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## CHAPTER 1

# The Importance of Dividends in Personal and Taxable Income

## Taxable Dividends and Aggregate Personal Dividend Receipts

OVER the period 1918–1957 personal dividend receipts traced out cyclical patterns broadly similar to those of the general economy. (See Table 1 and Chart 1.) The dividend component of personal income increased from year to year through 1929; fell through 1933; then commenced a gradual rise, unbroken (except for a sharp acceleration in dividend payments in 1936 and 1937 in response to the undistributed profits tax) through 1949; declined slightly between 1950 and 1952; and rose from year to year through 1957 where this study stops.<sup>1</sup>

A somewhat different pattern, however, characterized the relative importance of dividends in personal income. From 1919 through 1929 dividends grew more rapidly than total personal income; their proportion increased from 4.6 per cent of the total to over 7.9 per cent (or 7.2 per cent according to the adjusted personal income figure for 1929 of the National Income Division of the Department of Commerce Office of Business Economics). The 1929 and 1930 proportions represent a peak never again achieved; the trend since is toward a general,

<sup>&</sup>lt;sup>1</sup> There is a correspondence between the level of economic activity and aggregate dividend receipts with both measured on an annual basis, but it is loose. Annual dividend receipts did not decline in any of the milder business cycle contractions since 1920, namely, 1923–1924, 1926–1927, 1945–1946, 1953–1954. A closer examination based on monthly data discloses that dividends typically lag behind aggregate economic activity. See Daniel Creamer, *Personal Income During Business Cycles*, Princeton University Press for the National Bureau of Economic Research, 1956, p. 65.

TABLE 1

Total Personal Dividend Receipts and Dividends Reported on Taxable Returns, 1918-1957

(dollars in billions)

Year (1)	Personal Dividend Receipts (2)	Personal Income Receipts (3)	Dividends as a Per- centage of Personal Income Receipts (4)	Dividends on Taxable Returns <sup>a</sup> (5)	Adjusted Gross Income on Taxable Returns (6)	as a Per-	Dividends on Taxable Returns as a Per- centage of Personal Dividend Receipts (8)
1918	\$ 3.5	\$ 55.2	6.3%	\$ 2.3	\$ 15.5	14.8%	66%
1919	3.2	63.1	5.1				72
1919	2.9	63.7	4.6	2.3	20.1	11.4	79
1920	3.2	66.9	4.8	2.5	22.9	10.9	78
1921	3.0	53.3	5.6	2.1	15.7	13.4	70
1922	3.0	57.3	5.3	2.3	17.3	13.3	77
1923	3.8	66.5	5.8	2.7	20.3	13.3	71
1924	3.8	66.9	5.7	2.8	22.2	12.6	74
1925	4.4	70.8	6.2	3.1	20.0	15.5	70
1926	4.7	73.7	6.4	3.5	19.8	17.7	74
1927	5.0	74.1	6.7	3.8	20.3	18.7	76
1928	5.5	75.9	7.2	4.1	23.7	17.3	75
1929	6.3	80.2	7.9	4.3	23.1	18.6	68
1929	5.8	80.1	7.2	4.3	23.1	10.0	74
1930	5.5	71.0	7.7	3.9	16.0	24.4	71
1931	4.1	60.3	6.8	2.6	10.5	24.8	63
1932	2.6	45.6	5.7	1.6	8.7	18.4	62
1933	2.1	44.2	4.8	1.3	8.1	16.0	62
1934	2.6	50.3	5.2	1.7	9.6	17.7	65
1935	2.9	56.9	5.1	1.9	11.4	16.7	66
1936	4.5	65.1	6.9	3.5	16.0	21.9	78
1937	4.7	70.2	6.7	3.8	17.4	21.8	81
1938	3.2	64.6	5.0	2.5	14.5	17.2	78
1939	3.8	69.1	5.5	3.0	17.9	16.8	79
1940	4.0	74.8	5.3	3.5	26.2	13.4	88
1941	4.5	92.6	4.9	4.0	49.9	8.0	89
1942	4.3	118.9	3.6	3.5	73.2	4.8	81
1943	4.5	145.3	3.1	3.5	105.2	3.3	78
1944	4.7	137.4	3.4	3.7	115.4	3.2	79
1945	4.7	162.0	2.9	3.7	118.4	3.1	79

(continued)

TABLE 1 (concluded)

Year (1)	Personal Dividend Receipts (2)	Personal Income Receipts (3)	Dividends as a Per- centage of Personal Income Receipts (4)	Dividends on Taxable Returns <sup>a</sup> (5)	Adjusted Gross Income on Taxable Returns (6)	as a Per-	Dividends on Taxable Returns as a Per- centage of Personal Dividend Receipts (8)
1946	5.8	174.6	3.3	4.6	119.1	3.9	79
1947	6.5	186.6	3.5	5.3	136.3	3.9	81
1948	7.2	203.6	3.5	5.9	143.0	4.1	82
1949	7.5	199.7	3.7	6.3	139.5	4.5	84
1950	9.2	220.6	4.2	7.5	159.8	4.7	81
1951	9 <b>.0</b>	247.2	3.6	7.4	186.3	4.0	82
1952	8.9,	262.0	3.4	7.3	199.8	3.7	82
1953	9.2	276.2	3.3	7.2 b	213.7 <sup>b</sup>	3.4	78
1954	9.8	276.8	3.5	7.6	211.5	3.6	77
1955	11.2	296.4	3.8	8.4	231.5 b	3.6	75
1956	12.1	318.2	3.8	9.4	252.1	3.7	78
1957	12.6	334.4	3.8	9.9	264.7 b	3.7	79

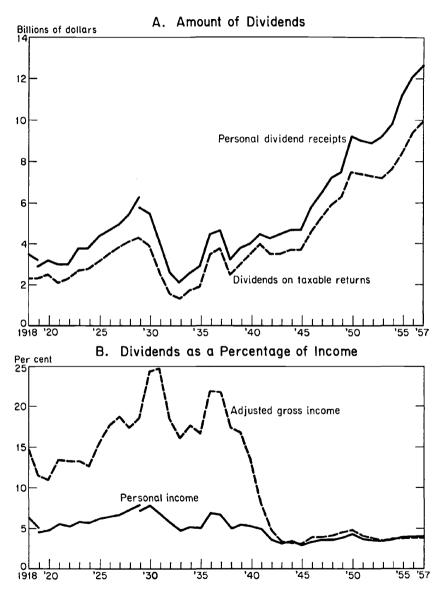
Source: Column 2, 1918-1929: Simon Kuznets, Shares of Upper Income Groups in Income and Saving, New York, NBER, 1953, p. 571; 1929-1955: U.S. Income and Output, 1958, line 13, Table II-1, p. 145; 1956-1957: Survey of Current Business, July 1960, p. 8. Column 3, 1918-1929: Kuznets, Shares of Upper Income Groups, p. 571; 1929-1945: Lawrence H. Seltzer, Interest as a Source of Personal Income and Tax Revenue, Occasional Paper 51, New York, NBER, 1955, p. 1250; 1946-1957: See ibid., p. 1250, footnote, for computation approach; data for 1946-1955, from U.S. Income and Output; data for 1956-1957, from Survey of Current Business, July 1959. Column 5: Statistics of Income. Column 6: Data computed for NBER Personal Income Tax Study. Double values in columns 2 and 3 for 1919 and 1929 provide overlap when one series is replaced by another.

Note: This table (and a number of others in this report) incorporates data prepared for the National Bureau's Personal Income Tax Study under the direction of Lawrence H. Seltzer.

<sup>b</sup> Total income and dividends of fiduciaries, not tabulated in 1953, 1955, and 1957, are assumed to be the same as in 1952, 1954, and 1956, respectively.

<sup>&</sup>lt;sup>a</sup> Includes dividends reported on taxable returns of individuals and fiduciaries (estates and trusts); from 1936 through 1953 includes also an estimate of the dividend component of individual's income from estates and trusts.

CHART 1
Personal Dividend Receipts and Dividends Reported on Taxable Returns,
1918–1957



although interrupted, decline in the importance of dividends as a component of personal income through 1945, and stability at about 3.5 per cent thereafter.

Several factors other than the aggregate total of dividends might be expected to affect the amount of dividends reported on taxable returns. For one thing, the level of exemptions and credits for dependents, being a determinant of the number of taxable returns, might be important here. For another, the figures on taxable returns could reflect taxpayer resistance in reporting income receipts.

In general, however, these influences have not been as important as another factor—the high degree of concentration 2 that characterizes the dividend distribution. Therefore, even in the years before World War II, a major fraction of aggregate dividends showed up on taxable returns although only a minor segment of the income-receiving population paid any personal income tax (or even had to file a tax return).<sup>3</sup> And so over the whole period under study, dividends reported on taxable returns have tended to move with the total of personal dividend receipts. Starting with 1918, dividends reported on taxable returns generally increased from year to year to a peak in 1929, decreased yearly to a trough in 1933, and then tended to rise, although not without exception, for the remainder of the period (see Table 1, column 5).

Since the personal income tax was a minority levy up to about 1940, dividends were much more important in the income of taxpayers than in total personal income. Until 1929 they accounted for between 4.5 and 7.8 per cent of personal income, but they comprised between 10 and 20 per cent of taxpayers' adjusted gross income. Over the ensuing ten years they became even more important. In 1930 and 1931, for example, almost one-fourth of taxpayers' income came from dividends. With the rapid extension of the scope of the personal income tax, taxable income more closely approximated personal income, and dividends reported for tax purposes constituted about the same proportion of taxable income as of personal income. The relative importance

<sup>&</sup>lt;sup>2</sup> In this study concentration means predominance at the high end of some distribution—in this case the high end of the income scale.

<sup>&</sup>lt;sup>8</sup> In 1920, for example, 78 per cent of aggregate personal dividend receipts showed up on taxable returns; in 1957, about 79 per cent. Variations in this ratio did occur in the years between, and they suggest that taxpayers' reporting zeal may have fluctuated too. This matter is explored in Chapter 2, where we develop data more directly appropriate to the dividend "gap."

<sup>4</sup> Adjusted gross income, the net sum of income from all sources reported on tax returns (including only 50 per cent of net long-term capital gains) has been chosen as the most appropriate tax return counterpart of personal income.

of dividends in taxable income declined sharply. (Compare columns 4 and 7 of Table 1.)

In every year of the study period, dividends were larger than any of the other property income components of taxpayers' incomes.<sup>5</sup> (The one exception to this statement occurred in 1946 when net capital gains, with long-term gains included at 100 per cent rather than the 50 per cent required for tax purposes, exceeded dividends.) Over the span 1927 through 1939 they also totaled more than entrepreneurial income on taxable returns. Wages and salaries of taxpayers, of course, have always amounted to a much larger figure than dividends. But through the thirties, their preponderance over dividends was not so marked in adjusted gross income on taxable returns as it was in aggregate personal income. For example, in 1929, the tax return tabulations show wages and salaries to have been about five times as large as dividends while the employee compensation component of personal income was about nine times the dividend item. By 1941 with the scope of the income tax sharply extended and more of wages and salaries subject to tax, this gap had narrowed considerably: for taxable returns the wages and salaries were 121/2 times dividends; for personal income the ratio was 14:1. And by 1953, the ratio of 24:1 for taxable returns was only slightly higher than the ratio of 23:1 for personal income.

## Patterns in Income Class Distribution of Taxable Dividends

In discussing the picture that emerges when a breakdown of dividends among income classes is undertaken, we should bear in mind some of the serious qualifications that reduce the value of the data. First, they are classified by income per return not income per family or spending unit. Therefore individuals, families, taxpayers who report the family's income as a whole, and taxpayers who report only their own share of the family income are thrown together indiscriminately. Second, whatever picture we get is, to some extent, affected by the choice of income groupings—refined classes will, in general, exhibit a more volatile pattern than data arrayed by broad groupings. Third, a taxpayer falling in a given money income range was a substantially different economic entity at 1932 levels of incomes and prices than, say, at those prevailing in 1947. In addition to these difficulties there is a break in our annual series in 1944: Before this year the data were

<sup>&</sup>lt;sup>5</sup> These other components are interest, net realized capital gains, rents and royalties, and annuities.

arrayed by the net income class of the taxpayer; after it, by adjusted gross income.<sup>6</sup> Since the latter is less net than the former, taxpayers in the net income class \$6,000-\$7,000, for example, represent a higher average adjusted gross income level than taxpayers in the adjusted gross income class \$6,000-\$7,000.<sup>7</sup> Finally, of course, the results obtained depend on how the income range is chopped up.

It is not possible to make effective adjustments for most of these difficulties. They qualify the results and inject an element of vagueness. They suggest that faith be placed only in discovered relationships pronounced enough to rise above statistical ambiguities.

For these reasons it has seemed more appropriate to work with broader income ranges than with narrow classes. This procedure irons out some of the irregularities due to shifts in amounts and shares between adjacent classes and reveals only very broad and pronounced results. The data upon which the summary is based appear in Table 2 and Chart 2. (Those who are interested in more detailed data will find tabulations by finer income classes in Tables 7, 8, and 9, at the end of this chapter.) But the use of broad income classes does not remove two difficulties noted above-changes in income levels due to both inflation and growth in real income, and the shift from a net income base to an adjusted gross income base in 1944. The next part of this chapter attempts an adjustment on both scores.8 Finally, the potential difficulty in interpreting our data that arises from the possibility that high income stockholders may hold shares with low dividend pay-outs and low income stockholders may have shares with high dividend pay-outs is discussed in the note at the end of this chapter.

When the absolute amount of dividends reported on taxable returns is considered, three income class patterns are discernible:

- 1. In the income class under \$5,000 the amount of dividends reported seems over most of the period to have been primarily a function of
- <sup>6</sup> In computing net income all deductions—both those attributable to specific income sources, e.g., partnership losses, etc., and those allowed against income in general, e.g., charitable contributions, etc.,—are subtracted from total income. In computing adjusted gross income, only specific income source deductions are subtracted.
- <sup>7</sup> In 1945, for instance, of the 168,200 taxpayers who reported adjusted gross incomes of over \$6,000 and under \$7,000, only 27,000 had net incomes this high; the rest had net incomes lower than \$6,000, most of them (108,000) being in the \$5,000-to-\$6,000 net income range; see Statistics of Income for 1945, Part 1, pp. 173-174.
- <sup>8</sup> The necessity for some such adjustment and, in general, for a greater emphasis on the effect of price and income level changes in vitiating the meaning of income class comparisons over long periods of time has been stressed by Professor Willard Thorp who read an earlier draft of this study.

TABLE 2

SUMMARY DATA FOR DIVIDENDS REPORTED ON TAXABLE RETURNS ARRAYED IN THREE BROAD INCOME CLASSES, 1918-1957

ERSONAL TS <sup>b</sup>	\$50,000 and over	25.5	27.4	30.1	25.7	21.4	27.4	24.1	28.9	29.4	34.9	35.9	37.4	32.7	35.6	28.6	23.4
SHARE OF TOTAL PERSONAL DIVIDEND RECEIPTS b	\$5,000 to \$50,000 (per cent)	35.2	39.0	42.8	46.6	43.9	44.7	39.7	37.4	35.4	36.2	37.8	35.6	33.7	36.7	38.5	37.6
SHARE C	Under \$5,000	5.3	5.5	6.1	9.6	4.6	4.9	7.2	7.7	3.6	3.0	2.3	2.0	1.7	1.9	3.9	1.9
RECEIPTS XABLE	\$50,000 and over	38.7	38.1	: }	33.0	30.6	35.6	33.9	39.1	44.2	47.1	47.2	49.9	10 1	1.04	40.3	37.2
SHARE OF DIVIDEND RECEIPTS REPORTED ON TAXABLE RETURNS Income Class	\$5,000 to \$50,000 (per cent)	53.3	54.2	1	59.7	62.7	58.0	55.9	9.05	9.09	49.0	49.8	47.4	707	4%.0	54.3	59.7
SHARE O	Under \$5,000	8.1	7.7	•	7.2	9.9	6.3	10.2	10.4	5.1	4.0	3.0	2.7	c	<b>6.7</b>	5.5	3.0
INCOME	\$50,000 and over	45.2	35.2	1	42.0	45.6	39.5	42.7	42.0	32.8	39.1	36.8	29.0	0	50.7	55.7	71.2
DIVIDENDS AS A PER CENT OF ADJUSTED GROSS INCOME Income Class	\$5,000 to \$50,000 (per cent)	21.7	16.0		18.2	19.7	18.4	19.4	16.8	15.2	16.4	17.7	16.3	1	17.3	23.7	25.2
DIVIDEN OF ADJU	Under \$5,000	2.4	8,	?	1.5	1.7	1.8	2.6	2.7	3.0	2.8	2.5	2.4		4.7	8.4	2.7
OF DIVIDENDS <sup>a</sup> Lass	\$50,000 and over	898,713	879 648	200	842,879	628,224	814,483	913,592	1,113,034	1,373,904	1,664,004	1,816,816	2,042,050	0011100	2,0/4,123	1,553,420	969,003
· ·	\$5,000 to \$50,000 (thousand dollars	1,234,496	1.248 641	110,012,	1,520,999	1,286,914	1,324,537	1,502,441	1,439,813	1,571,137	1,729,411	1,914,779	1,939,322	, , , , ,	2,130,324	2,096,335	1,553,505
ABSOLUTE AMOUNT	Under \$5,000 (th	187,844	175 781	17,01	184,946	134,894	144,151	272,696	296,553	160,358	139,454	113,941	112,569	, , ,	106,843	211,073	78,996
	VEAR 20	1918	1919	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1929	1930	1931

(continued)

TABLE 2 (concluded)

		DIVIDENDS <sup>c</sup> Income Class	NDS ¢ Class		Ã	DIVIDEND RETURNS Income Class	RNS	TAXAB	TAXABLE DIVIDEND RETURN <sup>d</sup> Income Class	ETURN <sup>d</sup>
YEAR	Under \$5,000	\$5,000 to \$50,000	\$50,000 and over	Total	Under \$5,000	\$5,000 to \$50,000 (per cent)	\$50,000 and over	Under \$5,000	\$5,000 to \$50,000 (dollars)	\$50,000 and over
1934	258,735	257,827	7,660	524,222	49.4	49.2	1.4	345	3,923	74,338
1935 1936	312,478 658 011	301,302	10,135	623,915	59.1	39.3 39.3	1.6	308 763	3,699 4,146	68,653 65,421
1937	795,455	453,805	16,468	1,265,728	62.8	35.9	1.3	768	4,377	72,406
1938	741,731	377,156	9,460	1,128,347	65.7	33.4	0.0	774	3,474	63,033
62 1 9 3 9	973,027	429,447	11,920	1,414,391	8.89	30.4	8.0	661	3,616	67,763
_	1,579,232	471,244	13,753	2,064,229	76.5	22.8	0.7	543	3,625	65,833
1941	2,360,374	510,839	17,504	2,888,717	81.7	17.7	9.0	523	3,487	54,059
1946	1,945,397	1,130,344	42,665	3,118,406	62.4	36.2	1.4	447	2,121	30,314
1947	1,938,302	1,226,376	41,955	3,206,633	60.4	38.3	1.3	463	2,277	38,309
1948	1,377,252	1,455,598	59,219	2,892,069	47.6	50.3	2.1	505	2,088	36,944
1949	1,537,634	1,543,972	53,062	3,134,668	49.1	49.2	1.7	296	2,101	40,649
1950	1,440,847	1,742,596	73,314	3,256,757	44.2	53.5	2.3	545	2,198	39,933
1951	1,464,464	2,082,320	76,689	3,623,473	40.4	57.5	2.1	534	1,899	35,328
1952	1,455,820	2,291,287	73,420	3,820,527	38.1	0.09	1.9	521	1,753	34,119
1953 •	1,476,108	2,481,489	67,919	4,025,516	36.7	61.6	1.7	542	1,663	33,595
1954	1,144,974	2,434,727	82,206	3,661,907	31.3	66.5	2.2	287	1,769	32,605
1955 •	1,167,620	2,669,721	92,843	3,930,184	29.7	6.79	2.4	573	1,631	36,590
1956	1,181,583	3,011,752	106,488	4,299,823	27.5	70.0	2.5	610	1,730	32,812
1957 •	1,166,498	3,316,520	109,529	4,572,547	25.5	72.5	2.0	633	1.679	32.524

#### Notes to Table 2

Source: Annual volumes of Statistics of Income, Part 1, and Table 1. See note to Table 1, also note to Table 5 for explanation of dividend amounts, 1954-1957.

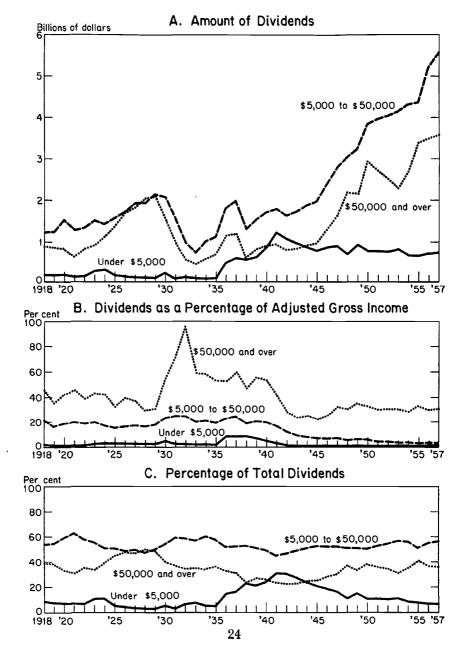
- <sup>a</sup> Includes dividends reported on taxable returns of individuals and fiduciaries (estates and trusts); from 1936–1954 includes also an estimate of the dividend component of individuals' income from estates and trusts.
- b Percentage of total personal dividend receipts falling in these taxable return income classes. The sum of these percentages is the entry in column 8 of Table 1.
- <sup>e</sup> Taxable returns of individuals and fiduciaries (estates and trusts) reporting dividends.
- <sup>d</sup> These averages from 1936 through 1953 are slight overstatements because in the amount of dividends we included an estimate of the dividend component of income from estates and trusts, but did not similarly adjust the number of dividend returns. The overstatements run on the order of 3 per cent.
- Data for fiduciaries, not tabulated in 1953, were taken to be the same in that year as in 1952; in 1955 assumed the same as in 1954; in 1957 the same as 1956.

certain features of the tax law (particularly the level of exemptions) rather than of the total of corporate net dividend payments. The absolute amount of dividends reported was low over the first half of the period covered by the personal income tax. It rose quite sharply in 1936 due to a combination of factors; among them were increased dividend payments resulting from the undistributed profits tax, increased coverage of the tax system, and a change in the method of tabulating the data for fiduciary returns. Up to 1946, lower exemptions kept the amount of dividends in this class larger than it was in the twenties even though dividends on taxable returns (as well as personal dividends) lay below the 1929 level over these years.

- 2. In the income class between \$5,000 and \$50,000, where half or more of all taxed dividends were received, changes in the tax system had a relatively minor effect. The pattern of dividend reporting essentially mirrored the pattern of the aggregate net dividend flow—peaks in the late twenties, 1937, and 1941, troughs in the early thirties, 1938, and 1942, and a continual rise since that date (relatively slight during the war, and more rapid in the postwar years).
- 3. At the top of the income range, in the income class of \$50,000 and over, a similar pattern emerged. Parenthetically, we note that in the over-\$500,000 class, on a more refined class breakdown, dividends did not reach their 1929 total until 1955, although aggregate dividend payments had, of course, been above the 1929 figure since 1946, and 50 per cent higher than in 1929, in each of the years 1950–1954.

Concerning the importance of dividends as a component of taxpayers' adjusted gross income, several broad features are apparent:

CHART 2
Income Class Distribution of Dividends on Taxable Returns, 1918–1957



- 1. In every year the percentage of taxpayers' adjusted gross income attributable to dividends increased with income class. (Had we used finer income class breakdowns a few exceptions would have been found. But they are minor except for this one: at the very bottom of the income scale dividend receipts sometimes weigh more heavily because the taxpayers there include a higher proportion of widows and retired individuals to whom dividends are an important source of income. In Table 8, compare the under-\$2,000 class with the immediately adjacent two classes, particularly for the more recent years.)
- 2. From 1936 through 1940 in the lowest of our summary income classes (under \$5,000) dividends were five to ten times as important a component of taxpayers' income as they were before or after these dates. The growth in their importance during these years can be explained, in part at least, by the acceleration of dividend payments that accompanied the undistributed profits tax. Their ensuing decline in importance may be traced to the great increase in the early forties in the number of taxpayers, for the most part wage and salary recipients, as a result of lowered exemptions and the rapid rise in labor and entrepreneurial incomes relative to dividends (which also tended to push taxpayer recipients thereof, along with their dividends, into higher income classes).
- 3. For all income classes, the decade of the forties marks a sharp decline in the importance of dividends as a component of taxpayers' incomes. This did not happen because, over this period, the amount of dividends reported fell. On the contrary they increased, but an even more pronounced increase occurred in the wages and salaries and entrepreneurial components of adjusted gross income.9
- 9 Between 1943 and 1944 particularly, and between the early forties and the later forties generally, even if all other factors had remained unchanged we should expect to find a fall in the proportion of dividends to adjusted gross income because of the change in the income concept by which the basic data were classified: the change in 1944 from net to adjusted gross. Average adjusted gross income is larger than average net income in any income class. With a change in the basis of classification, and with everything else remaining unchanged, some taxpayers in the old under-\$5,000 net income class would move out of it when classified on the basis of adjusted gross income. Since dividend receipts typically comprise a higher proportion of income the higher a taxpayer's total income, those who leave the class will have a higher proportion of dividends than those who remain. Hence the proportion of dividends to adjusted gross income would tend to fall. The same reasoning applies to all the other classes too. For, although in the case of all but the highest class there will be movement in as well as movement out upon reclassification, those who leave will be likely to have a higher proportion of dividends to adjusted gross income than those who enter from below. Similarly in the highest class those who

Regarding the distribution of the total of taxable dividend receipts among income classes, the following observations can be made:

- 1. Taxable dividends were very clearly concentrated, over the whole of our period, in income classes above \$5,000. Through 1935, stockholders in the income classes of \$5,000 and over received between 90 and 98 per cent of all dividends reported by taxpayers. From 1936 through 1949 their share fluctuated between 70 and 85 per cent, and since 1950 it has been 90 per cent or higher.
- 2. Over the period under review long swings in the income class distribution of dividends on taxable returns can be discerned.

In general, the middle (\$5,000-to-\$50,000) classes of our summary income brackets had a fairly stable share of dividends, the range running between limits of 50 to 60 per cent of the total. Greater relative variations over time characterized the shares of the under-\$5,000 and the \$50,000-and-over classes.

Starting at 14 per cent, the under \$5,000 income group's share moved gradually downward to a low of 2.5 per cent of total dividends reported on taxable returns in 1929, then slowly upward to a high of over 30 per cent in 1941 and 1942, followed by a gradual drift downward once more to about 7.5 per cent by 1957.

High exemptions and the consequent restriction of the income tax primarily to the upper rung of the ladder of income recipients, the heavy concentration of dividends in the upper income classes, and the generally rising income levels over the period 1918 through 1929 all help to explain the low and declining share of the under \$5,000 class in the total of dividends reported on taxable returns. The rise in this class' share from 1929 through 1942 can be attributed to the decline in incomes that occurred after 1929, particularly up through the middle thirties, and the decline in exemptions (which made for more taxpayers in this lower income class) in 1932 and 1940–1942. Finally, stable and then rising exemptions plus an upward movement in incomes account for the general downward drift of this lowest income class' share from 1942 on.

The long swings in the share of dividends going to the \$50,000-andover class have, as a rule, been in the opposite direction from those for the lowest summary income class. To a large degree the reasons are simply the reverse of those just noted for the under-\$5,000 income

enter from below will bring proportionately more to the adjusted gross income total than to aggregate dividends; the proportion of dividends to adjusted gross income will therefore fall.

class. Thus we find an upward movement from 39 per cent in 1918 to a high of almost 50 per cent in 1928 and 1929, then a downward drift to less than 23 per cent by 1942, and a movement upward once more to between 35 and 40 per cent in recent years.

## An Attempt to Correct for Price Level Changes

Needless to say, the generalizations made here and in the rest of this brief review relate to a specific set of income class arrangements of the aggregate data. All such income class comparisons are rendered ambiguous by the shift from net income to adjusted gross income as the basis of classification for *Statistics of Income* tabulations that took place in 1944. A more serious qualification to income class comparisons lies in the variations in the economic significance of any given set of money income classes over a forty-year period in which pronounced changes in price levels have occurred.

It is not possible to correct precisely for either of these factors. But neither is it realistic to neglect them entirely. Therefore for one measure, an adjustment for changing price levels and income concepts has been attempted in order to furnish the reader with some sense of how different the findings would be.

Table 3 shows the percentage share of total dividends on taxable returns reported by taxpayers in three broad income classes after adjustment for these two considerations. These data are the "real" net income counterparts of the three columns headed "Share of Dividend Receipts Reported on Taxable Returns" in Table 2.10

The pattern of relative shares described earlier in money terms still stands for the adjusted data; but in real terms, it is pitched at a lower level for the under-\$5,000 group, at roughly the same level for the middle income group, i.e., \$5,000 to \$50,000, and at a higher level for the \$50,000-and-over class. For every class, of course, the discrepancy between real and money percentage shares is smallest since 1947.

What this adjustment accomplishes, in effect, is to get rid of some

10 The under-\$5,000 class, for example, now has a different money income boundary in every year, as determined by the Consumer Price Index, with 1947–1949 as the base. The boundary then represents the same amount of purchasing power as \$5,000 did in the period 1947–1949, and varies from \$2,765 of money income in 1933 to \$6,010 in 1957. The other money income classes have been similarly determined, and, from 1944 on, an additional adjustment (always downward) has been made to convert the bounding lines from an adjusted gross income to a net income basis.

TABLE 3

Share of Dividend Receipts Reported on Taxable Returns, by 
"Real" Net Income Classes, 1918–1957

(per cent)

	"Rec	al" Net Incom	ne Class	
		\$5,000	\$50,000	
	Under	to	and	
Year	\$5,000	\$50,000	over	
1918	2.8	47.5	49.7	-
1919		50.3	45.7	
1920		57.3	37.3	
1921	3.8	58.0	38.2	
1922	3.1	51.6	47.3	
1923	5.2	52.0	42.8	
1924	5.4	46.6	48.0	
1925	2.8	44.5	52.7	
1926		43.0	54.6	
1927	1.6	43.4	55.0	
1928	1.4	41.0	57.6	
1929		43.1	55.6	
1930		53.3	43.4	
1931	1.2	51.5	47.2	
1932		51.1	46.7	
1933		48.0	49.7	
1934		49.4	49.0	
1935		47.9	50.6	
1936		48.4	43.6	
1937		49.9 53.9	42.7 34.1	
1938 1939		51.5	38.0	
1939		49.3	36.4	
1940	19.7	47.9	32.4	
1942	23.1	47.3	29.6	
1943		49.3	29.4	
1944		51.6	33.6	
1945		51.9	34.3	
1946		49.9	37.1	
1947		51.9	34.5	
1948	10.1	50.3	39.6	
1949		50.7	37.0	
1950		49.7	41.4	
1951		52.8	37.1	
1952		55.2	34.4	
1953		57.3	31.6	
1954		56.5	34.8	
1955		51.7	40.3	
1956		55.8	36.8	
1957	8.2	57.7	34.9	

of the factors—those associated with price level changes—that helped to determine the pattern marked earlier. Thus, for example, on a real basis the share of the lowest income group in total dividends on taxable returns remained insignificant until the middle thirties when exemptions were lowered. But the rough generalizations based on the money income classes still stand. Only between the middle thirties and early forties was a sizable share reported by the under-\$5,000 class. The over-\$50,000 class' share declined over the period of our study, although the decline appears to have tailed out in about 1946. The share of the middle income group has fluctuated within fairly narrow bounds.

## Shifts in Distribution of Taxable Dividends Among Income Classes

To end this discussion after covering the totals and shares of amounts of dividends would leave an important part of the story untold. For it is clearly important to know something about the number of dividend recipients as well. But for this purpose, unfortunately, the ground is much weaker in terms of the available information. Data are lacking on number of dividend returns for the earlier part of the period under study. Tabulations start in 1934 and, with some estimates and guesses, figures can be pieced together for a run of years through 1941. (In particular, the estimates in the under-\$5,000 class for a number of years in this period are shaky.) For several reasons (nontabulation in 1942 and 1943 and tabulation combined with interest returns in 1944 and 1945) the thread cannot be picked up again until 1946, but then it can be carried forward in a fairly straightforward fashion. The figures on number of dividend returns should be viewed as incomplete and subject to a fairly wide margin of error in most of the period 1934-1941; as substantially correct (but not strictly comparable with the earlier period because of the change in 1944 from net income to adjusted gross income as the basis of tabulation) from 1946-1953; and as somewhat different starting in 1954 because from that year on dividends received as part of income from estates and trusts were reported under the heading of dividends, whereas from 1936 through 1953 they were reported as income from estates and trusts.

The remarks that follow cover the last three sections of Table 2, and are based on money income classes.

1. The number of taxable dividend returns tended to increase (albeit interruptedly and at uneven rates) over the whole of the period

for which the data are available—the more recent half of the span of years covered by this study.

Several causes lie behind this result: lowered exemptions and rising incomes with an increase in the number of taxable returns as a consequence, a growth in dividend payments, and, in the latter part of the period, an increase in the number of stockholders. Specific factors can be cited to explain particular changes over this period. For instance, the large increase in number of taxable dividend returns between 1935 and 1936 can be explained in part, at least, by the spurt in dividend payments induced by the undistributed profits tax. The decline between 1947 and 1948 is related to the granting in 1948 of the privilege of income-splitting (without the assignment of assets) in general, rather than just for residents of community property states, for joint returns of husband and wife. Husband and wife split-ups of dividend receipts no longer meant a lower combined tax liability. Many dividend recipients who had formerly reported separately began in 1948 to report jointly and were counted as one. This seems corroborated by the sharp fall between 1947 and 1948 in the number of taxable dividend returns in the under-\$5,000 income class, although the increase in personal exemptions between 1947 and 1948 (from \$500 to \$600), which removed some returns from the taxable category, was another factor in the fall of returns in this class.

2. The broad factors-lowered exemptions, rising incomes, and increased dividends-explain the rise in taxable dividend returns from 1934 through 1941. The latter two apply to some degree to the earlier years of the period 1946-1957. The years 1950-1953, however, show no change in exemptions and a virtually constant total of personal (or taxable return) dividend receipts (see columns 2 and 5 of Table 1). While incomes continued to rise over these four years, no sizable number of returns moved out of nontaxable into taxable categories on this score. What then, accounts for the continued growth in the number of taxable dividend returns between 1950 and 1953? Apparently there was a real increase in the number of dividend recipients because of an increase in the number of stockholders. The data of the last three columns of Table 2 substantiate this conjecture. In the under-\$5,000 income class, dividends per taxable dividend return stayed about the same over the four years 1950-1953; in the other two classes, the average amount of dividends on taxable returns reporting them fell sharply. Since total dividends received by individuals was fairly constant from 1950-1953, and since the pressure to split stock ownership and dividend

income between husband and wife was removed in 1948, it is reasonable to infer that the number of stockholders went up over these four years.

3. This same inference cannot be drawn unambiguously from the data for the years following 1953, because rising dividend payments are associated with the annual increase in the number of taxable returns reporting dividends. However other evidence suggests a further increase in the number of stockholders. An examination of these estimates shows an impressive growth in the number of stockholders between 1952 and 1956. The total number of individual shareowners increased by 82 per cent; those in households whose income was under \$5,000 numbered 56 per cent more in 1956, while the number of shareowners in households whose income equaled or exceeded \$5,000 more than doubled (see Table 4).

But the evidence drawn from tax return data shows nothing like this order of volatility. Here, for comparison with the Stock Exchange estimates, the focus must be on the returns of individuals alone, both taxable and nontaxable.<sup>12</sup> Thus the tax return data are not the same as in Table 2, which covered taxable returns of individuals and fiduciaries.

Between 1952 and 1956 the number of tax returns reporting dividends increased by only 21 per cent. With due recognition of the pit-falls in comparing income classes where definitions of income differ—household income in the one case and adjusted gross income in the other—it is possible to spot the income range where the greater discrepancy occurs. In sharp contrast to the shareowner rise of 56 per cent in the under-\$5,000 class already noted, there is a decline of 10 per cent in the number of tax returns with under \$5,000 of adjusted gross income reporting dividend receipts. Dividend tax returns in the \$5,000 and-over adjusted gross income class rose by 28 per cent between 1952 and 1956, but this is much less than the doubling found from the shareowner estimates. Shareowners and dividend recipients are, of course, different categories. One would expect fewer dividend recipients than shareowners because some companies do not pay dividends, and

<sup>11</sup> Lewis H. Kimmel, Share Ownership in the United States, Washington, 1952, and New York Stock Exchange, Who Owns American Business, 1956 Census of Share-owners, New York, 1956. (I have used the revised income class breakdown as given for 1956 in the 1959 Census. See the source note for Table 4.)

<sup>12</sup> The Brookings study and the Census of Shareowners give an income class breakdown only for individuals. Taxable and nontaxable returns have been combined to ensure that the results are not due to the movement of some dividend recipients from the taxable to nontaxable category or vice versa.

TABLE 4

COMPARISON OF NUMBER OF STOCKHOLDERS AND NUMBER OF DIVIDEND RECIPIENTS ON TAX RETURNS, 1952 AND 1956

viaenas	Onaer ine	income	1 4
Percentage Change Between 1952 and 1956 in	Number of Dividend Recipients (8)	-10 28	117
Percenta Between 19.	Number of Stock- holders (7)	56 101	70
	Col. 5 as a Per Cent of Col. 4 (6)	53	66
1956	Number of Dividend Recipients usands) (5)	1,698	4,769
	Number Number of Stock- Dividend holders Recipiens (thousands)	3,195	8,630
	Col. 2 as a Per Cent of Col. 1 (3)	93	88
1952	Number Number of of Stock- Dividend holders Recipients (thousands)	1,897	4,219
	Number of Stock-holders (tho	2,050	4,750
	Household or Adjusted Gross	Under \$5,000 \$5,000 and over	Total

America, 1959, p. 15. Column 4: Statistics of Income, Individual Income Tax Returns for 1956, p. 40.

SOURCE: Column 1: Lewis H. Kimmel, Share Ownership in the United States, p. 95. Column 2: Statistics of Income for 1952, Part 1, p. 21. Column 3: New York Stock Exchange, Share Ownership in

because many households with several shareowners would lump their dividend receipts for tax reporting. But with dividend payments rising as they did between 1952 and 1956, the numbers under these two classifications should, if anything, come closer together. Moreover, some slight increase in the number of tax returns reporting dividends can be expected since 1954, for, with the exclusion and credit introduced in that year, part of what was formerly reported as income from estates and trusts would be reported as dividends.

It is not hard to suggest why, at any given time, there should be a greater discrepancy between shareowners and dividend tax returns in the under-\$5,000 income class. Some dividend recipients did not need to file; others who would be nontaxable might not file even if legally required to do so; record-keeping is probably poorer in this group; the likelihood of being detected if dividends were not reported is not as great; employees who have obtained small amounts of stock under company saving plans who are uncertain about whether they received (or were credited for) dividends on them, or whose right to the stock has not been vested, would not report dividends, etc.

But all this, while it may explain in small part what has been observed, does not get very far in explaining this puzzle—the growing shortfall between the estimates of stockholders and the estimates of dividend recipients. The puzzle can be summarized in another way. Why did the individual tax returns which reported dividends amount to 89 per cent of the estimated number of individual stockholders in 1952 and only 55 per cent in 1956? It is possible and, indeed, as Chapter 2 shows, very likely that some persons do not report their dividend receipts. And, again as the data of Chapter 2 will indicate, it appears that the practice of under- or nonreporting became more widespread between 1952 and 1956. It is possible also that the tax return estimates or the shareowner estimates or both are subject to error more serious than has been suspected on the basis of their sampling design. The data available do not permit a test of this hypothesis.<sup>13</sup>

<sup>13</sup> Data made available very recently indicate that the question raised concerning the difference between the 1952 and 1956 results applies also to 1959. For in that year there were, according to the preliminary release of Statistics of Income, 1959, dated June 29, 1961, some 5.9 million returns that reported dividends, and this represents only 47 per cent of the 12,490,000 individuals owning shares in publicly held corporations in early 1959. (See Share Ownership in America, 1959, published by the New York Stock Exchange.) Between 1956 and 1959 about 1 million people became new shareholders through participation in company saving plans, and until the stock yests to them, the dividends may go to a trust and not to them at all.

- 4. The vast mass of dividend recipients fell in the income classes under \$50,000. In all the years for which we could obtain data, not more than 2.5 per cent and frequently less than 1 per cent had incomes higher than \$50,000. So between them, the two broad income classes below \$50,000 accounted for almost all the dividend returns. Since net income was used in tabulating the 1934-1941 data, while adjusted gross income was the basis for 1946-1957, the number of returns could not be treated as a continuum. But broad comparisons are not precluded. In the earlier period, 1934-1941, a major and growing fraction of all taxable dividend returns fell in the under-\$5,000 class. In 1934 the under-\$5,000 and the \$5,000-to-\$50,000 classes each contained about 49 per cent of all taxable dividend returns; by 1941 the corresponding percentages were almost 82 and just under 18. The later period-1946-1957-shows a different trend. The share of the lowest group in total taxable dividend returns started at over 60 per cent, but fell continually to 25.5 per cent by 1957. Just the opposite was true of the \$5,000-to-\$50,000 class, as indeed it must be since between them these two classes encompass about 98 per cent of all taxable dividend returns. It is appropriate to remind the reader at this point that these results, based on the data for given income-size classes, are strongly affected by the upward movement in prices and incomes since the end of World War II.
- 5. The data on number of dividend returns, in conjunction with the evidence presented earlier on amounts of dividends, point up the high degree of concentration in the income-class distribution of dividends. In 1957, for example, the 2.0 per cent of taxable dividend recipients in the income class \$50,000 and over received 36 per cent of the dividends reported on taxable returns.

## Distribution of Dividends by Dividend Size Classes

Data are also available on the distribution of dividends per se, i.e., by size classes of dividend receipts. The more recent figures—1946—1952 15

Therefore, it might be more appropriate to relate the 5.9 million dividend recipients on tax returns to 11.5 million stockholders; with this adjustment, the tax return figure comes to 51 per cent of the Stock Exchange estimate.

<sup>14</sup> For all returns filed from 1946-1952 (with the exception of 1951) and for taxpayers with net incomes of \$5,000 and above for 1936-1941.

<sup>15</sup> For 1953 a comparable tabulation was not made, and comparisons involving 1954 and later years are rendered ambiguous by the fact that the data for these years are tabulated net of exclusions.

-may be summarized this way. The vast majority of dividend recipients had "small" incomes from this source. Over one-third had less than \$100 of dividends, about one-half had less than \$200, and around two-thirds less than \$400 of dividends annually. On the other hand, a mere 4 to 6 per cent received \$5,000 or more of dividends (see Table 5 for more detail). Small in number, this latter group was, however, rich in dividends. In 1950, for example, the 6 per cent of all dividend recipients with dividends of \$5,000 or more received an estimated 65 per cent of all dividends reported by individuals on tax returns. The lowest third of dividend receivers had about 1 per cent of the total, the lowest two-thirds under 7 per cent. (Only income from estates and trusts appears to approach the concentration shown by dividends. But this income, of course, is heavily weighted with dividends; well over 50 per cent of the income of fiduciaries comes from dividends.)

Of all the sources of income specified on tax returns, dividends have been most concentrated in their distribution. The 1950 data summarized in Table 6 show this clearly. Compared with the upper 10 per cent of the dividend recipients' share of almost three-fourths of dividends, the top decile of recipients of wages and salaries showed a figure of only 26 per cent of total wages and salaries; for entrepreneurial income the comparable figure was 42 per cent; for rents and royalties, 54 per cent; for interest, 57 per cent; for capital gains, 64 per cent; and 67 per cent of income from estates and trusts went to the upper 10 per cent of the recipients of this income source. The Gini coefficient has been used as a single summary measure of the degree of concentration of each income type's distribution by recipients thereof. It ranges between 0 and 1, with 0 being the figure that would be obtained if all dividend recipients had the same amount of dividends, and 1 the value that would characterize a distribution in which one person received all the dividends reported on tax returns. This measure makes it clear that dividends stand alone in degree of inequality. The only two income types that approach this degree of concentration-income from estates and trusts and capital gains—are, of course, closely related to dividends (see column 6 of Table 6); dividends, as already noted, account for a high proportion of income from estates and trusts.<sup>16</sup> while capital gains arise to a large extent from trading in assets, ownership of which is the source of dividend income.

16 In 1950 dividends represented about 60 per cent of the total income of taxable estates and trusts, and, presumably, therefore, some percentage on this order of the income received by individuals from estates and trusts.

TABLE 5

DISTRIBUTION OF DIVIDEND RECEIPTS BY DIVIDEND SIZE CLASSES, 1946-1952

(taxable and nontaxable returns, individuals only, number of returns in thousands)

				1946		•	1947			1948	
	Dividend Si	ize Class	Number	Per Cent of	Cumulative Per Cent	Number	Per Cent of	Cumulative Per Cent	Number of	Per Cent of	Cumulative Per Cent
	(dollars.)	rs.)	Returns	Total	of Total	Returns	Total	of Total	Returns	Total	of Total
ı	Under	100	1,250.0	37.78%	37.78%	1,257.0	36.45%	36.45%	1,100.0	33.12%	33.12%
	100 to	200	490.0	14.81	52.59	515.0	14.93	51.38	200.0	5.06	48.18
	200 to	300	276.0	8.35	60.94	293.0	8.50	59.88	278.0	8.37	56.55
	300 to	400	179.0	5.40	66.34	187.0	5.42	65.30	189.0	5.69	62.24
36	400 to	200	134.0	4.05	70.39	141.0	4.09	69.39	145.0	4.36	09.99
	500 to	1.000	368.0	11.13	81.52	383.0	11.10	80.49	399.0	12.01	78.61
	1.000 to	1,500	174.0	5.26	86.78	186.0	5.39	85.88	181.0	5.45	84.06
	1,500 to		99.0	2.99	89.77	103.0	2.99	88.87	109.0	3.28	87.34
	2,000 to		65.0	1.97	91.74	71.0	2.06	90.93	74.0	2.23	89.57
	2,500 to		47.0	1.42	93.16	49.0	1.42	92.35	51.0	1.54	91.11
	3,000 to		59.0	1.78	94.94	64.0	1.86	94.21	0.89	2.05	93.16
	4,000 to	5,000	35.0	1.06	96.00	41.0	1.19	95.40	45.0	1.36	94.52
	5,000 to		74.0	2.24	98.24	88.0	2.55	97.95	97.0	2.92	97.44
	10,000 to	25,000	43.0	1.30	99.54	20.0	1.45	99.40	59.0	1.78	99.22
	25,000 to	50,000	10.4	0.31	99.85	13.2	0.38	99.78	16.8	0.51	99.73
	50,000 to	100,000	3.7	0.11	96.66	4.7	0.14	99.92	6.4	0.19	99.92
		more	1.6	0.05	100.01	2.2	90.0	86.66	3.0	0.00	100.01
	Total		3,308.7			3,448.1			3,321.2		

(continued)

TABLE 5 (concluded)

		1949			1950			1952	
Dividend Size Class (dollars)	Number of Returns	oer Per Cent of ns Total	Cumulative Per Cent of Total	Number of Returns	Per Cent of Total	Cumulative Per Cent of Total	Number of Returns	Per Cent of Total	Cumulative Per Cent of Total
			24 12	1 100	20.00	20.05	1 447 0	24.20	24.30
Under	100 1,160.0 200 519.0	14.20	51.75 45.93	1,183.0	13.85	32.23 46.10	621.0	14.72	49.02
			54.52	307.0	8.37	54.47	346.0	8.20	57.22
			60.24	194.0	5.29	59.76	234.0	5.55	62.77
			64.75	161.0	4.39	64.15	185.0	4.38	67.15
		-	77.25	431.0	11.75	75.90	477.0	11.31	78.46
			83.32	232.0	6.32	82.22	236.0	5.59	84.05
			86.96	135.0	3.68	85.90	150.0	3.56	87.61
			89.56	88.0	2.40	88.30	0.66	2.35	89.96
			91.23	65.0	1.77	20.06	0.99	1.56	91.52
			93.61	86.0	2.34	92.41	89.0	2.11	93.63
			95.00	55.0	1.50	93.91	50.0	1.19	94.82
			97.74	115.0	3.13	97.04	118.0	2.80	97.62
			99.33	75.0	2.04	80.66	71.0	1.68	99.30
			99.78	21.3	0.58	99.66	19.5	0.46	99.76
_			99.94	8.0	0.22	88.66	6.7	0.16	99.92
100,000 or more	2		100.02	3.8	0.10	86.66	3.0	0.07	99.99
Total	3,656.2	.2		3,668.1			4,218.2		

1950: Statistics of Income, Part 1, pp. 56, 57. 1952: Statistics of Income, Part 1, p. 26. Note: 1951 data not tabulated. Sources: 1946: Statistics of Income, Part 1, pp. 152, 153. 1947: Statistics of Income, Part 1, pp. 106, 107. 1948: Statistics of Income, Part 1, pp. 102, 103. 1949: Statistics of Income, Part 1, pp. 98, 99.

TABLE 6
Shares of Selected Percentile Bands of Recipients of Specified Income Types, 1950

(per cent)

Type of Income	Share of Lower 25% (1)	Share of Lower 50% (2)	Share of Lower 75% (3)	Share of Lower 90% (4)	Share of Upper 10% (5)	Gini Coefficient of Inequality (6)
Dividends	0.74%	2.78%	10.60%	25.60%	74.40%	.86
Income from estates and						
trusts	0.94	4.97	15.25	32.77	67.23	.78
Capital gains	1.12	5.40	18.27	35.77	64.23	.76
Interest	3.32	7.63	20.98	43.22	56.78	.70
Rents and royalties	2.13	8.48	25.32	45.94	54.06	.70
Partnership income	2.46	10.69	28.69	48.75	51.25	.65
Business and professional						
income	3.95	14.94	35.53	57.97	42.03	.56
Annuities and pensions	2.41	13.56	40.64	66.42	33.58	.53
Salaries and wages	6.54	24.03	50.94	73.79	26.21	.38

Data cover all those who filed tax returns. In each case the percentiles are determined on the basis of receipts from this particular source. Partnership income and business and professional income do not include reported losses from these sources.

## A Note on Possible Variation of Pay-Out Ratios with Tax Bracket of Stockholders

In commenting on the income class distribution of dividends in an earlier draft of this study, Professor Willard Thorp wondered whether "stocks with lower pay-outs might not have gravitated to high bracket holders and those with high dividend yields gone to the lower classes."

His question raises a possibility that is important both for the discussion just completed, and for the analysis of Chapter 4 of our study. For essential to the analysis in this later chapter is the imputation of pro rata shares of corporate earnings—dividends plus retained earnings plus corporate income tax—on the basis of dividend receipts.

Over almost the whole of the period in which we have had a personal income tax, it has "paid" all taxpayers to get, if they could, a given amount of income to be cast up in a form that would be treated as a capital gain rather than in a form that would be considered ordinary income for tax purposes. Moreover, as a general rule, in any

particular year, the worth of such a conversion, i.e., the net tax saving it represented, rose with the stockholder's tax rate bracket. The tax advantage of capital gains vis à vis dividend income increased most when the exemption of dividends from normal tax was removed in 1936; bracket rates rose in the ensuing years and a ceiling rate was imposed on capital gains. See Table 10 for the relevant data and differential worth of a capital gain.

Would it not be sensible to think, then, that higher income investors would seek out in particular the stock of corporations with low dividend pay-out ratios, hoping thereby to take out what might otherwise have been dividends taxed at regular rates, in the form of capital gains that would be taxed at lower rates? To the degree that this occurred, since all the shares outstanding must have holders, we could infer that low income taxpayers ended up with stock whose pay-out ratio was above average. A significant difference in pay-out ratios of stockholding among income classes would distort any income-class comparison of dividend receipts, especially if, as seems possible, the differences became more pronounced at some time or times in the period over which the income class distribution was being compared.

This is a complicated problem, and cannot be settled on an a priori basis. The behavior posited by Professor Thorp's question is rational, and there are numerous allegations that it does exist. On the other hand, no one would deny that some high income individuals do seek heavy current income, widows perhaps or persons more interested in spending than in further accumulation. Some data relevant to this problem appear in Table 11. These are based on answers to questions in interviews undertaken in 1949. The elusiveness of replies to interview questions is well known, and the categories of investment objective are not mutually exclusive. But these data show that the proportion of capital appreciation seekers and of those who desire both income and capital appreciation increases with income class. Capital appreciation seems to weigh more heavily in the decisions of high income investors. This would appear to support the possibility that dividend pay-out of stockholdings and tax-bracket of stockholder are inversely related.

On the other hand it is sometimes asserted for reasons not clearly specified that higher dividend pay-outs will cause stock to rise in price, so even investors interested in capital gains could very well hold high pay-out stock and be undertaking an action consistent with their objectives.

	Di	ivid	eno	ds U	Inde	er.	the	I	no	:01	m	е	T	ax	ę,	
				Total	2,321,053	2,304,072	2,548,826	2,050,032	2,283,173	2,688,729	2,849,400	3,105,399	3,532,869	3,845,536	4,093,941	4,317,290
			\$500,000	and	192,882	170,996	130,955	79,809	137,961	143,628	187,182	264,032	361,599	411,742	513,259	544,486
1918–1957			\$100,000	to \$500,000	381,269	380,577	334,139	253,077	324,481	371,408	457,117	597,335	723,617	781,120	887,476	883,823
Dividends <sup>a</sup> Reported on Taxable Returns, by Income Classes, 1918-1957			\$50,000	to \$100,000	324,561	328,075	377,785	295,338	352,045	398,552	468,736	512,534	578,784	623,864	641,315	645,814
RNS, BY INCO	dollars)	ass	\$25,000	to \$50,000	400,804	399,602	488,525	396,472	439,944	520,940	555,071	618,308	909,999	906,629	694,181	736,129
AXABLE RETU	(thousands of dollars)	Income Class	\$10,000	to \$25,000	507,262	526,813	647,572	541,211	562,752	660,270	657,661	731,865	815,445	834,567	835,312	930,662
PORTED ON T			\$5,000	to \$10,000	326,430	322,226	384,902	349,231	321,841	321,231	227,081	220,964	247,360	400,306	409,829	469,533
VIDENDS <sup>a</sup> RE			\$3,000	to \$5,000	134,758	126,238	130,825	96,117	103,131	195,397	211,444	116,273	92,936	80,394	78,836	76,805
Ä				_	"	4	2	<b>∞</b>	9	4	7	<b>∞</b>	6	7	9	~

38,535 35,964

14,551 13,579

1918 6161 <u>40</u>

1920 1921 1922

38,802 24,358 25,516 48,854 53,647 30,318 33,999 23,607 24,846

15,319 14,419 15,504 28,445 31,462 13,767 12,519 9,940 8,887 7,596

1923 1924 1925 1926 1927 1928

TABLE 7

\$2,000 to \$3,000

Under \$2,000

Year

3,860,828 2,601,504 1,639,697 1,286,523 1,670,198

378,128 234,056 105,593 95,057 118,914

647,516 396,566 224,448 178,830 228,001

527,776 338,381 232,224 181,420 222,509

649,447 413,903 264,633 214,967 305,829

932,635 715,012 394,962 297,176 421,446

514,253 424,590 309,663 227,611 284,161

54,585 71,030 57,600 60,667

44,631 18,234 22,807 19,953 17,170

46,625 6,177 14,337 13,909 11,501

1930 1931 1932 1933

					_																		
1,906,445	3,476,598	3,789,588	2,480,889	3,003,581	3,471,744	3,962,489	3,531,312	3,536,283	3,672,713	3,726,498	4,561,123	5,296,681	5,923,218	6,316,633	7,544,165	7,445,518	7,279,795	7,207,944	7,622,046	8,419,030	9,426,620	9,869,565	-
139,792	197,960	193,666	91,872	138,428	150,909	154,985	104,205	111,003	137,604	139,499	198,183	253,472	312,918	331,624	496,993	420,810	374,404	363,239	435,537	547,057	610,473	590,257	
289,169	488,940	504,756	256,289	332,507	389,563	407,554	331,796	343,847	383,628	403,857	558,910	701,982	1,012,467	969,167	1,321,394	1,212,921	1,089,204	956,331	1,132,919	1,340,411	1,457,764	1,494,561	
266,836	473,665	493,966	248,128	336,803	364,935	383,706	362,735	373,081	395,898	418,003	536,267	651,803	862,428	856,143	1,109,285	1,075,556	1,041,432	962,201	1,111,845	1,509,707	1,425,856	1,477,526	
348,438	577,870	615,928	353,989	445,622	492,284	509,251	479,775	501,461	520,322	555,937	706,709	844,750	1,007,282	1,025,584	1,298,940	1,297,069	1,716,732	1,709,641	1,371,604	1,277,262	1,754,231	1,790,487	
462,011	757,888	823,452	547,439	649,713	709,043	729,124	690,369	720,682	787,347	836,633	1,023,637	1,190,636	1,247,402	1,324,907	1,584,164	1,617,925	1,269,955	1,300,658	1,862,954	1,972,810	2,294,211	2,427,507	
303,958	478,360	547,080	408,821	457,454	506,915	543,071	471,648	511,253	569,380	574,419	667,556	757,160	785,101	893,481	947,976	1,039,390	1,029,347	1,115,515	1,074,783	1,102,878	1,163,322	1,350,545	
66,132	292,635	344,540	279,102	324,033	364,539	487,322	363,189	341,744	390,936	348,903	418,647	438,441	402,582	524,004	471,585	469,178	443,435	462,007	448,286	433,288	475,319	473,561	
18,301	109,776	130,207	117,386	131,924	220,896	334,254	294,381	249,142	218,776	214,130	235,846	234,742	168,407	237,980	195,694	183,984	188,901	203,226	133,955	147,037	147,009	157,732	
11,808	99,504	135,939	177,863	187,097	272,660	413,222	433,214	384,070	265,146	231,995	215,368	223,695	124,631	153,743	118,134	128,685	126,385	135,126	90,163	88,580	98,435	107,389	
1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952 b	1953b	1954 b	1955	1956	1957	

SOURCE: Annual volumes of Statistics of Income, Part 1. See note to Table 1.

<sup>a</sup> Includes dividends reported on taxable returns of individuals

b In this year the data were tabulated by income classes differ-

from estates and trusts.

ent from those usually employed. The \$20,000-to-\$30,000 class total was allocated between the \$10,000-to-\$25,000, and the \$25,000-to-\$50,000 class amounts on the basis of the 1951 ratios. and fiduciaries (estates and trusts); from 1936-1953 includes also an estimate of the dividend component of individuals' income

TABLE 8

Dividends as a Percentage of Adjusted Gross Income Reported on Taxable Returns Arrayed by Adjusted Gross Income Classes, 1918–1957

				Income C	lass (thou	sands of d	ollars)		
		2	3	5	10	25	50	100	500
	Under	to	to	to	to	to	to	to	and
Year	2	3	5	10	25	50	100	500	over
1918	0.9	1.5	3.7	12.9	25.1	35.4	40.7	44.1	59.4
1919	0.6	1.3	2.6	9.2	18.7	26.5	31.0	34.9	49.0
1920	0.5	0.9	2.5	10.6	20.7	29.9	36.3	44.0	63.3
1921	0.6	1.5	2.6	12.2	22.2	32.0	39.3	50.0	66.9
1922	0.6	1.6	2.5	10.5	20.9	30.1	36.3	40.9	46.2
1923	1.1	2.3	3.4	10.4	21.7	31.9	39.3	44.9	47.8
1924	1.3	2.4	3.4	6.7	19.6	30.3	38.4	43.0	51.2
1925	1.3	2.7	3.6	5.8	17.5	26.2	31.8	34.0	32.1
1926	1.1	2.9	3.4	6.1	19.2	29.6	27.2	40.8	39.8
1927	1.0	2.1	3.2	9.6	19.3	29.0	35.8	37.6	37.4
1928	1.0	2.1	2.9	8.9	18.0	26.2	30.5	29.7	26.2
1929	0.9	2.0	3.1	9.9	19.9	29.4	34.5	31.8	26.3
1930	4.8	4.3	5.1	13.4	27.4	40.8	50.7	58.5	59.0
1931	0.9	2.6	3.4	14.9	30.3	43.8	60.0	76.1	85.0
1932	1.2	2.5	3.4	15.9	29.0	44.2	74.4	113.0 ª	139.5 ª
1933	1.2	2.6	3.2	12.8	23.1	34.3	51.2	65.4	66.4
1934	1.0	2.8	3.0	12.7	23.7	36.7	46.5	63.1	84.4
1935	0.9	2.4	2.8	11.7	21.9	34.0	42.7	57.8	78.1
1936	5.9	10.1	9.4	14.2	25.4	36.3	45.2	56.0	72.2
1937	6.3	10.4	9.1	15.1	27.1	40.3	50.8	63.1	79.6
1938	8.7	10.0	8.1	12.8	23.0	34.1	43.2	53.6	41.5
1939	6.9	8.1	7.3	12.5	23.5	36.0	47.0	60.4	74.2
1940	5.4	4.4	6.3	12.5	22.5	34.5	44.6	58.8	70.9
1941	3.3	2.1	5.6	11.3	18.3	27.3	34.6	45.3	60.1
1942	2.1	1.3	2.7	8.1	14.0	19.8	24.8	30.4	42.6
1943	1.3	0.8	1.4	6.4	11.4	15.9	20.3	26.3	40.1
1944	1.1	0.8	1.1	4.8	10.5	14.9	19.8	28.3	47.7
1945	0.9	0.7	1.0	4.6	9.3	13.3	17.9	26.1	40.8
1946	1.1	0.8	1.2	4.3	9.1	14.0	19.7	30.6	40.9
1947	1.3	0.7	0.9	4.1	10.1	16.6	24.6	38.1	50.7
1948	1.1	0.7	0.8	2.6	8.8	15.7	23.6	37.6	50.0
1949	1.4	1.0	1.1	2.9	9.8	17.3	26.8	42.1	56.7
1950	1.1	0.9	0.8	2.4	10.0	17.0	25.4	38.5	51.7
1951	1.2	0.9	0.8	1.9	8.7	15.4	23.1	35.2	53.1
1952	1.2	1.0	0.7	1.5	7.3	14.2	23.1	36.8	54.0
1953	1.3	1.1	0.7	1.4	6.5	13.9	23.1	36.8	55.7
1954	1.1	0.8	0.7	1.3	7.4	14.6	22.8	35.3	41.9
1955	1.0	0.9	0.7	1.2	6.5	11.9	28.1	36.1	41.9
1956	1.2	1.0	0.8	1.1	6.2	14.6	22.9	36.5	43.7
1957	1.4	1.1	0.8	1.1	5.9	14.3	22.9	37.4	46.4

<sup>&</sup>lt;sup>a</sup> Net capital losses experienced in these income classes; hence a value of over 100 per cent for dividends.

TABLE 9

Income Class Shares of Dividends Reported on Taxable Returns, 1918–1957

(per cent)

			I	ncome Cl	ass (thou.	sands of a	dollars)			
		2	3	5	10	25	50	100	500	
	Under	to	to	to	to	to	to	to	and	
Year	2	3	5	10	25	50	100	500	over	Total
1918	0.6	1.7	5.8	14.1	21.9	17.3	14.0	16.4	8.3	100.0
1919	0.6	1.6	5.5	14.0	22.9	17.3	14.2	16.5	7.4	100.0
1920	0.6	1.5	5.1	15.1	25.4	19.2	14.8	13.1	5.1	100.0
1921	0.7	1.2	4.7	17.0	26.4	19.3	14.4	12.3	3.9	100.0
1922	0.7	1.1	4.5	14.0	24.6	19.3	15.4	14.2	6.0	100.0
1923	1.1	1.8	7.3	11.9	24.6	19.4	14.8	13.8	5.3	100.0
1924	1.1	1.9	7.4	8.0	23.1	19.5	16.5	16.0	6.6	100.0
1925	0.4	1.0	3.7	7.1	23.6	19.9	16.5	19.2	8.5	100.0
1926	0.4	1.0	2.6	7.0	23.1	18.9	16.4	20.5	10.2	100.0
1927	0.3	0.6	2.1	10.4	21.7	17.7	16.2	20.3	10.7	100.0
1928	0.2	0.6	1.9	10.0	20.4	17.0	15.7	21.7	12.5	100.0
<b>192</b> 9	0.2	0.5	1.8	10.9	21.6	17.1	15.0	20.5	12.6	100.0
1930	1.2	1.2	3.1	13.3	24.2	16.8	13.7	16.8	9.8	100.0
1931	0.2	0.7	2.1	16.3	27.5	15.9	13.0	15.2	9.0	100.0
1932	0.9	1.4	4.3	18.9	24.1	16.1	14.2	13.7	6.4	100.0
1933	1.1	1.6	4.5	17.7	23.1	16.7	14.1	13.9	7.4	100.0
1934	0.7	1.0	3.6	17.0	25.2	18.3	13.3	13.7	7.1	100.0
1935	0.6	1.0	3.5	15.9	24.2	18.3	14.0	15.2	7.3	100.0
1936	2.9	3.2	8.4	13.8	21.8	16.6	13.6	14.1	5.7	100.0
1937	3.6	3.4	9.1	14.4	21.7	16.3	13.0	13.3	5.1	100.0
1938	7.2	4.7 4.4	11.3	16.5	22.1 21.6	14.3	10.0	10.3	3.7	100.0
1939	6.2	4.4	10.8	15.2	21.0	14.8	11.2	11.1	4.6	100.0
1940	7.9	6.4	10.5	14.6	20.4	14.2	10.5	11.2	4.3	100.0
1941	10.4	8.4	12.3	13.7	18.4	12.9	9.7	10.3	3.9	100.0
1942	12.3	8.3	10.3	13.4	19.6	13.6	10.3	9.4	3.0	100.0
1943	10.9	7.0	9.7	14.5	20.4	14.2	10.6	9.7	3.1	100.0
1944	7.2	6.0	10.7	15.5	21.5	14.2	10.8	10.5	3.8	100.0
1945	6.2	5.8	9.4	15.4	22.5	14.9	11.2	10.8	3.7	100.0
1946	4.7	5.2 <b>4.</b> 4	9.2 8.3	14.6 14.3	22.4 22.5	15.5 15.9	11.8	12.3	4.3	100.0
1947	4.2						12.3	13.3	4.8	100.0
1948	2.1	2.8	6.8	13.3	21.0	17.0	14.6	17.1	5.3	100.0
1949	2.4	3.8	8.3	14.1	21.0	16.2	13.6	15.3	5.3	100.0
1950	1.6	2.6	6.2	12.6	21.0	17.2	14.7	17.5	6.6	100.0
1951	1.7	2.5	6.3	14.0	21.7	17.4	14.5	16.3	5.6	100.0
1952	1.7	2.6	6.1	14.1	17.5	23.6	14.3	15.0	5.1	100.0
1953	1.9	2.8	6.4	15.5	18.0	23.7	13.4	13.3	5.0	100.0
1954	1.2	1.7	5.8	14.1	24.3	18.0	14.5	14.8	5.6	100.0
1955	1.1	1.7	5.1	13.1	23.4	15.2	17.9	15.9	6.6	100.0
1956	0.9	1.5	5.0	12.4	24.3	18.7	15.2	15.4	6.6	100.0
1957	1.2	1.6	4.6	13.8	24.3	18.2	14.9	15.2	6.0	100.0

TABLE 10

Effective Rate on an Added Dollar of Dividend Income and on an Added Dollar of Net Long-Term Capital Gains for Selected Statutory Net Incomes <sup>a</sup> and Years, 1936–1960

(per cent)

						Net I	ncome						
Year	\$5,000		\$10,000		\$25	\$25,000		\$50,000		\$100,000		\$1,000,000	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
1936–1937 b	4.0	2.4	9.0	5.4	19.0	11.5	31.0	18.6	59.0	35.4	76.0	45.6	
1938-1939°	4.0	2.0	9.0	4.5	19.0	9.5	31.0	15.0	59.0	15.0	76.0	15.0	
1940 <sup>d</sup>	4.4	2.2	11.0	5.5	34.1	16.5	48.4	16.5	66.0	16.5	78.4	18.5	
1941	13.0	6.5	21.0	10.5	48.0	15.0	59.0	15.0	68.0	15.0	78.0	15.0	
1942	22.0	11.0	34.0	17.0	58.0	25.0	69.0	25.0	83.0	25.0	88.0	25.0	
1943 <sup>e</sup>	24.8	11.0	36.8	17.0	60.8	25.0	71.8	25.0	88.0	25.0	90.0 f	25.0	
1944-1945	25.0	12.5	37.0	18.5	62.0	25.0	75.0	25.0	90.0	25.0	90.0 f	25.0	
1946-1947	20.9	10.5	32.3	16.2	56.1	25.0	68.4	25.0	82.7	25.0	86.5	25.0	
1948-1949	16.6	8.3	19.4	9.7	33.4	16.7	51.9	25.0	63.4	25.0	82.1	25.0	
1950	17.4	8.7	20.0	10.0	34.6	17.3	53.7	25.0	65.5	25.0	84.4	25.0	
1951	20.4	10.2	22.4	11.2	39.0	19.5	60.0	25.0	73.0	25.0	91.0	25.0	
1952-1953	22.2	11.1	24.6	12.3	42.0	21.0	66.0	26.0	75.0	26.0	92.0	26.0	
1954 g	18.0	10.0	20.0	11.0	36.0	19.0	57.0	25.0	70.0	25.0	89.0	25.0	
1955-1960 h	16.0	10.0	18.0	11.0	34.0	19.0	55.0	25.0	68.0	25.0	87.0	25.	

NOTE: Odd-numbered columns show effective rate on added dollar of dividend income and evennumbered columns show rate on added dollar of net long-term capital gains.

SOURCE: For 1936-1950, Lawrence H. Seltzer, The Nature and Tax Treatment of Capital Gains and Losses, New York, National Bureau of Economic Research, 1951, pp. 523-524; for 1951 on, Internal Revenue Code.

<sup>a</sup> Married person, two dependents, maximum earned income credit.

b Rates on gain from sale of capital assets held over two, but not over five years.

Rates on gain from sale of capital assets held more than two years.

d Includes Defense Tax.
Includes Victory Tax.

f Takes account of maximum effective rate limitation of 90 per cent.

8 Assumes exclusion exhausted and 4 per cent credit taken only in latter half of year (i.e., credit of

2 per cent).
 h Assumes exclusion exhausted and 4 per cent credit taken over the whole year.

## A stockholder in a major corporation explained it this way: 17

One of the main factors that enters into the market value of stock is the dividend it pays.

To show how dividends affect prices, I have tried to find a parallel example with which to compare Jersey, and I believe that American Can fills the bill. Both are fine companies; their stocks are really "prime." They are rated equally by Fitch. In 1947 they closed within a half point of each other, around 81. Their high prices of 1948 were within one-eighth point, around 93. The book value of Can is

<sup>&</sup>lt;sup>17</sup> From a statement by Mr. Wolf, a stockholder, at the 1949 Annual Meeting of Standard Oil Company, New Jersey, pp. 20-21 of a transcript published by the company for its stockholders, July 18, 1949.

TABLE 11

Investment Objectives of a Sample of Active Investors Interviewed in 1949

(percentage of spending units)

			Int	estment Obj	jective		
Income Class (thousand dollars)	Number of Cases	Capital Preser- vation	Security and Income	Income	Income and Capital Appre- ciation	Capital Appre- ciation	All
Under 7.5	201	4%	42%	26%	20%	8%	100
7.5 to 12.5	182	5	41	17	28	9	100
12.5 to 25	160	8	32	20	31	9	100
25 to 50	121	6	24	19	42	9	100
50 to 100	46	20	18	13	33	16	100
100 and over	26	12	7	9	46	26	100
Not ascertained	10	_		_	_		100

Source: J. Keith Butters, Lawrence E. Thompson, and Lynn L. Bollinger, Effects of Taxation: Investments by Individuals, Boston, 1953, p. 37.

\$10 or so less than that of Jersey, yet Can sold at 91% yesterday, and Jersey sold at 64%. Why? Perhaps because Can, while earning only \$9.71 a share in 1948 increased its dividends from \$3 to \$4, while Jersey, earning over \$12 in 1948, decreased its dividends from \$4 to \$2. I venture the theory that if Jersey had paid us \$4 last year the stock would now be selling right up where Can is, perhaps even higher.

We may also cite the conclusion of Butters, Lintner, and Cary: 18 "It is entirely conceivable that Ashland's policy of paying out a larger percentage of earnings as dividends would increase the market value of its securities more than a policy of negligible distributions; the market value of listed securities—as contrasted with closely held, untraded securities representing a controlling interest in a company—depends in considerable part on their dividend records."

From the standard texts in finance and investments one gets the view that among the numerous factors that may affect the price of stock, dividends are important. How important varies from the most

<sup>&</sup>lt;sup>18</sup> J. Keith Butters, John Lintner, and William L. Cary, assisted by Powell Niland, Effects of Taxation: Corporate Mergers, Boston, 1951, p. 49.

important to more important than some people think. A sampling of opinion follows:

"The considered and continuous verdict of the stock market is overwhelmingly in favor of liberal dividends as against niggardly ones. The common-stock investor and the security analyst must take this judgment into account in the selection of stocks for purchase. It is now becoming standard practice to evaluate common stocks by applying one multiplier (or 'capitalization rate') to that portion of the earnings paid out in dividends and a much smaller multiplier to the undistributed balance." 19

"One thing is clear and that is that the market does not uniformly accept the line of reasoning we suggested at the outset which implied that the more paid out in dividends, the less the value of what remained in the business. On the contrary, observation suggests that an increase in the dividend payment normally acts to raise market price rather than lower it, and there are several reasons why this should be expected. . . . "20

"Generally, earnings per share have the greatest influence on valuations of stocks and a widely used method is that of capitalizing earnings. However, we observed that many analysts take dividends into account along with earnings in developing their ideas of value. And we went on to suggest that perhaps dividends are a more logical basis than earnings for valuation of stocks." <sup>21</sup>

No definitive analysis of this question has been made to date, although much has been written on it. Some investigators hold in theory—and claim to have established in fact—a positive association between the size of the dividend paid on a share of stock and its price. Others assert that if these results are valid—and they are not sure this is the case—it is only because dividends are a good proxy measure for the really relevant variable, viz., expected earnings. To cite a few examples:

David Durand has investigated the effects of book value, earnings, and dividends on the price of common stock of banks. In general, but with exceptions, he found the price of bank stock to be positively associated with their dividend payments. But he warns the reader:

<sup>&</sup>lt;sup>19</sup> Benjamin Graham and David L. Dodd, with the collaboration of Charles Tatham, Jr., Security Analysis: Principles and Techniques, 3rd ed., New York, 1951, p. 432.

<sup>&</sup>lt;sup>20</sup> Pearson Hunt, Charles M. Williams, and Gordon Donaldson, Basic Business Finance, Homewood, Ill., 1958, pp. 648-649.

<sup>&</sup>lt;sup>21</sup> Harry Sauvain, *Investment Management*, 2nd ed., Englewood Cliffs, N. J., 1959, p. 312.

"Generalizations, moreover, may be misleading unless very carefully drawn. From the frequency with which dividends takes first place among the weights, one might be tempted to conclude that this factor is the most important one affecting bank stock prices in general; but one should not lose sight of the presence of exceptions among the 117 stocks from 1946 to 1953 or of the possibility that other factors might take first place for other groups of stocks or for other periods of time." <sup>22</sup>

Myron Gordon holds, on the basis of econometric tests of a model of stock price behavior using cross-sectional data for 1951 and 1954 for four industries—chemicals, foods, steel, and machine tools—that dividend pay-out and stock price are positively associated, although the degree of association is subject to wide variations, and there are exceptions.<sup>23</sup>

On the other hand, Franco Modigliani and Merton Miller have argued, after developing and testing a model of the cost of capital, that as long as investment policy is optimal, stockholders, in theory, should be indifferent to pay-out policy. (They go on to assert that considerations of control or convenience for management may affect payout ratios, but this is not because the pay-out rate per se will affect the prices of shares.) In a more recent, as yet unpublished, paper, the same authors after analyzing the data for over sixty electric utilities for 1954, 1956, and 1957 concluded that in the latter two years current earnings and growth of earnings were the variables that "explained" the price of common stocks; only in 1954 did dividends have an effect on stock prices.<sup>24</sup>

In a similar vein, Haskel Benishay in a cross-sectional multiple regression analysis of fifty-six companies for four years, 1954, 1955, 1956, and 1957, finds indications that "the higher is the pay-ratio the higher is the value of the firm." But having "rejected as an interpretation of this result that, ceteris paribus, investors prefer distribution to retention of earnings," he feels that "Instead the pay-out ratio may

<sup>&</sup>lt;sup>22</sup> In his study, Bank Stock Prices and the Bank Capital Problem, Occasional Paper 54, New York, NBER, 1957, p. 16.

<sup>&</sup>lt;sup>23</sup> M. J. Gordon, "Dividends, Earnings, and Stock Prices," Review of Economics and Statistics, May 1959, pp. 99-105.

<sup>24</sup> Franco Modigliani and Merton H. Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment," American Economic Review, June 1958, reprinted in Ezra Solomon (ed.), The Management of Corporate Capital, Glencoe, Ill., 1959, pp. 150–181, especially footnote 53 on p. 177. Also, Modigliani and Miller, "Leverage, Dividend Policy, and the Cost of Capital," a paper presented at the meeting of the Econometric Society, December 1960, in St. Louis, Missouri.

represent, in the capacity of an instrumental variable, the extent of error in the measurement of expected income." 25

That the question is still open is all that one can firmly conclude from the studies cited and other similar ones. But I think this review of the literature also suggests that the path to capital gains is not strewn solely with low-yielding stock, and we know that the really low-yielding stock is small in amount, while the holdings of "high-bracket" taxpayers are large. This leaves open the possibility, at least, that the income class figures of Chapter 1 and our procedure for imputing corporate earnings in Chapter 4 may not be seriously in error.

We have saved the most "direct" evidence for the end of the discussion. This indicates something about its nature. For if it were really both direct and conclusive, it would not have been necessary to examine, as we have done so far, opinions, conjectures, and the results of research all of which have some relevance for the problem of this note but none of which singly or together settle the problem.

The data we have that relate to Professor Thorp's query are fragmentary, not directly focused on the question, and inconclusive. Yet to my mind (to put the conclusion before the evidence) they suggest that, all things considered, the drift of high-bracket and low-bracket taxpayers to low pay-out and high pay-out stock respectively—if it has occurred—has not, in the aggregate, been powerful enough to cause us to view income class distributions of dividends and stock ownership imputations based on dividends with real skepticism. But this conclusion is putting the cart before the horse. What are the data? I have been able to find two sets of evidence.<sup>26</sup>

First, there is available for 1936 a cross-tabulation which gives the asset size of dividend-paying corporations and the net income class of dividend recipients filing income tax returns for that year.<sup>27</sup> The dividends received by shareholders, tabulated by twenty-seven net income classes, are classified on the basis of asset size (ten in all) of the originating corporations. For instance, stockholders in the net income class \$70,000 to \$80,000 received 0.37 per cent of their dividends from corporations with assets of less than \$50,000; they received 0.52

<sup>&</sup>lt;sup>25</sup> Haskel Benishay, "Variability in Earnings-Price Ratios of Corporate Equities," American Economic Review, March 1961, p. 90.

<sup>26</sup> What follows, i.e., the rest of this note, is taken in large part from Daniel M. Holland, *The Income-Tax Burden on Stockholders*, Princeton for NBER, 1958, pp. 106-114.

<sup>27</sup> Bulletin of the Treasury Department, January 1943, pp. 3-6.

per cent from corporations with assets of \$50,000 to \$100,000, etc. These data, more refined than those available for any other year, can be used to estimate differences in average distribution ratios associated with the dividend receipts of taxpayers in the various net income classes, because, on the average, corporations in each asset size class had different distribution ratios. These ratios tend to increase with the asset sizes of the dividend distributing corporations 28 (see Table 12). Note that these ratios at best only approximate the information relevant to the problem posed in this note. Directly relevant would be data derived from an array in which the distribution ratio itself constituted the basis for classifying the data. Use of an approximation qualifies the result of the test (summarized in Table 13) and tends to damp the figures finally obtained compared with the results that would have been obtained from data classified directly by dividend distribution ratios. Basically, the test involved computing a distribution ratio for each net income class, by weighting each asset size distribution ratio (Table 12) by the proportion that dividends paid by corporations

TABLE 12

RATIO OF NET DIVIDENDS PAID OUT TO NET CORPORATE EARNINGS FOR NET INCOME CORPORATIONS, BY ASSET SIZE CLASSES, 1936

(dollars in thousands)

Asset Size Class	Net Dividends Paid Out	Net Corporate Earnings	Distribution Ratio	
Under \$50	\$ 79,902	\$ 148,818	0.5369	
\$50 to 100	93,349	154,577	0.6039	
100 to 250	218,687	349,336	0.6260	
250 to 500	238,476	374,159	0.6374	
500 to 1,000	272,306	453,423	0.6006	
1,000 to 5,000	718,404	1,234,418	0.5820	
5,000 to 10,000	343,452	567,963	0.6047	
10,000 to 50,000	902,773	1,334,255	0.6766	
50,000 to 100,000	414,546	548,464	0.7577	
100,000 and over	1,280,608	1,531,202	0.8363	
All net income corporations	4,562,500	6,696,613	0.6813	

Source: Statistics of Income for 1936, Part 2.

<sup>28</sup> Cf. George E. Lent, The Impact of the Undistributed Profits Tax, New York, 1948, p. 43.

TABLE 13

Net Income Classes' Weighted-Average Distribution Ratios, 1936

Net Income Class (thousand dollars)	Weighted-Average Distribution Ratio	
Under 1	0.730	
1 to 2	0.737	
2 to 3	0.729	
3 to 4	0.720	
4 to 5	0.710	
5 to 10	0.701	
10 to 15	0.691	
15 to 20	0.686	
20 to 25	0.685	
25 to 30	0.682	
30 to 40	0.682	
40 to 50	0.678	
50 to 60	0.679	
60 to 70	0.683	
70 to 80	0.690	
80 to 90	0.689	
90 to 100	0.696	
100 to 150	0.693	
150 to 200	0.695	
200 to 250	0.710	
250 to 300	0.735	
300 to 400	0.726	
400 to 500	0.734	
500 to 750	0.735	
750 to 1,000	0.754	
1,000 and over	0.775	
Total	0.701	

in this asset size class comprised of the total dividend receipts in each net income class. The relevant values for all net income classes appear in Table 13. The pattern of deviations from the over-all average distribution ratio is surprisingly regular.<sup>29</sup> Starting with the lowest net income class and moving up, we find distribution ratios above the over-all average, but the extent of departure from the general average tends to decline. Dividends representing distribution ratios below average were received by all classes from \$10,000 up to \$200,000. The lowest ratio was reached in the \$40,000-to-\$50,000 net income class:

<sup>&</sup>lt;sup>29</sup> The deficit income class is neglected for purposes of this discussion because the calculations covered taxpayers only. Moreover, purposeful conduct cannot be inferred from the deficit class since, presumably, deficits are involuntary.

above this class the extent of departure from the over-all average distribution ratio becomes gradually less until at the \$200,000-to-\$250,000 net income level a distribution ratio above average is once more reached. This above-average ratio is characteristic of the rest of the income distribution, with the extent of departure from the average increasing steadily as the income level increases, and reaching its maximum in the \$1,000,000-and-over class. If the behavior of these divergences in distribution ratio were plotted with income on the horizontal axes, above-average distribution ratios on the vertical axis above the origin, and below-average distribution ratio below the origin, then a plot of the net income class distribution ratios would be U-shaped.

How important are these differences in the distribution ratios characterizing the investments of the various net income classes? They are really very small. It is only at the extreme levels that the divergence from the average for all classes is over 5 per cent. But, as pointed out above, if the data were classified by the distribution ratio of each dividend-paying corporation, relatively greater differences would probably have been obtained. An interesting feature of this pattern of the distribution ratio is its regularity. With only a few minor exceptions, it varies smoothly from one income class to the next, falling constantly to a minimum and thereafter rising constantly. This pattern is not exactly what would have been expected solely on personal income tax minimization grounds. It is true that over a significant range the distribution ratios for the higher net income receivers are below average and this is reasonable. But if it is rational for a \$45,000 net income shareholder to seek to hold personal taxes down more than average, via corporate saving, is not the pressure to do this even greater on the \$450,000 net income stockholder? But the latter typically received dividends representing a distribution ratio higher than average.

The results of this test do not permit positive generalizations for 1936 for a reason beyond the lack of precise and suitable data: uncertainty arises because the undistributed profits tax, instituted in 1936, stimulated dividend distribution and changed the relative pattern of distribution ratios of different asset size class corporations.<sup>30</sup>

<sup>&</sup>lt;sup>30</sup> Cf. Lent, *Undistributed Profits Tax*. According to Lent, while all but one of the asset size classes were induced by the undistributed profits tax to distribute more liberally, the greatest relative increase was made by corporations in asset size classes in which a higher proportion of stock was held by taxpayers in the middle range of net income classes. Over this income interval the test disclosed distribution ratios below average—despite the influence of the new tax. Therefore in the absence of the

There is certainly no basis for concluding that many higher income class taxpayers did not choose investments in companies with very meager distribution policies in order to forestall high personal surtaxes. But, in 1936 at least, this tendency appears to have been almost completely counterbalanced and even swamped (in the case of top income classes) by the opposite choice of stock in corporations with distribution ratios above average. In that year, considerations other than corporate saving rates evidently affected the relationship between size of personal income, including dividends, and distribution ratios of corporations from which the dividends were received.

While the above test, fragmentary though it is, suggests that there was on net balance no pronounced tendency in 1936 for the rich to seek investment in high-saving corporations, it is possible that in the years after 1936, when opportunities for tax saving on capital gains increased, such a tendency became marked.

The second set of evidence is data for 1949 on the patterns of financial asset holdings of individuals in Wisconsin, developed by Thomas R. Atkinson, which permit inferences to be drawn as to whether high-income taxpayers, as a group, take advantage of the preferential tax rate on capital gains by concentrating their holdings in corporations with low distribution ratios. Wisconsin law requires reporting on state income tax returns not only dividend receipts but also stock holdings. Having access to the returns, Atkinson was able to estimate the value of the stock from which a sampled group of taxpayers received dividends in 1949.31 For this purpose he divided common and preferred stocks into two categories—traded and untraded. Stock issues for which dividend and price quotations were available in investment manuals fall in the traded category and the rest are classified as untraded. The value of traded stock holdings was determined by multiplying the average number of shares of the particular issue held by the individual in 1949 "by the unweighted mean between the high and low 1949 market price." For untraded stock Atkinson used book value.32 His estimates for all Wisconsin taxpayers are presented in Table 14 (columns 1 and 2).

undistributed profits tax, the over-all average distribution ratio of Table 13 would have been higher and, for each income class, the extent of the deviation from this average would have been greater (but in the same direction as the table shows).

<sup>&</sup>lt;sup>81</sup> Thomas R. Atkinson, The Pattern of Financial Asset Ownership: Wisconsin Individuals, 1949, Princeton for NBER, 1956.

<sup>32</sup> Atkinson, Financial Asset Ownership, p. 49.

TABLE 14

Yield on Traded and Untraded Common Stock Held by Wisconsin Individuals, Arrayed by Income Classes, 1949

(per cent)

	Yield on C	Common Stock	747
Income Class	Traded * (1)	Untraded b (2)	Weighted-Average Distribution Ratio (3)
\$0 to \$5,000	7.3	3.2	55.7
\$5,000 to \$6,000	6.8	3.1	51.2
\$10,000 to \$20,000	6.7	4.3	53.7
\$20,000 to \$50,000	6.5	4.9	49.3
\$50,000 and over	7.3	· 5.1	50.4

Source: Atkinson, Financial Asset Ownership, p. 131.

## Atkinson has this to say about his data.88

It has been suggested that the liberal provisions regarding taxation of long-term capital gains will encourage high income individuals to purchase the stocks of corporations which retain most of their earnings. . . . If the tax treatment of capital gains were important, as has been suggested, in determining the behavior of investors, one would expect yields figured as the ratio of dividends to the value of stock held to decline for successively higher income groups. . . . [The data of Table 14 appear] to confirm that thesis except in the case of individuals with incomes of \$50,000 or over, for whom the yield on traded stocks is higher than for any other group. One would expect persons in the top income group to be benefited most by the provisions of the capital gains tax; accordingly, the presence of extremely high yields on the marketed stocks held by that group casts doubt upon the validity of the thesis as a sole explanation of investor behavior.

I think his skepticism is justified, but his data do not conclusively establish the point. For it is not the yield, i.e., D/M (where D = dividends and M = market value) but D/Y (where Y = corporate earnings)

<sup>\*</sup> Based on market value.

b Based on book value.

<sup>&</sup>lt;sup>o</sup> For traded stock.

<sup>33</sup> Atkinson, Financial Asset Ownership, p. 130.

that is the relevant figure here. It is true that (D/M)(M/Y) = D/Y, but this means we would need to know something about the behavior of M/Y, the price-earnings ratio, by income class of stockholders to be certain that the product of (D/M)(M/Y), i.e., D/Y, moved with income class the same way as D/M itself.

Column 3 of Table 14 gives weighted-average distribution ratios, D/Y, for the traded stockholdings in each of his income classes. These were computed by applying to Atkinson's industrial breakdown for traded stockholdings, the dividend distribution ratios appropriate to each industry sub-group.84 Data from column 3 appear to show that there is some tendency for high income and high corporate saving rates to be associated, but the relation is uneven indeed, and reverses at just the point where one would expect it to be most pronounced, i.e., at the highest income class tabulated. Thus the conclusion is equivocal. But we hasten to note that this, just like our earlier test, is inconclusive. For the variation that the weighted-average distribution ratio measures is merely the variation between industry groups; it fails to get at what may very well be equally or more important-the variation in dividend pay-out rate within each industry group. That is to say, we assumed in constructing our index that all chemical industry stockholdings, for example, were characterized by the same pay-out ratio, and the only factor making for a difference among income classes would be the differential proportions that each industry and its pay-out ratio play in each income class' portfolio. But certainly within the chemical industry there are sharp variations in pay-out rates, and high bracket stockholders could seek out those firms with low dividend rates. Our procedure has no way of adjusting for this possibility. Adding to the inconclusiveness of the results is the fact that these data cover a single year, and one that was not "typical."

But traded stocks, with which our discussion has hitherto been concerned do not exhaust Atkinson's evidence. Indeed, there are good grounds for holding that the hypothesis that the stock investments of high-bracket investors are characterized by a lower pay-out percentage

 $^{84}$  The distribution ratios, D/Y, come mainly from Sidney Cottle and W. Tate Whitman, Corporate Earning Power and Market Valuation, 1935–1955, Durham, 1956, but some were computed by me from samples of prominent firms in a few industries. For one reason or another, usually broadness of industrial classification or the inappropriateness for the problem at hand of individual holdings of mutual investment trust shares, which distribute all their earnings, some industrial groups in the table on pp. 155–156 of Atkinson's book were left out in constructing the weighted-average distribution ratio. They accounted for only a small fraction of stock, however.

than the average percentage for stockholdings of all dividend recipients can be tested most straightforwardly by the data for untraded corporations. For these companies are more typically small and closely held, and the operations of such enterprises can be more easily geared to the owners' personal requirements than is the case for widely owned corporations. Moreover, with traded stock, a low dividend pay-out policy might lead to a fall in the value of the stock (or prevent a rise); therefore the ratio of dividends to stock value, i.e., the yield, would not be useful data for testing the hypothesis. Book valuation would not be affected in this way.

An examination of the data most relevant here (column 2, Table 14) shows that in general the higher the income class, the greater the dividend return in proportion to stockholders' equity. On the face of it, these figures appear to contradict the hypothesis under test, but such a direct conclusion is not warranted. It is not the ratio D/B(D = dividends and B = book value) which is relevant evidence in this connection, but more properly it is D/Y (Y = earnings) which is the product of D/B and B/Y. Only if B/Y is constant or rises from one stockholder income class to another can the pattern of movement of the values of D/B be taken definitely to indicate the direction of the ratio D/Y. In other words, since D/B increases reading up the stockholder income scale, if B/Y rises or remains constant then D/Y will increase with stockholder income. Without evidence on the behavior of B/Y by stockholder income classes, the argument must be inferential. For income corporations (responsible for almost all corporate net dividend payments in the years covered) W. L. Crum has demonstrated that the rate of return on net worth, Y/B, tends to fall as asset size rises. 85 This means that its inverse, B/Y, rises with asset size. And since the 1936 data suggest a loose correlation between corporate asset size and dividend recipient income class, the D/B ratios in the untraded column of the table can be taken to indicate a D/Y that moves in the same direction, rising with stockholder income class. The same result would follow if it were the case that corporations whose stock is untraded tend to fall within a narrow asset size range, with B/Y roughly constant for all relevant corporation asset size and stockholder income classes.

Thus, the analysis apparently ends with the conclusion that the

<sup>&</sup>lt;sup>85</sup> William Leonard Crum, Corporate Size and Earning Power, Boston, 1939, pp. 27–30. Crum's findings are for each of the years 1931 through 1936. Similar computations for 1944, 1947, and 1952 confirm the occurrence of this pattern over the period of this investigation.

data do not support the hypothesis that high income stockholders, as a group, tend to invest proportionately more heavily than lower income stockholders do in corporations that save a higher than average proportion of their earnings. But this is not a conclusion to be pressed strongly. The chain of argument is not complete; some links are missing. In particular, the transition from corporation asset size to stockholder income classes is a rather rough and ready procedure. Moreover, data for one state in one year are obviously not a valid basis for generalization. The data are too tangential to the problem at hand and generally too imperfect to sanction a firm conclusion that, in fact, personal income tax relief via the route of retained earnings is not sought to a greater relative extent by stockholders in the higher income classes. But they do suggest that the effect, if it exists, is not very "strong."

<sup>86</sup> Indicative of the need for caution in interpreting these data is the following information supplied by Atkinson in a letter dated February 25, 1951.

"Finally I did some investigating on the reason that the per cent return on closely held stocks behaves in an opposite manner than your thesis would require. I broke the tabulation down into holdings of stocks in corporations from which the holder also received wages, and stocks in corporations from which they did not. No luck there. The ratios continued to rise for each type of holding. However, the proportion of low yielding bank stock out of the total closely held stocks owned by each income group falls as income rises which may account for some of it. Similarly, the holdings of stock in personal holding companies rise percentage-wise as income increases and these stocks have an extremely large rate of return when computed on book value basis as the underlying assets, real estate and stocks for the most part, are carried on the books, for the most part, at purchase price. For instance, the Able Company is a holding company whose principal assets consist of Baker Company stock. The Baker stock must have been valued at the original cost for Able paid out almost as much in dividends as its total book value in 1949. Thus, even if the operating company retained a high percentage of earnings, the per cent return on the book value of the holding company would be very high.

"These factors may account for some of the reasons that the ratios rise. However, I think the more important reasons have to do with the character of the closely held corporations the stock of which is held by people in different income groups. Low income groups hold closely held stock of banks, retail and wholesale concerns and service concerns, all of which are small businesses which have extremely low earnings after payment of the wages of the manager who is probably also the principal stockholder. Their earnings would be much smaller both absolutely and relative to book value than some larger closely held corporations. Furthermore, undoubtedly the larger closely held corporations are owned somewhat more widely, i.e., outside of management and family circles, and there is a pressure to distribute dividends to the outsiders, perhaps due to mistrust, and also due to the inability in many cases for capital gains to be taken by the outsiders because of lack of market or a market composed only of 'insiders.' Finally, perhaps unions will accept a six per cent return on investment more easily than high salaries to management in their bargaining considerations." Able and Baker are substituted for the names of specific companies in this quotation.