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6

CHARACTERISTICS OF SELECTED CLASSIFICATIONS OF STATE AND LOCAL DEBT

Up to this point, it has been implied that state and local debt consists of a group of reasonably similar debt instruments. Individual instruments, however, often differ substantially on important characteristics such as the type of issuer, the legal liability and the type of resources pledged for debt service payments. There may be sizeable differences in quality among different classifications of state and local debt. The possibility exists, therefore, that changes in the composition of state and local debt have affected the quality of such debt.

The proportionate amounts of the three major classifications of state and local debt and some of the characteristics that may indicate quality within these classifications are presented in this chapter. Discussion of the first two methods of classification, by type of governmental unit and by geographic region, is brief due to the lack of detailed data and because the differences in quality do not appear to have a very large impact on the quality of state and local debt. The third method of classification, by type of resources used to pay debt service charges, is discussed more thoroughly because of large shifts in the proportionate amount of state and local debt classified in this matter and because of their possible relevance to the over-all quality of state and local debt.

Classification by Type of Governmental Unit

The types of state and local units issuing debt include:

- States
- Regular local governmental units
    - Counties and parishes

Incorporated municipalities (cities, towns, etc.)
Unincorporated municipalities (townships, etc.)

Special districts
School districts
Drainage, irrigation, levee districts
Sewer and water districts
Road, bridge, and street districts
Miscellaneous (fire, park, etc.) districts

Statutory authorities
Port authorities
Bridge authorities
Housing authorities
Toll road commissions
Miscellaneous (power, canal, dormitory, parking, school, airport, etc.) authorities

This method of classification points out some of the differences among state and local governmental units. State governments, with the exception of New York, are the only government units below the federal level which may not be sued by individuals or corporations without the consent of the involved unit. State and regular local governments, such as counties and cities, possess broad powers such as the police power, the taxation power and the power of eminent domain. The activities of states and regular local governments generally produce no revenue and taxes are their principal sources of income. State and regular local governments ordinarily issue debt by pledging their credit; however, they may pledge specific revenues or create a special district or authority to issue bonds. Special districts are similar to regular governmental units in their power to tax, but they are usually organized to promote a specific activity. Statutory authorities are public corporations, without the power to tax, which generally operate revenue-producing projects.

The amount of debt outstanding for each of the major types of state and local units from 1902 through 1968 is presented in Appendix Table 3. The borrower characteristics for the major types of state and local units in 1952 and 1966 are presented in Table 14. Analysis of these data reveals that debt service charges were a rising percentage of the general revenues for all types of state and local units between 1952 and 1966. In both of these years the debt service charges for incorporated municipalities and special districts were a much higher proportion of their general revenues than the similar relationship for the other major state and local units. Between 1952 and 1966 the growth in debt service charges as a per cent of general revenues was by far the greatest for special districts – debt service charges increased over six times while general revenues increased less than four times.

TABLE 14

Debt and Borrower Characteristics, Classified by Type of Governmental Unit
(dollar figures in millions)

	All State & Local Units	State[a]	Counties & Parishes	Incorporated Municipalities	Unincorporated Municipalities	School Districts	Special Districts[a]
1952							
Debt outstanding	30,100	6,874	2,018	12,659	619	3,806	4,125
Interest charges	724	144	49	341	15	94	81
Est. debt service charges[b]	2,367	587	204	980	54	315	228
General revenues[c]	25,181	13,529	3,926	6,351	833	5,087	669
Revenues from own sources[d]	22,615	10,944	2,385	5,139	594	2,920	632
Property taxes	8,652	370	1,835	3,144	515	2,618	170
General expenditures[e]	26,098	13,697	4,015	6,303	993	5,342	1,236
Interest/general revenues	2.5%	1.1%	1.2%	5.4%	1.8%	1.8%	12.1%
DSCs/general revenues	9.4%	4.3%	5.2%	15.4%	6.5%	6.2%	34.1%
Interest/own revenues	2.8%	1.3%	2.1%	6.6%	2.5%	3.2%	12.8%
DSCs/own revenues	10.5%	5.4%	8.6%	19.1%	9.1%	10.8%	36.1%
1966							
Debt outstanding	107,051	29,564	7,208	33,714	1,989	17,841	16,736
Interest charges	3,268	894	234	1,013	54	561	512
Est. debt service charges[b]	8,688	2,112	621	2,936	172	1,527	1,320
General revenues[c]	83,036	46,757	11,444	17,262	2,109	20,946	2,509
Revenue from own sources[d]	69,916	34,511	6,829	13,122	1,610	11,886	1,959
Property taxes	24,670	834	4,939	6,879	1,340	10,102	576
General expenditures[e]	82,842	46,010	10,774	17,047	2,026	21,176	2,658
Interest/general revenues	3.9%	1.9%	2.0%	5.9%	2.6%	2.2%	20.4%
DSCs/general revenues	10.5%	4.5%	5.4%	17.0%	8.2%	7.3%	52.6%
Interest/own revenues	4.7%	2.6%	3.4%	7.7%	3.3%	4.7%	26.1%
DSCs/own revenues	12.4%	6.1%	9.1%	22.4%	10.7%	12.8%	67.4%

Notes to Table 14

Sources: U.S. Department of Commerce, *Historical Statistics on Governmental Finances*, Vol. VI, No. 4 of *1962 Census of Governments; Governmental Finances in 1954;* and *Governmental Finances in 1965-66.*

[a]Statutory authorities are included primarily in the states and special districts categories.

[b]Estimated debt service charges include interest charges and long-term debt redeemed but not refunded and does not include short-term debt.

[c]General revenues exclude utility revenues, liquor revenues and insurance trust revenues. General revenues include intergovernmental revenues so the sum for the individual types of governmental units does not equal the total for all units.

[d]General revenues excluding all intergovernmental revenues.

[e]General expenditures exclude utility expenditures, liquor store expenditures and insurance trust expenditures. General expenditures include intergovernmental grants so the sum of expenditures for individual types of governmental units does not equal the total for all state and local units.

While classification as to type of unit may be useful in describing some of the differences among state and local indebtedness, this method has several major disadvantages when assessing the quality of state and local debt. First, economic and intangible factors generally outweigh the legal features stressed in classification by type of unit. For example, neither the legal-inability-to-sue feature of state bonds nor the limited powers of school districts appear to detract substantially from the investment appeal, *ceteris paribus,* of these classes of state and local debt. Second, it is not possible to classify the resources on which government revenues are based by type of state or local unit. For example, wealth and income measures cannot be separated by type of government unit. Third, other useful data, such as the size of the tax base and the liquid asset balances, are not compiled by type of state and local unit at the present time. Finally, there are conceptual problems, such as the interpretation of intergovernmental revenues and expenditures and the lack of separate data for statutory authorities, which complicate the analysis of what data are available.

Classification by Geographic Region

An alternative method of classifying state and local debt is by geographic region. The earlier data on payment difficulties indicate the potential importance of such information. For example, prior to the 1929 major default period several areas, e.g., Florida and the Far West, experienced rapid growth in indebtedness with little realized growth in resources, to repay such indebtedness. These areas experienced serious defaults when the expected growth in

TABLE 15

State and Local Debt in Relation to Revenue, Income and Wealth Measures, by States in 1942, 1957 and 1966

	1942			
	Debt/Pop.	Debt/ Personal Income	Debt/ General Revenues	Debt/ Own Revenues
Alabama	$ 74.18	.143	2.052	2.320
Alaska	n.a.	n.a.	n.a.	n.a.
Arizona	143.66	.158	1.579	1.864
Arkansas	114.58	.243	3.066	3.461
California	172.47	.133	1.602	1.746
Colorado	137.54	.152	1.380	1.613
Connecticut	105.15	.074	1.154	1.230
Delaware	95.73	.075	1.384	1.549
Dist. of Columbia	24.54	.018	.349	.413
Florida	209.30	.270	3.020	3.304
Georgia	44.21	.077	1.102	1.226
Hawaii	n.a.	n.a.	n.a.	n.a.
Idaho	159.60	.175	1.801	2.115
Illinois	118.95	.115	1.420	1.525
Indiana	48.47	.053	.697	.766
Iowa	69.39	.084	.887	.961
Kansas	59.42	.070	.807	.905
Kentucky	50.24	.094	1.167	1.312
Louisiana	151.55	.256	2.411	2.659
Maine	83.76	.099	1.171	1.295
Maryland	162.54	.144	2.508	2.687
Massachusetts	122.58	.114	1.293	1.390
Michigan	113.48	.108	1.369	1.474
Minnesota	117.86	.148	1.224	1.346
Mississippi	82.34	.188	1.934	2.221
Missouri	84.46	.104	1.390	1.579
Montana	173.87	.193	1.689	1.929
Nebraska	159.51	.196	2.302	2.610
Nevada	75.79	.048	.585	.789
New Hampshire	71.74	.084	.823	.908

repayment sources failed to materialize or the economy declined. Such payment difficulties obviously affected the involved geographic region and may also have contributed to problems in other areas by changing the willingness to pay of some governmental units and the public's willingness to lend to state and local units.

Using such a method of classification involves several problems. What geographic region should be used – political divisions, economic regions or metropolitan areas? There is the problem of finding the debt service charges

1957				1966			
Debt/Pop.	Debt/ Personal Income	Debt/ General Revenues	Debt/ Own Revenues	Debt/Pop.	Debt/ Personal Income	Debt/ General Revenues	Debt/ Own Revenues
$200.53	.148	1.219	1.522	$444.40	.215	1.309	1.808
191.32	.082	.916	1.212	959.29	.280	1.141	2.052
270.19	.152	1.156	1.326	467.20	.184	1.009	1.266
167.16	.141	1.079	1.329	287.34	.143	.893	1.231
321.08	.129	1.047	1.173	661.25	.191	1.160	1.388
286.99	.142	1.058	1.241	492.85	.169	.948	1.176
474.25	.173	2.011	2.128	792.27	.215	1.867	2.136
516.92	.181	2.455	2.700	1213.87	.344	2.341	2.751
111.60	.041	.437	.533	402.06	.108	.794	1.086
287.28	.162	1.360	1.511	516.27	.198	1.345	1.567
232.24	.161	1.226	1.506	408.27	.172	1.197	1.507
376.01	.200	1.523	1.784	744.27	.238	1.300	1.632
148.63	.089	.649	.771	251.73	.103	.565	.704
324.19	.131	1.489	1.600	487.23	.138	1.215	1.387
176.86	.087	.968	1.039	312.61	.102	.782	.886
118.61	.063	.508	.563	208.37	.070	.461	.538
306.02	.170	1.318	1.493	448.67	.157	1.031	1.212
157.39	.110	1.005	1.175	534.70	.238	1.622	2.139
356.60	.237	1.397	1.639	581.68	.255	1.361	1.738
205.83	.122	1.063	1.209	307.83	.124	.838	1.040
503.52	.227	2.404	2.625	654.43	.204	1.637	1.870
437.84	.190	1.771	1.909	634.14	.194	1.426	1.651
243.42	.109	1,018	1.106	499.18	.153	1.122	1.285
217.32	.115	.877	.972	503.76	.174	1.011	1.205
153.68	.152	.927	1.117	370.62	.209	1.154	1.514
166.43	.084	.907	1.087	340.83	.121	.911	1.140
217.59	.113	.784	.953	356.73	.136	.721	.957
358.73	.190	1.786	2.031	533.70	.184	1.391	1.661
253.31	.102	.701	.848	595.03	.170	1.035	1.331
213.75	.114	1.089	1.200	407.86	.145	1.183	1.418

(continued)

and resources available to pay debt service charge measures or proxies for such measures for the types of regions selected. Finally, what is to be done with overlapping debt, i.e., debt in two or more of the regions selected?

Table 15 is an example of what can be done with state and local debt classified by geographic regions. Statewide regions were selected, and the relationships examined were debt/population, debt/personal income, debt/general revenues and debt/general revenues from own sources. Debt is a proxy

TABLE 15 concluded

	1942			
	Debt/Pop.	Debt/ Personal Income	Debt/ General Revenues	Debt/ Own Revenues
New Jersey	$254.43	.217	2.771	2.893
New Mexico	128.32	.202	1.738	2.004
New York	399.45	.341	3.314	3.445
North Carolina	121.03	.209	2.422	2.636
North Dakota	72.21	.110	.665	.729
Ohio	99.18	.096	1.287	1.402
Oklahoma	79.78	.127	1.190	1.215
Oregon	139.56	.120	1.495	1.695
Pennsylvania	155.25	.165	1.941	2.117
Rhode Island	245.00	.209	3.266	3.494
South Carolina	103.50	.191	2.171	2.556
South Dakota	116.84	.155	1.233	1.391
Tennessee	131.32	.235	2.950	3.297
Texas	109.38	.152	2.080	2.302
Utah	72.07	.080	.828	1.002
Vermont	51.01	.067	.658	.737
Virginia	71.24	.084	1.495	1.638
Washington	123.27	.102	1.282	1.501
West Virginia	73.35	.120	1.258	1.420
Wisconsin	39.22	.045	.418	.449
Wyoming	203.98	.218	2.046	2.459
U.S. average	143.38	.157	1.856	2.023
Median state	113.48	.127	1.369	1.579

Sources: U.S. Department of Commerce, *Historical Statistics on Governmental Finances,* Vol. IV, No. 4 of *1962 Census of Governments,* and *Governmental Finances in 1965-66.*

n.a. = not available.

for debt service charges while the measures related to debt are proxies for the resources available to pay debt service charges. The information is presented for three years: 1942, 1957 and 1966.

The data in Table 15 indicate that the relationships between debt and the surrogates for resources that can be used to pay debt service charges varied greatly among statewide areas and were not consistent for broader sections of the country. Futhermore, these relationships changed rather markedly over time. During World War II, the eight states with the heaviest amount of state and local debt relative to the resource surrogates were Arkansas, Florida,

1957				1966			
Debt/Pop.	Debt/ Personal Income	Debt/ General Revenues	Debt/ Own Revenues	Debt/Pop.	Debt/ Personal Income	Debt/ General Revenues	Debt/ Own Revenues
$397.33	.160	1.879	1.971	$509.75	.148	1.332	1.487
237.39	.144	.834	1.076	382.94	.161	.709	1.007
596.63	.237	2.134	2.260	971.91	.278	1.840	2.013
186.31	.136	1.123	1.342	246.47	.108	.791	.961
138.49	.090	.507	.578	295.46	.124	.620	.757
281.68	.127	1.434	1.558	439.06	.144	1.228	1.438
246.29	.151	1.069	1.295	473.51	.192	1.123	1.468
268.37	.135	.950	1.104	484.73	.167	.968	1.246
320.78	.149	1.619	1.730	585.64	.197	1.622	1.882
320.79	.161	1.657	1.887	599.47	.197	1.497	1.830
187.21	.151	1.207	1.392	219.22	.107	.782	.963
68.75	.042	.275	.329	144.31	.060	.329	.419
282.01	.199	1.716	2.003	509.43	.229	1.612	2.088
324.92	.178	1.608	1.845	500.58	.197	1.444	1.735
200.29	.113	.861	1.008	460.27	.185	.986	1.307
149.93	.090	.673	.775	336.31	.130	.713	.974
205.62	.124	1.190	1.313	368.34	.141	1.115	1.379
493.87	.231	1.858	2.093	1215.10	.377	2.315	2.773
215.01	.129	1.338	1.533	339.37	.156	.947	1.298
156.40	.079	.673	.725	417.38	.140	.922	1.029
211.30	.102	.613	.817	422.45	.154	.628	.992
311.31	.152	1.390	1.545	546.57	.185	1.289	1.531
237.39	.136	1.089	1.313	467.20	.169	1.122	1.379

Louisiana, New Jersey, New York, Rhode Island, Tennessee and Wyoming. By 1957, the eight states with the heaviest amount of state and local debt were Connecticut, Delaware, Louisiana, Maryland, Massachusetts, Nebraska, New York and Washington. By 1966, the eight states with the heaviest debt burden were Alaska, Connecticut, Delaware, Kentucky, Maryland, New York, Tennessee and Washington.[1]

Many other instrument and borrower characteristics should be considered before reaching a conclusion about the quality of state and local debt by statewide areas. Analysis of quality by geographic regions (e.g., Table 15 plus additional available characteristics) is a useful tool in spotting areas of potential debt payment difficulties. Such analysis must be used with greater cau-

[1]The states with the heaviest debt burden were selected by ranking the four debt to resources ratios in declining order and arithmetically weighting these ratios from 1 to 50. The eight states with the lowest combined weights are listed for each period.

tion when assessing the quality of all state and local debt in the United States. If only a few geographic regions had debt payment difficulties it seems reasonable that shifts in intergovernmental revenues might help alleviate the difficulties until correcting adjustments could be made.

Classification by Type of Resources Used to Pay Debt Service Charges

A third method of classifying state and local debt is by the type of resources used to pay debt service charges. Numerous categories can be formed using this basis of classification. However, by reevaluating several relatively small classifications of state and local debt, four major categories, which encompass nearly all state and local debt, can be distinguished. The relative dollar amount of state and local debt outstanding in each of these categories – guaranteed debt, short-term debt, limited liability obligation bonds and general obligation bonds – is illustrated in Chart 17. The quality of each of these major categories is briefly examined in the following paragraphs.

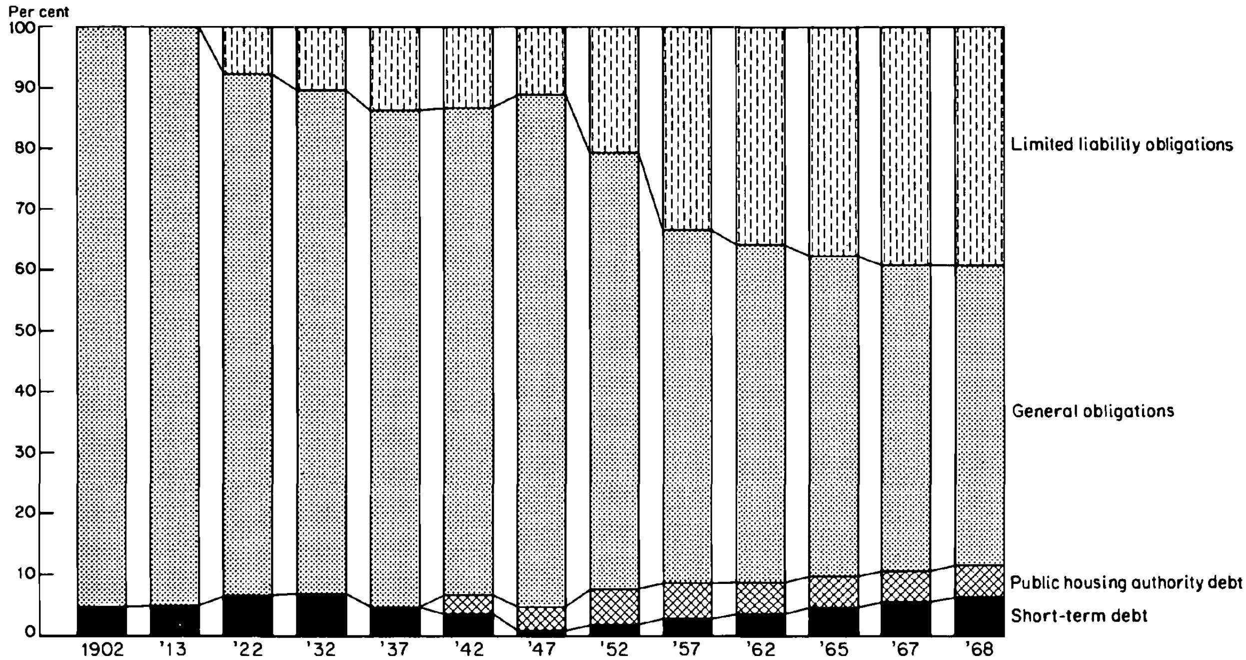
Guaranteed Debt

The first major category is housing authority notes and bonds issued under the provisions of the Federal Housing Act of 1949. While each such issue is secured by a pledge of the net rental revenues of the local project, it has additional strength based on the contribution contract with the Public Housing Authority. Since the Public Housing Authority unconditionally agrees to make annual contribution that would be sufficient to pay note and bond principal and interest when due, the faith and credit of an agency of the United States lies behind housing authority indebtedness. The dollar amount of housing authority notes and bonds issued annually is disclosed in Appendix Table 1 and the dollar amount outstanding appears in Appendix Table 2.[2] The relative dollar amount outstanding, illustrated graphically in Chart 17, has remained close to 5 per cent of all outstanding state and local debt since the early 1950's.

The quality of these Public Housing Authority notes and bonds is as good as the quality of an issue by a federal government agency. While the quality of this 5 per cent of state and local debt is very high, it does not mean its service charges should be ignored or that this category of indebtedness should be treated as federal rather than state or local. The debt service charges on Public Housing Authority notes and bonds are paid from the rental revenues

[2]Some notes and bonds were issued under the previous Housing Authority Act of 1939. The issues under the 1939 Act that were outstanding in 1949 were covered by the 1949 Act.

CHART 17
Proportionate Dollar Amount of State and Local Debt Outstanding, by Type of Resources Used for Payments, 1902-68



Note: General obligations include all debt other than short-term for 1902 and 1913.
Source: Data in Appendix Table 2.

of the housing projects (plus the ability to borrow to repay some of the notes), which are classified as general revenues of state and local units. Some revenues which are classified as state and local general revenues are, therefore, restricted to this purpose. The Public Housing Authority has been forced to contribute to debt service charges in only a few instances and their contribution typically have been only for short periods of time.

Short-Term Debt

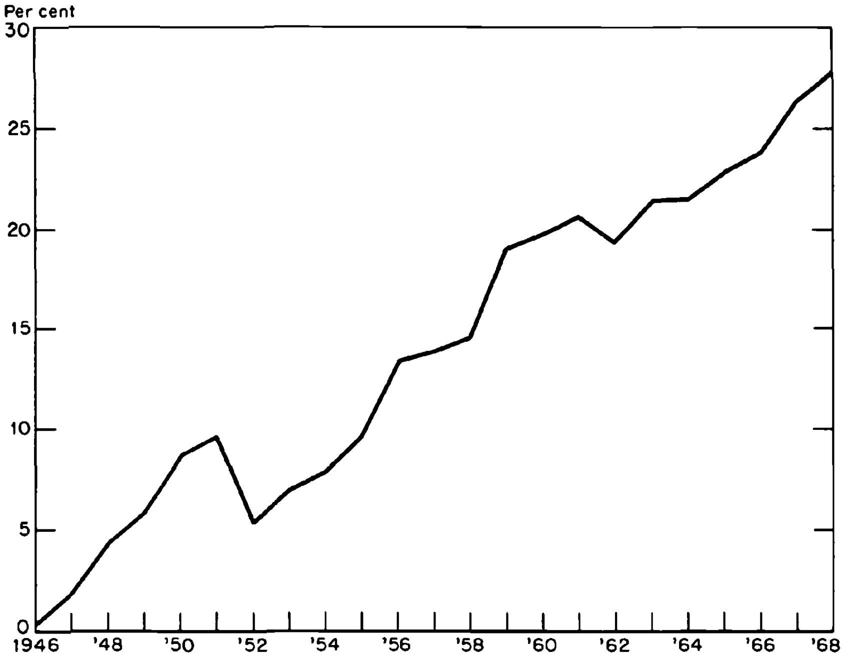
The second major category is debt having a maturity of less than a year at issuance. Short-term Public Housing Authority notes are treated as guaranteed debt and not included in this category. Chart 17 shows that short-term debt was roughly 5 per cent of all state and local debt outstanding in 1902 and 1913. Short-term debt rose during the 1920's and early 1930's, reaching nearly 7 per cent of the total state and local debt outstanding by 1932. Short-term debt fell to less than 1 per cent of total state and local debt outstanding in the years immediately following World War II, then increased steadily, reaching approximately 5 per cent of debt outstanding by the end of 1968.

The major portion of short-term debt is tax anticipation notes, which are secured by tax receipts anticipated in the near future and by the full faith and credit of the issuing unit. Most of the remaining short-term debt is secured by both the proceeds of another planned debt issue and by the full faith and credit of the issuing state and local unit. Nearly all of the remainder of this category of state and local debt is secured by the full faith and credit of the issuing unit.

The resources that can be used to pay the debt service charges on short-term debt are, therefore, similar to those available for general obligation bonds. Because repayment of principal is always eminent, the liquid assets and borrowing reserve of the issuing unit assume a more prominent role. The borrowing reserve is probably best estimated by an analysis of the general quality of the issuing unit and its payment performance. Many units defaulted on short-term issues in the early 1930's because they were no longer able to borrow at any reasonable cost.

The relationship between short-term debt outstanding and liquid assets (currency and deposits in financial institutions) of state and local units from 1945 through 1968 appears in Chart 18. The data in Chart 18 show that short-term debt has become a larger and larger per cent of state and local liquid assets since the end of World War II. The growth in the early postwar years started from a very low base. The proportion of short-term debt, however, has continued to rise in the 1960's. This proportion has averaged close to 25 per cent in the mid-1960's. While exactly comparable figures are not available prior to 1945 it appears that short-term debt fluctuated between 20 and 30 per cent of state and local liquid assets in the 1920's and 1930's, and climbed to over 60 per cent of state and local liquid assets during the 1929-33

CHART 18
Short-Term State and Local Debt as a Per Cent of State and Local Liquid Assets[a], 1946-68



Sources: Short-term debt outstanding from Appendix Table 2. Liquid asset figures from Goldsmith, Lipsey and Mendelson, *Studies in the National Balance Sheet of the United States,* Vol. II, Table III-6, pp. 216-217; unpublished FRB worksheets; and *Governmental Finances,* 1959-68 issues.

depression period.

Limited Liability Obligation

Limited liability obligation bonds form the third category of state and local debt. Nearly all of the debt included in this category come under the conventional term "revenue bonds" or the Bureau of the Census term "nonguaranteed debt." The dollar amount of outstanding limited liability obligation bonds grew rapidly relative to other bonds, as can be seen in Charts 10 (page 61) and 17 (page 91). The data in Table 16, which shows the proportion of nonguaranteed debt by type of governmental unit, reinforce this rapid growth.

Limited liability bonds, which are long-term debts, are payable solely from the revenues derived from the operation of (1) the facilities constructed or acquired with the proceeds of the bonds or (2) other facilities owned by the

TABLE 16

Percentage of Long-Term Debt Outstanding Which Is Nonguaranteed, by Type of Governmental Unit, 1948-68

Year	All State and Local	States	All Local[a]	Counties	Incorporated Municipalities	Unincorporated Municipalities	Special Districts[b]
1968	42.3	55.8	36.5	18.5	40.6	6.0	79.5
1967	41.7	56.5	35.6	14.2	39.0	4.4	81.4
1966	40.8	55.4	35.0	10.7	38.4	6.3	81.1
1965	40.1	55.0	34.4	11.8	36.9	6.2	81.8
1964	39.1	54.3	33.3	7.9	36.7	3.4	81.5
1963	39.0	53.2	33.7	10.5	36.2	4.7	83.2
1962	37.7	52.2	32.1	8.4	34.5	6.2	82.3
1961	37.6	51.2	32.4	10.8	34.8	4.3	82.1
1960	37.7	50.8	32.7	18.4	33.8	3.4	84.4
1959	35.8	50.0	30.5	13.0	34.0	5.2	84.3
1958	35.7	51.2	29.9	12.2	33.0	10.0	82.3
1957	35.3	52.0	29.2	16.0	31.7	15.9	79.5
1956	31.8	50.9	24.8	13.5	28.8	17.2	58.5
1955	30.6	45.9	25.3	12.2	29.0	28.8	57.9
1954	26.8	38.1	23.1	10.2	25.0	3.1	58.1
1953	24.2	31.3	19.7	12.2	23.8	5.7	43.6
1952	21.9	25.8	18.3	12.7	22.1	4.9	29.1
1951	16.4	22.1	14.6	3.1	20.6	1.4	16.2
1950	14.1	18.0	13.0	3.0	17.4	1.3	15.3
1949	12.3	15.4	11.5	2.7	12.0	.8	23.4
1948	10.6	10.6	10.6	2.7	10.4	.8	22.4

Sources: U.S. Department of Commerce, *Historical Statistics on Governmental Finances*, Vol. IV, No. 4 of *1962 Census of Governments;* and *Governmental Finances in 1963-68*, an annual publication.

[a]Includes school districts that are not listed separately because they had no nonguaranteed debt during the entire period covered.

[b]Other than school districts that are not listed separately because they had no nonguaranteed debt during the entire period covered.

issuer of the bonds. Long-term state and local issues that are payable from a limited or special tax or from specified rents, leases or appropriations are also classified as limited liability obligation bonds. The security for limited liability obligations is based primarily upon the specific revenue-producing activity, special tax or special fund, rather than primarily upon the economic resources of the taxpayers. This type of debt financing, therefore, opens sources of revenue that typically would not be available through general obligation financing.

A limited liability bond issued by a government unit is an obligation of that unit, but the unit's legal obligation only extends to the bond service payments from a specified source of revenue. This limited security was a cause of the relatively poorer payment performance of these obligations in the postwar period (documented in Chapter 3). There is considerable disagreement on whether an issuing or benefiting government unit has a "moral" obligation to implement its revenue bonds by providing financial assistance. During the postwar period, some issuing or benefiting units have aided their limited liability bonds, while others have openly refused to do so.[3] It appears inappropriate to assume that a possible moral obligation on the part of another public body will prove financially productive.

If it is accepted that limited liability obligations will be paid solely from the pledged source, debt service costs on these obligations can be compared directly with the cash flows pledged to cover the service charges.[4] Chart 19 compares the cash coverage of larger limited liability obligations for alternate years from 1955 through 1969. The data in Chart 19 demonstrates that the average cash flow coverage of all the limited liability obligations observed (constituting over 50 per cent of the dollar amount of all limited liabilities outstanding) has had a modest upward trend over the period observed. Much of this increase appears to be due to the sharply increased cash flow coverage of service charges on debts paid from tolls on roads or bridges.

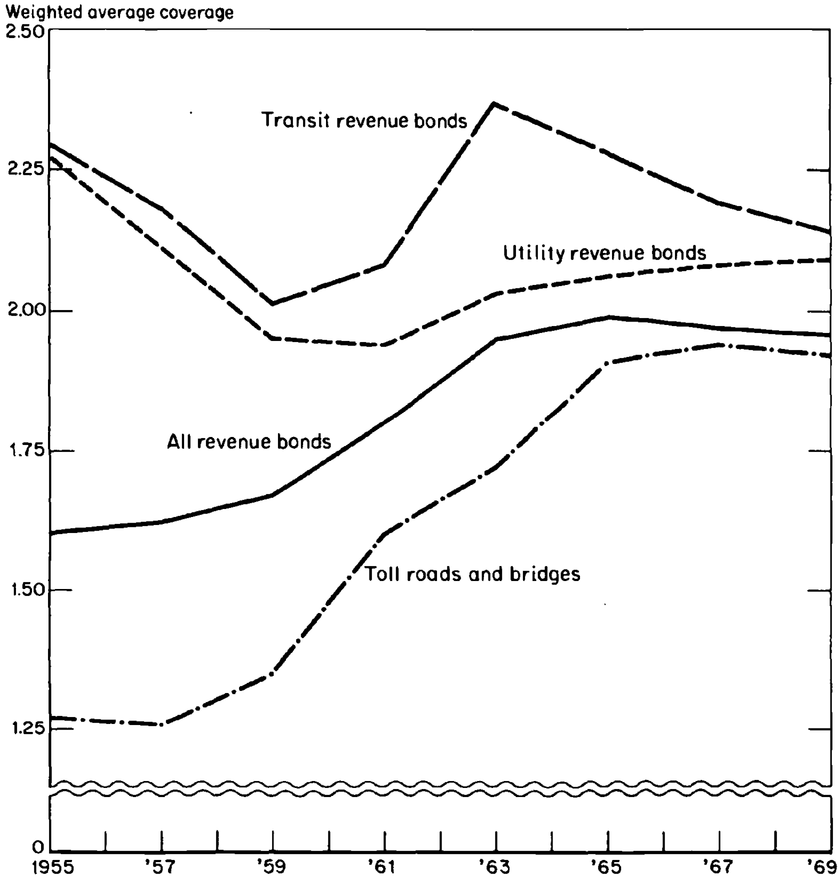
The data in Table 17 show that the improved cash flow coverage of debt service charges does not extend to all limited liability obligations. As late as 1967 approximately 19 per cent of the limited liability obligations analyzed by Standard and Poor's covered debt service charges less than 1.25 times. Among toll road issues approximately 36 per cent covered debt service charges 1.25 times or less.

The improved cash flow coverage of limited liability debt service charges indicates the quality of this particular classification of debt has improved slightly in the last decade or so. The implications for the quality of all state and local debt are more complicated. Limited liability obligations made new sources of revenues available, often at the cost of lower security. The rapid increase in the relative amount of a generally weaker quality obligation (Table 16 shows limited liability obligations rose from approximately 10 per cent to approximately 40 per cent of the dollar amount of all long-term state and local debt outstanding during the postwar period) was probably at the expense of slower relative growth in the usually higher quality general obliga-

[3]For example, Kansas City, Missouri, advanced supplementary funds so that interest on its Auditorium Plaza Garage revenue bonds could be paid promptly and in full. On the other hand, West Virginia refused to aid the defaulting West Virginia Turnpike.

[4]There is generally no attempt to maximize these cash flows once they adequately cover debt service charges; therefore, the aggregative cash coverage of limited liability obligations is not maximized. Two possible methods of overcoming this problem – using the asset values of the facilities and estimating maximum cash flows – are not practical at this time due to the lack of adequate data.

CHART 19
Cash Flow Coverage of Debt Service Charges on Limited Liability Obligations, Odd Years, 1955-69



Note: The separate purpose categories do not add up to the total category.
Source: Standard and Poor's Corporation, *Municipal Bond Selectors.* The first issue of a year was used as the coverage for the preceding year.

tions. There is evidence that government units were forced to issue sizeable amounts of limited liability obligations because of outmoded restrictions limiting general obligation debt.[5] It would appear that the shift in composition toward a higher portion of indebtedness of a weaker quality, other things being equal, has had a weakening effect on the over-all quality of state and local debt. Furthermore, since revenues pledged to cover limited liability

[5]For example, see James A. Heins, *Constitutional Restrictions Against State Debt,* Madison, Wis. 1963.

obligations are usually restricted to this purpose, the growth in revenues from such obligations will not improve the quality of other indebtedness.

General Obligation Bonds

General obligation bonds are long-term state and local debt on which the issuing unit pledges as security its full faith and credit. In addition, the issuing unit must have the power to levy taxes at any level necessary in order to meet debt service payments. There are, however, practical limits beyond which taxes cannot be collected successfully. The basic security of this type of bond is necessarily based upon the economic resources of the taxpayers in the issuing unit.

The main controversy in this description is just how broad the issuing unit's taxing power should be before long-term debts are classified as general obligations. In this study general obligations are bonds for the service of which the issuing state or local unit has pledged its entire tax revenues. The issuing unit must either be able to levy property taxes for bond service payments at an unlimited level or have the power to levy property taxes (even if only at a limited level) and at least one other type of tax for bond service payments at an unlimited level.

Described in this manner, the general obligation category includes several forms of state and local debt which are sometimes classified separately. These include: (1) state and local debt for which the issuing unit can levy only a limited level of property taxes but can levy one or more other types of taxes at an unlimited level; (2) unlimited special assessment bonds, i.e., state and local bonds for which there is no limit on the rate or amount of property tax that can be levied on benefiting property for the payment of the bonds; and (3) hybrid types of state and local bonds payable primarily from pledged revenues or receipts from limited revenues or from limited or special taxes, but for which the issuing unit pledges its full faith, credit and taxing power if these limited sources fall short.

The measurement of the quality of general obligation bonds as a separate category of state and local debt is difficult because the needed information is not available at the present time. It is clearly improper to compare the service charges on general obligations alone with the cash resources to meet debt service charges developed in Chapter 5 or with state and local general revenues. This incomparability is because large portions of state and local revenues are restricted in their use to the servicing of limited liability obligations or guaranteed debt or are earmarked to be used for specific purposes only. A sizable portion of state and local cash and near-cash balances are also restricted in use by the same methods. The measures most helpful in assessing the quality of general obligations separately are unrestricted general revenues and unrestricted cash flows and balances which can be used to service such obligations. The unused state and local taxing capacity and the willingness of the federal government to assist financially distressed state and local units would

TABLE 17

Cash Coverage of the Debt Service Charges on Revenue Bonds in 1963, 1965 and 1967

Cash Flow Coverage of Debt Service Charges	All Revenue Bonds Studied			Toll Road Revenue Bonds			Total Excl. Toll Issues		
	Number	Per Cent	Cum. %[a]	Number	Per Cent	Cum. %[a]	Number	Per Cent	Cum. %[a]
1963									
.00- .74	23	1.7	1.7	15	15.0	15.0	8	.6	.6
.75- .99	54	4.0	5.7	13	13.0	28.0	41	3.3	3.9
1.00-1.24	175	12.9	18.6	23	23.0	51.0	152	12.1	16.0
1.25-1.49	225	16.6	35.2	14	14.0	65.0	211	16.8	32.8
1.50-1.74	238	17.5	52.7	9	9.0	74.0	229	18.3	51.1
1.75-1.99	162	12.0	64.7	6	6.0	80.0	156	12.4	63.5
2.00-2.49	198	14.6	79.3	3	3.0	83.0	195	15.5	79.0
2.50-2.99	117	8.6	87.9	5	5.0	88.0	112	8.9	87.9
3.00-3.99	71	5.2	93.1	6	6.0	94.0	65	5.2	93.1
4.00-4.99	45	3.4	96.5	3	3.0	97.0	42	3.4	96.5
5.00 & above	47	3.5	100.0	3	3.0	100.0	44	3.5	100.0
1963 totals	1,355	100.0		100	100.0		1,255	100.0	
1965									
.00- .74	15	.7	.9	10	11.2	11.2	5	.3	.3
.75- .99	39	2.3	3.2	7	7.9	19.1	32	2.0	2.3
1.00-1.24	235	13.7	16.9	17	19.1	38.2	218	13.4	15.7
1.25-1.49	405	23.5	40.4	10	11.2	49.4	395	24.2	39.9
1.50-1.74	283	16.4	56.8	13	14.6	64.0	270	16.5	56.4
1.75-1.99	211	12.3	69.1	11	12.4	76.4	200	12.3	68.7
2.00-2.49	229	13.3	82.4	8	9.0	85.4	221	13.5	82.2
2.50-2.99	102	5.9	88.3	3	3.4	88.8	99	6.1	88.3
3.00-3.99	110	6.3	94.6	6	6.7	95.5	104	6.4	94.7
4.00-4.99	31	1.8	96.4	1	1.1	96.6	30	1.8	96.5
5.00 & above	61	3.6	100.0	3	3.4	100.0	58	3.5	100.0
1965 totals	1,721	100.0		89	100.0		1,632	100.0	

(continued)

TABLE 17 concluded

Cash Flow Coverage of Debt Service Charges	All Revenue Bonds Studied			Toll Road Revenue Bonds			Total Excl. Toll Issues		
	Number	Per Cent	Cum. %[a]	Number	Per Cent	Cum. %[a]	Number	Per Cent	Cum. %[a]
1967									
.00- .74	12	.6	.6	10	12.3	12.3	2	.1	.1
.75- .99	35	1.8	2.4	10	12.3	24.7	25	1.4	1.5
1.00-1.24	318	16.6	19.0	9	11.1	35.8	309	16.8	18.3
1.25-1.49	435	22.7	41.6	16	19.8	55.6	419	22.8	41.1
1.50-1.74	344	17.9	59.5	8	9.9	65.4	336	18.3	59.3
1.75-1.99	215	11.2	70.7	6	7.4	72.8	209	11.4	70.7
2.00-2.49	260	13.5	84.3	12	14.8	87.6	248	13.5	84.2
2.50-2.99	100	5.2	89.5	2	2.4	90.1	98	5.3	89.5
3.00-3.99	99	5.2	94.7	5	6.2	96.2	94	5.1	94.6
4.00-4.99	38	2.0	96.7	2	2.4	98.7	36	2.0	96.6
5.00 & above	63	3.3	100.0	1	1.2	100.0	62	3.4	100.0
1967 totals	1,919	100.0		81	100.0		1,838	100.0	

Source: *Municipal Bond Selector* by Standard and Poor's Corporation, February 27, 1964, February 28, 1966, and February 28, 1968.

[a]Indicates cumulative percentage at or below highest cash coverage in row.

also be very useful information. Unfortunately the above types of information are not available at the present time. In the author's opinion, therefore, the best method currently available to assess the quality of general obligations is to compare over-all state and local debt service charges with over-all cash resources available to meet these debt service charges as was done in Chapter 5.

Summary

The characteristics for the categories of state and local debt classified by type of governmental unit showed that incorporated municipalities and special districts had much higher debt burdens than other types of units. Instruments and borrower characteristics for units in statewide geographic regions demonstrated that some areas had much heavier debt burdens; however, the states with heavier burdens were spread throughout the United States and changed over time. The impact of changes in quality among these categories on the over-all quality of state and local debt does not seem very large.

Classification by type of resources used to pay debt service charges proved to be the most fruitful classification in analyzing the over-all quality of state and local debt. Federally guaranteed debt has remained a constant proportion of all state and local debt over the postwar period; however, so have liquid assets and other measures of the ability to repay such debt. There is, therefore, no evidence in these two categories of any significant changes in quality over the postwar period. By far the most rapid relative and absolute increase in state and local debt was in the limited liability obligation category. The cash flow coverage of the debt service charges on such indebtedness has improved moderately in the last decade; however, the increased absolute and relative amounts of limited liability obligations outstanding may weaken the over-all quality of state and local debt. The security behind most limited liability obligations is weaker than full faith and credit debt. The postwar payment record is poorer for limited liability obligations than for general obligations. Furthermore, since all revenues from the pledged source are usually restricted to one specific project or purpose, the residual unrestricted revenues probably cover general obligation debt service charges to a smaller extent than before the rapid postwar growth in limited liability obligations.