Estimated holdings for the upper .5 per cent and for the upper .25 per cent were only slightly less than those for the 1 per cent

CHART 11

LORENZ DISTRIBUTION OF STATE AND LOCAL SECURITIES HELD BY UPPER-INCOME GROUPS, SELECTED YEARS, 1924–1940



Source: Number of returns derived from *Statistics of Income*, and Simon Kuznets, *Shares of Upper Income Groups in Income and Savings*, Occasional Paper 35 (National Bureau of Economic Research, 1953). Amount of securities from *Statistics of Income*, Part 1, Appendix C.

group. Changes in these proportions over the period followed closely those for the upper 1 per cent. A close examination of the chart, however, shows a somewhat less unequal distribution of these holdings within the upper 1 per cent for the later years than was reported for the earlier years.

This leveling off in the concentration of holdings among the higher-income groups is clearly indicated by the comparison in Table 8 of the municipal securities reported on individual and

TABLE 8

HOLDINGS OF STATE AND LOCAL SECURITIES REPORTED BY INDIVIDUALS (INCLUDING FIDUCIARIES) IN NET INCOME CLASSES OF $5,000 AND OVER, SELECTED YEARS, 1924–1940

Income Class	*1924*	*1929*	*1935*	*1940*
	Amount (millions of dollars)			
Total over $5,000	$2,552.5	$3,199.3	$2,562.0	$3,104.6
$ 5,000–$ 10,000	121.2	174.6	281.4	410.5
10,000– 25,000	338.8	345.2	574.4	650.1
25,000– 50,000	486.5	399.2	533.3	646.7
50,000– 100,000	509.2	591.1	420.3	553.5
100,000– 500,000	828.8	1,036.7	590.3	674.9
Over $500,000	268.0	652.5	162.2	168.9
	Cumulative Percentage of Total			
Over $ 5,000	100.0	100.0	100.0	100.0
Over 10,000	95.3	94.5	89.1	86.8
Over 25,000	82.0	83.8	66.6	65.8
Over 50,000	62.9	71.3	45.8	45.0
Over 100,000	43.0	52.8	29.4	27.2
Over 500,000	10.5	20.4	6.3	5.4

Source: Dept. of the Treasury, *Statistics of Income*, Part 1.

fiduciary returns in various net income classes of $5,000 and over for certain years in the earlier and later periods. Whereas returns with a net income of $25,000 and over in the earlier period accounted for more than 80 per cent of the total in 1924 and 1929, they included only about two-thirds of the total in the $5,000-and-over income group in 1935 and 1940. An even greater con-

Table 9

Adjusted Gross Income, Country-Wide Totals, and Share of Taxpayers in Income Class $50,000 and Over after Tax, 1919–1950

(dollars in millions)

Year	Adjusted Gross Income Reported on Taxable Returns, Less Taxes, in Income Class $50,000 and Over	Total Adjusted Gross Income, Country-Wide Totals, Less Total Taxes	Col. 1 ÷ Col. 2, %
	(1)	(2)	(3)
1919	$1,768	$57,606	3.07
1920	1,521	60,455	2.52
1921	1,060	47,089	2.25
1922	1,618	51,323	3.15
1923	1,821	60,706	3.00
1924	2,209	61,287	3.60
1925	3,683	66,066	5.57
1926	3,744	67,944	5.51
1927	4,317	68,597	6.29
1928	6,132	71,757	8.55
1929	5,906	{74,250 73,555	{7.95 8.03
1930	2,463	60,550	4.07
1931	1,206	47,456	2.54
1932	429	35,393	1.21
1933	575	35,150	1.64
1934	716	42,757	1.67
1935	946	47,067	2.01
1936	1,487	55,953	2.66
1937	1,384	60,111	2.30
1938	898	54,196	1.66
1939	1,005	62,790	1.60
1940	1,030	67,777	1.52
1941	1,212	80,343	1.51
1942	1,191	97,287	1.22
1943	1,354	113,377	1.19
1944	1,570	120,757	1.30
1945	1,935	122,995	1.57
1946	2,543	139,269	1.83
1947	2,508	153,010	1.64
1948	4,115	169,160	2.43
1949	3,660	167,798	2.18
1950	5,086	181,921	2.80

trast is apparent for such investments of those with net income over $100,000 in 1929 and later years. Compared with 50 per cent of the total reported by this group in 1929, those above $100,000 net income in 1935 and 1940 accounted for less than 30 per cent of municipal securities reported on all returns with a net income of $5,000 and over.

In view of the underreporting of tax-exempt securities in the federal income tax tabulations, these data must be interpreted with care. We believe, however, that they yield useful indications, if not precise estimates, of the relative concentration of holdings among individuals in different income groups and of the changes in this concentration over a period of time. This view is supported, at least indirectly, by the fairly consistent picture, already referred to, of the distribution of these securities by type given by these statistics compared with our independent estimates, by their consistency with estate tax data (see pages 109–115), and by the reasonableness of the results they yield.

Possible Effects of Shifts in the Redistribution of Incomes. The shifts in the distribution of incomes which have taken place since 1929 may have adversely affected the market for tax-exempt securities. The sharp drop in income after taxes reported by those with a net income of $50,000 and over, for example, may have contributed to the declining proportion of tax-free investments owned by individuals after 1932.

During the decade 1919–1929, income after taxes of this group showed a remarkable increase from less than $2 billion to around $6 billion (Table 9). The share of the nationwide total represented by this group rose from around 3 per cent to around 8 per

NOTES TO TABLE 9

Column 1: 1919–1943: Net income classes. 1944–1950: Adjusted gross income classes. Prior to 1944, adjusted gross income estimated from total income reported less negative items of income when tabulated in *Statistics of Income.*

Column 2: 1919–1929: Derived from Simon Kuznets' estimates of personal income in *National Income, 1919–1938* (National Bureau of Economic Research, Occasional Paper 2, 1941). 1929–1950: Derived from Department of Commerce estimates of national income.

These estimates were prepared in connection with a study of the personal income tax by Lawrence H. Seltzer, National Bureau of Economic Research.

TABLE 10

PERCENTAGE COMPOSITION OF ESTATE INVESTMENTS,[a] SELECTED YEARS, 1922–1950

YEAR	CAPITAL STOCK	BONDS: Wholly Tax-Exempt: State and Local	BONDS: Wholly Tax-Exempt: Federal	BONDS: Wholly Tax-Exempt: Total	BONDS: Federal Partially Tax-Exempt and Taxable	BONDS: Other	BONDS: Total	MORTGAGES, NOTES AND CASH	REAL ESTATE	TAXABLE INSURANCE	MISCELLANEOUS
1922	38.2	3.0	1.3	4.3	4.2	8.0	16.5	10.2 [b]	20.1	2.4 [b]	12.6
1923	37.0	4.1	1.4	5.5	3.4	8.2	17.1	11.2	19.7	2.6	12.4
1925	38.4	3.9	1.7	5.6	3.4	9.0	18.0	10.5	17.8	2.3	13.1
1927	40.9	4.0	1.6	5.6	2.3	7.6	15.5	11.1	16.9	2.6	13.2
1929	50.2	4.1	1.2	5.3	1.2	6.9	13.4	9.7	13.8	3.0	9.9
1931	49.1	6.0	2.1	8.1	1.3	6.4	15.8	9.4	12.2	2.9	10.6
1935	41.5	9.1	3.7	12.9	3.0	8.4	24.3	12.7	11.8	4.5	5.2
1937	47.9	7.8	2.2	10.0	3.6	7.3	20.9	11.7	10.8	2.4	6.4
1939	44.3	12.0	2.6	14.6	3.3	6.0	23.9	12.7	10.5	2.4	6.2
1941	47.0	8.4	2.6	11.0	3.8	6.1	20.9	14.4	10.3	2.3	5.0
1943	42.5	8.8	1.8	10.6	6.5	5.3	22.4	15.1	10.8	3.3	5.9
1945	44.0	7.1	.9	8.0	7.9	4.2	20.1	11.7	11.5	6.1	6.6
1947	43.1	5.0	.1	5.1	9.1	2.8	17.1	12.2	14.5	6.1	7.0
1949	42.9	5.6	.7	6.3	8.1	2.2	16.5	13.2	14.6	5.5	7.3
1950	43.2	4.2	c	4.2	8.7	2.1	15.0	13.0	15.6	5.6	7.6

[a] Taxable estates over $100,000, before specific exemption.

[b] Not separately classified but allocated on basis of 1923 distribution.

[c] Negligible.

Source: Dept. of the Treasury, *Statistics of Income*, Part 1. Investment data were not tabulated for 1951 or 1952.

cent. After 1929, however, the disposable income of the $50,000-and-over income group dropped to less than $500 million in 1932 and did not recover the $2 billion mark until after World War II. During that period the disposable income of this group ranged between 1 and 3 per cent of the national adjusted gross income after taxes.

The Shifting Pattern of Investment

Composition of Estates. Trends in the investment policies of individuals are revealed in the composition of decedents' estates filed with the federal government for tax purposes. The reports submitted at death are, broadly speaking, samples of the investment pattern of all wealthy persons.[22] Although accounting for probably less than 2 per cent of the population dying each year, the heavy concentration of wealth represented by the large estates greatly influences the direction of investment in the economy at large.

These data show that the relative importance of wholly tax-exempt securities has run a complete cycle since the 1920's (Table 10 and Chart 12). During the earlier decade from 1922 to 1931, tax-free investments averaged less than 6 per cent of gross estates.[23] Principally because of greatly increased investments in state and local securities, wholly tax-exempts rose to almost 15 per cent of total estate investments in 1939. Since then tax-exempt investments have gradually declined to their relative importance in the 1920's.[24]

22 For purposes of analysis only net estates of $100,000 and larger, before specific exemption, are taken into account. This is the lowest limit for which comparable data are available for all years. Both the gross amount of estates and their composition are influenced by the structure of the death tax system itself. The definition of taxable estates, allowable deductions, size of exemptions, gift tax, provision for liquidation, and severity of the tax rate all influence estate management. The comparability of the data over time, however, is probably not significantly altered by tax considerations. The character of investment also tends to change with the age of the decedent, but this factor should not impair comparisons over a period of time.

23 Only wholly tax-exempt federal obligations and state and local securities are included; farm loan obligations were not separately classified.

24 This analysis is limited for practical reasons to the odd years as representative of the period under review. However, the first year reported, 1922, is included, and, be-

(Continued on page 110)

The cycle in the porportion of wholly tax-exempt obligations held by large estates over this period was due less to changes in the absolute amount held than to variations in the gross value of estates filed. Table 11 shows that the gross value of net estates over $100,000 filed between 1935 and 1943, for example, averaged about one-half the gross value of estates of this size filed during 1929–1931. The amount of wholly tax-exempt securities held, however, remained fairly constant. The greater part of such securities was reported by net estates over $1 million, whose gross value declined even more over the same period but whose holdings of wholly tax-exempt obligations remained at a high level. The concentration in ownership of wholly tax-exempts thus tended to increase despite evidence of a decline in the concentration of wealth during the post-1929 period.

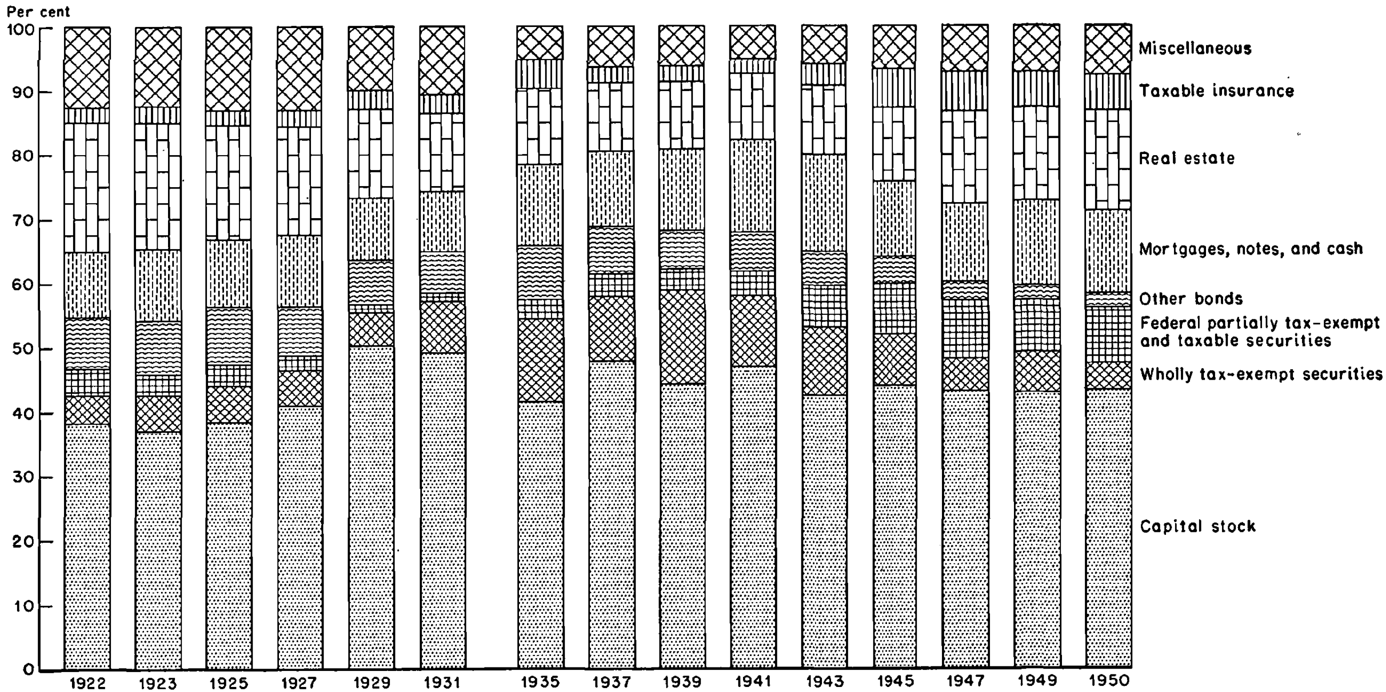
The increase in the proportion of tax-exempt investments through 1940 was not accompanied by any diminution in the comparative importance of capital-stock investments. This class of investments, which is representative of equity capital, increased from less than 40 per cent of gross estates to a peak of around 50 per cent during the late 1920's. Since then the average proportion has ranged within the narrow limits of 42 to 48 per cent. The changing level of stock-market prices may of course distort these intertemporal comparisons for particular years.

The relative decline in real estate holdings was the principal offset to the rise in tax-exempt investments. The major decline occurred between 1922 and 1931 when the share of real estate dropped sharply from about 20 per cent of gross estates to around 12 per cent. Not until 1945 did the proportion of real estate investments evidence any recovery. The relative decline of real estate might be ascribed in part to the collapse in land values after the boom of the early 1920's and possibly in part to increased incorporation of such holdings. It may also reflect the breakup of

cause of unusually depressed conditions of equity investments, the year 1933 is omitted. Data for 1950 are also included because no tabulations are planned for 1951 or 1952. The year referred to is the year in which the estate tax return was filed, generally one year later than the year of death. It reflects the composition of estates in the year of death but not necessarily their valuation, since the law provides for optional valuation one year after death.

CHART 12

PERCENTAGE DISTRIBUTION OF ESTATE INVESTMENTS, SELECTED YEARS, 1922–1950



Source: Table 10

TABLE 11

WHOLLY TAX-EXEMPT SECURITIES HELD BY LARGE ESTATES OF DECEDENTS, SELECTED YEARS, 1922–1950

	NET ESTATES $100,000–$1,000,000			NET ESTATES OVER $1,000,000			TOTAL NET ESTATES OVER $100,000		
YEAR	*Gross Estate (mill. $)*	*Wholly Tax-Exempt Securities (mill. $)*	*% of Total*	*Gross Estate (mill. $)*	*Wholly Tax-Exempt Securities (mill. $)*	*% of Total*	*Gross Estate (mill. $)*	*Wholly Tax-Exempt Securities (mill. $)*	*% of Total*
1922	$1,246	$ 29	2.3	$ 983	$ 67	6.8	$2,229	$ 96	4.3
1923	1,232	40	3.2	538	57	10.9	1,770	97	5.5
1925	1,462	51	3.5	704	69	9.8	2,166	120	5.6
1927	1,885	73	3.2	966	85	8.8	2,851	158	5.6
1929	2,090	71	3.3	1,476	118	8.0	3,566	189	5.3
1931	2,029	92	4.5	1,688	210	12.4	3,717	302	8.1
1935	1,214	109	9.0	568	120	21.1	1,782	229	12.9
1937	1,266	89	7.0	716	109	15.2	1,982	198	10.0
1939	1,238	98	7.9	677	181	26.7	1,915	279	14.6
1941	1,198	77	6.4	707	132	18.7	1,905	209	11.0
1943	1,261	76	6.0	544	115	21.1	1,805	191	10.6
1945	1,844	63	3.4	793	147	18.5	2,637	210	8.0
1947	2,350	54	2.3	824	109	13.2	3,174	163	5.1
1949	2,462	53	2.1	905	156	17.2	3,367	209	6.3
1950	2,439	61	2.5	688	71	10.3	3,127	132	4.2

Source: Dept. of the Treasury, *Statistics of Income,* Part 1. Investment data were not tabulated for 1951 or 1952.

large estates upon which so many early fortunes were founded.

A significant reduction also took place in miscellaneous investments. This probably reflects a change in classification rather than any real change in the direction of investment.[25] The declining importance of corporation bonds is also notable. This drop was largely offset by a rise in federal partially tax-exempt and taxable bonds. No significant changes were made in mortgages, notes, and cash (apparently the most important item) or in the value of taxable insurance; both of these classes of investments increased in relative importance.

Although the increased prominence of tax-exempt securities is most pertinent to our inquiry, probably of greater economic importance has been the shift toward a higher level of investment in fixed-income securities (and cash) in general. The proportion of all fixed-income investments, including bonds, mortgages, notes, and cash, rose from around 26 per cent in the period of the 1920's to a fairly constant level of around 36 per cent between 1935 and 1943 and dropped significantly only since World War II. Most of the increase was accounted for by an absolute rise in wholly tax-exempt investments.

Variation with Size of Estates. The relative importance of wholly tax-exempt securities owned tends to vary directly with the size of the estate (Table 12). During the earlier period, 1922–1930, the average proportion of tax-free investments ranged from about 2 per cent of estates between $100,000 and $200,000 to over 11 per cent of estates of $5–$10 million.[26] Estates over $10 million

25 Before 1933 "miscellaneous" covered all property included in transfers made within two years of date of death, power of appointment, transfers in contemplation of death, and property from an estate taxed within five years; and before 1927, all jointly owned property. After 1933 all these classes of property were distributed by type of asset, so far as practicable. Since 1933 "miscellaneous" has therefore included only debts due, interest in business, claims, rights, royalties, pensions, leaseholds, judgments, shares and trust funds, household goods and personal effects, farm products and growing crops, farm machinery, automobiles, etc., in addition to various legal forms, listed previously, for which no breakdown was available by type of asset.

26 These averages are based on data for all years. Because of the small number of estates in the upper size classes, wide fluctuations occur in their relative composition. It is interesting to note one estate of $42 million filed in 1949 with wholly tax-exempt investments of $27 million, or 64 per cent of the total. Most of the remainder consisted of cash. *Statistics of Income for 1948,* Part 1.

TABLE 12

AVERAGE PROPORTION OF INVESTMENTS IN WHOLLY TAX-EXEMPT SECURITIES AND CAPITAL STOCK TO GROSS ESTATE, BY SIZE CLASS OF NET ESTATE, SELECTED PERIODS, 1922–1949

PERIOD	NET ESTATE SIZE CLASS (*thousands of dollars*) *$100–$200*	*$200–$500*	*$500–$1,050*	*$1,050–$2,050*	*$2,050–$5,050*	*$5,050–$10,050*	*Over $10,050*	TOTAL
	Average Percentage of Wholly Tax-Exempt Securities							
1922–1930	1.9	3.3	5.2	8.2	10.5	11.4	9.8	5.8
1934–1941	4.0	6.8	11.4	17.3	21.2	29.8	23.8	12.2
1942–1949	1.7	3.1	6.2	12.4	16.7	18.7	18.6	7.0
	Average Percentage of Capital Stock							
1922–1930	28.4	37.0	44.6	48.7	53.6	55.0	62.2	43.3
1934–1941	34.6	42.0	47.3	50.3	53.3	50.5	53.3	44.8
1942–1949	32.4	40.5	47.8	49.5	52.0	55.4	55.9	43.2
	Index of Wholly Tax-Exempt Securities							
1922–1930	100	100	100	100	100	100	100	100
1934–1941	211	206	219	211	202	261	243	210
1942–1949	89	94	119	151	159	164	190	120
	Index of Capital Stock							
1922–1930	100	100	100	100	100	100	100	100
1934–1941	122	114	106	103	99	92	86	103
1942–1949	114	109	107	102	97	101	90	100

Source: Dept. of the Treasury, *Statistics of Income,* Part 1.

had a slightly smaller portion of tax-exempt securities.

During 1934–1941 the relative importance of tax-free investments was roughly double that of 1922–1930 for all size classes and ranged from 4 per cent for the smallest estates to about 30 per cent for the $5–$10 million class. In the period 1942–1949 the average percentage declined to the level of the earliest period, but the decline for the smaller estates was much greater than for the larger estates.

Capital-stock investments also tend to increase with the size of estates. During the 1920's they increased from an average of 28 per cent to a maximum of 62 per cent for estates over $10 million.

Since then capital-stock investments have tended to be less concentrated in the very large estates.

There is little evidence that the highly graduated tax structure has diverted venture capital to tax-free investments.[27] Despite greatly increased holdings of wholly tax-exempt investments, the relative amount of capital stock held by taxable estates has not suffered any decline below the period of the 1920's, when surtax rates were at a much lower level.

The general rise in income tax rates has, however, been accompanied by an apparent redistribution of investments in capital stock and tax-free securities among investors in different wealth size classes (Table 12). This trend is evidenced by the change in the percentage of tax-free securities during the period 1942–1949 from an index of 89 for the lowest estate size to 190 for the largest estates, as compared with the base period 1922–1930. The opposite movement, from an index of 114 for small estates to 90 for very large estates, is seen in the relatives for capital-stock investments.

Summary

Individual holdings of wholly tax-exempt securities expanded from less than $2 billion in 1913 to almost $16 billion in 1932–1933 and then declined to $7 billion in 1946. They have since risen substantially but in 1953 were far short of their 1932 peak.

The declining share of individuals has been one of the most significant developments in the market for tax-exempt securities. In contrast to the first half of the period under review, when individual investments in state and local securities rose from less than one-half to two-thirds of total private holdings, their share dropped to around 43 per cent in 1952.

This cycle may be explained in part by changes in the comparative federal tax rates applicable to corporations and individuals. When the corporation income tax rates were comparatively low, individuals tended to increase their share of the tax-exempt market. High corporation income tax rates, on the other hand, have

27 This conclusion is supported independently by Butters, Thompson, and Bollinger, *op. cit.*, Chap. XI.

been accompanied by relatively high interest differentials with respect to other investments and a highly differentiated individual market which has tended to be more limited to high-income groups. Other factors, such as excess bank reserves, the volume of new securities marketed, and the redistribution of income, have also played an important role.

Because of the greater value of tax-exempt securities to high-income individuals, their ownership has been more concentrated than other types of investment. This concentration has been somewhat less, however, than might be expected on purely pecuniary grounds. As of 1940, for example, the upper 1 per cent of the population held an estimated two-thirds of total individual holdings of municipal securities. This still left a substantial amount in the hands of those for whom there apparently was little or no tax advantage.

Changes in the concentration of individual holdings of state and local obligations over the period 1924–1941 reflected the changing level of individual income tax rates. The available data indicate that between the early 1920's and the early 1930's their concentration in the hands of high-income individuals declined with the reductions in personal tax rates during that period and that concentration increased between then and 1940 or so when tax rates were rising. However, there appeared to be some redistribution in these holdings among different levels in the higher-income group itself (above $5,000), which might be accounted for in part by a decline in the concentration of incomes after tax.

Between the 1920's and the 1930's, holdings of wholly tax-exempt securities by large estates (over $100,000) rose from about 6 per cent to about 12 per cent of total investments of these estates. The proportion then declined to around 7 per cent. These changes in ownership of wholly tax-exempt investments, however, were not accompanied by any change in the proportion of equity securities held by large estates. This would indicate in general that investments in comparatively safe tax-exempt securities did not displace equity investments over this period.

The proportion of wholly tax-exempt securities held by estates increases with the size of gross estates up to around $5–$10 million.

Their relative concentration since the early 1940's apparently has greatly increased, however, by comparison with the period of the 1920's. During the same time there has been a relative decline in the concentration of equity securities among very large estates. This redistribution may indicate a shift in the relative supply of equity capital from the wealthiest groups to those of more moderate wealth.

Appendixes

(Appendixes A to D provide basic data through 1953.)