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Chapter Author: Roland Robinson

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CHAPTER 3

The Supply of Funds by Investors in State and Local Government Obligations

SUMMARY

One principal feature sets state and local government securities apart from other capital market obligations: exemption of the interest return from the income taxation of the federal government, and usually exemption from income taxation by the state of issue.¹ As a result most of the state and local government securities privately held are held by persons or institutions which are subject to high federal income taxation. As would be expected, few are held by institutional investors which are tax-exempt as such. Individuals are the most important holders; later in this chapter we shall review evidence suggesting that most of the state and local government securities held by individuals are owned by upper-income bracket investors—as would be expected. Commercial banks are the most important institutional investors; they are subject to corporate income taxes at the standard rates. Fire and casualty insurance companies are next in size of holding. Both types of companies in this field pay the standard corporate tax rate on marginal investment income with certain exceptions.² Life insurance companies are the only important investing institutions which buy state and local government obligations in appreciable volume though partly sheltered from federal income taxes. Life insurance companies are taxed according to a quite special formula. While life insurance companies enjoy only moderate tax advantages from owning tax-exempt securities at present, they may consider themselves prudent to hold some tax exempts as a protection against the pos-

¹ It is frequently forgotten that interest income from state and local government obligations is quite generally taxed fully by states themselves in states other than that of issue. In 1952, 31 of the 34 states having a corporate income tax taxed the income from securities issued by other states; 16 taxed the income from the obligations of the home states. In the same year 30 of the 33 states having a personal income tax taxed the income from securities issued by public bodies in other states; 8 taxed those of the home state.

² Under the Revenue Code of 1954, certain mutual insurance companies pay a normal tax of 25 per cent rather than the usual 30 per cent and accordingly, when the 22 per cent surtax is allowed for, have a marginal tax rate of 47 per cent rather than 52 per cent.

sibility of future changes in tax laws. Since many toll road and other revenue bonds yield about as much as could be secured on fully taxed securities, they have the opportunity to store up a reserve of tax exemption for the future without suffering impairment of income in the present. A mild revival of mutual savings bank interest in these securities seems to have started after 1951 when the tax laws were changed so that some mutual savings banks became subject to corporate income taxation. The only group of investors—other than state and local governments themselves—clearly free of income tax liabilities are the fraternal societies. Their holdings have dropped from a small to a smaller part of the total amount privately held. State and local governments themselves are important investors in their own securities. Their holdings are material and they are sometimes important market factors, but the incentive lying back of this is generally a parochial one.

The purpose of this chapter is to examine the investment practices and policies of each of the principal investors in state and local government obligations: why they buy them, their policies with respect to maturity and quality, and the alternative uses of funds that each type of investor might make. This examination is necessary because each of the principal classes of investors has a quite different investment problem. Consequently, the timing of their purchases has varied greatly. In some periods individuals have dominated the market; in others, banks have taken the leading role and casualty insurance companies have also been increasingly important. The participation of life insurance companies has been quite irregular.

No other market seems to have experienced such pronounced and frequent changes in customers. The sharp fluctuations in the securities absorbed by the various groups are shown in Table 8. This table is limited to "private" acquisitions. No group shows a really stable record; the nearest approach to stability is found in the record of fire and casualty companies. The participation of commercial banks is shown to have varied from as little as 3 per cent to as much as 63 per cent of net increases in private holdings.

It is quite likely that the sharp and frequent shifting in the participation of various investors in the market for state and local government securities has given it some of the price volatility noted

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Annual Acquisitions of State and Local Government Securities by Private Investors, 1946-1956

TABLE 8

Year	Fire and Casualty			Miscellaneous			Total Private Acquisitions (10)			
	Commercial Banks (1)	Mutual Savings Banks (2)	Life Insurance Companies (3)	Life Insurance Companies (4)	Fire Casualty Insurance Companies (5)	Non-bank Security Dealers (6)		Financial Institutions (7)	Non-financial Corporations (8)	Residual (Mainly Individuals) (9)
	Amount in millions of dollars									
1946	425	-30	-108	-12	6	40	-2	2	-254	67
1947	881	2	-5	78	-5	-97	2	36	510	1,402
1948	385	6	263	229	4	24	1	52	1,120	2,084
1949	887	15	180	284	-5	-15	1	51	650	2,048
1950	1,570	2	100	316	-16	118	20	68	539	2,717
1951	1,080	59	18	304	-1	14	5	52	459	1,990
1952	991	178	-17	423	3	-156	3	65	1,141	2,631
1953	632	82	145	748	-11	202	6	91	1,853	3,748
1954	1,765	193	548	783	10	+70	19	219	800	4,407
1955	112	37	192	793	21	+100	32	250	1,795	3,332
1956	203	32	235	721	0	-100	15	75	1,796	2,977
1946 ^a	Percentage									
1947	62.8	-0.1	-0.4	5.6	-0.4	-6.9	0.1	2.6	36.4	100.0
1948	18.5	0.3	12.6	11.0	0.2	1.2	....	2.5	53.7	100.0
1949	43.3	0.7	8.8	13.9	-0.2	-0.7	....	2.5	31.7	100.0
1950	57.8	0.1	3.7	11.6	-0.6	4.3	0.7	2.5	19.8	100.0
1951	54.3	3.0	0.9	15.3	-0.1	0.7	0.3	2.6	23.1	100.0
1952	37.7	6.8	-0.6	16.1	0.1	-5.9	0.1	2.5	43.4	100.0
1953	16.9	2.2	3.9	20.0	-0.3	5.4	0.2	2.4	49.4	100.0
1954	40.0	4.4	12.4	17.8	0.2	-3.0	0.4	5.0	19.6	100.0
1955	3.4	1.1	5.8	23.8	0.6	....	1.0	7.5	56.9	100.0
1956	6.8	1.1	7.9	24.3	....	-6.7	0.5	2.5	63.8	100.0

^a Because the total is so small, the percentage distribution Source: Dollar amounts, first differences of Table A-3; percentages computed from dollar amounts.

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in Chapter 6. The "offering scales"³ for state and local government securities which are presented in that chapter vary in slope and shape from the yield curves of either corporate bonds or Treasury securities because of the shifting composition of the market. The greater range of price fluctuation for state and local government securities, noted in Chapter 6, is probably related to this market characteristic. After this examination of the position of the various groups of investors, the chapter will conclude with some generalizing comments.

THE MARKET FOR STATE AND LOCAL GOVERNMENT OBLIGATIONS AMONG INDIVIDUALS

At the opening of the postwar decade, individuals held slightly more than 60 per cent of the state and local government obligations privately owned. By mid-1952 this fraction had been reduced to about 45 per cent. But at the end of the decade this fraction was starting once more to rise. Of the net increase in privately held state and local government obligations during the postwar decade, about 35 per cent was absorbed by individuals. This story may be read from Table 9.⁴ Even more notable is the evident fact that individual acquisitions have varied greatly from year to year. Individual holdings declined through the end of 1946. In 1947, however, individuals increased their purchases sufficiently to account for three-eighths of the net gain in 1947. In 1948 they accounted for more than half. In the three years, 1949 through 1951, individuals acquired only about a quarter of the gain in private holdings. In 1952 and even more in 1953, with sharply higher interest rates, individuals accounted for almost four-ninths of the increase in private holdings. This proportion fell to about one-fifth in 1954 when money markets were eased and banks bid prices up. When money market conditions were reversed in 1955 and 1956, individuals again became the dominant factor in the market, accounting for five-sixths of the increase in private holdings.

This evidence suggests that participation in this market by indi-

³ For a definition, see Chapter 4.

⁴ This table should be interpreted with considerable care. As explained in Appendix A, Column 1 is derived as a residual from other figures more directly reported. Although the results should be reasonably accurate, they are subject to some systematic biases such as the reporting of holdings on a book-value rather than a par-value basis.

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TABLE 9

Holdings of State and Local Government Securities by
Individuals, Annually, 1945-1955

(dollar amounts in millions)

<i>Year End</i>	<i>Amount Held (1)</i>	<i>Total Privately Held (per cent) (2)</i>	<i>Annual Change in Amount Held (3)</i>	<i>Individuals' Acquisitions as a Proportion of Change in Total Privately Held (per cent) (4)</i>
1945	9,559	61.3		a
1946	9,316	59.4	-243	(neg.)
1947	9,814	57.5	498	35.5
1948	10,872	56.7	1,058	50.7
1949	11,522	54.3	650	31.7
1950	12,072	50.5	550	20.3
1951	12,502	48.2	430	21.6
1952	13,645	47.8	1,143	44.7
1953	15,459	47.9	1,814	48.4
1954	16,253	44.3	794	18.0
1955	18,001	45.0	1,748	52.5
1956	19,752	45.8	1,751	59.0

a Total amount privately held declined.

Source: Col. 1: Table A-3, col. 10; Col. 2: Table A-4, col. 10; Cols. 3 and 4: computed from Table A-3.

viduals has had a jerky quality; in some years they have been the leading buyers, in others they have dropped back in rank. The principal effort of this section will be to appraise various purported explanations of this irregularity in individual participation.

The individuals who own state and local government securities are primarily those with higher incomes; presumption and logic support this fact. But in order to appraise the size and character of this market, we need reasonably precise answers to such questions as: At what level of income do such holdings become a significant part of portfolios? What are the investment alternatives open to those who can advantageously invest in tax-exempt securities? What is the nature of income and saving at the level of income or among the groups that purchase tax-exempt securities?

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For example, is proprietary income important in accounting for this demand? If so, the irregularity of proprietary income might account for the irregularity of individual demand. A knowledge of the relationship between wealth and income at the upper levels of each would help to mark out the margins of this market. Those who have high incomes but little wealth seldom start to build a portfolio by buying tax-exempt securities. Those of considerable wealth but modest income (nonincome producing wealth can account for such a case) have little reason to seek tax exemption of income. A man of wealth who is aggressively pushing the development of his own business might have little to spare for investment in tax-exempt form.

As might be expected, our knowledge of these various points is fragmentary. The fragments yield some interesting conclusions, but they fall short of telling the full story. Of necessity, our review of this evidence will have something of the episodic nature that marks its origins. The principal sources consulted and used in this part of the inquiry include:

1. Lent's study⁵ of tax-exempt security ownership includes an examination of the concentration of individual ownership by size of income and also by concentration of such ownership in estates by size of estate. Lent also directed some attention to the problem of income concentrated in upper-income shares. He found that two-thirds of the state and local government securities held by individuals in 1940 were held by the upper one per cent income group.⁶

2. Atkinson's study⁷ of financial asset ownership includes estimates of the income received from tax-exempt obligations and of the principal value of these obligations in the sample of tax returns covered by this study.

Atkinson's 1949 sample of Wisconsin taxpayers showed that those having an income of \$50,000 or more held 2.3 per cent of their financial assets in state and local government securities. The holdings of such securities in this income group accounted for 38 per cent of the total of such securities, the holdings of which were implied by the tax returns.

⁵ George E. Lent, *The Ownership of Tax-Exempt Securities, 1913-1953*, Occasional Paper 47, National Bureau, 1955.

⁶ *Ibid.*, p. 116.

⁷ Thomas R. Atkinson, *The Pattern of Financial Asset Ownership: Wisconsin Individuals, 1949* (Princeton University Press for National Bureau, 1956).

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Those having an income of \$25,000 to \$50,000 held 1.2 per cent of their financial assets in state and local obligations and accounted for 22 per cent of total implied holdings.

Those with incomes of less than \$25,000 held less than one-half of 1 per cent of their financial assets in state and local government securities but nevertheless accounted for 40 per cent of the total holdings implied. In this income range, there is no further evidence that the proportion of state and local government securities held is related to size of income; except for the very smallest income size group the others held close to one-half of 1 per cent of their financial assets in this form.

3. Mendershausen estimated the amounts of financial assets held by living persons.⁸ This estimate was based on the estate tax returns for the year 1944. Mendershausen estimated that 90 per cent or more of the state and local government securities held by individuals in 1944 were held by individuals who would have been required to file an estate tax return if they had died in that year. Comparison with an earlier study by C. O. Hardy based on similar data suggests that the degree of concentration in ownership had increased from the 1920's to 1944. Robert Lampman has carried the Mendershausen estimates forward in an unpublished National Bureau study but his material was not ready for use in time for inclusion in this study.

4. A Harvard team studied, by intensive interview, the investment preferences and policies of about 750 wealthy individuals.⁹ The interviews were made in 1949. Butters-Thompson-Bollinger found the proportion of state and local government securities in the 1949 portfolios of those interviewed to be (Table A-13, p. 468):

<i>Income</i> (thousands of \$)	<i>Per cent of</i> <i>Portfolio</i>	<i>Wealth</i> (thousands of \$)	<i>Per cent of</i> <i>Portfolio</i>
Under - \$ 7.5	*	Under - \$ 25	*
7.5 to 12.5	1	25 to 50	*
12.5 to 25.0	2	50 to 100	1
25.0 to 50.0	2	100 to 250	1
50.0 to 100.0	4	250 to 500	2
100.0 and over	7	500 to 1,000	3
		1,000 and over	5

* Less than one-half of one per cent.

⁸ Goldsmith, *Study of Saving*, Vol. III, p. 361.

⁹ J. Keith Butters, Lawrence E. Thompson, and Lynn L. Bollinger, *Effects of Taxation: Investments by Individuals* (Harvard Business School, 1953).

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These findings confirm the major point that holdings of tax-exempt state and local government securities are concentrated among those with high incomes and usually considerable wealth. But they also show that such holdings are not confined to upper income groups. Furthermore the various studies tend to confirm one another, though minor differences may be found. Lent concluded that two-thirds of such individual holdings are to be found in the upper 1 per cent of the income scale.¹⁰ The pattern of Wisconsin holdings estimated by Atkinson suggested a slightly lower degree of concentration. The two do not necessarily conflict; Wisconsin experience might differ from the national average. Mendershausen's evidence suggested that in the year 1944 most tax-exempt securities were held by those with estates which would have been liable for an estate tax. This evidence suggests more concentration than indicated by any of the three other sources.

Since the Butters-Thompson-Bollinger evidence was collected by interviews with a limited group of individuals selected for their wealth, it cannot be used to estimate aggregates. But within the income and wealth categories covered by Butters-Thompson-Bollinger in 1949, the proportions of state and local government securities found was quite consistent with those found in Atkinson. The last two are the only ones that give us postwar evidence. Both of them suggest that ownership of tax exempts, though concentrated in upper income groups, is not confined to them.

The Mendershausen study also presented a comparison of the unadjusted holdings of state and local government securities in the estates filing estate tax returns for a number of years. The degree of variation among years in the proportions shown by these comparative figures is considerable. It suggests that single-date evidence may be almost unreliable. Three of the four studies we use here are single-date inquiries. Lent is the only one whose evidence was not tied to the facts of a single year, and his evidence relates only to aggregate holdings. Relative holdings appear in Table 10. These values are reproduced in Chart 5.

As this chart shows, the proportion of tax-exempt securities in big estates has been declining. There are, however, some year-to-year variations that seem to reflect fluctuations in common stock prices. For example, 1929 shows a low proportion of tax-exempt

¹⁰ *Op.cit.*, p. 116.

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TABLE 10

State and Municipal Bonds as a Percentage of Gross Taxable Estates

(current values)

	1922	1929	1939	1944	1946	1950	1955
	(per cent)						
Grand total	3.3	4.4	6.1	5.7	3.9	3.3	2.7
Nontaxable	1.7	1.7	1.1	2.0	0.8	0.6	0.4
By size of net estate:							
(thousands of dollars)							
Under 100	1.1	1.2	1.8	0.9	0.6	0.5	0.2
100-200	1.4	1.7	3.1	1.6	1.0	1.0	0.4
200-300	1.7	2.4	3.6	2.3	1.4	1.8	0.9
300-500	3.0	3.0	6.2	4.0	3.2	3.4	1.7
500-1,000	4.6	3.6	8.9	5.4	4.1	5.4	3.6
1,000-2,000	5.0	4.6	12.5	12.8	8.4	7.9	6.6
2,000-5,000	7.9	7.7	16.5	13.3	14.6	9.6	10.5
5,000 and over	12.0	9.7	14.5	22.7	18.0	18.5	8.1

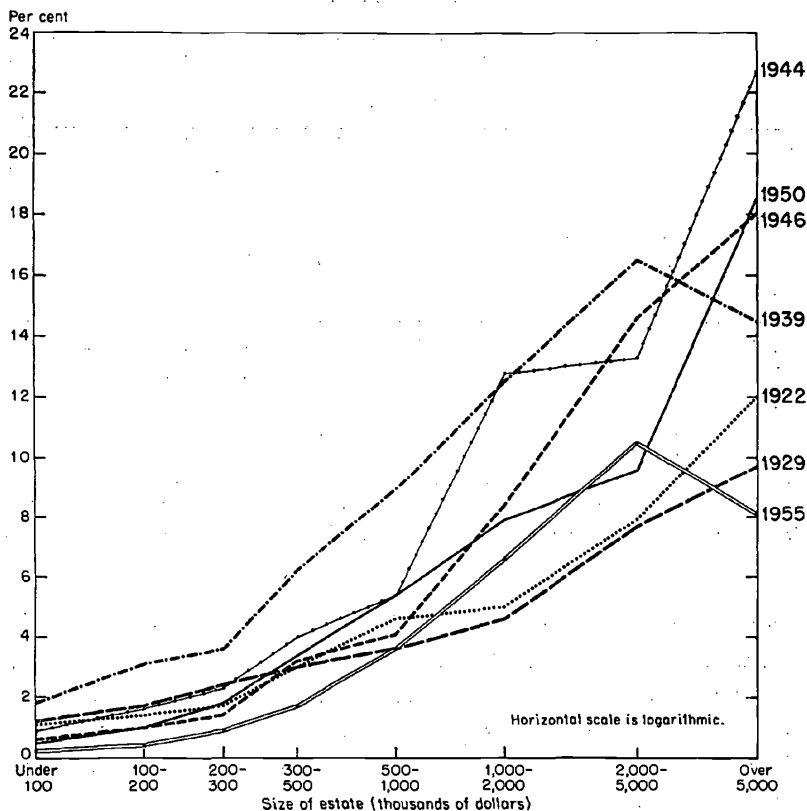
Source: 1922-46: From *Study of Saving*, Vol. III, Tables E-21 to E-25. 1950: From *Statistics of Income*, 1949, Part 1, p. 324 to p. 328. 1955: From *Statistics of Income*, 1955, Estate Tax Collections, Table 4, p. 16.

securities; presumably a reciprocal of the high equity prices. The reverse is true of 1939. Although common stock prices were advancing during the 1950's, this does not seem to be a fully adequate explanation of the smaller proportion of tax-exempt securities in big estates. Large investors appear to have been convinced that the attractions of capital gains far outweighed those of tax exemption. In fact, the extreme right-hand portions of several of the curves in Chart 5 turn down, suggesting that tax exemption is used more by middle-to-large investors than by the very largest investors. This is particularly true in years of high equity prices.

Lent's and Atkinson's evidence suggest that some holders of state and local government obligations—a majority by number of holders, but a minority by amount—have relatively modest incomes and therefore take only partial advantage of tax exemption. Mendershausen's estimate minimizes the size of this group and an examination of the slope to the curves in Chart 5 would lead to the same conclusions. The Butters-Thompson-Bollinger interviews cannot be used to prepare aggregate estimates. The apparent conflict

CHART 5

State and Municipal Bonds as a Percentage of Gross Taxable Estates



of their evidence with that in other studies may be reconcilable. Both Lent and Atkinson used size distributions of income; Mendershausen's estimates are based on a size distribution of estates or wealth. An estimate of marginal tax rates applying to the holders of tax-exempt securities, prepared by Harry Kahn of the staff of the National Bureau of Economic Research and fully described in the source notes to Table 27, supports the Mendershausen results rather more than those of Lent or Atkinson.

From year to year, the income of a person is likely to vary considerably more than his wealth; this must be particularly true of wealthy individuals who depend on dividends and capital gains for

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an appreciable part of their income. Thus the reports of any one year might show some holders of state and local government securities receiving incomes that did not put much of a premium on tax exemption. But over the full life cycle of these investors, employment of funds in this way might have been entirely rational. Wealth is less likely to vary than income (although market values will fluctuate in fairly wide swings). Therefore the evidence that state and local government securities are rare in smaller portfolios is consistent not only with such facts as we have but also with investment logic.

Although tax-exempt securities are held mainly by upper income and wealth groups, the proportion of assets in upper income or upper wealth portfolios held in tax-exempt securities is modest. Respondents to the Harvard interviews with wealth of \$1 million or more held 5 per cent of their portfolios in tax exempts. The estate tax evidence (Table 10 and Chart 5) shows that, in the years covered, tax exempts averaged from 10 to 25 per cent of estates of \$5 million or more; with a median not far from 15 per cent. At the \$1 million to \$2 million level, the range of the averages was from 5 to 13 per cent. Since these ratios are considerably above the Harvard response, it appears that there may be a difference between the portfolios of living persons and the estates of the deceased. Another possibility is that the respondents to the Harvard interviews may have included an unusual proportion of alumni who had profited by the investment example of Harvard University itself and concentrated on equities.

Some clues in the Butters-Thompson-Bollinger interviews furnish convincing reasons why the ratios of tax-exempt securities in large portfolios may be small. An upper income individual is often relatively little concerned with the production of current cash income; capital gains are far more desirable. Persons of wealth who are aggressively trying to increase their estate further have relatively little use for tax-exempt obligations; they want assets that furnish them with opportunities for capital gains. It is only wealthy investors who were intent on capital preservation for the sake of income production that are interested in tax exemption. The comments reproduced from the interviews showed that aggressive investors treated tax exempts almost with contempt; the return was too low.

Wealth-conserving conservative investors were the ones who

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bought tax exempts. This point is of considerable importance; while portfolio shifts can account for part of the market for state and local government securities, the rate of saving of those who are interested in the purchase of tax-exempt securities must be an important limit on the amount of such securities that individuals can absorb from the market year after year. Our knowledge of life-cycle income and saving is still unfortunately limited. But common sense suggests that the rate of saving of those who are still attempting aggressively to build estates is probably higher (save in depression years) than those who have settled down to the process of capital and income preservation. Furthermore, tax-exempt securities are not the only or even the major means for minimizing the tax burden on upper-income individuals. Investments in oil royalties, in income-producing real estate, in various foreign ventures, and even in life insurance have much the same final effects.

A variety of special provisions and exceptions to the individual income tax have been created so that larger income receivers can minimize their tax liabilities by means other than buying tax-exempt securities. Among such features are: conversion of ordinary income to capital gains, depreciation and depletion allowances, income splitting, and rather generous gift provisions (particularly on securities with unrealized capital gains), all of which permit considerable minimizing of potential tax liabilities. Because of these possibilities, investment in tax-exempt securities has lost some of its appeal for upper income individuals. Estimates of the erosion of the tax base have been made by Heller and by Pechman.¹¹

The managers of trust accounts are important buyers of these securities. Unpublished estimates by Goldsmith, Shapiro, and Mendelson suggest that about half of the tax-exempt securities bought by individuals are acquired for them by trustees, usually corporate fiduciaries. The investment policies of professional trustees for trust accounts differ greatly from those for individuals. The habits, traditions, and mores of trust investment put much more emphasis on conservatism and capital preservation. It is quite likely that for a given level of income and a given tax position, trust accounts of which individuals are beneficiaries are more likely to use tax-

¹¹ Walter W. Heller, "Limitations of the Federal Individual Income Tax," *The Journal of Finance*, May 1952, Vol. vii, No. 2, and Joseph A. Pechman, "Erosion of the Individual Income Tax," *National Tax Journal*, March 1957, Vol. x, No. 1.

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exempt obligations as an investment medium than would be true of individuals themselves.

When the beneficial interest in a trust estate is divided between a life tenant and a remainderman, the trustee has a problem in equitable treatment of both. The life tenant is entitled to income, the remainderman to principal. Since trust law frequently does not require and frequently may not even allow amortization of premiums unless specifically allowed for in the trust contract, the trustee is forced to seek securities selling near par, where coupon and yield are nearly equivalent. This gives rise to some of the prejudice against both high coupon (premium) and low coupon (discount) obligations mentioned in Chapter 6.

This circumstance is sometimes reversed. If the remainderman is also a trustee (or joint trustee) of the estate, and if the life tenant is his mother he may deliberately invest some of the funds in high-coupon tax-exempt securities. When the coupon is not amortized this amounts to a mild kind of capital consumption. It is a way of persuading mothers who are not very knowledgeable about finance to consume capital without being aware that they are doing so. It was even reported that some individuals deliberately buy high-coupon tax exempts for their own portfolios as a means of engaging in some mild capital consumption, a pleasant deception. The tax rules do not require individuals to amortize the income from premium securities; there would be no point to such a requirement.

The irregularity in time of individual acquisitions of state and local government securities suggests that they are not primarily bought out of current saving but are acquired by portfolio rearrangement. The market potential, over the short run at least, is much more a matter of relative yields than current savings. When yields are attractive, portfolios will be shifted into tax-exempt form. At the quite low yields of 1946, individuals reduced their holdings; when yields became more attractive in 1948, they bought more actively. The heavy acquisitions by individuals in 1953 and 1955 took place when money markets were tight and banks were not buying. To bring out individual buying, yields had to go up considerably. The level of equity prices is also doubtless a market factor of considerable significance. When individuals are bullish on equities, their tax-exempt security buying suffers, but when the

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equity outlook grows dim, tax-exempt buying by individuals becomes more important.

It would seem logical that to induce individuals to buy on a substantial scale the yields available to investors would have to compare favorably with those available on fully taxed sources of interest or dividend income. The levels of income of those individuals who hold most of the tax-exempt securities is such as to put them in quite high tax brackets. The Harvard survey suggested that most of the holdings were among those with annual incomes of \$50,000 or more. In 1949, when that survey was made, the marginal rate of federal income taxation for this minimum was 59 per cent. Even at \$25,000 annual income—certainly the lower level according to both the Atkinson and Harvard study for an appreciable degree of concentration—the marginal rate was 38 per cent. It seems likely, therefore, that individuals do not make close or precise comparisons as do institutional investors; their judgments are more general. But they also look toward the longer-term advantage; longer-term judgments are necessarily even less precise. No one could ever make a close choice between the hope for capital gains and the certainty of federal income tax exemption.

Individuals not in higher income brackets who nevertheless own tax-exempt securities are still to be accounted for; our knowledge of them is limited. We do know that many very small issues are marketed locally and that these issues sometimes yield almost as much as fully taxed security incomes. A local investor with little expert investment knowledge and considerable mistrust of the central capital markets may be quite willing to invest in local municipal obligations even though his use of tax exemption is slight. Local pride and sentiment may support such action. A school board member or possibly even a schoolteacher may buy bonds on the local school district, even with relatively low marginal tax rates. The importance of this local market is discussed in Chapter 4.

One unhappy possibility must be mentioned. It is quite well established that federal income tax collections cover only a fraction of the volume of interest payments. The best evidence available suggests that only about 35 to 40 per cent of it is reported by taxpayers.¹² Taxpayers who do not pay taxes on their taxable

¹² Noted by Selma Goldsmith in her "Appraisal of Basic Data for Constructing Income Size Distributions" in Part VI of *Studies in Income and Wealth* 13

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interest income obviously have little use for tax-exempt securities. We know very little about the income levels at which such underreporting takes place, but evidence developed by Holland and Kahn from Audit Control Program records suggests the frequency of underreporting is greater at low income levels. But an appreciable portion of the dollar volume of underreporting is at higher income levels.

THE MARKET FOR STATE AND LOCAL GOVERNMENT OBLIGATIONS AMONG COMMERCIAL BANKS

Commercial banks follow close on the heels of individuals as the second most important group of investors in tax-exempt securities. Among institutional investors they are the most important by a wide margin. Commercial bank holdings hit their high-water mark at the end of 1951 or in early 1952, when they accounted for just over 35 per cent of all private holdings. This mark was reached after seven years of strong buying. Since that time, commercial banks have added to their holdings, but as total offerings have grown even more, the commercial bank share has declined. The first absolute decline in bank holdings of tax-exempt securities during the postwar decade came in the second half of 1955.

Commercial banks, like individuals, have been irregular buyers, dominating the market mainly in periods of easy money and withdrawing from it in tight money periods. Since commercial banks and individuals are the two most important buying groups, the timing of their participation seems to alternate. The principal features of bank ownership and participation are shown in Table 11.

The relationship of bank buying to money market conditions and the state of bank reserves is fully appreciated by the market itself. Indeed, the response of yields on state and local government obligations to Federal Reserve credit actions is sometimes more violent than that of federal government obligations. Even before 1951, which marks the postwar revival of a free and flexible Federal Reserve credit policy, the market for state and local gov-

(National Bureau, 1951). Expanded more recently by D. M. Holland and C. Harry Kahn in a paper, "Comparison of Personal and Taxable Income," which appears in the Joint Committee Print of papers submitted by panelists appearing before the Joint Committee of the Economic Report on the subject *Federal Tax Policy for Economic Growth and Stability*, 84th Congress, 1st Session, pp. 313-38.

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TABLE 11

Commercial Banks' Holdings of State and Local Government Securities, 1945-1956

(dollar amounts in millions)

Year-End	Amount Held (1)	Per Cent of Total Privately Held (2)	Change in Amount Held (3)	Acquisitions as a Ratio of Change in Total Private Holdings (per cent) (4)	Holdings as a Ratio of Earning Assets (per cent) (5)	Change in Amounts Held as a Ratio of Earning Asset Changes (per cent) (6)
1945	8,970	25.4			3.2	
1946	4,395	28.0	425	634.3 ^a	3.9	^b
1947	5,276	30.9	881	62.8	4.5	39.3
1948	5,661	29.5	385	18.5	5.0	^b
1949	6,548	30.9	887	43.3	5.4	15.0
1950	8,118	33.9	1,570	57.8	6.4	24.2
1951	9,198	35.5	1,080	54.3	6.9	18.2
1952	10,189	35.7	991	37.7	7.2	11.0
1953	10,821	33.5	632	16.9	7.4	15.6
1954	12,586	34.3	1,765	40.0	8.1	17.3
1955	12,698	31.7	112	3.4	7.9	2.3
1956	12,901	30.0	203	6.8	7.8	4.8

^a Increase in total was negligible.

^b Earning assets declined.

Source: Col. 1: Table A-3, col. 1; Col. 2: Table A-4, col. 1; Cols. 3 and 4 computed from Table A-3; Cols. 5 and 6 computed from earning assets of Commercial Banks from *Annual Report*, Federal Deposit Insurance Corporation.

ernment obligations responded with alacrity to the shape of credit policy. For example, in 1948 member bank reserve requirements were increased three different times. This action appears to have had more effect on bank purchases of tax-exempt securities than it did on their loans. Since the Federal Reserve System was still supporting the prices of Treasury securities, it could offset the reserves created by such action only by selling short-term obligations or raising reserve requirements. The third increase during that year was under temporary authority given at that time under compromise anti-inflation legislation. Bank reserves could hardly

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have been called tight; still, there was a halt in the expansion of deposits and currency. Under these circumstances, banks continued to increase their loans, though less rapidly than in 1947, and to sell Treasury obligations. Investment in tax exempts slowed down. This seems to characterize tax-exempt investment fairly well in general commercial bank policy during the postwar period: loans have top priority, but tax exempts come next and seem to lead all other forms of security investment in general favor. All during the decade, relative holdings of Treasury securities have been slowly dwindling. The only type of security acquired in appreciable volume, other than tax exempts, has been railroad equipment obligations. Though short maturities are available, these sometimes seem to have been bought more for reasons of customer relations than for reason of investment preference.

Commercial bank acquisition of tax exempts slackened in mid-1952, when monetary policy became a bit sterner; and continued to be slow through 1953. Again in 1955, tight money took the banks out of this market almost completely. Easy money also seems to stimulate purchases: banks were heavy buyers (relative to offerings) in early 1947, and in the second half of 1949 and all of 1950. From mid-1949 to mid-1950 these purchases could be attributed largely to easy money conditions, but in the second half of 1950 the Korean war episode sparked the conviction (wholly false, as events turned out) that there might be a shortage of tax-exempt obligations. Easy money clearly seems to have been the major stimulant of heavy bank purchases in 1954.

This concentration of bank purchases in periods of easy money would be expected to have an adverse effect on their earnings from these obligations; they buy when yields are low and prices are high. The very fact of their withdrawal from the market increases yields. Banks bid securities away from other holders in 1946 when total state and local government debt was still declining. And they paid very high prices. Their concentrated purchases in 1949-1950 coincided with declining yields; this also happened in 1954. On the other hand, banks were not in a position to take full advantage of the higher yields prevailing in 1948, 1953, and 1955. In fact, commercial banks secured higher yields in spite of what appears to have been disadvantageous timing for their principal purchases.

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Such crude estimates as can be made of the rate of earnings realized by commercial banks from their holdings of state and local government securities suggest that these holdings have produced a materially better after-tax income than was received from other securities. This judgment is necessarily crude; the earnings reports of insured commercial banks on which our estimates are based do not distinguish between state and local government, and corporate securities in the "other" security category. By use of the ratio between fully taxable and tax-exempt yields in the market such a division has been estimated, as shown in Table 12. This estimate is probably a reasonable approximation of the rate of earnings from the state and local government securities held by commercial banks. The estimate cannot be far wide of the truth because these securities constitute such a large fraction of the "other" securities group in the earnings reports. Conversely, the implied yields for corporate obligations secured by this method of estimation probably should not be made to bear the weight of much interpretative analysis.

The privilege of tax exemption and availability of short maturities doubtless accounts for a large part of the interest of banks in the purchase of state and local government securities. Commercial banks are in a relatively exposed investment position; very few other financial corporations, or at least those with sizable amounts of funds to invest, are as fully exposed to tax pressures. When the income on an appreciable volume of federal securities was tax exempt, commercial banks were important buyers of them; indeed, until World War II, commercial banks paid relatively small amounts of federal income taxes. But when the federal government ceased to allow exemption from taxation for its own obligations in 1941, the only source of new issues so exempt was from state and local governments. During World War II, the volume of such new issues was negligible, but commercial banks bought state and local government securities aggressively in the secondary market. During that period, and particularly near the end of the war, life insurance companies and individuals were net sellers and commercial banks net buyers of state and local government obligations.

Commercial banks are denied by law or tradition the other investment outlets that are used by some investors to reduce the load of taxation. They cannot buy oil royalties. They cannot invest in

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TABLE 12

Estimated Yield Earned on State and Local Securities
by Insured Commercial Banks, 1946-1955

	State & Local (1)	"Other" Securities (2)	Interest on Securities (3)	Aa Corp. Yield to Aa S & L Yield (4)	Estimated Yield Earned on S & L Securities (5)
	(millions of dollars)			(ratio)	(per cent)
1946	\$ 4,301	\$3,593	\$176.6	2.06	1.51
1947	5,131	3,622	179.4	1.70	1.59
1948	5,511	3,421	189.6	1.44	1.82
1949	6,403	3,574	201.7	1.44	1.75
1950	7,959	4,192	225.4	1.53	1.57
1951	9,016	4,058	249.5	1.63	1.60
1952	10,006	3,867	277.0	1.52	1.74
1953	10,620	3,758	297.7	1.30	1.92
1954	12,387	3,634	324.8	1.42	1.85
1955	12,501	3,442	351.0	1.36	2.04
1956	12,717	2,829	370.0	1.34	2.24

Source: *Annual Report of the Federal Deposit Insurance Corporations*: Cols. 1 and 2, assets and liabilities of operating banks in the U.S. "obligations of states, etc." and "other bonds, etc." plus "corporate stock" respectively; Col. 3, earnings, expenses, and dividends of insured commercial banks "interest and dividends on other securities"; Col. 4, ratio of Moody's Aa corporate bond yields to Aa municipal bond yields (yearly averages); Col. 5 = Col. 3 ÷ Col. 1 + Col. 2 × Col. 4.

Stated in symbolic terms:

If S = amount of state and local government securities

r_s = rate of return from state and local government securities

O = amount of "other" securities

r_o = rate of return from "other" securities

and I = total interest income from state and local government,
and "other" securities

then $r_s S + r_o O = I$

which may be transformed into $r_s = \frac{I}{S + \frac{r_o}{r_s} O}$ which is formula for
computation of Col. 5.

In Table 14, col. 1 is S ; col. 2 is O ; col. 3 is I ;

col. 4 is $\frac{r_o}{r_s}$; and col. 5 is r_s .

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dividend paying equities that promise capital appreciation taxed at the capital gains rate. They cannot invest in rental real estate properties on which depreciation may be charged. Thus the alternatives open to commercial banks are limited and most of these alternatives involve a tax liability.

Banks are also doubtless moved to invest in state and local government securities by virtue of the fact that they can underwrite and deal in them. The Banking Act of 1933 denied commercial banks that are members of the Federal Reserve System the right to underwrite and deal in corporate securities or to operate subsidiaries which engaged in this business. But state and local government obligations based on full faith and general credit were exempt from this prohibition. The great money market banks combine the operation of large investment portfolios of such securities with underwriting and dealing of the broadest sort. The two complement one another: the strategic position of an underwriter gives such banks the chance of acquiring new offerings on a most advantageous basis. And the dealer role increases the liquidity of such a bank portfolio considerably. The dealer department can work off holdings with less loss and more dispatch than is true of investors who must use the facilities of outside dealers.

Smaller banks also have an added interest in state and local government securities by virtue of the fact they can originate and deal in them. Banks, except in the great money markets, are basically local enterprises. They are tied by sentiment and by the pressure of customers to the welfare of their neighborhoods. Banks are always under pressure to support local finance, including the finance of local governmental units. A great many banks which do not consider themselves formal underwriters or dealers in state and local government obligations nevertheless do bid on and deal in the securities of nearby governmental units, albeit rather casually. In fact, the securing of the deposit balances of nearby local governmental units is not unrelated to the willingness of a bank to bid on and hold the securities of such a governmental unit. In this sense something approaching the customer relationship prevails. Even though the formalities of the open market—the public auction and bidding and the public announcement of depositary relationships—may prevail, the realities are more nearly those of negotiated arrangements. This is not to imply that such relationships

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are improper. Quite the contrary, they only illustrate the strong tendency in the economic history of the United States for impersonal open-market relationships to be superseded by customer relationships which are responsive to considerations other than price.

This negotiated relationship, however, clearly tends to limit the marketability of state and local government securities acquired in this way. Technically these securities are negotiable and the right of the owner to sell is unquestioned. But a banker who sold his holdings of the securities of local governmental units would be exposing himself to two kinds of criticism. In the first place, the issuing governmental unit might be offended; the sale would limit their power to sell further obligations. But beyond that, buyers would fear that a local banker had inside knowledge of local financial affairs, that he was selling to avoid expected unpleasantness. As a matter of practice, therefore, many small banks treat their holdings of nearby local state and government securities as having no greater degree of liquidity than that possessed by local loans. Not only that but in some circumstances of distress, local governmental authorities expect the local banker to furnish a market for such previously issued obligations as may turn up in the secondary market.

The great money market banks are not exempt from such influences. The fiscal authorities even of large cities and states are quite conscious of the identity of buyers for their securities. They think of buying banks as "friendly" and while they might not call those which sell their securities or fail to bid on them as "hostile" they certainly take a cool view of them. The fiscal authorities follow closely which banks organize or participate in buying groups that bid on their securities; they distinguish between those which "give them a good price" as over against bids which they interpret as ducking the market. During periods of adversity in the market, the banking underwriters very likely may feel a little more compelled to maintain a continuity of functioning than nonbanking dealers simply for this reason.

Banks, particularly those acting as underwriters and dealers in the securities of neighboring governmental units, doubtless play an important role in influencing the general financial policies of such bodies, as is generally true of customer relationships.

Since state and local government obligations are issued in serial

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form, the new issues market supplies some quantity of short-term obligations of the type traditionally preferred by commercial banks. This is also true of equipment trust obligations, but not of most other corporate obligations. Commercial banks, when their demand has been strong, have sometimes pushed beyond the range of maturities ordinarily acceptable to banks. The maturity distribution of bank holdings in June 1947 and in June 1956 is shown in Table 13.

TABLE 13

Maturity of State and Local Government Obligations Owned
by Insured Commercial Banks, June 30, 1947 and June 30, 1956

	<i>Amount in Millions</i>		<i>Per Cent</i>	
	1947	1956	1947	1956
Maturing in one year or less	813	1,931	16.9	15.2
Maturing in 1 to 5 years	1,420	4,437	29.5	34.9
Maturing in 5 to 10 years	1,269	3,825	26.3	30.0
Maturing in 10 to 20 years	945	2,539	19.6	19.9
Maturing after 20 years	381		7.9	
Total	4,828	12,731	100.0	100.0

For reasons mentioned in Chapter 4 and explained more fully in Appendix B, banks and dealers are presumably the principal buyers of the high-coupon short-term maturities of state and local government securities. If a bank has dealer status, these securities have tax advantages since a dealer bank is not required to amortize the premium for a security held less than 30 days or having a maturity more than five years. In such a case the loss of premium may be treated as a capital loss while the coupon income is fully tax exempt. But even those banks which must amortize the premiums may still be able to improve their yield by virtue of their willingness to fuss with the mechanics of accrual accounting for income from securities. They can profit from the prejudice other investors seem to have against high coupon obligations.¹³

Direct evidence on the quality of state and local government securities purchased by banks is thin. Unquestionably the super-

¹³ David Durand and Willis J. Winn, *Basic Yield of Bonds, 1926-1947: Their Measurement and Pattern*, Technical Paper 6 (National Bureau, 1947), Addendum, pp. 31-40.

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visory authorities have urged high standards on banks. Probably the most comprehensive supervisory attention to this has been given by the Federal Deposit Insurance Corporation. That agency has regularly had at least one specialist in this field spending full time on the subject. The influence of this supervisory agency has been felt in the private and undocumented form of examiners' comments and in the more public form of statements and speeches.¹⁴

Even though official pressure for adherence to high qualitative standards is put on banks, they cannot acquire securities that are better than those being issued. Banks often have been the leading factor in the new issues market. Furthermore, they usually concentrate their purchases in the shorter maturities of the new offerings. Thus to find the volume of securities they have frequently bought, banks had to accept the general average of market quality.

THE MARKET FOR STATE AND LOCAL GOVERNMENT OBLIGATIONS AMONG FIRE AND CASUALTY INSURANCE COMPANIES

While fire and casualty insurance companies have always held a few state and local government obligations, the expansion of these holdings to major proportions and the emergence of these institutions as leading factors in the tax-exempt market did not come until near the end of the postwar decade. This development may be seen in Table 14, which shows these holdings both as a fraction of total private holdings and also as a fraction of fire and casualty company assets. Since 1948 these companies have devoted a very large fraction of their new funds to the purchase of state and local government securities.

The importance of fire and casualty insurance companies as buyers of state and local government securities is due, as might be

¹⁴ As, for example, the following addresses by Raymond E. Hengren, Assistant Chief, Division of Research and Statistics, Federal Deposit Insurance Corporation. "Factors in Evaluation of Municipal Bonds," *Commercial and Financial Chronicle*, June 21, 1951, pp. 2-8 (an address before the Florida Bankers' Association). "Municipal Bonds as Bank Investments," mimeographed, pp. 21-28 (an address before the Ninth Tennessee Bankers Conference, September 7-11, 1952). "Municipal Bonds in Bank Portfolios," *Commercial and Financial Chronicle*, September 13, 1951, pp. 6-8 (an address before the School of Banking of the South Louisiana State University). *Municipal Security Analysis and Bank Investment Problems*, Municipal Finance Officers Association of the United States and Canada, August 1953 (from a paper given during the 47th Annual Conference of the Association).

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TABLE 14

Fire and Casualty Insurance Company Holdings of State and Local Government Securities, Annually, 1945-1956
(dollar amounts in millions)

Year End	Amount Held (1)	Per Cent of Total Privately Held (2)	Increase in Amount Held (3)	Acquisition as a Ratio of Change in Total Privately Held (per cent) (4)	Holdings as a Ratio of Total Assets (per cent) (5)	Proportion of Available Funds Invested in State & Local Obligations (6)
1945	\$ 249	1.6			3.2	
1946	237	1.5	-12	-17.9	2.8	
1947	315	1.8	78	5.6	3.3	
1948	544	2.8	229	11.0	5.2	
1949	828	3.9	284	13.9	6.8	
1950	1,144	4.8	316	11.6	8.5	$\frac{3}{8}$
1951	1,448	5.6	304	15.3	9.8	$\frac{2}{8}$
1952	1,871	6.6	423	16.1	11.4	$\frac{1}{2}$
1953	2,619	8.1	748	20.0	14.7	$\frac{7}{11}$
1954	3,402	9.3	783	17.8	16.7	$\frac{8}{11}$
1955	4,195	10.5	793	23.8	18.8	all
1956	4,916	11.4	721	24.3	21.5	all

Source: Col. 1: Table A-3, col. 4; Col. 2: Table A-4, col. 4; Cols. 3 and 4 computed from Table A-3; Col. 5: computed from total assets of fire and casualty insurance companies in Best's *Fire and Casualty Aggregates and Averages*. Column 6: Roy Reierson and Sally Ronk, *The Investment Outlook for 1956* (Bankers Trust Company, February 1956), Table 11, page 48.

The asset figures on which Col. 5 is based are at market value. In order to estimate the proportion of new funds available for investment which was applied to the purchase of tax-exempt securities it would have been necessary to adjust for changes in market value of securities held at the beginning of the period as well as purchased during the period covered. Since we were not in a position to make such an adjustment, we used an approximation worked out by the Bankers Trust Company in its estimates of sources and uses of funds in the capital markets.

guessed, largely to their exposure to tax liabilities. To a lesser extent these holdings also represent liquidity reserves; they are combined with the holdings of other high-grade fixed dollar value obligations as general reserves against underwriting risks.

The basic investment rule prevailing among fire and casualty companies is that business liabilities should be covered by cash,

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receivables, and "money" bonds. "Money" bonds can be long-term as well as short-term, but they must be high grade. Business liabilities include unearned premium reserves and reserves for unsettled and unreported losses, as well as the normal liabilities. In addition, the laws of a number of states put rules on the form of investment of the capital of these insurance companies. In practice, the companies seem to fulfill their liquidity requirements in a number of ways. Some take them quite literally and hold rather short-term obligations, but others invest in relatively long-term obligations as liquidity reserves.

Fire and casualty insurance companies seem to be bound by the rule that dividends on their own stock shall be paid only out of investment income, while underwriting profits, if any, are plowed back into the business. This practice has the effect of putting rather severe income pressure on the investment managers of stock companies, which in turn produces a conflict of business interests. To raise capital, fire and casualty companies need be able to attract equity investors. The attraction of such investors depends on the ability of stock companies to produce investment income (since underwriting income, in effect, is not available for distribution to stockholders). But the production of maximum investment income may impair liquidity and therefore the ability to undertake the primary business of these concerns: the writing of insurance.

Capital gains on equities also play a role. If a company with relatively low capital funds has the skill or good fortune to achieve substantial capital gains (whether realized or not), then its basic capital position is strengthened. And to the extent the equities that produced these capital gains pay dividends at a rate above interest yield on bonds, so much the better. Under such circumstances, unrealized capital gains may be better than realized gains. In other words, fire and casualty insurance companies may become reluctant sellers of equities. But when they consider the level of equity prices high, they may overcome their reluctance, sell and reinvest in tax-exempt securities. The yields on state and local government obligations during the first half of the postwar decade discounted most of the advantage of such investment; fire and casualty insurance companies bought Treasury securities and railroad equipment obligations for liquidity protection. But in the later years of the decade, state and local government yields became relatively more fa-

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avorable. At the same time equity prices rose and the capital gain potential in them became less certain.

Such a general account of why fire and casualty insurance companies might be interested in state and local government securities conceals great differences among companies. Individual companies sometimes suffer underwriting losses so severe that for several years they do not have to worry about taxes. During 1955 almost all of the net funds of fire and casualty insurance companies went into tax-exempt securities. But even in that year a significant number of individual exceptions emerged. An analysis of the investment policies of 73 of the leading companies showed the following variations:¹⁵

<i>Fraction of Net Funds available for Investment Going into State and Local Government Securities during 1955</i>	<i>Number of Companies</i>
"All" (and sometimes more due to sale of other securities)	17
"Most" (interpreted as over one-half)	25
"Some" (less than half)	14
"No transactions"	10
"Net sellers"	7
	73

Fire and casualty insurance companies buy mainly high quality state and local government securities. Indeed, some companies are reported to have the rule of buying nothing less than Aa bonds. It seems to be agreed that most of these companies have been important buyers of the PHA bonds. Reports of toll road bond ownership can be found, but it appears that such holdings are limited to bonds of toll roads already in proved and successful operation.

The maturity policies followed are nowhere near as uniform. It appears that some companies limit purchases to the early maturities—sometimes to as short a limit as the first five years—but in other cases purchases are made of relatively long-term bonds. Since fire and casualty companies are reputed to prefer state bonds over the bonds of local governmental subdivisions, this fact alone tends to put some limit on maturities since state bonds average to be

¹⁵ Privately circulated memorandum by Shelby Cullom Davis, "Insurance and Investment Exposure during 1955 for Fire and Casualty Companies," March 9, 1956.

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shorter in maturity than the others.¹⁶ In general these companies are buyers of "intermediate" maturities mainly.

THE MARKET FOR STATE AND LOCAL GOVERNMENT SECURITIES AMONG LIFE INSURANCE COMPANIES AND MUTUAL SAVINGS BANKS

During most of the postwar decade neither life insurance companies nor mutual savings banks were material factors in the market for state and local government securities. This was a change from past policies: once upon a time these institutions were important buyers of state and local government obligations. Prior to World War I, when tax exemption was of no market value, mutual savings banks were the leading institutional investor in such obligations.¹⁷ They held from one-fourth to one-fifth of the amount in private hands. Indeed, mutual savings banks holdings remained fairly large until the opening of World War II, when other investors who valued tax exemption more highly bid away these holdings. Life insurance companies became significant investors in state and local government obligations mainly after the 1920's, when demand for funds from other sources dried up. Between 1929 and 1935 life insurance companies doubled their holdings even though the gross privately held debt of state and local governments was growing only slightly. During this period other investors, principally individuals, were net sellers, apparently because of uncertainty with respect to the future of these obligations. By this action, life insurance companies showed themselves courageous as well as shrewd investors. Their reward was rather handsome profits. These holdings were increased still further until they hit a peak level in 1941.

Life insurance companies themselves were never in a position to take full advantage of income tax exemption. The exemption had some value to them but far less than to many others. In any event, life insurance companies, like mutual savings banks, began a large-scale liquidation of their portfolios during World War II. The cycle of acquisition and then liquidation ran a bit later for

¹⁶ *Investment Policies of Fire and Casualty Insurance Companies*, by J. W. Middendorf II, privately published by Wood, Struthers & Co., cites a great many individual cases reflective of these variations in maturity policy. See pp. 23, 33, 43, 47-48, 53, 63, 72-73, and 78.

¹⁷ Lent, *The Ownership of Tax-Exempt Securities, 1913-1953*, Appendix B, Table B-1, p. 128.

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life insurance than for the mutual savings banks, but the circumstances and relative amounts were much like one another. Both of them had disposed of major fractions of these portfolios by the time the postwar period was reached.

Rebuilding did not start until several years after the postwar decade started, roughly in 1948, as shown in Table 15 for life

TABLE 15
Life Insurance Company Holdings of State and Local Government Securities, Annually, 1945-1956
(*dollar amounts in millions*)

<i>Year End</i>	<i>Amount Held (1)</i>	<i>Per Cent of Total Privately Held (2)</i>	<i>Change in Amount Held (3)</i>	<i>Acqui- sition as a Ratio of Change in Total Privately Held (per cent) (4)</i>	<i>Holdings as a Ratio of Assets (per cent) (5)</i>	<i>Change in Amount Held as a Ratio of Increase in Assets (6)</i>
1945	722	4.6			1.6	
1946	614	3.9	-108	-161.2	1.3	-3.2
1947	609	3.6	-5	-0.4	1.2	-0.1
1948	872	4.6	263	12.6	1.6	7.0
1949	1,052	5.0	180	8.8	1.8	4.4
1950	1,152	4.8	100	3.7	1.8	2.3
1951	1,170	4.5	18	0.9	1.7	0.4
1952	1,153	4.0	-17	-0.6	1.6	-0.3
1953	1,298	4.0	145	3.9	1.6	2.8
1954	1,846	5.0	548	12.4	2.2	9.2
1955	2,038	5.1	192	5.8	2.2	3.2
1956	2,273	5.3	235	7.9	2.4	4.2

Source: Col. 1: Table A-3, col. 3; Col. 2: Table A-4, col. 3; Cols. 3 and 4 computed from Table A-3; Cols. 5 and 6 computed from total assets of life insurance companies in the *Life Insurance Fact Book*.

insurance companies. Both life insurance companies and mutual savings banks revived their interest in state and local government obligations because of the favorable yields which were available on some of the new revenue obligations. As described in Chapter 7, this type of financing parallels that prevailing in corporate en-

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terprises. The credit problems, the standards of security analysis, the general economic background that dominates the choices are quite similar. The investment departments of life insurance companies and mutual savings banks which dealt with corporate financing were able to turn to these obligations without having to learn new routines and procedures.

Tax exemption is not without some appeal to both of these types of institutions. Life insurance companies have never been tax exempt *per se*, though the formulae under which they have been taxed have sometimes had that effect. But the issue of life insurance company taxation never seems to be finally settled. At present life insurance companies are subject to an investment income tax of 6½ per cent.¹⁸ A 3½ per cent yield on a tax-exempt security provides a price advantage of about 23 basis points or ¼ of one per cent, usually enough to make toll road bonds fully competitive with corporate obligations.

Mutual savings banks, or at least some of them, have recently been given an even more compelling reason for being interested in tax exemption. In 1951 these institutions were subjected to federal income taxation at the corporate rates—with an exception. Those institutions which have capital funds equal to less than 12 per cent of deposit liabilities are, in effect, exempt from the imposition of income taxes. Only a few mutual savings banks have capital funds of 12 per cent or more, but these few included some very large mutual savings banks. The value of tax exemption became material to those banks. Others, cognizant of the fact that laws can be changed, found it prudent to acquire a few tax exempts when the opportunity to do so without material yield concession presented itself. Toll road financing during these years offered frequent opportunities of exactly this sort.

These two classes of institutions may have accounted for as much as one-quarter of the toll road bonds sold during the second half of the postwar decade.

STATE AND LOCAL GOVERNMENTS, AND THE FUNDS THEY CONTROL AS INVESTORS IN THEIR OWN SECURITIES

State and local governments, or the special funds they control, invest in their own securities. Since these governments or their

¹⁸ Small life insurance companies are taxed half this rate.

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creatures are exempt from tax as such, it seems a violation of investment logic for them to own their own securities. Several reasons account for the practice. In the first place, the general conviction prevails that a governmental unit will fare better in new financing if its outstanding securities are strong on the secondary market. Buying by the issuer obviously helps.¹⁹ Some local administrators of funds doubtless have had limited investment experience; they feel more confident in their judgments of the securities issued by their own government or nearby or well-known governmental units; they hesitate to embark on dealing in the national market for a wider range of securities. "Deep-discount" low-coupon bonds sometimes turn up on the secondary market at yields which are competitive with fully taxable issues; in such cases buying them serves the purposes of supporting local government finance without any concession in return.

Of all the factors, the overwhelming reason for this practice is probably provincialism or parochialism: good old-fashioned "keep-your-money-at-home" spirit. The laws governing investment of state and local governmental pension and retirement funds usually permit and sometimes specify investment in their own securities. These funds, incidentally, are a growing portion of all state and local government holdings, from about two-fifths of them in 1945 to over half at present. Table 16 shows the details.

OTHER INVESTORS IN STATE AND LOCAL GOVERNMENT OBLIGATIONS

The estimates of ownership of state and local government obligations shown in Table 8 above (presented fully in Appendix A) list only three categories of investors not already discussed: non-bank dealers, taxable corporations, and fraternal societies. These three groups account for less than 3 per cent of private holdings. Since fraternal society holdings appear to be dwindling at about the rate at which such securities might be expected to mature, it is evident that they are not a market factor of much significance. But the other two have rather more importance.

Nonfinancial corporations buy some state and local government securities. It is believed that their purchases are mainly of short-

¹⁹ The point is developed at somewhat great length in Chapter 5.

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TABLE 16

State and Local Government Securities Owned by the State and
Local Governments Themselves, Annually, 1945-1956

(dollar amounts in millions)

Year End	Amount Held (1)	Per Cent of Total Interest Bearing Debt (2)	Change in Amount Held (3)	Acquisi- tions as a Ratio of Change in Interest Bearing Debt (%) (4)	PENSION OR RETIREMENT FUNDS	
					Amount (year end) (5)	Acquisi- tions as a Ratio of Change in Interest Bearing Debt (%) (6)
1945	2832	14.9			1086	
1946	2363	12.8	-469	neg. total	993	neg. total
1947	2451	12.2	88	5.8	1084	6.0
1948	2593	11.6	142	6.2	1217	5.8
1949	3104	12.5	511	20.7	1407	7.7
1950	3587	12.8	483	14.8	1578	5.2
1951	3785	12.4	198	8.1	1659	3.3
1952	4025	11.9	240	7.5	1799	4.4
1953	4354	11.6	329	8.8	2073	7.3
1954	4690	11.2	336	7.6	2385	7.1
1955	5078	11.1	388	10.4	2728	9.2
1956	5499	11.2	421	12.2		

Source: Col. 1: Table A-2, col. 2; Col. 2: Table A-2, col. 2 divided by col. 1; Col. 3: Table A-2, change in col. 2; Col. 4: Table A-2, change in col. 2 divided by change in col. 1; Col. 5: interpolation of Bureau of the Census June data supplemented by unpublished estimates by Duane Saunders; Col. 6: Table A-2, change in col. 5 divided by change in col. 1.

term ones such as PHA temporary notes. Since corporate treasurers have learned about money market investment of temporarily idle funds, both the Treasury bill market and the market for high-grade short-term tax exempts have furnished such an outlet. Most of our formal knowledge of such holdings, however, comes from the reports of fully tax-exempt interest received shown in the Part 2 (Corporate) section of the *Statistics of Income*. Publication of these data is greatly delayed; at the moment 1954 is the latest year available. The capitalizing of such interest returns requires selection of an appropriate rate. If a high-grade short-term rate is used,

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the results show quite a lot of random variability. This evidence is of dubious reliability, however, because a similar estimate of bank holdings by capitalizing the fully tax-exempt interest they report varies considerably from the known facts. Nonfinancial corporations unquestionably buy short-term high grade obligations, but our knowledge of how much is slight; the series shown in Table 8 is presented rather tentatively. In early 1956 *Fortune Magazine* conducted a survey of the short-term investment portfolios of 276 large corporations.²⁰ This survey showed holdings of \$240 million near the end of 1955. This would project to a total of about \$1 billion if current assets were used for the blow-up ratio. The estimates shown in Appendix A have been adjusted to take account of this evidence, but they remain rather rough at best.

Nonbank dealers also present a problem. As our comments in Chapter 5 on the secondary market will indicate, dealers' inventories of securities are a factor of dominant market importance. But a large fraction of dealers inventories, such as shown in the *Blue List*, are on a "when issued" (WI) basis. Such securities are not yet issued and so not a part of the ownership record. On the other hand, it seems equally evident that dealers carry considerably larger inventories than are shown in the *Blue List*. Our evidence is as follows:

The Wharton study of over-the-counter markets developed an estimate of dealer holdings of state and municipal holdings that was more than four times the figures of shown inventory according to the *Blue List* for the same date.²¹ Second, a few brokers and dealers publish financial statements. The total state and local government holdings shown by several of these were compared with *Blue List* offerings for the same dates. The balance sheet totals were almost invariably considerably more than were shown in the *Blue List*. Some brokers and dealers own tax-exempt securities even though they are relatively inactive in underwriting or dealing in them.

It appears that such holdings perform a very real investment function; firms use them as a means of employing their capital. When firms can qualify as dealers and so do not have to amortize

²⁰ Reported in the August 1956 issue, "Short-Term Investment Portfolios of 276 Large Corporations."

²¹ Irwin Friend et al., *The Over-the-Counter Securities Markets*, Table 5-1, p. 263.

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such high coupon issues as are turned over in less than 30 days, the tax advantage of such an investment is quite attractive.

The figure shown by the Wharton study cited above for nonbank dealers was used as the base figure in our ownership estimates. Changes were made by capitalizing tax-exempt interest income reported in Part 2 of the Statistics of Income blown up to cover non-incorporated brokers and dealers.

SOME CONCLUSIONS WITH RESPECT TO THE SIZE OF MARKET FOR STATE AND LOCAL GOVERNMENT OBLIGATIONS

State governments and governmental units at lower levels have unquestionably benefited in some measure from the privilege of selling securities that offer the investor exemption from federal income taxes. But this advantage has also had a clear counterpart: the market for state and local government obligations has had to be found among investors exposed to income taxation. Investors who are tax exempt *per se*—pension funds, most savings and loan associations²² and mutual savings banks, and nonprofit foundations, for example—are not interested in such a market. Those who have limited tax liabilities—life insurance companies and lower income individuals, for example—have only a mild interest in this market. If, as some feel, the future direction of institutional investment is toward those institutions with limited tax liabilities or none at all, this forecasts a further discounting of the value of the privilege of borrowing on a tax-exempt basis.

Furthermore, state and local government securities are not the first preference of any important group of investors. Commercial banks prefer loans. Individuals, and fire and casualty companies, prefer equities—most of the time. Savings and loan associations, mutual savings banks, and life insurance companies all prefer mortgages. State and local government obligations are the second choice of many investors, the first choice of very few.

This must account for some of the jerky quality to the market for state and local government obligations and to their price instability. When banks can find all the loans they want, they do not buy tax exempts; when fire and casualty companies think equity prices are reasonable, they do not buy tax exempts. And, as a class,

²² Most savings and loan associations do not have authority to invest in these obligations so the issue is largely academic.

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individuals do not seem to have a true preference for tax-exempt obligations. They require a fairly clear price advantage to be enticed into the market. They will not pay out most of the value of tax exemption in buying as the commercial banks seem to do in periods of easy money. It is true that commercial banks and individuals have tended to put funds into this market at somewhat different phases of the yield cycle, a factor that tends to have a steadying influence. But unfortunately it has not been a strong enough influence to offset other unstabilizing influences.

All of this argues that the borrowing advantage of tax exemption becomes seriously depreciated except when the volume of market offerings is small, when all of the new offerings can find a resting place in the portfolios of those who actively resist tax liabilities. This is quite parallel to the point made by Shaw-Gurley: an increase in their "direct finance ratio" (direct investment by individuals to total investment) is generally accompanied by an increase in interest rates. A decrease in the direct finance ratio (an increase in the degree of institutional investment) is accompanied by a decline in interest rates.²³ When the sellers of tax-exempt obligations must find a market for a bigger proportion among investors (the equivalent of an increase in the Shaw-Gurley direct finance ratio), then rates must be pushed up. Most of the benefits of tax exemption then accrue, not to borrowers, but to investors.

²³ John G. Gurley and Edward S. Shaw, "Financial Intermediaries and the Saving-Investment Process," *Journal of Finance*, May 1956, Vol. XI, No. 2, pp. 257-76.