Volume Title: Postwar Market for State and Local Government Securities

Volume Author/Editor: Roland Robinson

Volume Publisher: Princeton University Press

Volume ISBN: 0-870-14103-1

Volume URL: http://www.nber.org/books/robi60-1

Publication Date: 1960

Chapter Title: The Demand for Funds by State and Local Governments

Chapter Author: Roland Robinson

Chapter URL: http://www.nber.org/chapters/c2439

Chapter pages in book: (p. 37 - 66)

CHAPTER 2

The Demand for Funds by State and Local Governments

SUMMARY

The usual reason that state and local governmental units borrow in the capital markets is to finance lumpy capital expenditures. On some occasions since World War II state governments have borrowed to pay soldiers' bonuses. In a very few instances cities and local governmental units have borrowed to meet budgetary deficits. But since the Great Depression such use of their borrowing powers has been rare; the dominant reason sending financial managers of governmental units to the capital markets is to cover a planned capital expenditure.

State and local governments usually feel bound by the strong tradition for an annually balanced current budget and are sometimes so bound by law. On the other hand, borrowing for capital purposes is widely sanctioned. In many states it is easier for a local government to get tax power to cover debt service than to make capital outlays directly.[1] An added reason for borrowing, however, is that many governmental units find it almost impossible to save in advance for capital expenditures; if they try to do so the pressure for tax reductions becomes irresistible. There are exceptions, of course; during World War II many state and local government units accumulated liquid reserves which in effect financed some early postwar capital expenditures. Nevertheless, the financing of capital expenditures out of accumulated funds is otherwise quite rare.

In many ways the circumstances that cause state and local governments to borrow are not unlike those which cause private corporations to borrow. There are, however, great differences in the

[1] The publication *Horizons for Modern Pennsylvania Local Government*, put out by the Associated Institutes of Government of Pennsylvania Universities, November 1957, Vol. IV, No. 10, reports, "In 1957 the General Assembly of the Commonwealth of Pennsylvania passed legislation which permitted certain cities and townships to establish reserves for future capital expenditures. Two years earlier similar power had been given to boroughs. This authority made it possible for a local governmental unit to put itself on a pay-as-you-go basis for capital expenditures."

kind of financing policies and financing limits that control the operations of the state and local governments and those which control corporate operations. Corporate capital expenditures are clearly limited by some sort of earnings or gross profits test. This test is not applied with the same rigor to state and local government expenditures except in the case of revenue financed projects. The limits on state and local government borrowing are more likely to be either constitutional or statutory limits than earnings limits. As a result, the financing policies of the managers of state and local government affairs really do not have any close analogy to those of corporate financial management.

The character of borrowing varies by level of governmental unit. For example, state governments frequently have such large budgets and such detailed financial plans that they can plan and schedule capital expenditures to correspond roughly to the expected stream of tax receipts. This is particularly true for expenditures such as roads which may be tied to receipts from gasoline taxes. At the other extreme, very small governmental units are likely to find capital expenditures much more lumpy and therefore more dependent on financing by borrowing. The proportion of capital expenditures at local levels that is financed by borrowing is considerably larger than the proportion of capital expenditures at state level that is so financed.[2]

Since borrowing tends to be for capital expenditures, the time profile of state and local government borrowing is likely to lead the timing of their capital expenditures. State and local government capital expenditures do not seem to be influenced by minor cyclical fluctuations. Such expenditures, however, were clearly curbed during the Great Depression. While they have not yet achieved a true counter-cyclical character, state and local government capital expenditures do not appear to have been retarded during the three minor postwar recessions, and may have been stimulated in 1954.

Though state and local government capital *expenditures* do not conform except to very broad cyclical influences, the *financing* of them appears to be somewhat more sensitive to short-term cyclical

[2] R. W. Goldsmith, *A Study of Saving in the United States* (Princeton University Press for National Bureau of Economic Research, 1955), Vol. I, Tables G-4-6, and 15.

influences. State and local governments traditionally arrange financing fully before making any capital expenditures; in other words, financing leads outlays. As a result, financing might also be expected to show little cyclical influence. This does not seem to be the case. Among the financing limits that are put on state and local governments, there is frequently a limit on the rate of interest that may be paid. These limits, combined with a natural desire to minimize financing costs, cause state and local governments to be particularly coy in attempting to time their market offerings advantageously. It would be inappropriate to contrast the financing policies of state and local governments with those of private corporations in this regard, but it is possible that state and local governments are more sensitive to interest rate fluctuations than are corporate financial managers. In any event, quite a bit of latitude is used by state and local government managers in timing their offerings to the capital markets. As a result, the pattern of state and local government financing is quite erratic and highly variable over the short-run, even though not conforming to any clearly recognized minor cyclical pattern.

The ultimate limit on the demands for funds by state and local governments is a combination of the demand of their citizens for capital expenditures and the ability of these units to service debt. The first of these factors eludes measurement, but the second is subject to fairly clear and explicit statistical testing. The ability of state and local governments to service debt is basically their ability to collect taxes. This is in turn a limit that is determined not merely by the value of assessed property but also by the tolerated level of tax rates.

The structure of this chapter will follow the sequence of topics introduced in this summary in analyzing the demand for funds. It will consider first the relationship of capital expenditures to financing. Then it will examine the financing policies of state and local government financial managers. Following this, differences in financial policies and financial practices by level of government will be analyzed. Next the timing of borrowing, both in terms of its cyclical content and its short-term variability, will be examined. Finally, the ability to service debt and the relationship of this ability to the demand for funds will be reviewed.

CAPITAL EXPENDITURE IS THE PRIME CAUSE OF MOST STATE AND LOCAL GOVERNMENT BORROWING

A modest portion of state and local government capital expenditure is covered out of current receipts—roughly one-third in 1955. The remainder is financed by borrowing. Such borrowing accounted for the major share of state and local government borrowing—in the postwar decade about eight-ninths of it. Evidence on this point is found in the Federal Reserve purpose classification for new long-term issues. This tabulation, summarized in Table 1, shows that

TABLE 1
Long-term State and Local Government Borrowing, by Purpose, 1946-1955

Purpose of Issue	*Millions of Dollars*	*Percentage Distribution*
Schools	7,863	19.9
Highways	6,821	17.3
Sewer and water	4,494	11.4
Residential building	2,868	7.3
Veterans' aid	2,865	7.2
Miscellaneous public service enterprises	2,000	5.1
Bridge and tunnel	1,607	4.1
Hospitals and institutions	700	1.8
Port and airport	680	1.7
Recreation	308	.8
Industrial building	106	.3
Other	2,780	7.0
"Unidentified," i.e., under $500,000	4,998	12.7
Total new capital	38,090	96.6
Total refunding	1,341	3.4
Grand total	39,430	100.0

Source: Summarized from Federal Reserve Board unpublished mimeograph tabulation of state and local government security offerings by purpose.

refunding and veterans, bonus issues accounted for only about one-ninth of the identifiable types of borrowing during the postwar decade; the remainder was to finance capital outlays. As nearly as can be estimated, only a modest fraction of these capital outlays

was for land and existing structure; most was for new construction. Furthermore, it appears that most construction was on a contract basis: force account construction (that which is done by regular government employees) apparently is rather less frequently financed by market borrowing. An exception in some states is highway construction. Other examples are hard to find. Annual figures for purpose of borrowing are shown in Table 2 in dollars; the percentage array of these figures is made in Table 3.

The relationship of state and local government borrowing to the capital expenditures of these governmental units during the postwar decade is tested in Table 4. In this table the borrowing for veterans' aid (bonuses) and for refunding has been omitted; the remainder can be treated as a reasonably close estimate of borrowing for true capital expenditures.

Anticipatory borrowing apparently has been common during the postwar period. The low rates prevailing during much of this decade, particularly on tax-exempt borrowing, had the effect of stimulating borrowing of funds not immediately needed. State and local government units could borrow with tax-exempt obligations and turn about and invest the proceeds in Treasury securities which were taxable obligations to many other holders. Since state and local governments are tax-exempt institutions *per se*, they used the privilege of tax exemption on their own issues to help to solve their liquidity problems.

Table 4 shows that the proportion of new construction expenditures to borrowing in the same year declined regularly from 1946 through 1951, the ratio dropping from a level of over 70 per cent to under 50 per cent. This is contrary to what one would expect. Both the amounts of capital expenditure and of borrowing were increasing rapidly; if the timing of their increases were not parallel, then a quite different construction should be put on the figures. This evidence more properly suggests that borrowing is usually undertaken somewhat in advance of the period of construction. The practice of completing financing before starting construction is general in revenue-supported projects. Buyers want to be assured that the project can be finished and prefer advance guarantee of costs to the full extent possible. When short-term interest rates on Treasury obligations are fairly high, the cost of such conservatism is negligible.

TABLE 2

Long-term State and Local Government Borrowing, by Purpose, Annually, 1946-1956

(millions of dollars)

Purpose of Issue	*1946*	*1947*	*1948*	*1949*	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*
New capital–total	1,047	2,311	2,798	2,896	3,579	3,188	4,093	5,473	6,788	5,911	5,383
Schools	194	205	412	524	709	582	967	1,319	1,432	1,516	1,455
Highways	140	128	237	351	451	478	777	1,336	1,680	1,241	650
Residential building	9	70	148	203	123	361	423	506	456	570	258
Hospitals & institutions	8	34	35	47	96	135	38	133	77	98	62
Sewer & water	154	222	314	400	487	464	419	647	674	712	752
Miscellaneous public service	27	253	124	145	131	176	223	156	596	169	646
Recreation	11	22	29	37	34	8	24	44	58	40	41
Bridge & tunnel	27	74	186	169	59	102	161	251	456	121	48
Port & airport	67	47	107	67	68	26	60	48	88	102	137
Veterans' aid	39	672	643	263	635	41	100	140	162	169	110
Industrial building	....	....	....	1	81	5	5	7	1	4	11
Other	89	166	214	240	218	201	283	344	533	490	575
Unidentified	282	418	348	449	487	608	613	542	576	680	638
Refunding total	155	42	192	107	114	90	314	82	180	65	63
Total	1,202	2,354	2,989	3,003	3,694	3,278	4,407	5,555	6,969	5,976	5,446

Source: Same as Table 1.

TABLE 3

Long-term State and Local Government Borrowing, by Purpose, Annually, 1946-1956
(per cent distribution)

Purpose of Issue	*1946*	*1947*	*1948*	*1949*	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*
New capital–total	87.1	98.2	93.6	96.4	96.9	97.2	92.9	98.5	97.4	98.9	98.8
Schools	16.1	8.7	13.8	17.5	19.2	17.8	22.0	23.7	20.5	25.4	26.7
Highways	11.7	5.4	7.9	11.7	12.2	14.6	17.6	24.0	24.1	20.8	11.9
Residential building	0.8	3.0	4.9	6.8	3.3	11.0	9.6	9.1	6.5	9.5	4.7
Hospitals & institutions	0.6	1.4	1.2	1.6	2.6	4.1	0.8	2.4	1.1	1.6	1.1
Sewer & water	12.8	9.4	10.5	13.3	13.2	14.2	9.5	11.6	9.7	11.9	13.8
Miscellaneous public service	2.2	10.7	4.1	4.8	3.6	5.4	5.1	2.8	8.6	2.8	11.9
Recreation	0.9	0.9	1.0	1.2	0.9	0.2	0.5	0.8	0.8	0.7	0.7
Bridge & tunnel	2.3	3.1	6.2	5.6	1.6	3.1	3.7	4.5	6.5	2.0	0.9
Port & airport	5.6	2.0	3.6	2.2	1.8	0.8	1.4	0.9	1.3	1.7	2.5
Veterans' aid	3.2	28.6	21.5	8.8	17.2	1.3	2.3	2.5	2.3	2.8	2.0
Industrial building	....	....	....	0.0	2.2	0.1	0.1	0.1	0.0	0.1	0.2
Other	7.4	7.1	7.1	8.0	5.9	6.1	6.4	6.2	7.6	8.2	10.6
Unidentified	23.4	17.8	11.6	14.8	13.2	18.5	13.9	9.8	8.3	11.4	11.7
Refunding total	12.8	1.8	6.4	3.6	3.1	2.7	7.1	1.5	2.6	1.1	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Calculated from Table 2.

TABLE 4

Borrowing for Capital Expenditure Compared with New Construction Outlays of State and Local Governments, 1946-1956

	Borrowing for Capital Expenditure	*New Construction*[a]	*Total Expenditures*	*Proportion of col. 1 to col. 2*	*Proportion of Previous Year to Current Year*	*New Construction as a Proportion of Total Expenditures*
	Millions of dollars				*Per cent*	
1946	1,010	1,431	11,133	70.6		12.8
1947	1,639	2,482	14,513	66.0	40.6	17.1
1948	2,155	3,638	17,902	59.2	45.0	20.3
1949	2,626	4,917	20,393	53.4	44.0	24.1
1950	2,944	5,375	22,638	54.8	49.0	23.7
1951	3,147	6,436	23,902	48.9	46.0	26.9
1952	3,996	6,715	25,486	59.5	47.0	26.3
1953	5,336	7,243	27,165	73.8	55.2	26.6
1954	6,626	8,477	30,070	78.2	62.9	28.2
1955	5,742	9,161	32,718	62.7	72.3	28.0
1956	5,274	10,044	35,483	52.7	57.0	28.2

[a] Includes purchases from business.

Source: Col. 1: same source as col. 1 of Table 1: "new capital" minus "veterans' aid." Cols. 2 and 3: *National Income Supplement, 1954*, Table 9, pp. 172-73, for 1946-53. Figures for 1954 to 1956 from National Income Division, Department of Commerce; annual estimates in *Survey of Current Business*. Cols. 4, 5, and 6: computed.

If the long-term borrowing of each year is compared with the new construction outlays of the following year, as is done in column 5 of Table 4, the results follow a quite different pattern than that in column 4. They show a fairly steady level from 1947 through 1952 and thereafter increase fairly sharply. The presumption that borrowing anticipates new construction expenditures by about one year is not entirely unreasonable. On some types of projects, such as toll roads and bridges, the period of anticipation is clearly much longer than one year. On other and smaller types of construction projects the degree of anticipation may be less than one year.

The time pattern of the increases in the borrowing ratio shown in column 5 is consistent with other well-known facts of state and local government finance. In the early postwar period the liquid assets accumulated during the war, combined with the high receipts of these governmental units due to excellent business conditions, made it possible to cover the cost of more than a half of new construction out of current revenues. But during the later years of the decade, expenditures for new construction mounted faster than total expenditures.

The proportion of new construction financed by borrowing is not, of course, a converse measure of the degree of state and local government saving. New borrowing is generally in serial form and the repayment of debt by state and local government has usually been in excess of the rate at which state and local government assets should be depreciated.[3] Furthermore, allowances for force account construction are in addition to the contract construction figures in Table 4. Census estimated such force account construction to have been $615 millions in 1954.[4]

Although state and local government capital expenditures seem to have burgeoned in the postwar period, they were about the same proportion of total state and local government expenditures as in the 1920's. Measured as a fraction of national product, however, total state and local government expenditures have tended to become slightly larger.[5] If allowance were made for the expenditures financed by federal grants but for essentially state and local government purposes, the tendency for these expenditures to grow might be more evident.

[3] But not by particularly comfortable margins. Goldsmith's *Study of Saving* shows the depreciation on original cost basis for state and local government depreciable assets combined to have been $1,538 million in 1949. Depreciation on a replacement cost basis was figured to be $2,836 million, or about 85 per cent higher. Table 4 suggests that about one-half of state and local government capital outlay is financed by borrowing. These figures suggest that depreciation on an original cost basis for assets acquired by borrowing was about 0.8 billions of dollars, or 1.4 billions on a replacement cost basis. The probable retirement of long-term debt in 1949 was just about equal to the larger of these two figures. See Tables G1 and 13, pages 1045 and 1063, Vol. 1.

[4] *Summary of Governmental Finances in 1954*, Table 15 (Government Division of the Bureau of the Census).

[5] Some forecast that the proportion may grow further. See "The Expanding Role of State and Local Governments in the National Economy," *Monthly Review*, Federal Reserve Bank of New York, June 1957; also see the Severson estimates in *State and Local Government at the Crossroads*, National Committee for Municipal Bonds, January 1958.

BORROWING POLICIES OF STATE AND LOCAL GOVERNMENTAL UNITS

Law and tradition control much of the borrowing process; the margin left for policy determination by finance officers is modest. But some of these factors are of considerable importance in terms of market strategy.

The timing of offerings is one of the subjects left, in part, to administrative policy. Many full faith and general credit offerings, however, leave the finance officer relatively little latitude. If the public demand for the projects involved is considerable, there is not much public sympathy with waiting because "the market is temporarily weak." Public administrators have some latitude; they can vary the time of announcement and can even reject all bids if they find them unacceptable. But the margin of maneuver is not much more than a few months. The officers in charge of financing public authority projects usually exercise somewhat greater latitude in selecting offering dates.

The maturity of most public offerings is also administratively determined. Observation of new offerings announcements suggests that terminal maturities of 20, 25, and 30 years now dominate the serial offerings. A few run longer; this is sometimes true of PHA contract housing authorities bonds. A few issues, usually state bonds, are limited to maturities of as short as 10 or 15 years. Term bond issues based on the revenue of specific projects are generally issued with initial maturity of 30 or 40 years usually qualified by some kinds of call provisions. Some underwriters report that the maturity of new offerings has been stretched out in recent years somewhat beyond those prevailing in the 1920's or 1930's. They suggest that 15- and 20-year terminal maturities were dominant then. This view, however, is not universally held.

State and local government security maturities are sometimes geared to the life of the asset being financed, as is usually done in business finance, but the practice seems to be less general.[6] It is more common to find that maturity has been tied to some estimate of revenues. For example, most water and sewer issues, whether revenue or based on full faith and credit, appear to be given a

[6] For example, railroad equipment trust obligations are given a modal life of about 15 years because this is a conservative estimate of the economic life of equipment. Right-of-way bonds, on the other hand, have very long maturities.

maturity so that anticipated receipts cover the serial maturities and interest requirements comfortably. As a result such maturities are often put at about 30 years. But water and sewer systems are not fashion-determined projects; no technological obsolescence of them is in prospect; and they seem to remain operative for many decades and even for centuries. The other side is illustrated by school building bonds. Before 1940, issues of such obligations usually had a terminal maturity of 20 years and many issues still observe that limit. But there has been a tendency for school bond maturities to be stretched out to 30 and even 40 years. This appears to be particularly true of the school building issues of authorities or corporations such as are used in Pennsylvania, Indiana, and Kentucky because of restrictive debt limits. Here the relation between the final maturity and length of economic life of the underlying asset may be the opposite of that observed for water and sewer bonds. Public school buildings less than 40 years old and even less than 30 years old are already being called obsolete. Will some of the bonds now being sold outlive the school buildings the construction of which they finance?

The market itself has variable preferences with respect to the length of the terminal maturities. Sophisticated finance officers are reported to adjust their offerings to such changes in market tolerance, but the practice is far from common. One notable exception to this rule is the Public Housing Administration; it has become very sensitive to the state of the market and its tolerance of terminal maturities.[7] Twice it has changed the maturities of its offerings to meet current market conditions.

The apparent elongation of maturities in recent state and local government offerings may be explained by factors parallel to the factors that account for the lengthening of mortgage maturities. Lenders have developed an increased tolerance to them; borrowers have discovered the greater freedom it gives them. As a result, borrowers less often put an equal dollar amount in each maturity than they did formerly; they lighten maturities in the early years and concentrate them in later years. In periods such as 1955 and 1956 when commercial banks are reluctant buyers, underwriters welcome such schedules of maturities.

[7] *8th Annual Report*, Housing and Home Finance Agency (1954); PHA section; p. 365.

During recent years the maturities of many issues seem to have been stretched out a bit from earlier standards on the excuse that the longer issues were callable. The privilege of calling a serial issue usually becomes effective only after about a decade, and customarily in the reverse order of maturity. In many cases where taxes have been pledged for the service of a callable bond issue, it is likely that the securities with the longest maturities will be retired before the intermediate maturities. The practice of calling in reverse order of maturity was adopted initially to permit state and local governments to get fully out of debt in advance of the final maturity. This sometimes leads to what is known in the trade as a "humpbacked" offering scale: yields of the longest bonds may be below those of the intermediate maturities.

A recent buying practice of underwriters has blocked such calls, apparently quite inadvertently. In most sales, buyers are permitted to name the coupon structure. Because of the conventional municipal form of interest cost computation, underwriters sometimes put absurdly low coupons on the final maturity such as 1/10th of one per cent.[8] When this is done, the governmental unit must jump the hurdle of calling (usually at quite a bit above par) a security that, on a market yield basis, is worth much less than par. The advantage of the call privilege to borrowers can be reduced considerably by this practice.[9]

Short-term credit is used in state and local government financial management but in a rather restrained way at present. Excessive use of it appears to have led to difficulties in the past and so it is avoided. Furthermore, if short-term credit exceeds expected tax receipts, refunding of this debt can be embarrassing. Commercial banks often are hesitant to refund short-term credit with more short-term credit. Some investors are reluctant to buy long-term obligations where they fear the management of short-term debt has been unsound. Whether this fear has any substance in fact or not, it appears to be genuinely held. The Public Housing Administration is one of

[8] The reasons for this odd practice are explained in Appendix B.

[9] This was clearly true of two $30 million issues of California school bonds, one in November 1955 and the other in March 1956; also a City of Louisville issue marketed in April 1956. In all three cases, the existence of low terminal coupons (¼ of one per cent on the two California issues and 1/10 of one per cent on the Louisville issue) skimmed off a large part of the potential advantage of call. It is not clear that state and municipal finance officers are as yet fully aware of this result.

the few public bodies to make extensive use of short-term credit. It has guided the local housing authorities into a program of using short-term notes for projects under construction.[10] This agency follows closely the fluctuations in interest rates and often uses short-term credit in an effort to wait for relatively favorable long-term rates. These PHA short-term notes often account for almost half of the total of short-term state and local government credit outstanding. Table 5 tells the story of infrequent resort to short-term financing in the postwar decade.

TABLE 5

Long-term and Short-term State and Local Government Debt (Interest Bearing), Year-ends, 1945-1956

	Total	*Short-term (Maturity of One Year or Less When Issued)*	*Long-term*	*Ratio of Short to Long-term (per cent)*
		(*Millions of dollars*)		
1945	18,946	353	18,593	1.9
1946	18,523	454	18,069	2.5
1947	20,032	551	19,481	2.8
1948	22,328	625	21,703	2.9
1949	24,802	781	24,021	3.3
1950	28,069	932	27,137	3.4
1951	30,518	919	29,599	3.1
1952	33,711	1,194	32,517	3.7
1953	37,456	1,645	35,811	4.6
1954	41,873	1,847	40,026	4.6
1955	45,593	1,579	44,014	3.6
1956	49,041	1,527	47,514	3.2

Source: Table A-1.

LEGAL RESTRAINTS ON STATE AND LOCAL GOVERNMENT BORROWING

State and local governments borrowed heavily during the postwar period primarily because of a mounting demand for public capital improvements. Population growth has increased the demand

[10] *8th Annual Report* cited above, pp. 364-65.

for new housing and public services. But while population, particularly at the lower age levels, has been growing, its location has also been shifting. Rural families have been moving to the city, and city population has been moving from urban to suburban areas. Some cities and one Federal Agency have been attempting to counter the blight of urban centers by improved housing (slum clearance), improved public facilities such as streets and parks, and better sanitary systems. Almost every one of these developments compound the need for public capital expenditures: sewer and water systems, schools, roads, hospitals, public housing authority projects, parks, and the like.

Then, too, the automobile is a great multiplier of public expenditures: drivers want better roads (and will sometimes pay tolls for the use of such roads), they also want better parking facilities whether on-street or off-street. And better roads should not be identified merely with the dramatic through highways; the demand is also for better local roads and side streets. The extension of housing in areas of increasing radii around the hubs of great cities—made possible by the automobile—means the building of entirely new sets of streets and roads. Automobile registration doubled in the postwar period.

This strong and insistent public demand often encounters the obstacle that our forefathers frequently put rigid limits on the power to tax and to borrow in state constitutions or into the statutes creating local governmental units. The demand for public services that require borrowing often comes in conflict with the legal limitations on such borrowing. For reasons that a political scientist but not an economist might try to explain, this conflict has not been met head-on. Much legal ingenuity has been devoted to finding ways, other than by a direct constitutional change or statutory revision of circumventing the effect of law without breaking it. This is a complex business at best. It takes an exceptional amount of legal skill to tread such a narrow and devious path. Not that such acts should be thought of as involving a moral breech: indeed the lawyer who finds some way to finance the construction of school buildings so evidently needed by a growing population in spite of a constitutional debt limit that seems at first glance to make this impracticable, doubtless feels that he is doing a public service. But the fact remains that the market for state

and local government securities is complicated by the existence of a great deal of borrowing that, while legal, has had to be tailored into a pattern of legality by considerable indirection.

Investors in state and local government obligations are understandably sensitive to the pitfalls of this complicated legal foundation. Investment bankers and public officials are similarly disposed. As a result, virtually every step of this business is guided or sanctioned by legal advisers. Prudent public officials or bodies do not initiate or announce their intention to borrow until they have the advice of counsel. Investment bankers retain counsel and clear all questionable matters with them. All bids and all sales are conditioned upon the delivery of legal opinions by firms of repute; the point is of such consequence that it appears in the advertising of almost every new issue. In fact, investors appear to discriminate among law firms; an opinion from a well-known firm is to be preferred to one from a more obscure firm. A copy of this approving opinion is attached to every bond as it is issued. In the secondary market, the sale of a bond without a copy of the original opinion ("ex opinion") is awkward and sometimes impossible. Even with all of these safeguards, it is not always possible to be certain that legal obstacles will not delay bond sales or the delivery of bonds after the sales have taken place. Taxpayer suits are given respectful hearing by the courts.[11] While some investors do not seem to worry about the legal problems that might complicate their portfolio operations, many do; the necessary caution involved takes time and adds to the complexity of this business.

The legal restrictions on the borrowing power of individual state and local government units are sometimes reflected in the market by the appearance of novel types of governmental organization. For example, states sometimes create or establish new authorities which have the power to borrow, and sometimes to tax, in such a fashion that the offspring can do what the parent body cannot. Judging the credit quality of many state and local government

[11] For example, the biggest issue of state and local government obligations ever sold—the $415 million issue of Illinois Toll Road bonds—came to market in October 1955 and had been all sold by the formal offering date. But delivery was delayed for about two months by taxpayer suits, a matter of considerable inconvenience to the firms handling the deal and not without some influence on the prices of both state and local government obligations and Treasury obligations during the period of delay.

obligations naturally means that one must look beyond these forms and see the economic and political realities that underlie them—assuming counsel confirms the fact that these devices can stand the test of adjudication.[12]

The existence of such a harness of legal restrictions explains partially the widespread requirement that bonds be sold by competitive bidding. Originally competitive bidding was required in the sale of state and local government obligations to avoid the connivance of politicians and investment bankers. The protection of self-interest that might be expected to police direct negotiation in the marketing of corporate obligations does not prevail in public finance. The market's valuation of some of the more complexly devised state and local governments is so uncertain that competitive bidding may be needed to protect innocent public finance officers. Without such a guide, the arrangement of a fair price by negotiation might be often disputed and uncertain. As a result, competitive bidding is accepted without much debate even though many underwriters resist the practice in the field of corporate finance. It is significant that lately the rule of competitive bidding has been broken with increasing frequency. The major exceptions have occurred in the case of the new authorities that borrow on the basis of the revenue expected from the projects they sponsor. The laws creating the new authorities operating revenue projects have not always required competitive bidding; a number of these bodies have negotiated their financing without public bidding.

Competitive bidding doubtless explains some of the characteristics of the market for this group of securities. The process of getting out an announcement or invitation to bid, and the interval that must be allowed for bidding groups to organize, takes quite a bit of time. The public officials or finance officers of state and local government units try to anticipate market conditions but this cannot be done as adroitly as is possible in negotiated financing; the time of the sale may come when dealer inventories are high and the bids are bound

[12] Not always as clear as might be expected. For example, B. U. Ratchford has argued quite persuasively that certain types of (and possibly most) revenue bonds are not tax-exempt. See "Revenue Bonds and Tax Immunity" in the *National Tax Journal*, March 1954, Vol. VII, No. 1. Any decision confirming Ratchford's view would have a devastating impact on the market for such obligations; in fact a suit challenging the existing immunity would have wide market repercussions even if the general view were that it had little chance of succeeding. The market is sensitive to threats, no matter how remote.

to be unfavorable. Until shortly before the sale a finance officer can call off the sale without creating ill will; this is done occasionally. Once the sale is held, finance officers are reluctant to reject all bids even if they consider none of them very good. The leaders of organized bidding groups—managers of syndicates and other investment bankers—condemn such an action as having wasted their time and money in organizing groups and preparing bids. For these reasons all bids are seldom rejected. Frequently the price at the time of reoffering is higher than the best bid rejected. The unwieldy mechanics of competitive bidding may have the unintended result of building up inventories when the market is generally recognized as being weak. This sort of involuntary expansion of dealer inventories may account in part for the erratic character of this market, dealt with more fully in Chapter 6.

STATE AND LOCAL GOVERNMENT BORROWING AT VARIOUS LEVELS

States and local governmental units that borrow vary widely both in size and in character; they are so various that they make for a complex market. No other open capital market covers such a wide range of borrowers. Corporations whose securities are traded in the public markets, particularly the organized exchanges, usually are the larger ones. The market for corporate bonds is relatively homogeneous as to size and character of corporate issues. The market for residential mortgages on single family dwellings is almost uniformly one of small borrowers; it is keyed to and organized around that situation. This is not true of state and local government finance. Some states and a few cities borrow in such large amounts that they can be compared only with the most massive corporations. At the other extreme, many tiny units of local government often have to borrow.

While such diversity might have been expected to have resulted in cost penalties for the small, obscure, and unfamiliar type of governmental organization, some cost-of-financing estimates presented in Chapter 4 suggest that such penalties attach only to very small units. Those large enough to offer their bonds on the national market, though relatively small, show no evidence of suffering any sort of size penalty. The principal marketing institutions have shown considerable skill and adaptability in handling the securities of smaller units and of conducting educational campaigns

to create markets for unfamiliar types of obligations such as school authority bonds. However, one should not overstress the point. State and local government has paid a price for having a heterogeneous and complex organization.

Virtually every kind of state and local governmental unit is a potential borrower on the new issues securities markets. State governments head the list, cities and towns of all sizes and varieties enter this market; so do school districts and other special purpose districts, counties, townships, boroughs, parishes, as well as specially created authorities. The number of potential borrowers is vast; the Bureau of the Census reported the number of state and local government units to be over 102,000 in 1957.[13] Of the total that might borrow, roughly 15,000 to 20,000 units have exercised this privilege. Some have borrowed many times. The number of outstanding issues is probably at least 25,000 and it may be larger.[14]

Distribution of this borrowing activity by level of governmental unit may be measured by the debt outstanding or by the gross volume of new offerings. Unfortunately, data for the two classifications come from different agencies and so the results are not entirely comparable. The classification of debt outstanding is taken from figures estimated by the Bureau of the Census,[15] while the classification of the type of new issues put on the market comes from the Federal Reserve tabulation already cited.[16] The outstanding debt of state and local governmental units based on Bureau of the Census data is shown in the first column of Table 6, and the gross amount of long-term debt issued in the postwar period in column 3. Differences in classification, where not reconcilable, are indicated by the offset arrangement of the table.

Coincidence accounts for the fact that the amount outstanding in 1954 should have been so near to the gross amount of new financing during the decade. State governments account for about

[13] "Governments in the United States in 1957," Bureau of the Census.

[14] On January 1, 1955, 2,810 outstanding issues covering a somewhat smaller number of issuers had been rated by *Moody's Investors Service*. In 1950, Moody's estimated that 20,100 issues were outstanding. The number of issues to which new ratings are assigned by Moody's each year runs from one-sixth to one-tenth of the number of long-term offerings listed by the *Bond Buyer*. Since this source misses some of the smaller issues, an estimate of 25,000 issues now outstanding seems more reasonable. Friend, et al., *Over-the-Counter Securities Markets*, Table 2-4, p. 54.

[15] *Survey of Governmental Finances in 1954*, Tables 18 and 19.

[16] See source note for Table 1.

TABLE 6

Long-term State and Local Government Debt: Amount Outstanding in 1954 and New Issues, 1946-1955

Governmental Unit[a]	Amount Outstanding, 1954 (in millions)	(per cent)	New Issues, 1946-1955 (in millions)	(per cent)
State	9,317	25.3	9,637	24.4
County	2,624	7.1	2,549	6.5
Township	782	2.1		
City (municipality)	13,892	37.6	8,750	22.2
School district	5,827	15.8	4,820	12.2
Special district (special authority)	4,455	12.1	8,555	21.7
"Unidentified," i.e., under $500,000			5,119	13.0
Total	36,898	100.0	39,430	100.0

[a] Federal reserve classification, where different, in parentheses.

Source: Col. 1: summary of governmental finances, 1954, Bureau of the Census, Table 18. Col. 2: computed. Col. 3: summary based on Federal Reserve Board unpublished mimeograph tabulation of "Long-term Security Offerings of State and Local Governments by Issuing Authority." Col. 4: computed.

a quarter of the total in each case. If the amount that is reported as "unidentified" in the Federal Reserve classification is roughly divided between school districts and smaller municipalities (where most of it probably belongs), it is evident that city borrowing is the most important single segment. When the market labels all state and local government obligations "municipals" it is almost more literal than figurative. School districts are set apart when they are identifiable as such, but it is known that in many areas the finance of public schools cannot be separated from city finance. Special district financing, a rapidly growing part of the total, is the other principal kind of state and local government unit.

CYCLICAL INFLUENCES ON THE TIMING OF STATE AND LOCAL GOVERNMENT BORROWING

The only available annual series of state and local government capital expenditures is the one provided by the national income estimates of the U.S. Department of Commerce. These estimates

are available back to 1929. This annual series suggests that while the capital expenditures of state and local government may be curbed by a massive depression such as the one suffered from 1929 to 1933, they were very little affected by the fairly sharp downturn between 1937 and 1938 and they were not discernibly affected by the mild postwar dips in 1949, in 1953-1954 and in 1957. On the other hand, there is no evidence that state and local government capital expenditures tend to be countercyclical; a more correct statement would be that they are insensitive to moderate changes in business activity, though responsive to drastic ones.

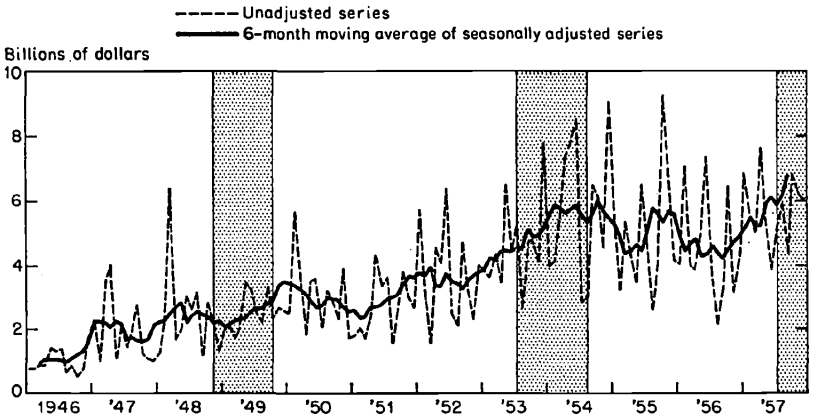
Strategic elements in the timing of borrowing. Even though state and local government capital expenditures appear to be insensitive to moderate cyclical influences, the borrowing to finance them appears to be sensitive to a number of short-run market influences of a countercyclical nature. This is made possible by latitude in the timing of borrowing already mentioned. The latitude financial managers have in the timing of their market actions may explain this erratic quality. They try to delay financing when conditions appear unfavorable but then hurry to the market when conditions improve. As Chart 1 shows, seasonally adjusted state and local government borrowings for the postwar period show an increase in the 1949 downturn and at the 1953-1954 downturn and again near the end of 1957. On the other hand, in the periods of peak private business activity, borrowing seems to have been reduced. To the extent that state and local government financial managers use their timing latitude successfully, they have been a true countercyclical influence in the market.

There are limits to their capacity to play this role. While state and local government financial managers can temporarily withdraw from active capital markets and avoid high interest rates, sooner or later they are forced to overcome their reluctance and to enter the market for needed funds. In other words, there is some evidence that there is a cyclical character to state and local government borrowing of a very short period and relatively moderate amplitude which is related to the state of the capital markets but not related to somewhat broader business developments.

Interest elasticity of demand for funds. State and local governmental units have faced sharply increased costs of raising funds in the postwar period. The issue of interest cost has become a political

CHART 1

State and Local Government Securities Sold by Public Offering, Monthly at Annual Rates, 1946-1957



Note: Shaded areas represent business cycle contractions and unshaded areas, expansions, according to National Bureau of Economic Research reference cycle dates.

Source: *Bond Buyer*; seasonal adjustment by Shishkin method.

issue of consequence. The Federal Reserve has been charged with responsibility for impeding the construction of school buildings and sanitary facilities. In periods of tight money no bids have been received for some issues[17] and in other cases all bids have been rejected as being unreasonably high. These circumstances illustrate the economic question being discussed here: the degree of interest elasticity in state and local governmental demands for funds. In practical terms, did the episodes of unsuccessful or abortive financing result only in short deferment, or has tight money sometimes produced a true and lasting reduction in the volume of financing?

Evidence in the next few paragraphs suggests that the first circumstance is nearer reality than the second one. Many of the issues for which bids were rejected or for which no bids were received were later reoffered successfully. Even when remarketing has not been attempted, capital projects have sometimes been financed in other ways. For example, in quite a few states the funds accruing

[17] This is more often than not accounted for by an unrealistic interest rate limitation in the invitation to bid.

in public retirement funds are normally invested in taxable obligations. But under stress these funds have been used to buy tax-exempt issues that had been unsuccessfully offered on the market. The burden of higher interest cost is thus either put on the beneficiaries of these retirement systems or deferred for the governmental units concerned if the retirement benefits are guaranteed.

Experience during periods of tight money markets. It may be said that in the postwar period to date tight money markets have occurred only in 1952-1953 and again in 1955-1957. During both periods an appreciable number of state and local government issues that had been planned or announced for offering were either deferred or offered unsuccessfully. Pickering has estimated that in the second quarter of 1953 the volume of such issues was about $300 million.[18] He also found considerable evidence of deferral in late 1952 and the first quarter of 1953. In general, however, most of the financing deferred appears to have reached the market later.

A similar estimate was prepared by Morris for the 9-month period July 1956 to March 1957. He estimated deferred financing in that period to have been $539 million.[19] It appeared that a majority of the issues were only deferred but had not been abandoned. Deferment, of course, performs an economic function.

One point on which these two investigators agree is that the enduring effect of higher interest rates is more evident in revenue obligations than in the case of general obligations. Pickering pointed out that the coverage of debt service in the case of revenue obligations was often relatively modest so that the changes in interest costs could have wiped out what would otherwise have been considered an acceptable margin of coverage by most prudent investors. Experience subsequent to the Pickering memorandum illustrates this point very well. In 1954, 40-year bonds for a planned toll road with estimated safety margin acceptable to investors could have been sold at a yield of around 3¼ per cent. No such issues were brought to the market in late 1956, but the prices on toll road bonds in the secondary market indicated that comparable obligations would have had to bear about a 4¾ or

[18] This estimate appears in an unpublished Federal Reserve manuscript, "Effects of Credit and Monetary Policy Since Mid-1952 on State and Local Government Financing and Construction Activity," by Richard C. Pickering, dated April 18, 1955.

[19] By Frank E. Morris in the IBA *Statistical Bulletin*, April 1957, No. 3, pp. 1-4.

even a 5 per cent coupon. The resulting increase in debt service cost would amount to about a fifth. In other words, a project for which the engineers had estimated a coverage of debt service of 1.5 times—apparently acceptable to many investors—when an interest rate of 3¼ per cent is assumed, would have found itself with a coverage of only 1.2 times if an interest cost of 4¾ per cent had to be expected. Such a coverage is usually thought to be too small by most investors.

Experience in periods of ease. While there have been several episodes of easy credit in the postwar periods, the only one studied with any intensity was Pickering's study of the year 1954.[20] His conclusions, while quite tentative, suggested that the large volume of issues in the year 1954 was partly due to the moderately lower rates.[21] Many projects were made feasible by the rates then prevailing which would have been marginal at much higher rates. Unlike deferments during periods of credit tension, the volume of general obligations that were made feasible by lower interest costs cannot be estimated by objective tests. As already indicated, this can be done in a general way for many revenue obligations, though there are exceptions. For example, the elasticity of demand for the services of sewers and sanitary systems probably is far less than for toll roads. The illustration used above is not applicable to all types of revenue obligations. It is not at all impossible, however, that as much as one-tenth of the offerings in 1954 were generated by the favorable terms then available. The amount might be larger. Similar evidence might be uncovered if the year 1958 were to be scrutinized.

THE ABILITY OF STATE AND LOCAL GOVERNMENTAL UNITS TO SERVICE DEBT

Except for revenue obligations (which will be separately treated in Chapter 7) the ability of state and local governments to service their obligations is based on their ability to tax. This rule is qualified by a few exceptions but they are unimportant and can be neglected.

The ability to tax is better measured in terms of the practical

[20] Memorandum cited above in note 18.

[21] The same observation could have been made of the first half of 1958.

limits than of the legal limits on its exercise. Tax revolts are not unknown in the United States and in a few cases debt defaults apparently resulted from these revolts. Defaults on state and local government obligations in the 1930's suggest that local governments, while sensible of the rights of creditors, are even more sensitive to the pressure of their own electorates. Public bodies will default in an extremity before they will put intolerable burdens on their citizens. State and local government taxes at the end of the postwar decade were about the same proportion of personal income as in 1939. Some margin for increased taxing therefore probably exists. But residents of some rapidly growing suburban towns appear to feel that the margin is not too remote. At present levels of taxation, debt service of all forms of state and local government units accounts for about one-tenth of tax revenues or slightly more. But such an average may conceal considerable dispersion. The distribution of debt service among individual governmental units is what counts. For example: annual debt service appears to be only about one-twentieth of annual state tax revenues; indeed the whole debt of states is less than one-year's tax receipts. In the case of local government, debt service appears to require between one-sixth and one-seventh of tax receipts. The total debt of these units is almost three times their annual tax receipts. The most significant fact is that the ratios of debt service and of debt to taxes appear to be growing at all levels of state and local government.

The critical point is an intangible one: How willing are state and local government electorates to tax themselves? Almost every full-faith and general credit obligation outstanding is supported by adequate assessed value and adequate income—if debt payment is put high in the list of preferences by the citizens of the government owing it. State and local taxes are frequently quite regressive. Most of the citizens who vote for bond issues also pay some of the taxes that retire them, but they may not be conscious of the commitment for tax increases that such borrowing implies. A simple illustration will make the point clear. Toll road traffic studies suggest that the demand for toll road services, particularly by commercial users, is quite elastic. If all roads were paid for on a "pay-as-you-use" basis, it is almost certain that our national demand for highways (and maybe automobiles) would shrink. People—even though they pay

the same ultimate cost—seem more willing to vote bond issues for free road than to pay for toll roads.[22]

Not only are there differences between states and local governments, but there are great differences *among* states and *among* local governmental units in their debt burdens and their ability to service them. This is shown in the following series of three charts. Chart 2 ranks the per capita debts of states in 1955. The states which have high debts by this test are not necessarily those which have been growing rapidly; indeed, rank correlation of debt and growth was only .11.[23] Chart 3 shows a similar array of the cities. Both charts demonstrate the vast disparity in individual governmental units with respect to indebtedness.

When we examine differential borrowing costs in Chapter 6 we shall find that, all other credit factors being equal, those states and cities which borrow sparingly tend to get premium treatment by the market; those which borrow heavily, even if of good credit quality, have to pay a penalty for the frequency of their resort to the market. Some differences in debt among governmental units, particularly among states, are accounted for by differences in the level at which various governmental functions are provided.

Differences in income levels might be expected to account for the diversity in debt levels. If this test could be applied to city and suburban debts, the results would be of great interest; some significant results might be found. But the only data available to us for test were for states. As a preliminary very simple test, the effect of income differences was tested by comparing debt to personal income. The results are shown in Chart 4. While some of the extreme differences are ironed out by this adjustment, more remain than were suppressed. The conclusion remains inescapable: differences among states and among local governmental units are great. Averages are of little use in measuring the ability of state and local government to service debt. This could be tested only by a kind of case study, something far outside the aims (and resources) of this project.

One factor complicating a relative judgment of credit at the state

[22] The Highway Act of 1956 is ample demonstration of this assertion. Traffic engineers could not conceivably find enough highway locations on which the amounts of expenditure contemplated by this act could be spent for self-supporting toll roads.

[23] Debt per capita as against relative population changes, 1950-1955.

CHART 2

State Government Debt per Capita, by States

(Net debt at end of fiscal 1955)

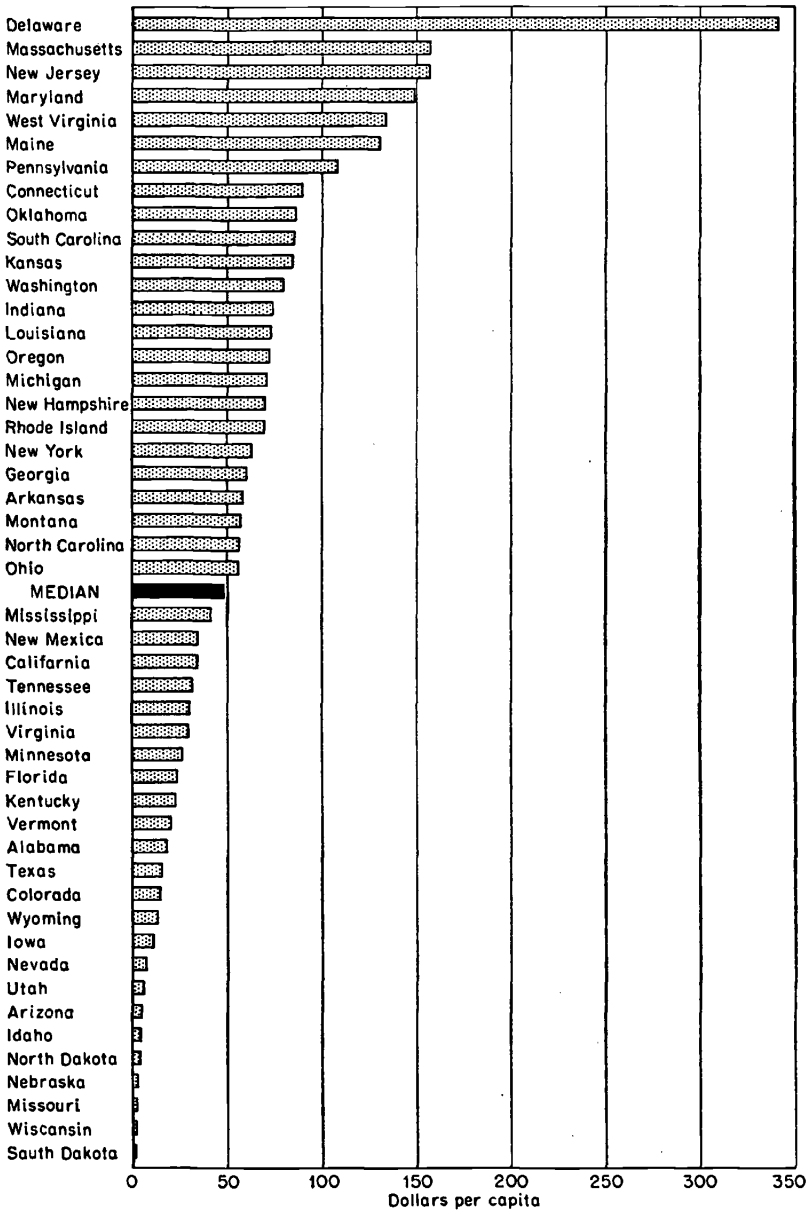


CHART 3

City Government Debt per Capita, in Major Cities

(Net debt at end of fiscal 1954)

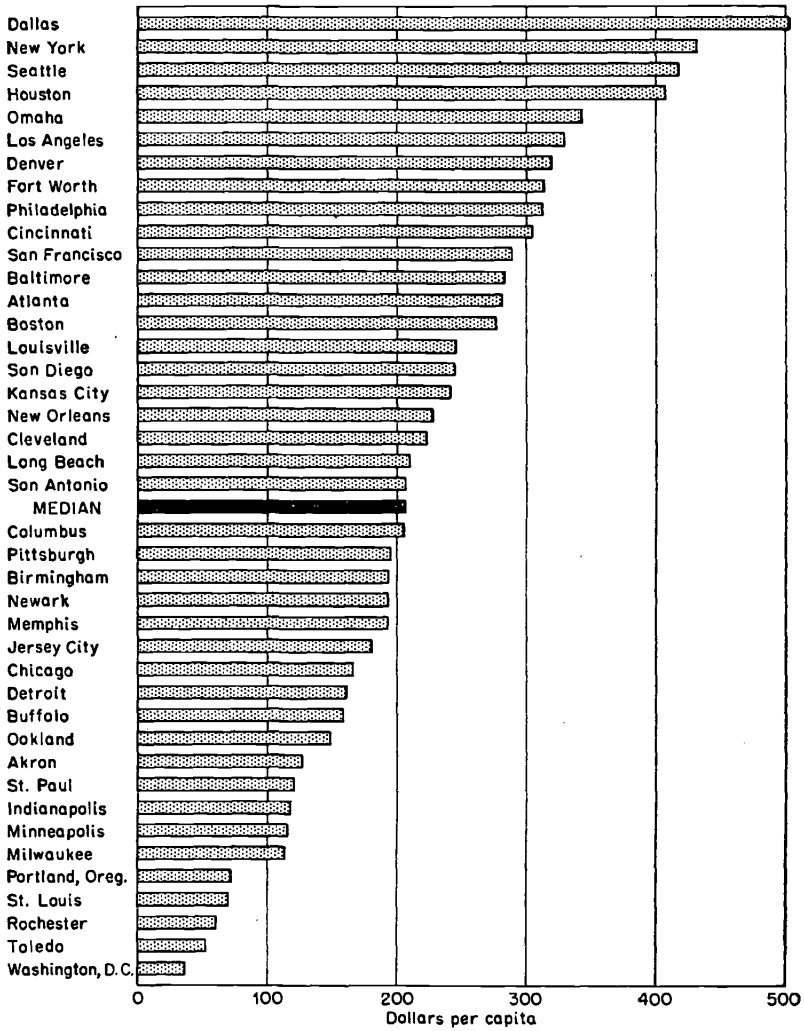
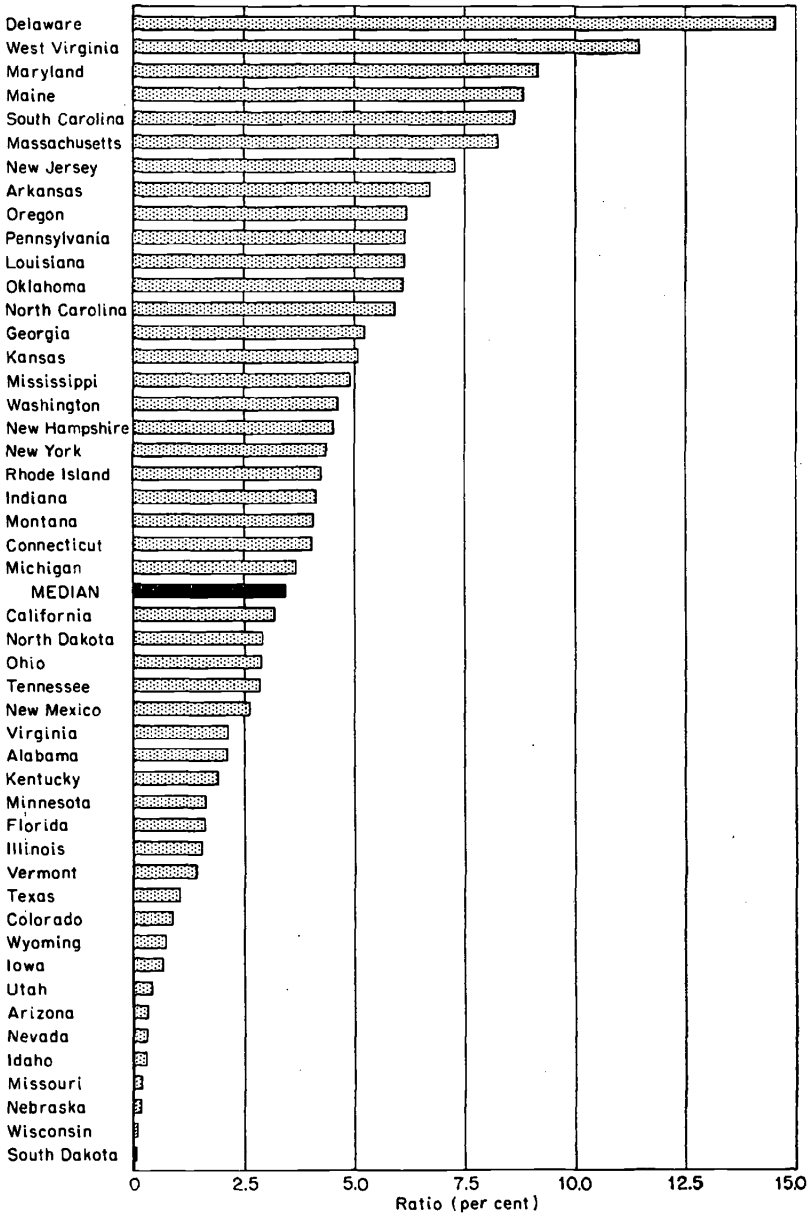


CHART 4

Ratio of State Government Debt (Gross) per Capita to Personal Income per Capita

(Gross debt—personal income for year 1954)



level and at the local level is grants-in-aid. In modern times (possibly in all times, if the record of history were open to us) large central governments often come to the aid of smaller constituent governmental units. The federal government aids states and local governments to perform their traditional functions, such as the state-aid highway construction program. State governments aid their constituent local units, and so on. For example, the Pennsylvania system of financing school buildings by special authorities seems to be quite dependent upon a system of state aid to schools. Many other examples could be found. Some feel that the volume of downstream grants-in-aid is likely to increase.

The combination of great diversity in the concentration of debt and of a rising level of borrowing during the postwar decade might lead to the expectation of some deterioration in the quality of new offerings. Such does not appear to have been the case. As Table 7 shows, the quality of the new offerings rated by Moody's appears to have been about as high near the end of the decade as at the beginning.[24] This increase in the quality of securities offered is, however, not evidence of an improvement of state and local government credit. Rather, it means that governmental units with the highest credit ratings were infrequent borrowers in the early postwar period but have since entered the markets to an increasing extent. The fact that the amount of debt outstanding has increased tends to reduce at least slightly the quality of the total outstanding. But the growth of debt has been almost matched by the growth in income and so sustenance of a high rating for state and local government obligations is reasonable—if income continues to be high.

[24] The new Housing Authority bonds with PHA contracts (virtually amounting to a federal government guarantee) which have been offered since 1951 are rated Aaa and tend to improve the average quality. But even exclusion of these issues, an alternative shown in the lower part of the table, would not change the conclusion greatly.

TABLE 7

Percentage Distribution of State and Local Bonds Rated by Moody's Investors Service, by Rating Group, 1945-1955

	RATING				
	Aaa	*Aa*	*A*	*Baa*	*Ba B Caa*
1945	4.2	16.2	46.1	27.0	6.4
1946	7.6	22.7	47.6	19.2	2.8
1947	16.4	50.2	20.2	11.6	1.4
1948	33.9[a]	23.2	31.2	10.5	1.1
1949	9.4	30.2	38.3	20.1	2.0
1950	12.6	41.2	32.6	12.0	1.5
1951	27.0	31.4	28.6	11.6	1.5
1952	23.5	21.2	42.5	10.6	2.1
1953	24.4	31.9	32.1	11.0	.6
1954	22.4	27.0	38.1	11.0	1.5
1955	22.2	29.6	35.0	12.2	1.0
	Without housing authority loans guaranteed by the PHA				
1951	15.0	36.5	33.2	13.4	1.8
1952	10.1	25.0	50.0	12.5	2.4
1953	13.0	36.7	36.9	12.7	.6
1954	13.3	30.2	42.6	12.3	1.6
1955	11.2	33.8	39.9	13.9	1.1

[a] Due to $500 million of bonus bonds: $300 million in New York (2 issues), $200 million in Ohio both Aaa.

Source: Listings of individual issues in weekly bond service of Moody's Investors Service. These ratings are sometimes revised and listed in the annual *Moody's Investors Manual of Governments*. No allowance was made for the effect of such revisions. Revenue obligations were included, where rated; but obligations based on revenue from projects without operating experience are generally not rated.