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Chapter Title: The Shifting Importance of Interest as a Sources of Personal Income

Chapter Author: Lawrence Howard Seltzer
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ceived by individuals is received by those with small and moderate incomes.
Another subject of debate is the influence of tax policy on the choice of investments, that is, on the inducement to invest in relatively safe interest-bearing securities as against possibly risky equities, or vice versa. This study offers some revealing evidence in this connection, indicating, among other things, the great importance of the prevailing expectations with respect to the possibilities of capital gains.
Is the tendency to higher interest rates which has been in evidence since 1946, despite some interruptions and reversals, likely to continue, and, if so, are interest rates likely to rise to former peaks? On these questions, too, some light is thrown by analysis of the statistics and related considerations.
It will doubtless surprise many persons to learn that only about onefourth of the interest income estimated to have been received by individuals in the years 1930-1950 was reported on taxable income tax returns, despite the sharp decreases during the 1940's in the level of personal exemptions and the huge increase in the number of taxable returns filed. What are the important reasons for this fact?
It is the aim of the National Bureau of Economic Research, in this as in its other studies, not to take a position on disputed issues of public policy but rather to make available empirical evidence and impartial analysis for whatever uses may be appropriate.
The present paper begins by tracing the changing absolute and relative importance of personal interest receipts and their changing distribution as between higher and lower income groups. Then it examines the principal causes of the long decline in personal interest income after 1929 and attempts to account, so far as possible, for the fact that only about one-fourth of total personal interest receipts have been reported on taxable individual income tax returns in recent years. The third section of the paper presents some measures of the importance of interest income as a source of tax revenues. The fourth discusses the effects of the progressive income tax rate structure upon interest yields and interest income after taxes and the resulting influence upon incentives to individuals to invest in taxable fixed-interest securities. A final section considers some probable future trends in personal interest income.

## I. THE SHIFTING IMPORTANCE OF INTEREST <br> AS A SOURCE OF PERSONAL INCOME

1. Substantial fluctuations in the absolute and relative importance of interest have occurred since 1913
Although interest has the reputation of being a relatively stable

## TABLE 1

INTEREST COMPONENT OF PERSONAL INCOME RECEIPTS, 1913-1953

| Year | Total income receipts of individuals (billions of dollars) | Monetary interest | Interest as percentage of total income receipts | Year | Total income receipts of individuals (billions of dollars) | $\begin{gathered} \text { Mone- } \\ \text { tary } \\ \text { interest } \end{gathered}$ | Interest as percentage of total income receipts |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1913 | 32.5 | 1.4 | 4.4 | 1932 | 45.6 | 4.6 | 10.2 |
| 1914 | 31.9 | 1.5 | 4.6 | 1933 | 44.2 | 4.4 | 10.0 |
| 1915 | 34.1 | 1.6 | 4.6 | 1934 | 50.3 | 4.2 | 8.4 |
| 1916 | 40.7 | 1.6 | 4.0 | 1935 | 56.9 | 4.0 | 7.1 |
| 1917 | 49.5 | 1.8 | 3.6 | 1936 | 65.1 | 3.9 | 6.0 |
| 1918 | 55.2 | 2.0 | 3.6 | 1937 | 70.2 | 3.9 | 5.5 |
| 1919 | 63.1 | 2.6 | 4.1 | 1938 | 64.6 | 3.8 | 5.9 |
|  |  |  |  | 1939 | 69.1 | 3.8 | 5.4 |
| 1919 | 63.7 | 2.9 | 4.6 | 1940 | 74.8 | 3.7 | 5.0 |
| 1920 | 66.9 | 3.3 | 5.0 | 1941 | 92.6 | 3.7 | 4.0 |
| 1921 | 53.3 | 3.5 | 6.6 | 1942 | 118.9 | 3.5 | 2.9 |
| 1922 | 57.3 | 3.6 | 6.3 | 1943 | 145.3 | 3.4 | 2.3 |
| 1923 | 66.5 | 3.8 | 5.7 | 1944 | 137.4 | 3.5 | 2.2 |
| 1924 | 66.9 | 3.9 | 5.8 | 1945 | 162.0 | 3.9 | 2.4 |
| 1925 | 70.8 | 4.1 | 5.7 | 1946 | 172.5 | 4.4 | 2.5 |
| 1926 | 73.7 | 4.1 | 5.6 | 1947 | 185.2 | 4.9 | 2.6 |
| 1927 | 74.1 | 4.3 | 5.8 | 1948 | 201.6 | 5.3 | 2.6 |
| 1928 | 75.9 | 4.6 | 6.0 | 1949 | 197.8 | 5.7 | 2.9 |
| 1929 | 80.2 | 4.8 | 6.0 | 1950 | 219.2 | 6.2 | 2.8 |
|  |  |  |  | 1951 | 245.8 | 6.8 | 2.8 |
| 1929 | 80.1 | 5.2 | 6.5 | 1952 | 260.1 | 7.0 | 2.7 |
| 1930 | 71.0 | 4.8 | 6.8 | 1953 | 274.3 | 7.5 | 2.8 |
| 1931 | 60.3 | 4.8 | 8.0 |  |  |  |  |

Source: Simon Kugnets, Shares of Upper Income Groups in Income and Savings (National Bureau of Economic Research, 1953), pp. 570-571, 576-577. Kuznete uses three separate series: (a) 1913-1819, estimates of W. I. King, The National Income and Its Purchasing Power (NBER, 1930), and an unpublished extension of the 1013 data, modified by Kuznets (Simon Kuznets, National Product in Wartime [NBER, 1945]); (b) 1919-1929, Simon Kuznets, National Income and Its Composition, 1919-1988 (NBER, 1941); (0) 1929-1953, National Income Supplement, 1954, Survey of Current Business; and Statistical Abstract of the United States, 1958.

Exoluded from the figures used here for total personal income are imputed rent, imputed interest, inventory valuation adjustments, business transfers except cash prizes, and government contributions to military family allowances.

Interest receipts of nonprofit institutions furnishing services to individuals and ourrent accruals of interest (diseount) on individuals' holdings of United States savings bonds are induded, while interest reveived by individuals from other individuals are excluded, from the personal interest income figures of the Department of Commerce which are used here.

## CHART 1

INTEREST COMPONENT OF PERSONAL INCOME RECEIPTS, 1913-1953



Source: Table 1.
source of income, the annual amounts received by individuals in the United States have varied substantially in both directions since 1913. This may be seen in Table 1 and Chart 1, which present annual estimates of total explicit or monetary interest receipts of individuals in the United States in the period 1913-1953. The figures were obtained by joining estimates made by Simon Kuznets for 1913-1929 with those of the Department of Commerce for years beginning with 1929. ${ }^{1}$

Annual receipts of interest by individuals more than tripled between 1913 and 1929. Then the total fell during the next fourteen years, reaching a level in 1943 about 35 per cent below that of 1929 . In contrast, dividends paid to individuals in 1943 were only 23 per cent lower than in 1929, while employee compensation, entrepreneurial income, and rents were all much higher. ${ }^{2}$ Personal interest receipts began a vigorous upturn in 1944, but despite a great growth in public and private debt they did not overtake the 1929 total until 1948. A comparison of the year-to-year movements of personal receipts of interest and dividends in 1913-1953 is shown in Table 2 and Chart 2.

Most striking in the record of personal interest receipts is the long and pronounced decline in their relative importance as a component of total personal incomes since 1933 (Table 1 and lower section of Chart 1). Interest had contributed a rising proportion of total personal income receipts between 1913 and 1929. In 1929, the first year of the present series of national income estimates of the Department of Commerce, the money interest receipts of individuals constituted 6.5 per cent of their total income receipts. During the early years of the Great Depression the more drastic shrinkage of other sources of income caused the share of interest in total personal income to rise above 10 per cent in 1932 and 1933, though the absolute amount fell substantially. After 1933 the percentage importance of interest declined sharply and almost uninterruptedly until it reached a low of slightly more than 2 per cent in 1944. Since then the proportion has fluctuated somewhat between $2 \frac{1}{2}$ and 3 per cent.

The record low levels in the relative importance of interest in total personal income receipts in recent years resulted in largest part from the vastly disproportionate increases in other sources of income. Whereas employee compensation rose from $\$ 46$ billion to $\$ 200$ billion between 1939 and 1953 and entrepreneurial income, from $\$ 11$ billion to $\$ 38$ billion, money interest receipts of individuals rose only from $\$ 3.8$ billion to $\$ 7.5$ billion. ${ }^{3}$

[^0]
## 2. Interest income more widely diffused among the different income groups

The figures for 1917-1948 presented by Simon Kuznets in his Shares of Upper Income Groups in Income and Savings and those compiled from income tax returns for subsequent years show that a marked reduction has taken place in the concentration of interest receipts in the upper income groups. Correspondingly, there has been an increased diffusion of interest income among the population as a whole. Whereas the top 5 per cent of the population, when ranked according to the size of family income per member, received 51 per cent of the total personal interest income in 1919 and an average of 43.4 per cent of the total in 1918-1938, their proportion had fallen to 26 per cent in 1948. ${ }^{4}$ The share of the top 1 per cent of the population fell from 37 per cent of all personal interest income in 1919 to $15 \frac{3}{4}$ per cent in 1948. Conversely, the lower 95 per cent of the population, who had obtained only 49 per cent of total personal interest receipts in 1919 , received 74 per cent in 1948.

Although the relative importance of interest as a component of personal income declined substantially for all income groups, the decline was greatest in the upper income groups. In 1919 the top 1 per cent of the population obtained 13.4 per cent of their aggregate income from interest; ten years later the proportion was still 12.9 per cent; but by 1948 it had shrunk to 4.6 per cent. ${ }^{5}$ The top 5 per cent of the population, whose interest receipts had accounted for 10.3 per cent of their total income in 1919 and 10.9 per cent in 1929, obtained only 3.7 per cent of their total income from this source in 1948. For the lower 95 per cent of the population the percentage of income obtained from interest was 2.9 per cent in 1919 and 2.2 per cent in 1948.

These figures, as well as those from income tax returns in recent years, are in contrast with a still common notion that members of the uppermost income groups in the United States obtain a large fraction of their incomes by clipping and cashing maturing interest coupons on their bond holdings and from interest receipts on mortgages and other loans. The income tax figures indicate that in the ten years ending in 1950, taxable interest contributed an average of only about 3 cents of each dollar of adjusted gross income reported by all taxpayers with incomes exceeding $\$ 25,000$. (Adjusted gross income is statutory net income before the allowable personal deductions such as interest and taxes paid, charitable contributions, medical expenses, and casualty losses.) The major sources of taxable individual incomes over $\$ 25,000$

[^1]in 1941-1950 were dividends, salaries, and entrepreneurial income from unincorporated business. In 1950 the proportion that taxable interest contributed to the total adjusted gross income of each of nine income size groups was as follows:

| Income size group | Per cent |
| :---: | :---: |
| $\$ 00,000$ and over | 2.9 |
| $\$ 100,000-\$ 500,000$ | 3.0 |
| $50,000-100,000$ | 2.9 |
| $25,000-50,000$ | 2.8 |
| $10,000-25,000$ | 2.2 |
| $5,000-10,000$ | 0.9 |
| $3,000-$ | 5,000 |
| $2,000-$ | 3,000 |
| Less than $\$ 2,000$ | 0.4 |
|  |  |

TABLE 2
COMPARISON OF INTEREST AND DIVIDENDS IN PERSONAL INCOME, 1913-1953
(Billions of Dollars)

| Year | Dividends | Monetary <br> interest | Year | Dividends | Monetary <br> interest |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1913 | 2.1 | 1.4 | 1932 | 2.6 | 4.6 |
| 1914 | 2.0 | 1.5 | 1933 | 2.1 | 4.4 |
| 1915 | 2.0 | 1.6 | 1934 | 2.6 | 4.2 |
| 1916 | 3.3 | 1.6 | 1935 | 2.9 | 4.0 |
| 1917 | 3.7 | 1.8 | 1936 | 4.5 | 3.9 |
| 1918 | 3.5 | 2.0 | 1937 | 4.7 | 3.9 |
| 1919 | 3.2 | 2.6 | 1938 | 3.2 | 3.8 |
|  |  |  | 1939 | 3.8 | 3.8 |
| 1919 | 2.9 | 3.9 | 1940 | 4.0 | 3.7 |
| 1920 | 3.2 | 3.3 | 1941 | 4.5 | 3.7 |
| 1921 | 3.0 | 3.6 | 1942 | 4.3 | 3.5 |
| 1922 | 3.0 | 3.8 | 1943 | 4.5 | 3.4 |
| 1923 | 3.8 | 3.9 | 1944 | 4.7 | 3.5 |
| 1924 | 3.8 | 4.1 | 1946 | 4.7 | 3.9 |
| 1925 | 4.4 | 4.1 | 1947 | 6.8 | 4.4 |
| 1926 | 4.7 | 4.3 | 1948 | 7.2 | 4.9 |
| 1927 | 5.0 | 4.6 | 1949 | 7.5 | 5.3 |
| 1928 | 5.5 | 4.8 | 1950 | 9.2 | 5.7 |
| 1929 | 6.3 |  | 1951 | 9.1 | 6.2 |
|  |  | 4.8 | 1952 | 9.1 | 6.8 |
| 1929 | 5.8 | 4.8 |  |  | 7.0 |
| 1930 | 5.5 | 4.1 |  |  |  |
| 1931 | 4.8 |  |  | 7.5 |  |

Source: Same as in Table 1.

CHART 2
COMPARISON OF INTEREST AND DIVIDENDS IN PERSONAL INCOME, 1913-1953


Of the $4,410,271$ tax returns reporting interest income in 1950, 3,667,607 of them reported interest income of $\$ 500$ or less, and only 27,161 reported interest income of more than $\$ 5,000$ (Table 3). The latter group accounted for 15.8 per cent of the total interest income reported on all returns.

Unlike Kuznets' estimates the figures drawn from income tax returns are subject to the qualification that they do not include interest from tax-exempt securities. Such securities are doubtless held in relatively greater amounts among the upper income groups than among the lower. Nevertheless, as reœently as 1941 -the latest year for which this information was reported on income tax returns-individuals with incomes of $\$ 5,000$ and over reported only 39 per cent of the state and local government securities estimated to be in the hands of individuals. ${ }^{6}$ After allowing for the holdings of taxable fiduciaries and for underreporting, George Lent's estimates indicate that individuals with

[^2]
## TABLE 3

## ESTIMATED INTEREST ON ALL RETURNS REPORTING INTEREST, BY SIZE OF INTEREST INCOME <br> REPORTED, 1950

| Size of interest income reported (thousands of dollars) | No. of returns in each group | Average interest reported per return <br> (2) | Total interest income of each group (1) $\times(2)$ (thousands of dollars) (3) | Percentage of total interest in each group (3) $\div$ total (per cent) <br> (4) |
| :---: | :---: | :---: | :---: | :---: |
| Under 0.1 | 2,041,369 | 50 | 102,068 | 6.17 |
| 0.1-0.2 | 782,152 | 150 | 117,323 | 7.09 |
| $0.2-0.3$ | 406,642 | 250 | 101,660 | 6.14 |
| $0.3-0.4$ | 267,209 | 350 | 93,523 | 5.65 |
| 0.4-0.5 | 170,235 | 450 | 76,606 | 4.63 |
| 0.5-1.0 | 409,048 | 750 | 306,786 | 18.53 |
| 1.0-1.5 | 138,969 | 1,250 | 173,711 | 10.49 |
| 1.5-2.0 | 65,106 | 1,750 | 113,936 | 6.88 |
| 2.0-2.5 | 37,753 | 2,250 | 84,944 | 5.13 |
| 2.5-3.0 | 22,858 | 2,750 | 62,860 | 3.80 |
| 3-4 | 26,829 | 3,500 | 93,902 | 5.67 |
| 4-5 | 14,940 | 4,500 | 67,230 | 4.06 |
| 5-10 | 20,114 | 6,385.6 | 128,440 | 7.76 |
| 10-25 | 6,054 | 14,564.5 | 88,173 | 5.33 |
| 25-30 | 809 | 33,735.7 | 27,292 | 1.65 |
| 50-100 | 148 | 66,878.0 | 9,898 | 0.60 |
| 101 or over | 36 | 198,775.9 | 7,156 | 0.43 |
| Total | 4,410,271 |  | 1,655,508 | 100.01 |
| Actual total reported in |  |  |  |  |
| Overestimate |  |  | 59,904 |  |
| Per cent overestimated |  |  | 3.75 |  |

Source: For returns reporting interest income of less than $\$ 5,000$, the average amount of interest per return in each interest size group was estimated by assuming that it equalled the midpoint of the size group. The number of returns in each group was obtained from Statistics of Incorne. Because of the wider limits of the interest size groups of $\$ 5,000$ and over, the midpoint was not deemed representative of the average. In these groups the average amount of interest per return was estimated by assuming that the number of returns within each interest size group, as reported in Statistics of Income, was distributed similarly to the distribution of returns reporting adjusted gross income of the same amounts.
incomes of less than $\$ 5,000$ owned nearly one-half of the state and local government securities in individual hands in 1941. ${ }^{7}$ We estimate below,

[^3]moreover, that individuals' interest receipts from tax-exempt securities fell by more than one-half between 1932 and 1949.

In the taxable estate tax returns filed in 1949, as reported in Statistics of Income for 1948, wholly tax-exempt securities constituted 0.5 per cent of gross estates under $\$ 100,000,1$ per cent of those between $\$ 100,000$ and $\$ 500,000$, 3.2 per cent of those between $\$ 500,000$ and $\$ 1$ million, 8.4 per cent of $\$ 1$ million to $\$ 5$ million, 17 per cent of $\$ 5$ million to $\$ 10$ million, and 32.2 per cent of gross estates of $\$ 10$ million and over. For estates under $\$ 5$ million the proportions represented by taxexempt securities in 1949 were considerably smaller, on the average, than the proportions in the years 1934-1945 and for estates of $\$ 5 \mathrm{mil}-$ lion and over, slightly greater.

Although the exclusion of tax-exempt interest causes the role of interest in the composition of income to be somewhat understated for all income groups in figures taken from income tax returns, and to be more understated for larger than for smaller incomes, the understatement is relatively small for any broad income size group. Tax-exempt interest doubtless bulks large in the incomes of some individuals. But entrepreneurial profits, dividends, capital gains, and salaries dwarf taxexempt interest in importance for each group as a whole. This is true even of the highest income groups, which owe the bulk of their aggregate incomes to dividends, entrepreneurial profits, and capital gains. ${ }^{8}$ Even if, in the face of the sharp decline in total tax-exempt interest received by individuals and of the evidence from estate tax returns, we were to assume that the amount of fully tax-exempt interest received in 1949 by taxpayers with adjusted gross income of $\$ 100,000$ or more was twice as great as the amount of such interest reported by these income groups in 1940, their tax-exempt interest would equal only 3.9 per cent of the adjusted gross income they reported. Thomas R. Atkinson found that in 1949 state and local government obligations represented only 2.3 per cent of the total financial assets of all Wisconsin individuals with incomes of $\$ 50,000$ or more and only 1.2 per cent of the financial assets of those with incomes of $\$ 20,000-50,000 .{ }^{9}$

The lower among taxable income groups have received a surprisingly large porportion of the aggregate interest income reported on taxable individual returns in recent years. Individuals with incomes under $\$ 5,000$ accounted for an average of 41 per cent of the annual totals of taxable interest in the ten years 1941-1950, and even those with incomes under $\$ 3,000$ accounted for an average of 25 per cent of the annual totals in this period (Tables 4 and 5).

[^4]The lower among the taxable income groups have consistently received a much larger proportion of total interest income than of total dividend receipts reported on taxable returns. Taxpayers with incomes under $\$ 5,000$ accounted for an average of only 13 per cent of the annual total of dividends reported on taxable returns in the 33 years 19181950 as compared with 36 per cent of the total interest. In 1941-1950 they accounted for an average of 21 per cent of the total dividends so reported as against 41 per cent of total interest.

These figures accord in a general way with Atkinson's findings with respect to the pattern of financial asset ownership of individuals in Wisconsin in $1949 .{ }^{10}$ Atkinson found that individuals with incomes less than $\$ 5,000$ tend to concentrate much of their financial assets in debt obligations, particularly such kinds as savings bank deposits, building and loan association shares, and life insurance policies but that corporate stocks become progressively more important in higher income groups. Similarly, Joseph A. Pechman, in analyzing the patterns of income revealed by a study of the 1936 Wisconsin state income tax returns, found that interest was the second most frequent source of income for wage earners with less than $\$ 2,000$ income and for entrepreneurs with incomes under $\$ 1,000$, as well as for entrepreneurs with incomes between $\$ 6,000$ and $\$ 8,000 .{ }^{11}$
3. Long decline in personal interest income after 1929 and relatively moderate growth in recent years in the face of large increases in debt
It is easy to point to the major reasons for the substantial decline in the absolute amounts of interest received by individuals during the 1930's but less easy to account fully for the only moderate recovery in the 1940's, when immense increases took place in the amount of inter-est-bearing debt outstanding in the United States.

In the years immediately following 1929 the shrinkage in personal interest income reflected in part a general contraction in the total amount of interest payments, both to individuals and corporations. Such payments fell sharply in the early years of the Great Depression as bank and other loans were reduced and as defaults took place on large amounts of bonds of railroad and other domestic corporations, foreign governments and corporations, and on residential and farm mortgages. Gross annual monetary interest payments in the United States fell from $\$ 13.6$ billion in 1929 to $\$ 8.8$ billion in 1935 , as estimated

[^5]TABLE 4
PERCENTAGE SHARES OF DIFFERENT INCOME GROUPS IN TOTAL INTEREST REPORTED ON TAXABLE INDIVIDUAL AND FIDUCIARY RETURNS,

1918-1950

|  | Net income classes.* (thousands of dollars) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Less } \\ \text { than } \\ 2 \end{gathered}$ | 2-3 | 3-5 | 5-10 | 10-25 | 25-50 | 50-100 | $\begin{aligned} & 100- \\ & 500 \end{aligned}$ | 500 <br> and <br> Over |
| 1918 | 7.7 | 12.7 | 18.5 | 16.9 | 15.3 | 9.2 | 7.1 | 8.7 | 4.0 |
| 1919 | 6.9 | 8.2 | 17.5 | 18.3 | 18.2 | 10.9 | 7.8 | 9.1 | 2.9 |
| 1920 | 7.5 | 12.6 | 18.6 | 18.1 | 18.5 | 10.5 | 7.1 | 5.5 | 1.5 |
| 1921 | 8.8 | 9.2 | 20.8 | 19.5 | 19.7 | 10.6 | 6.3 | 4.3 | 0.8 |
| 1922 | 7.3 | 8.0 | 19.5 | 19.3 | 20.0 | 11.5 | 7.5 | 5.5 | 1.5 |
| 1923 | 9.7 | 10.9 | 27.5 | 15.3 | 16.7 | 9.2 | 5.5 | 4.1 | 1.1 |
| 1924 | 9.0 | 10.8 | 29.4 | 13.0 | 16.2 | 9.5 | 6.1 | 4.7 | 1.3 |
| 1925 | 4.1 | 6.3 | 18.2 | 17.5 | 22.7 | 13.4 | 8.5 | 7.0 | 2.3 |
| 1926 | 4.0 | 6.3 | 15.2 | 19.1 | 23.7 | 13.3 | 8.7 | 7.3 | 2.3 |
| 1927 | 3.3 | 5.7 | 13.1 | 19.6 | 24.6 | 13.8 | 9.2 | 8.0 | 2.7 |
| 1928 | 3.4 | 6.4 | 13.4 | 18.6 | 22.6 | 13.1 | 9.3 | 9.0 | 4.2 |
| 1929 | 2.9 | 5.7 | 12.4 | 18.8 | 23.5 | 13.4 | 9.3 | 9.3 | 4.8 |
| 1930 | 4.7 | 7.4 | 14.4 | 20.8 | 24.8 | 12.5 | 7.6 | 5.9 | 2.1 |
| 1931 | 4.0 | 7.4 | 14.3 | 23.6 | 27.2 | 11.4 | 6.6 | 4.1 | 1.4 |
| 1932 | 9.6 | 9.3 | 17.4 | 22.2 | 20.5 | 11.5 | 5.8 | 3.2 | 0.6 |
| 1933 | 11.2 | 9.9 | 17.2 | 21.8 | 19.4 | 10.7 | 5.6 | 3.5 | 0.7 |
| 1934 | 7.6 | 6.8 | 15.6 | 24.3 | 25.1 | 11.5 | 5.5 | 2.9 | 0.7 |
| 1935 | 6.9 | 6.5 | 15.0 | 23.7 | 25.1 | 12.3 | 6.3 | 3.5 | 0.7 |
| 1936 | 9.8 | 8.6 | 17.7 | 19.1 | 20.7 | 11.3 | 6.9 | 4.7 | 1.3 |
| 1937 | 10.0 | 8.1 | 17.4 | 20.1 | 21.3 | 10.9 | 6.4 | 4.5 | 1.3 |
| 1938 | 15.6 | 9.0 | 18.3 | 20.5 | 19.9 | 8.6 | 4.1 | 3.0 | 1.0 |
| 1939 | 15.2 | 8.8 | 17.5 | 19.8 | 19.9 | 9.4 | 4.7 | 3.5 | 1.2 |
| 1940 | 18.6 | 13.4 | 17.3 | 17.1 | 17.1 | 8.2 | 4.1 | 3.1 | 1.0 |
| 1941 | 23.5 | 16.3 | 18.1 | 14.1 | 14.1 | 6.7 | 3.6 | 2.9 | 0.8 |
| 1942 | 25.7 | 15.0 | 15.2 | 13.7 | 15.1 | 7.7 | 4.1 | 2.9 | 0.5 |
| 1943 | 23.7 | 12.5 | 14.4 | 15.4 | 16.4 | 8.6 | 4.9 | 3.6 | 0.6 |
| 1944 | 15.7 | 10.9 | 16.0 | 17.6 | 18.7 | 9.7 | 5.9 | 4.2 | 1.4 |
| 1945 | 13.9 | 10.9 | 14.6 | 18.1 | 20.0 | 10.4 | 6.2 | 4.5 | 1.4 |
| 1946 | 10.9 | 9.9 | 14.9 | 18.2 | 21.1 | 11.4 | 6.8 | 5.2 | 1.6 |
| 1947 | 10.9 | 10.1 | 14.9 | 18.8 | 20.9 | 11.1 | 6.4 | 5.3 | 1.6 |
| 1948 | 5.4 | 7.6 | 15.7 | 21.0 | 21.9 | 12.6 | 7.8 | 6.5 | 1.7 |
| 1949 | 6.6 | 8.4 | 17.2 | 22.1 | 20.6 | 11.5 | 6.9 | 5.4 | 1.4 |
| 1950 | 5.3 | 6.9 | 15.0 | 21.5 | 22.0 | 13.4 | 7.9 | 6.3 | 1.7 |

[^6]For the years 1927-1931 and 1932-1936, respectively, when Statistics of Income combined

## TABLE 5

INTEREST REPORTED ON TAXABLE RETURNS, BY INCOME CLASSES, 1918-1950
(Millions of Dollars)

| Year | Net income classes* (thousands of dollars) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Less } \\ & \text { than } 2 \end{aligned}$ | 2-3 | 3-5 | 5-10 | 10-25 | 25-50 | $\begin{aligned} & 50- \\ & 100 \end{aligned}$ | $\begin{aligned} & 100- \\ & 500 \end{aligned}$ | $\begin{gathered} \text { Over } \\ 500 \end{gathered}$ | Total |
| 1918 | 99.9 | 165.5 | 241.0 | 220.6 | 199.5 | 120.5 | 92.9 | 113.8 | 51.8 | 1,305.6 |
| 1919 | 96.7 | 114.9 | 244.4 | 255.5 | 254.6 | 152.3 | 108.6 | 127.2 | 41.1 | 1,395.3 |
| 1920 | 111.2 | 186.3 | 276.2 | 268.7 | 274.8 | 156.0 | 105.2 | 81.4 | 22.3 | 1,482.0 |
| 1921 | 110.5 | 115.8 | 263.0 | 246.4 | 249.3 | 134.4 | 79.5 | 53.8 | 9.7 | 1,262.2 |
| 1922 | 104.7 | 115.4 | 281.2 | 278.3 | 289.0 | 165.3 | 107.7 | 78.9 | 21.4 | 1,441.8 |
| 1923 | 181.8 | 204.0 | 514.1 | 285.3 | 311.5 | 172.7 | 103.5 | 76.3 | 20.2 | 1,869.3 |
| 1924 | 181.6 | 216.1 | 591.4 | 260.4 | 326.3 | 190.6 | 122.7 | 94.7 | 25.2 | 2,009.0 |
| 1925 | 67.3 | 103.3 | 297.9 | 287.7 | 372.4 | 219.7 | 140.3 | 114.7 | 37.8 | 1,641.0 |
| 1926 | 70.5 | 111.2 | 267.9 | 336.1 | 416.9 | 233.1 | 152.1 | 128.5 | 40.8 | 1,757.1 |
| 1927 | 59.7 | 104.6 | 240.2 | 359.0 | 451.4 | 252.2 | 169.4 | 147.4 | 49.7 | 1,833.6 |
| 1928 | 69.7 | 130.2 | 272.8 | 377.7 | 459.5 | 265.3 | 188.5 | 183.6 | 85.2 | 2,032.5 |
| 1929 | 58.0 | 114.1 | 249.7 | 380.3 | 473.4 | 270.5 | 188.1 | 187.4 | 97.0 | 2,018.5 |
| 1930 | 79.5 | 126.3 | 245.7 | 354.6 | 423.1 | 213.2 | 130.4 | 100.3 | 35.4 | 1,708.4 |
| 1931 | 46.2 | 84.1 | 162.8 | 269.1 | 310.4 | 130.0 | 75.7 | 47.1 | 15.6 | 1,141.0 |
| 1932 | 96.7 | 93.9 | 176.0 | 224.6 | 207.0 | 116.2 | 59.2 | 32.1 | 6.4 | 1,012.1 |
| 1933 | 94.7 | 83.9 | 145.9 | 184.7 | 164.6 | 90.8 | 47.3 | 29.5 | 6.2 | 847.5 |
| 1934 | 61.8 | 55.1 | 127.3 | 197.5 | 204.5 | 93.9 | 44.4 | 23.5 | 6.0 | 813.9 |
| 1935 | 56.5 | 53.1 | 121.6 | 193.0 | 204.1 | 99.7 | 51.5 | 28.2 | 5.3 | 813.0 |
| 1936 | 88.5 | 77.8 | 159.8 | 172.0 | 186.8 | 101.8 | 62.4 | 42.3 | 11.3 | 902.7 |
| 1937 | 88.4 | 71.8 | 153.1 | 177.1 | 187.9 | 96.1 | 56.7 | 39.5 | 11.6 | 882.3 |
| 1938 | 135.3 | 77.7 | 158.7 | 177.2 | 172.4 | 74.8 | 35.2 | 25.7 | 9.1 | 866.1 |
| 1939 | 136.5 | 78.9 | 157.8 | 178.3 | 179.2 | 84.9 | 42.1 | 31.5 | 10.9 | 900.3 |
| 1940 | 183.9 | 132.6 | 170.8 | 169.0 | 169.2 | 80.8 | 40.4 | 30.5 | 10.3 | 987.5 |
| 1941 | 269.7 | 187.0 | 207.5 | 161.8 | 161.6 | 76.9 | 40.9 | 33.8 | 9.0 | 1,148.2 |
| 1942 | 293.5 | 171.9 | 173.5 | 157.1 | 172.7 | 87.9 | 46.3 | 33.3 | 6.2 | 1,142.3 |
| 1943 | 259.2 | 136.5 | 158.2 | 168.2 | 179.2 | 94.5 | 53.4 | 39.3 | 7.0 | 1,095.4 |
| 1944 | 169.1 | 118.2 | 172.5 | 190.4 | 201.4 | 104.2 | 63.3 | 45.9 | 14.7 | 1,079.7 |
| 1945 | 148.8 | 116.1 | 155.8 | 193.3 | 214.2 | 111.4 | 66.7 | 47.6 | 14.8 | 1,068.6 |
| 1946 | 133.7 | 122.0 | 182.4 | 222.9 | 259.5 | 139.4 | 83.7 | 64.3 | 19.7 | 1,227.6 |
| 1947 | 136.2 | 126.1 | 185.5 | 234.2 | 260.2 | 138.7 | 80.2 | 65.5 | 19.8 | 1,246.5 |
| 1948 | 70.0 | 98.4 | 204.0 | 273.2 | 284.4 | 164.0 | 101.1 | 84.5 | 21.5 | 1,301.2 |
| 1949 | 99.8 | 126.7 | 260.6 | 335.1 | 311.7 | 173.6 | 104.0 | 81.8 | 21.5 | 1,514.8 |
| 1950 | 86.1 | 111.6 | 243.1 | 348.7 | 356.0 | 216.3 | 127.1 | 102.1 | 27.5 | 1,618.5 |

* In 1944 changed to Adjusted Gross Income Classes.

Note: The figures do not necessarily add to total due to rounding.
Source: Same as in Table 4.
nontaxable returns with taxable returns for net incomes of $\$ 5,000-10,000$ and $\$ 5,000-6,000$, interest on taxable returns was estimated by assuming that it constituted the same ratio of total reported interest as the ratio of net income on taxable returns to total net income reported.

For the years 1941-1943, interest was combined with dividends, rents, royalties (for 1941 only), and annuities on 1040A (short-form) returns. Interest was estimated for these years by assuming it constituted the same ratio of these components of income as in 1040 (long-form) returns.
by the Department of Commerce. Total personal interest receipts fell from $\$ 5.2$ billion in 1929 to $\$ 4.0$ billion in 1935 . The amount of personal interest income continued to shrink until the entrance of the United States into World War II and did not rise above its 1929 level until 1948 despite a large and rapid growth in the total of public and private debt during the war and postwar years.

The net amounts of public and private debt outstanding, as defined by the Department of Commerce but modified to exclude debt bearing no interest, are shown for selected years, by classes of borrowers, in Table 6. Net public and private debt is defined to exclude government obligations held by federal, state, or local governments or their agencies or trust funds; corporate obligations held by the issuer or its close affiliate; and short-term debts of individuals and nonfinancial unincorporated business enterprises owed to other such enterprises and individuals. It also excludes bank deposits and the value of outstanding life insurance and annuity policies. The total fell from $\$ 160$ billion in 1930 to $\$ 142$ billion in 1933 . It rose slowly during the remainder of the 1930's, approximating its 1930 level in 1940. Then it more than doubled in the next five years, reaching $\$ 362$ billion in 1945 . The whole of this $\$ 202$ billion increase in this period was in the federal debt and was mainly occasioned by World War II. The federal government then reduced its debt by $\$ 24$ billion between 1945 and 1953, but the net debt of other borrowers more than doubled, causing the total net public and private interest-bearing debt at the end of 1953 to be greater than that at the end of 1945 by $\$ 141$ billion, or 39 per cent, and greater than that at the end of 1929 by $\$ 345$ billion, or 218 per cent.

[^7]TABLE 6
NET INTEREST-BEARING PUBLIC AND PRIVATE DEBT AT END OF CALENDAR YEARS, 1918-1953
(Billions of Dollars)

|  | Federal government | State and local government | Longterm corporate | Farm mortgage | Nonfarm mortgage | Shortterm corporate | Nonmortgage, noncorporate | Total interestbearing debt |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1918 | 21 | 5 | 30 | 7 | 10 | 7 | 27 | 106 |
| 1919 | 25 | 5 | 31 | 8 | 10 | 7 | 24 | 112 |
| 1920 | 23 | 6 | 33 | 10 | 12 | 8 | 25 | 117 |
| 1921 | 23 | 7 | 34 | 11 | 13 | 8 | 25 | 120 |
| 1922 | 23 | 8 | 34 | 11 | 14 | 9 | 25 | 123 |
| 1923 | 21 | 8 | 36 | 11 | 16 | 9 | 25 | 127 |
| 1924 | 21 | 9 | 39 | 10 | 19 | 9 | 26 | 132 |
| 1925 | 20 | 10 | 40 | 10 | 21 | 10 | 27 | 137 |
| 1926 | 19 | 11 | 42 | 10 | 24 | 10 | 27 | 142 |
| 1927 | 18 | 11 | 44 | 10 | 27 | 10 | 27 | 148 |
| 1928 | 17 | 12 | 46 | 10 | 30 | 10 | 29 | 154 |
| 1929 | 16 | 13 | 47 | 10 | 31 | 11 | 29 | 158 |
| 1930 | 16 | 14 | 51 | 9 | 32 | 9 | 28 | 160 |
| 1931 | 18 | 16 | 50 | 9 | 31 | 8 | 23 | 154 |
| 1932 | 21 | 16 | 49 | 8 | 29 | 6 | 18 | 148 |
| 1933 | 24 | 16 | 48 | 8 | 26 | 5 | 15 | 142 |
| 1934 | 30 | 16 | 45 | 8 | 26 | 5 | 15 | 143 |
| 1935 | 33 | 16 | 44 | 7 | 25 | 5 | 16 | 145 |
| 1936 | 37 | 16 | 43 | 7 | 24 | 5 | 17 | 149 |
| 1937 | 39 | 16 | 44 | 7 | 24 | 7 | 18 | 154 |
| 1938 | 40 | 16 | 45 | 7 | 24 | 5 | 17 | 154 |
| 1939 | 42 | 16 | 44 | 7 | 25 | 5 | 17 | 156 |
| 1940 | 44 | 16 | 44 | 6 | 26 | 5 | 18 | 160 |
| 1941 | 56 | 16 | 44 | 6 | 27 | 6 | 20 | 175 |
| 1942 | 101 | 15 | 43 | 6 | 27 | 8 | 15 | 214 |
| 1943 | 153 | 14 | 41 | 5 | 26 | 8 | 15 | 263 |
| 1944 | 210 | 14 | 40 | 5 | 26 | 9 | 17 | 321 |
| 1945 | 250 | 13 | 38 | 5 | 27 | 7 | 20 | 362 |
| 1946 | 228 | 14 | 41 | 5 | 32 | 9 | 20 | 350 |
| 1947 | 221 | 15 | 46 | 5 | 39 | 12 | 24 | 361 |
| 1948 | 214 | 17 | 52 | 5 | 45 | 12 | 29 | 376 |
| 1949 | 216 | 19 | 57 | 6 | 51 | 12 | 33 | 394 |
| 1950 | 216 | 22 | 60 | 6 | 59 | 18 | 39 | 420 |
| 1951 | 216 | 24 | 66 | 7 | 67 | 22 | 42 | 444 |
| 1952 | 221 | 27 | 73 | 7 | 75 | 22 | 48 | 474 |
| 1953 | 226 | 30 | 79 | 8 | 84 | 23 | 53 | 503 |

[^8]Certain important sources of interest income of individuals are excluded from the figures in Table 6. Among these are savings and time deposits in commercial and savings banks, the total amount of which increased from $\$ 22.1$ billion to $\$ 63.6$ billion between the end of 1924 and of 1952. Except for mortgage debt the amount of interest-bearing obligations of individuals and unincorporated enterprises owed to noncorporate creditors is also excluded.

## 4. Decline in interest rates

Contributing most conspicuously to the contraction of total interest payments after 1932 was the prolonged decline in interest rates that then began. One type of interest rate was reduced to zero and a related one severely limited by the Banking Act of 1933 which prohibited the payment of interest on demand deposits by any bank insured by the Federal Deposit Insurance Corporation and provided for regulating the maximum rate of interest that could be offered by such banks on time and savings deposits.

Interest rates on new issues of corporate and governmental debt securities and market yields on old issues fell almost continuously between 1932 and 1946. During this period the monthly average yield on Moody's Aaa corporate bonds fell from 5.01 per cent in 1932 to 2.53 per cent in 1946; that on Moody's Baa bonds fell from 9.30 to 3.05 per cent; and the average yield of long-term Treasury bonds fell from 3.68 for bonds issued when the interest was exempt from normal tax to 2.19 per cent for fully taxable bonds (Table 7, Chart 3). (For corporate investors the latter yield was reduced to about 1.66 per cent by the normal tax of 24 per cent, and to still lower levels for corporations with

[^9]TABLE 7
YIELDS ON UNITED STATES TREASURY AND CORPORATE BONDS, 1919-1954

| Year | Long-term treasury bonds | Moody's corporate bonds |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Aas | A | Baa |
| 1919 | 4.73 | 5.49 | 6.48 | 7.25 |
| 1920 | 5.32 | 6.12 | 7.41 | 8.20 |
| 1921 | 5.09 | 5.97 | 7.28 | 8.35 |
| 1922 | 4.30 | 5.10 | 6.03 | 7.08 |
| 1923 | 4.36 | 5.12 | 6.17 | 7.24 |
| 1924 | 4.06 | 5.00 | 5.93 | 6.83 |
| 1925 | 3.86 | 4.88 | 5.55 | 6.27 |
| 1926 | 3.68 | 4.73 | 5.24 | 5.87 |
| 1927 | 3.34 | 4.57 | 5.04 | 5.48 |
| 1928 | 3.33 | 4.55 | 5.01 | 5.48 |
| 1929 | 3.60 | 4.73 | 5.28 | 5.90 |
| 1930 | 3.29 | 4.55 | 5.13 | 5.90 |
| 1931 | 3.34 | 4.58 | 6.01 | 7.62 |
| 1932 | 3.68 | 5.01 | 7.20 | 9.30 |
| 1933 | 3.31 | 4.49 | 6.09 | 7.76 |
| 1934 | 3.12 | 4.00 | 5.08 | 6.32 |
| 1935 | 2.79 | 3.60 | 4.55 | 5.75 |
| 1936 | 2.65 | 3.24 | 4.02 | 4.77 |
| 1937 | 2.68 | 3.26 | 4.01 | 5.03 |
| 1938 | 2.56 | 3.19 | 4.22 | 5.80 |
| 1939 | 2.36 | 3.01 | 3.89 | 4.96 |
| 1940 | 2.21 | 2.84 | 3.57 | 4.75 |
| 1941 | 1.95 | 2.77 | 3.30 | 4.33 |
| 1942 | 2.46 | 2.83 | 3.28 | 4.28 |
| 1943 | 2.47 | 2.73 | 3.13 | 3.91 |
| 1944 | 2.48 | 2.72 | 3.06 | 3.61 |
| 1945 | 2.37 | 2.62 | 2.87 | 3.29 |
| 1946 | 2.19 | 2.53 | 2.75 | 3.05 |
| 1947 | 2.25 | 2.61 | 2.87 | 3.24 |
| 1948 | 2.44 | 2.82 | 3.12 | 3.47 |
| 1949 | 2.31 | 2.66 | 3.00 | 3.42 |
| 1950 | 2.32 | 2.62 | 2.89 | 3.24 |
| 1951 | 2.57 | 2.86 | 3.13 | 3.41 |
| 1952 | 2.68 | 2.96 | 3.23 | 3.52 |
| 1953 | 2.93 | 3.20 | 3.47 | 3.73 |
| 1954 | 2.54 | 2.90 | 3.06 | 3.18 |

Source: Treasury Bulletin and Moody's Investors Service as reprinted in Survey of Current Business. Between Jan. 1, 1919 and Oct. 15, 1925, the Long-Term Treasury Bond series included all outstanding partially tax-exempt bonds not due or callable for 8 years or more; between Oct. 15, 1925, and Dec. 31, 1941, those not due or callable for 12 years or more; between the latter date and April 1, 1952, all fully taxable issues not due or callable for 15 years or more; since the last date, all fully taxable issues not due or callable for 12 years or more.

## CHART 3

## YIELDS ON UNITED STATES TREASURY AND CORPORATE BONDS, 1919-1954


incomes subject to surtax.) Many millions of dollars of high-grade public utility and other corporate bonds, as well as much larger amounts of United States Treasury bonds, were refunded at, or in advance of, maturity during the latter half of the 1930's and in the 1940's by new issues carrying lower interest rates.

Reflecting reduced interest rates, primarily, five of the seven major sources of private interest payments, exclusive of financial institutionsall but consumer credit and nonfarm mortgages-were smaller in 1948 than in 1929, as may be seen in the figures for selected years in Table 8. Total interest payments from these seven sources, which had been $\$ 7.9$ billion in 1929, fell to $\$ 4.6$ billion in 1940, after which they began an ascent which brought them to $\$ 5.6$ billion in 1948 and to $\$ 10.4$ billion in 1953.

## 5. Institutionalization of investment

One reason for the reduced level of total personal interest income in

## TABLE 8

## MONETARY INTEREST PAYMENTS ON SELECTED TYPES OF DEBT, 1929-1953

(Millions of Dollars)

|  | $\begin{gathered} \text { Mortgages } \\ \text { on } \\ \text { nonfarm } \\ \text { dwellings } \end{gathered}$ | Farm mortgages | Debt of transportation and utility corporations | Debt of other nonbankdng corporatlons | Consumer credit | Loans from brokers | Net inflow of interest from abroad | Total interest, selected types of private debt | Government interest payments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1929 | 1,560 | 582 | 1,387 | 2,358 | 443 | 951 | 577 | 7,858 | 1,506 |
| 1930 | 1,549 | 570 | 1,468 | 2,312 | 444 | 264 | 608 | 7,215 | 1,513 |
| 1931 | 1,571 | 553 | 1,567 | 2,023 | 366 | 100 | 550 | 6,730 | 1,521 |
| 1932 | 1,538 | 528 | 1,551 | 1,768 | 259 | 45 | 426 | 6,113 | 1,574 |
| 1933 | 1,425 | 472 | 1,490 | 1,524 | 196 | 32 | 324 | 5,483 | 1,689 |
| 1934 | 1,336 | 430 | 1,314 | 1,691 | 221 | 32 | 242 | 5,266 | 1,849 |
| 1935 | 1,275 | 396 | 1,293 | 1,588 | 276 | 15 | 207 | 5,050 | 1,831 |
| 1936 | 1,232 | 364 | 1,244 | 1,500 | 386 | 33 | 195 | 4,954 | 1,868 |
| 1937 | 1,214 | 341 | 1,183 | 1,498 | 490 | 38 | 160 | 4,924 | 2,019 |
| 1938 | 1,192 | 320 | 1,176 | 1,382 | 458 | 22 | 138 | 4,688 | 1,920 |
| 1939 | 1,167 | 305 | 1,156 | 1,336 | 500 | 25 | 127 | 4,616 | 1,941 |
| 1940 | 1,172 | 203 | 1,077 | 1,345 | 818 | 20 | 120 | 4,843 | 2,050 |
| 1941 | 1,217 | 284 | 1,035 | 1,320 | 743 | 17 | 128 | 4,742 | 2,088 |
| 1942 | 1,238 | 272 | 1,053 | 1,207 | 530 | 15 | 130 | 4,445 | 2,407 |
| 1943 | 1,184 | 246 | 1,035 | 1,105 | 326 | 20 | 115 | 4,031 | 3,141 |
| 1944 | 1,147 | 230 | 978 | 1,097 | 303 | 26 | 118 | 3,899 | 3,895 |
| 1945 | 1,131 | 220 | 951 | 1,095 | 328 | 32 | 130 | 3,887 | 4,934 |
| 1948 | 1,204 | 216 | 838 | 1,122 | 496 | 25 | 135 | 4,036 | 6,772 |
| 1947 | 1,372 | 222 | 839 | 1,340 | 784 | 18 | 168 | 4,743 | 5,751 |
| 1948 | 1,592 | 229 | 873 | 1,548 | 1,085 | 23 | 224 | 5,574 | 5,904 |
| 1949 | 1,783 | 242 | 959 | 1,735 | 1,310 | 26 | 230 | 6,285 | 6,196 |
| 1950 | 2,081 | 264 | 996 | 1,857 | 1,675 | 48 | 248 | 7,149 | 8,428 |
| 1951 | 2,361 | 291 | 1,063 | 2,228 | 1,857 | 65 | 312 | 8,177 | 6,652 |
| 1952 | 2,649 | 319 | 1,149 | 2,464 | 2,110 | 72 | 317 | 9,080 | 7,023 |
| 1953 | 2,974 | 349 | 1,220 | 2,732 | 2,644 | 98 | 333 | 10,351 | 7,441 |

Source: Office of Business Economics, Dept. of Commerce and National Income Supplement, 1954, Survey of Current Business.
spite of the immense increase in the total outstanding public and private debt (Table 6) has been the continuing growth of financial intermediaries as holders of interest-yielding securities. Raymond W. Goldsmith has estimated that the main groups of financial intermediaries, excluding personal trust departments of banks but including government lending institutions and social security systems, increased their total assets by $\$ 257$ billion, or more than 206 per cent, between 1929 and 1949 (Table 9). ${ }^{12}$ They raised their share of the total owner-

[^10]ship of each of the principal classes of interest-bearing securities outstanding in the United States as follows: ${ }^{13}$

|  | Per Cent of Total Held by <br> Financial Intermediaries |  |
| :--- | :---: | :---: |
|  | 1929 | 1949 |
| United States government securities | 46 | 64 |
| State and local government securities | 34 | 53 |
| Corporation and foreign bonds | 33 | 76 |
| Mortgages | 61 | 70 |

In consequence of this development much income that would formerly have been received directly as interest income of individuals now takes the form of additions to various types of claims against financial intermediaries and of dividends from corporations. The channeling of savings and investment through private life insurance companies, for example, caused their assets-most of which consist of bonds and mort-gages-to increase from less than $\$ 9$ billion in 1922 to $\$ 79$ billion in 1953. ${ }^{14}$ Interest-yielding investments that many individuals formerly made directly have in more recent years been made indirectly through life insurance companies. The effective exemption from personal income tax of the interest that policyholders earn on their accumulating life insurance reserves doubtless influences some persons to make some of their investments in this form rather than in the form of direct ownership of fixed-interest securities.

A development that considerably narrowed an important area of individual lending was the widespread adoption, under the leadership of the Federal Housing Administration, of the long-term amortized large value-ratio mortgage in the financing of residential construction and the consequent drastic reduction in the demand for junior lien financing in this field. During the 1920's the junior mortgage or subordinated land contract was a large source of interest income for many individuals. Because institutional investors then generally limited their first mortgage loans to 60 per cent or less of the appraised value of the property (the appraisals were sometimes excessively liberal, however), purchasers of houses commonly raised an additional 20 to 25 per cent

[^11]
## TABLE 9 <br> TOTAL ASSETS OF MAIN GROUPS OF FINANCIAL INTERMEDIARIES

(Billions of Dollars)

|  | 1929 | 1949 |
| :---: | :---: | :---: |
| Banking system: |  |  |
| Federal Reserve Banks | 5.46 | 45.39 |
| Commercial banks | 66.24 | 157.46 |
| Mutual savings banks | 9.87 | 21.49 |
| Postal Savings System | 0.17 | 3.31 |
| Total | 81.74 | 227.66 |
| Insurance: |  |  |
| Private life insurance companies | 17.48 | 59.55 |
| Fraternal life insurance organizations | 0.85 | 1.98 |
| Private self-administered pension funds | 0.50 | 6.85 |
| Federal, \pension, retirement, and | 0.96 | 33.98 |
| State and local) social security funds | 0.52 | 4.87 |
| Fire and marine insurance companies | 3.08 | 6.56 |
| Casualty and miscellaneous insurance companies | 1.54 | 5.45 |
| Mutual accident associations | 0.09 | 0.28 |
| Total | 25.02 | 119.53 |
| Miscellaneous financial intermediaries: |  |  |
| Saving and loan associations | 7.41 | 14.55 |
| Credit unions | 0.04 | 0.83 |
| Investment companies | 2.94 | 2.95 |
| Investment-holding companies | 4.35 | 2.44 |
| Investment installment companies | 0.05 | 0.29 |
| Mortgage companies | 0.78 | 0.50 |
| Land banks | 1.94 | 1.01 |
| Government lending institutions | 0.29 | 12.31 |
| Total | 17.81 | 34.87 |
| Grand total | 124.57 | 382.06 |

[^12]by borrowing from others, largely individuals, on notes secured by a junior lien on the property. Under these circumstances a residential building boom, such as occurred during the 1920's, could lead to a substantial increase in the interest income of individuals. In the building boom that followed World War II, in contrast, institutional investors widely adopted the long-term amortized mortgage-with or without FHA insurance-under which they were often willing to lend 80 per cent or more of the value of the mortgaged property. In consequence, even apart from restrictions by the FHA against junior lien financing in connection with insured mortgages, the area for such financing was greatly reduced.

The direct participation of individual lenders in financing residential construction was further narrowed both by their exclusion from the list of eligible lenders in the FHA program of insured mortgages and by the stimulation of commercial bank lending in this field. Whereas the National Banking Act imposes severe restrictions on the freedom of national banks to make conventional mortgage loans, and substantially similar restrictions exist in many state banking laws, mortgage loans insured by the FHA or guaranteed by the Veterans' Administration were generally exempted from these limitations. Residential mortgage loans by commercial banks were thereby greatly stimulated. In 1926-1930 commercial banks accounted for 14 per cent of home mortgage loans; in 1946-1950 they accounted for 23 per cent of the much larger total. ${ }^{15}$ Between 1935 and 1950 they originated about one-third of the total amount of FHA-insured home mortgage loans and about one-half of the total amount of FHA-insured loans on rental and cooperative housing projects. ${ }^{16}$

The continued growth of the corporate form of doing business and of owning property likewise tended to reduce direct individual investment in debt obligations. To the extent that ownership of mortgages, corporation and government bonds, and other debt passes from individuals into the hands of property-managing family corporations, financial corporations, and ordinary business enterprises, the interest income becomes merged with other corporate receipts and reaches individuals in the form of dividends and capital gains.

Further evidence of the increased importance of financial institu-

[^13]tions as recipients of interest income is found in Table 10, which compares the amounts of monetary interest (total interest less "imputed" interest as defined below) received by individuals with the amounts received by the principal classes of financial institutions, as estimated by the Department of Commerce. As a group these institutions increased their interest receipts from a total roughly equal to that for individuals in 1929 to one about 20 per cent greater by 1948 and 41 per

TABLE 10
MONETARY INTEREST RECEIVED BY PRINCIPAL TYPES OF FINANCIAL INTERMEDIARIES COMPARED WITH MONETARY INTEREST RECEIVED BY INDIVIDUALS AND NONPROFIT ORGANIZATIONS, 1929-1953
(Millions of Dollars)

|  | Commercial banks | Federal <br> Reserve banks | Mutual savings banks | Life insurance companies | Corporatlons in finance, n.e.c. | Savings and loan assoclations | Credlt unions | Total for finanalal Intermediarles | Total monetary interest recelved by individuals and nonprofit organizam tions |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1929 | 2,620 | 68 | 516 | 893 | 573 | 548 | 4 | 5,228 | 5,198 |
| 1930 | 2,360 | 34 | 523 | 961 | 551 | 539 | 4 | 4,972 | 4,795 |
| 1931 | 2,104 | 27 | 550 | 1,015 | 374 | 496 | 4 | 4,570 | 4,843 |
| 1932 | 1,757 | 48 | 554 | 970 | 338 | 434 | 4 | 4,105 | 4,645 |
| 1933 | 1,387 | 48 | 500 | 011 | 275 | 373 | 3 | 3,497 | 4,421 |
| 1934 | 1,329 | 48 | 474 | 938 | 483 | 303 | 4 | 3,579 | 4,239 |
| 1935 | 1,305 | 41 | 432 | 948 | 492 | 260 | 5 | 3,483 | 4,039 |
| 1936 | 1,332 | 37 | 407 | 971 | 486 | 251 | 7 | 3,481 | 3,886 |
| 1937 | 1,367 | 40 | 403 | 983 | 522 | 257 | 10 | 3,592 | 3,883 |
| 1938 | 1,337 | 35 | 393 | 1,030 | 384 | 254 | 12 | 3,445 | 3,822 |
| 1939 | 1,369 | 38 | 378 | 1,080 | 375 | 265 | 16 | 3,521 | 3,761 |
| 1940 | 1,382 | 43 | 377 | 1,098 | 425 | 258 | 20 | 3,613 | 3,701 |
| 1841 | 1,504 | 41 | 370 | 1,129 | 408 | 273 | 25 | 3,750 | 3,872 |
| 1942 | 1,487 | 52 | 371 | 1,201 | 271 | 285 | 21 | 3,688 | 3,494 |
| 1943 | 1,637 | 69 | 375 | 1,243 | 214 | 281 | 15 | 3,834 | 3,391 |
| 1844 | 1,843 | 104 | 405 | 1,293 | 201 | 293 | 14 | 4,153 | 3,451 |
| 1845 | 2,083 | 142 | 451 | 1,383 | 210 | 317 | 15 | 4,601 | 3,803 |
| 1948 | 2,417 | 150 | 503 | 1,419 | 272 | 369 | 18 | 5,148 | 4,376 |
| 1947 | 2,585 | 158 | 529 | 1,502 | 338 | 437 | 27 | 5,576 | 4,874 |
| 1948 | 2,800 | 303 | 563 | 1,633 | 418 | 549 | 33 | 5,299 | B,256 |
| 1849 | 2,977 | 316 | 606 | 1,826 | 461 | 571 | 42 | 6,790 | 5,737 |
| 1950 | 3,234 | 275 | 659 | 1,970 | 570 | 653 | 58 | 7,418 | 6,243 |
| 1951 | 3,626 | 394 | 683 | 2,274 | 565 | 750 | 67 | 8,359 | 6,775 |
| 1952 | 4,116 | 456 | 757 | 2,552 | 633 | 875 | 80 | 9,469 | 6,880 |
| 1953 | 4,610 | 513 | 846 | 2,782 | 714 | 1,051 | 100 | 10,622 | 7,545 |

[^14]cent greater by 1953. Life insurance carriers approximately doubled their interest receipts between 1929 and 1948, while monetary interest receipts of individuals in 1948 were only slightly above the 1929 level. The amounts for individuals include the interest receipts of nonprofit institutions furnishing services for individuals but exclude interest paid by some individuals to other individuals.

Similar evidence is provided by the growth in the absolute amount and relative importance of "imputed interest" as defined and estimated by the Department of Commerce. Such interest consists of the amount of the net property income of financial institutions that they spend to provide services for individuals. Table 11 presents figures for 19291953 together with those for total personal interest income, which is the sum of the monetary and "imputed" interest receipts of individuals and nonprofit institutions furnishing services to them. The imputed interest portion of total personal interest rose from about 30 per cent in 1929 to 44 per cent in 1953, and its absolute amount in the latter year was more than 165 per cent greater than in 1929. The monetary interest of individuals was 45 per cent above its 1929 level in 1953; and its proportion of total personal interest declined from 70 to 56 per cent between 1929 and 1953.

TABLE 11
TOTAL PERSONAL INTEREST, IMPUTED INTEREST PORTION, AND MONETARY INTEREST RECEIVED BY INDIVIDUALS AND NONPROFIT ORGANIZATIONS, 1929-1953
(Billions of Dollars)

| Year | Total personal interest | Imputed interest | ```Mone- tary interest``` | Year | Total personal interest | Imputed interest | Monetary interest |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1929 | 7.4 | 2.2 | 5.2 | 1942 | 5.8 | 2.3 | 3.5 |
| 1930 | 6.9 | 2.2 | 4.8 | 1943 | 5.8 | 2.4 | 3.4 |
| 1931 | 6.9 | 2.1 | 4.8 | 1944 | 6.2 | 2.7 | 3.5 |
| 1932 | 6.6 | 1.9 | 4.6 | 1945 | 6.9 | 3.0 | 3.9 |
| 1933 | 6.2 | 1.8 | 4.4 | 1946 | 7.6 | 3.2 | 4.4 |
| 1934 | 6.1 | 1.9 | 4.2 | 1947 | 8.2 | 3.3 | 4.9 |
| 1935 | 5.9 | 1.9 | 4.0 | 1948 | 9.0 | 3.7 | 5.3 |
| 1936 | 5.8 | 2.0 | 3.9 | 1949 | 9.8 | 4.0 | 5.7 |
| 1937 | 5.9 | 2.0 | 3.9 | 1950 | 10.6 | 4.4 | 6.2 |
| 1938 | 5.8 | 2.0 | 3.8 | 1951 | 11.6 | 4.8 | 6.8 |
| 1939 | 5.8 | 2.0 | 3.8 | 1952 | 12.3 | 5.3 | 7.0 |
| 1940 | 5.8 | 2.1 | 3.7 | 1953 | 13.5 | 5.9 | 7.5 |
| 1941 | 5.8 | 2.2 | 3.7 |  |  |  |  |

[^15]
[^0]:    ${ }^{1}$ See note to Table 1.
    © National Income Supplement, 1954, Survey of Current Business, Dept. of Commerce.
    ${ }^{8}$ Ibid., and special tabulation by Dept. of Commerce of net rent of owner-occupied farm dwellings, the amounts of which we deduct from entrepreneurial income.

[^1]:    4 Simon Kuznets, Shares of Upper Income Groups in Income and Savings (National Bureau of Economic Research, 1953). Table 123, pp. 647 ff .
    ${ }^{5}$ Ibid., Table 125, pp. 668 fi.

[^2]:    - George E. Lent, The Ownership of Tax-Exempt Securities, 1915-1968 (Nationsl Bureau of Economic Research, Occasional Paper 47 (1954), Table 7. Between 1924 and 1942 the law required individuals with incomes of $\$ 5,000$ or more to report on their income tax returns the amount of their holdings of tax-exempt securities and the amount of interest obtained therefrom.

[^3]:    ' Unpublished eatimate of George E. Lent.

[^4]:    ${ }^{8}$ Kuznets, op. cit., Table 125, pp. 668 ff.
    ${ }^{9}$ Thomas R. Atkinson, "The Pattern of Financial Asset Ownership" (National Bureau of Economic Research, mimeographed).

[^5]:    ${ }^{10}$ Ibid.
    ${ }^{11}$ Frank A. Hanna, Joseph A. Pechman, and Sidney M. Lerner, Analysis of Wisconsin Income, Studies in Income and Wealth, Volume Nine (National Bureau of Economic Research, 1948), Chap. 2.

[^6]:    * In 1944 changed to Adjusted Gross Income Classes.

    Note: The figurea do not necessarily add to 100 per cent due to rounding.
    Source: Statistics of Income. For the years 1918 through 1930, the figures for interest include annuities and dividends from foreign corporations (except those with more than 50 per cent of gross income from sources in the United States), both of which were lumped with interest as "Interest and other income" in Statistics of Income.

[^7]:    For 1943, interest includes partially tax-exempt dividends.
    For 1944-1945, when interest and dividends were reported together on income tax returns, interest was estimated by assuming that the ratios between interest and dividends in 1944-1045 were the same as in 1946.

    Prior to 1937 , interest received by fiduciaries was not tabulated separately from their other income. We estimated interest to constitute the following percentages of the adjusted gross income of fiduciaries in this period: $1922-1930,0.33 ; 1931-1935,0.40 ; 1936$, same as 1937 . For years beginning with 1937, the amount of interest included in individuals' taxable income from fiduciarios was estimated to constitute the same proportion of their total income from fiduciaries as interest was of the adjusted gross income of fiduciaries.

    Two elements in these procedures work to produce small opposing errors: (1) Some understatement of interest occurs because long-term capital gains are included in the adjusted gross income of fiduciaries. thereby making the ratio of interest to their adjusted gross income lower than it otherwise would be. Since long-term capital gains are reported separately by the bencficiaries and are not included in income from fiduciaries, our estimate of interest from fiduciarics is somewhat less than it should be. (2) Somo overstatement of interest arises, on the other hand, because a portion of interest directly reported on taxable fiduciary returns is distributed to beneficiaries as income from fiduciarics and is thus includod twice in our estimates of interest. The duplication appears to be very small, howover. In 1947, for example, if all the interest income of fiduciaries went to beneficiaries filing taxable returns-an extreme assumption, the maximum overestimation of interest froin fiduciaries would be about 3 per cent.

    Excluded from our figures for 1944-1947 and 1948-1950 is the interest portion of the total of dividends and interest not exceeding $\$ 100$ per return, reported by taxpayers filing W2 returns in the former period and 1040 A in the latter.

[^8]:    Sources: Federal debt: Survey of Current Business, September 1953, October 1954; Annual Report of the Secretary of the Treasury, 1952. Matured and non-interest-bearing debt was deducted from the total net federal debt outatanding at the end of calendar years as reported in the Survey of Current Business for years beginning with 1928; for prior years the June 30 figures for matured and non-interestbearing debt as reported in the Treasury's annual report were averaged to obtain December 31 esti-

[^9]:    mates, and these were deducted from the December 31 totals of net federal debt reported in the Survey of Current Business.

    State and local government debt: Survey of Current Business, September 1953, October 1954, May 1955; Indebtedness in the United States, Dept. of Commerce, 1942; Governmental Debt in 1069, Dept. of Commerce, 1952. Non-interest-bearing debt was deducted from the Commerce figuree, the amounta for 1929-1941 and 1944-1952 being obtained from the Commerce volumes cited, and estimated for the other years. The June 30 interest-bearing debt figures were averaged to obtain December 31 estimates.

    Long-Term Corporate, Farm Mortgage, and Non-Farm Mortgage, Survey of Current Business, September 1953, October 1954.

    Short-Term Corporate: R. W. Goldsmith's unpublished NBER monograph on capital requirements, Statistics of Income. Figures for 1012, 1922, 1929, and 1933 represent the non-real estate loans of all operating commercial banks to corporations as reported by Goldsmith. Figures for the intervening years were obtained by straight-line interpolation. Those for 1934-1936 are interpolations of Goldsmith's figures for 1933 and 1938. Figures for 1937-1952 were estimated from the balance sheet data in Statistics of Income, adjusted to cover corporations not submitting balance sheets.

    Nonmortgage-Noncorporate: Survey of Current Business, September 1953, October 1954; Rolf Nugent, Consumer Credit and Economic Stability (Russell Sage Foundation, 1939), Federal Reserve Bulletin, April 1953. From the total net nonmortgage-noncorporate debt figures reported by the Dept. of Commerce, we deducted our eatimates of consumers' non-interest-bearing charge account and service debt, estimates based on the data reported in Nugent, op. cit., and the Federal Reserve Bulletin.

[^10]:    ${ }^{19}$ Raymond W. Goldsmith, The Share of Financial Intermediaries in National Wealth and National Assets, 1900-1949 (National Bureau of Economic Research, Occasional Paper 42, 1954), Table 1.

[^11]:    ${ }^{18}$ Tbid., adapted from Tables 11, 13, 14, 10. "Outstanding in the United States" means only the amounts held in this country of the bonds of foreign corporations but the total outstanding iseues, whether held in this country or abroad, of American governments, corporations, and mortgages.
    ${ }^{1}$ Life Ineurance Fact Book, Institute of Life Inburance.

[^12]:    Source: Raymond W. Goldsmith, The Share of Financial Intermediaries in National Wealth and National Assets (National Bureau of Economic Research, Occasional Paper 42, 1954), Table 1. Slight discrepancies between components and totals are due to rounding.

[^13]:    ${ }^{16}$ See Leo Grebler, The Role of Federal Credit Aide in Residential Construction (National Bureau of Economic Research, Occasional Paper 39, 1953), p. 39.
    ${ }^{16}$ Ibid., p. 38.

[^14]:    Source: Office of Business Economics, Dept. of Commerce and National Income Supplement, 1954, Survey of Current Business.

[^15]:    Source: National Income Supplement, 1954, Survey of Current Business.

