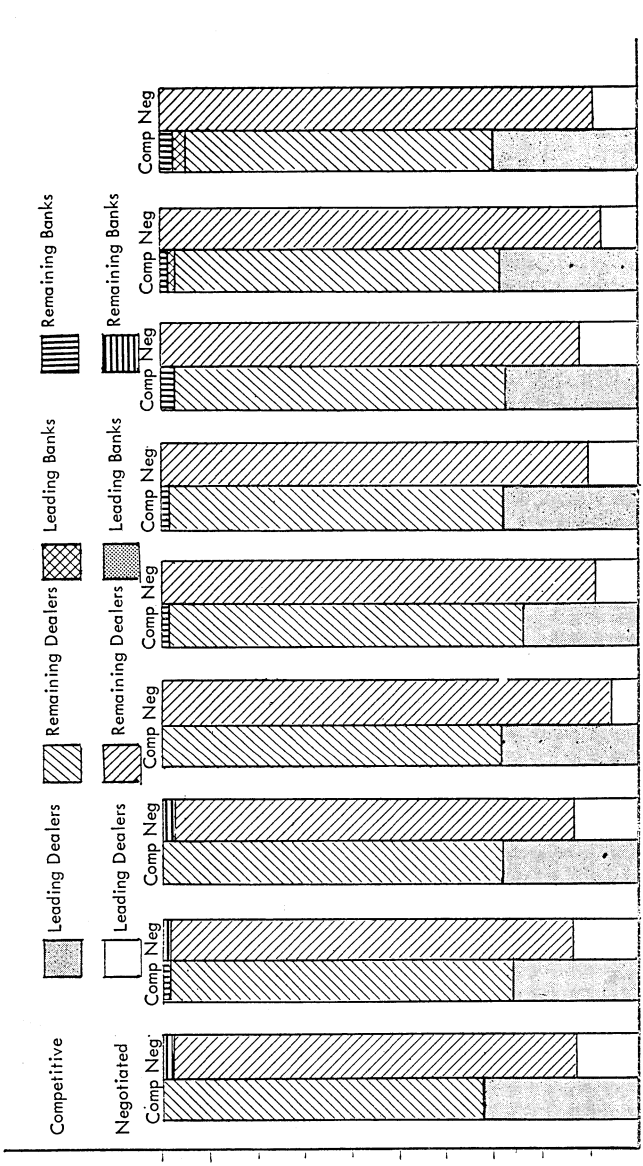
New Issues of Municipal Bonds, 1957-1965

CHART IX
PERCENTAGE DISTRIBUTION OF THE NUMBER OF UNDERWRITTEN ISSUES
By Type Underwriter and Offering
Revenue Bonds, 1957-1965



Source: Investment Bankers Association of America.

TABLE 5.—*Average number of bids [1] for competitively offered issues: By size of issue, 1957–65*

	Size of issue [2] (dollar amounts in millions)				
	0 to $0.25	$0.25 to $0.50	$0.5 to $1	$1 to $5	$5 and over
Year:					
1957	1.87 (1,571)	2.12 (670)	2.47 (551)	3.85 (756)	3.01 (306)
1958	2.26 (1,697)	2.68 (672)	3.36 (613)	4.29 (831)	2.76 (381)
1959	2.58 (1,566)	3.19 (608)	3.79 (619)	4.90 (844)	3.27 (251)
1960	2.56 (1,372)	3.52 (642)	3.89 (651)	5.07 (946)	3.50 (234)
1961	2.30 (1,295)	3.12 (678)	3.74 (659)	4.53 (1,321)	3.32 (425)
1962	2.45 (1,159)	3.22 (644)	3.67 (768)	5.08 (1,432)	3.92 (444)
1963	2.64 (1,121)	3.41 (663)	4.19 (664)	5.82 (1,144)	4.20 (493)
1964	3.13 (1,395)	4.21 (805)	4.44 (1,049)	5.60 (1,757)	5.87 (1,003)
1965	3.06 (1,262)	3.92 (794)	4.40 (820)	6.27 (1,981)	4.97 (1,024)

[1] Represents number of known bids. Actual number of bids higher but by an undeterminable amount.
[2] Number of issues in sample shown in parentheses.

Source: Investment Bankers Association of America.

Two prominent relationships relating to the number of competitive bids are demonstrated in table 5. First, the average number of bids increases as the size of the issue increases up to $5 million but decreases for the category $5 million or more. In all but one instance (1964 issues of $5 million or more) this relationship has held for all categories. Secondly, a pronounced trend of increasing number of bids exists for all categories over the past 9 years. For all categories, the average number of competive bids was at least 50 percent higher in 1965 than 1957.

Underwriting spreads.—Underwriting spread is the difference (per $1,000 value of bonds) between the underwriter's purchase price and the price at which he offers these bonds for sale. It is an average for all of the bonds included in the issue, and will vary depending on the rating, average maturity, and other factors of the issue. For competitively purchased issues, it is the return to the underwriter for risk, distribution, and overhead expenses associated with bidding. For negotiated issues, it also includes a return for financial services required to organize and plan the issue (when such services are required for a competitively sold issue, this cost is borne separately by the issuer.)

Spead represents the anticipated gross return to the underwriter if all bonds are sold at the syndicate's agreed upon price level. In a favorable market all bonds are quickly sold and spread equals gross profit. In an unfavorable market it may be necessary for the syndicate to lower prices. In such a situation the hoped for spread will not be realized. Because of this "one way" (downward) price adjusting process, spreads tend to overstate gross profits.

Table 6 presents the average spread for the years 1958, 1959, 1963, 1964, and 1965 grouped by size of issue. The number of issues used to calculate the average spread is included in parentheses. The sample for the years 1958 and 1959 is particularly small but has been included to provide information on the long-run trend in spreads.[18]

[18] Because different methods were used to record data for these two periods (1958 and 1959 versus 1963 through 1965) minor differences in the data may exist.

TABLE 6.—*Average spread*[1] *for underwritten issues: By size of issue, 1958–59, 1963–65*

	Size of issue[2] (dollar amounts in millions)				
	0 to $0.25	$0.25 to $0.50	$0.5 to $1.0	$1.0 to $5.0	$5.0 and over
Year:					
1958	$24.56 (70)	$17.31 (47)	$15.68 (41)	$16.25 (94)	$13.99 (113)
1959	22.29 (61)	19.50 (31)	22.90 (40)	16.61 (85)	17.98 (47)
1963	12.46 (307)	11.80 (248)	11.84 (292)	11.62 (482)	10.46 (103)
1964	12.33 (325)	11.99 (297)	11.05 (361)	11.31 (595)	10.07 (120)
1965	11.60 (272)	11.82 (260)	11.70 (298)	10.55 (580)	9.82 (118)

[1] On those issues for which data were available. See text for discussion of spread.
[2] Number of issues in sample shown in parentheses.

NOTE.—Spread is stated in dollars per $1,000 of bonds.

Source: Investment Bankers Association of America.

The most noticeable relationship is the decrease in spread in all categories between the time periods 1958–59 and 1963–65. Even with the latter time period the trend remains downward. Thus, in 1958 a community borrowing $250,000 to $500,000 through the bond market would have paid the investment banker (on the average) $4,327 to $8,655 for his services. In 1965 these services would have cost $2,955 to $5,910.

A study conducted by the IBA in 1964[19] concluded that size was unimportant in determining spread. The fact that the larger issues are usually better rated accounts for much of the difference between large and small issues shown in table 6.

Spread is also the price paid by the issuer for underwriting services. Viewed from this perspective, the cost of these services to the issuer declined 30 to 40 percent from 1958 to 1965.

[19] IBA Statistical Bulletin, occasional paper No. 7, June 1964.

EXHIBIT 1

Typical Syndicate Agreement For an Undivided Account

GENTLEMEN:

We confirm the formation of an Account to bid for, and if such bid is accepted, to sell the above bonds subject to the following terms and conditions:

The present members of the Account, including yourselves, and their respective participations are set forth on the reverse hereof; but the Managers may, at any time prior to the submission of the bid, make any change in the membership of the Account or in the amounts of respective participations, and any such change will become effective notwithstanding that notice thereof may not be received by any member or members; *provided*, that the participation of a member shall not be increased without his consent. Your participation is for your own account and is not to be reoffered, subdivided, or transferred without the consent of the Managers. Each member hereby authorizes the Managers to bid any amount up to and including such member's maximum bid price, for the joint and/or several accounts of the members.

Should this Account be the successful bidder for the bonds, sales for the Account shall be made only by or through the Managers. Subject to confirmation by the Managers, members may purchase bonds from the Account at the terms fixed as hereinafter provided but any resales of bonds so purchased by a member shall be solely for his own account and not as agent for the Managers or for the Account. All sales of bonds shall reduce the liability of the members for any bonds remaining in the Account at its termination, proportionately to their participations in the Account. The terms of the offering, including concessions or commissions allowable to members and to others, shall be determined by the Managers with the consent of the members having a majority interest in the Account. Each member will be advised of such terms and of any changes therein and each member agrees to comply with the terms from time to time in effect during the life of the Account.

The undersigned will act as Account Managers, with the customary authority and discretion, including the right to represent the Account in bidding for the bonds, either directly or through a delegated agent. The Managers may require of the members prior to bidding or thereafter their proportionate shares of the good faith deposit and the Managers are authorized, on behalf of each member and either separately in his name or as part of like arrangements for other members, in the Account name or otherwise, without notice and upon such terms as the Managers deem appropriate, to borrow money and/or effect other arrangements, in order to pay for or carry such member's share of the bonds and to pay or provide for his share of any losses and expenses of the Account, and also to pledge any of the bonds as security and to sign any notes or loan agreements. Each member for whose account such loan or other arrangements are made shall, without the necessity of any determination, call or accounting by the Managers, be unconditionally obligated thereon directly to the lender for the full amount of liability incurred for his account and no more. At any time during the life of this Account the Managers may call upon each member to carry his proportionate share of any unsold or undelivered bonds or to margin his liability at a price and in the amount and manner as the Managers may determine. Upon termination of the Account the Managers may require the members to take up and pay for their proportionate shares of any remaining bonds at the net cost thereof to the Account. The net profits of the Account or the liability for any net losses shall be divided among the members in proportion to their participations in the Account, regardless of any purchases from the Account made by them.

If any member fails to perform in accordance with the terms of this agreement the Managers may, without legal proceedings, demand or notice, terminate or transfer to others his interest in the Account and, in the event of termination, sell, at public or private sale and upon such terms as the Managers shall elect, all or a part of the defaulting member's proportionate share of the bonds in this Account, the Managers on behalf of the Account and each member reserving the right to be a purchaser at any such sale; but such action on the part of the Managers shall not release any other member from obligations hereunder, and the defaulting member shall continue liable for his default and for his other liabilities hereunder. Any loss or expense resulting from any such default shall be charged to the Account and shall be borne by the remaining members in proportion to their respective participations, being collectible therefrom by the Managers at any time after the occurrence of such default, without the prior necessity of legal proceedings against the defaulting member.

The Account shall run for days from the date the bonds are awarded to it, unless extended by mutual consent or terminated prior thereto by the Managers with the consent of the members having a majority interest in the Account; provided, however, that the members shall remain liable for their proportionate shares of any bonds sold for the Account until delivery thereof out of the Account by the Managers; *provided, however*, that the Managers alone may terminate the Account at any time after sale and delivery of all the bonds or extend the Account beyond the fixed or agreed date of termination to permit the delivery of bonds sold prior thereto. Notwithstanding any termination or settlement of this Account the members will be and remain liable in proportion to their respective participations for any further liabilities and expenses including any taxes which may from time to time be assessed against the Account as such.

The Managers may publish advertisements for the bonds with the names of any or all members of the Account, unless expressly requested by a member to omit his name. The Managers act hereunder solely as agent for the members and shall be under no liability with respect to the validity or value of the bonds or the correctness or completeness of anything contained therein or in any advertisement, prospectus or any other document prepared or used by the Managers, or for the acts of any agent selected with due care, or otherwise in connection herewith except for want of good faith. Members shall be liable for their proportionate shares of all expenses incurred in connection with this Account, provided that any member who withdraws from the Account prior to the submission of the bid shall be liable in the discretion of the Managers for his proportionate share of expenses incurred prior to the time of withdrawal. No member other than the Managers may incur any liability or expense for the Account without the consent of the Managers.

Please confirm your participation in and acceptance of the terms of this Account by signing and returning the enclosed duplicate of this letter to

Very truly yours,

Account Managers

By: .....
Vice President

We confirm our participation in this Account.

Name: .....

By: .....
Authorized Signature

Date: .....

Form UG

EXHIBIT 2.

Typical Syndicate Agreement For a Divided Account

GENTLEMEN:

We confirm the formation of an Account to bid for, and if such bid is accepted, to sell the above bonds subject to the following terms and conditions:.

The present members of the Account, including yourselves, and their respective participations are set forth on the reverse hereof; but the Managers may, at any time prior to the submission of the bid, make any change in the membership of the Account or in the amounts of respective participations, and any such change will become effective notwithstanding that notice thereof may not be received by any member or members; *provided*, that the participation of a member shall not be increased without his consent. Your participation is for your own account and is not to be reoffered, subdivided, or transferred without the consent of the Managers. Each member hereby authorizes the Managers to bid any amount up to and including such member's maximum bid price, for the joint and/or several accounts of the members.

Should this Account be the successful bidder for the bonds, sales for the Account shall be made only by or through the Managers. Subject to confirmation by the Managers, members may purchase bonds from the Account at the terms fixed as hereinafter provided but any resales of bonds so purchased by a member shall be solely for his own account and not as agent for the Managers or for the Account. Purchases of bonds from the Account by a member shall reduce such member's liability for any bonds remaining in the Account at its termination, to the extent of the bonds so purchased. All sales of bonds for Syndicate Account shall reduce the liability of the members for any bonds remaining in the Account at its termination, proportionately to their participation in the Account. On elimination of any member's liability by purchases and sales as above provided, any reduction of liability from the sale of bonds for Syndicate Account to which such member would otherwise have been entitled shall reduce the liability of other members, proportionately to their participations in the Account. The terms of the offering, including concessions or commissions allowable to members and to others, shall be determined by the Managers with the consent of the members having a majority interest in the Account and may be changed during the life of the Account only by unanimous consent. Each member will be advised of such terms and of any changes therein and each member agrees to comply with the terms from time to time in effect during the life of the Account.

The undersigned will act as Account Managers, with the customary authority and discretion, including the right to represent the Account in bidding for the bonds, either directly or through a delegated agent. The Managers may require of the members prior to bidding or thereafter their proportionate shares of the good faith deposit and the Managers are authorized, on behalf of each member and either separately in his name or as part of like arrangements for other members, in the Account name or otherwise, without notice and upon such terms as the Managers deem appropriate, to borrow money and/or effect other arrangements, in order to pay for or carry such member's share of the bonds and to pay or provide for his share of any losses and expenses of the Account, and also to pledge any of the bonds as security and to sign any notes or loan agreements. Each member for whose account such loan or other arrangements are made shall, without the necessity of any determination, call or accounting by the Managers, be unconditionally obligated thereon directly to the lender for the full amount of liability incurred for his account and no more. At any time during the life of this Account the Managers may call upon each member to carry his proportionate share of any unsold or undelivered bonds or to margin his liability at a price and in the amount and manner as the Managers may determine. Upon termination of the Account each member shall take up and pay for any remaining bonds representing his undischarged liability at the established terms of the Account. The net profits of the Account or the liability for any net losses shall be divided among the members in proportion to their participations in the Account.

If any member fails to perform in accordance with the terms of this agreement the Managers may, without legal proceedings, demand or notice, terminate or transfer to others his interest in the Account and, in the event of termination, sell, at public or private sale and upon such terms as the Managers shall elect, all or a part of the defaulting member's proportionate share of the bonds in this Account, the Managers on behalf of the Account and each member reserving the right to be a purchaser at any such sale; but such action on the part of the Managers shall not release any other member from obligations hereunder, and the defaulting member shall continue liable for his default and for his other liabilities hereunder. Any loss or expense resulting from any such default shall be charged to the Account and shall be borne by the remaining members in proportion to their respective participations, being collectible therefrom by the Managers at any time after the occurrence of such default, without the prior necessity of legal proceedings against the defaulting member.

The Account shall run for ..... days from the date the bonds are awarded to it, unless extended by mutual consent or terminated prior thereto by the Managers with the consent of the members having a majority interest in the Account; provided, however, that the members shall remain liable for their proportionate shares of any bonds sold for the Account until delivery thereof out of the Account by the Managers; *provided, however*, that the Managers alone may terminate the Account at any time after sale and delivery of all the bonds or extend the Account beyond the fixed or agreed date of termination to permit the delivery of bonds sold prior thereto. Notwithstanding any termination or settlement of this Account the members will be and remain liable in proportion to their respective participations for any further liabilities and expenses including any taxes which may from time to time be assessed against the Account as such.

The Managers may publish advertisements for the bonds with the names of any or all members of the Account, unless expressly requested by a member to omit his name. The Managers act hereunder solely as agent for the members and shall be under no liability with respect to the validity or value of the bonds or the correctness or completeness of anything contained therein or in any advertisement, prospectus or any other document prepared or used by the Managers, or for the acts of any agent selected with due care, or otherwise in connection herewith except for want of good faith. Members shall be liable for their proportionate shares of all expenses incurred in connection with this Account, provided that any member who withdraws from the Account prior to the submission of the bid shall be liable in the discretion of the Managers for his proportionate share of expenses incurred prior to the time of withdrawal. No member other than the Managers may incur any liability or expense for the Account without the consent of the Managers.

Please confirm your participation in and acceptance of the terms of this Account by signing and returning the enclosed duplicate of this letter to

Very truly yours,

We confirm our participation in this Account.

Account Managers

Name: .....

By: .....
Authorized Signature

By: .....
Vice-President

Date: .....

Form DG

APPENDIX

TABLE 1.—*Distribution of underwritten issues: By type offering and dealer*

[All bonds, 1957–65 (dollar amounts in millions)]

	Competitive		Negotiated		Total	
	Amount	Number	Amount	Number	Amount	Number
1957:						
Top 10 dealers [1]	$1,446	632	$367	41	$1,813	673
All dealers	2,921	3,565	740	985	3,792	4,812
Top 10 banks [1]	1,711	611	27	37	1,738	648
All banks	2,029	1,139	53	102	2,082	1,241
Total	4,950	4,704	792	1,087	5,874	6,053
1958:						
Top 10 dealers [1]	1,935	689	206	45	2,141	734
All dealers	3,551	3,666	596	1,037	4,263	4,913
Top 10 banks [1]	2,186	653	17	46	2,203	699
All banks	2,959	1,218	37	113	2,999	1,333
Total	6,510	4,884	633	1,150	7,262	6,246
1959:						
Top 10 dealers [1]	1,910	585	803	21	2,714	607
All dealers	3,510	3,550	1,244	775	4,785	4,506
Top 10 banks [1]	2,188	524	57	27	2,245	551
All banks	2,503	1,132	82	89	2,590	1,225
Total	6,013	4,682	1,326	864	7,375	5,731
1960:						
Top 10 dealers [1]	2,120	779	331	17	2,451	796
All dealers	3,628	3,694	953	685	4,608	4,489
Top 10 banks [1]	2,133	622	3	21	2,158	645
All banks	2,492	1,223	20	78	2,533	1,303
Total	6,120	4,917	974	763	7,141	5,792
1961:						
Top 10 dealers [1]	1,663	875	259	33	1,922	908
All dealers	3,938	4,341	1,054	667	5,028	5,096
Top 10 banks [1]	2,621	850	3	15	2,625	865
All banks	3,044	1,584	14	65	3,058	1,650
Total	6,982	5,925	1,067	732	8,086	6,746
1962:						
Top 10 dealers [1]	2,105	1,137	162	23	2,266	1,160
All dealers	4,117	4,497	753	453	4,895	4,962
Top 10 banks [1]	2,531	883	20	11	2,551	894
All banks	3,028	1,707	24	32	3,052	1,743
Total	7,145	6,204	777	485	7,947	6,705
1963:						
Top 10 dealers [1]	$2,497	763	$656	70	$3,206	837
All dealers	4,599	3,490	1,786	1,117	6,526	4,694
Top 10 banks [1]	2,579	724	5	20	2,764	744
All banks	3,384	1,583	18	86	3,403	1,672
Total	7,983	5,073	1,805	1,203	9,930	6,366
1964:						
Top 10 dealers [1]	1,811	1,042	265	25	2,077	1,068
All dealers	3,802	3,943	956	803	4,824	4,838
Top 10 banks [1]	2,810	947	4	6	2,814	953
All banks	3,899	2,285	14	62	3,912	2,347
Total	7,701	6,228	970	865	8,736	7,185
1965:						
Top 10 dealers [1]	2,500	793	195	34	2,721	831
All dealers	4,785	3,494	773	680	5,681	4,306
Top 10 banks [1]	3,358	946	11	46	3,369	992
All banks	4,812	2,395	69	68	4,941	2,468
Total	9,597	5,889	841	748	10,622	6,774

[1] The 10 dealers and 10 banks ranked highest in terms of management of new issues.

Source: Investment Bankers Association of America.

TABLE 2.—*Distribution of underwritten issues: By type offering and dealer*

[General obligation bonds, 1957–65 (dollar amounts in millions)]

	Competitive		Negotiated		Total	
	Amount	Number	Amount	Number	Amount	Number
1957:						
Top 10 dealers [1]	$869	474	$9	11	$879	485
All dealers	1,865	3,041	155	732	2,084	4,016
Top 10 banks [1]	1,674	604	27	37	1,170	641
All banks	1,987	1,125	52	98	2,039	1,223
Total	3,852	4,166	207	830	4,123	5,239
1958:						
Top 10 dealers [1]	1,204	531	7	7	1,211	538
All dealers	2,297	3,083	162	735	2,525	3,998
Top 10 banks [1]	2,154	650	17	46	2,171	696
All banks	2,924	1,207	37	110	2,960	1,317
Total	5,220	4,290	199	845	5,485	5,315
1959:						
Top 10 dealers [1]	1,180	448	9	6	1,189	455
All dealers	2,239	3,035	126	551	2,384	3,749
Top 10 banks [1]	2,188	524	57	27	2,245	551
All banks	2,502	1,131	76	85	2,578	1,216
Total	4,741	4,166	202	636	4,962	4,965
1960:						
Top 10 dealers [1]	1,377	625	6	6	1,382	631
All dealers	2,407	3,139	118	457	2,536	3,691
Top 10 banks [1]	2,113	621	3	21	2,138	644
All banks	2,472	1,220	20	77	2,513	1,299
Total	4,878	4,359	138	534	5,048	4,990
1961:						
Top 10 dealers [1]	1,062	715	44	11	1,106	726
All dealers	2,555	3,651	156	394	2,721	4,125
Top 10 banks [1]	2,614	848	3	15	2,617	863
All banks	3,033	1,574	14	63	3,047	1,638
Total	5,588	5,225	170	457	5,768	5,763
1962:						
Top 10 dealers [1]	1,204	913	3	3	1,208	916
All dealers	2,493	3,679	90	221	2,585	3,910
Top 10 banks [1]	2,514	878	20	11	2,535	889
All banks	3,009	1,695	24	32	3,033	1,727
Total	5,502	5,374	114	253	5,618	5,637
1963:						
Top 10 dealers [1]	$1,277	527	$5	5	$1,283	533
All dealers	2,429	2,579	211	550	2,679	3,189
Top 10 banks [1]	2,705	718	5	20	2,710	738
All banks	3,328	1,569	18	86	3,346	1,656
Total	5,756	4,148	229	636	6,025	4,845
1964:						
Top 10 dealers [1]	1,037	848	0	0	1,037	848
All dealers	2,462	3,269	182	379	2,659	3,724
Top 10 banks [1]	2,738	939	4	6	2,742	945
All banks	3,818	2,272	14	62	3,832	2,334
Total	6,281	5,541	195	441	6,491	6,058
1965:						
Top 10 dealers [1]	1,386	579	2	3	1,388	582
All dealers	3,066	2,797	99	272	3,207	3,158
Top 10 banks [1]	3,292	934	11	46	3,303	980
All banks	4,715	2,369	66	67	4,841	2,441
Total	7,782	5,166	165	339	8,048	5,599

[1] Includes PHA issues.

Source: Investment Bankers Association of America.

TABLE 3.—*Distribution of underwritten issues: By type offering and dealer*

[Revenue bonds, 1957-65 (dollar amounts in millions)]

	Competitive		Negotiated		Total	
	Amount	Number	Amount	Number	Amount	Number
1957:						
Top 10 dealers [1]	$573	157	$358	30	$931	187
All dealers	1,030	489	581	248	1,678	756
Top 10 banks [1]	0	0	0	0	0	0
All banks	1	4	1	4	2	8
Total	1,031	493	581	252	1,680	764
1958:						
Top 10 dealers [1]	696	149	199	38	895	187
All dealers	1,210	556	429	297	1,689	883
Top 10 banks [1]	0	0	0	0	0	0
All banks	4	8	0	3	6	13
Total	1,213	564	430	300	1,695	896
1959:						
Top 10 dealers [1]	730	137	795	15	1,525	152
All dealers	1,272	515	1,118	224	2,402	757
Top 10 banks [1]	0	0	0	0	0	0
All banks	1	1	6	4	11	9
Total	1,272	516	1,125	228	2,413	766
1960:						
Top 10 dealers [1]	743	154	326	11	1,069	165
All dealers	1,219	553	835	228	2,069	796
Top 10 banks [1]	20	1	0	0	20	1
All banks	20	3	0	1	20	4
Total	1,239	556	835	229	2,089	800
1961:						
Top 10 dealers [1]	601	160	215	22	816	182
All dealers	1,384	690	897	273	2,307	971
Top 10 banks [1]	8	2	0	0	8	2
All banks	11	10	0	2	11	12
Total	1,394	700	897	275	2,317	983
1962:						
Top 10 dealers [1]	900	224	158	20	1,059	244
All dealers	1,624	818	663	232	2,310	1,052
Top 10 banks [1]	16	5	0	0	16	5
All banks	18	12	0	0	20	16
Total	1,642	830	663	232	2,329	1,068
1963:						
Top 10 dealers [1]	$1,220	236	$652	65	$1,924	304
All dealers	2,170	911	1,576	567	3,847	1,505
Top 10 banks [1]	54	6	0	0	54	6
All banks	57	14	0	0	57	16
Total	2,227	925	1,576	567	3,904	1,521
1964:						
Top 10 dealers [1]	774	194	265	25	1,039	220
All dealers	1,340	674	774	424	2,164	1,114
Top 10 banks [1]	72	8	0	0	72	8
All banks	80	13	0	0	80	13
Total	1,420	687	774	424	2,245	1,127
1965:						
Top 10 dealers [1]	1,114	214	193	31	1,333	249
All dealers	1,719	697	674	408	2,475	1,148
Top 10 banks [1]	66	12	0	0	66	12
All banks	97	26	3	1	100	27
Total	1,816	723	677	409	2,574	1,175

[1] The 10 dealers and 10 banks ranked highest in terms of management of new issues.

Source: Investment Bankers Association of America.

CHAPTER 10

Municipal Financial Consultants*

NATURE AND FUNCTIONS

Municipal finance consulting as a profession has its roots in the great depression of the 1930's. Since many municipalities had predicated borrowing during the late 1920's on a never-ending boom, the suddenly shrinking tax revenues of the early and midthirties brought many to the brink of default. Debt reorganization and refunding became the order of the day as local governments sought to bring debt service schedules in line with revenues. The municipal finance expert was called in to act as liaison between the bondholder and the issuer and work out a debt reorganization plan acceptable to both.

Since then municipal finance consulting owes its development to the increasingly complex and competitive nature of the business of marketing debt securities of State and local governments.

SCOPE OF DUTIES

The scope of duties performed by a municipal finance consultant vary considerably depending on the nature of the issue, its size, and the standing of the issuer. Generally, however, the consultant provides the following services:

(*a*) Surveys issuer's debt structure and financial resources to determine borrowing capacity for future capital financing requirements.

(*b*) Gathers all pertinent financial statistics and economic data such as debt retirement schedule, tax rates, overlapping debt, etc., that would affect or reflect on the issuer's ability and willingness to repay its obligations.

(*c*) Advises on the time and method of marketing; terms of bond issues, including maturity schedule, interest payment dates, call features and bidding limitations.

(*d*) Prepares an overall financing plan detailing the recommended approach and probable timetable.

(*e*) Prepares, in cooperation with bond counsel, an official statement, notice of sale, and bid form and distributes same to all prospective underwriters and investors.

(*f*) Assists the issuer in getting local public acceptance and support of the proposed financing.

(*g*) Keeps in constant contact with the rating services to insure that they have all the information and data they require to properly evaluate the credit.

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* Prepared by Arthur R. Guastella, executive vice president, Wainwright & Ramsey, Inc., New York, N.Y., with minor editing by committee staff.

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(*h*) Is present when sealed bids are opened and stands ready to advise on acceptability of bids.
(*i*) Supervises the printing, signing, and delivery of the bonds.
(*j*) Advises on investment of bond proceeds.

Qualifications and Standards of Performance

In general, the municipal finance consultant should have a broad knowledge of municipal government, laws, and practices. He should also be fully conversant with the intricacies of underwriting and distributing municipal securities as well as investor preferences and prejudices. Finally, he must be capable of discerning and interpreting developments in the bond and money markets.

While there are no standards in performance as such, the professional services rendered must be of a consistently high caliber as the major portion of new business originates from the referrals of satisfied clients. Experience, reputation, and integrity are the consultant's major assets.

Structure of the Industry

At this point, a distinction should be drawn between the independent financial consultant and the investment banking firm acting as a consultant. The independent consultant renders professional service for a fee and he represents and acts for the issuer who has retained him. Investment banking firms, on the other hand, are primarily in the business of underwriting and distributing securities for a profit. While there is no question about the ability of a reputable investment banking firm to render competent advice and service—the two functions—acting as agent for the issuer and underwriting the issuer's bonds—have often raised questions of a conflict of interest. Accordingly, some investment banking firms, as a matter of policy, will not participate in the underwriting of an issue, if they are acting as consultant.

Commercial banks, by and large, limit themselves to providing general advice and guidance to governmental issuers. There are a few, however, which offer full consultant services. Attorneys, engineers, and accounting firms have also provided municipalities with advice on bond financing.

Number, Size, and Distribution of Firms

Research indicates that there are only six nationally recognized independent municipal finance consultants. One is headquartered in New York with branch offices in Florida and California and has a total of 20 employees. Another is headquartered in Chicago and serves governmental issuers through the Middle West. It has eight employees. Interestingly, there are three such firms in the Minneapolis-St. Paul area operating in Minnesota, Wisconsin, and North and South Dakota, with an estimated 40 employees. There is one independent consultant firm headquartered in California, with about four employees.

A similar tally of investment banking firms presents some problems since every investment banking firm with a municipal bond department is potentially a consultant. However, if consideration is limited to those firms which have one or more individuals actively and consistently engaged only in consulting service then there are at least 30 invest-

ment banking firms which would qualify. Most are headquartered in New York with the bulk of the remainder in Texas and California.

Relationships With Other Segments of the Industry

Financing consultants are employed as agents for the municipality and render services for a fee. The municipality looks to the consultant for advice and guidance in all phases of financing municipal improvements. The consultant, acting as liaison between issuer and underwriters should anticipate and provide for all of the prospective underwriters' needs in the preparation of the bid.

The consultant should work to stimulate interest in the issuers securities among investors and also make sure that bondholders are kept fully informed.

The consultant should work very closely with other technical advisers such as bond counsel, engineers, and architects.

Remuneration

Just as the type of services provided will vary from issuer to issuer, so too does the basis of contracts vary. The size and method of payment of fees will depend upon the type of issue, its size, and complexity.

An issuer who makes regular demands on the capital market may contract with a financial consultant on the basis of an annual retainer. The annual retainer is also preferred in the case of a unique or major project which may involve many years of work before any bonds are actually issued. The retainer may cover all services or it may be credited against a per bond fee, or it may be in addition to per bond fees. Such fees may or may not include expenses.

In a good many cases the fee is established on a per bond basis with charges for revenue bonds generally higher than those on straight general obligation bonds. Such fee schedules are on a sliding scale with the per bond charge decreasing as the size of the issue increases. On a $1 million general obligation issue for example, the fee might be between $2 and $3 per $1,000 bond, while on a $10 million issue, it would only be about $1 or $1.50 per bond.

Revenue bond consulting fees show considerable variation because such issues are generally much more complex than issues backed by a governmental unit's full faith and taxing power. If the security provisions are relatively simple the per bond fee might be only about 25 percent higher than on a general obligation issue of the same size. On others, the fee schedule could be $5 per bond on the first $5 million and $2.50 per bond over $5 million. In certain special instances a per diem arrangement may be made.

As a practical matter, consulting fees can be fixed only after considering the individual bond issue and determining just how much work is involved. There are no pat formulas for putting a bond issue together. Governmental issuers are considerably diverse in their makeup, borrowing powers, etc., and their financing problems are equally diverse.

Future Prospects

When a State or local government undertakes to borrow for a capital improvement, it binds its citizens to a financial obligation which will endure for a generation or more. Increasingly, State and local finance

officers are discovering that the planning, preparation, and execution of a bond issue creates responsibilities which cannot be superimposed on an already burdensome workload. In today's high-volume market, with so many issues competing for investor acceptance, a sloppily prepared or ill-conceived bond issue will result in unnecessarily high interest costs.

Two factors—the heightened competition for the investor's dollar and the increasingly complex nature of the debt instruments themselves—have caused more and more harassed public finance officers to take advantage of the specialized knowledge and broad experience offered by the professional municipal finance consultant.

The industry, while relatively small, is dynamic. All participants report heavy workloads but face one major impediment to expansion: the lack of qualified personnel.

CHAPTER 11

Municipal Bond Counsel*

INTRODUCTION

The practice of employing experienced attorneys to render approving opinions respecting the validity of municipal bonds [1] originated as an aftermath to the disenchanting debacle of railway aid financing. Many public agencies engaged in the dubious competitive effort to attract railroad facilities by issuing municipal bonds to pay for subscriptions to railroad stock and to make donations for railroad construction. "This invention to aid the enterprises of private corporations," the eminent Judge John F. Dillon has written, "has proved itself baneful in the last degree * * * and has undeniably been attended with very serious, and it is perhaps not too strong a statement to add, disastrous consequences." The Supreme Court of Illinois has stated that this "mania" for extending such public aid in the construction of railroads resulted in "poisonous byproducts" which far outweighed the temporary benefits. Not the least of such poisonous byproducts were the heavy losses suffered by investors in municipal bonds. Inevitably, the staggering burdens imposed on taxpayers through such extravagant financing precipitated widespread defaults. The lack of sound financial and legal advice in the issuance of the bonds provoked repudiation and litigation voiding numerous bond issues.

In the wake of such excesses, reform measures to prevent recurrences were invoked. Constitutional and charter provisions were adopted and laws were enacted imposing upon States, counties, cities, and other public agencies limitations upon the incurring of indebtedness, the levy of taxes, the granting of aid to private persons or corporations, and the use of public moneys for purposes not public in nature. Election and other restrictive procedural requirements were enacted, further augmenting the legal restrictions attending the issuance of municipal bonds.

The need for the services of bond attorneys thus emerged. Investors required assurances as to the validity of the bonds. In order to mitigate resistance to the purchase of municipal bonds, the practice developed whereby bond dealers used house counsel or retained bond attorneys to render approving opinions on bonds. Bids for the purchase of bonds were conditioned upon the approving opinion of a designated attorney. In such case the bond transcipt would

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* Prepared by Joseph Guandolo, partner, Mitchell, Pershing, Shetterly & Mitchell, New York, N.Y., with minor editing by committee staff.

[1] Bonds issued by States and Puerto Rico and their municipal corporations and political subdivisions and by authorities, districts, and other public agencies.

be sent to the attorney after the award of the bonds had been made to a particular bidder. Pending the completion of the legal examination of such transcript, there was always uncertainty as to whether the bonds would be approved and delays in the delivery of the bonds. Delays were experienced in compiling the transcript and in amending and supplementing various papers and proceedings to meet the requirements of such attorney. Irregularities in bond elections discovered at the last moment were embarrassing impediments. Litigation occasionally resulted from efforts of public agencies to retain bid deposits or enforce accepted bids in situations where such attorneys failed to render approving opinions on the bonds. This early practice of dealers' employment of bond attorneys proved disadvantageous and is now largely supplanted by the practice of having the public agency issuing the bonds retain bond counsel. It is now customary for the issuing public agencies to offer approving opinions of bond counsel on practically all municipal bond issues. Underwriters and purchasers are thereby assured that the issuance of the bonds, from the initial inception to final delivery, conforms to constitutional, statutory, and charter requirements and that the bonds are otherwise valid and binding. In a publication relating to municipal bonds, one of the Nation's largest banks comments as follows:

> The importance of a municipal bond attorney must never be underestimated. Because the procedure through which a unit of government may borrow for any purpose is specifically prescribed by law, the prospective bond purchaser must be assured that every step in the authorization process has been taken in strict observance of the law. This assurance is given to prospective investors by securing the unqualified approving legal opinion of a nationally recognized bond attorney. Municipal bonds are not generally marketable without such an opinion.

In striking contrast, no similar opinion of counsel is required for the sale of bonds of private corporations. The powers of private corporations to issue bonds are extremely broad and are not subject to substantive and procedural limitations of the type imposed upon municipal corporations. The validity of municipal bonds generally is dependent upon meticulous compliance with a maze of constitutional, statutory, and, in some cases, charter provisions and judicial opinions strictly limiting and circumscribing, both substantively and procedurally, the powers of public agencies to issue municipal bonds. In addition, the authority to issue municipal bonds is subject to the restrictive underlying legal principle that municipalities and other public agencies of a State may exercise only such powers as are expressly granted by law or are necessarily implied from powers expressly granted.

1. Nature and Functions of Bond Counsel

(A) SCOPE OF DUTIES; SERVICES RENDERED

The branch of law in which bond counsels specialize comprises a vast array of general statutes, special laws, charters, constitutional provisions, opinions of State and Federal courts, and administrative and other rulings, pertaining to the authorization, description, terms, conditions, and procedures for the issuance of bonds of various types by the States, Puerto Rico, and many hundreds of counties, municipalities, and other public agencies. The scope of the duties of bond coun-

sel is delineated by the expanding limits of the municipal bond industry, now exceeding an annual volume of $11 billion. The ambit of the bond attorney's services has been progressively extended with the changing scope, complexity, and increasing volume of municipal bond financing.

Specifically, the duties of bond counsel are broad as necessary to establish to his satisfaction the legality of the bonds when they are issued and delivered. He is expected to examine the applicable law and to review the bond proceedings, resolutions, ordinances, election documents, if any, and other documents to determine whether he can render an approving opinion as to the validity of the bonds. This basically and traditionally has been, and currently is, the principal function of bond counsel.

However, the role of bond counsel in connection with many bond issues, particularly revenue bond issues, is far more extensive. Population increases, urbanization, technological advancements, industrial and commercial expansion, educational, health, social and cultural developments and other factors have built up pressures for more and better public facilities and public services. The functions of bond counsel have expanded to keep pace with new methods and the added complexities of financing the public facilities and services demanded by a more sophisticated or, in any event, a more affluent citizenry. The challenge of coping with such demands has called forth the specialized knowledge and experience of bond attorneys to develop new, or to adapt old, legal concepts and techniques of public financing. In cooperation with legislators, public officials, underwriters, investors, engineers, and others, bond attorneys have engaged in drafting legislation, even constitutional amendments, devising new methods of financing, creating new public instrumentalities and preparing trust indentures, resolutions, ordinances, contracts, and other documents that have contributed to the acceptance by the investing public of an increasing volume of municipal bonds.

When employed in the initial stages of a proposed bond issue, bond counsel is in a position to offer suggestions for obviating delays and perhaps costly errors. Through conferences with public officials, underwriters, and financial consultants respecting the proposed financing, bond attorneys may advise as to the nature of the financing that is most suitable from a legal point of view and may outline the actions and proceedings required to effectuate such financing. He may determine that the enactment of additional legislation may be required, or that certain legal questions may have to be adjudicated, or, in certain instances, that a constitutional amendment may be necessary. He may prepare the additional legislation or the constitutional amendment, if found necessary, and in connection with any litigation to resolve legal questions, may frame the questions that are to be submitted for judicial determination and may prepare, or assist in the preparation of, pleadings, briefs, and other litigation papers and, occasionally, may appear in court.

The work of bond counsel, more prosaically, is marked by searching, meticulous, and detailed examinations of laws, legal instruments, and proceedings—work occasionally disparaged as "the dotting of the i's and the crossing of the t's" approach. Such deliberate approach and circumspection stem from bond counsel's overriding objective to estab-

lish to his satisfaction the legality of the proceedings and the validity of the bonds and also to minimize the risk of litigation on the bonds following their issuance. He recognizes that litigation, even if terminated favorably, is prejudicial to the interests of bondholders and that no buyer of bonds wants to buy a lawsuit.

Bond counsel's initial consideration is whether there is legal authority for the issuance of the bonds. This may entail a search for and a study of general statutes, local laws, charter provisions and constitutional provisions. The statutory or charter authority for the issuance of the bonds must be consistent with constitutional requirements and limitations. Journals of legislative bodies relating to the enactment of legislation occasionally must be examined to ascertain whether the enactment conforms to constitutional requirements. The opinions of State and Federal courts bearing upon the legality of the bonds have to be considered.

If satisfied that legal authority to issue the bonds is duly vested, bond counsel then prepares (or, in certain cases, reviews), in the light of applicable legal requirements and limitations, the proceedings for the issuance of the bonds, including the legal instruments necessary to authorize the issuance of the bonds and to describe the bonds and the security thereof. Ordinances, resolutions, and, particularly for revenue bond issues, trust indentures are usually the bond authorizing instruments.

In the preparation of such legal instruments, bond counsel is guided by forms and precedents previously used, but each bond issue requires a legal instrument specifically tailored to fit the particular factual and legal situtaion. Frequently, new and imaginative approaches to solve unique problems which constantly arise must be devised. A trust indenture of over 150 printed pages is not unusual in revenue bond financing. Its length, often facetiously attributed to the verbosity of lawyers, is essential for the proper delineation of the security for the bonds and for the protection of the interests of the public agency issuing the bonds, the purchasers of the bonds and the trustee administering the trust. Many of the provisions of the trust indenture have been developed to meet specific problems that have arisen or to satisfy suggestions of investors, underwriters, financial consultants, engineers, trustees, public agencies, and others. The trust indenture, an instrument that may remain in force for perhaps more than three or four decades, long after the participants in its drafting are departed, must specify clearly and in reasonable detail the description of the bonds authorized, the security of the bonds, the custody and application of the bond proceeds, the charging, collection, and administration of rates and charges, the creation of reserve funds and accounts, the safeguarding and application of revenues, the covenants respecting the operation, maintenance, repair, use, and insuring of the project being financed, the remedies of the bondholders in the event of default, the rights and duties of the trustee, and other requirements and procedures.

Notwithstanding a certain rigidity respecting provisions deemed fundamental, the form of trust indenture securing revenue bonds is still in the process of development. It must always remain flexible and readily adaptable to new conditions.

If a revenue bond issue is not secured by a trust indenture, bond counsel in drafting the bond ordinance or bond resolution may adapt and include many of the provisions otherwise contained in a trust indenture.

Following the initial preparation of the trust indenture, bond ordinance or bond resolution, such instrument is submitted for review by the interested parties. Conferences and discussions are usually required before bond counsel drafts in final form a legal instrument acceptable to all parties. When prepared in final form, the document is submitted for approval, adoption, and, if required, proper execution.

Bond counsel may also draft agreements of lease when rentals thereunder are pledged for the payment of revenue bonds and contracts for the purchase of existing facilities whose revenues are similarly pledged. Illustrative of bond counsel's expanded services under the complexities of modern day municipal financing are the services being performed by one firm of bond attorneys as "project attorney" on all the urban renewal projects in a State.

With respect to general obligation bonds payable from ad valorem taxes, the work of bond counsel generally is not as time consuming as that for revenue bonds. The forms of legal instruments therefor are not subject to the degree of continual revision typical for revenue bond issues and, moreover, general obligation bonds, unlike revenue bonds, offer little basis for discussions and agreements as to the security and other matters. Trust indentures usually are not involved. However, the constitutional and statutory limitations mentioned above are applicable and bond counsel must be satisfied that the general obligation bonds are within applicable debt limitations, that any applicable tax limitation as to rate or amount is observed and that any required elections respecting the bonds or the project financed thereby are called and held in conformity with law.

Special assessment bonds require a meticulous examination of a maze of technical legal requirements designed to protect property rights. Bond counsel must ascertain that the assessment or charges against the property benefited by the improvement financed have been duly assessed in conformity with the prescribed procedures, which may include the giving of due notice and the holding of public hearings. If such bonds under applicable law are additionally secured by ad valorem taxes, bond counsel must be assured that the legal requirements for the authorization and levy of such taxes are observed.

Bonds secured, in whole or in part, through pledges of excise taxes, such as motor fuel, cigarette or public utility taxes, or through rents payable from funds, appropriated periodically, present additional legal problems that must be resolved to the satisfaction of bond counsel.

Bond counsel's duties may also embrace the preparation of additional ordinances and resolutions, forms of minutes, certificates, affidavits, statements, and other legal instruments necessary or desirable to evidence the proper approval, authorization, and issuance of the bonds in conformity with applicable legal requirements and, if pertinent, the understandings or agreements of the interested parties, and to assure that the public agency can undertake, carry out, and finance the project in the manner proposed, that the bonds are issued and secured as permitted by law and will be marketable at reasonable rates

of interest, and that the purchasers and holders of such bonds are adequately protected. Bond counsel examines the rates of interest, the maturity schedule, the date and denomination of the bonds, the maturities, the registration privileges, the place of payment and also the printer's proofs of the bonds to make sure that they are properly printed by a firm qualified to do the work and operating under procedures of supervision and control as to eliminate duplicate or illegal bonds and to prevent counterfeiting and forgery of bonds.

The public agency issuing the bonds usually provides a prospectus or official statement relating to the bond issue and the agency issuing the bonds. Oftentimes such prospectus or statement is prepared by the financial consultant of the agency. Bond counsel must review the prospectus or official statement to make certain that the legal information is correct and that no material legal information has been omitted. The bond attorney also examines the transcript of the proceedings providing for the sale of the bonds to satisfy himself that the bonds have been legally sold. If a public sale is required, bond counsel must be satisfied that the sale has been properly advertised and that the bid accepted is legally acceptable. He must also be satisfied that the bonds are properly executed, and to that end he examines one of the executed bonds of each series (if more than one series).

Prior to the delivery of the bonds, the bond attorney must hold himself ready to answer inquiries respecting the bonds from rating services, institutional investors, underwriters, trustees, paying agents and others.

A date mutually satisfactory is set for the delivery of and payment for the bonds. If on such date bond counsel is satisfied that the certificates and other closing papers are in good order and all conditions precedent have been satisfied, the bonds are delivered and evidence of payment therefor in full is required. Simultaneously, the opinion of bond counsel approving the bonds is released.

Generally, it is the practice to deliver to a purchaser of municipal bonds a copy of the legal opinion rendered on such bonds. The practice has developed, upon the basis of a recommendation made in 1958 by the Investment Bankers Association, to have the complete final legal opinion, with the name of the attorney, printed on the back of each municipal bond with a certification, signed with a facsimile or manual signature by a paying agent or an official of the issuer, that the copy is a true and correct copy of the original opinion. However, the practice of printing a copy of the legal opinion on the back of municipal bonds does not extend to opinions, such as those on certain revenue bonds, that are too lengthy for such purpose.

The rendering of this final opinion may be the climax, but not necessarily the end, of the bond attorney's work on the bond issue. Questions may arise after the date of closing which the bond attorney is expected to resolve. Prospective purchasers of the bonds in the secondary market, the trustee, the consulting engineers, the accountants, the underwriters, and the issuing public agency often pose problems that require additional legal services. Bond attorneys usually perform such services as a part of their overall functions in connection with the bond issue.

(B) BASIS OF CONTRACT

Bond attorneys, as indicated above, are generally employed by the public agencies issuing the bonds. However, in certain cases, particularly in connection with large revenue bond issues, the underwriters may employ bond counsel. Normally he works with the public agency issuing the bonds in the same manner as if he were directly employed by such agency.

Arrangements for the services of bond counsel are rather informal. An exchange of letters between the bond attorney and the client usually suffices to consummate the attorney-client relationship. If the public agency issuing the bonds employs the bond attorney, a resolution authorizing or approving the employment of counsel may be adopted. If the bond attorney has represented the public agency with respect to previous bond issues, there may not be any specific reference to legal fees as it will be assumed that the fees will generally be in line with previous charges. Oftentimes it may not be feasible to quote at the initial stages of the bond proceedings a definite fee. In such case, the determination of the fee is postponed until a proper evaluation of the work and responsibility involved can be made or, if otherwise necessary, the bond attorney may quote a maximum or minimum fee or a minimum and maximum range, with perhaps some qualification respecting unanticipated events, such as litigation. Fairly definite fees may be quoted early respecting certain types of bonds involving established types of proceedings.

In certain cases bond counsel may be employed by the public agency issuing the bonds subject to the requirement that the purchaser of the bonds shall pay bond counsel's fees. In such cases it is important that the prospective purchasers of the bonds know the amount of the fees prior to the submission of their proposals to purchase the bonds so that the fees may be reflected in their bids.

Occasionally, advertisements for the sale of bonds (primarily obligations guaranteed by the Federal Government) provide that bids may be conditioned upon the successful bidder's obtaining the approving opinion of recognized bond counsel of his choice, to be employed and paid by the bidder. Under this procedure the public agency issuing the bonds loses the advantage of having bond counsel employed early in the proceedings to assist in setting up the bond issue upon an acceptable basis and helping to resolve legal questions early in the proceedings. In addition, whether bond counsel is employed by the issuing public agency or whether the issuing public agency pays the fees of bond counsel directly, the ultimate result is that bond counsel's fees are reflected in the price paid for the bonds.

Many public agencies pursue the practice of employing the same firm of bond attorneys year after year. Generally, neither changes in the incumbency of office holders nor changes in the political affiliations of the administration of a particular State, county, or city affects the continuity of such employment of bond counsel. In consequence, such public agencies have the benefit of the services of legal specialists who have acquired a valuable background of knowledge and have become familiar with the financial and legal aspects of the financing of public improvements by such agencies.

The employment of bond counsel by an underwriter or the managers of a group of underwriters may be effected quite informally,

frequently by a telephone call or a letter. Fees may be agreed upon at the time of employment in connection usually with general obligation bonds sold through public bidding. As to certain bond issues that are to be purchased through negotiations, the question of fees may not be discussed until shortly before the actual purchase of the bonds by the underwriters.

(C) QUALIFICATIONS AND STANDARDS OF PERFORMANCE

The principal qualification of bond counsel is an established reputation in the municipal bond market. This is gained through high standards of performance in the approval of many bond issues over a span of years. Integrity, experience, a broad background in municipal bond law, familiarity with the needs of public agencies and the requirements of investors and underwriters, skill in drafting essential legal instruments, and an ability to perform his functions with imagination and at the same time with meticulous attention to detail, precision, and thoroughness—these are the attributes of a highly skilled specialist in the field of municipal bonds.

Bond counsel must determine whether a bond issue has been legally issued. The legality of the bond issue cannot be evaluated upon a basis of gradation. It is either legal or illegal. Unless bond counsel is fully satisfied that the bonds are legal, he will not render an approving opinion on such bonds.

Irrespective of who pays his legal fees, bond counsel bears the responsibility of protecting the interest of the ultimate purchaser of the bonds insofar as the legal aspects thereof are concerned. He actually functions as the lawyer for the ultimate purchaser of the bonds in the secondary market. Bond counsel recognizes that the purchaser of bonds is primarily concerned with the payment of the principal and interest on the bonds and that, accordingly, both the legality of the bond issue and the technical aspects thereof bearing upon the payment of principal and interest and the enforceability of the rights of the bondholders fall within bond counsel's functions.

In so filling his responsibility to the ultimate investor, bond counsel cannot, however, ignore safeguarding the rights and interest of the public agency issuing the bonds and those of the underwriters. The attainment of the objectives of the public agency and the marketing of the bonds by the underwriters with reasonable expectation of success cannot be subordinated. Bond counsel must balance equities among the various parties and seek to protect the proper interests of each party. Generally, there exists a compatibility of purpose among such parties.

2. Size and Structure of Industry

(A) NUMBER OF FIRMS

The latest 1966 Directory of Municipal Bond Dealers of the United States, as published semiannually by The Bond Buyer, contains an appendix listing a total of 128 firms which are reported to have performed bond attorney work in the preceding calendar year. It is specifically stated therein that the list has been compiled upon the basis of reports to The Bond Buyer to the effect that the bond attorneys listed have rendered at least one legal opinion in the preceding calendar year upon an issue of State or municipal securities.

Several of the firms listed in such directory may be classified as "nationally recognized bond counsel," in the sense that their opinions upon municipal bonds issued in any jurisdiction are marketable; i.e., are acceptable to the investing public. The opinions of many other bond firms listed are acceptable nationally by the investing public with respect to bonds issued in the particular jurisdiction or region in which such firms are located. Many smaller issues are sold locally with what is known as a local opinion rendered by a bond attorney usually situated in the particular locality in which the bonds are issued.

The public agencies issuing bonds are in competition to attract the highest purchase price for their particular bonds. Each day many issues of municipal bonds are offered. The bond issues which appear most attractive and most desirable to the prospective purchasers will be sold at a better price. The reputation of the bond counsel selected to render the approving opinion on the bonds has a bearing upon the marketability of the bonds and, therefore, upon the purchase price. Larger bond issues supported by local opinions may encounter bidder resistance and higher interest costs. An essential question in issuing bonds is whether the opinion will be recognized as marketable.

Some issues may be marketed under the approving opinions of both a firm of nationally recognized bond counsel and a firm of bond attorneys not so recognized. Certain public agencies follow the practice of offering in support of their bonds the opinion of their local counsel and the opinion of nationally recognized bond counsel. Occasionally, the opinions of two nationally recognized firms of bond counsel may be rendered on a bond issue.

The law firms listed in the directory range from those which have been recently established or which render only one or two opinions upon the validity of bonds in a year to firms which have been established for a half century or more and annually render opinions upon scores of bond issues of various types and have rendered opinions during their existence upon literally billions of dollars of bonds. Many of the firms listed engage in other legal work in addition to municipal bond work. Other firms devote their full time exclusively to municipal bond matters and engage in no other legal work.

Bond attorneys are specialists in a rather narrow field of law. It is interesting to note, however, that many of the firms, through choice or historical reasons, are actually specialists within the specialty of municipal bond law. Certain firms confine their work solely to certain types of bonds, such as special assesment bonds or general obligation bonds. Other firms are specialists in revenue bonds, such as power, water, turnpike and bridge revenue bonds. Some firms specialize only in the bonds of a particular jurisdiction or perhaps a few jurisdictions and are unwilling to render opinions upon bonds issued in other jurisdictions in order to avoid a dilution of their talents and resources.

(B) SIZE OF FIRMS (NUMBER OF EMPLOYEES)

Approximately 500 partners and associates of the law firms listed in the directory are named as performing the work of bond attorneys. It is apparent that many of such lawyers do not devote their full time to municipal bond work. Also, some of the firms listed have rendered only one or two legal opinions on municipal bonds in the preceding

calendar year and, hence, the partners and associates in such firms named in the directory did not devote their full time to bond counsel work during such year.

Twenty-two of the firms listed in the directory have only one partner or associate listed as performing bond counsel work. One Illinois firm has 19 bond attorneys designated. An Ohio firm has 15 bond attorneys designated. A California firm has 14 attorneys listed as performing bond counsel work. Four other firms have 10 or more bond attorneys listed.

Aside from the listed firms of bond attorneys, bond work to a greater or less degree is performed, in conjunction with bond attorneys, by many legal officers of public agencies, including attorneys general, county attorneys, city attorneys, corporation counsel and general counsel, solicitors and attorneys for authorities, school districts and other special districts and political subdivisions.

(C) DISTRIBUTION BY STATES, MAJOR CITIES

The 128 firms of bond attorneys listed in the directory are located in 37 States and the District of Columbia. According to this directory, in each of 10 States there are 2 firms, in each of 4 States there are 3 firms, and in each of 14 States there are 4 or more firms. The Commonwealth of Pennsylvania with 21 firms listed in such Directory, 12 of them in the city of Philadelphia, leads the Nation in such category. The State of New York has 8 firms of bond attorneys, all located in the city of New York. Seven firms are located in Baltimore, Md.

The distribution of such firms is as follows:

States:	*Number of firms*
Pennsylvania	21
New York	8
Maryland, Texas	7
California, Kansas, Louisiana	5
Connecticut, Georgia, Illinois, Kentucky, Massachusetts, Minnesota, Washington	4
Alabama, Arkansas, Ohio, and Oklahoma	3
Arizona, Colorado, Iowa, Maine, Michigan, Missouri, Nebraska, Tennessee, Utah, and West Virginia	2
District of Columbia, Florida, Indiana, New Mexico, Oregon, South Carolina, South Dakota, Vermont, Virginia, and Wisconsin	1

3. RELATIONSHIPS

(A) WITH BORROWERS

Usually a close working relationship between bond counsel and the public agency issuing the bonds is maintained. Such agency must communicate to bond counsel as clearly and as fully as practicable its objectives in issuing the bonds and the type of obligations to be issued and must furnish bond counsel information and numerous bond transcript documents as requested by bond counsel. Depending upon the type of bonds involved and the procedures and requirements under applicable law, bond counsel may request certified copies of proceedings, resolutions, ordinances, affidavits, opinions, reports and other documents and information. Oftentimes, the bond transcript is voluminous.

Bond counsel are very meticulous about details, and it is to the best interests of the public agency issuing the bonds to satisfy the requests for information and documents made by bond counsel, however unimportant that may appear to be to the layman. Bond counsel knows that full and meticulous observance of the requirements of the law is a protection to the public agency, the underwriters and the investing public.

(B) WITH BOND UNDERWRITERS

Bond attorneys also maintain close working relationships with underwriters. This is particularly true in connection with large revenue bond issues. Bond counsel frequently attended conferences of underwriters during the early stages of a proposed bond issue to discuss the type of security and any proposed methods of financing from a legal point of view. From these early stages to the final closing of the loan and beyond, bond counsel collaborates with the underwriters in setting up the bond issue to accord with the agreement of the public agency and the underwriters. Representatives of the underwriters and bond counsel from time to time confer with respect to provisions of the proposed trust indenture, the official statement and other legal papers. Bond counsel frequently attend underwriters' information meetings to discuss the legal aspects of the issue and to answer questions bearing upon such aspects. Bond counsel also may prepare for the underwriters other legal instruments pertaining to the bond issue, such as the contract of purchase of the bonds submitted by the underwriters to the public agency issuing the bonds.

(C) WITH LENDERS AND INSTITUTIONAL INVESTORS

Banks, insurance companies and other investors by telephone or letter often request bond counsel to furnish information or advice respecting a proposed bond issue. Occasionally, changes in the trust indenture are made at the suggestion of prospective investors. Additional transcript documents may be required in order to satisfy the requests of an insurance company or a bank. Some of the larger investors examine the bond transcript which is provided by bond counsel and occasionally raise questions respecting the sufficiency of the transcript or the interpretation of certain instruments included in the transcript. Bond counsel must at all times cooperate with such investors and provide the information desired to the fullest extent feasible.

After the loan has been closed, purchasers of the bonds may raise questions respecting the interpretation of some provision in the bond itself or in the trust indenture or other legal instrument authorizing the issuance of the bonds. In all such cases bond attorneys usually provide such services without charge as part of their overall responsibilities.

(D) WITH OTHER TECHNICAL ADVISERS—FINANCIAL ADVISERS, CONSULTING ENGINEERS

Bond attorneys work closely with the financial advisers of a public agency. The financial advisers consult with bond counsel respecting the legal aspects of projected plans of financing. Through such con-

ferences and discussions with bond counsel, the financial consultants formulate a method of financing and recommend the type of bonds to be issued. The legal instrument prepared by bond counsel for the authorization of the bonds, such as the bond ordinance, bond resolution, or trust indenture, is based on such recommendations, as accepted by the public agency, and referred to such financial advisers for suggestions and comments which, if legally acceptable, are incorporated in the legal instrument.

In connection with certain types of revenue bond issues two firms of consulting engineers may be employed, one to design and supervise the construction of the project to be financed and the other firm to make estimates of revenues, such as toll revenues on a turnpike or toll bridge, and other determinations and projections. Bond counsel may confer with such engineers and review the engineering reports to make certain that they include findings, determinations, and statements consistent with the requirements of law and the trust indenture.

Bond counsel also maintain a close working relationship with local counsel of the public agency. Bond attorneys normally are not substitutes for local counsel. In fact, local counsel facilitate the work of the bond attorneys. Such services as rendering day-to-day advice to the issuing body, attending its meetings, preparing certain types of legal papers, acquiring land, handling litigation, and otherwise guiding the bond proceedings at the local level can be more effectively performed by local counsel working in cooperation with bond counsel.

In drafting the trust indenture, bond counsel considers the suggestions and comments of the trustee and its lawyers. The trustee may frequently consult bond counsel respecting various legal aspects of the functions of the trustee.

4. Remuneration

Bond counsel, like other attorneys, are compensated on the basis of legal services rendered. The fees of bond counsel are not governed by any schedule of fees suggested or agreed upon by bond attorneys or by any other group of attorneys. The volume of such type of legal work in any jurisdiction is so limited and the number of firms engaged therein is so small that, to my knowledge, no bar association has attempted to formulate a schedule of fees for bond counsel.

This, however, is not to say that bond counsel's fees do not conform to fair and reasonable standards. Foremost among the controlling factors are the reasonableness and integrity of the bond attorneys and the salutary effect of competition among them. Generally, their fees are much lower than the charges that would be made by lawyers who are not specialists in the field of municipal finance and are less experienced. The fairness and reasonableness of such fees are evidenced by the continuity of employment, as mentioned above, of a firm of bond attorneys by a public agency. The several factors that determine legal fees are the complexity of the work involved, the time devoted to the performance of such work, and the degree of responsibility assumed by the bond attorney. The degree of responsibility is related to the amount of bonds that are approved under his legal opinion and the complexities involved. The larger the bond issue, the greater is the lawyer's responsibility. Where the bond attorney's work consists merely of examining a bond transcript which is provided to him covering a simple bond issue, lower fees can, of course, be expected. Much

higher fees are justified for a more complicated or revenue bond type of financing. Extraordinary or novel methods of financing may entail extraordinary or unusual legal issues that have to be resolved by bond counsel and other additional services.

Occasionally, bond attorneys perform their legal services upon a contingent fee basis whereby the legal fees are payable only if the bond issue in question is sold and delivered. Work upon a contingent fee basis is performed in conformity with the prevailing code of ethics of the American Bar Association. As is to be expected, legal fees payable upon a contingency are larger than would be the case if no contingency were involved. Issuing authorities and underwriters usually prefer that the legal work be performed upon a contingent fee basis. If the bond issue is not sold in such case, no liability for the payment of the legal services is incurred. Generally, the bond attorney then recovers only his out-of-pocket expenses for travel, telephone calls, and similar disbursements.

The legal fees for opinions on general obligation bonds of the ordinary type payable from ad valorem taxes are usually based upon a certain amount per bond with a graduated scale providing for a lower per bond fee as the principal amount of bonds involved increases. The fees for such general obligation bond issues vary as among different bond counsel in different localities. Differences in legal requirements, such as election requirements, may account at least in part for such variances in charges.

Historical factors also play a part in determining legal fees. A bond attorney may be governed by fees that he may have charged a particular client for similar services over a long period of time, and he may be reluctant to increase such fees notwithstanding his increasing costs of operation.

In many instances bond counsel's fees are subject to review and approval by various governmental agencies. Fees pertaining to bond issues of public agencies in connection with loans made by the Federal Government are subject to approval both by the respective local agency issuing the bonds and by the Federal Government. Charges of bond attorneys in connection with other bond issues not involving a Federal loan are subject to approval by the appropriate officers or governing bodies of the State, county, city, or other public agency issuing the bonds. If the bond attorney is employed by the underwriters or the purchasers of the bonds, the fees of the bond attorney must be acceptable to such underwriters or purchasers.

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CHAPTER 12

Consulting Engineers*

1. NATURE AND FUNCTIONS OF CONSULTING ENGINEERS

The consulting engineer is an individual or group of professional engineers who offer professional services in specialized engineering fields. The consulting engineer offers independent opinions and solutions to problems based on training and experience. The consulting engineer is available for engagement on engineering matters just as a medical doctor or an attorney is available in their respective fields.

Consulting engineers offer a wide variety of services, including preliminary reconnaissance and appraisal, planning and feasibility studies, engineering design, plans and specifications, construction coordination, supervision of operation, and consultation on special programs. These services are available under a wide variety of contractual agreements from qualified consultants.

A. SCOPE OF DUTIES, SERVICES RENDERED

(1) *Preliminary reconnaissance and appraisal.*—The consulting engineer provides independent and expert analysis of specific problems both for preliminary and for more detailed feasibility surveys to develop a definite course of action. The preliminary engineer report to the client may include estimates of construction costs, descriptions and sketches of various plans contemplated, and a review of the site. This phase is important to the client to assist in reaching a decision, but does not include broad comparisons or investigations.

(2) *Planning and feasibility studies.*—The consulting engineer's studies determine possible solutions to the engineering problems and the most economical solutions in terms of both short- and long-range planning as the needs of a situation require. The various engineering solutions available to the client are developed after careful analysis of the present and future needs, detailed costs and benefits, and financial capability of the client. The choices of possible solutions are explained to the client and a recommendation of the best choice is made based upon all relevant factors. Estimates for economical comparisons in these studies, including operating costs, overhead, financing consideration and rates, or expected revenue, may require extensive analysis of historical data and the projection of statistical estimates for future years. Long-range planning, functional studies, and analyses to determine the possibilities of future development are important parts of this phase of the consulting engineer's service.

(3) *Engineering design.*—Preparation of design plans and specifications involves the translation of brief outlines and sketches into

*Prepared by the Council of Consulting Engineers with minor editing by committee staff.

working drawings, and details and specifications for the guidance of constuction. The design includes basic layout concept and development, calculations to determine strength and capacity requirements, and selection of equipment and materials. These engineering services insure safe, smooth, and effective construction.

(4) *Construction coordination.*—Coordination of construction includes engineering assistance and administration, as the agent of the client, in preparing contract documents, obtaining and evaluating construction contract bids, reviewing schedules and progress during project inspection, checking materials and equipment purchased, inspecting contractors' shop and working drawings, outlining test procedures, reviewing and approving changes, checking costs and payments, supervising final tests and inspection, and preparing record drawings. Engineering supervision may be on occasion an intermittent basis but is generally on a continuous basis for the entire construction period.

(5) *Supervision of operations.*—The consulting engineer provides this service for structure and facilities as well as for operating systems such as production lines, process plants, automated control installations, and other systems. The service may be necessary for several years after completion of the project. It combines experience gained in operating comparable equipment in other plants with related operating techniques.

(6) *Consultation on special problems.*—The consulting engineer offers services in such areas as utility rate studies, value of property, patents, technical expert testimony in litigation, research on methods, review of operating procedures, and assistance in financing.

B. BASIS OF CONTRACT

Professional services may be obtained by the client under a wide variety of contractual arrangements. These can be tailored to suit the particular requirements of the client or project.

Many public agencies and private organizations require professional advisory services on a continuing basis and find it advisable to enter into annual retainer agreements with professional services firms. The client is thus assured of a continuing contact with an engineering organization thoroughly familiar with operation and procedures advisory services available on short notice. The annual retainer agreement generally provides for a certain amount of professional service at a set rate, agreed to in advance.

The client may prefer to select a consulting engineer for a specific project, or bond issue, when and as needed. In either case, the individual consultant or consulting firm should be selected on the basis of past experience, available organization personnel, and other professional qualification. Several engineering organizations may be considered for each assignment, however, final negotiation should be limited to the individual or firm felt to be most qualified for the undertaking.

C. QUALIFICATIONS AND STANDARDS OF PERFORMANCE

Qualifications are demonstrated by professional registration and by the record of past accomplishments and extent of available professional personnel and experience in the fields involved.

Professional engineering registration is administered by the States. Registration of professional engineers, who have established qualifications and competence, is designed to protect the public health, safety, and welfare. The engineer in responsible charge of planning, design, and other engineering services is required, by law, to have obtained professional registration as a condition precedent to performing, or offering to perform, these services publicly.

Standards of performance are established by the profession itself. The nature and scope of services are established through negotiation between the engineer and the client, and are set forth in the terms of the professional services agreement. These services may include any or all of the following:

Long-range or master planning.
Investigations and technical reports.
Expert witness services.
Patent preparation assistance.
Assistance with financing applications and sale of debt securities.
Engineering and economic feasibility.
Valuation of property.
Municipal, urban, or land planning.
Rate studies, ratemaking.
Industrial process analysis.
Time and motion studies.
Materials testing, evaluation.
Operations management.
Market research.
Project planning and design.
Contract management.
Engineering design details.
Specifying processes, material, equipment.
Assistance with permits, codes, right-of-way.
Location studies.
Soil analysis, foundation design.
Surveying, mapping, photogrammetry.
Drainage, water control.
Materials testing and analysis.

Ethics demand that the professional engineer agree to undertake only those assignments which he is qualified by virtue of training and experience. To each phase of the assignment the engineer is obligated to bring complete and impartial review and analysis of all factors and considerations, employing all available and pertinent information. His recommendations, based on impartial consideration of relative costs, safety, performance, appearance and other results, are then presented to the client.

Standards of performance permit only a complete evaluation of each assignment in the light of all available information, followed by recommendations which will serve the needs of the client, considering safety, economy, and the desired end result.

2. Size and Structure of Industry

Consulting services in a wide range of engineering fields are offered by a number of firms and individuals distributed throughout the

United States. Joint ventures, when required, may provide expanded engineering capability.

A. CATEGORIES OF FIRMS

Firms provide a wide range of services covering all of the basic disciplines. Engineering firms may serve in one or more of the following fields:

Civil	Chemical
Mechanical	Industrial
Electrical	Metallurgical
Structural	Surveying

In addition, some firms provide architectural and other advisory services.

B. NUMBER OF FIRMS

It is estimated that there are 7,000 to 8,000 independent organizations offering engineering services.

C. SIZE OF FIRMS

Firms range in size from individual practitioners to organizations with more than 1,000 employees. Total employment in the private sector of the profession is estimated at 80,000 to 85,000 including an estimated 40,000 to 50,000 professional engineers.

D. DISTRIBUTION OF FIRMS

Consulting engineering firms are generally distributed evenly, throughout the United States, following general population distribution. There is some concentration of larger firms in the major cities.

E. DEGREE OF SPECIALIZATION AND INTERCHANGEABILITY

Many firms are highly specialized in such fields as chemical process engineering, industrial plant layout, metallurgy, structural design, power production, water supply, and sewerage. Others provide a complete range of services embracing all phases of project planning, economic and valuation studies, engineering and architectural design, and construction management.

There are few barriers to the participation of firms in projects with respect to size. Where project requirements are beyond the scope of a given firm, joint ventures involving two or more firms with the required capabilities may be formed. Consulting firms may work as associate professionals with other engineering firms or architects, and the same firms may act as prime professionals.

3. The Relationship of the Consulting Engineer in the Municipal Securities Market

The marketing of municipal securities requires the efforts of a team of specialists. It requires the attorney, with experience in legal matters on security issues, who assures that the legal and statutory requirements are met and that covenant provisions incorporated are satisfactory both to the borrower and to the prospective investor. It certainly requires the consulting engineer, who is an informed specialist with technical training and experience to allow proper evaluation of the project, including projections of growth and ability to repay debt.

It also requires the bond underwriters, who have a vital interest in the conditions and feasibility of the issue, and who are actually the bidders for the securities. It requires the institutional investors and lenders—these are the investors who will purchase the securities from the bond underwriters, and in the interest of the buyer requires the evaluation of the merits of the securities by standards set in the market and through experience. There may also be other technical advisers such as financial consultants, who make available experience with similar matters, and who advise as to conditions of the issue, such as the scheduling of terms and amounts of payment, to fit other financial programs of the borrower.

The consulting engineer is responsible for the engineering concept and planning of the project, its design, and estimates of cost. He is also an informed specialist with experience and responsibility for growth projections and anticipated revenues over the life of the security issue. The experience and reputation of the consulting engineer is very important in connection with the given issue, since the other members of the team, and particularly those in connection with the purchasers, must be able to rely upon the consulting engineer's opinions.

A. ATTORNEY FOR THE BORROWER

It is the obligation of the attorney for the borrower to prepare contract documents in compliance with statutory requirements and practice which will be in the best interest of, and provide protection for both the borrower and the investor. The attorney must properly balance the many matters involved in the preparation of the contract to the best interests of all, and in so doing he will operate to the benefit of the issue and to the best sale of the security. The consulting engineer, as a member of the team of the marketing group, is available to furnish information and advice to the bond attorney, as an informed specialist in connection with engineering and economic matters entailed in preparing the bond contract. Experience has shown that it is advisable that the consulting engineer review the draft of the bond contract with regard to the effect of specific provisions from an engineering and economic standpoint. The engineer complements the attorney's legal expertise in matters in which the attorney cannot be expected to be informed. Matters of protective funds, life of the facility to be financed, anticipated availability of revenues, operating expenses, and other matters, are items in which the engineer should be consulted prior to completion of contract documents.

B. THE BORROWER

The borrower, prior to marketing a security issue, must have available a capital improvement program, the estimated cost of the improvements, a feasibility report outlining the necessity of the financing, and a comprehensive financial program. The borrower must make available in the information for bidders, or bond prospectus, an improvement and financial program as well as a presentation of his financial and legal position. The borrower looks to the consulting engineer for the preparation of the engineering and economic portions of these items. The consulting engineer generally prepares the original concept which brings about the scope of capital needs to be financed

and he prepares the economic studies of the feasibility of financing the project. The consulting engineer also recommends the basis and specific methods of obtaining revenues and other supporting sources of funds.

In serving the borrower the consulting engineer stakes his reputation on his representations in connection with the marketing of the issue. It is the engineer who presents the project and its cost and the part that the security issue plays in financing the project. If the engineer's estimates of capital improvements, or his projections of growth and subsequent revenues, expenses, maintenance, and other obligations, fail to materialize to the detriment of the ability of the security issue to pay out, then the engineer's reputation is affected. No other agent of the borrower can accept this responsibility, and the borrower looks to the consulting engineer for this purpose.

C. BOND UNDERWRITERS

Since the consulting engineer is the agent responsible for costs and economic projections indicating the feasibility of the issue, the bond underwriter looks to the engineer for information in the prospectus which will determine the marketability of the bonds and the risk element, and which will affect the rating which will be given to the bonds. The consulting engineer is often asked to furnish supplemental information, or to develop and explain points in regard to the showings in the prospectus. The underwriter's viewpoint of the issue is influenced by the experience and the reputation of the engineering firm certifying to the feasibility of the project.

D. LENDERS AND INSTITUTIONAL INVESTORS

The lenders and institutional investors are staffed with analysts of security offerings, or engage such services through rating agencies, and others. The analyst is particularly concerned with the elements making up the marketability of the bonds. Legal matters are highly important, and are expected to conform to practice in such matters. The engineering information offered is the variable which is a most important factor to the analyst, and again the degree of competency and reliability of the engineering information furnished will have a great deal to do with the marketability of the security issue in the eyes of the lenders and institutional investors.

The consulting engineer is often asked to meet with the representatives of the rating agencies, bond underwriters, and the institutional investors, to furnish additional information and to present facts and estimates with regard to the engineering economics of the issue.

E. OTHER TECHNICAL ADVISERS OR FINANCIAL ADVISERS

Where other advisers are involved, such as a financial adviser, the consulting engineer again is in the position of offering consultation on engineering matters which will supplement the financial or other capabilities of such advisers. In all of these matters the consulting engineer is an independent expert in his own field offering services of mutual benefit to others of the team to assist his client in making the best possible presentation of the security issue.

4. Remuneration for Consulting Engineer's Services

Remuneration for engineering services in connection with security issue financing may be on various bases, depending on the circumstances. Where the project may be clearly defined, and the extent of work is known, the fee for the consulting engineer's services may be on a lump-sum basis. Often the engineer is engaged to prepare feasibility studies and data for security issue financing at a time when the extent of the project and the amount of services to be rendered cannot be fully defined.

In such instances it is advisable that the engagement be on a fee basis commensurate with the amount of service performed. In this instance, either a per diem or a cost-plus fee may be used, with or without a maximum limit, depending upon the situation.

The consulting engineer is often asked to review a project and offer opinions and recommendations with regard to the feasibility of a project which is being offered. At the initiaton of the engagement, such reviews are not definable as to extent of services required since some reviews of work well prepared and well conceived may require comparatively little time on the part of the consulting engineer, but in instances of a marginal project extensive surveys, analysis, review, and revision may be required. On such occasions a variable cost basis will be of benefit of both the client and the consulting engineer.

The fee for consulting engineering services related to bond feasibility and financial studies is seldom tied to the bond fee, nor is it a percentage of the project construction cost, or of the amount of the security issue. Ordinarily, cost of engineering services bear little relationship to the amount of dollars involved in the financing. The fee will ordinarily be influenced by the complexity and scope of the project.

The consulting engineer's services should not be furnished on a contingent fee basis such such a basis of remuneration would give the engineer an interest in the feasibility of the project and could, at least in the eyes of others, affect his objectivity. For this reason, the basis of fees should be independent of the project feasibility or consummation. Consulting engineering services, taken on a firm basis, should result in lower fees than would be possible for the same engineer to undertake work on a contingent basis, since over a period of time the engineer's average fee basis would have to reflect the costs of contingent work, as well as engagements where the project sale was consummated.

CHAPTER 13

The Secondary Market in Municipal Bonds*

1. INTRODUCTION

The purchase of a new issue of municipal bonds from the issuer by an investment banker (or by a group of investment bankers in a syndicate) and the resale of the bonds by the investment banker or securities dealer constitutes the primary or new issue market. Any subsequent sale of the bonds by an investor or dealer is in the secondary market.

Like any other security there are times when the municipal bond must be disposed of before maturity. Heirs sell, institutions have different securities needs, and commercial banks see deposits and commercial loans rise and fall cyclically and so on. A change in money rates often will see an underwriting syndicate forced to break up and divide the unsold bonds among its members. What ever the reason, the bond returns to the market to be offered to the investigating public for the second time.

Hence, the term "secondary market." This secondary market is almost without exception far more voluminous at any given date than the primary (new issue) market.

2. SIZE AND OPERATIONS OF THE SECONDARY MARKET

There are no accurate estimates of the annual volume of secondary market transactions in print but a check of many thoughtful and serious dealers and dealer banks who are active in this market leads us to the conclusion that approximately $22 to $25 billion is a reasonable estimate. When one considers that there are close to $100 billion of municipal bonds outstanding and last year's new issue financing totaled $11 billion this seems quite feasible.

An investor desiring to dispose of a block of bonds has a choice of a number of methods. If the amount is not large, his best method may be simply to sell the bonds to the investment banker from whom he purchased the bonds or to some other reputable dealer at a mutually satisfactory price. If the amount of bonds involved is large, the owner may prefer: (1) to give a selling order to a dealer with instructions to place the bonds with a municipal bond broker to sell at the best bid; (2) to give a selling order to a dealer to sell the bonds on an agency basis at a stated price; or (3) to contract with a dealer to advertise the bonds for competitive bidding over the dealer's name.

Municipal bond traders could be called secondary market specialists because traders are simply investment bankers who buy, sell, and trade

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municipal bonds in the secondary market. Trading transactions are usually purchases or sales of bonds for cash.

The bond trader must have an accurate knowledge of the location of blocks of particular bonds, both new issues and bonds available in the secondary market; current bond prices and local credit information, general market factors and recent developments affecting prices; the trend of the market; and the locations of buying interest for certain maturities or issues. The trading department of an investment banking firm usually trades alone, but occasionally a group of firms form a joint trading account to handle a large block of bonds which makes it desirable to spread the risk among two or more firms. Such joint trading accounts in the secondary market operate similarly to an underwriting account for a new issue, except that the agreement is often much less formal and in some cases is simply a verbal agreement.

Most investment banking firms with a municipal bond trading department fix a "position" limit which determines the amount ("position") of bonds which the department may hold at any one time. In small firms where the new issue underwriting and secondary market trading functions are handled by the same people a general "position" limit may be fixed on the aggregate amount of municipal bonds which the firm can hold in new issues and trading positions. These positions or holdings in the secondary market range from $200,000 to well over $25 million in the larger dealers and dealer banks.

Most of the dealers who maintain trading positions are capable and willing to bid their clients for their own accounts. They also bid other dealers and brokers competitively on blocks or even odd lots. This is one of the greatest contributions to the underlying strength in the municipal bonds secondary market.

The municipal bond broker confines his business solely to dealers and dealer banks. He never takes a position in municipal bonds, that is, he never buys municipal bonds for his own account, but always acts only as a broker for a commission. By accepted practice brokers trade bonds for a commission of one-eight of a point ($1.25 per $1,000 bond) and one-fourth of a point ($2.50 per $1,000) on odd lots ($10,000 or less) unless a different commission has been agreed upon previously.

It would not be unreasonable to assume that brokers trade 10 to 15 percent of the total volume in the secondary market or $2½ to $3 billion per annum.

Since both the trader and the broker must have up-to-the-minute information on current offerings of bonds and proposed new issues, they rely heavily on certain trade publications and rapid communication facilities. Many years ago most bond houses prepared a daily or weekly offering list of the bonds they owned and offered for sale, and traders and brokers were confronted with the task of tabulating the available bonds. Today the "Blue List" is published every business day carrying most of the current offerings of all dealer subscribers. The offerings (with prices) are listed under the general headings of each of the States with subheadings for certain special bonds. Thus, the "Blue List" is a central listing of all available municipal bonds that dealers are publicly offering, and it also carries advertisements of new issues. This of course includes unsold balances of recent new issues. Each day the "Blue List" carries the total of par value of all bonds listed the previous day and this figure is accepted as the best estimate of the floating supply of municipal bonds (although it is

recognized that dealers may withhold a part of their bond inventory from listing in the "Blue List").

The average daily volume offered in the "Blue List" for the first 4 months of 1966 was $692 million.

The "Daily Bond Buyer," also published every business day, serves a similar purpose in presenting detailed information regarding proposed bond issues and the results of sales of new issues of municipal bonds, together with other statistical information regarding interest rates on municipal and U.S. Government bonds.

The "Daily Bond Buyer" has also offered on a subscription basis a wire service called "Munifacts." Via a private teletype circuit it helps to keep traders as well as underwriters advised on current news of pertinent importance in the municipal bond market.

One municipal broker maintains an extensive private teletype system for the simple purpose of exhibiting bonds which he has for bids to interested dealers. While this system covers over 200 dealers and dealer banks throughout the country, in reality it supplements the telephone and teletype calls which the broker generally must make in order to give complete service on the blocks of bonds which they have for sale.

3. Changes in the Secondary Market

How has the secondary market changed during the past 20 years? Using the same ratio exhibited in the first presentation, the new issues in 1946 comprised 1,876 issues with a dollar total of $819 million; therefore it is not unreasonable to assume that the volume in the secondary was approximately $1,800 million compared with our estimate of today's volume of $22 billion or more. Incidently, in 1965 new issues comprised 7,977 issues totalling a dollar volume of $11,084 million. The number of firms advertising in the "Blue List" has risen from a total of 416 in 1946 to 664 in 1965 and we feel there are probably 100 additional firms who do not advertise in the "Blue List" and are active only in their own geographical areas. Once again their willingness to risk their own capital and effort to support the market on issues originating in their sections of our country are also strong factors contributing to the underlying strength of our market.

It is difficult once again to conduct any price research in the municipal bond secondary market since the tremendous number of issues, coupons and maturities prohibit any dollar price comparison. The range of "yields" or interest return (according to the "Bond Buyer Index") to the investor goes from a low of 1.35 percent in 1946 to a high of 3.56 percent in 1965.

Remember that "yields" go in inverse order to dollar prices.

The spread or profit margin on municipal bonds in the secondary market has declined from an average of $12.50 per bond in 1946 to less than $7.50 in 1965, in some cases as low as $2.50. One should bear in mind that:

1. This is a potential gross profit and generally would be reduced by a reallowance to another recognized dealer of a fair commission for the latter's retailing bonds. This commission would in many cases be one-third or one-half of the potential gross profit.

2. Most municipal bonds are issues to be matured annually over a period of years. These "serial" issues are marketed at prices which

will return a specified yield to these maturies when bonds are offered in the secondary market they are usually offered for sale at prices competitive with current offerings of similar quality, quantity, and maturity.

4. Enlarging the Secondary Market

The secondary market in municipal bonds time and again has given ample demonstration of its ability to support any liquidation from whatever source. Recently, in a period of steadily rising interest rates and no great cessation of new issues coupled with really substantial selling by larger holders it has absorbed this selling in orderly fashion.

We feel that perhaps the best way to expand the secondary market for municipals is to educate the investing public as to the liquid quality of this type of security, i.e., almost without exception State and municipal bonds can be sold on any given business day in a matter of minutes or if the customer prefers, in a few hours. In many cases "cash" trades can be effected thus arranging actual transferral of securities and funds as of the same date. A number of dealers have already taken steps in advertising by direct mail, newspaper, and magazine advertising in order to acquaint the public in this direction. The IBA through its education committee on municipal bonds has contributed greatly in fostering individual advertising.

CHAPTER 14

Municipal Bond Ratings*

1. NATURE—FUNCTIONS OF BOND RATINGS

In 1955 the volume of the tax exempt securities outstanding was $42.8 billion. As of June 30, 1965, the total had reached $97.8 billion. Annual new issue sales of $10 or $11 billion are now taken for granted.

Ratings have become indispensible as more issues come to the market. Each year, the dealer and investor in tax exempts is confronted by hundreds of unfamiliar names. They need to know the quality of a bond before they will purchase it. In some cases, firsthand information is readily obtainable. A simple issue, such as the tax secured bonds of a central school district in New York State, may be offered and explained through a nontechnical one-page circular. Many issues, however, because of their size, technical aspects and unusual security provisions require more study and detail. When an issue of Rocky Reach Hydro-Electric System revenue bonds was offered some 10 years ago, the offering was accompanied by a 68-page official statement, a 65-page volume of basic documents, three separate engineering reports totaling 130 pages covering the economic and financial feasibility and construction of the project, and a 40-page brochure describing the Northwest Power Pool. Clearly, few investors would have been willing or able to carefully investigate and evaluate the credit of the Rocky Reach offering. Rather, investors have come to depend upon the "quality" ratings issued by a number of major investment advisory services.

Ratings for municipal bonds are basically an outgrowth of corporate bond ratings. The first ratings for corporate bonds appeared in 1909 when Moody's began rating railroads. In 1914, Moody's expanded its services to cover public utilities and industrials. In 1922, Poor's began rating all industries, Standard Statistics and Fitch followed in 1924. Thus, four ratings were available for most large issues from 1924 through March 1941, when Poor's was merged with Standard Statistics. Three ratings were then usually available. Ratings were often not assigned by the agencies to small issues of little public interest, to private placements or situations in which sufficient information was not available.

Since 1909, when Moody's Investor Service began rating corporate bonds, ratings assigned by the various investment agencies have constituted an important device for evaluating the quality of corporate bonds. In the period 1924–35 ratings were assigned to over 98 percent of the total par amount of all straight corporate bond issues outstanding. Thereafter, with the growth of private placements (not usually rated by the agencies), the extent of coverage declined. Nevertheless,

*Prepared by James F. Reilly, partner, Goodbody & Co.

as late as 1944, more than 92 percent of the total par amount of all issues outstanding was rated by one or more of the agencies.

Moody's began rating municipal bonds in 1919; Standard & Poor's not until 1950. Until the great depression, Moody's rated most issues Aaa or Aa. Large numbers of defaults during the 1930's caused Moody's to reevaluate its standards and adopt a more conservative approach. It has been estimated that during the 1930's approximately 2½ percent of a total of 160,000 local governmental bodies were in default on some part of their interest or principal requirement. The aggregate loss of principal sustained by bondholders was approximately $100 million, or two-thirds of 1 percent of total public debt. Of these, 48 percent of the number of defaulting issues in the 1930's were rated Aaa in 1929 and 78 percent of the defaulting issues were rated Aa or Aaa. The art of municipal bond analysis has come a long way since the predepression days when the rule of thumb was the number of railroads passing through a town. One railroad called for a single A, two for Aa and so forth.

Today, a determination of ability to pay involves analysis of a host of economic, social, political, and historic factors tempered in large measure by the analyst's own subjective, or even intuitive assessment.

Agency ratings are, in effect, graduated listings of bond issues according to investment quality; they are long run appraisals of the intrinsic quality of bond issues and reflect the ability of the issue to withstand default and capital loss over long periods of time in the future. Moody's ratings of municipal bond issues take the form of the same alphabet symbols as, and are thought to be comparable to, those which Moody's applies to corporate bonds. These range from Aaa—judged to be the finest quality—through Aa, A, Baa, Ba, B, Caa, Ca and finally C—issues regarded as having extremely poor prospects of ever attaining any real investment standing.

Though agencies do not divulge in detail the particular factors and weights used in assigning the individual ratings, it does appear from the manual descriptions that attention is given to such matters as earnings, coverage, lien, position, capital structure, and growth and stability of earnings. The primary aim of the ratings is to rank issues in the order of their relative freedom from default and capital losses arising therefrom. Thus, issues with the highest rating are those on which default is adjudged least likely to occur; issues with the lowest ratings are those already in default or on which default is imminent.

Moody's does not rate issues of less than $600,000, nor obligations of enterprises without established earnings records, projects under construction, or issues where current financial data are lacking. More than 16,000 public bodies and 20,000 issues are presently included in Moody's Municipal and Government Manual.

The second major advisory service which rates municipal credits is Standard & Poor's Corp. S. & P. began rating municipals in 1950 and rates governmental bodies having at least $1 million of debt outstanding, provided the availability of adequate information. Standard & Poor's also categorizes bonds into letter groupings. They are AAA (prime); AA (high grade); A (upper medium grade); BBB (medium grade); BB (lower medium grade); B, CCC and CC denote speculative issues with varying degrees of risk; C, DD, and D denote defaults. The investing public has come to consider Standard &

Poor's rating categories to be comparable to those of Moody's. Thus, Aaa is thought to be equivalent to AAA, Baa equivalent to BBB. Both Standard & Poor's and Moody's publish weekly booklets with data pertaining to municipal bonds. Unlike Moody's, Standard & Poor's does not publish a comprehensive annual volume of data, but does frequently issue publications of summarized financial data and ratings. Today Standard & Poor's rates in excess of 7,000 issues.

Dun & Bradstreet, Inc., does not rate municipal bonds per se. For many years, however, they have issued a series of credit surveys of the major issuers of tax secured bonds. In addition, the post-World War II growth of revenue-secured public bonds has been extensively analyzed by Dun & Bradstreet. In 1965, current information was available for more than 225 issues. Both tax and revenue-secured bonds are labeled either "above average," "favorable," "fair," "poor," etc., according to principal factors. For tax secured bonds these factors include economic or social characteristics, administration, debt obligations, and current operations. Revenue-secured bonds are examined according to the nature of the enterprise, sources of supply, debt obligations, debt structure, bond security, provisions, debt service coverage, debt history, rate structure, and policy operating trends, financial conditions, economic factors, and management. Numerical or alphabetical ratings are not given. It is Dun & Bradstreet's policy only to provide fullest information possible, and allow the investor to draw his own conclusions concerning an issue's overall quality.

Fitch Investor Service issues municipal bond ratings on a specific request basis.

Other agencies exist throughout the United States which either rate municipal bonds or provide detailed information on municipal credits, but each confines its activities within prescribed geographic areas. Among these agencies are the North Carolina Municipal Advisory Service, the Texas Municipal Advisory Council, and the Oklahoma Municipal Advisory Council.

2. Effect of Bond Ratings

(a) on investors

Ratings are usually given to large, widely known issues of municipal bonds prior to public sale by the issuer or underwriter. So attuned are investors to ratings, that almost automatically the rating will determine within rather broad limits, the interest rate the issuer must pay on its bonds. (For simplicity, all rated bonds are assigned to very few categories. As a result, there can be wide differences in yields available even within each category.) It is hardly necessary to note that the underwriter must keep this in mind. Many investors are bound by procedures and regulations which narrowly describe the breadth of investments possible. As the underwriter is aware of these requirements he can attempt to calculate his market for a particular issue. When a bond is not rated it becomes the task of the underwriter to evaluate the credit and convince his market that the bond is, in fact, comparable to one which has received a particular rating.

It is, of course, highly unlikely that all parties concerned with a bond will agree with the verdict of a rating agency. Issuers are often of the opinion that a rating is too low and interest costs unjustifiably

high. Underwriters investigate situations themselves, and commonly dispute ratings thought to be too low as well as these viewed as too high. The investor, once a purchase is made, only hopes the rating will not be lowered, for he too remembers the 1930's when events caused so many issues to be devalued and rating agencies adopt their lingering conservative attitudes.

Investor preferences are usually guided by ratings. In general, there is greatest demand for those issues rated A or better; unrated issues are preferred to those rated Ba or lower (unrated issues will usually carry higher yields than those rated issues believed to be comparable). A bonus awaits the analytical investor if he can take advantage of unrated issues or those which seem to be rated lower than justified by careful analysis.

As of June 30, 1965, commercial banks held more than $31 billion of public bonds. One must, therefore, be careful to consider the preferences of investment officers and understand the rules and regulations under which banks are charged to operate by examining authorities.

National and State banks, which are members of the Federal Reserve System and Federal Deposit Insurance Corporation, must adhere to rules and regulations set forth by the Comptroller of the Currency. State banks which are not members of the Federal Reserve System are regulated by the FDIC. State banking authorities also examine banks within their States, and Federal Reserve banks may look into the affairs of State member banks within their respective districts. Most often, difficulties which could result from these overlapping jurisdictions are fortunately avoided by close cooperation among the several regulatory authorities.

In 1949, the Comptroller of the Currency, the FDIC, the Federal Reserve System and the Executive Committee of the National Association of Supervisory of State Banks issued a statement in which investment securities purchased by banks were divided into four categories:

Group I securities are marketable obligations in which the investment characteristics are not distinctly or predominantly speculative. This group includes general market obligations in the four highest grades and unrated securities of equivalent value.

Group II securities are those in which the investment characteristics are distinctly or predominantly speculative. This group includes general market obligations in grades below the four highest, and unrated securities of equivalent value.

Group III securities are those securities in default.

Group IV securities; stocks.

In an opinion of the Comptroller of the Currency it is stated that:

Although the rating services and investment counselors play an important part in the intelligent and informed acquisition of securities by banks, management may not under any circumstances delegate its responsibilities for maintaining a sound investment account to a rating service or any other individual or entity. Therefore, it is incumbent upon management to use all necessary and available sources of information to keep informed and the data obtained should be retained for ready reference.

Another opinion from the Comptroller regarding ratings states that:

Responsibility for proper investment of bank funds rests primarily with each bank's directors and this responsibility cannot be delegated to the rating services of others or be considered as having been fully performed merely by ascertaining that a particular security falls within a particular rating classification.

On the other hand, where securities are not included in one of the rating manuals, but the bank has evidence that the securities meet requirements as to marketability and are not distinctly and predominantly speculative, and the directors are satisfied that they meet the requirements of the statute and investment securities regulations, this office will not take exceptions to the securities merely from the standpoint of their rating (or absence of rating) in a rating manual. In the last analysis the burden of proof of eligibility rests upon the bank and such proof of eligibility should be on file in the bank and available to the examiner. However, it must be borne in mind that in determining the eligibility of securities not rated in one of the first brackets of recognized rating manuals, there will be a correspondingly greater burden upon the bank to satisfy the examiner that the particular security is in fact eligible.

In August 1957, the Comptroller of the Currency issued a ruling concerning bank investment in public bonds which:

(1) Specifies that an "investment security" must be a marketable obligation, i.e., it must be salable under ordinary circumstances with reasonable promptness at a fair value, and there must be present one or both of the following characteristics:

(*a*) A public distribution of the securities must have been provided for or made in a manner to protect or insure marketability of the issue; or,

(*b*) Other existing securities of the obligor must have such a public distribution as to protect or insure marketability of the issue under consideration;

(2) Provided, however, that special revenue obligations of States or local governments or of duly constituted public authorities thereof which possess a high degree of credit soundness, so as to assure sale under ordinary circumstances, with reasonable promptness at a fair value may also be considered to constitute investment securities even though they may not meet the above distribution standards;

(3) Prohibits the purchase of investment securities in which the investment characteristics are distinctly or predominantly speculative, or the purchase of securities which are in default, whether as to principal or interest;

(4) Requires that all investment securities shall be supported by adequate information in the files of the bank as to their investment quality. The Comptroller's Digest of Opinions states that retaining adequate financial information "is just as important with respect to general obligations of municipalities even though exempt from the restrictive provisions of Revised Statute 5136. The minimum information to be retained and analyzed in support of a proper credit judgment of municipal obligations is as follows:

(*a*) Statement of debt, including overlapping, floating and full faith, and credit obligations;
(*b*) Assessed valuation, including basis of assessment;
(*c*) Property tax rates;
(*d*) Tax collection record;
(*e*) Receipts and disbursements;
(*f*) Sinking fund operation and requirement;
(*g*) Future debt service requirement;
(*h*) Population (whether well balanced or otherwise);
(*i*) Economic background;
(*j*) Default record;
(*k*) Per capita debt.

Revenue bonds are not treated differently from general obligations, with the exception that not more than 10 percent of a bank's capital and surplus can be invested in the revenue bonds of a single issuer. According to the Comptroller, revenue bonds qualify as investment securities on the basis of actual earnings records. Where no historical earnings record exists, revenue bonds are ineligible for bank portfolios.

It would obviously be impossible for bank examiners to be familiar with the many thousands of public bond issues outstanding. It is, therefore, quite natural that, despite the Comptroller's exhortations, examiners should rely heavily upon the opinion of rating agencies. As a matter of expediency all public bonds rated Baa (BBB) or higher by either Moody's or Standard & Poor's have come to be eligible for bank investment as are all unrated but tax-secured bonds. All bonds rated below Baa and all unrated revenue bonds are ineligible for bank investment unless the banker has a file sufficient to convince a carefully scrutinizing bank examiner. Most large banks, as well as the major insurance companies are adequately staffed to make justifiable investment decisions independent of the rating agencies. The smaller bank must rely upon the rating agency. But, in any event, experience seems to indicate that most issues rated below Baa by both agencies are rejected out of hand for bank investment. The burden of proof is just too difficult to bear.

(B) ON INTEREST RATE

The differences of a notch in a rating, or between similar rated and unrated issues is usually between 25 and 50 basis points. This, of course, depends upon prevailing market conditions. The following table shows the spread of yields on comparable new issues for six randomly selected days in 1966:

Rating date	Years to maturity	Issue	Rating	Yield
Jan. 10, 1966	20	Los Angeles sewer	Aa	3.50
Do	20	Burlington, Mass., various	A	3.60
Do	20	Fairfax County, Va., school office facilities	Baa	3.65
Feb. 7, 1966	20	State of Maine, various	Aaa	3.35c
Do	20	State of California, construction	Aa	3.60c
Do	20	State capital construction and improvment commission, Louisiana, sales tax revenue.	A	3.80c
Do	20	Las Vegas Valley Water District, Nevada, water revenue	Baa	4.10c
Feb. 21, 1966	20	Durham, N.C., various	Aa	3.50
Do	20	Brandywine Area School Authority, Pennsylvania	A	3.85
Do	20	San Antonio, Tex., airport revenue	Baa	4.15c
Apr. 4, 1966	20	Riverside, Calif., electricity revenue	Aa	3.60
Do	20	King County, Wash., limited tax	A	3.75c
Do	20	North Bergen Township, N.J, sewer	Baa	4.00
Apr. 18, 1966	20	Los Angeles County Flood Control District, Calif	Aa	3.55
Do	20	Hempstead, N.Y., various	A	3.60
Do	20	State of Connecticut, highway	Aaa	3.37
Do	20	Western Kentucky State College, construction, education building, services D and E.	Baa	4.00c
Apr. 25, 1966	20	East Lansing School District, Michigan	Aa	3.50
Do	20	Fairfield, Ohio, sewer system	N.R.	4.00c
Do	20	Washington Suburban Sanitary District Maryland, general construction, 1966, and water supply.	A	3.60c
Do	20	Consumers Public Power District, Nebraska, Consolidated Eastern System, issue of 1966, revenue.	Baa	3.90c

3. Factors Taken Into Account in Assigning Ratings

"Ratings are not a reflection of bond maturity or marketability except in rare cases where the combination of maturity and marketability itself has a direct bearing on the prospects of payment. Security, or safety (relative certainty of the payment of interest and principal) remains as the principal, almost the sole ingredient of the ratings." [1] Agency ratings are not derived through the use of statistical formulas. Though statistics are used, great weight is given to numerous economic and nonfinancial factors which can effect the long-term future performance of the bonds. Ratings are reviewed periodically and changed whenever the rating agency is convinced that long-term risks have diminished or increased.

Bonds are appraised according to two basic risk factors. They are:

(1) *The risk that bond quality will be diluted by inordinate increase in debt.*—In recent years many States have come to relax or expand legal debt limits; special taxing districts and authorities are more frequently being used to finance projects beyond municipal limitations. For example, Moody's will be satisfied that bond quality will not be diluted by inordinate debt increases, only when municipal debt is modest and governmental facilities adequate for immediate and prospective needs.

(2) *The risk that ability to meet maturing bond principal and interest may be impaired under depressed business conditions.*—The investor wants assurance not only that a community is able to pay today, but also that it shall be able to meet obligations in the future. Though debt service may be secured by law, the whole community budget structure must be sound if a high credit standing is to be provided.

An appraisal of the role of management is still another important factor considered by rating agencies before a final rating is given. Management administers present day policies and forms plans and policies which are to be followed in the future. Management's role is that of executor of debt proceeds and developer of the economy.

A city's history of debt policy and administration is a key to credit standing. How willing is management to face its responsibilities? How aggressive and how capable? Economic development very much depends upon the governmental environment created by city managers. To maintain and improve credit, agencies look to how well management attracts new business and residents and instills in them a social consciousness which can be called upon to shoulder community responsibilities. Communities must not be targets for exploitation. Business and residents will come when a community is known to give fair, equitable property assessments, provide adequate facilities, and insure that spending (and taxing) results only after careful and complete analysis.

Moody's expects effective management to be a good public relations officer. Information provided by managers is relied upon by bondholders, and for them, by Moody's. A former top Moody's official has stated, "Management is appraised by how well its reports tell its story, as well as by the story itself."

Moody's, particularly, asks management to tell its story through municipal records, histories, and statistics, as well as all documents

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[1] D. M. Ellinwood, former vice president, Moody's Investor Service, "Bond Ratings and Bond Prices," Public Works magazine, October 1965.

relating to the proposed bond issue. In addition, questionnaires are sent to municipal authorities which request figures on such things as assessed value of realty, personal property, net direct debt, tax collections over periods, etc. With this information, it is hoped that questions, such as the following, may be answered:

(1) Is the population actually there, or is it only hoped for?

(2) Is the total debt supportable by the present inhabitants under any foreseeable business conditions?

(3) What additional financing is to be expected, either from the units under consideration or from any other unit taxing the same properties?

(4) Are securities payable from unlimited taxes on all property in the community, or are there limitations which might prove troublesome at some future date?

(5) Is there heavy dependence on a single plant or a single industry?

(6) How vulnerable is the community to economic unsettlement?

(7) Are there nearby towns in which the residents can find work?

(8) Are industries likely to migrate and if so, are there factors that suggest the attraction of replacements?

(9) Has the attitude of the administration been prodebtor or procreditor?

(10) Do the laws and traditions lend themselves to debt evasion?

Since agency representatives have not been able to visit all of the many thousands of communities rated, these questionnaires and other information returned from the community must often form the basis for an eventual rating of that community's credit. Moreover, as the rating agencies readily admit, impressions and judgment, factors not susceptible to numerical measurement, always constitute an important part of that analysis which ultimately is transformed into a rating.

4. Bond Rating Operations

Bond ratings are disseminated by the major rating services through their own publications as well as through the Bond Buyer and the Wall Street Journal. The publications prepared by Moody's and Standard & Poor's are as follows:

Moody's:

Municipal and Government Manual, published annually. Up-to-date information on financial characteristics and data on municipalities showing ratings where applicable. Also has descriptive paragraphs of municipalities.

Municipals and Government News, published biweekly. Includes details and ratings on securities offered, prospective offerings, Government and municipal calls, and a complete list of new calls.

Bond Survey, published weekly. Subjective opinions and analyses of corporates, municipals and foreigns.

Bond Record, published monthly. Covers outstanding issues and situations, and gives essential facts and statistical background.

Standard & Poor's:

Weekly Bond Outlook, published weekly. Subjective opinions and analyses of bond markets and trends, with respect to corporates, municipals and foreigns. Also includes list of current and proposed offerings with Standard & Poor ratings.

Municipal Bond Selector, published bimonthly. Gives essential data and statistics on outstanding municipal issues. Provides data on States, counties, and municipalities—population, debt, etc. In addition, historical and economic data are given. Such data provides for appraising bonds and comparing issues in various States or with similar characteristics.

Bond Outlook, published weekly. Covers only stocks and corporate bonds in subjective manner as well as market analyses and trends.

Moody's employs 13 people in its municipal bond department; Standard and Poor's employs 12.

Moody's charges subscribers $150 per year for the Blue Book of Ratings (manual) and the Bi-Weekly Letter. The Bond Survey and Bond Record can be had for an additional $150 per year.

Standard and Poor's charges $240 per year for the Bond Outlook, the Weekly Bond Outlook, and the Municipal Bond Selector.

5. Relative Importance of Bond Ratings

Almost despite the rating agencies, rulings from the Office of the Comptroller of the Currency, and their subsequent administration by bank examiners, have caused an overreliance to be placed upon rating agencies. Commercial banks are among the largest purchasers of municipal bonds and have increasingly bought according to ratings, spending less time evaluating issues themselves. This has caused some embarrassment to the rating agencies for, unwittingly, they have come to be looked upon by banks as well as by the public at large as "official agencies" serving a public rather than private purpose. But they are, of course, not official agencies. They receive no compensation from the U.S. Government nor from any of the communities rated. The cost of ratings is mainly covered through subscriptions and fees paid by customers for other services provided by the agencies. It is, therefore, natural that first responsibility be to these clients and not to the investing public. A high official at Standard & Poor's has said that, "since the amount which can be charged against any single rating is distinctly limited, we can only apply ourselves to those issues which are of interest to a number of clients or subscribers."

Moody's does not rate bonds outstanding in amounts less than $600,000 nor bonds payable solely from special benefit assessments, bonds payable from the earnings of a hospital, university or other public, nonprofit institution which does not have an historical earnings record, or bonds in which there is a minimum of public interest. Moreover, bonds are not rated if sufficient information is not available. This includes bonds of municipalities which have failed to provide current information as well as bonds which are payable from the earnings of a project which has no earnings record. This last group includes all new construction projects, for engineers' estimates are not considered sufficient information.

Moody's and Standard & Poor's have, of necessity, limited their efforts to issuers with substantial bonded debt—a minimum of $600,000, in the case of Moody's and $1 million in the case of Standard & Poor's. It becomes apparent that as useful and important as these services are, a significant segment of the market is excluded by definition. There are over 92,000 issuers of municipal bonds. Moody's,

which considers more names because of its lower bonded debt requirement, had assigned approximately 20,000 ratings as of a recent date. This leaves thousands of issuers in the nonrated category.

The value of general obligation bonds sold in the 5-year period 1957 through 1961 amounted to $26,752,648,000, with 29,019 issues. Approximately 70 percent of all issues rated by both Moody's and Standard & Poor's have similar ratings. These situations present no difficulties. But 20 percent of all issues receive higher ratings from Standard & Poor's, whereas 10 percent of all issues are given higher ratings by Moody's. Rated bonds accounted for 85 percent of the value but only 43 percent of the number of general obligations sold during this time. Thus, three out of five issues were not rated.

It might be assumed that the number of nonrated issues would decline in light of the increased volume mentioned previously. The fact that the average size of general obligation issues rose from $868,000 in 1957 to $1,102,000 in 1965, would give support to this theory. As a matter of fact, no such trend is apparent. The year to year variations are irregular; 1960, for instance, showed a higher percentage of nonrated issues than the 3 prior years. In 1965 nonrated bonds accounted for 12 percent of the dollar volume and 47 percent of the number of new issues.

6. Appraisal of Ratings

Although professionals realize that the NR symbol beside a bond is in no way a reflection on its investment quality, the nonrated bond does pose special problems. Generally speaking, the nonrated bond is not as readily marketable as a rated bond. This consideration affects the issuer, the dealer and the investor. The average coupon on a nonrated bond usually falls between the "A" and "Baa" groups.

Municipal bonds sold by issuer—1965

	Amount (thousands)	Percent
States	$2, 287, 654	20
Counties	715, 907	6
Municipalities	2, 534, 297	23
Townships	23, 102	2
School districts	1, 828, 130	16
Special districts	986, 992	9
Statutory authorities	2, 765, 094	24
Total	11, 141, 176	100

Source: IBA Statistical Bulletin, No. 38, March 1966.

Municipal bonds sold, by type—1965

[Thousands—par value]

Type	Amount	Number of issues
G.O.—unlimited tax	$6,730,575	4,515
G.O.—limited tax	429,830	311
Total G.O.'s	7,160,405	4,826
Utility revenues	1,143,610	594
Quasi-utility revenues	1,542,050	340
Special tax revenues	205,062	56
Rental revenues	626,004	260
Total revenues	3,516,726	1,250
New Housing Authority	464,045	127
Grand total	11,141,176	6,203

Source: IBA Statistical Bulletin No. 38, March 1966.

Recently, agency ratings have come under close scrutiny by various members of the financial community. A major criticism has concerned the thousands of issues not rated each year. An official at Standard & Poor's has estimated the cost of rating a community to be in the neighborhood of $2,000. It is understandable that Moody's and Standard & Poor's must make arbitrary decisions about which credits are to be rated. The rating agencies are not public institutions and are not supported as such. Unfortunately, however, they have come to be looked upon by the public as official agencies, for they do perform a public function. Often, the lack of a rating can seriously jeopardize a communities credit position. Funds may not be as readily available or as inexpensive to the unrated town as they are to its neighbor whose bonds do have a rating. A higher cost of borrowing is necessarily equated with a lesser amount of services a community may provide. Many feel that the agencies have neither the staffs nor the money necessary to insure that public financing always assured to qualified borrowers at equitable interest costs. Proper ratings will not alone determine this assurance, but no rating at all will certainly have a detrimental effect.

The rating agencies have also been criticized for the kind of information upon which ratings are based. The agencies are constantly asking municipalities to supply complete and current information. In the course of a year Moody's receives reports from over 12,000 municipalities. Ratings are not given and are withdrawn when information supplied is not complete enough so that an evaluation can be made. The agencies must, in large measure, rely upon fiscal officers. Unless an agency representative visits each community personally (an almost impossible task under present agency procedures), there can be no assurance that information supplied is complete and not biased, if only for lack of any uniform system for financial reporting among the several States. Two questions arise:

(1) With so many thousands of reports to cover and so few staff men to review them, can the agencies be sure that the information received is complete? Or can some information be left out and a rating still given?

(2) Can the agencies be sure that information judged complete is accurate?

A third criticism concerns possible conflicts of interest. Though Moody's and Standard & Poor's rate municipal bonds, this is not their primary function. Both are primarily investment advisory institutions. Thus, a conflict of interest may arise when a rating agency also acts as a financial consultant to governmental bodies. Moody's is known to operate in the dual capacity of rating agency and financial consultant.

Since public rather than private interests are involved, and since municipal finance is growing daily at increasing rates, the whole field of bond ratings deserves to be more closely studied to determine its proper value. As a first step, a group might be set up to develop a uniform municipal finance credit analysis. Such a group should include all interested segments of the market so as to produce an objective evaluation. The expected large volume market of tomorrow needs new ideas and new approaches today. We must be prepared to meet that expected larger volume. It is quickly coming upon us.

Chapter 15

Postwar Default Experience of Municipal Bonds*

Post World War II experience with municipal bond defaults in the overall has been good. Prosperity, with some recessions, mild compared with the prewar period, and greatly improved municipal financial and debt management practices have made significant contributions to the generally favorable record. And this record has been achieved despite a rapid increase in the annual volume of municipal borrowing and a steadily mounting total of municipal bonds outstanding.

Even so, there have been municipal bond defaults, two monumentally big ones and a number of smaller ones. Unfortunate State legislation, poor planning, and unsound choice of a financing vehicle appear to lead the list of causes when there have been payment difficulties subsequent to the bond financing. Because these root causes remain, because of a continuing pressure on State and local governments to provide the services, and because of increasing experimentation in the invention of new and untried bond financing techniques, the likelihood is that municipal bond defaults will continue and, possibly, increase in numbers, if not in the relative portion of dollar value of municipal bonds outstanding.

Growth of State and Local Capital Financing

In the post World War II period bond financing by State and local governments has grown rapidly. Spurred by over a decade and a half of postponed capital construction and the demands of a prosperous economy, State and local units increased their annual borrowing from just under a billion dollars in 1946 to over $10.3 billion in 1965, both amounts excluding refunding issues. These increases amounted to an average annual rate of growth of municipal bond issues of nearly 12.4 percent, considerably above the average annual growth of less than 4 percent in gross national product and well above the 5.3 percent average annual growth of corporate bonds. This rate of emission in new municipal securities brought the total volume of long-term debt outstanding to over $92.4 billion by mid-1965, according to the Department of Commerce. With the increase in volume and number of issues the possibility of difficulties and defaults rose.

Pointing to possible future trouble was the change in the nature of security. From 1962 to mid-1965, for example, the volume of full faith and credit issues of State and local governments outstanding increased from $48.3 billion to $56.4 billion, an increase of 16.8 per-

*Prepared by Jackson Phillips, Assistant Director, and Roger Baum, Municipal Research Service, Dun & Bradstreet, Inc., with minor editing by committee staff.

cent. On the other hand, nonguaranteed issues outstanding increased from $29.2 billion to $37.8 billion, a rise of 29.4 percent. This shift, in evidence over the entire post World War II period, produced a mix of 60 percent full faith and credit obligations and 40 percent nonguaranteed obligations by 1965, compared with a mix of 62.3 percent full faith and 37.7 percent nonguaranteed in 1962. The persistence of this trend over a 20-year period is attributable to debt limitations and tax restrictions combined with continuing strong demand for capital construction. By devising means of nonguaranteed debt issuance, many State and local governments, and their elected officials, have found a way to satisfy their voters without unduly arousing their taxpayers. The significance of this practice for the future will be discussed later.

What Is a Default?

In general, a default is a failure to do what is required by law or by peculiar function, an omission of what ought to be done. More specifically, it is a failure to pay financial debts. Sometimes default is extended to mean any failure in fulfilling a contract or agreement. Thus, if a toll road agency agrees with its bondholders in a trust indenture to set toll rates at levels to produce a specified level of revenues, and does not do so, technically it is in default, even though it continues to meet all of its financial obligations. As used here, however, a default is the failure of a State or municipal government or other local subdivision to pay the principal of or the interest on its debt obligations at the time of maturity.

Information on State and local government bond defaults is not easy to obtain. Because of the generally good record of these bonds there has been little effort in the postwar years to compile comprehensive data on the subject, as was the case in the 1930's. So each default, by its very nature, is a secretive matter. If it is reported, details are minimized. Consequently, this discussion cannot be complete or pretend to be comprehensive. It covers only the better known situations and fragments of others.

Default Experience in the Postwar Period

A search of primary sources of default experience reveals that in the postwar period there have been 30 instances of failure to pay principal or interest or both when due. By State, the reported defaults are as follows:

Arizona	2	Michigan	1
California	7	Nebraska	2
Florida	3	New Mexico	1
Idaho	1	South Carolina	2
Illinois	1	Tennessee	2
Kentucky	2	Vermont	1
Louisiana	2	West Virginia	3

In nearly every instance of default the bonds that were issued were special purpose, limited liability obligations. In several cases there was no loss to the bondholder as the cause of the difficulty was cured, or, in one instance, moneys were appropriated by a legislature to pay off the defaulted obligations. Most of the issues were relatively small in size and involved obscure, unknown issuers. Among the defaulting issuers at least two cases of alleged fraud were involved.

By purpose for which the bonds were originally issued the leading instance is toll road or toll bridge facilities. Classified by purpose or type of issue the defaulting situations were as follows:

Toll facilities (revenue)	7	Industrial aid (revenue)	2
Irrigation districts	6	Natural gas systems (revenue)	2
Cities or counties	4	Fire district	1
Marina facilities (revenue)	3	College dormitory (revenue)	1
Water systems (revenue)	3	Aerial tramway (revenue)	1

The two major defaults in terms of dollar volume are the West Virginia Turnpike Commission, which issued a total of $133 million revenue bonds, and the Chicago Skyway, which issued $101 million. All of the other issues in difficulty were much smaller in size, all excepting a marina facility in California, the aerial tramway, and a toll bridge facility in West Virginia being under $5 million in total amount of bonds issued. By far the type of security experiencing the most difficulty was the revenue bond, one supported solely by the revenues of a public or quasi-public service enterprise.

As to the seriousness of the defaults, 14 of the 30 cases cited resulted in the issuer filing for debt composition in the courts and loss to the bondholder on principal. All of the others, including so far the West Virginia Turnpike and the Chicago Skyway, represent failure to pay interest or principal when due. Some of these defaults in the latter category were only temporary in nature and have since been cured by resolution of the problem creating revenue insufficiencies. Others, including the West Virginia Turnpike and the Chicago Skyway, are situations in which some bondholders continue to nourish hope for an eventual cure. In these cases to date the bondholder has suffered little dollar loss, unless he was forced to liquidate his holdings at depressed market prices. Most of the temporarily defaulted issues pay interest on interest past due when paid.

MAJOR DEFAULTS

The major defaults in municipal securities in the postwar period have been associated with vehicular toll facilities and with revenue bond financing. Most conspicuous have been the West Virginia Turnpike, involving a dollar magnitude exceeded only by previous Russian and German Government bond defaults, and the Chicago Skyway. In both cases, high costs, limited liability financing, and low usage levels have combined to create the existing difficulty.

The West Virginia Turnpike is an 88-mile toll road extending from Charleston, W. Va., to Princeton, near the Virginia border. Financed by $133 million revenue bonds payable solely from net revenues of the toll road, it was opened in 1954. By 1958, revenue deficiencies and complete absorption of financial reserves led to the postponement of the payment of the interest coupon due June 1, 1958, to October 1 of that year. Subsequent coupon maturities were also delayed, and now earning about 0.74 time interest requirements, the turnpike is behind on its last seven interest payments. Planned as a part of long distance route from the Great Lakes industrial area to the south, the turnpike serves its function only in small part. The hope is that eventual connection with Federal Interstate System will cure the basic difficulties of the turnpike.

The Chicago Skyway is a 7¾-mile facility, essentially a toll bridge, extending from the western terminus of the Indiana Toll Road into Chicago. It was financed by the issuance of $101 million revenue bonds, payable solely from net revenues. In one instance the city of Chicago advanced $2 million as a loan to prevent default, but the interest coupon due July 1, 1963, was not paid until October 25 of that year. Subsequent coupons have been delayed, and early in 1966 the city was behind in the payment of three coupon maturities. The skyway, now earning about 0.57 time interest requirements, suffers from competition from federally financed alternate routes and additionally bears the burdens of its high cost and low traffic generating capacity.

Other toll facilities which have suffered temporary default in the postwar period include two Nebraska-sponsored bridges across the Missouri River. In one case the approach routes were inadequate, in another the approach was nonexistent, the bridge having been built over dry land after the river shifted its course. Subsequent, but delayed, correction of the river's course cured the fundamental difficulty. A causeway in Florida suffered payment difficulties because of lack of development at one end, but this was eventually cured with the economic development of the area. Two toll bridges in West Virginia have also suffered payment difficulties because of limited liability financing, low usage, and economic depression in the local area.

In one State the basic law governing special district financing proved inadequate in preventing financial abuse and led directly to several instances of default. The charge was made, and probably justifiably, that "tax-exempt bonds are being used to give windfalls to promoters by paying for improvements which formerly have been considered an appropriate cost of a developer." This condition is not unique to this one State, and in varying degrees a number of States potentially face future difficulties from overly permissive legislation governing issuance of municipal bonds.

Conclusion and Outlook

A complete listing of local government bond defaults in the United States in the postwar period is not economically obtainable. A reasonable sampling, however, shows an excellent record for this type of security. Where there have been payment difficulties two major causes appear to prevail. One, there has been poor planning of the facilities constructed relative to the actual need for them. Two, judgment has been defective in the selection of the method of financing. The use of a limited liability obligation to finance economically marginal projects has been the cause of most difficulties. Tax-supported, general obligation financing has an unsurpassed record in the postwar period of prosperity. In a few cases default has resulted from allegedly fraudulent actions, but these are relatively few.

There are in the United States a number of State and local government bond issuers of a marginal nature, including general obligation issuers. These could be affected with financial stress and probable default in the event of a recession of any severity. Assuming the continuation of the general level of prosperity prevailing in the postwar period, however, difficulties of this kind appear minimal. More likely, municipal defaults will continue as they have in the postwar

period, few in number, scattered geographically, and usually traceable to a fairly obvious flaw in legislation or planning.

Difficulties with marginal projects financed through limited liability obligations very likely will continue and may worsen. Though not in default now and still possessing some financial reserves, three projects each with substantial debt are now considered by some to have a dubious financial future. Again these are net toll revenue bonds and include facilities in Massachusetts, Virginia, and New Jersey. Continued financing of high cost marginal facilities by use of limited liabilities and without adequate safeguards is certain to create additional burdens.

Continued experimentation with new types of financing could possibly add a new dimension of defaults at some future date. Industrial aid financing by local governments has increased markedly in the last few years. And a real danger could arise with a future extension of this device, particularly with the use of revenue bonds. The practice has become an increasingly competitive one, and when revenue bonds are employed, the municipal security essentially is only as sound as the company for which the plant is built. Borderline companies, then, could pose real future difficulty for a local government eager to expand its economic future and unable to assess properly the company's future.

CHAPTER 16

Credit Problems of Small Municipalities*

THE MARKET FOR BOND ISSUES OF SMALL MUNICIPALITIES

Long-term municipal debt outstanding totals in excess of $29 billion.[1] In the 9-year period 1957–65, such debt increased by approximately $1.4 billion a year, and there is every indication that municipal debt outstanding will continue to increase at no less a rapid pace in the future.

With few exceptions, the Nation's cities, like its citizens, are compelled to borrow in order to obtain funds for the construction and acquisition of capital facilities. However, unlike private citizens who can secure loans with relative ease at fixed interest rates, small municipalities, particularly those having less than 10,000 inhabitants, often are penalized, solely on the basis of their size, in the rate of interest they must pay. This occurs in spite of the fact that the degree of credit risk involved is not an intrinsic characteristic directly attributable to size alone.

The average annual net interest costs of bonds in the A, B, and unrated categories for municipalities having less than 10,000 inhabitants and for municipalities having 10,000 to 250,000 inhabitants are compared for the 5-year period 1961–65 in table I on the following page. In each year, the average annual interest costs paid by smaller municipalities exceeded the average costs paid by the larger municipalities.[2] Application, on a monthly basis, of the Bond Buyer index to the various categories of bonds shows that the time of sale is not a significant factor contributing to the consistently lower net interest costs enjoyed by the larger municipalities. Table II shows the difference, expressed in basis points,[3] between the average annual interest costs of small- and medium-sized municipalities as a deviation from the Bond Buyer index. In each case, the adjusted interest costs for the medium-sized municipalities are less than those for the small municipalities. The difference varies from 4 to 79.9 basis points, depending upon the year and the type of bonds.

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*By David R. Berman and Lawrence A. Williams of the National League of Cities (formerly the American Municipal Association), with minor editing by committee staff.

[1] U.S. Bureau of Census, "City Government Finances in 1964–65," Governmental Finances/GF No. 5 (Washington, D.C.: U.S. Government Printing Office, 1966), p. 6. Total long-term debt outstanding for all local government units amounted to $68 billion in 1965. U.S. Bureau of the Census, "Governmental Finances in 1964–65," Governmental Finances/GF No. 6 (Washington, D.C.: U.S. Government Printing Office, 1966), p. 28.

[2] The Investment Bankers Association of America very kindly provided the raw data, on a monthly basis, for the preparation of table I. The data was converted to an annual basis because the number of issues marketed in some months provided too little material upon which to base conclusions. (See app. A at the end of this chapter for a presentation of the data on a monthly basis.)

[3] A "basis point" is one-hundredth of 1 percent of the bond yield. Each basis point constitutes $0.10 in interest per year on a $1,000 bond. On a $500,000 bond issue, maturing serially over 20 years, an increase of 25 basis points in the interest rate increases interest payments by $13,125.

TABLE I.—*Average annual net interest costs of A, B,[1] and unrated bonds for small- and medium-sized municipalities, 1961–65*

Year and type of bonds	Average maturity							
	Under 10 years				10 to 19 years			
	Population under 10,000	Number of issues	Population 10,000 to 250,000	Number of issues	Population under 10,000	Number of issues	Population 10,000 to 250,000	Number of issues
1961—A	3.023	60	2.967	428	3.451	126	3.335	658
B	3.149	26	3.115	345	3.788	115	3.635	792
Unrated	3.338	141	3.127	75	3.816	181	3.721	78
1962—A	2.757	36	2.668	371	3.086	91	3.030	541
B	3.543	26	2.749	290	3.386	99	3.188	599
Unrated	3.128	175	2.906	78	3.453	186	3.326	68
1963—A	2.861	42	2.732	407	3.066	92	3.021	611
B	3.036	41	2.832	374	3.361	104	3.176	761
Unrated	3.047	204	2.809	76	3.439	277	3.279	68
1964—A	3.038	60	2.944	357	3.234	118	3.180	589
B	3.315	26	3.055	267	3.509	118	3.339	651
Unrated	3.287	181	3.168	93	3.598	267	3.429	104
1965—A	3.169	48	3.093	332	3.335	77	3.233	613
B	3.376	36	3.184	293	3.503	89	3.386	666
Unrated	3.434	151	3.289	84	3.659	289	3.501	141

[1] Bonds rated Aaa, Aa and A and Baa, Ba and B, respectively.

Source: Investment Bankers Association of America.

TABLE II.—*Average annual deviation of net interest costs from bond buyer's index for A, B, and unrated bonds for small and medium-sized municipalities, 1961–65*

Year and type of bonds	Average maturity under 10 years		Difference [1]	Average maturity 10 to 19 years		Difference [1]
	Population under 10,000	Population 10,000 to 250,000		Population under 10,000	Population 10,000 to 250,000	
1961—A	−0.421	−0.493	7.2	0.008	−0.121	12.9
B	−.305	−.374	6.9	.328	.178	15.0
Unrated	−.079	−.334	25.5	.372	.280	9.2
1962—A	−.384	−.470	8.6	−.070	−.115	4.5
B	.408	−.391	79.9	.242	.040	20.2
Unrated	−.019	−.153	13.4	.303	.215	8.8
1963—A	−.327	−.427	10.0	−.087	−.127	4.0
B	−.141	−.327	18.6	.213	.025	18.8
Unrated	−.111	−.340	22.9	.278	.133	14.5
1964—A	−.182	−.265	8.3	.018	−.039	5.7
B	.085	−.149	23.4	.288	.131	15.7
Unrated	.076	−.047	12.3	.385	.214	17.1
1965—A	−.091	−.170	7.9	.059	.000	5.9
B	.101	−.072	17.3	.247	.153	9.4
Unrated	.145	−.024	16.9	.398	.246	15.2

[1] Expressed in basic points.

Source: Calculations based upon data provided by the Investment Bankers Association of America and from the Bond Buyer's Index of 20 Municipal Bonds.

FACTORS CAUSING DISCRIMINATORY TREATMENT

Several interrelated factors tend to cause such discriminatory treatment. First, small municipalities market bond issues at infrequent intervals, and these issues usually involve only a limited number of bonds of relatively small total dollar amounts. However, overhead costs incurred in marketing an issue of small dollar amount is not proportionally less than the cost incurred in marketing a sizable issue. As a consequence, market costs per bond are higher for small issues,

because the "spread" [4] is greater for a small issue than it is for a large issue. Major bond buyers, such as insurance companies and commercial banks, usually prefer to purchase bond issues that are large in total dollar amounts because larger issues are generally easier to trade. Thus, bond issues of small municipalities are relatively more costly to market, and less attractive to investors, than are the issues of large municipalities. Second, large municipalities generally can provide quickly and accurately the detailed financial information needed by bond dealers and buyers for an analysis of investment possibilities. Third, small municipalities usually cannot afford to employ the experienced legal and financial advisers necessary to guide the bond issue through the intricacies of the bond market smoothly and effectively. Finally, the influential bond rating services, that evaluate municipal fiscal responsibility, usually will not rate bonds of political subdivisions unless such units have at least a specified minimum of debt outstanding.[5] This policy probably reflects the general lack of interest in the bond issues of small municipalities, and the difficulty in securing detailed financial data from such units. The absence of a rating tends to decrease still further bond buying interest.

The lack of interest by the large, nationwide investors forces small municipalities to seek a market for their bonds in the immediate area, competing for the limited amount of local investment capital with other investments that yield greater returns than do tax-exempt municipals. A large number of small issues are sold to local bankers who feel that their local government should "get at least one decent bid." [6]

At other times:

> A local investor with little expert investment knowledge and considerable mistrust of the central capital markets may be quite willing to invest in local municipal obligations even though his use of tax exemption is slight. Local pride and sentiment may support such action. * * *[7]

Usually only a few people in the community are in a high enough income bracket to take advantage of the tax-exempt feature. Thus, issues marketed locally frequently must offer a yield approximating the yield offered by taxable securities.[8]

THE NEED FOR ASSISTANCE

Certain factors affecting the sale of municipal issues, such as the availability of investment capital, the relative attractiveness of municipal bonds vis-a-vis common stocks, etc., are beyond the direct control of local officials. At the same time, several steps to improve the marketability of their bond issues can be taken by smaller municipalities. For example, accurate compilations of municipal credit and related financial data over extended periods of time should be maintained and made available to the bond market. A capital improve-

[4] The "spread" is the difference between the amount offered for the issue by the underwriters and the price of the issue to the issuer, and serves as compensation to the underwriters for the costs and risks of floating the issue.

[5] Moody's has followed a policy of not rating debt of governmental subdivisions unless debt outstanding totals $600,000 or more. Standard & Poor's does not rate governmental subdivisions having less than $1 million debt outstanding.

[6] Roland I. Robinson, "Postwar Market for State and Local Government Securities, National Bureau of Economic Research" (Princeton, N.J.: Princeton University Press, 1960), p. 104.

[7] Ibid., p. 80.

[8] Ibid., p. 104.

ments program, backed by a sound financial plan, should be developed and utilized to schedule and to coordinate expensive and long-lasting public works projects. In addition, small municipalities should attempt to time the sale of bond issues to favorable market conditions and to advertise any special characteristics that may indicate that the community is stable and a "sound" credit risk.

Smaller units of local government seldom have staffs versed in the specialized techniques involved in preparing and selling bond issues. Being a governmental official in a small municipality is often a part-time job. Many small localities do take advantage of consulting engineers and architiects, bond counsels, and financial advisers. Others, however, do not enjoy ready access to these qualified advisers, or fail to recognize their importance.

There are many ways in which State and Federal Governments could assist small municipalities market their securities. A survey conducted in 1961 by the National League of Cities (then the American Municipal Association) pointed up that most municipalities felt that such assistance would be of value in: (1) preparing economic and financial data to support bond sales; (2) explaining terms and conditions governing loan repayment, establishment of reserves, and issuance of additional bonds; (3) comparing advantages of revenue and general obligation bonds, term and serial bonds, and factors affecting annual debt service costs; (4) explaining techniques and procedures involved in marketing bonds; and (5) scheduling and programing capital improvements.[9]

State and Federal Government responsibility for providing assistance and for strengthening the position of small local governments in the municipal bond market has often been expressed. The Advisory Commission on Intergovernmental Relations, for instance, has concluded:

> States have an inescapable interest in and concern with the quality of the debt management practices of their local governments. Each community's practice is a matter of statewide concern because a blemish on its credit standing, perhaps on only a single bond issue, could affect the money markets' judgment of local bond issues in that State. The dramatic increase in local borrowing since the end of World War II also underscores the need for State concern with local debt practices.[10]

Federal assistance has been chiefly given through the public facilities loan program which, as amended in 1961, authorizes the establishment of technical advisory services to assist municipalities and other political subdivisions and instrumentalities in budgeting, financing, planning, and constructing community facilities.[11]

The remainder of this chapter will focus on what State and Federal Governments have done, and could do, to aid small municipalities prepare and market their bond issues.

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[9] U.S. Congress, House Subcommittee on Housing of the Committee on Banking and Currency, Housing Act of 1961, 87th Cong., 1st sess. (Washington, D.C.: U.S. Government Printing Office, 1961), pp. 878–884.

[10] Advisory Commission on Intergovernmental Relations, "State Technical Assistance to Local Debt Management" (Washington, D.C.: U.S. Government Printing Office, January 1965), p. 1.

[11] Sec. 501(i) of Public Law 87–70, which added sec. 207 to the public facility loans legislation, title II of the Housing Amendments of 1955.

The Role of the States

STATE CONCERN WITH MUNICIPAL CREDIT

State concern with municipal credit historically has been of a negative nature as evinced by the general imposition of constitutional and statutory restrictions. These restrictions generally involved establishment of municipal debt limits at fixed percentages of the assessed valuation, and requirements for voter approval of bonded debt, often by an extraordinary majority. Problems created by restrictive debt limits have been adequately treated elsewhere,[12] and, therefore, are not included in this discussion. It is sufficient to say that these debt restrictions frequently have impeded efforts by municipalities to provide needed community facilities. As a consequence, such restrictions have tended to encourage proliferation of independent, overlapping single-purpose districts, and utilization of costly and circuitous financing methods.

STATE ADMINISTRATIVE SUPERVISION

Several States have attempted to provide guidance and assistance to municipalities by assigning responsibility for exercising administrative supervision over municipal debt, borrowing, and related fiscal operations to specific State agencies or officials. In such cases, the designated agencies, or officials, are responsible for examining, on a routine basis, the legality of proposed issues, and for assisting municipalities in eliminating inadequate or defective local borrowing procedures.[13] This approach can be constructive and flexible; in some States it has provided positive assistance to small municipalities attempting to market bond issues. The total kind and degree of supervision and assistance provided municipalities by such agencies varies from State to State. The following examples describe the assistance provided by six such State agencies with respect to municipal borrowing.

Michigan.—The Michigan Municipal Finance Commission was created in 1943 to "protect the credit of the State and its municipalities." [14] The commission has been given the power to—

1. Approve or deny proposed municipal loans;
2. Aid, advise, and consult with municipalities relative to proposed or outstanding indebtedness;
3. Examine municipal books and records to determine if they comply with debt provisions established by the commission, by statute, by charter, or by ordinance;

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[12] See, for example, Advisory Commission on Intergovernmental Relations, "State Constitutional and Statutory Restrictions on Local Government Debt" (Washington, D.C.: U.S. Government Printing Office, 1964).

[13] The attorney general's office in Arizona, Kansas, New Mexico, Oklahoma, Texas, West Virginia, and Wisconsin perform this function. In Louisiana and Michigan, the State attorneys general are called upon to examine the legality of local issues in special cases, and in Missouri and Nebraska the State auditor has this responsibility. The same responsibility is assigned to the tax commissioner in Connecticut; the local finance office, department of finance, in Kentucky; director of accounts, department of corporations and taxation, bureau of accounts, in Massachusetts; the State bond attorney in Mississippi; the local government commission in North Carolina; the bureau of municipal affairs, department of internal affairs, in Pennsylvania; and the division of local and metropolitan government, department of administration in Rhode Island.

[14] Act 202, Public Acts of 1943.

4. Adopt rules and regulations and enforce compliance with such orders and with provisions of State law, charters, ordinances, and resolutions with respect to indebtedness, including the levy and collection of taxes for debt purposes, and the segregation, safekeeping, investment, and application of money for the payment of debt.[15]

Local units are advised with respect to the comparative advantage of revenue and general obligation bonds, factors affecting debt service costs, and techniques and procedures in marketing of bonds.

The commission collects data relative to interest rates, maturities, number of bids, and bond ratings on each bond issue. This information is not currently available for distribution.[16]

New Jersey.—The division of local government in the department of the treasury has general regulatory control over the fiscal affairs, including borrowing, of local governments in New Jersey. The duties of the division include:

1. Receiving and filing copies of annual audits of all municipalities and counties;
2. Receiving, filing, and certifying all local budgets;
3. Receiving, filing, and certifying all annual and supplemental debt statements;
4. Preparing an annual report of comparative financial statistics of local government units.[17]

The division and the local government board, a semiautonomous agency within the division, undertake studies in the field of municipal finance; publish reports, guides, and statistical data on local government finances; hold hearings on the extension of credit for school districts and municipalities; and give formal financial advice on written request from local units.

The primary activity of the division with respect to the marketing of municipal bond issues is the promulgation of rules and regulations for use by registered municipal accountants licensed by the State board of public accountants. Such accountants are employed by local units to prepare annual reports and to serve as financial advisers. They assist in the preparation of brochures prepared in connection with the sale of bonds and in the establishment of sound debt service retirement schedules.

Small municipalities in New Jersey have had little difficulty marketing bond issues. Usually such units receive bids from several bidders, and interest rates received generally compare favorably with those received by other jurisdictions.[18]

North Carolina.—The North Carolina Local Government Commission has two major responsibilities with respect to marketing municipal bond issues. First, the commission must approve all municipal bond issues and notes before issuance, and, second, it is responsible, by law, for marketing all municipal securities.

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[15] See Municipal Finance Commission, Municipal Finance Acts and Rules and Regulations (Lansing, Mich., no date), ch. II.

[16] Letter from E. Boomie Mikrut, director of Michigan Municipal Finance Commission, Mar. 29, 1966. In addition to the services provided by the Michigan Finance Commission, the Michigan Municipal League offers to all municipalities in the State a financial consulting service on a fee basis. The service includes a complete advisory program with respect to marketing bond issues.

[17] George C. Skillman, division of local government, "New Jersey Municipalities," vol. XLI, No. 7 (October 1964), p. 11. Mr. Skillman was director of the division of local government.

[18] Letter from W. G. Coward, acting director, division of local government, Apr. 5, 1966.

Proposed municipal bond issues are reviewed by the commission with respect to both legality and fiscal burden imposed upon the municipality. In the investigation to determine the economic ability of a local unit to support a proposed bond issue, the commission staff gathers and analyzes data on all local financial matters, including existing local debt, tax levies, and assessments. The investigation seldom leads to the rejection of a proposed bond issue due, in large part, to the fact that municipalities, in anticipation of this review, consult frequently with the commission in the preliminary planning stages.[19]

State law requires that marketing of municipal securities shall be performed by the local government commission. In this connection, the commission publishes the prospectus providing extensive information about the local securities, and maintains financial files from which prospective buyers can secure additional information. Centralized control over the sale of bond issues is reported to result in substantial savings to municipal units because—

1. Bond issues can be held for sale until market conditions appear to be most favorable;
2. Bond issue sales can be given wider publicity by a State agency than is usually possible by a small municipality; and
3. Coordination of sales and wider publicity facilitates maximum participation of interested prospective buyers.[20]

The commission, in addition to these activities, offers assistance on capital improvements programing, regulates sinking fund management, oversees refunding operations and default adjustments, and supervises municipal accounting and reporting.

Pennsylvania.—State law in Pennsylvania requires that general obligation bonds be approved by the department of internal affairs before they may be delivered to the purchaser. The bond division of the bureau of municipal affairs within the department examines all features of the bond issue to determine whether provisions of the State constitution and municipal borrowing act have been met. If the requirements have not been met, approval is withheld until the defects are corrected.

The bond division assists municipalities in all legal matters relative to the issue, including the preparation of ordinances, resolutions, model proceedings, and related documents, and distribution of such material to municipal attorneys upon request. The division prepares a comprehensive checklist of all of the proceedings that must be submitted by the municipality for approval. The checklist and the model proceedings provide guidelines for local solicitors in the preparation of bond issues and prospectuses. These items are included in a publication prepared by the bond division entitled "A Guide to Pennsylvania's Municipal Borrowing Act," as are an analysis of State laws related to borrowing and sample election notices, bonds and bond coupons, and financial statements. In addition, the division will review drafts of proceedings, upon request, for errors or omissions before enactment, and before advertising costs are incurred. Most local solicitors are reported to take advantage of this offer, and, as a con-

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[19] See Advisory Commission on Intergovernmental Relations, footnote 6, supra, pp. 21–22. A detailed account of the activity of the commission may be found in Robert S. Rankin, "The Government and Administration of North Carolina" (New York: Thomas Y. Crowell Co., 1955).

[20] Rankin, op. cit., p. 386.

sequence, embarrassing and untimely delays in the delivery of bond issues to purchasers are avoided. Although the division is prepared to assist in any legal problems, it does not have the facilities or manpower to advise municipalities on marketing techniques or to prepare prospectuses.

The bond division maintains records of all general obligation bonds sold in Pennsylvania together with information relating to net interest costs, maturities, and conditions of sale. However, this information is not published in a report form.

The assistance offered by the bond division of this Pennsylvania department can be supplemented readily by access to private counsel. A number of law firms in Philadelphia and Pittsburgh specialize in marketing municipal issues. One or the other of these cities is accessible from any part of the Commonwealth, and, therefore, professional assistance is readily available if required, or sought, by a municipal solicitor. As a consequence, most bond issues marketed by Pennsylvania municipalities are done so under the supervision of a bond counsel.[21]

Tennessee.—Financial assistance in Tennessee is provided local units, on request, by the division of local finance in the office of the comptroller of the treasury. Services provided by the division, for a very nominal charge, include the preparation of economic and financial data, resolutions, notices of bond issue sale, prospectuses, and related technical assistance. Also, the division staff will (1) advise and assist with respect to debt retirement programs, (2) attend each bond sale, and (3) assist in arranging for the printing and delivery of bonds. The division emphasizes to local officials the importance of making available to the investment community accurate and complete financial reports and other requested data in order to secure high credit ratings that result in reduced costs.[22]

Virginia.—The Virginia State Commission on Local Debt offers substantial assistance to local units. It is empowered to advise local governments, on request, with respect to "all matters relating to the planning, preparation, and marketing" of local bonds, and to "assist the political subdivision in the sale of such bonds." [23] The commission, at no charge to the municipality, offers aid in all preliminary financal planning, including a determination of the ability to retire general obligation bonds from a tax levy and revenue bonds from the income of self-sustaining enterprises. It assists in the preparation of bond maturity schedules, prepares and prints bid forms, advises on the best time to offer bond issues for sale, handles the sale of the bond issue, and recommends acceptance or rejection of the best bid. In addition, the commission prepares, prints, and distributes a comprehensive brochure setting forth all information relating to each bond issue to approximately 300 investment bankers east of the Mississippi; and answers all inquiries from investment bankers relative to bond issues.

The commission, however, does not provide architectural, engineering, or legal services, nor does it extend financial aid for the performance of such services. Each political subdivision must pay the cost

[21] Letter from Ellen Marie Coggins, Esq., chief of bond division of bureau of municipal affairs, department of internal affairs, Commonwealth of Pennsylvania, Harrisburg, Pa., Apr. 4, 1966.

[22] Letter from W. R. Snodgrass, comptroller of the treasury, State of Tennessee, Apr. 12, 1966.

[23] Ch. 177 of the acts of the assembly, 1950.

of these services, as well as the costs connected with the publication of the notice of sale in a newspaper and the printing of bonds.[24]

With respect to Virginia, the Advisory Commission on Intergovernmental Relations found:

> Local governments have profited from the activities of the Virginia Commission on local debt in the form of better prices for their bonds and some savings in consultants' fees. The centralization of local bond sales intensifies the competition for the offering, and the availability of detailed information on local finances tends to upgrade credit ratings.[25]

OTHER FORMS OF STATE ASSISTANCE

Standards for notices of sale.—A number of States prescribe minimum standards for data to be included in official statements on local debt offerings. New Jersey, for example, requires that the notice of sale for a bond issue contain the following basic data: (1) the principal amount, date, denomination, and maturities of the bonds offered for sale; (2) the rate or rates of interest to be borne by the bonds; (3) the terms and conditions of public sale; and (4) such other information as may be required by the governing body.[26] New Jersey law further provides that:

> A public sale of bonds shall be advertised at least once * * * seven days prior * * * [to the sale] * * * in a newspaper qualified for publication of a bond ordinance of the local unit and in a publication carrying municipal bond notices and devoted primarily to financial news or the subject of State and municipal bonds and published in the City of New York and New Jersey.[27]

New York statutes assign to the State comptroller responsibility for regulating the form, publication, and mailing of bond issue sale notices. Minimum information required by law to be contained in such notices includes: designation of the place where bids will be received and opened, the maximum rate of interest to be paid, conditions of sale, and method of bidding. Additional information may be required by the comptroller, if he deems it advisable.[28] In addition, the comptroller prescribes the standards and basic information that local governments must embody in a bond issue prospectus. Basic facts to be contained in each such prospectus include: a description of the community, financial experience for the preceding 5-year period, detailed information on tax collection, a summary statement of the assets of various city funds, a schedule of bond maturities, descriptive analysis of the finances of overlapping and coterminous government units, and related historical financial data.

Publication of data.—Approximately half the States require local governments to file debt reports as part of the auditing process. However, with few exceptions, States that do gather audit and financial reports fail both to "prescribe standard reporting classifications * * * and to "* * * disseminate the information they gather in any meaning-

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[24] "State Aid to Counties and Municipalities in Debt Services," address by J. Gordon Bennett, Virginia auditor of public accounts and member of the Virginia State Commission on Local Debt, municipal finance commission, annual seminar, Lansing, Mich., May 8, 1962.
[25] Advisory Commission on Intergovernmental Relations, supra, note 5, p. 58.
[26] "New Jersey Statutes Annotated," 1965 cumulative supplementary pamphlet, title 40A: 2–31.
[27] Ibid., title 40A: 2–30.
[28] "Consolidated Laws of New York Annotated," book 33, secs. 57.00–59.00.

ful way on a current basis." [29] Leading examples of sound reporting systems are found in California, New Jersey, and New York. These States not only require local governments to file detailed financial reports on standard forms, but they publish local financial data in detail. In California, for example, annual financial reports for local governments are issued by the State comptroller and contain detailed information on bonded debt, assessed values, capital outlays, and such other fiscal data as an investment analyst might require.

Capital improvements programing.—A capital improvements program constitutes an effective tool for a municipality to employ in financial planning and debt management, and for underwriters, investors, and security analysts to utilize in evaluating anticipated municipal expenditure patterns and fiscal capacity. Assistance in the preparation of capital improvement programs is available to municipalities in several States.[30] New Jersey goes so far as to make the adoption of capital improvement programs mandatory. Since June 15, 1964, all municipalities and counties in that State undertaking any capital improvements have been required to adopt and file a 6-year capital budget—capital improvements program—with the State division of local government.

A model form for reporting capital improvement programs has been drawn up by the division for the guidance of local units. Following this form, local officials establish a schedule of capital construction for each of the next 6 years, complete with cost estimates, identification of financing methods, and an analysis of the effect of the program on the credit rating and financial capacity of the unit. Discretion with respect to the procedures to be followed in preparing this program, and to determining project priorities is left to the local government units, but the program must be approved by the governing body. The requirement for capital improvements programs, and division assistance to local units in their preparation, have gone far toward providing information and planning necessary to support the marketing of bond issues.[31]

Training.—Few States have made serious efforts to promote local official training in bond marketing and debt management. State training programs for local government personnel usually have been confined to special functional areas in which the State has a direct financial and administrative interest, such as public health, welfare, and education.[32] State sponsored training programs offered through State universities often are of only limited usefulness. Finance officials of small municipalities, concerned primarily with a "how to do it" approach, frequently find that the university, or its extension division, does not offer the desired type of instruction, or that the local government will not, or cannot, finance the cost of instruction. The university sponsored training programs found in North Carolina and Tennessee have been of demonstrated value, however. The Institute of Government at the University of North Carolina provides assistance to local government units in the full range of services, including accounting and finance. In addition to answering inquiries and providing

[29] Advisory Commission on Intergovernmental Relations, supra, note 5, p. 31.
[30] See p. 254 above.
[31] Data based on interviews with George C. Skillman and William G. Coward of the division of local government, Feb. 5, 1965, and documents supplied by the division.
[32] The International City Managers' Association, "Post-Entry Training in the Local Public Service" (Chicago: the International City Managers' Association, 1963), p. 22.

field assistance to the various municipalities, the finance specialist on the institute staff conducts annual courses and prepares guidebooks for municipal and county finance officials.[33] In Tennessee, at the request of the Tennessee Municipal League and its member cities, the municipal technical advisory service was established in the University of Tennessee Extension Division. MTAS employs a number of staff specialists in the fields of finance and accounting, municipal management, codes and ordinances, and engineering. By law it is to furnish "* * * technical, consultative, and field services to municipalities in problems relating to fiscal administration, accounting, tax assessment and collection, law enforcement, improvements and public works, and any and all matters relating to municipal government, * * *" and to expend funds for "* * * studies and research in municipal government, publications, educational conferences and attendance thereat * * *."[34] Finally, State governments could alleviate this problem still further by encouraging participation of local finance officials in the programs sponsored by State municipal leagues and professional associations such as the Municipal Finance Officers Association.

POSSIBLE STATE ACTION

The mechanics of the bond market are exceedingly complex, and the public interest can best be protected by technically competent specialists experienced in its operations. Small and medium size municipalities cannot efficiently retain such specialists on their staffs. The need for State assistance to the Nation's municipalities, therefore, is generally recognized. A few States, notable examples being New Jersey, North Carolina, and Tennessee, have established effective programs of assistance in debt management.[35] Most States, however, have made no real constructive effort to provide small municipalities with much needed guidance in this field.[36] Various groups such as the National League of Cities, the Council of State Governments, and the Advisory Commission on Intergovernmental Relations have recommended for several years State enactment of legislation designed to improve local credit through positive programs of assistance in debt management practices. Such legislation would provide for modernization and codification of debt laws to remove obsolete restrictions imposed upon municipal governments, and for the establishment of an adequately staffed and financed agency to assist municipalities in the marketing of municipal bond issues. Such an agency would be empowered to—

1. Establish standard classifications and procedures for reporting essential minimum finance data, including current and historical records of revenues by source, expenditures by function and character, assessed valuation and true value of taxable property, tax rates, tax collections, and delinquencies, and debt outstanding and retired.

[33] William L. Frederick and Marilyn Gittell, "State Technical Assistance to Local Governments" (Chicago: the Council of State Governments, 1962), pp. 41–45.
[34] Ibid., pp. 38–41.
[35] In addition to the State previously discussed, Delaware and Kentucky have established agencies to assist municipalities market their securities.
[36] Correspondence from officials in Alabama, Arizona, Connecticut, Florida, Georgia, Massachusetts, Mississippi, Montana, North Dakota, Oklahoma, South Carolina, South Dakota, and Washington indicates that these States have no established agencies responsible for providing positive assistance on a regular basis to municipalities attempting to market bond issues.

2. Maintain a central file of municipal finance data and distribute such data to bond underwriters, investors, and security analysts.

3. Provide, on request, technical assistance with respect to borrowing practices, methods of financing, size of bond issues, maturity schedules, timing of bond issue sales, and other matters related to debt management.

4. Establish standard forms for the preparation of bond issue prospectuses.

5. Make available to municipal officials and employees training in debt management procedures and practices in cooperation with State municipal leagues and professional associations.

6. Market, on request, municipal bond issue offerings in order to obtain the best terms available in a continually changing money market through advantageous timing and extensive advertising.

7. Review proposed municipal bond issues in terms of legality, and to conduct studies to determine economic ability to support the proposed debt burden. (The agency should not have authority to reject a proposed bond issue on the basis of economic soundness—a negative advisory report would provide, in most cases, a serious deterrent to the incurring of indebtedness.)

Adoption of these recommendations by the various States should contribute substantially to improvement in debt management and credit standing among the Nation's small municipalities.

Federal Assistance

THE PUBLIC FACILITY LOAN PROGRAM

Federal assistance to facilitate the sale of bond issues by municipalities has been minimal. The only significant Federal program designed to assist municipalities market their securities is the public facility loan program, administered by the Department of Housing and Urban Development.[37] The Housing Act, as amended,[38] authorizes the Department to purchase the securities and obligations of, or make loans to, cities, towns, villages, townships, and counties with populations under 50,000, if such political subdivisions cannot secure credit at "reasonable terms and conditions" from private lending organizations.[39] Loans can be made for a variety of public works, including water, sewer, and gas distribution systems. Loans may be made for terms up to 40 years and up to 100 percent of the project cost, including land, right-of-way, site improvement, planning, construction, and engineering, architectural, and legal fees. The period of the loan is governed by the applicant's ability to pay and the estimated useful

[37] The Farmers Home Administration makes loans to public bodies and nonprofit organizations primarily serving rural residents to develop domestic water supply and waste disposal systems. In connection with this program, the Administration offers assistance to the applicants in determining the engineering feasibility, economic soundness, cost estimates, organization, financing, and management matters in connection with a proposed improvement. The recently organized Economic Development Administration, Department of Commerce, also offers. or plans to offer, technical assistance that will strengthen the bond issues of smaller local governments. The public facility loan program, however, has been most active in this area, particularly since the amendments of the Housing Act of 1961.

[38] Public Law 345, 84th Cong., 69 Stat. 642; 42 U.S.C. 1941.

[39] Political subdivisions having populations up to 150,000 may qualify if located in a redevelopment area designated by the Public Works and Economic Development Act of 1965. Population limits do not apply to communities located near a research or development installation of the National Aeronautics and Space Agency.

life of the project. Applicants are required to show that income will be available to repay the loan.

After a loan commitment from the Department of Housing and Urban Development has been received, the applicant political subdivision is required to secure the services of a bond counsel and to advertise its bond issue in financial publications to maximize the possibility of securing private financing. When possible, Department of Housing and Urban Development staff assist in the preparation and in the review of prospectus, advertising notices, and essential financial data related to the political subdivision. Department of Housing and Urban Development will purchase those portions of a bond issue for which there is no bid by private underwriters at interest rates deemed to be reasonable. Interest rates charged for public facility loans since 1962 are presented on the following page.

TABLE III.—*Interest rates under public facility loan program*

Fiscal year	Regular interest rate	Interest rate in designated redevelopment counties [1]
1962	3.75	3.50
1963	3.875	3.625
1964	4.00	3.75
1965	4.00	3.75
1966	4.00	3.75

[1] Counties, or county equivalents (including, Indian reservations, independent Virginia cities, territories, and cities of 250,000 meeting specified income, employment, or outmigration conditions), designated as redevelopment areas under the provisions of the Public Works and Economic Development Act.

EVALUATION OF THE PUBLIC FACILITY LOAN PROGRAM

The public facility loan program has proved beneficial to a limited number of local government units. Approximately a thousand loans have been made through this program since it began in fiscal 1956. These loans have been concentrated in the 16 Southern and Southwestern States in the Department of Housing and Urban Development regions III and V, as indicated in table IV below. Political subdivisions in these two regions have received approximately 80 percent of the loans approved since the program was inaugurated.

TABLE IV.—*Geographical distribution and amount of approved loans from 1965 to date* [1]

Region [2]	Number	Amount of loans
I	1	$366,000
II	37	20,913,000
III	510	214,820,000
IV	74	32,013,000
V	313	65,113,000
VI	89	54,104,000
VII	2	330,000
Total	1,026	387,659,000

[1] Unofficial data obtained from the Public Facility Loan Division, Department of Housing and Urban Development.

[2] Distribution of States among the Department of Housing and Urban Development regions is as follows: Region I: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont; region II: Delaware, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia, and the District of Columbia; region III: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee; region IV: Illinois, Indiana, Iowa, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; region V: Arkansas, Colorado, Kansas, Louisiana, Missouri, New Mexico, Oklahoma, and Texas; region VI: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming; and region VII: Guam, Puerto Rico, and the Virgin Islands.

Table V, below, shows that in the last 5 fiscal years 707 loans, totaling just under $300 million, were made to local political subdivisions. This number of loans is equal to only 1.25 percent of the number of municipalities, counties, townships, and special districts located by the 1962 U.S. Census of Governments. The amounts loaned each year through this program constitute less than 4 percent of the annual increase in long-term debt incurred in any of these years by all such political subdivisions.

TABLE V.—*Number and amount of loans made under the public facility loan program*[1]

Fiscal year	Number of loans	Amount of loans	Percent of increase in long term debt
1962	196	$88,657,000	3.35
1963	242	60,400,000	1.48
1964	121	45,210,000	2.47
1965	79	75,271,000	1.98
1966	69	29,400,000	----------
Total	707	298,938,000	----------

[1] Data obtained from the Public Facility Loan Division, Department of Housing and Urban Development and U.S. Bureau of Census, "Governmental Finances," Governmental Finances G–GF61–No. 2, G–GF62–No. 2, G–GF63–No. 2, G–GF64–No. 1, and GF No. 6 (Washington, D.C., U.S. Government Printing Office (1962–66).

The limited use of the public facility loan program by the Nation's local governments can be attributed to several factors. First, the program is not well known among potential users. The National League of Cities (American Municipal Association) survey referred to earlier, found that more than one-third of the municipalities responding had not heard of the program. This situation existed because neither the Washington nor the regional offices have made more than a minimum effort to publicize the program's existence. Second, financial limitations imposed act as constraints on the usefulness of the program. A total of $650 million has been appropriated for the public facility loan revolving fund. Excluding $50 million allocated for transportation facilities, and loans outstanding, there is now only $233 million, approximately, available for future loans. The use of these funds was curtailed in 1966 by an allotment established by the Bureau of the Budget which could not be exceeded. However, probably a greater deterrent to the usefulness of the program is the fact that funds can generally be borrowed at more reasonable rates from private investors. Comparison of the average annual net interest costs charged small- and medium-size municipalities with interest rates charged political subdivisions under the public facility loan program [40] indicates that program rates, even those established for designated redevolpment counties, have been higher than the rates available in the public bond market for all categories of bonds during the last 5 years with the exception of the 1961 "B" and unrated bonds having an average maturity of 10 to 19 years.

[40] See tables I and III.

APPENDIX A

Average monthly net interest costs of A, B, and unrated bonds for small- and medium-sized municipalities in 1961

AVERAGE MATURITY UNDER 10 YEARS

Month	A bonds				B bonds				Unrated bonds			
	Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000	
January	3.009	(2)	2.803	(36)	3.240	(1)	3.011	(29)	3.405	(7)	2.865	(4)
February	3.161	(8)	2.873	(22)	3.154	(1)	3.006	(13)	3.336	(14)	2.853	(11)
March	2.890	(4)	3.009	(30)	---------	(0)	3.254	(23)	3.431	(12)	3.082	(8)
April	3.289	(3)	3.160	(29)	---------	(0)	3.185	(27)	3.439	(5)	2.648	(3)
May	2.918	(6)	2.890	(58)	3.057	(2)	3.044	(30)	3.239	(14)	2.798	(8)
June	3.006	(5)	3.071	(52)	3.043	(3)	3.123	(39)	3.461	(5)	3.191	(2)
July	2.958	(7)	3.042	(29)	2.827	(3)	3.147	(22)	3.740	(11)	3.303	(3)
August	3.094	(2)	3.016	(40)	3.572	(3)	3.308	(34)	3.149	(19)	3.358	(13)
September	3.556	(2)	2.941	(35)	3.350	(1)	3.136	(18)	3.265	(31)	3.494	(17)
October	2.840	(9)	2.858	(25)	2.683	(3)	3.062	(33)	3.580	(12)	2.687	(3)
November	2.991	(7)	2.936	(40)	3.239	(7)	2.998	(33)	3.988	(7)	3.091	(3)
December	3.112	(5)	2.984	(32)	3.481	(2)	3.089	(44)	3.237	(4)	---------	(0)
Average	3.023	(60)	2.967	(428)	3.149	(26)	3.115	(345)	3.388	(141)	3.127	(75)

AVERAGE MATURITY 10 TO 19 YEARS

January	3.475	(16)	3.349	(48)	3.793	(12)	3.627	(52)	3.689	(20)	3.722	(9)
February	3.300	(12)	3.157	(51)	3.701	(11)	3.385	(64)	3.627	(31)	3.585	(10)
March	3.350	(10)	3.300	(70)	3.496	(5)	3.635	(38)	3.663	(20)	3.720	(21)
April	3.449	(5)	3.430	(67)	3.856	(13)	3.514	(92)	3.823	(9)	4.010	(1)
May	3.451	(12)	3.248	(57)	3.698	(12)	3.430	(83)	3.676	(14)	4.257	(4)
June	3.494	(15)	3.364	(67)	3.840	(20)	3.498	(88)	3.931	(11)	3.944	(2)
July	3.565	(6)	3.424	(45)	3.891	(10)	3.541	(58)	3.907	(11)	4.178	(2)
August	3.547	(11)	3.397	(40)	3.855	(10)	3.609	(54)	3.936	(19)	3.891	(8)
September	3.588	(4)	3.427	(52)	3.859	(5)	3.530	(40)	4.043	(18)	3.682	(13)
October	3.385	(14)	3.320	(41)	3.728	(7)	3.549	(67)	3.887	(13)	3.745	(4)
November	3.340	(13)	3.335	(59)	3.738	(6)	3.504	(82)	3.789	(8)	2.861	(4)
December	3.429	(8)	3.273	(61)	3.814	(4)	3.412	(74)	3.956	(7)	---------	(0)
Average	3.451	(126)	3.335	(658)	3.788	(115)	3.635	(792)	3.816	(181)	3.721	(78)

NOTE.—Figures in parentheses denote number of issues.

Average monthly net interest costs of A, B, and unrated bonds for small- and medium-sized municipalities in 1962

AVERAGE MUTURITY UNDER 10 YEARS

Month	A bonds				B bonds				Unrated bonds			
	Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000	
January	2.875	(4)	2.785	(21)	3.765	(2)	2.903	(25)	3.490	(11)	2.881	(1)
February	2.875	(2)	2.793	(29)	5.833	(3)	3.095	(24)	3.160	(19)	2.690	(10)
March	2.771	(2)	2.803	(45)	3.295	(3)	2.750	(18)	3.021	(21)	2.727	(6)
April	2.600	(3)	2.608	(46)	3.666	(3)	2.627	(43)	3.231	(18)	2.831	(6)
May	2.802	(6)	2.674	(49)	3.101	(2)	2.732	(45)	3.063	(10)	2.983	(10)
June	3.080	(4)	2.761	(33)	---	(0)	2.928	(25)	3.226	(5)	3.030	(4)
July	2.885	(2)	2.740	(24)	---	(0)	2.634	(15)	3.264	(16)	3.348	(5)
August	2.560	(1)	2.867	(18)	3.080	(4)	2.937	(19)	3.171	(19)	2.835	(8)
September	2.739	(2)	2.547	(31)	2.913	(3)	2.627	(14)	2.917	(10)	3.181	(8)
October	2.713	(3)	2.456	(13)	2.490	(1)	2.625	(8)	3.165	(7)	2.713	(3)
November	2.403	(3)	2.379	(33)	3.282	(4)	2.455	(33)	2.920	(14)	2.904	(2)
December	2.593	(4)	2.594	(29)	3.310	(1)	2.736	(21)	3.032	(25)	2.847	(15)
Average	2.757	(36)	2.668	(371)	3.543	(26)	2.749	(290)	3.128	(175)	2.906	(78)

AVERAGE MATURITY 10 TO 19 YEARS

January	3.258	(14)	3.167	(45)	3.479	(10)	3.366	(63)	3.683	(13)	3.397	(5)
February	2.999	(4)	3.086	(85)	3.487	(13)	3.220	(99)	3.505	(35)	3.333	(6)
March	3.094	(4)	3.061	(88)	3.536	(8)	3.167	(96)	3.406	(32)	3.310	(9)
April	2.962	(12)	2.969	(78)	3.403	(9)	3.104	(77)	3.399	(21)	3.278	(9)
May	3.014	(14)	2.974	(63)	3.265	(21)	3.210	(78)	3.627	(6)	3.459	(8)
June	3.208	(12)	3.096	(36)	3.565	(6)	3.236	(43)	3.516	(16)	3.279	(2)
July	3.246	(5)	3.152	(18)	3.440	(4)	3.340	(7)	3.280	(2)	3.579	(3)
August	3.232	(2)	3.109	(17)	3.313	(3)	3.162	(14)	3.541	(11)	3.662	(2)
September	3.049	(7)	2.925	(16)	3.338	(7)	3.083	(17)	3.356	(6)	3.150	(2)
October	2.837	(4)	2.847	(16)	3.003	(3)	3.090	(14)	3.488	(5)	2.680	(1)
November	2.915	(4)	2.922	(29)	3.142	(4)	3.040	(34)	3.229	(8)	3.086	(6)
December	3.051	(8)	2.952	(50)	3.412	(11)	3.150	(57)	3.363	(31)	3.339	(15)
Average	3.086	(91)	3.030	(541)	3.386	(99)	3.188	(599)	3.453	(186)	3.326	(68)

NOTE.—Figures in parentheses denote number of issues.

Average monthly net interest costs of A, B, and unrated bonds for small- and medium-sized municipalities in 1963

AVERAGE MATURITY UNDER 10 YEARS

Month	A bonds				B bonds				Unrated bonds			
	Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000	
January	2.850	(6)	2.526	(15)	2.940	(1)	2.889	(13)	2.915	(9)	2.573	(12)
February	2.667	(3)	2.454	(14)	3.008	(5)	2.707	(25)	2.944	(13)	2.778	(4)
March	2.750	(3)	2.625	(35)	----------	(0)	2.688	(42)	3.064	(12)	2.667	(7)
April	2.472	(2)	2.590	(43)	2.846	(6)	2.610	(26)	2.812	(33)	2.755	(5)
May	2.692	(1)	2.748	(62)	2.851	(8)	2.814	(70)	2.968	(24)	2.637	(6)
June	2.740	(3)	2.634	(41)	2.897	(4)	2.724	(29)	3.092	(27)	2.798	(8)
July	2.922	(7)	2.776	(62)	3.025	(4)	2.891	(58)	3.079	(22)	2.810	(10)
August	2.902	(4)	2.841	(32)	3.494	(5)	2.833	(14)	3.066	(14)	2.927	(9)
September	2.980	(2)	2.862	(28)	3.288	(2)	2.933	(20)	3.130	(16)	3.357	(5)
October	2.963	(5)	2.809	(40)	2.963	(2)	2.947	(36)	3.254	(17)	3.099	(5)
November	3.017	(6)	2.927	(32)	3.235	(4)	3.055	(38)	3.304	(16)	2.820	(5)
December	----------	(0)	2.950	(3)	----------	(0)	2.950	(3)	3.750	(1)	----------	(0)
Average	2.861	(42)	2.732	(407)	3.036	(41)	2.832	(374)	3.047	(204)	2.809	(76)

AVERAGE MATURITY 10 TO 19 YEARS

January	2.994	(12)	2.959	(55)	3.339	(15)	3.174	(67)	3.323	(19)	3.153	(11)
February	3.037	(8)	2.920	(55)	3.228	(10)	3.131	(57)	3.362	(21)	3.068	(7)
March	2.886	(7)	2.845	(76)	3.052	(5)	2.973	(102)	3.237	(11)	3.275	(5)
April	2.912	(9)	2.971	(75)	3.272	(17)	3.065	(96)	3.234	(39)	3.448	(4)
May	3.042	(7)	2.988	(39)	3.222	(9)	3.212	(43)	3.481	(28)	3.189	(11)
June	3.152	(9)	3.087	(67)	3.536	(7)	3.173	(88)	3.535	(40)	3.569	(3)
July	3.066	(5)	3.057	(49)	3.477	(5)	3.236	(49)	3.431	(32)	3.321	(13)
August	3.031	(9)	3.123	(59)	3.591	(9)	3.272	(63)	3.543	(15)	3.271	(3)
September	3.169	(7)	3.068	(39)	3.527	(6)	3.260	(45)	3.453	(24)	3.388	(5)
October	3.140	(10)	3.105	(51)	3.346	(11)	3.267	(74)	3.610	(27)	3.506	(4)
November	3.278	(9)	3.199	(43)	3.479	(10)	3.328	(70)	3.498	(18)	3.445	(2)
December	----------	(0)	3.447	(3)	----------	(0)	3.468	(7)	3.928	(3)	----------	(0)
Average	3.066	(92)	3.021	(611)	3.361	(104)	3.176	(761)	3.439	(277)	3.279	(68)

NOTE.—Figures in parentheses denote number of issues.

Average monthly net interest costs of A, B, and unrated bonds for small- and medium-sized municipalities in 1964

AVERAGE MATURITY UNDER 10 YEARS

Month	A bonds				B bonds				Unrated bonds			
	Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000	
January	2.942	(5)	2.837	(20)	3.460	(3)	3.190	(8)	3.268	(6)	3.458	(9)
February	2.866	(2)	2.923	(18)	---	(0)	3.029	(21)	3.090	(13)	2.894	(6)
March	3.033	(8)	2.892	(13)	---	(0)	3.151	(13)	3.443	(14)	3.020	(8)
April	2.971	(9)	2.938	(31)	3.230	(8)	3.108	(14)	3.351	(26)	2.871	(9)
May	3.118	(7)	3.013	(15)	3.340	(1)	3.069	(20)	3.309	(13)	---	(0)
June	3.036	(4)	2.865	(27)	3.349	(3)	3.090	(11)	3.271	(25)	3.217	(11)
July	3.116	(3)	2.943	(66)	3.237	(3)	3.028	(45)	3.333	(13)	3.095	(8)
August	2.953	(6)	2.960	(36)	3.639	(1)	2.966	(27)	3.217	(12)	3.315	(9)
September	3.170	(1)	2.956	(22)	---	(0)	3.162	(13)	3.148	(10)	3.314	(6)
October	3.095	(4)	2.954	(39)	3.373	(2)	3.056	(30)	3.195	(13)	3.176	(12)
November	3.187	(3)	2.983	(40)	3.298	(5)	3.027	(38)	3.375	(15)	3.259	(9)
December	3.079	(8)	2.996	(30)	---	(0)	3.051	(27)	3.302	(21)	3.136	(6)
Average	3.038	(60)	2.944	(357)	3.315	(26)	3.055	(267)	3.287	(181)	3.168	(93)

AVERAGE MATURITY 10 TO 19 YEARS

January	3.130	(10)	3.135	(51)	3.471	(12)	3.306	(67)	3.462	(18)	3.362	(12)
February	3.069	(8)	3.070	(70)	3.484	(11)	3.230	(103)	3.442	(17)	3.305	(3)
March	3.317	(9)	3.243	(58)	3.510	(15)	3.374	(64)	3.740	(26)	3.414	(13)
April	3.245	(16)	3.217	(58)	3.634	(11)	3.414	(70)	3.499	(24)	3.587	(7)
May	3.145	(6)	3.190	(42)	3.546	(10)	3.329	(40)	3.701	(16)	3.560	(9)
June	3.276	(16)	3.247	(46)	3.513	(12)	3.482	(51)	3.643	(29)	3.346	(8)
July	3.274	(9)	3.177	(46)	3.540	(6)	3.438	(41)	3.628	(17)	3.322	(12)
August	3.234	(4)	3.169	(33)	3.438	(5)	3.265	(26)	3.845	(10)	3.386	(8)
September	3.238	(6)	3.195	(41)	3.424	(7)	3.383	(34)	3.595	(9)	3.584	(5)
October	3.292	(12)	3.246	(36)	3.429	(17)	3.349	(49)	3.680	(34)	3.457	(7)
November	3.248	(13)	3.123	(47)	3.611	(6)	3.276	(44)	3.530	(39)	3.438	(11)
December	3.229	(9)	3.188	(61)	3.575	(6)	3.299	(62)	3.513	(28)	3.460	(9)
Average	3.234	(118)	3.180	(589)	3.509	(118)	3.339	(651)	3.598	(267)	3.429	(104)

NOTE.—Figures in parentheses denote number of issues.

Average monthly net interest costs of A, B, and unrated bonds for small- and medium-sized municipalities in 1965

AVERAGE MATURITY UNDER 10 YEARS

Month	A bonds				B bonds				Unrated bonds			
	Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000		Population, under 10,000		Population, 10,000 to 250,000	
January	2.965	(8)	2.902	(19)	---	(0)	2.914	(10)	3.674	(5)	2.756	(1)
February	2.974	(4)	2.902	(8)	3.243	(2)	3.103	(25)	3.331	(9)	3.170	(2)
March	3.148	(2)	2.907	(33)	3.207	(2)	3.106	(24)	3.188	(13)	3.193	(2)
April	3.036	(3)	2.990	(22)	3.221	(4)	3.062	(25)	3.405	(9)	3.189	(3)
May	3.077	(1)	3.018	(35)	3.085	(4)	3.075	(30)	3.484	(8)	3.248	(8)
June	3.105	(4)	3.096	(41)	3.343	(7)	3.186	(37)	3.179	(8)	3.392	(4)
July	3.191	(10)	3.067	(37)	3.525	(3)	3.125	(44)	3.261	(18)	3.148	(1)
August	3.055	(1)	3.069	(31)	---	(0)	3.158	(14)	3.386	(18)	3.171	(15)
September	3.139	(2)	3.173	(30)	3.415	(3)	3.256	(24)	3.475	(15)	3.262	(10)
October	3.440	(1)	3.280	(30)	3.537	(2)	3.811	(3)	3.482	(15)	3.371	(31)
November	3.380	(8)	3.244	(27)	3.518	(7)	3.356	(36)	3.629	(23)	3.218	(2)
December	3.462	(4)	3.375	(19)	3.750	(2)	3.455	(21)	3.722	(10)	3.476	(5)
Average	3.169	(48)	3.093	(332)	3.376	(36)	3.184	(293)	3.434	(151)	3.289	(84)

AVERAGE MATURITY 10 TO 19 YEARS

January	3.164	(5)	3.091	(65)	3.495	(6)	3.242	(60)	3.414	(28)	3.251	(13)
February	3.258	(3)	3.042	(65)	3.686	(3)	3.135	(67)	3.434	(18)	3.355	(9)
March	3.169	(5)	3.185	(55)	3.602	(12)	3.324	(87)	3.617	(32)	3.476	(8)
April	3.132	(9)	3.162	(38)	3.473	(7)	3.276	(46)	3.520	(11)	3.474	(8)
May	3.413	(6)	3.185	(47)	3.452	(6)	3.347	(63)	3.567	(29)	3.344	(21)
June	3.376	(10)	3.245	(63)	3.589	(11)	3.360	(75)	3.731	(19)	3.554	(13)
July	3.237	(9)	3.240	(54)	3.682	(12)	3.393	(57)	3.709	(20)	3.529	(10)
August	3.228	(4)	3.176	(69)	3.575	(6)	3.361	(52)	3.608	(21)	3.274	(7)
September	3.171	(3)	3.363	(44)	3.628	(8)	3.633	(34)	3.805	(34)	3.554	(16)
October	3.445	(6)	3.405	(32)	3.594	(6)	3.539	(16)	3.753	(31)	3.698	(18)
November	3.533	(7)	3.446	(56)	3.731	(7)	3.599	(71)	3.787	(27)	3.611	(11)
December	3.595	(10)	3.587	(25)	3.868	(5)	3.774	(38)	3.857	(19)	3.972	(7)
Average	3.335	(77)	3.233	(613)	3.503	(89)	3.386	(666)	3.659	(289)	3.501	(141)

NOTE.—Figures in parentheses denote number of issues.

PART III. MUNICIPAL BOND INTEREST RATES AND TAX EXEMPTION

70-132 O—67—vol. 2——18

CHAPTER 17

Factors Determining Municipal Bond Yields*

THE NEW ISSUE YIELDS OF MUNICIPAL BONDS are the result largely of the interaction of four groups of measurable market forces, as follows:

1. The prevailing yields at that time of similar taxable bonds.

2. The effective income tax rates then applicable to each of the various investor groups which regularly make fixed interest investments. These rates determine the value of tax exemption to each investor group.

3. The volume of new investible funds flowing to each of these investor groups. This determines the potential significance to the municipal market of the tax rates applicable to each investor group.

4. The volume of new bond financing desired by all states and municipalities at around prevailing yields.

To the above list of four specific measurable market forces must be added two more groups of forces which are far less specific and measurable.

5. Expectations. For example, the market might expect higher or lower tax rates generally or for specific types of investors. Alternatively, specific individuals or institutions might expect that their own brackets will rise or fall due to a change in their earnings. Again a change in the volume of tax-exempt financing might be expected or a change in the flow of new investible funds.

6. Institutional restrictions. Laws, customs, and liquidity needs limit the free interflow of investible funds from one department of the investment market to another solely for yield advantage. The best net after tax yield is an important guide to the allocation of loanable funds, but is far from the sole guide.

The market forces will first be discussed separately to see how they affected recent yields, and then in combination over a long period of years. First of all it will be useful to illustrate the effect of each at one recent point of time.

* Prepared by Sidney Homer, partner, Salomon Brothers & Hutzler, with minor editing by committee staff.

Bond Yields in February 1966

This date was picked because prime long new corporate bonds early in the month came to market to yield as much as 5% for the first time since 1960, and this is a good round number. Simultaneously, prime long municipals were selling to yield 3.60%. (In July '66, these yields are 5.50% and 3.85%, respectively.)

The following table shows the net after tax yield of these prime corporate bonds on that date to all principal investor groups. All those groups above the double rule probably preferred municipals on that date, and all those within and below the double rule probably preferred the corporate bonds. The two markets equated at the 28% (July 30%) bracket where both would give the same net yield *if* tax rates, or individual tax brackets, never changed (a big *if*).

TABLE I

Net After Tax Yield of Prime New Corporate Bonds and Municipal Bonds to Various Investor Groups in February 1966

	Gross Yield of Corporates	Tax Bracket	Net Yield of Corporates	Net Yield of Municipals
Top Bracket Private Investors .	5.00%	70%	1.50%	3.60%
Corporate Bracket: ..... Com'l. Banks ..... Fire & Casualty Ins. Co. ... Business Corporations	5.00	48	2.60	3.60
Medium Bracket Investors ...	5.00	40	3.00	3.60
Low Bracket Priv. Investors ..	5.00	28	3.60	3.60
Low Bracket ..... Many Life Ins. Cos. ..... Many Savings Institutions .. Many Small Private Investors	5.00	20	4.00	3.60
Non-Taxpayers ..... Pension Funds ..... Public Retirement Funds .. Foundations ..... Endowment Funds ..... Political Agencies	5.00	0	5.00	3.60

Municipal Yield as a % of Corporate Yield 72% (July, 70%)
Municipal Yield Equated to Corporate Yield at the 28% bracket (July, 30%)

Prime long bonds are, of course, only one segment of the municipal bond market. Different sets of calculations would apply to lower quality or shorter maturity bonds, but the principle illustrated would be the same. Prime long bonds are used as an illustration of trends and relationships throughout the first part of this study because they are uniform in quality and maturity and their past yield history is readily available. Lower quality bonds and shorter maturity bonds are discussed at the end of this study.

Savings Flows According to Tax Bracket

The above table suggests that municipals were and are a veritable bonanza for all investor groups in the corporate bracket or higher. To understand why the net yield of municipals was so high when tax exemption was seemingly so valuable to many investors, it is necessary to look at the volume and direction of the flow of new savings in recent years through the capital markets in terms of the applicable tax brackets. This is summarized in Table II below.

TABLE II

Net New Funds Invested in Bonds and Mortgages by Investor Groups Arranged by Tax Bracket

1960-64 Annual Average: Billions of Dollars

	No Tax	20% Bracket	Corporate Bracket	Above 48% Bracket	Total
Foundations and Endowment Funds	?				?
Public Retirement Funds	$2.3				$ 2.3
Pension Funds	1.8				1.8
Savings & Loan Associations		10.2			10.2
Mutual Savings Banks		2.9			2.9
Life Insurance Companies		5.4			5.4
Fire & Casualty Insurance Companies			.9		.9
Total Non-Bank Institutions	4.1	18.5	.9	0	23.5
Com'l. Banks (Long-Term Funds Only)			7.4		7.4
All Institutions	4.1	18.5	8.3	0	30.9
Private Investors & Misc. (Direct Inv. in Bonds & Mortgages)	?	?	?	?	5.0
Total					$35.9

(The tax brackets used are estimated averages. Within such groups as life insurance companies, savings banks, etc., there is a great variety of effective tax brackets, some higher and some lower than the estimated averages; some in these groups pay no tax.)

The table reveals the extraordinary consequences of our complicated tax laws. We start with a high graduated income tax and then enact a series of reductions or exemptions in order to avoid or soften double taxation on the individual saver who saves through pension funds, insurance companies, or savings banks. These complex laws, and the tendency of Americans to save through institutions, have resulted in an extraordinary concentration of savings in institutions which are subject to no tax or to a bracket less than half of the corporate bracket.

The table shows that of $23.5+ billion of annual nonbank institutional savings flowing into bonds and mortgages, less than $1 billion was subject to as much as the full corporate tax bracket. Out of the grand total of $35.9 billion of annual bond flow only $8.3 billion, or a fourth, was identifiably taxable at above 20%. Furthermore, almost all of this $8.3 of fully taxable flow of savings was accounted for by commerical banks which in some years in the past have shown very little appetite for municipal bonds and whose investment funds are highly variable from year to year. Statistics unfortunately do not break down private investor savings by bracket, but it is probable that most dollar savings accrue to those in low or medium brackets.

Who Buys Municipals

Table I and Table II, taken together, show why only a small part of our big annual flow of new bond investment money in recent years has been attracted to municipal bonds and why, therefore, municipal yields equate to taxable yields at a bracket as low as 28%. At the February 1966 yield ratio (municipals yielding 72% of corporates) corporate bonds (or mortgages) were much more attractive to pension funds, retirement funds, foundations, life insurance companies, savings banks, and savings and loan associations. Municipal bonds at this yield relationship were of interest only to three investor groups: commercial banks, fire and casualty insurance companies, and higher

bracket private investors. (Business corporations also would buy some short municipals at times when their reserve funds were growing.) The effect of these preferences on the municipal market is brought out clearly in Table III below.

TABLE III

The Total Volume of Net New Issues of State & Municipal Bonds and the Volume Bought By Each Principal Investor Group

(Billions of Dollars)

	1960	1961	1962	1963	1964	1965 Est.
Net New Issues of Municipals	4.0	5.0	5.3	6.3	5.6	6.8
Net Purchases of Municipals by:						
Pension Funds	0	0	0	0	0	0
Public Retirement Funds	.3	.1	—.4	—.6	—.6	—.4
Mutual Savings Banks	0	0	—.2	—.1	0	—.1
Savings & Loan Associations	0	0	0	0	0	0
Life Insurance Companies	.4	.3	.1	—.2	—.1	—.3
Fire & Casualty Ins. Companies	1.0	.9	.7	.8	.4	.4
Commercial Banks	.6	2.8	4.5	5.1	3.6	5.0
Business Corporations (Est.)	.2	.3	.1	.4	.4	.2
Individuals & Misc.	1.5	.6	.5	.9	1.9	2.0
Total	4.0	5.0	5.3	6.3	5.6	6.8

Table III above starts with the total net volume of new money raised by states and municipalities each year since 1960. In 1964, for example, gross new issues were $10.5 billion, retirements were $5.5 billion, other debt was $.6 billion, and the net of these figures was an increase in outstandings of $5.6 billion. The table also shows by how much each investor group increased or decreased its portfolio of municipals during each of these years.

Several groups which used to buy municipals have become net liquidators in recent years, and the reason, apparent from Table I, is that municipals now yield less than corporates to these investors; these are Retirement funds, Savings banks, and Life insurance companies. The table also shows that during recent years Commerical Banks have come to dominate the municipal market. Prior to 1961, when Regulation Q was changed, commercial banks rarely bought a dominant volume of municipals. In the 1950's,

the chief buyers of municipals were fire and casualty insurance companies, private investors, state and local retirement funds (many of these were then restricted to municipals and Treasuries), life insurance companies, and only in easy money periods, commercial banks. Today the sources of funds are radically different; commercial banks and private investors together account for more than the entire net volume of new issues.

The Volume of Municipal Financing Compared with Other Credit Demands

Since most of the institutional investor groups in the United States have little or no interest in tax-exempts, it is fortunate for the municipal yield structure that the net volume of new municipal financing during recent years has not been very large. Each year the gross of new municipal issues sets a record and it is spoken of in the press as enormous, but in fact, considering the size of our capital markets, our economy, and of our municipal expenditures, net municipal capital requirements, as shown in the table below, can be called modest.

TABLE IV

Principal Net Demands for Credit in the United States

	(Billions of Dollars)					
	1960	**1961**	**1962**	**1963**	**1964**	**1965**
Real Estate Mortgages	$14.8	$18.9	$24.9	$30.2	$30.2	$29.4
Corporate Bonds	5.0	5.1	4.9	5.6	6.6	8.1
Term Loans (SB&H Estimate)	0.9	1.0	1.4	2.0	2.8	5.3
State and Local Bonds	4.0	5.0	5.3	6.3	5.6	6.8
Foreign & Int'l. Bank Bonds	0.6	0.5	0.9	1.0	0.7	0.9
Total Long-Term Demands	$25.3	$30.5	$37.4	$45.1	$45.9	$50.5
Other Bank Loans	5.1	4.6	8.6	9.1	10.8	15.0
Treasury & Agency Debt (Publicly Held)	—2.7	5.8	6.1	2.5	3.2	0.5
Grand Total of Demands	$27.7	$40.9	$52.1	$56.7	$59.9	$66.0

The Cost of Borrowing

One reason why the volume of municipal debt expansion has lagged economic growth is probably that municipal borrowing is not cheap and painless. The fact that the gross interest rate usually paid on tax exempts is well below other interest rates is often misinterpreted as an inducement to borrow large sums. However, when municipalities or states borrow they often have to find additional revenues to meet debt service — immediately, not 30 years hence. And they cannot deduct their interest payments as corporations can so that Uncle Sam pays half. They pay it all.

Table V below shows the net cost of borrowing after tax deductions to issuers of a variety of credit instruments. Looked at in this peculiar way it seems that Uncle Sam is the highest cost borrower on the list, and states and municipalities are the second highest cost borrowers.

TABLE V

The Net Cost of Borrowing After Tax Credits; February 1966

	Gross	Tax Rate	Net Cost After Tax
U. S. Treasury Notes	5.00%	0	5.00%
Prime Long Municipal Bonds	3.60	0	3.60
Medium Quality Municipal Bonds	4.00	0	4.00
Prime Long Corporate Bonds	5.00	48%	2.60
Medium Quality Corporate Bonds	5.50	48	2.86
Savings Banks	4.50	20	3.60
Commercial Bank c/d's	5.00	48	2.60
Conventional Mortgages to Individuals	5.75	32	3.90
		70	1.72

Neither Table I (net after-tax yield to investors) nor Table V (net cost of borrowing to borrowers) tells a full story. I would not want to press these comparisons too far. For example, it can be argued that Uncle Sam recaptures some part of his interest expenditures in tax receipts while other borrowers do not. It can be argued that corporations not only deduct interest, but also wage payments and all other expenses and, therefore, to the extent that they operate as though labor is costing, say, $3 an hour, money is

costing the full 5%, and just this would be true if operations were unprofitable. Nevertheless, Table V suggests that municipal interest payments are not relatively cheap. Furthermore, principal must be repaid as well as interest.

Almost every real estate taxpayer knows that municipal borrowing is not painless. Uncle Sam can borrow and refund at maturity and, thus, carry a constantly rising debt provided it does not rise too fast. (The postwar rise of publicly held Treasury debt has in fact been very moderate.) States and municipalities on the contrary usually sell serial issues and start repaying principal next year. These principal repayments may come to 3% or 5% of the new debt and total debt service thus may thus run 6% to 9% a year on the sum borrowed. In contrast, utility companies borrow at lower net cost for 20-30 years and enjoy the use of the money for this full period of time, taking care only to provide thru depreciation for ultimate repayment.

Thus, a new school, or a new sewer costs taxpayers dearly, and they know it. No doubt, this explains why municipal debt has not grown much faster than it has and why it probably will not soar.

A basic rule of economics is that "human wants are infinite." Nobody thinks of estimating next year's Gross National Product by adding up everything that everybody will want. Similarly it can be said that "Capital requirements are infinite," or that "State and municipal requirements are infinite." The determining factor of the volume of new facilities that will be created is not need; the limiting factor always is somebody's ability and willingness to finance new facilities and somebody else's ability and willingness to service the debt. Facilities are very expensive. Taxes are already high. Construction on credit costs vastly more than pay-as-you-go construction. Therefore, in explaining the moderate volume of state and municipal financing in recent years and in estimating its future volume, a catalogue of needs or wants (while useful) is

not as important as an estimate of the future taxability of the community and the cost and availability of credit.

We will now turn to the history of tax-exempt yields over a long period of years, the ratio of tax-exempt yields to taxable yields, and the reasons for changes in this ratio. Next we will consider the future of this ratio and say a word about the future of the entire yield structure. Finally we will discuss the yields of lower quality and shorter maturity municipals.

The History of Municipal Bond Yields.

Appendix A shows the history of high grade long-term municipal bond yields from 1900 to 1966 as estimated by several acceptable sources. These are annual averages or annual highs and lows.

Chart I on page 12 summarizes prime long municipal yields in terms of annual averages from 1900 to date. Yields are inverted so that the line provides a price index of constant 30 year bonds. Chart I also summarizes the yields of prime long corporate bonds in the same way so that the eye can quickly compare these two markets. Since these are all annual averages, the chart obscures or minimizes important inter-year and cyclical fluctuations, but it shows the major trends clearly enough.

The chart shows that all yields tended to rise from 1900 to 1921. They then fell most of the time until 1946. They then rose most of the time until 1960, stabilized for five years, and then recently started to rise again.

The chart shows that municipal yields almost always fluctuated in the same direction as corporate bond yields, but between 1930 and 1955 the municipal yield fluctuations were much larger than the corporate yield fluctuations. This was, no doubt, due to the growing effect of the tax structure. In the 1940's the bull market in municipals far exceeded the bull market in corporates. Again after 1946 the bear market in municipals far exceeded the bear market in corporates. Since 1955 however, the two markets have fluctuated similarly.

The chart shows that early in the century prime municipals and prime corporates usually yielded about the same. This was before the income tax. As tax rates grew the municipal index pulled away from the corporate index and when tax rates became very high a huge yield gap developed.

However, we cannot explain the changing differential between these two markets entirely in terms of tax rates. For example, from 1946 to 1952 the differential narrowed strikingly, but during those years tax rates did not come down. The explanation of these large shifts in municipal yields relative to taxable yields requires an examination of the money flows into the bond market according to tax bracket in a manner similar to that discussed under Table II.

The History of the Ratio Between Municipal Bond Yields and Taxable Bond Yields

Chart II on page 13 shows the ratio of the prime long municipal bond yields to the yields of prime long seasoned corporate bonds annually since 1900.* The data are from Appendix B. The chart also shows the history of two important income tax rates. These are inverted so that the line traces the per cent of the corporate bond yields retained by two taxpayer groups: full corporate taxpayers and top bracket private investors.

The heavy ratio line shows that early in the century, when there was little or no income tax, the municipal yields were about the same as the corporate yields and for a spell around 1913 rose to be slightly higher than the corporate yields. During World War I, when corporate income tax rates rose to 12% and individual top bracket rates to 75%, a spread developed in favor of corporate yields and by 1930 the municipal-corporate yield ratio had declined to 90%.

(Note that Chart II and Appendix B are based on a comparison of seasoned corporate bond yields with new municipal bond yields and thus the yields and ratios are slightly different from those in Table I, which compares new issues with new issues.)*

The ratio has never been higher since that time. Comparison of this municipal yield ratio with the tax ratios shows that in the 1920's municipals usually gave corporate taxpayers a small advantage over corporate bonds, but gave top bracket private investors an enormous advantage over corporate bonds. Tax free institutions, nevertheless, continued their established practice of buying municipals.

When tax rates rose in the 1930's, the chart shows that the municipal-corporate ratio tended downward as might be expected. In fact the ratio followed the inverse of the corporate tax rate closely, so that it was usually a matter of indifference to corporate taxpayers whether they bought taxable or tax-exempt bonds. By 1941 both ratios had fallen to about 60%.

During World War II a remarkable distortion developed. Although corporate tax rates rose no higher (except for the excess profits tax), the municipal-corporate yield ratio fell to 41%. This was when municipals had their own special bull market and rose far faster in price than all other types of high grade bonds. Long prime municipal yields then actually fell below 1% and short municipal yields fell to around .25% or lower. Municipals became highly unattractive to many corporate taxpayers and many of them sold out, as did insurance companies and savings banks.

This extraordinary fluctuation occurred, no doubt, because during the war years new municipal financing virtually ceased, maturing bonds were paid off, and total debt actually declined. Nevertheless, some trustees and a few top bracket private investors thought it worthwhile to buy long municipals at 1% instead of long corporates or Governments at around 2½% which equated to less than .25% after tax. Also the acute scarcity of new tax-exempt bonds contrasted with a flood of new taxable Treasury bonds. Thus, analysis only of tax rate changes does not explain this extraordinary market episode. Its cause must be sought in a flow of funds analysis similar to that illustrated in Tables I, II, and III.

CHART I

Prime Long Municipal and Corporate Bonds; Inverted Yields and Index Prices
Price scale at right is for a fixed maturity non-callable 30 year 4% bond

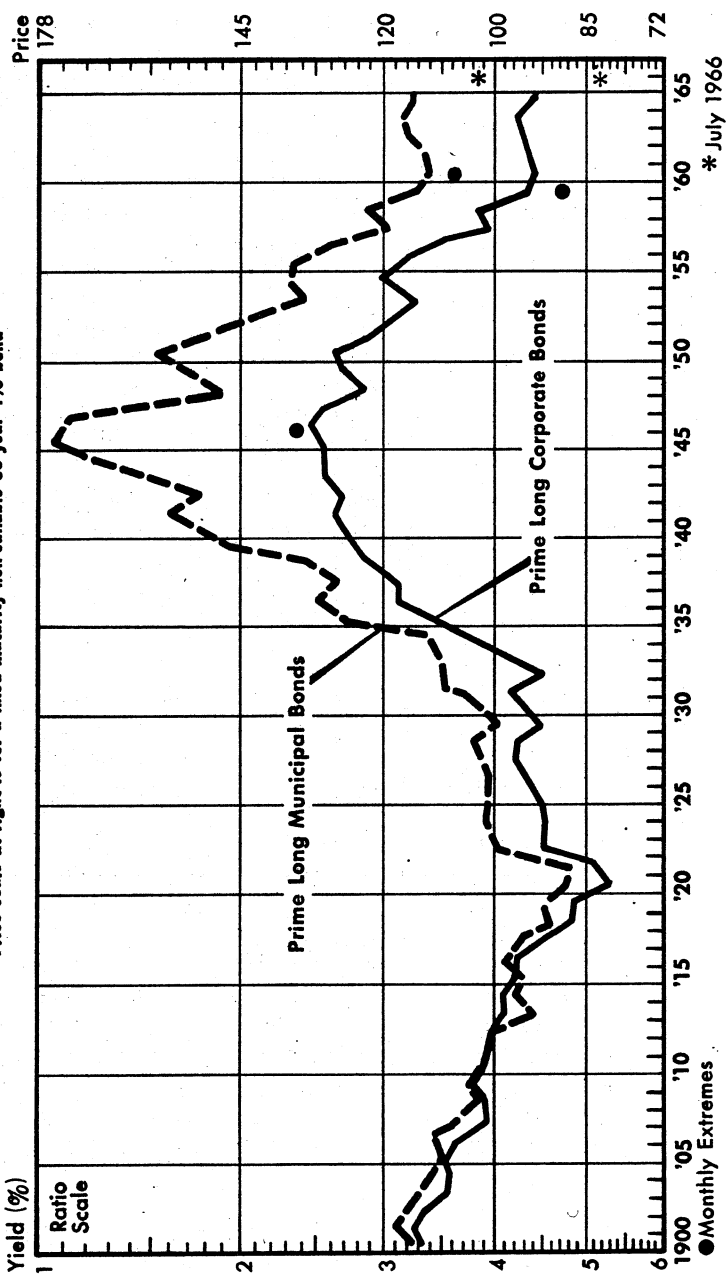
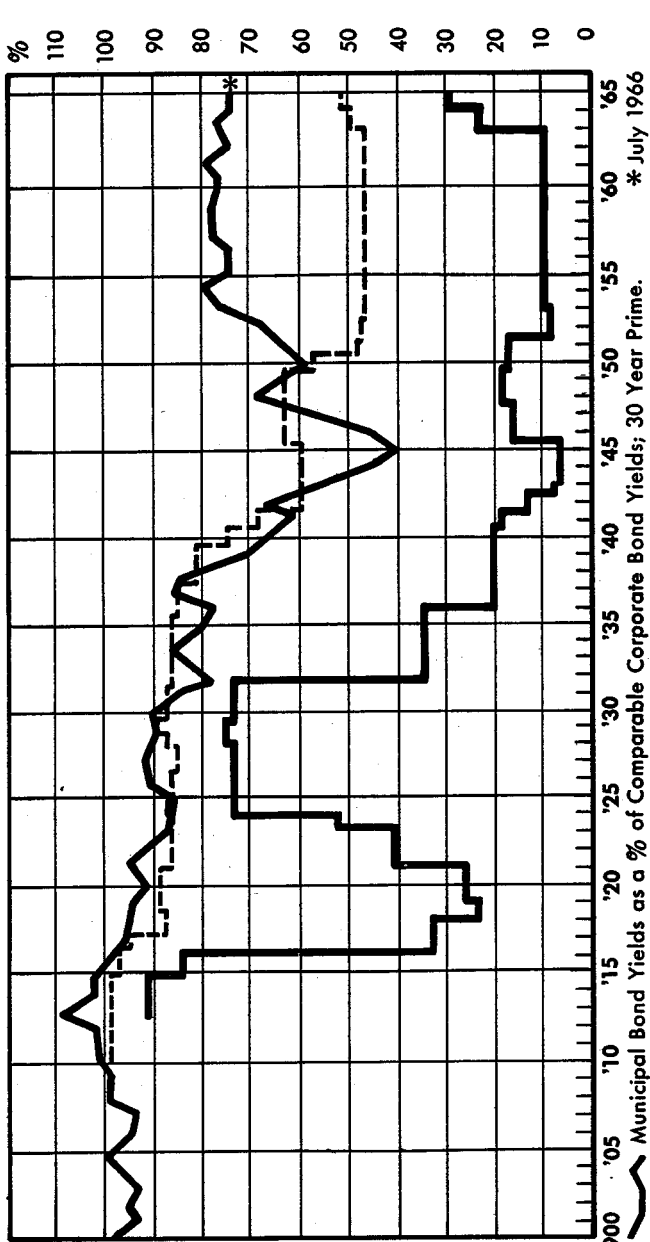


CHART II

Ratio of Municipal Bond Yields to Corporate Bond Yields and Inverted Income Tax Rates



From 1946 through 1954, as Chart II shows, the municipal-corporate ratio again swung violently, this time up from 41% to 79%. Furthermore, during these years corporate tax rates actually increased. Here we see positive proof that tax trends are not enough to explain the municipal-corporate yield ratio. The following flow of funds analysis, however, makes the events understandable.

In these postwar years the volume of net new municipal financing grew from below zero to over $5 billion a year. As early as 1947 the flood of new municipal issues swamped the new funds of high-bracket private investors. Bond dealers had to seek lower bracket investors and especially institutions. By 1948 the municipal ratio was up from 40% to above 62%, and this equated to the prevailing 38% corporate tax rate, the point of indifference for fire and casualty insurance companies and banks. But this was not enough to attract a large enough volume of such institutional funds into the municipal market and municipal prices continued to plunge much faster than corporate bond prices. By 1954 the ratio had reached 79% and this large differential from the 48% corporate tax residual was enough. Municipals were then (as now) a bonanza for all corporate taxpayers and for many medium bracket private investors. Medium grade municipals were attractive even to low tax bracket life insurance companies.

At the 79% ratio the large volume of new municipals met with excellent demand, and the ratio soon declined to around 75%. It remained close to 75% ever since (July 66 — 75%) which means that municipals since 1955 have fluctuated closely in line with corporates. (Very recently corporate new issue yields have risen faster than new municipal yields.) At these ratios the chart shows that municipals are still a bonanza to corporate taxpayers. As a result commercial banks in recent years, as we saw in Table IV, stepped in and bought most of the available new volume; recently however with money very tight their volume of purchases has declined.

The Future of the Ratio of Municipal Yields to Taxable Yields

The future of municipal yields will be discussed in four parts: 1) The outlook for the ratio of prime long municipal yields to similar taxable bond yields; 2) The outlook for prime long taxable bond yields; 3) The outlook for the municipal risk factor; and 4) The outlook for the municipal yield curve according to maturity.

Since 80-90% of all new credit instruments are taxable (see Table IV), it is the taxable yields which dominate the trends of the bond market as a whole. Municipal yields adjust to taxable yields. The size of the adjustment depends partly on the volume of new municipal financing, partly on tax rates, but most importantly on the volume and direction of savings flows — whether they flow to higher bracket investors or to lower bracket investors, and by how much.

It seems reasonable to believe that in the decade ahead the volume of new municipal financing will continue to grow, but it will not grow as fast as the economy as a whole or as the total of capital market expansion. This lag is assumed partly because it has been noticeable for several years and partly because municipal financing will continue to be high cost financing and, therefore, politically unpopular. There will continue to be efforts to find easier ways to finance desirable projects.

Furthermore, the tables seem to show clearly that if by chance there is a rapid increase in the volume of municipal credit demands (for example, from an increase in industrial issues), the funds of the investor groups who are now buying would soon be inadequate. If so, municipals would have to be repriced — maybe up to 90% of corporate yields. This means 4.50% for prime municipals if corporates are 5%, and probably 5.40% for second grades if second grade corporates are 6%. These higher yields would be necessary to attract large funds from lower bracket life insurance companies and savings insti-

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tutions. But these higher yields would themselves discourage many municipal projects and, thus, reduce the volume of demand. Therefore, volume is not apt to increase dynamically.

I shall make no effort to forecast changes in tax rates. Let us suppose they decline. At present the two markets equate at the 30% bracket, while the corporate bracket is a long way off at 48%. Therefore, reductions in the tax rate would still leave municipals far more attractive to corporate taxpayers than taxables. For this reason, moderately lower tax rates probably would not by themselves divert much funds, or raise the ratio much.

Suppose tax rates increase. This would, of course, enhance the attractiveness of municipals to corporate taxpayers, but the margin of attraction (tax rate vs. yield ratio) is today so great that these institutions are already putting all the bond funds they very well can into municipals. Therefore, tax increases by themselves probably would not lower the ratio importantly.

More important than tax rate changes probably will be changes in the volume and direction of the flow of new savings and the related question of internal revenue regulations. Monetary policy action or changes in the rules which would divert commercial banks away from municipal bonds would have an unfavorable effect on the municipal market which has recently been dependent on banks for three fourths or so of its new funds. If bank purchases were reduced from $5 billion a year to $1 billion, for example, other buyers for the $4 billion of bonds would be hard to find. This could mean seeking to sell more municipals to the 20% bracket investors. This would raise the ratio to 85% and probably to 90%.

I seriously doubt that our regulatory authorities would find it advantageous to place municipal financing under such a permanent handicap. However, monetary authorities, in times of inflationary expansion of total bank credit, will find it necessary for temporary periods to force banks

to curtail all investments. Something like this is now actually happening. Nevertheless, at present ratios municipals are so attractive to banks that they are apt to return to the municipal market as soon as monetary policy permits, and stringent monetary policies are not apt to last for long periods of time. Therefore, I expect banks will in the average year be large municipal investors over the decade ahead.

Who else is apt to increase their purchases of tax-exempts? At present yield ratios, not life insurance companies or the other 20% bracket savings institutions and certainly not the tax free pension and retirement funds.

There is one important investor group that could become large purchasers of municipal bonds — namely, medium bracket private investors. High bracket private investors do not ordinarily command a large enough annual new money flow to play a major role in the $6-$7 billion municipal market, but the army of medium bracket individuals do command vast and growing sums. Much of it is today flowing into institutions. Savings accounts are very convenient to such people while security purchase programs are mysterious and cumbersome and seem risky. New techniques, such as tax-exempt common trust funds or tax-exempt mutual funds (if managed funds were legalized), could ultimately divert a vital $2 billion or more a year into municipals. Finally experience shows that with any large step up in yield private investors as a group buy municipals in volume. Just this is happening on a large scale today.

I must conclude that the municipal-corporate yield ratio is apt to remain in a bonanza area where it exerts a strong attraction on corporate taxpayers. I can see no solid reason to forecast an important lasting decline in the ratio over the next decade. On the contrary I believe it should rise again to 80%. This means that pricewise municipals will decline more or advance less than taxable bonds. Nevertheless like all prime bonds, prime municipals today are in a very attractive range.

The Future of Taxable Bond Yields

The yields of high grade long-term bonds in a free economy are the end product of thousands of separate decisions by an army of borrowers and an army of investors. These decisions are influenced by every important political and economic event the world over. For example, an elderly politician in Asia with a beard called Ho Chi Minh probably had more to do with the recent sharp rise in bond yields than any other single individual in the world; far more, for example, than Chairman Martin.

Short-term interest rates are often closely controlled by monetary or fiscal policy, but long-term yields are only influenced by policy, not controlled. Long-term yields can only be controlled by policy in wartime when controls are also extended over wages, prices, the allocation of scarce materials, and investment.

Looking back over the history of prime bond yields we find two interesting correlations which should be helpful in judging the future:

1. Since 1790 all of the great sustained periods of rising yields have roughly coincided with major wars — just before, during, or just after. One centered around the War of 1812, one centered around the Civil War, one centered around World War I, while the most recent bear bond market (still underway) was postponed by controls during World War II, but followed soon after and was accentuated by Korea and Viet Nam. In periods of real peace, yields have usually declined. They declined in the 1880's and 1890's, and in the 1920's in spite of great growth and prosperity during those decades.
2. Also since 1790 all of the great periods of commodity price inflation have coincided with the same major wars. There have been no peacetime inflations in the sense of a sustained rise in commodity prices. Therefore, the great bear bond markets have coincided roughly with the great commodity price inflations.

It has been argued from this coincidence that the destruction of major wars creates inflation and that inflation raises

interest rates. There are many reasons to believe that such a sequence of cause and effect is valid.

If so, a forecaster of the level of interest rates in say 1975 must have a clear pre-vision of the state of world politics — war or peace, or neither. Little else really counts. Therefore, right here I must make some assumptions and in doing so really beg the whole question. I will assume 1) no major war; 2) a gradual discouragement and diminution of the type of fringe warfare which we now see in Viet Nam; 3) reasonable success for American international policies of peace, cooperation, and trade; 4) a successful defense of the dollar; 5) a reasonable degree of political unity within the United States.

I have thus removed, by the simple process of assumption, the chief forces which are just now pushing up commodity prices and hence interest rates. But of course, although we have never had a sustained peacetime inflation and hence a sustained peacetime bear bond market, we could have both in the years ahead. Many believe, for example, that the Great Society program promises peacetime inflation. I do not believe that the present obvious overheating of our economy can be said to prove this point. This is the sixth year of the greatest of all business booms and we are in a war at the same time. Thus, it may turn out that we are now experiencing only a cyclical rise in commodity prices and a cyclical fall in bond prices, both without too much long range significance.

A key question affecting broad interest rate trends in the decade ahead will be the degree of cyclicality in the economy. Before World War II we had great cycles. Every few decades we had a runaway boom followed by a deep depression. We also had small cycles in between, but nobody remembers them. Since World War II we have had a succession of small cycles and no real superboom or depression. Now, however, with the "new economics" we are told that even minor recessions are to be prevented. Naturally with such a rosy outlook businessmen are hastening to complete their expansion plans in as short a time as

possible. They are borrowing all they can and trying to buy each other out. This is the very stuff of booms and if long continued could lead to major depression. Fortunately, however, our Government is already putting on the brakes.

Now, therefore, I will make one more optimistic assumption: the brakes will be applied in time, this boom will not go to great excess, and it will, therefore, be followed (whenever there is peace) not by a major depression but rather by a recession. If so, the decade ahead will be marked by several more small cycles and no great boom and bust. This is optimistic because it may already be too late to check this boom without serious trouble.

With the benefit of these cheerful assumptions, I think we can draw some conclusion on interest rate trends. The present bear bond market is already 20 years old. It has carried yields up to a very high level: they have averaged higher than at present in only two years since 1880. For the time being nevertheless they are trending higher and money is getting even tighter. My assumptions suggest that the great forces behind this bear bond market (the aftereffects of World War II, the effects of the Viet Nam War, and the effects of this superboom) will weaken or vanish in the years ahead. If so, a trend towards more moderate yields could set in. Present pressures and tensions seem too acute to last indefinitely.

It is argued, however, that mere peacetime prosperity and economic growth, will promote high yields. I do not think so. Peacetime growth is in a sense self-financing. This is a heavy saving economy with vast and growing productivity, an abundance of labor, and a high degree of political stability. We can see today that our productivity is not enough to sustain a boom on top of a war, but according to my assumptions this coincidence of forces is not to be typical of the economy over the next decade. If my assumptions are wrong, if this is to be a mobilized decade, then interest rates may be held down by capital market rationing. If it is to be a decade of increasing peace, interest rates should return to more moderate levels.

The Yields of Lower Quality Municipals

The above analysis has been based entirely on the yields and yield prospects for long-term prime municipals. Most bonds, however, are rated less than prime and many are of distinctly secondary quality. Lower grade municipals naturally yield more than prime municipals of the same maturity. However, this quality differential is highly variable.

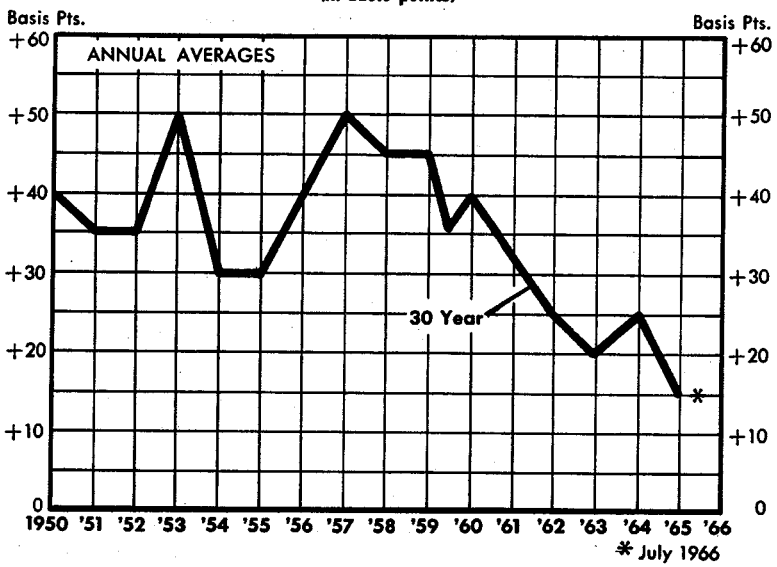
Table I in Appendix C reports the estimated yields for new issues of two quality groups of municipal bonds in all of the principal maturities. These quality groups are primes and so-called "good grades." These latter are, generally speaking, the best medium grade bonds. Table II in Appendix C lists the differentials between these two quality groups. It will be seen that, for the longest maturity, the primes have at times yielded 50 basis points less than the good grades, whereas recently this quality differential has come down to only 15 basis points. For the short maturities, the differential has been as wide as 30 basis points and as narrow as 5 basis points. Chart III on Page 22 shows the 30 year maturity quality differential over a period of years. It is apparent that the quality differential has declined almost steadily since 1957 and by 1965 it had almost vanished.

The decline in the quality differential is, no doubt, attributable largely to two factors: 1) Long years of prosperity have caused investors to forget the financial problems which many communities suffered in earlier times. After all for several decades the debt payment record of mediocre credits has been exactly as good as the debt payment record of prime credits. 2) During the past four or five years there has been intensive competition between institutional investors, mostly commercial banks, for maximum yield in order to offset the high cost of deposit money. This has led portfolio managers to accept progressively lower yield differentials in order to improve their current income performance.

CHART III

Municipal Yield Spreads — Good Grade vs Prime

(in basis points)



The yield comparisons made by Chart III, however, do not extend to truly second grade municipal bonds, but are confined to two quality groups within the broad field of quality investments. However, there are many municipals of quality well below the "good grade," and these yield still more. Nevertheless, even in the case of outright second grades the differentials have narrowed strikingly in recent years. In the depression years of the 1930's for example, there were times when the bonds of shaky cities sold to yield 6% or more, while simultaneously the bonds of prime credits were selling to yield below 3%. At one time New York City (medium grade) long 4's were selling at 60, while simultaneously New York State (prime) long 4's were selling at twice the price, i.e., 120.

For the future, it seems probable that the differentials between prime and lower quality municipals will again widen. Furthermore, if municipal debt increases too rapidly in the years ahead, it is certain that at least a few

municipalities will become dangerously overextended. In such an event, it would only take one large default to bring about a drastic revision of investor sentiment adverse to all types of lower quality municipals. This would quickly result in drastic repricing of lower and medium quality municipals to wider or perhaps very wide spreads from prime municipals. In this way the new issues of industrial bonds or risky revenue bonds could damage the market for a very wide range of general obligations.

Medium quality and low quality municipals will in the years ahead be importantly influenced by the fluctuations discussed above for prime municipals, but they will also be influenced by changes in the market's appraisal of the risk factor. Since at present the risk differential is at a minimum, it is apt to widen. This means that the market for medium grade and second grade municipals should do distinctly worse than the market for primes.

Shorter Maturity Municipals

The yields of municipal bonds differ not only because of differences in quality but also because of differences in maturity. This is again illustrated by Table I in Appendix C, while the yield spreads according to maturity are tabulated in Table III of Appendix C and are charted in Chart IV on page 24.

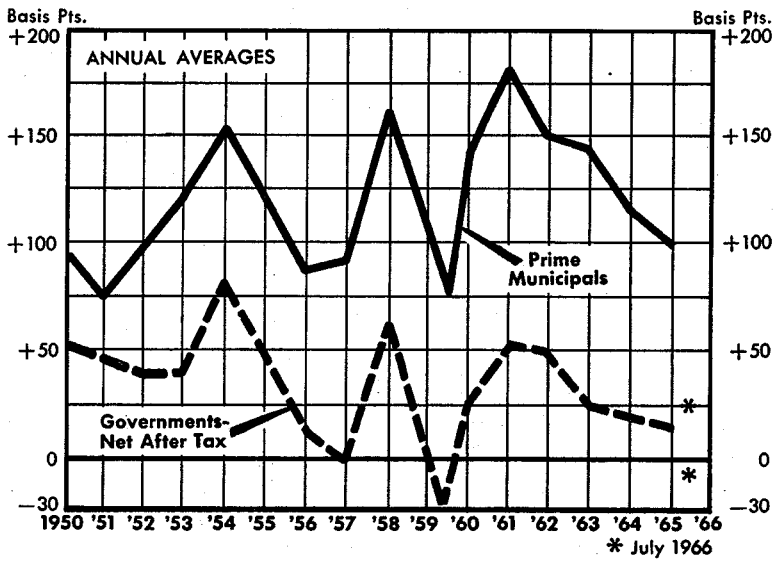
It will be seen that prime 30 year maturity municipals have usually sold to yield 100-185 basis points more than one year municipals of the same quality and that this differential was usually spread over the entire yield curve so that two year bonds yielded more than one year bonds, and five year bonds more than two year bonds, etc. It will also be seen in Table III that this differential by maturity has come down sharply during the past two years and has now all but vanished. The table also shows that the differential by maturity for good grade bonds has usually been even larger than the differential for prime bonds and it has also come down sharply during recent years.

Thus, the basic pattern of the entire municipal market has usually been: the longer the maturity, the higher the yield. However, the slope of this "yield curve" is highly variable. The curve tends to become flatter when money is tight and all yields are rising as, for example, in 1957, 1959, and currently, while it tends to become steeper in periods of easy money. This shift in the slope of the yield curve is due to the fact that short yields are much more sensitive to changes in the money market than are long yields and, therefore, fluctuate over a wider area. When all yields are rising, short yields usually rise more than long yields; when all yields are falling, short yields fall more.

Chart IV shows the history of the yield curve for prime municipals in terms only of the differential between the shortest and the longest maturities. It also shows the history of the U. S. Government yield curve, net after income tax. The chart shows that in the case of Govern-

CHART IV

Yield Curves: 30 Year vs 1 Year Prime Municipals
30 Year vs 1 Year Governments Net After Tax



ments the differential actually became negative in 1957, 1959, and currently when money was very tight; a negative curve meant that the shorts actually yielded more than the longs. The municipal curve, on the other hand, until very recently, was always positive. The chart also shows that the ups and downs of these two yield curves, i.e., municipals and Governments, have been closely synchronized most of the time, but that the municipal differential between longest and shortest has always been substantially larger than the Government differential net after tax. Evidently at all times and even in periods of intensive money market pressures, there has been a greater investor preference for shorter maturities in the municipal market than has been the case in the Government market.

These tables suggest that the analysis of long prime municipal yield trends contained in the first part of this study should in general terms also be applicable to shorter maturity municipals with this qualification: shorter maturity yields should fluctuate with long maturity yields, but should cover a wider range. This means that if yields rise further shorts will yield more than longs and if and when the present intense pressures on the money market relax and long prime municipal yields decline, shorter prime municipal yields will decline even more to levels far below long yields.

This history of the yield curve provides the investor with important guidance for his maturity selection: the best time to buy the long maturities is when the yield curve is flattest, i.e., when longs yield very little more than shorts (or even yield less than shorts). This pattern is typical of high yield low priced markets. The worst time to buy long maturities is when they yield far more than shorts; this pattern is typical of low yield high priced markets.

APPENDIX A— High Grade Municipal Bond Yields, 1900-1965

	New England	Standard & Poors			Bond Buyer, High Grade
Year	Annual Average	Annual Average	Low	High	Annual Average
1899					
1900	3.15	3.12	3.08	3.13	3.25
1901	3.12	3.13	3.08	3.19	3.10
1902	3.21	3.20	3.15	3.25	3.18
1903	3.37	3.38	3.26	3.49	3.30
1904	3.45	3.45	3.39	3.52	3.40
1905	3.43	3.40	3.37	3.44	3.48
1906	3.60	3.57	3.44	3.70	3.43
1907	3.90	3.86	3.68	4.17	3.67
1908	4.02	3.92	4.79	4.17	3.87
1909	3.85	3.79	3.72	3.85	3.76
10-yr. av.	3.51	3.48			3.44
1910	4.00	3.97	3.87	4.04	3.91
1911	4.00	3.98	3.96	4.01	3.98
1912	4.07	4.03	3.99	4.09	4.01
1913	4.40	4.22	4.08	4.36	4.45
1914	4.37	4.12	4.09	4.17	4.16
1915		4.16	4.02	4.23	4.24
1916		3.93	3.84	3.99	4.05
1917		4.21	3.82	4.51	4.23
1918		4.50	4.36	4.59	4.57
1919		4.46	4.43	4.53	4.50
10-yr. av.		4.15			4.21

	Prime New Issues			Moody's Aaa			Bond Buyer, High Grade		
Year	Annual Average	Low	High	Annual Average	Low	High	Annual Average	Low	High
1920		4.80	4.80				4.97	4.53	5.25
1921		4.70	5.00				5.02	4.48	5.16
1922		3.80	4.30				4.19	4.05	4.37
1923		3.80	4.15				4.23	4.10	4.38
1924		3.70	4.15				4.19	4.07	4.35
1925		3.75	4.05				4.09	3.98	4.23
1926		3.80	4.10				4.08	4.05	4.13
1927		3.70	4.00				3.97	3.91	4.10
1928		3.65	3.95				3.98	3.83	4.15
1929		3.95	4.10				4.29	4.13	4.47
10-yr. av.		3.97	4.26				4.30		

	Prime New Issues			Moody's Aaa			Bond Buyer, High Grade		
Year	Annual Average	Low	High	Annual Average	Low	High	Annual Average	Low	High
1930		3.65	4.10				4.08	3.92	4.25
1931		3.20	3.85				3.88	3.60	4.23
1932		3.15	3.95				4.33	4.02	4.66
1933		3.05	3.85				4.30	3.81	4.90
1934		2.90	3.85				3.73	3.38	4.50
1935		2.35	3.00				2.99	2.79	3.30
1936		2.25	2.65				2.63	2.35	2.84
1937		2.35	3.00	2.50	2.18	2.81	2.67	2.35	2.90
1938		2.30	2.60	2.24	2.14	2.45	2.58	2.42	2.75
1939		1.75	2.10	2.07	1.90	2.32	2.42	2.26	2.94
10-yr. av.		2.70	3.30				3.36		
1940		1.60	2.00	1.83	1.56	2.06	2.20	1.82	2.66
1941	1.60	1.35	1.80	1.52	1.39	1.71	1.80	1.57	2.13
1942	1.82	1.70	2.00	1.63	1.54	1.84	1.88	1.72	2.19
1943	1.47	1.25	1.75	1.38	1.25	1.56	1.58	1.35	1.80
1944	1.15	1.10	1.20	1.16	1.14	1.21	1.34	1.30	1.44
1945	1.05	0.95	1.20	1.08	0.95	1.22	1.21	1.06	1.43
1946	1.12	0.90	1.50	1.10	0.91	1.38	1.23	1.04	1.66
1947	1.46	1.35	1.80	1.45	1.35	1.69	1.63	1.56	1.85
1948	1.91	1.70	2.15	1.87	1.75	1.96	2.16	2.00	2.25
1949	1.65	1.60	1.70	1.66	1.61	1.71	1.92	1.84	1.99
10-yr. av.	1.50			1.47			1.70		
1950	1.52	1.40	1.65	1.57	1.42	1.66	1.74	1.58	1.86
1951	1.79	1.40	2.00	1.60	1.30	1.78	1.75	1.43	2.02
1952	2.02	1.85	2.25	1.79	1.67	1.99	1.98	1.84	2.20
1953	2.45	2.25	2.75	2.31	2.04	2.64	2.50	2.21	2.85
1954	2.32	2.15	2.45	2.03	1.93	2.18	2.24	2.10	2.37
1955	2.34	2.25	2.40	2.17	2.06	2.29	2.33	2.24	2.50
1956	2.54	2.30	2.85	2.50	2.19	3.04	2.62	2.34	3.10
1957	3.05	2.70	3.25	3.10	2.79	3.43	3.15	2.89	3.43
1958	2.87	2.65	3.30	2.92	2.69	3.28	3.05	2.80	3.51
1959	3.31	3.10	3.65	3.35	3.06	3.60	3.43	3.15	3.70
10-yr. av.	2.42			2.33			2.48		
1960	3.40	3.10	3.65	3.26	2.99	3.53	3.37	3.12	3.65
1961	3.38	3.25	3.40	3.27	3.12	3.37	3.35	3.16	3.44
1962	3.21	3.10	3.35	3.03	2.88	3.26	3.10	2.92	3.28
1963	3.19	3.10	3.30	3.06	2.93	3.18	3.10	2.95	3.24
1964	3.26	3.20	3.35	3.09	2.99	3.16	3.15	3.06	3.25
1965	3.28	3.15	3.50	3.15	2.94	3.40	3.20	2.99	3.47
July '66			3.85			3.77			3.85

Sources

New England municipals from Macaulay's "Bond Yields, Interest Rates and Stock Prices," National Bureau of Economic Research, 1938, page A 142ff.

Standard & Poor's, Moody's Aaa, and Bond Buyer averages are from those publications. The new issue yields are derived from a privately prepared series reflecting the twenty-year maturity yields of all substantial prime new issues that sold reasonably well through 1950 and, thereafter, the thirty-year maturity yields of the same.

APPENDIX B—A Comparison Between Long-Term Prime Municipal Yields and Long-Term Prime Corporate Bond Yields

Year	Long-Term Municipal Bonds* vs. Prime 30-Year Corporate Bonds, Annual Averages		Year	Long-Term Municipal Bonds* vs. Prime 30-Year Corporate Bonds, Annual Averages	
	Yield Spreads, Basis Points	Municipal Yields as % of Corporate Yields		Yield Spreads, Basis Points	Municipal Yields as % of Corporate Yields
1900	− 6	98	1934	− 46	87
1901	− 18	94	1935	− 76	81
1902	− 16	95	1936	− 66	78
1903	− 25	93	1937	− 44	86
1904	− 17	95	1938	− 45	84
1905	− 3	99	1939	− 85	70
1906	− 22	94			
1907	− 25	93	**10-yr. av.**	− 65	82
1908	− 3	99			
1909	− 2	99	1940	− 90	67
			1941	− 99	62
10-yr. av.	− 13	96	1942	− 84	68
			1943	−108	58
1910	+ 4	101	1944	−139	45
1911	+ 5	101	1945	−149	41
1912	+ 6	102	1946	−133	46
1913	+ 31	108	1947	−111	57
1914	+ 5	102	1948	− 91	68
1915	+ 6	102	1949	−103	61
1916	− 5	99			
1917	− 18	96	**10-yr. av.**	−111	58
1918	− 25	95			
1919	− 34	93	1950	−110	58
			1951	−111	62
10-yr. av.	− 3	99	1952	−101	67
			1953	− 82	75
1920	− 47	91	1954	− 65	79
1921	− 31	94	1955	− 76	76
1922	− 44	91	1956	− 81	76
1923	− 53	88	1957	− 88	78
1924	− 59	87	1958	− 94	78
1925	− 60	87	1959	−105	76
1926	− 41	91			
1927	− 33	92	**10-yr. av.**	− 91	73
1928	− 39	91			
1929	− 45	90	1960	− 99	77
			1961	− 94	78
10-yr. av.	− 45	90	1962	−111	74
			1963	−104	75
1930	− 44	90	1964	−110	75
1931	− 62	85	1965	−115	74
1932	−106	78	**July '66**	**−128**	**75**
1933	− 74	82			

***Sources**

Corporate yields are 30-yr. Durand Basic Yields (National Bureau of Economic Research). Municipals are Bond Buyer, High-Grade to 1920; New York State to 1940; thereafter, long-term prime new issues (see Appendix A).

APPENDIX C

TABLE I

Annual Averages of Municipal Yield Scales

	PRIME						GOOD GRADE					
	Maturity in Years						Maturity in Years					
	1	2	5	10	20	30	1	2	5	10	20	30
1950	.75	.80	1.00	1.20	1.55	1.70	.90	.95	1.20	1.50	1.90	2.10
1951	1.00	1.05	1.20	1.40	1.60	1.80	1.10	1.10	1.40	1.60	1.95	2.15
1952	1.00	1.05	1.20	1.45	1.75	2.00	1.10	1.15	1.40	1.70	2.10	2.35
1953	1.30	1.35	1.55	1.80	2.20	2.45	1.45	1.50	1.85	2.25	2.70	2.95
1954	0.75	0.90	1.15	1.50	2.00	2.30	0.85	1.00	1.30	1.75	2.30	2.60
1955	1.15	1.25	1.55	1.80	2.15	2.35	1.35	1.45	1.80	2.15	2.50	2.65
1956	1.70	1.90	2.10	2.25	2.40	2.55	1.90	2.10	2.40	2.65	2.80	2.95
1957	2.15	2.30	2.55	2.75	2.95	3.05	2.45	2.60	2.95	3.25	3.45	3.55
1958	1.30	1.50	2.00	2.40	2.80	2.95	1.50	1.75	2.30	2.80	3.30	3.40
1959	2.20	2.35	2.65	2.95	3.20	3.35	2.45	2.55	2.95	3.35	3.65	3.80
1960	2.05	2.30	2.60	2.90	3.20	3.40	2.30	2.50	2.90	3.30	3.65	3.80
1961	1.50	1.75	2.20	2.75	3.15	3.35	1.70	1.95	2.50	3.05	3.55	3.70
1962	1.60	1.75	2.15	2.55	3.00	3.20	1.75	1.90	2.30	2.75	3.20	3.45
1963	1.75	1.90	2.25	2.60	3.00	3.20	1.85	2.00	2.40	2.80	3.20	3.40
1964	2.10	2.25	2.55	2.80	3.05	3.25	2.20	2.35	2.75	2.95	3.30	3.50
1965	2.35	2.50	2.75	2.90	3.10	3.30	2.40	2.55	2.85	3.00	3.25	3.45
July '66	**3.60**	**3.60**	**3.60**	**3.65**	**3.75**	**3.85**	**3.70**	**3.70**	**3.80**	**3.85**	**3.95**	**4.00**

TABLE II

Yield Spreads Between Annual Averages of Good Grade and Prime Municipal Scales

	Maturity in Years					
	1	2	5	10	20	30
	— in basis points —					
1950	15	15	20	30	35	40
1951	10	5	20	20	35	35
1952	10	10	20	25	35	35
1953	15	15	30	45	50	50
1954	10	10	15	25	30	30
1955	20	20	25	35	35	30
1956	20	20	30	40	40	40
1957	30	30	40	50	50	50
1958	20	25	30	40	50	45
1959	25	20	30	40	45	45
1960	25	20	30	40	45	40
1961	20	20	30	30	40	35
1962	15	15	15	20	20	25
1963	10	10	15	20	20	20
1964	10	10	20	15	25	25
1965	5	5	10	10	15	15
July '66	**10**	**10**	**20**	**20**	**20**	**15**

TABLE III

Yield Spreads Between Maturity Groups of Municipal Yield Scales
Annual Averages

	PRIME						GOOD GRADE					
	Maturity in Years						Maturity in Years					
	2 to 1	5 to 2	10 to 5	20 to 10	30 to 20	30 to 1	2 to 1	5 to 2	10 to 5	20 to 10	30 to 20	30 to 1
1950	5	20	20	35	15	95	5	25	30	40	20	120
1951	5	15	20	20	20	80	0	30	20	35	20	105
1952	5	15	25	30	25	100	5	25	30	40	25	125
1953	5	20	25	40	25	115	5	35	40	45	25	150
1954	15	25	35	50	30	155	15	30	45	55	30	175
1955	10	30	25	35	20	120	10	35	35	35	15	130
1956	20	20	15	15	15	85	20	30	25	15	15	105
1957	15	25	20	20	10	90	15	35	30	20	10	110
1958	20	50	40	40	15	165	25	55	50	50	10	190
1959	15	30	30	25	15	115	10	40	40	30	15	135
1960	25	30	30	30	20	135	20	40	40	35	15	150
1961	25	45	55	40	20	185	25	55	55	50	15	200
1962	15	40	40	45	20	160	15	40	45	45	25	170
1963	15	35	35	40	20	145	15	40	40	40	20	155
1964	15	30	25	25	20	115	15	40	20	35	20	130
1965	15	25	15	20	20	95	15	30	15	25	20	105
July '66	**0**	**0**	**5**	**10**	**10**	**25**	**0**	**10**	**5**	**10**	**5**	**30**

CHAPTER 18

The Effect of Credit Conditions on State and Local Bond Sales and Capital Outlays Since World War II*

INTRODUCTION AND SUMMARY

This paper is divided into two sections. The first reviews the literature on postwar interactions among overall credit conditions, State and local borrowing, and State and local capital outlays. The second section explains in nontechnical language the writer's own regression model and findings on the market for State and local bond issues since 1951. The regression model is based on two theoretical models, one for borrowers and one for lenders. It tests indexes of State and local needs for structures, interest rates and rate spreads, and "institutional" variables such as fluctuations in the wealth of high-tax-bracket savers for their power and reasonableness in explaining State-local bond sales. A technical appendix presents the model in the manner familiar to econometricians and explains certain deviations from what may already be called the classical lagged stock adjustment model.

Findings may be summarized as follows. The literature reviewed agrees, in general, that interest rates paid on State and local bonds affects the timing of gross new issues and may have an impact on the amount of issues placed in the long run. But the latter is probably of very moderate size, relative to total issues, and may well be of a one-shot nature (after initial changes in borrowing, States and municipalities adjust their tax rates to provide for changing interest costs rather than permanently raising or lowering their borrowing targets). The evidence for a significant impact of interest rates on State and local construction is weak, but this may reflect deficiencies in the very few studies focusing on this variable rather than the "true" state of affairs.

The writer's regression model explains up to four-fifths of fluctuations in semiannual State and local bond issues (including federally guaranteed ones) around a trend of wealth and taxing power which is represented by permanent income. The lagged stock-adjustment coefficient, which is the mean of the unknown actual ones for borrowers and for lenders, is of the correct negative sign and of a size according quite well with reasonable assumptions on the reaction speeds of bond buyers and State and local borrowers. The interest rate coefficients are interpreted as meaning that State and local borrowers do form and act upon expectations on future interest rates, while buyers of new issues are more influenced by current changes in the spread yields on

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* Prepared by Paul F. McGouldrick, Division of Research and Statistics, Board of Governors of the Federal Reserve System, with minor editing by committee staff. The author wants to acknowledge the stimulating criticisms and suggestions offered by Frank deLeeuw and Edward Gramlich of the Board of Governors of the Federal Reserve System. Editorial assistance was also provided by Mrs. Mary Ray of the Board of Governors and by Paul McGann. The author, of course, takes responsibility for all errors of omission and commission.

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State-local bonds and yields on taxable securities (for which the U.S. Government bond yield is a proxy).

Also influencing the demand for borrowed money are Federal grants-in-aid (having a positive effect) and an index of needs for new construction. The supply of funds has been positively affected by special movements in the wealth of high-tax-bracket individuals (measured by the ratio of the Standard & Poor's stock price index to total wealth) and by increases in the share of total wealth held in the form of time deposits at commercial banks. A possible weakness in the model and therefore in the findings may be the inadequacy of the variable used to measure total human and nonhuman wealth as well as the tax base (permanent income).

(1) Review of the Literature

In a Journal of Finance article written in 1960,[1] Frank Morris found a definite, although moderate, inverse cyclical association between interest rates on State and local securities and State and local bond issues, for the 1952–59 period. A more uncertain inverse relationship was also found between the same interest rates and the start of State and local outlays measured by contract awards. However, two types of bond sales and contract awards were found to be cyclically insensitive to interest rate fluctuations: those for educational buildings and facilities and those for water and sewer systems. Countercyclical fluctuations in sales and awards were therefore concentrated in the "other" category of each, which includes highways and bridges, hospitals and other social welfare institutions, and administrative buildings.

These conclusions were derived by comparison of fluctuations around trend in centered 12-month moving averages of bond sales, contract awards, and construction put in place, on the one hand, and fluctuations around trend in the Moody's index of AAA bond yields (not smoother by a moving average), on the other hand. The upward trends in the three smoothed series were ascribed to the growth of needs for State and local services, so that interest rate impacts could be measured by examining their correspondence with deviations from trends. Moving averages were used to isolate cycles in bond sales and contract awards because of the very large irregular components of both monthly series. On charts 1, 2, and 3, the two series plus construction put in place are updated to 1965, using contract award and construction data revised since this article. These series are then compared with his index of interest rates (Moody's AAA municipal bond yields).

Morris' implicit model—that factors underlying the demand for funds by State and local governments are cyclically insentitive, while the supply of funds and State and local adjustments to that supply are cyclically sensitive—is quite defensible as a rough approximation to a complex reality. Such indexes of "real" needs for publicly owned

[1] Frank Morris, "Impact of Monetary Policy on State and Local Governments: an Empirical Study," Journal of Finance, May 1960.

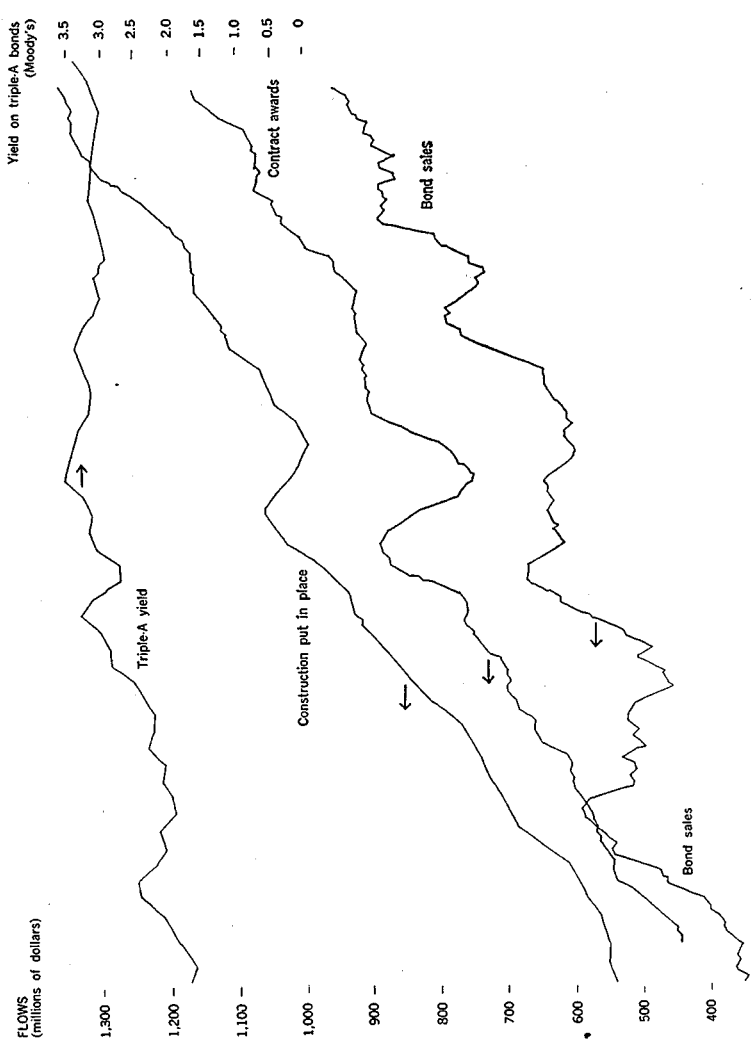

CHART 1. TOTAL BOND SALES, CONTRACT AWARDS, AND CONSTRUCTION PUT IN PLACE BY STATE-LOCAL GOVERNMENTS, 1952 TO 1965 (12-MONTH CENTERED MOVING AVERAGES; BOND YIELDS NOT SMOOTHED)

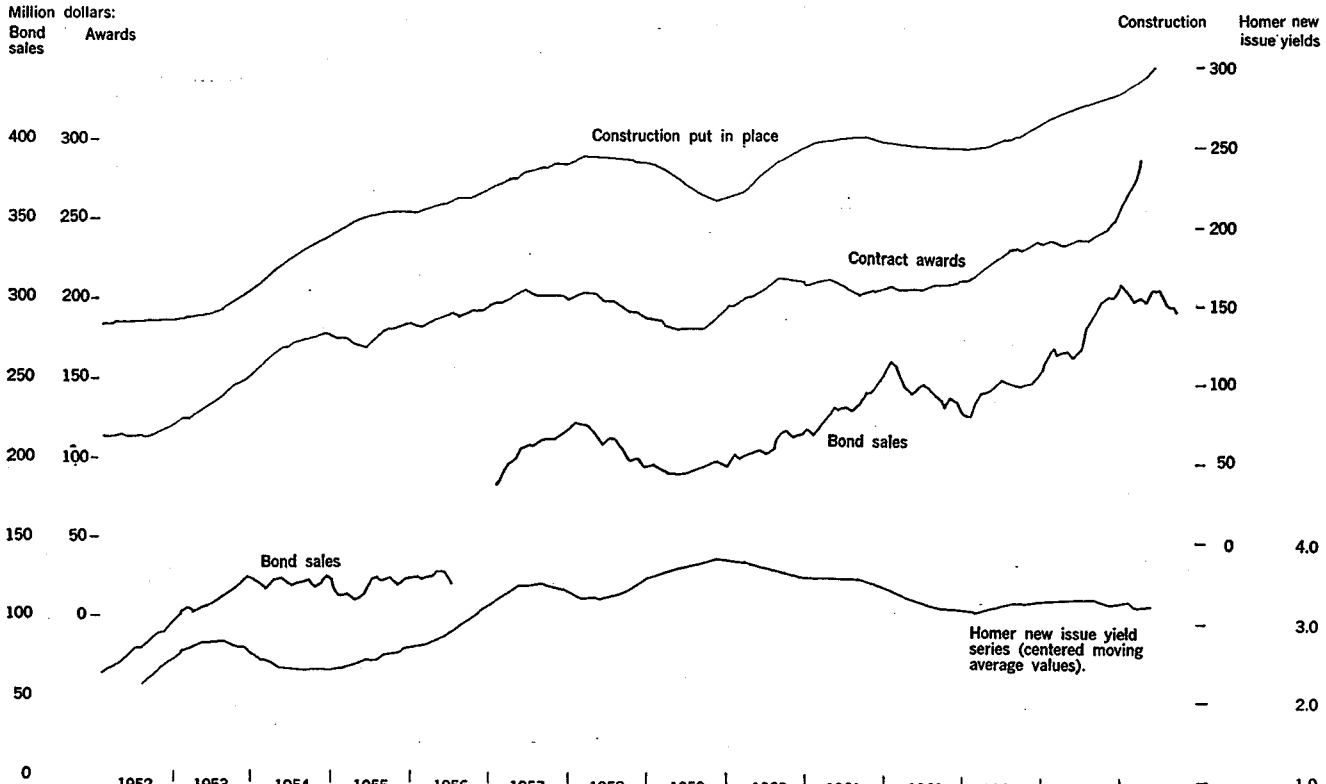

CHART 2. EDUCATION BOND SALES, CONTRACT AWARDS, AND CONSTRUCTION PUT IN PLACE BY STATE-LOCAL GOVERNMENTS, 1952 TO 1965 (12-MONTH CENTERED MOVING AVERAGES, SPECIFICALLY INCLUDING HOMER NEW ISSUE YIELDS)

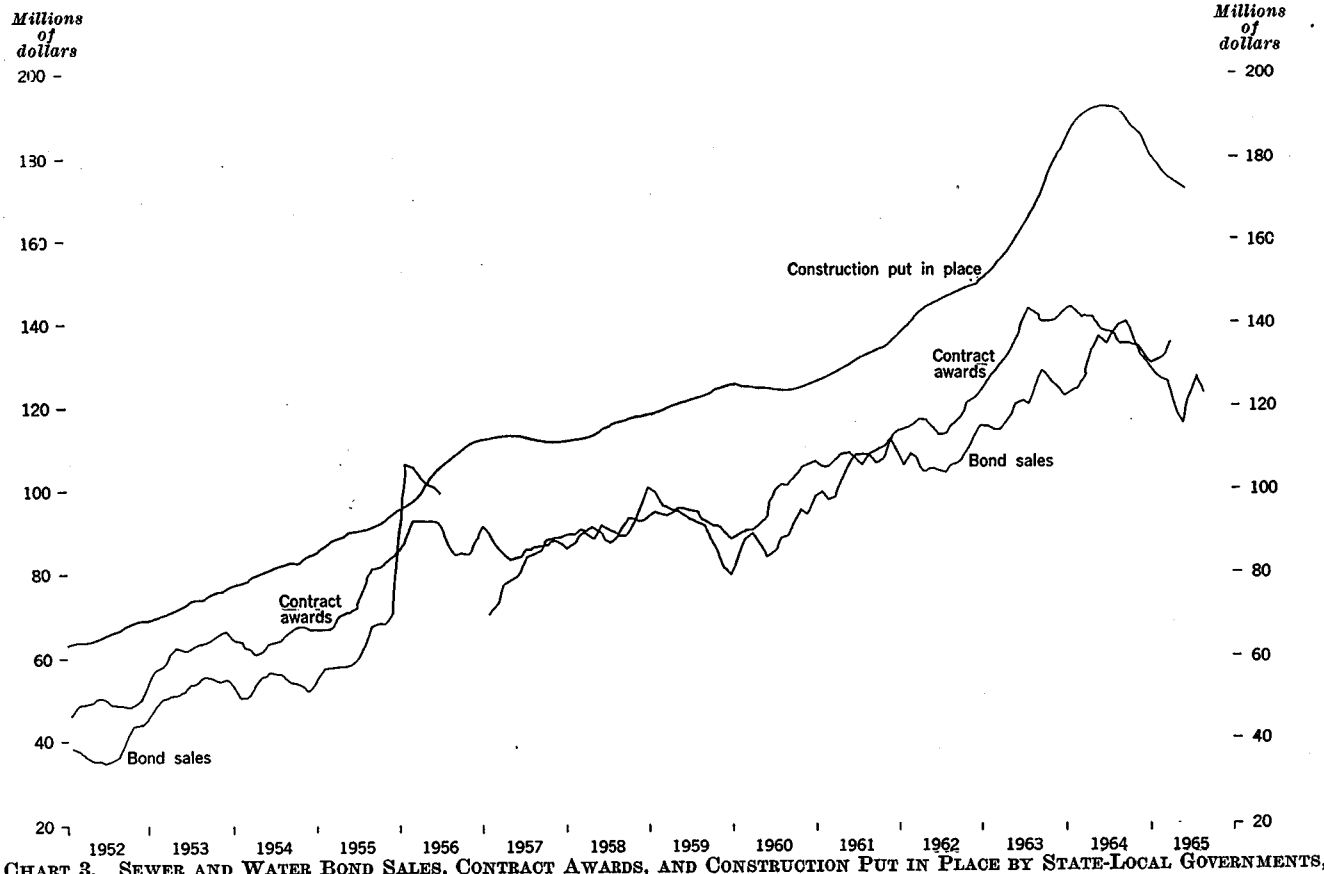

CHART 3. SEWER AND WATER BOND SALES, CONTRACT AWARDS, AND CONSTRUCTION PUT IN PLACE BY STATE-LOCAL GOVERNMENTS, 1952 TO 1965 (12-MONTH CENTERED MOVING AVERAGES; MONTHLY VALUES)

capital goods as the number of people in schools and passenger cars on the road have shown either very steady upward trends (people in schools) or mild fluctuations (cars on the road) which have not corresponded with postwar cycles in credit conditions. His implicit assumption that changes, not levels, of interest rates matter is supported by the postwar growth of real per capita income (helping offset the long postwar rise in interest costs) and the plausible hypothesis that shock effects of increases in rates ultimately vanish.

One puzzling feature of his procedure is his comparison of centered 12-month averages of variables thought to be influenced by interest rates with unsmoothed monthly values of the rates themselves. Literally, this implies that a change in the AAA bond rate affects bond sales or contract awards or construction equally, month by month, during the preceding as well as the following half year. Rather complicated patterns of anticipations and behavior lags would be needed to justify this very special postulated relationship.

An alternate interest rate series is plotted on chart 2 in order to test whether the conjunction of a more simple time relationship between interest rates and borrowing and an alternative measure of the cost of borrowed funds would still show the same broad relationships as those found by Morris. Since issues of State and local units of less than unassailable financial strength may be more exposed to tight money impacts than issues by very high-rated units are, the series is of bonds rated as "good" rather than "prime" in quality.[2] Since new issue yields may be more relevant to borrowing decisions than are the secondary market yields measured by the Moody's interest rate series,[3] the series is of the Sidney Homer series on standardized new issue yields (for "good" rated municipals).[4] And since a change in interest rates may affect most strongly State and local borrowing during the month in which it occurs, new issue yields are smoothed by the same 12-month centered moving average as that used to eliminate irregular fluctuations in bond sales.[5]

In fact, this alternative, smoothed interest rate series supports Morris' explanation better, after 1959, than his own series does. The long, gradual decline of smoothed new issue yields starting in early 1950 and ending in early 1963 corresponds more closely with the initially slow and then accelerating rise in smoothed bond issues than does the AAA bond yield series on chart 1. Before mid-1959, the two interest rate series have about the same turning points, making the unsmoothed AAA yield series used by Morris a reasonable proxy for the smoothed new issue one.

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[2] The series is given in "An Analytical Record of Representative Municipal Yield Scales" by Quality and Maturity, 1950–65" (Solomon Brothers and Hutzler) and is of bonds of 20 years maturity. These new issue yields are estimates of the yield of a bond with standard characteristics, made judgmentally from the characteristics of actual yields of new issues during the same time period.

[3] On the other hand, it could be argued that the Moody's AAA, Aa, A, and Baa yield series are more relevant to State and local financial decisions because they are widely known and are less subject to irregular fluctuations (including disturbances due to particular issue features) than are quoted new issue yields. This writer inclines to this opinion.

[4] Throughout this paper, "municipals" means long-term security issues of State as well as local governments. This usage conforms to that in financial markets.

[5] In other words, average bond sales (or contract awards, or construction put in place) for a 12-month period are compared with average bond yields during the same period. This gives the same weight to each month for any observation in each series.

But the linkage between interest rates and contract awards, which was somewhat uncertain in the Morris study, becomes even more dubious in the revised and updated series shown on charts 1 through 3. During the last half of 1953 and in 1954, awards for all purposes did not respond at all to credit ease; and charts 2 and 3 show that this lack of response was not due to special movements in sewer-water and education contract awards. While awards did rise during the 1957–58 period of credit ease and fall up to mid-1959, as the interest-sensitivity hypothesis would specify, they rose sharply during a period of very high interest rates (July 1959 to June 1960). The subsequent long decline of bond yields to early 1963 also had no immediate impact on yields. Of course, the accelerated growth of awards after mid-1962 could be designated as a lagged response to earlier bond yield declines; but this would not be consistent with the unlagged covariation of bond sales and awards in 1958 and early 1959, or with the absence of either a current or a lagged covariation during and after the 1953–54 recession.

In short, the simple time series coincidence between interest rates and contract awards, which approximate the start of construction, appears to be uncertain, unstable, or both. Construction put in place, which is a moderately good proxy for capital spending, lags decidedly behind contract awards. This is to be expected, for both technical reasons [6] and the derivation of the series prior to 1963 as a weighted average of current and past contract awards and starts. But this also suggests that any interest rate effects on State and local construction will be felt for many months after a change in rates occurs.

In a multiple regression study of State and municipal borrowing between 1953 and 1960, Michael Tanzer found that interest rate changes had a statistically significant and negative effect on State gross debt issues, with other influences on borrowing being explained by capital expenditures and a liquidity variable expressed as the difference between actual and required balances of cash, U.S. Government securities, and other liquid assets.[7] His preliminary analysis of State and municipal [8] gross debt issues and interest rates led him to suspect that nearly all countercyclical movements in combined State-local debt were concentrated at the State level. In order to make a stringent test of the interest rate sensitivity of such State issues, he eliminated a type known to be interest-sensitive—toll road issues—from these and tested only the residual. Capital expenditures were thought to have a positive effect, and the lagged difference between actual and trend values of liquid asset holdings a negative effect, on debt issues. In his equation explaining municipal debt issues, capital expenditures and his index of interest rate changes were included as independent variables but not his liquidity variable.

[6] According to "Construction Review" (December 1965, p. 4), technical planning and obtaining voter approval financing many types of construction takes normally about 1 year. Bonds are generally sold between 2 and 3 months after approval. The lag between the initial design of projects and the midpoint of work underway, for most projects, is approximately 2 years.

[7] Tanzer, "Review of Economics and Statistics," August 1964, pp. 237–244. Required balances were defined as those shown by a trend fitted to actual balances over the time period of his study.

[8] All units of government except States. The local issue series thus includes issues by townships, counties, special districts, and municipal aid bond districts as well as municipal issues proper. The two debt issue series exclude Federal Government loans and toll road issues. Both are gross of retirements.

Interestingly enough, the index of interest rate changes had the theoretically expected negative effect of municipal as well as State borrowing, despite the absence of a simple association between the two in the time series data. The respective sizes of the rate change partial regression coefficients [9] for the two levels of government, when applied to levels of borrowing, imply much the same moderate effects of tight money as Frank Morris found for his study of combined borrowing classified by functional purposes. Tanzer's results also are not inconsistent with Morris', since the latter found outlays for education and sewer-water systems to be interest-rate insensitive and these purposes have a much larger weight in total municipal than in total State borrowing.

A defect in Tanzer's article is that he does not discuss an objection to his procedure: that capital outlays are influenced by borrowing as well as borrowing being influenced by capital outlays, and that the use of ordinary least squares model using unlagged outlays may consequently generate significant biases in the coefficients. There are answers to this objection, among which a long lead of borrowing prior to capital outlays—making current outlays insensitive to current borrowing—is appealing. But the objection needs to be discussed explicitly.

In a doctorial dissertation,[10] Charlotte Phelps used cross section data [11] to investigate the impact of interest rates on municipal capital projects at different points between initiation and completion. She was able to do this because she limited her study to municipalities keeping capital budgets. Her time period was a short one characterized by a tightening monetary conditions, 1956 and 1957. In the first stage of her regressions, actual interest rates paid were explained by bond quality attributes, size of issue, call status, level of government, and the long-term rate of U.S. Government bonds at time of issue. In the second stage, the gap between authorized and actual expenditures, as a percentage of the former, was regressed against only one variable, percentage changes in interest rates calculated from the first stage regression. Results of this second stage, as Miss Phelps emphasized, should be viewed cautiously because of the small number of her observations—21 municipalities—and associated problems of possible response bias—less than a fifth of the municipalities she had originally sent questionnaires to replied with data on authorized and actual capital outlays.

The second stage regression results state that a rise in the municipal bond rate induces a decline in actual but not in authorized expenditures. This follows because the dependent variable is the difference between lagged authorized and current actual expenditures, as a per-

[9] A partial regression coefficient shows by how many units the dependent variable changes as a result of a unit change in the independent variable with which the coefficient is associated. For example, let the dependent variable be bond sales expressed in billions of dollars, one of the independent variables be the average interest rate paid on bonds sold, and the partial regression coefficient for the interest rate variable be an illustrative −0.8. This coefficient signified that a rise of 1 point in the interest rate; e.g., from 3 to 4 percent, will reduce bond sales by $0.8 billion. If other variables influencing bond sales are also changing during a period, as is usually the case, their joint impact on bond sales is measured by multiplying each of these causative variables by its own partial regression coefficient and summing algebraically the products of all such multiplications.

[10] For Yale University. The findings discussed in this paper are only those published in "Yale Economic Essays" (fall of 1961) and abridges in "Impacts of Monetary Policy" (Commission on Money and Credit, 1963).

[11] Cross section studies are those analyzing different units within a single time period.

centage of lagged authorized expenditures; and because the sign of the interest rate change coefficient is positive. Thus, interest rates affect the backlog of public works awaiting completion, increasing it when they go up and reducing it when they decline. But the operative variable is the flow of actual outlays, not the flow of projects approved for starting sometime in the future.

Phelps' findings cannot be extended mechanically to total State and local, or even total municipal, capital outlays, because of the atypical nature of her sample and the response of only about one-fifth of that sample to her questionnaire. And even for the presumably sophisticated borrowers in her sample, effects of tightening credit were moderate by her results; a 7-percent cutback of actual capital outlays in 1957 and a 4-percent cutback in 1959 (extrapolating her results based on 1956 and 1957 data).

An earlier set of unpublished studies by the Federal Reserve, conducted and written by Richard Pickering from 1957 to 1961, also investigated the effect of credit conditions on accelerations and postponements of debt financing and capital outlays. The method used was to survey State and local officials in charge of financing, with written questionnaires followed up by personal interviews conducted by Federal Reserve staff members. Questions focused on postponements and accelerations of bond sales and whether these shifts had been due to changes in the cost of borrowing, to other factors, or to both. One survey covered experience during 1957 and 1958, a second that of 1959 and 1960.[12]

The results of both showed a definite effect of interest rate changes on both accelerations and postponements of bond issues. Thus, 9 percent of total issues (by dollar volume) during the first 6 months of 1958 represented issues which had been postponed earlier because of high interest rates prevailing then. An additional 2 percent consisted of issues made earlier than originally planned because of low interest rates. Similar results were found in the 1960 survey: about 6 percent of issues originally planned for 1959 had been postponed because of high interest rates.

However, the survey findings also indicated that the effects of changing interest rates on capital outlays were very much smaller than those on the timing of bond financing. In the first half of 1958, finance officers indicated that only one-sixth of earlier postponements of bond issues had resulted in delays in construction expenditures. This was less than 2 percent of actual bond financing. None of the financing which was accelerated during the first half of 1958 resulted in any acceleration of construction outlays; nearly all proceeds were invested temporarily in short-term securities or time deposits.

There remains for discussion an empirical study of the determinants of State and local capital outlays by Albert Ando, E. Cary Brown, and Earl Adams, Jr.,[13] in the context of a study of all Federal, State, and

[12] The surveys obtained responses from small and unsophisticated governmental units as well as large units with capital budgets. For example, the 1959 survey included 3,744 out of 7,497 governmental units which were of some financial importance; and the sampling rate for large and frequent borrowers was 100 percent. Virtually all State and local borrowing was accounted for by the universe of small, medium, and large governmental units from which the samples were drawn.

[13] Albert Ando, E. Cary Brown, and E. W. Adams, "Government Revenues and Expenditures," chapter in the "Brookings Quarterly Econometric Model of the United States" (Duesenberry, Fromm, Klein and Kuh, ad editors), Rand McNally & Co., Chicago, 1965.

local revenues and expenditures which is part of the "Brookings Quarterly Econometric Model of the United States." Ando-Brown-Adams (A–B–A) limited their direct investigation of factors affecting State and local capital outlays to the outlays themselves, not attempting to explain borrowing separately. Disaggregating, they used separate equations to explain capital outlays for education, hospitals, administrative and service facilities, highways, sewer and water systems, and all other nonresidential construction.

However, A-B-A used an interest rate (Moody's long-term municipal bond yield) as an explanatory variable in only one of the six equations: that explaining education capital outlays. Even in that equation, the interest rate was entered twice (once as its own level and once as the product of itself times population), and no theoretical justification for including the second variable is given. Hence, the result of a negative regression coefficient for the interest rate times population term but a positive coefficient for the rate itself is difficult to interpret. The other five categories of nonresidential capital outlays [14] are explained entirely by indexes of real needs, spending, and current revenues. Insofar as the gross coefficients of determination [15] are moderately high (between 77 and 95 percent of capital outlay levels are explained), the results tend to show, by implication, that interest rate effects on capital outlays have been very small, very hard to measure, or perhaps both, for years prior to the mid-1960's.

(2) A Model of the State and Local Bond Market

State and local governments seek borrowed funds in a market dominated by the consequence of one feature of our laws: the Federal income tax exemption privilege for interest received by investors. Institutional and individual adjustments to the longstanding feature have been well described by Roland Robinson in his volume footnoted elsewhere and by Sidney Homer and other contributors to this present volume. These adjustments and the growth of needs for capital outlays have resulted in the following structural features of this security market, features which should be taken explicitly into account by any empirical study of trends and fluctuations in municipal [16] yields and issues:

(1) Other than a diminishing number of State and local governments and public retirement funds, lending institutions which do not pay substantial income taxes on their earnings, relative to the size of the latter, are excluded from this market for all practical purposes. As a result, institutional demand for municipals is uniquely exposed to cyclical and irregular shifts in demand by the remaining institutions.

(2) Among these remaining institutions, commercial banks are dominant in both the average level of takings over credit cycles and shifts in demand during such cycles. The priority given by banks to business loans, and hence the residual nature of their demands for municipals, is well known. But less noted in the literature has been the stimulative effect of rising time and savings deposit liabilities on

[14] Residential outlays are not explained by A-B-A, because of their smallness and irregularity.

[15] This coefficient, for which the symbol is R square, shows the proportion of variation around the mean of the dependent variable (that being explained) which is accounted for by all the independent variables together.

[16] This noun is used henceforth as a synonym for State and local securities together.

bank demand for municipals. A shift from demand to time deposits does not alter the absolute spread between after-tax bank earnings on taxable and tax-exempt investments, other than through indirect and probably small alterations in noninterest costs of operations.[17] But this shift does alter the relative spread between earnings on long-term investments to the advantage of tax exempts, and bank portfolios have shown large increases in tax-exempt holdings after each amendment of regulation Q beginning in 1957.[18] Thus, bank demand for municipals have fluctuated both inversely to business demand for loans and positively with movements in time deposits related to the business cycle, impacts of monetary policy on the public's demand for time and checking deposits, and one-time developments like Federal Reserve amendments to regulation Q.

(3) Demand by individuals is concentrated among those subject to high marginal income tax rates. Such individuals are financially sophisticated when taken as a group, so they would presumably respond to small alterations in the spread between after-tax earnings on taxable bonds and tax-exempt municipals. And this has happened, in fact, as shown by Federal Reserve flow of funds estimates on net acquisitions of State and local securities by all households. But factors other than this spread also play a part in demand, including fluctuations in the wealth of high-tax-bracket individuals. We might speculate that fluctuations in stock market values would have a positive wealth effect on their demand for tax exempts which might well be stronger than the negative effect on their demand from the resulting inverse fluctuations in common stock and tax-exempt bond yields.

(4) We have few facts and even less theory on which to construct hypotheses on the demand for construction and other capital goods by States and local governments and the resulting derived demand for long-term borrowed funds. A theory based on cost-minimizing behavior postulates would have to deal with the collective nature of costs as well as benefits from public work and with difficulties posed by the generations problem analyzed by Prof. James Buchanan.[19] Never-

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[17] Let r_1 be the yield of tax-exempt bonds, r_2 be the average yield of taxable loans and investments, r_3 be the average rate paid on time and savings deposits, and the letter "a" be the marginal tax rate (stated as a fraction of taxable profits). We will further assume that banks always have taxable income against which interest paid on time and savings deposits has its full tax value (equal to interest paid times the marginal corporation income tax rate). Taking noninterest costs of operation as fixed, the marginal effect on after-tax profits of a dollar of deposits invested in different ways is as follows:

Demand deposits, invested in taxable investments	$=(1-a)r_2$
Demand deposits, invested in tax exempts	$=r_1$
Time deposits, invested in taxable investments	$=(1-a)(r_2-r_3)$
Time deposits, invested in tax exempts	$=r_1-(1-a)r_3$

Hence, a shift from demand to time deposits lowers after-tax profits per dollar of total deposit liabilities by the same amount, i.e., by $(1-a)r_3$ points, whether that dollar had been invested in taxable or in tax-exempt investments.

[18] Any reasonable allocation of operating costs among tax exempts, taxable bonds and mortgages, and business loans in the aggregate portfolios of commercial banks would indicate that since 1952 at least, tax exempts have been more profitable than the other two classes of investments. Banks have presumably not followed a strict profit-maximizing policy because of institutional constraints as well as the need to have taxable income against which to write off interest costs on time and savings deposits. Given this positive spread between tax-exempt yields and other yields after tax, any shift of funds from demand to time deposits would cause a relatively larger decline in net earnings from taxable investments than in net earnings from tax-exempt investments, favoring a bank portfolio rearrangement into tax exempts. For example, suppose that a bank earned 4.0 percent from tax exempts and 3.0 (after tax) from taxable securities. If the deposit liabilities which financed these investments are shifted from demand to time status by their owners, and if the time deposit rate of interest paid is 3 percent, bank earnings on tax exempts net of interest cost drop from 4.0 to 1.0 percent, i.e., by 75 percent of the former level. But earnings on taxable securities net of interest cost drop from 3.0 to 0 percent, i.e., by 100 percent of the former level.

[19] James Buchanan, Public Principles of Public Debt, Homewood, Ill., 1958 and "Confessions of a Burden Monger," Journal of Political Economy, vol. 72 (October 1964).

theless, several characteristics of the two demands—for construction and for long-term borrowed funds—stand out in postwar experience. One is the weight of evidence in the empirical studies reviewed in part 1 that interest cost fluctuations affect administrative decisions [20] on at least the timing of bond issues. Another is the impact of Federal grants-in-aid on at least one major component of State and local capital spending (highways and bridges) in periods like 1957–58 when the interstate highway program was getting underway. A third is an apparent lack of influence of long-run changes in interest rate levels on State and local contract awards and construction put in place. A fourth is the difficulty of empirical measurement of real stocks of State and local capital facilities and of relating them to flows of services provided, suggesting that some other variable might be preferable in any model attempting to relate State and local borrowing (or borrowing and taxation) to adjustments between desired and actual flows of services from capital goods and currently consumed factors of production.

(5) State and local borrowing is only a small part of total borrowing. If we confine our attention to the long-term side of the market and look at borrowing net of retirements, we find that net State and local bond issues were only 16 percent of the sum of net bond issues, mortgage lending, and term loans made by all domestic and foreign borrowers in the American market in 1965. Because more than four-fifths of State and local borrowing is always long term, this percentage would be lower if total net borrowing were compared.[21] Because of this low percentage and the unique tax-exemption features of State and local bonds, we might hypothesize that influences flowing from interest rates in general to State and local borrowing would be very much stronger than influences running in the opposite direction.

(6) The market for State and local securities is to a large extent a perfect market, if the latter is defined as one in which funds can always be raised at a price. Most borrowing, measured by volume, is not affected during periods of tight money by the nonprice rationing which is frequently alleged to exist in the market for business loans by commercial banks and other institutional lenders. Evidence for these conclusions is: The similarity of fluctuations in Aaa and Baa municipal bond yields during periods of tightening and easing credit conditions,[22] the absence of effective legal constraints on interest rates such as usury laws to preclude voters and officials from raising funds; [23] the marked

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[20] And voter decisions, insofar as interest rate ceilings are included in bond referendums proposals.

[21] The numbers behind the percentage are taken from Sidney Homer, "Factors Determining Municipal Bond Yields" (Solomon Bros. & Hutzler).

[22] In four periods of rising and four periods of falling interest rates on long-term State and local securities, between the end of 1951 and the first quarter of 1966, the Aaa and Baa bond yield indexes (Moody's) changed by much the same number of basic points in all but one case, if account is taken of the long decline in the risk differential since the late 1950's. Only in the first upswing of interest rates (first 1952 quarter to the third 1953 quarter) did the Baa yield rise appreciably more than the Aaa bond yield. Because of the structurally higher level of Baa yields, this indicates that Baa yields fluctuated somewhat less, in percentage terms, than did Aaa yields.

[23] State constitutional and other interest rate ceilings on general borrowing have been high enough, up to recently at least, as not to constrain demand by most lenders. Of course, this does not apply to the frequent specification of interest rate maximums for specific bond issues, in bond referendums or by administrative authority. But such ad hoc decisions on specific bond issues should be viewed as part of the decision mechanism rather than as a given constraint. If voters or officials decide that a project to be financed by a bond issue is undesirable at a rate of more than x percent, they should not be surprised that their action may inhibit sale of the issue when it is negotiated.

upsurge in issues of relatively high-risk industrial aid bonds during the first half of 1966, a tight period; the additional leverage for overcoming lender risk-aversion which the tax-exemption feature gives to yield differentials; and the impersonal nature of relationships between borrowers and ultimate lenders in a market dominated by public offerings of securities. Each of these statements is subject to some modification; one thinks, for example, of the many symbiotic ties among local governments, banks, and individual large investors. But many of these modifications, upon further examination, would seem to favor rather than inhibit fund raising by low-rated or unrated State and local borrowers. Others, such as the lack of a positive association between size of issue and interest cost of borrowed funds which was found by Roland Robinson and Charlotte Phelps,[24] give small borrowers more leeway during tight-money periods. The general conclusion is still that price factors are dominant in State and local security markets.

The foregoing characteristics of postwar borrowing and capital outlays by State and local governments and of the investors purchasing their obligations suggested a model explaining State and local bond sales which is reviewed step by step in the technical appendix For the nonspecialized reader, the following description of the model may be adequate for him to appraise the multiple regression findings in table 1.

(1) Institutional peculiarities affecting the behavior of both State and local borrowers and individual and institutional lenders are not overlooked. Instead, variables expressing their impacts on borrowers and lenders are included in the model.

(2) During any given period (the writer hypothesizes), borrowers and lenders in the municipal bond market attempt to change their respective long-term debt and municipal bond holdings to new levels because of changing conditions and (possibly) changes in expectations. If, for example, Federal grants-in-aid generally have a positive effect on the willingness of State and local governments to go into debt (because they find it more convenient to borrow to finance a part of the matchings sums required), an increase in these grants-in-aid will raise the desired stock of debt for State-local borrowers.

As this example may suggest, we hope that we can infer what the average of the desired levels of debt (for borrowers) and bond holdings (for lenders) is, even if we cannot directly observe it, by means of putting observable variables explaining that average into the regression explanation of bond sales. The writer interprets all variables in the left column stub of table 1 except the lagged stock variable (S_{t-1}) as helping to explain, in any given period, the level of State and local debt desired jointly by borrowers and lenders.

(3) But during any given time period, the adjustment process described in the preceding two paragraphs is necessarily incomplete because of administrative and bond referendums lags on the State and local borrower side and inertia, brokerage costs of switches, and uncertainty on the lender side. A portion of the adjustment caused by given-period changes in the financial and economic environment

[24] Roland Robinson, "The Postwar Market for State and Local Securities," 1960, table 18. The Phelps finding was that size of issue was positively related to the interest rate on bonds. One reason for this surprising result is that increasing the size of a bond issue generally necessitates bringing more partners into a bond underwriting syndicate. In addition, syndicates have to reach out for more buyers, because of the general preference of both individuals and financial institutions for diversification of portfolios.

is thus carried over to succeeding periods. The particular model used, a variant of the classic Metzler inventory model, theorizes that the largest portion of the ultimate, full adjustment to given-period changes in desired levels of debt is accomplished during the given period itself. In the following and subsequent periods, remaining adjustments become smaller and smaller and are finally insignificant. Thus, both borrowers and lenders are always reacting to past as well as current changes in desired levels of debt and bond holdings. That is, past as well as current conditions influence current lending and borrowing.

(4) While the writer's model can be developed into one explaining the separate effects of credit and other conditions on lenders and State and local borrowers, this is not done in this paper. The writer plans to use a procedure, known technically as the two-stage least squares method, to identify separate borrower and lender behavior characteristics in a future study. But the partial regression coefficients [25] in table 1 reflect the combined actions of borrowers and lenders for such variables as interest rates which influence both groups' behavior. Other variables, such as Federal grants-in-aid, affect borrowers but not lenders; while still others affect only lenders. The interpretation of regression findings requires a judicious combination of acquaintance with economic theory, knowledge of the market being explained, and commonsense. And the attribution of influences on bond sales to borrower and lender sides of the bond market is no exception to this general principle.

(5) The reader can interpret the following findings in ways different from what the lagged stock adjustment model would indicate, if his experience or intuition suggests that both borrowers and lenders behave differently. One alternative interpretation would be that borrowers and lenders adjust very quickly to changing circumstances. If so, the partial regression coefficients in table 1 should be interpreted straightforwardly, so that an illustrative coefficient of 0.6 means that a unit change in the variable with which it is associated induces six-tenths of a unit change, and no more, in the dependent variable. By this interpretation, the negative coefficient for the lagged stock would mean that high stocks of debt (for borrowers) and bond holdings (for lenders) inhibit further borrowing and lending more than low stocks do. And in any case, the reader should still read each coefficient literally for measuring what actually happens in any given period as a result of a given-period change in, say, the spread between U.S. Government and State-local bond yields during that period. If the coefficient of this spread is 0.6, a unit change in the spread induces a six-tenths of a unit change in bond sales during the current sales.

(6) For technical reasons, all variables except ratios and a special one (called a dummy variable),[26] are divided through by a weighted average of current and past GNP (in current dollars) called permanent income. The nonspecialized reader can interpret this step as a means

[25] See footnote 9 in sec. 1 for a definition of this term.

[26] A dummy variable is designed to show the effect of a one-time shift in the economic environment which affects the dependent variable. The effect is simply measured by the coefficient itself for periods where the dummy variable is coded as 1. For example, an illustrative coefficient of +0.99 means that during periods when the dummy is coded as 1 the dependent variable rises by 0.99 units. For other periods, when the dummy is coded as zero, the effect is naturally zero since any number times zero equals zero.

of removing effects of growth from the explanation so that observations for 1965 become comparable with those from 1952 or 1953. Otherwise, for example, growth in employment in Indiana steel mills might be "explained" very well by the rising number of bars in the city of Gary.

Table 1 presents findings for two multiple regression equations explaining State and local bond sales gross of retirements by semiannual data (seasonally adjusted, except for interest rates) from 1952 through 1965 inclusive. Results are broadly typical of those in other equations which were run by the author on the Federal Reserve computer. In these other runs, State and local bond yields also tended to have positive signs and be highly significantly,[27] while the coefficient of the yield on a competing but taxable security (U.S. Government bonds) showed up with negative signs. This also carries over to coefficient for the interest rate spread ($r_{us} - r_{s1}$) in the first column of table 1. Its negative sign means literally that an increase in municipal bond yields favors such bond sales.

These findings do not imply that State and local finance officers should be overjoyed at the thought of rising State and local bond yields relative to yields on U.S. Government securities. It only signifies, if the equation is correctly specified for measuring the combined effects of borrower and lender behavior, that the positive effect of rising yields on willingness to buy bonds more than offset the negative effect of rising yields on the willingness of State-local governmental units to go into debt during the 1952–65 period. And this is obviously only a first step in explaining the combined behavior of such borrowers and lenders, since changes in municipal and other bond yields are both influenced by and influence expectations of future yields. Since most State and local bonds sold are of intermediate to long maturity, we might hypothesize that a rise in State and local bond yields above their expected value would induce potential borrowers to delay bond issues.

The writer attempted to measure expectational effects by specifying four alternate definitions of State-local bond yield expectations and trying each in different regression runs using the same other variables. The variable, in all four cases, is expressed as the spread between the expected bond yield and the actual bond yield.[28] The coefficients for $(r^{ei}=r)_{sl}$ in table 1 indicate that a fall in the actual rate relative to the expected one encourages bond sales while a rise in the actual rate relative to the expected one (as happens in a tight money period) depresses bond sales. This was not a quirk of these particular regression equations; the regression coefficient for the expected-actual spread turned up with a positive sign and a magnitude much larger than chance variation could explain almost regardless of the other independent variables used or not used in a regression run.

These regression coefficients for the actual municipal yield and the spread between expected and actual municipal yields suggest that

[27] At the 5-percent level. At this level, "significant" means that there is only a 5-percent chance that sampling errors were great enough to produce a coefficient of a given sign when the true value is zero or has the opposite sign.

[28] A spread was used for technical reasons (to minimize collinearity between the actual and expected yield variables).

TABLE 1.—*Regression parameters for equations explaining bond sales as percent of permanent income*

Partial regression coefficients	Amount	Amount
T/Y^p		0. 211
		(. 039)
r_{sl}		. 672
		(. 197)
r_{us}		—. 406
		(. 265)
$r_{us}=_{sl}$	—0. 598	
	(. 193)	
E/Y^p	. 423	
	(. 157)	
F/Y^p	. 791	—. 108
	(. 264)	(. 373)
$(S/Y^p)_{t-1}$	—. 802	—. 399
	(. 115)	(. 097)
$(r^{ei}=r)_{sl}$	[1] . 523	[2] . 349
	(. 156)	(. 082)
V/Y^p	. 104	. 002
	(. 028)	(. 028)
P'	—. 023	—. 137
	(. 024)	(. 037)
Reg. Q	. 35	
	(. 11)	
C/Y^p		. 578
		(. 249)
Standard error	. 11	. 11
R^2	. 82	. 82
Durbin-Watson ratio	2. 55	2. 13
Constant term	. 977	1. 54

[1] i=1.
[2] i=3.

REGRESSION EQUATION SYMBOLS IN TABLE 1

B ——— Bond sales.
Y^p ——— Permanent income. This is always lagged ½ year, whether the variable with which it is combined is lagged or current.
S ——— State and local debt minus debt repayments during the following period. Excludes miscellaneous accruals, trade debt, and debt to U.S. Government.
T ——— Time and savings deposits at commercial banks.
E ——— Compensation of employees plus "other purchases" of State and local governments, in national income and product accounts. (E thus equals expenditures on goods and services less construction, in the same accounts).
F ——— Federal grants-in-aid to State and local governments.
P' ——— Construction cost index (Department of Commerce composite) as percent of implicit GNP deflator. (The former is converted to the same base as the latter.)
$r_{us}=r_{sl}$ — Interest yield on long-term U.S. Government bonds minus the Moody's triple-A municipal yield.
$(r^{ei}=r)_{sl}$ — Expected interest rate on municipals, by the ith definition of expectations, minus the actual interest rate on municipals (i=1, 2, 3, 4). The i definitions of expected interest rates are as follows:
  i=1 Expected rate equal the sum of the current and past 2 half-year values with weights of 0.25, 0.67, and 0.08 going back in time.
  i=2 Expected rate equals trend values for 2 trends, one for 1952–59 and the other for 1960–65.
  i=3 Expected rate equals the average rate during the preceding half year.
  i=4 Expected rate equals the past half-year rate plus its change from the preceding half year.
Reg. Q — Dummy variable for the amendment to Regulation Q at the beginning of 1962 (coded 0 for for 1952–61, 1 for 1962–65, half years.)
C ——— Contract awards by State and local governments.
V ——— Stock price index (Moody's 500 shares) with a 1958 base.

NOTE.—All dollar magnitudes are seasonally adjusted, including the stock of State and local debt(s). All percentages and rates (including interest rate spreads) are scaled in 1/100 of a point; for example, the municipal bond yield, 338, should be read as 3,38 percent. The dependent variable is itself a percentage written in basis points, like every independent variable except Reg. Q. All percentage numerators and interest rates shown in table 1 are current period values except the debt stock(s) variable whish is lagged by ½ year.

borrowers are more influenced by expectations of future bond yields, while lenders are more influenced by current spreads between yields on tax-exempt municipals and yields on taxable bonds and mortgages. This hypothesis appears plausible on several counts. Within broad limits, both institutional and individual investors can rearrange their portfolios at their own discretion, enabling them to react quickly to new situations. On the other hand, State and local borrowers are inhibited against one form of arbitrage—selling tax exempts and investing the proceeds in higher yielding U.S. Government securities—by the fear that they will be charged with abusing the tax exemption privilege. And while some State and local units have issued callable bonds, decisions to call or not to call require the formation of expectations on future interest rates just as much as do decisions on whether to postpone (or to accelerate) a bond issue for financing construction of facilities.

Hence, we might expect that bond buyers would generally react to the current situation, avoiding the troublesome business of peering into a murky future; while State and local borrowers would attempt to forecast because such forecasts and actions based on them offer the only means of minimizing interest costs of borrowing in the long run. Accordingly, the writer interprets the interest rate spread coefficient as measuring primarily the responses of bond buyers, while the expectations coefficient measures the responses of State and local borrowers to changing interest rates.

The institutional variables in table 1 generally performed well in each regression, having the expected sign (positive in each case) and being much higher than their standard errors.[29] The common stock price index (expressed as a percent of permanent income) is hypothesized to measure deviations in the wealth of high-bracket individual taxpayers from the wealth of the community (measured by permanent income itself). The regulation Q dummy variable was included to test whether the great expansion of time and savings deposits at commercial banks after the end of 1961 had the expected positive effect on overall supplies of funds to State and local borrowers. The positive sign of the regulation Q coefficient, as well as the repeated good results from another bank demand variable tried (time and savings deposits as a percent of permanent income), tends to confirm the relationship just hypothesized. Federal grants-in-aid apparently have a complementary rather than a substitutive relationship to State and local borrowing, partly because many grants are on a matching basis.

The variable, compensation of employees plus nonconstruction capital outlays plus miscellaneous purchases, was tested as an index of State and local needs for construction outlays. Besides being a better theoretical measure of these needs than the two other variables tried (contract awards and construction put in place),[30] it generally produced more stable regression coefficients in the regression runs.

[29] The standard error of a partial regression coefficient is an index of the extent to which the value of the coefficient could vary as a result of random or quasi-random factors. The higher the value of the coefficient relative to its own standard error, the less will be the proportional variation of coefficients found by repeated drawings of data for regression purposes.

[30] State and local governments faced with an expansion of needs for services can react immediately by hiring more employees, while construction of new facilities takes time. Compensation of employees is also better for a technical reason: Its regression coefficient is less apt to be biased by the feedback of changes in bond sales on the independent variable than is that for either contract awards or construction.

The lagged stock-adjustment coefficient (that for $S/Y^p\ t-1$) was also consistently of the right sign (negative) and usually implying that between four-tenths and eight-tenths of a discrepancy between desired and actual stocks was eliminated during each semiannual period. This range appears quite believable because the statistical coefficient is an average, with unknown weights, of the separate reaction-speed coefficients of borrowers and lenders.[31] While bond buyers may be presumed to act fairly rapidly in adjusting their portfolios, many State and local potential borrowers prefer, or are forced, to move slowly because of constitutional and other requirements for bond referendums and lags in the administrative process.

In conclusion, the results presented in table 1 and others not shown are encouraging. They do indicate a significant interest rate impact on State and local borrowing, although more on the timing of issues than on total borrowing in the long run. And the hypothesis of sensitivity of borrowers and insensitivity of lenders to expectations would have interesting implications if it is supported by further research. Another suggestion of the findings—that State and local borrowers are insensitive to long-run, quasi-permanent changes in interest rates while lenders are not—also deserves further investigation.

[31] See technical appendix.

TECHNICAL APPENDIX

The structural features of the market for State and local government bonds which are described in section 2 of the text suggest the following model of that market. On the demand side, borrowing of State and local governments is positively affected by the following variables: Needs for constructing; low prices for construction relative to the general price level; and Federal grants-in-aid.[1] It is also positively affected by a divergence between expected and actual rates of interest paid on new debt and negatively influenced by the stock of debt outstanding relative to the tax base for servicing it and by stocks of liquid assets (an alternate source of finance). In addition, borrowing may be influenced negatively by levels of interests rates, although the studies analyzed in part 1 suggest that fluctuations around trend rather than the upward trend of rates during the 1950's influenced borrowing.

However, adjustment of borrowing to the above factors requires time because of decision and administrative lags in the borrowing process and because many State and local units borrow only after construction projects have been approved making causation flow from interest rates to construction decisions to borrowing). Since this required reaction time for all State and local units together may be longer than the semiannual periods chosen for analysis, the writer hypothesizes that collective behavior can be depicted by a stock-adjustment demand function of the following type:

$$B_t = \delta_1(\beta'_1 X'_{it} - S_{t-1}) \tag{1}$$

when B is borrowing (gross of debt repayments and thus equal to bond sales), X'_t represents a vector of variables influencing the desired (target) stock of debt, the betas are the coefficients relating these factors to the desired stock of debt, S_{t-1} equals the lagged stock of State and local contractual debt *minus* current debt amortization,[2] and delta sub-one is the familiar reaction-speed coefficient.

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[1] Grants for construction itself or for purposes necessitating construction lower the cost of construction relative to the cost of current outlays financed out of current tax revenues, when each alternative is related to the stream of benefits expected to flow from it. Grants for purposes not involving or necessitating construction would tend to have the opposite effect, favoring more spending on the cheaper (to local taxpayers) current services than on construction financed by borrowing. However, the writer's review of the functional components of total Federal grants-in-aid showed that the first-defined type of grant dominated the total both as to level and changes.

[2] Current debt amortization is removed from the lagged stock of debt because what might be called the classical stock-adjustment model is inappropriate to the behavior of both borrowers and lenders in municipal bond markets. That classical model, which is used widely today in such studies as those by Frank de Leeuw in the Brookings quarterly econometric model of the U.S. economy, assumes implicitly that only net changes in stocks matter in the analysis. This is tantamount to saying that while decisions on altering stocks during a period are subject to behavior lags, those on maintaining the value of the stock at the beginning of the period are not subject to behavior lags. For example, let S be the actual stock of State and local bonds, S^* be the desired stock, delta S be net changes in the actual stock between the beginning and end of the period, A be amortization payments received by bondholders during the period, and B be bond sales during the period. The classical stock-adjustment model

$$\Delta S_t = \delta(S_t^* - S_{t-1})$$

implies that

$$B = \delta(S_t^* - S_{t-1}) + A_t$$

since bond purchases are definitionally equal to the algebraic sum of net changes in bondholdings and amortization payments received by bondholders. But if inertia, brokerage

An alternative hypothesis is that voters and public officials attempt to adjust actual to desired stocks of buildings and equipment, rather than actual to desired stocks of debt. Or, some weighted average of real stocks of capital, service flows from that capital, and debt would be relevant to decisionmaking. However, the difficulty of measuring stocks of buildings and equipment statistically is compounded by problems of relating that stock to flows of present and future services. The alternative service-flow approach, while perhaps more relevant to voter and official thinking, is troubled by just about the same problems of measurement. On the other hand, stocks of debt are measurable and known to most public officials. An increase in debt levels raises amortization and interest payments and therefore tax burdens in an immediate and measurable way. In addition, increases in debt relative to the tax base may have an unfavorable impact on bond ratings and hence the future cost of borrowed funds.

On the supply-of-funds side of the municipal bond market, the review of the literature in part 1 and the immediately preceding discussion suggest the following variables as influential: Municipal bond yields; yields on competing, taxable securities; time deposits at commercial banks; some measure of the wealth of individuals in high tax brackets; some measure of the difference between expected and actual municipal bond yields; the stock of liquid assets of State and local governments (positively related to supplies of loanable funds, since such assets help to insure that debt amortization payments are met); and the stock of State and local bonds in individual and institutional portfolios (exercising a negative influence on lending, as long as the relevant elasticities of substitution are less than infinite). This list of variables, and the supposition that lender reactions may require more time than the semiannual periods of our data, suggest the following stock adjustment model like for borrowers in its form:

$$B_t = \delta_2(A'_i Y'_{it} - S_{t-1}) \tag{2}$$

when delta sub-two is the *lenders'* reaction-speed coefficient, the Y primes are a vector of variables positively and negatively affecting the desired stock of bonds in the collective portfolio of all lenders and bondholders, the A prime are the coefficients relating these variables to the desired stock of bonds, and B and S are defined in the same way as for borrowers.[3]

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costs, and uncertainty induce bondholders to postpone a part of the net change in bondholdings to later periods, why should not the same factors operate with respect to checks received in repayment of debt? The bondholder always has the alternative of doing nothing, and doing nothing during a period means that the stock of debt at the beginning will be reduced at the end by the amount of debt amortization received. And reinvestment of the incoming flow of amortization payments demands the same attention and involves the same steps as the portion of bond purchases which result in a net change in holdings. Reinvestment and net investment, in short, are Siamese twins; and gross, not net, investment should be explained by the lagged stock adjustment model. Similar conclusions apply to State and local decisions on gross and net borrowing.

But whichever theory the reader prefers, the delta coefficients in equations 1 and 2 are not the delta coefficients in the classical stock adjustment model. However, differences between the writer's and the classical delta coefficients are very minor for values of either which are moderate to large in size, as long as we can make another assumption. This is that current period amortization is a constant fraction of the lagged stock of bondholdings (or debt, for State and local governments) over time. Given this assumption, which is very realistic for the period since 1951, the relationship between the classical reaction-speed coefficient and the writer's delta coefficients in equations 1 and 2 is as follows:

$$\delta = \delta'(1-\alpha) + \alpha$$

When alpha is the constant proportion of current debt repayment to the lagged stock of debt, delta is the classical reaction-speed coefficient and delta prime is the writer's reaction-speed coefficient. Since amortization payments have always been less than a tenth of the lagged debt stock for State-local governments, simple calculations show that as long as delta is above 0.3 or so, delta and delta prime are very close to each other. And the same is necessarily true in both equations 1 and 2 of the text, since alpha is the same for both.

[3] As before, the lagged stock is defined as the sum of the actual lagged stock and current debt amortization. See footnote 2 for the general justification for this special definition of the lagged stock. The reasons given there, mostly with respect to bondholder behavior,

The identification problem of isolating the separate reaction-speed coefficients of borrowers and lenders is apparent; but it is bypassed in this study except for some speculations later. This is done because the combined delta coefficient of both borrowers and lenders is a weighted average of the separate coefficients of borrowers and lenders (as is shown in the discussion following). The weights themselves are the structural coefficients of the eliminated variable when equations 1 and 2 are combined into one equation. As long as the coefficients of the eliminated variable are stable, the average reaction-speed coefficient in equation 3 shown later will be stable; and this will be sufficient for such purposes as prediction. If the coefficients of the eliminated variable are not stable, the model will not be useful in any form in which it might be tried, so we have little or nothing to lose for prediction purposes by not going further into lender and borrower behavior separately. In any case, the reader should keep in mind the fact that the coefficients shown in table 1 do not reflect the behavior of borrowers separately or lenders separately but the combined results of their actions (except for the many cases where theory and experience suggest that a variable is related to only one side of the market).

For measuring needs of State and local governments for borrowed funds, three variables are tried successively in different regression runs. The first is construction put in place, which is the familiar Bureau of the Census series reprinted in Construction Review. The second is contract awards, from the same source and (like construction put in place) including projects financed by Federal grants-in-aid as long as the ultimate owner is a State or local government. The third variable is the sum of wage and salary payments by State and local governments and other nonconstruction payments by the same units. An alternative approach, measuring "real" demand by indexes of needs, was considered initially; but trial indexes were either like straight lines over time or had cycles unrelated to any in interest rates or general business conditions. In addition, the indexes considered faced a host of objections on their theoretical meaningfulness. The three series used, on the other hand, reflect actual behavior related to needs. Of these three, the third (nonconstruction spending by State-local governments) appears closest to the conceptually desirable index of needs because of the flexibility with which needs can be met by hiring additional employees. In addition, this series has the econometric advantage of being more clearly exogenous to markets for State and local bonds than are either contract awards or construction put in place.

Expectations on interest rates, of course, are known only to the gods, or perhaps to gifted technicians.[4] Four definitions of these were tried in successive equations. (1) A naive hypothesis is that expected rates of period t equal rates in period $t-1$. (2) A somewhat more credible hypothesis is that expected rates during period t equal the past rate *plus* the past change in the rate, that is, that past changes are extrapolated into the present. (3) A hypothesis related to the definition of expectations as based on some concept of normal rates and return to them is that expected rates equal their trend value; trend is judged empirically by this writer from his knowledge of financial markets and the history of the period. (4) A hypothesis related to regressive expectations is that expected rates during a given period equal a weighted average of rates in preceding periods and perhaps the current period as well.

Going back to equations (1) and (2), let us modify the notation to express the fact that some of the variables in the X and Y vectors are common to both equations (for example, the municipal bond yield affects the behavior of both borrowers and lenders). These will be taken out of these vectors and relabeled as a vector of one or more variables, Z'. The X and Y vectors henceforth include only those variables present in the demand (but not the supply) and the supply (but not the demand) equations respectively.

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appear even stronger for State and local financial behavior. Could anyone really argue that these governmental units want to replace debt being retired with new debt so as to keep the stock of the latter constant? Or that different considerations and behavior lags apply to the portion of bond issues which happen to be offset by current amortization of old debt and to the portion which is not so offset? A decline in debt from amortization, for technical reasons related to the serial form of most State-local debt, does not result in a declining tax burden for debt interest and amortization payments, except over very long periods.

[4] David Meiselman, The Term Structure of Interest Rates, Prentice-Hall, Englewood Cliffs, N.J., 1962.

The next step is to combine equations (1) and (2) by eliminating one variable, Z_m, common to both. This is done by subtraction and manipulation of the resulting bunches of structural coefficients attached to each variable. The variable chosen for elimination is the stock of liquid assets held by State and local governments. As can be seen from the solutions footnoted,[5] the relationships between the structural coefficients of equations (1) and (2) and the structural coefficients in the combined equation:

$$B_t=\delta'[C_i'X'_{it}+D_i'Y'_{it}+E'_kZ'_{kt}-S_{t-1}] \tag{3}$$

are interesting.[6] The equation (3) reaction-speed coefficient, delta prime, is a weighed harmonic mean of the demand and supply reaction-speed coefficients. The equation (3) structural coefficient of variables present in one but not the other of the demand and supply equations (C' and D') equal their respective equation (1) or (2) coefficients divided by the ratio of one to both of the target coefficients of the eliminated variable. And the equation (3) structural coefficients of variables common to both demand and supply equations equal the weighted mean of the demand and supply coefficients (counting the signs of these). (The weights are the structural coefficients of the eliminated variable.) Therefore, estimates of C', D', and E' would be biased as estimates of the "true" structural coefficients; but we can at least guess at the extent of the bias by means of judgmental estimates of the coefficients of the eliminated variable (β_m and A_m).

This has not been done with respect to the absolute magnitudes of these two last coefficients, because our information is too slender for setting even judgmental limits within which the true values probably lie. However, we might speculate as to the *proportion* between them for judging whether the delta-prime coefficients in table 1 (equal to those for lagged State and local debt as a percent of permanent income) appear to be reasonable. For a number of reasons, in-

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[5] Let Z_m be the variable to be eliminated in combining equations 1 and 2 (it equals liquid assets of State and local governments, in our case). The beta and A coefficients for that variable, in equations 1 and 2, respectively, are B_m and A_m. Keeping the notation the same as in these two equations, and understanding that the vector Z'_k is now bereft of the eliminated variable (Z_m) it can be shown that the relationships are as follows between the structural coefficients in equation (3) and the structural coefficients in equations (1) and (2):

$$\delta'=\frac{\delta_1\delta_2(A_m+\beta_m)}{\delta_1\beta_m+\delta_2A_m}=\frac{1}{\frac{\beta_m}{\delta_2(A_m+\beta_m)}+\frac{A_m}{\delta_1(A_m+\beta_m)}}$$

$$C_i'=\beta_i'\left(\frac{A_m}{A_m+\beta_m}\right)=\frac{\beta_i'}{1+\frac{\beta_m}{A_m}}$$

$$D_i'=A_i'\left(\frac{\beta_m}{A_m+\beta_m}\right)=\frac{A_i'}{1+\frac{A_m}{\beta_m}}$$

$$E_k'=A_k'\left(\frac{\beta_m}{\beta_m+A_m}\right)+\beta_k'\left(\frac{A_m}{A_m+\beta_m}\right)$$

as long as we assume that liquid assets (Z_m) have a negative impact on borrowing (since they are an alternative source of finance for construction) but a positive impact on willingness to lend.

[6] Equations (1) and (2) can also be combined by addition without eliminating any variable which is common to both. The writer preferred to avoid this because it is impossible to eliminate the borrower and lender reaction-speed coefficients from the clusters of structural coefficients equivalent to the structural ones for each target-determining variable in equation (3). However, the reader is welcome to interpret findings in this way, if he is of the opinion that State and local liquid asset holding were unimportant or unstable determinants of both the demand for and the supply of bonds.

cluding the finding of Tanzer of an appreciable and negative relationship between "surplus" liquid assets and borrowing as well as the minor weight given to liquidity by Moody's analyses of individual bond issues which the writer has read, it is highly probable that much more weight is given to liquidity by borrowers than by lenders. On the assumption that between 2.5 and 5 times as much weight was placed by borrowers, B_m is between 2.5 and 5 times greater than A_m. Calculations based on this assumption and values found for delta-prime in the regression runs found that β_m and A_m would diverge from delta-prime in equation (3) by about the same number of basis points. Since we might expect lenders to have significantly faster reaction reflexes than State and local borrowers, for reasons discussed earlier, this implies that the general finding of delta-prime coefficients between 0.5 and 0.8, with the most plausible finding that at or slightly below 0.8, means that lenders make nearly all adjustments to their portfolios based on current conditions within the current semiannual period, while borrowers carry over a considerable but not suspiciously large proportion of the ultimate adjustment to following periods. While speculative, these calculations suggest that the combined reaction speed (delta prime) coefficients found in the regression runs are, at the least, not implausible in magnitude.

Going to these runs, equation (3) was tested in its statistical form with the modification that all stock and flow variables, including specifically the lagged stock of State-local debt, were transformed to percentages of lagged permanent income (with Friedman weights). Several reasons for this suggested themselves besides the statistical convenience of removing collinearity among the independent variables because of growth and postwar trends in credit and monetary conditions. Permanent income is defensible both as an index of the combined total of human and nonhuman wealth (presumably applicable to aggregate investor portfolio decisions) and as an index of the tax base for financing interest and amortization on State and local debt (and hence of the burden of that debt on voters). Time and savings deposits at commercial banks, Federal grants-in-aid, and other "institutional" variables are likewise expressed as percentages of permanent income because they are related to desired debt and asset levels of borrowers and lenders respectively. A word might be said about the variable, the Standard & Poor's stock price index as a percent of permanent income. Because of the scarcity of stock issues relative to retirements and value of stock outstanding, stock prices are an approximation to an index of the value of all shares outstanding, for the period since 1951 at least. Thus, the writer interprets increases or decreases in the percentage of stock prices to permanent income as measuring the extent to which the wealth of high-tax-bracket individuals is rising or declining relative to the wealth of the rest of us. If this is correct, this variable should catch changes in the demand of wealthy individuals for State and local bonds which are not reflected in aggregate economic growth and gross saving.

Only one variable was used in either level or interest rate spread form to measure the influence of yield changes in investments competing with municipals on the supply of loanable funds. That was the long-term yield of U.S. Government securities. This limitation was suggested by the very high collinearity of most long-term interest rates and the need to experiment with alternative measures of State and local needs for borrowed funds and of the expectations of borrowers as to future interest rates.

An accounting defect in the analysis is that the lagged debt stock variable includes short as well as long-term State and local contractual debt while the debt flow variable (bond sales) is limited to long-term debt. While the influence of this difference is judged to be very minor, because of the very small proportion of new short-term borrowing relative to bond sales in nearly all postwar periods, it should be kept in mind by the reader.

CHAPTER 19

Relative Tax Advantages to Different Investor Groups in Acquiring or Holding Municipal Securities*

INTRODUCTION

Since the beginning of the income tax, the Internal Revenue laws have provided that interest on obligations of States, territories, possessions of the United States, any political subdivisions of the foregoing, or of the District of Columbia, has been excluded from the gross income of any holder of these obligations.[1]

The exemption applies not only to the coupon rate of interest stated on the municipal obligations, but also to gains attributable to the discount at which such obligations were originally issued, whether or not the obligations were issued on a discount basis. Each respective holder is entitled to exemption of gain attributable to original issue discount in that proportion of the original issue discount which is equal to his holding period divided by the total period for which the obligation will be outstanding.[2]

Conversely, deductions are not permitted for amortization of a premium paid, whether on issuance or thereafter, for the purchase of tax-exempt securities because the premium is a direct cost of earning tax-exempt interest.[3] Taxpayers who do not amortize the premium must generally reduce the adjusted basis of the obligation for purposes of determining gain or loss on sale or exchange.[4] This rule prevents holders of tax-exempt obligations from indirectly charging a non-deductible expense against taxable income in the form of a loss upon disposition.

The gain on disposition or retirement of municipal bonds, other than that attributable to original issue discount, qualifies for capital gains treatment, subject to a maximum tax rate of 25 percent if held for more than 6 months,[5] to the same extent as obligations the interest on which is taxable. Unless municipal bonds are inventory in the hands of the holder, or are held by him for sale in the ordinary course of trade or business, they are capital assets.[6]

In order to prevent recipients of tax-exempt income from being doubly benefited, the Internal Revenue Code provides several restrictions on the deductibility of expenses connected with earning exempt income.

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*Prepared in the Treasury Department, Office of the Secretary, with minor editing by committee staff.

[1] Internal Revenue Code of 1954, sec. 103.

[2] In the case of obligations issued at a discount basis and payable without interest at a fixed maturity date not exceeding 1 year from the date of issue, the original issue discount shall not be considered to accrue until the date the obligation is disposed of. Internal Revenue Code sec. 454(b).

[3] Internal Revenue Code of 1954, sec. 171(a)(2).

[4] Internal Revenue Code of 1954, sec. 1016(a)(7).

[5] Internal Revenue Code, sec. 1201.

[6] Internal Revenue Code, sec. 1221.

First, all expenses (other than interest) otherwise deductible as an expense for the production of income are not deductible if allocable to tax-exempt income.[7] This rule is generally applicable only to investment expenses, and not to trade or business expenses. Thus, if the exempt interest is income of a trade or business, such as a bank, the expenses of earning that interest are not subject to disallowance under this rule.

Second, the code provides that interest on indebtedness incurred or continued to purchase or carry obligations, the interest on which is exempt, is not deductible.[8] This is so regardless of whether the exempt income is investment income or income of a trade or business.

Obligations of State and local governments are not accorded any preferential treatment for purposes of estate and gift taxation. In each case, tax is generally imposed on the fair market value of the obligation at the time it is transferred or bequeathed.

The foregoing rules are rules of general applicability, regardless of whether the taxpayer is an individual, a trust, or a corporation. Significant departures, however, result in the case of the following holders of tax-exempt obligations, classified by institutional group. The following analysis, however, does not treat of situations where the municipal bonds are held as inventory by dealers in such obligations.

1. COMMERCIAL BANKS

While State and local obligations held by commercial banks may qualify as capital assets, gains on disposition of which are taxed at 25 percent if held for more than 6 months, net losses on the sale or exchange of such obligations which are capital assets may, in effect, be deducted against ordinary income. Ordinarily, capital losses of corporations may not be used to offset ordinary income, but may be used to offset capital gains of the taxable year or future years. The bank, rule, however, applies only if the losses of the taxable year from sales or exchanges by banks of obligations issued by corporations, including municipal corporations, exceed the gains for the taxable year from such sales or exchanges.[9]

With respect to interest expense paid or accrued by commercial banks on indebtedness incurred or continued to earn tax-exempt interest, interest is not disallowed on deposits. The general disallowance rule has not obtained in the case of interest on deposits of commercial banks for historical reasons but is, of course, applicable to interest on other obligations of banks such as notes and debentures.

2. MUTUAL SAVINGS BANKS

Mutual savings banks which meet specified tests of similarity to national banks may, as in the case of commercial banks, deduct their net losses on sales or exchanges of obligations, including municipal obligations, for the taxable year against ordinary income.[10]

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[7] Internal Revenue Code, sec. 265(1).
[8] Internal Revenue Code, sec. 265(2).
[9] Internal Revenue Code, sec. 582(c).
[10] Internal Revenue Code, sec. 582(c).

If the mutual savings bank is substantially engaged in the general banking business, interest on deposits may not be disallowed on the ground that it is interest on indebtedness incurred or continued to purchase or carry tax-exempt obligations.

3. SAVINGS AND LOAN ASSOCIATIONS

The rules applicable to commercial banks for purposes of allowing ordinary expense deductions for net losses during a taxable year on sales or exchanges of securities are also applicable to savings and loan associations.[11]

4. LIFE INSURANCE COMPANIES

Prior to enactment of the Life Insurance Company Income Tax Act of 1959, life insurance companies were generally taxed on net investment income less a deduction for the policyholders' nontaxable share of net investment income determined on an industrywide basis as a stated percentage of net investment income. Net investment income was defined as the total income from investments less tax-exempt interest and investment expenses. The industrywide percentage was calculated in order to exempt from tax industry additions to policyholders' reserves. The Life Insurance Company Income Tax Act of 1959 provided that each item of exempt and taxable income, of which total life insurance company investment income is composed, shall be allocated pro rata between the policyholders' nontaxable share and the company's taxable share.[12] The effect of allocating each item of income, whether or not exempt, between the policyholders and the company is to prevent the double deduction of exempt interest by means of an additional deduction for additions to reserves without consideration of the portion of that increment attributable to exempt interest. This legislative formula was recently upheld by the Supreme Court against objections that it placed a tax on interest from municipal bonds in *United States* v. *Atlas Life Insurance Company* (381 U.S. 233 (1965)).

The provisions of the code for taxation of life insurance companies specifically provide that no amount shall be deducted as interest on indebtedness incurred or continued to purchase or carry tax-exempt obligations.[13]

5. FIRE AND CASUALTY INSURANCE COMPANIES

Fire and casualty insurance companies, including those organized by the issuance of stock, and certain fire and flood insurance companies operated on a mutual basis, are at present basically taxed in the same manner as other corporations. This being so, the problem in the *Atlas* case relating to the allocation of tax-exempt interest between the company and the policyholders does not arise.

With respect to expenses incurred in earning tax-exempt interest, the general provisions applicable to deductibility of expenses of earning tax-exempt interest are applicable to fire and casualty insurance companies. These rules provide that those expenses (other than in-

[11] Internal Revenue Code, secs. 581, 582(c).
[12] Internal Revenue Code, sec. 804.
[13] Internal Revenue Code, sec. 805(e).

terest) which are not expenses of a trade or business and which are allocable to production of tax-exempt interest are not deductible. Interest on all indebtedness incurred or continued to purchase or carry tax-exempt obligations is not deductible.

6. STATE AND LOCAL PUBLIC RETIREMENT FUNDS

The investment income of funds created by State and local governments to provide for the retirement of their employees is normally exempt from tax, either on the ground that they are qualified pension plans or that they are instrumentalities of the State or local government. This being the case, no tax advantage inures to the fund from investing in municipal obligations.

7. STATE AND LOCAL GOVERNMENTS

State and local governments and their instrumentalities and agencies are exempt from Federal income taxation. There is, therefore, no tax benefit to be derived from investing idle funds in municipal obligations.

8. NONINSURED PENSION FUNDS

Certain pension funds which do not discriminate between employees and meet other tests for qualification are exempt from tax, and are accordingly not taxed on their investment income. Therefore, they do not receive any tax advantages by virtue of investments in municipal obligations as compared to taxable securities.

The investment income of pension trusts which do not meet the qualifications for exemption from tax is taxed to the trust. Therefore, investments in municipal securities may be advantageous because of the interest exemption.

9. PERSONAL TRUST FUNDS

Personal trust funds are taxed at the rates applicable to individuals on income which is not distributed to beneficiaries. Beneficiaries, on the other hand, are generally taxed on distributions which do not exceed the current income of the trust. However, each item of trust income currently distributed to the beneficiaries preserves its character in their hands in the proportion that such item of income bears to the total income of the trust.[14] Thus if a trust receives tax-exempt interest on municipal bonds which it distributes currently, the beneficiaries are not taxed on the amount of the distribution representing tax-exempt interest. If the trust retains the municipal bond interest, such interest is not taxed to the trust.

In determining the tax-exempt interest allocable to distributions received by beneficiaries, deductions must also be allocated between the various items of income in order that the beneficiaries may not be allowed to offset taxable items of income by expenses attributable to exempt interest.[15]

[14] Internal Revenue Code, secs. 652(b), 662(b).
[15] Ibid.

10. MUNICIPAL BOND FUNDS

Investment funds which are not under present regulations, associations taxable as corporations and which hold municipal obligations exclusively or predominantly are not taxed on the receipt of interest on such obligations, and distributions to the holders of certificates of beneficial interest preserve their tax-exempt character. The shareholders are thereby relieved of the usual second layer of tax which would be imposed if the fund were treated as a corporation.

11. NONFINANCIAL CORPORATIONS

Corporations are not taxed on interest from State and local obligations, but receipt or accrual of such interest results in an increase of the earnings and profits of the corporation. Because the amount of current or accumulated earnings and profits generally determines the taxability of corporate distributions to shareholders, the tax-exempt interest does not retain its exempt character when distributed to shareholders. The shareholders are taxed notwithstanding that the source of the distribution is exempt income. Thus, the interest exemption only applies to one level of taxation of corporations and shareholders.

12. INDIVIDUALS

The general rules applicable to individuals holding municipal securities are those enumerated in the beginning of this chapter.

CHAPTER 20

Comparison of the Interest Cost Saving and Revenue Loss on Tax-Exempt Securities*

The exemption of interest paid to holders of State and local government securities from Federal income tax lowers the borrowing costs to State and local governments since holders attach a premium to the exemption feature in the form of lower interest. This chapter examines the relative magnitudes of (1) the interest cost saving to State and local governments and (2) the reduction in Federal revenues due to tax exemption.

A. Theoretical Analysis of the Basis of the Yield Differential Between Taxable and Tax-Exempt Securities

The differential in yield between taxable and tax-exempt bonds of comparable quality depends chiefly upon the value of the exemption to marginal investors.[1]

The relative return on investment at the margin on a taxable security yielding 5 percent or a tax-exempt security of comparable quality yielding 30 percent of this, 5 percent or 1.5 percent, would be a matter of indifference to an investor with a marginal tax rate or 70 percent. Both offer the same after-tax marginal return. However, an investor whose marginal tax rate was 50 percent would find that unless the return on the tax-exempt security reaches at least 50 percent of the yield on a comparable taxable security, the after-tax yield on the taxable security would be better than that on the tax-exempt security. For an investor taxable at 20 percent the break-even yield on tax exempts would be 80 percent of the yield on taxable securities. The term "investors" in these comments covers both individual and institutional investors.

Given their investment preferences, investors whose income is taxed at the highest marginal tax rate, will hold increasing amounts of tax-exempt securities as the yield on tax-exempts rises above 30 percent of the yield on taxables. Similarly, investors whose income is taxed at 50 percent will demand an increasing amount of tax-exempts only if the yield on tax-exempts rises above 50 percent of the yield on taxables.

Given the supply of outstanding State and local securities, the relative yield will be determined by the amount of tax-exempt securities which investors in all tax brackets desire to hold. Suppose the actual supply of tax-exempt securities to be relatively small, and all of them

* Prepared in the Treasury Department, Office of the Secretary, with minor editing by committee staff.

[1] Any two securities will in fact have different yields depending on all the differences between the securities, risk, liquidity, etc. In the following discussion comparisons are made between securities that are alike in all features except taxability. Assuming competitive capital markets this is a reasonable device for isolating the value of the exemption feature.

to be profitably bought by persons in the highest tax bracket. The yield on tax exempts would tend toward 30 percent of the yield on taxables. However, as the supply of tax exempts increased, the demand of buyers in the lower income tax brackets would have to be tapped. If buyers in the lowest tax brackets are brought in, the yield will rise to 80 percent of the yield on taxables. In this instance, they are the marginal buyers, that is, those whose income after tax is the same whether they buy tax-exempt or taxable securities. Since this is an undifferentiated market, all buyers of tax-exempt securities receive the same yields as the marginal buyers.

This is a somewhat simplified statement of investor choices. One could postulate that an investor in the 70-percent bracket chooses between a taxable bond, a tax-exempt bond, and an equity—half of the yield of which would be realized as capital gain. Because of the attraction of the capital gain feature of the equity, the investor might demand a better return on a tax-exempt bond than 1.5 percent even though comparable taxable bonds are yielding 5 percent. The point of the foregoing argument still applies, that is, the lower the tax rate applicable to an individual the higher must be the yield on tax-exempt bonds for these to be an attractive investment.

As the volume of State and local government borrowing rises, State and local securities must appeal to lenders with medium or low marginal tax rates, that is, the yield on State and local securities must move closer to the yield on comparable taxable securities. This means that the lender whose marginal tax rate is higher than the rate applicable to the marginal buyer will find that his tax saving is greater than the amount of interest foregone. The standard assumption of free capital markets and rational investors implies that there would be a negligible number of investors who would buy tax-exempt securities when the tax saving to them is less than the loss of interest. In the aggregate, therefore, it can be expected that the interest cost saving to State and local government borrowers due to tax exemption is less than the revenue loss which results from the exemption feature. Sections B and C provide some evidence on the yield differential and interest cost savings to State and local governments under the assumption that these governments continue to borrow from the same borrowers.

It is possible that in the absence of exemption the patterns of savings flows in capital markets would be very different than they are now, and this in turn could mean a variety of further changes which are not easily predictable. Section E offers some comment on this matter of possible shifts of existing savings flows.

B. Evidence on the Yield Differential in Recent Years

Given the total stock of all securities, the differential in yield between taxable and tax-exempt securities is influenced by the supply of tax-exempt securities; the tax rates applicable to each bracket; the wealth position of individuals in each income bracket and investment preferences among various investors. Over the decades the differential has widened or narrowed in response to pressures from these forces.[2]

[2] Identifying the precise effect of the variables which have influenced the differential in the past presents many difficulties. In particular, statistical evidence on the two latter variables is quite meager.

The following table, which compares the yield on high-grade corporate and municipal bonds over the period 1928–66, shows the behavior of the differential during this period and provides some evidence on the trend of the differential in recent years.[3]

TABLE 1.—*Comparative yields on high-grade, long-term municipal and corporate bonds,[1] selected years, 1928–66*

Year	Average yield		Differential	Differential as a percent of corporate yield
	Municipal bonds	Corporate bonds		
1928	3.92	4.50	0.58	13
1938	2.25	2.85	.60	21
1946	1.10	2.53	1.43	57
1956	2.51	3.36	.85	25
1963	3.06	4.26	1.20	28
1964	3.09	4.40	1.31	30
1965	3.16	4.49	1.33	30
1966 (May)	3.48	4.88	1.40	29

[1] Moody's Investors Service, Aaa municipal bonds and Aaa industrial bonds.

In the 1920's an upsurge in the amount of outstanding State and local securities, combined with a sharp decrease in the rates of Federal income tax, caused the relative differential (the absolute differential as a percent of corporate yields) to narrow considerably. Since many investors expected the decline in Federal tax rates to continue, the value of the exemption during this period was discounted at a high figure. In the 1930's the relative differential widened and during World War II widened further, so that by 1946 the yield on high-grade tax-exempt securities was less than one-half that of taxable bonds of comparable quality. Behind this widening of the relative differential lay the marked increase in the level and progression of Federal income taxes and a severe decline in the volume of tax-exempt securities as State and local governments postponed borrowing to finance capital outlays during the war. In the postwar years the relative differential has diminished.

C. The Interest Cost Saving to State and Local Governments

Conceptually, measurement of the interest cost saving to State and local government borrowers produced by the tax exemption requires an estimate of the expected rise in interest costs of State and local governments that would occur if the exemption were not available. The first problem in estimating the interest saving in any year due to the exemption feature is that of securing a judgment as to what the yield on State and local government securities would be in the absence of the exemption.

The magnitude of the yield differential.—Recently some instructive research has been undertaken to determine the value of tax exemption in terms of reduced borrowing cost to State and local government units; that is, the interest rate differential between tax-exempt and taxable securities of comparable quality. The research project, sponsored by the Brookings Institution[4] has made a major contribution

[3] These yields should not be taken as a measure of the true differential between tax-exempt and taxable securities, i.e., the amount by which the yield on tax exempts would be expected to increase in the absence of the exemption, but are shown in order to indicate the trend of the differential whatever its absolute size.

[4] David J. Ott and Allan H. Meltzer, "Federal Tax Treatment of State and Local Securities" (Washington: 1963).

to the factual and analytical framework in securing a measurement of the extent to which state and local government borrowers benefit from the exemption feature. The analysis presented here is based on the techniques employed in this study.[5]

A current range for the yield differential on long-term securities was computed on the assumption that the relevant comparable rate on taxable securities, grade by grade and maturity by maturity, lay somewhere between the yields on publicly and privately placed issues. The difference between new issue municipal yield and public corporate new issue yields was taken as the minimum differential; the maximum was set at the differential between private corporate placements and new issue yields on municipals of comparable quality.[6]

Application of the Ott-Meltzer technique to date for 1966 suggests a current estimate of the range of the yield differential as 1.33 to 1.88.[7]

Measuring the interest saving to State and local governments in any year due to the exemption feature poses the problem that the interest payments on State and local securities in a given year consist of payments contracted in all previous periods in which debt currently outstanding was issued. Estimation of the reduced borrowing costs on all outstanding securities would involve going far back into the history of such offerings, comparing market yields for fully tax-exempt obligations. Recently investigators have avoided the problem of dating outstanding securities by developing an estimate of the "first year" interest cost savings for any year. This approach was adopted and refined in the recent study by Professors Ott and Meltzer. The interest cost saving due to exemption was estimated by seeking an incre-

[5] The authors marshaled some quantitative evidence bearing on the level of yields on State and local securities without the exemption by examining the yield patterns on Canadian municipal and Provincial securities which are subjected to a Canadian Federal income tax, and also through examination of yields on domestic issues of railroad equipment trust obligations and religious institution bonds, which in the former instance are similar in form to State and local government securities (i.e., issued serially) and in the latter instance are comparable to small, unrated local government issues.

Because the yield series which would prevail in the absence of the exemption would be based to a large extent on qualitative evidence and judgments made in the capital market, the views of capital market experts on the absence-of-exemption yields on municipals were surveyed. Two conclusions were reached on the basis of this survey. First, while former investigations of the differential have compared the average long-term new issue yields on *public offerings* of corporate bonds with the average long term yields on municipals of the same credit category, the relevant yield on taxable securities should be viewed as some sort of weighted average of new issue yields on *public offerings* and *private placement* of corporate bonds. (In recent years private placements of corporate bond issues have accounted for almost 50 percent of total corporate issues.) Second, in the absence of the exemption it cannot be assumed that offering yields on all maturities would rise by the same absolute (basis points) amount as the estimated rise in offering yields on long-term issues. Some allowance should be made, therefore, for a change in the term structure of yields on municipals in estimating the differential.

Ott and Meltzer concluded that the yield differential for the tax-exemption feature of State and local government bonds was in the range of 1.19 to 2.02 percentage points, based on data for 1960.

[6] The range was calculated on the basis of available data for private placements and new corporate issues. The private placement yield series was based on compilations by the Life Insurance Association of America. For data on new issue yields of public offerings of corporate bonds the FHA series was chosen. The municipal yield series was based on the Investment Bankers Association series on new issue yields on State and local government securities. These series served to provide a general range for the differential between current municipal and the relevant corporate yields. The "3d" quality yields on private placements and the approximately comparable "A" public corporate issue yields were compared with the IBA median yields on "A" 20-year general obligation municipals.

It should be noted that a refined estimate of the range of the differential might allow for the fact that in the absence of the exemption the yields on shorter maturities of municipals would probably rise more than long-term yields. This change in the term structure of yields on municipals can be viewed as a "flattening" of the present yield curve. In the absence of the exemption the municipal yield curve may become less steep than at present and more closely resemble the term structure on corporate bonds.

[7] The Ott-Meltzer work was the subject of a conference of experts at the Brookings Institution which was summarized in Ott and Meltzer *op. cit.* p. 113 footnotes. In the discussion a consensus judgment of the conferees was sought and a figure of 1.5 percentage points appeared to be the midpoint of the range of judgments expressed.

mental figure, that is, the increase in the interest cost that would have occurred on the gross issues of a single year if the issues had been sold at the alternative (absence-of-exemption) yields. The revenue consequences of tax exemption are stated in terms of this incremental figure.

This technique is applied to determine the increase in interest costs that would have occurred on gross issues of State and local government securities issued in 1965 if the issues had been sold at the yields which would have prevailed in the absence of the exemption. On the basis of the yields which would have prevailed in the absence of the exemption. On the basis of the yields prevailing at the time of sale, aggregate total interest payments over the life of the debt issued during the year are estimated at $5 billion. If net interest cost for each issue were increased by a minimum of 133 and a maximum of 186 basis points, the aggregate interest payments by State and local governments over the life of the debt would have risen by an estimated range of 37.8 to 52.8 percent or $1.9 billion in the case of the minimum estimated rise in interest costs and $2.6 billion in the case of the maximum estimated rise in interests costs.[8]

D. The Added Federal Tax Yield in Relation to Additional Interest Payments

The revenue consequences of tax exemption to the Federal Treasury Department and dependent upon the distribution of holdings of State and local securities among various investor groups and the average marginal tax rates applicable to the interest receipts of the holders. Table 2 shows the estimated distribution of holdings of State and local government obligations in 1965 by value of total obligations and the percentage held by each investor group.

Table 2.—*Ownership of State and local government securities, 1965*

[In billions of dollars]

Investor group	Amount held	Percentage distribution
Individuals	$35.0	35.8
Nonprofit corporations [1]	5.3	5.4
State and local funds	36.6	37.4
Commercial banks	0.4	.4
Mutual savings banks	4.7	4.8
Life insurance companies	10.9	11.1
Nonlife insurance companies	1.8	1.8
Pension funds	3.1	3.2
Other	97.8	100.0
Total		

[1] Included in pension funds.

In order to determine the potential revenue yield, the approximate average marginal tax rate for each investor group on the basis of present income tax law was estimated and a weighted average marginal

[8] More crudely, the interest saving from tax exemption for State and local bonds in 1965 could be estimated as between 37.8 percent and 52.8 percent of the interest paid on all State and local securities in that year or $1.14 to $1.60 billion. The inaccuracy in this estimate is that some of the bonds on which interest was being paid in 1965 were issued in past years. Depending on market conditions, the value of tax exemption was somewhat different in each year. The differential has not changed greatly, however, as a percentage of the current rate after 1946 so this crude calculation of a single year's interest saving is reasonably satisfactory.

tax rate was computed. The aggregate average marginal tax rate, based on the present distribution of State and local government bond interest receipts, is estimated to be 42 percent. This result suggests that over the life of the debt issued in 1965 the increase in Federal revenues would have been $2.9 billion if the relevant differential were 133 basis points and interest payments were to rise by $1.9 billion. The additional revenue would have been $3.2 billion if the relevant differential were 186 basis points and the increase in interest payments were $2.6 billion. Over the life of State and local bonds issued in 1965, the excess of Federal revenue loss over interest saving to State and local governments is therefore estimated to be between $0.6 and $1.0 billion.[9]

E. The Market for State and Local Government Securities in the Absence of the Exemption

The revenue consequences resulting from the taxation of interest payments on State and local government securities suggested above were developed on the assumption that the distribution of holdings of these obligations would remain unchanged in the absence of the exemption.[10] However, if the exemption feature were unavailable, it would not be appropriate to assume a completely unaltered distribution of holdings among investor groups. This change in holdings among investors will affect the aggregate average marginal tax rate applicable to the interest income.

The factors which would effectuate shifting and determine the subsequent revenue effect are complex. The extent of shifting and the change in the prospective revenue yield would depend, for example, on yields on municipals in the absence of exemption—both short- and long-term; the changes which would occur in yields on equities and other fixed-interest bearing assets if the exemption on municipals were unavailable; the extent to which former purchases of tax-exempt securities were able to secure alternative income tax shelters and whether the exemption were to be made unavailable only on new issues; finally, what might be called institutional practices would govern to some extent purchases of State and local securities.

In their study, Professors Ott and Meltzer gave explicit recognition to the distribution problem. On the assumption that the exemption feature would be unavailable on new issues of State and local government obligations, an effort was made to determine changes in purchases by the various investor groups. While magnitudes of the shifts in purchases of State and local securities are subject to alternative judgments, the judgments as to the direction of the shifts postulated in the study appear quite reasonable.

The most striking portfolio changes are postulated to occur in the cases of individuals subject to tax in the higher income tax brackets and life insurance companies. Under present income tax treatment of State and local interest payments, the former investor group is the largest purchaser of municipals while the latter purchases only a

[9] These estimates of benefits and costs of tax exemption over the life of 1 year's issues were estimated following the Ott-Meltzer technique but using 1965 data.

[10] An implicit assumption was also that total security issues as well as the volume of State and local bond issues remained the same.

small percentage of total issues. In the absence of the exemption, individuals in the higher income tax brackets may be expected to forgo substantial purchases of municipals and shift into other investment outlets including equities. However, a decline in purchases of municipals by individuals may be checked if individuals below the higher tax brackets were attracted as yields on municipals rise in the absence of the exemption. Moreover, the decline in purchases by individuals shifting initially into equities or new ventures may be a shortrun phenomenon which would be checked as the debt-equity ratio of individual portfolios is readjusted.

Life insurance companies might increase substantially purchases of long-term municipals in the face of rising yields. This view is supported by the fact that this investor group is an important buyer of low-rated, high yield, State and local government issues. Nonlife insurance companies would probably move in the opposite direction. Purchases of municipals by this group would fall and the shift would be largely into preferred stock.

The second largest municipal investor group, under present tax treatment of interest income, commercial banks, are substantial purchasers of short-term serials. This group may be expected to shift out of municipals to some extent, but the magnitude of the shift should not be great since commercial banks purchase short-term municipals on the basis of liquidity as well as after-tax yield.[11]

In the absence of the exemption and given the rise in municipal bond yields, nonprofit corporations and pension funds can be expected to develop an interest in State and local obligations since high yields coupled with safety are important factors in determining the portfolio composition of these investor groups. In addition to these nontaxable investor groups, State and local trust funds would be expected to increase their participation in the municipals market as yields on these securities rise.

[11] Another factor which suggests that the absence of the exemption feature will not greatly diminish commercial bank purchases of municipals is that commercial banks to some extent are obliged to hold municipals as collateral for public funds. Public relation ties with localities would also encourage continuing purchases of municipals. Finally, the underwriting activity of commercial banks is limited to State and local government (general obligation) securities.

PART IV. SOURCES OF LOAN FUNDS

CHAPTER 21

Commercial Banks*

INTRODUCTION

The distinguishing characteristic of commercial banks, in comparison with other financial institutions, is their issuance of demand deposit accounts, transferable by check, which are used throughout the Nation as money, or means of payment. Most commercial banks also issue time deposits, usually evidenced by book accounts or by certificates of deposit. Some banks also have demand certificates of deposit.

In the 19th century what we now call commercial banks were traditionally known as banks of deposit and discount (some of them were also banks of issue because they issued circulating notes used as pocket currency). The description of them as banks of discount reflected the predominant character of their assets—as bills of exchange and promissory notes of businessmen and other individuals, with the emphasis on obligations arising out of relatively short-term commercial transactions (those not exceeding a few months). In recent decades commercial banks have made a broad variety of loans, including commercial loans of varying maturities, loans to individuals for consumer purposes, loans secured by real estate (residential, agricultural, and commercial and industrial), and loans of other types. They also hold a relatively large volume of investment securities, consisting mostly of obligations of governments (Federal, State, local, and sometimes foreign) and of other public or quasi-public bodies. The loans and investments of commercial banks represent a much broader coverage of the various types of loans and securities outstanding in the economy (except corporate bonds and stocks) than those of other types of financial institutions.

It may also be noted that the class of institutions commonly referred to as "commercial banks," for which statistics are regularly collected and published by the Federal banking agencies, includes stock savings banks, though they may have no demand deposit accounts, and trust companies not regularly engaged in deposit banking which handle fiduciary business other than that incidental to real estate title or mortgage activities. However, such savings banks and "nondeposit trust companies" are comparatively few in number relative to the commercial banks engaged in the types of operations described above.

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*The Introduction and Part A were prepared by the Division of Research and Statistics of the Federal Deposit Insurance Corporation; the remanider of the chapter was prepared by Wray O. Candilis, Department of Economics and Research, American Bankers Association. Minor editing of entire chapter by committee staff.

Size and Structure of the Industry

The number of commercial banks, and the amount of their assets, as of the call report dates at or near the end of the year, are given in table 2 for the years indicated. The commercial banks are classified in table 2, for the same years and call dates, according to participation in Federal deposit insurance and Federal Reserve membership. On December 31, 1964, commercial banks operated 14,771 branches, an increase of 1,119 over the corresponding date of the preceding year. Table 3 shows a distribution of insured commercial banks on December 31, 1964, by amount of deposits.

TABLE 1.—*Number and assets of commercial banks, 1950, 1955, 1960, and 1964*

	Call date	Number	Assets (thousands)
1950	Dec. 30	14,164	$169,855,778
1955	Dec. 31	13,756	211,830,899
1960	do	13,484	258,358,952
1964	do	13,775	348,433,496

Source: Annual reports of the Federal Deposit Insurance Corporation.

TABLE 2.—*Number and assets of commercial banks, 1950, 1955, 1960, and 1964, classified by selected criteria*

Criteria	Number		Assets (thousands)	
	Insured	Noninsured	Insured	Noninsured
Participation in deposit insurance:				
1950	13,446	718	$166,791,755	$3,064,023
1955	13,237	519	209,144,779	2,868,120
1960	13,126	358	256,322,819	2,036,133
1964	13,493	282	345,130,205	3,303,291
	Members	Nonmembers	Members	Nonmembers
Federal Reserve membership:				
1950	6,870	7,294	$144,641,543	$25,214,235
1955	6,540	7,216	179,387,715	32,443,164
1960	6,172	7,132	216,555,670	41,803,282
1964	6,224	7,269	289,128,895	56,001,310

Source: Annual reports of the Federal Deposit Insurance Corporation, annual reports of the Comptroller of the Currency, member bank call reports, and FDIC tabulations.

TABLE 3.—*Distribution of commercial banks, Dec. 31, 1964, by amount of deposits*

Deposit size	Insured commercial banks, December 31, 1964	
	Number	Deposits (millions)
Total	13,492	$306,230
Banks with deposits of—		
Under $1,000,000	730	530
$1,000,000 to $5,000,000	6,460	17,679
$5,000,000 to $25,000,000	5,018	52,951
$25,000,000 to $100,000,000	923	42,634
$100,000,000 to $500,000,000	283	59,327
Over $500,000,000	79	133,108

Source: Tabulations by Federal Deposit Insurance Corporation.

A. Supply of Capital Funds

The commercial banking system is looked to increasingly as a source of funds for financing State and local public works. Empirical information on the extent of financing directly by the acquisition by banks of obligations of private, nonprofit organizations for hospitals, schools, nursing and retirement homes, community centers, and other local public facilities is not available. Much of this is in the form of various classes of loans or warrants not separately categorized in bank recordkeeping and reporting. This kind of direct financing is important, if not in aggregate terms, then certainly in particularly circumstances where the more formal types of flotations and securities marketing are less appropriate.

There is somewhat more information available on the activities of commercial banks as buyers and sellers of State and local obligations used to finance local public works, but even here the data leave much to be desired. Also, banks, in their various fiduciary capacities and as investment counselors, probably exert considerable influence in the market for State and local securities but empirical data are fragmentary.

Commercial banks are much more important, however, as investors of their own resources in State and local securities, than as dealers, fiduciaries, or investment counselors. The holdings of State and local obligations by commercial banks since the end of World War II have greatly increased, not only in absolute terms, but also as a proportion of total State and local debt outstanding. Table 4 indicates this expansion. From holdings of $4.1 billion in 1946, commercial bank holdings steadily increasd to $36.6 billion by 1965. As a percentage of total issues outstanding, the proportion increased during the period from 26.1 to 37.4 percent. Note, however, that most of this latter increase occurred in very recent years, when there has been a heavy growth of time deposits.

Table 4.—*Holdings of interest-bearing State and local obligations commercial banks, 1964–65*

[Dollars in billions]

Year (June 30)	State and local obligations held by commercial banks	State and local obligations outstanding	Bank holdings of State and local obligations as a percentage of State and local obligations outstanding
1946	$4.1	$15.7	26.1
1947	5.0	16.6	30.1
1948	5.6	18.4	30.4
1949	6.0	20.5	29.3
1950	7.4	23.8	31.1
1951	8.6	26.7	32.2
1952	9.9	29.2	33.9
1953	10.6	32.3	32.8
1954	12.0	37.4	32.1
1955	12.8	42.8	29.9
1956	13.0	47.6	27.3
1957	13.4	52.1	25.7
1958	15.8	56.8	27.8
1959	17.0	62.0	27.4
1960	16.8	66.4	25.3
1961	18.8	71.7	26.2
1962	23.2	80.1	29.0
1963	27.9	85.9	32.5
1964	31.5	91.3	34.5
1965	36.6	97.8	37.4

Source: U.S. Treasury and Federal Deposit Insurance Corporation.

The holdings of State and local obligations by banks of differing size groupings, in relation to bank assets, are shown in table 5. This tabulation is based upon examination reports of approximately 6,000 State chartered banks that are not members of the Federal Reserve System. For all these banks, the ratio of holdings of State and local obligations to total assets is 9.3.

TABLE 5.—*Relationships of holdings of State and local obligations to assets of insured nonmember commercial banks, analyzed by selected size of bank groupings, 1964*[1]

[Dollars in millions]

Size of banks (total assets)	Number of banks	Holdings of State and local obligations	Total assets	Holdings of State and local obligations as a percent of total assets
Total	6,268	$4,009	$43,253	9.3
Less than $1,000,000	422	11	314	3.5
$1 to $2,000,000	1,403	90	2,104	4.3
$2 to $5,000,000	2,342	558	7,677	7.2
$5 to $10,000,000	1,204	848	8,425	10.0
Over $10,000,000	897	2,502	24,733	10.1

[1] Based on tabulations from examination reports of 6,268 banks examined by the Federal Deposit Insurance Corporation in 1964.

1. MATURITY DISTRIBUTION OF INVESTMENT IN STATE AND LOCAL OBLIGATIONS BY COMMERCIAL BANKS

A primary restraint pertaining to the management of assets that is inherent in the character of commercial banking relates to liquidity requirements. These requirements differ among institutions and at different points in time. But, in any case, they are determined by the need to satisfy any short range demands of claimants as they are presented. The maturity distribution of the investment account in State and local obligations can have important bearing on the liquidity position of any given institution.

There is no continuous series of data showing the maturity distribution of State and local obligations held by commercial banks. The whole banking system was surveyed in 1947 and again in 1956. Maturity data reported by bank examiners of some 6,000 State chartered banks not members of the Federal Reserve System have been tabulated for the years 1961–64. Summaries of these surveys are brought together in table 6. Noteworthy is the fact that there appears to have been a lengthening of maturities since 1961. The holdings in the 1- to 5-year maturity range decreased from 39.6 percent of all holdings in 1961 to 33.8 percent in 1964; in the 10- to 20-year range, the percentage increased from 11.5 percent to 18.5 percent.

TABLE 6.—*Percentage maturity distribution of State and local obligations held by insured nonmember commercial banks, 1961–64, and all insured commercial banks, 1947 and 1956*

Maturity	1964 [1]	1963 [1]	1962 [1]	1961 [1]	1956	1947
Total	100.0	100.0	100.0	100.0	100.0	100.0
Within 1 year	13.1	14.0	14.3	14.8	15.2	16.8
1 to 5 years	33.8	35.5	37.9	39.6	34.9	29.4
5 to 10 years	31.3	30.9	31.8	31.8	30.0	26.3
10 to 20 years	18.5	16.8	13.4	11.5	19.9	27.5
Over 20 years	3.3	2.8	2.6	2.3		

[1] Based on tabulations from bank examination reports of banks examined by the Federal Deposit Insurance Corporation.

Table 7 presents the maturity distribution of investment grade State and local obligations held in 1964 by some 6,000 State chartered banks not members of the Federal Reserve System, classified by size of bank groupings.

TABLE 7.—*Maturity distribution of investment grade, State and local obligations held by insured nonmember commercial banks examined in 1964, analyzed by selected size of bank groupings*

Size of banks (total assets)	Number of banks	State and local obligation holdings [1] (millions)	Maturity distribution as percent of total					
			Total	Under 1 year	1 to 5 years	5 to 10 years	10 to 20 years	Over 20 years
Total	6,268	$3,981	100.0	13.1	33.8	31.3	18.5	3.3
Less than $1,000,000	422	11	100.0	16.6	42.5	30.7	9.7	.5
$1,000,000 to $2,000,000	1,403	88	100.0	16.6	40.6	30.2	12.1	.5
$2,000,000 to $5,000,000	2,342	553	100.0	14.2	38.9	32.7	13.4	.8
$5,000,000 to $10,000,000	1,204	843	100.0	12.1	37.2	34.6	15.2	.9
Over $10,000,000	897	2,486	100.0	13.1	31.2	29.9	21.0	4.8

[1] Totals shown in this column exclude speculative and defaulted holdings and therefore differ from total holdings shown in other tables.

Source: Based on tabulations from Federal Deposit Insurance Corporation examination reports.

2. THE QUALITY OF COMMERCIAL BANK INVESTMENTS IN STATE AND LOCAL OBLIGATIONS

Commercial banks, particularly smaller ones involved in the financing of local developmental projects, invest rather heavily in unrated issues, which are not well-known outside local environs and which might be of either high or of low quality. Some banks invest rather substantially in grade 4, or marginal, issues. Nevertheless, on the basis of available evidence, which is generally acknowledged to be less complete than might be desirable, the commercial banking industry does usually insist upon very high standards of quality in its investment portfolio.

Quality classifications of holdings of State and local obligations by State chartered banks not members of the Federal Reserve System that were examined by the Federal Deposit Insurance Corporation from 1960 to 1964 are shown in table 8. These data indicate that over 55 percent of the holdings are of very high quality. Speculative holdings and issues in default are relatively insignificant, and the percentage of these found in bank portfolios has declined since 1960.

TABLE 8.—*Quality classification of holdings of State and local obligations by insured nonmember commercial banks examined, 1960–64*

Year	Number of banks	State and local obligation holdings (millions)	Percentage of holdings—				
			Total	Grades 1 to 3	Grade 4	Unrated	Speculative and in default
1960	6,757	$2,881	100.0	55.8	11.2	31.7	1.3
1961	6,391	2,912	100.0	55.6	12.1	31.5	.8
1962	6,324	3,158	100.0	55.3	13.5	30.3	.9
1963	6,150	3,466	100.0	54.6	15.4	29.2	.8
1964	6,268	4,009	100.0	55.9	15.3	28.1	.7

Source: Based on tabulation from Federal Deposit Insurance Corporation examination reports.

Table 9 relates the quality of the investments in State and local obligations in 1964 shown in table 8 to the size of banks. Smaller banks of less than $2 million of assets had less than one-fourth of their holdings of State and local obligations in issues of grades 1–3. Banks of over $10 million had 65 percent of their holdings in these higher grade securities, although these banks also had a slightly higher percentage of investments in grade 4 securities. Smaller banks showed a substantially higher proportionate investment in unrated securities than did the larger banks. Unrated issues, which usually are small and of varying quality, tend to have a limited market, often served by the smaller banks. On the other hand, the larger portfolios can usually be administered more efficiently and profitably if invested in large, well-known flotations.

TABLE 9.—*Quality classifications of holdings of State and municipal obligations by insured nonmember commercial banks examined in 1964, analyzed by selected size of bank groupings* [1]

Size of bank (total assets)	Number of banks	State and local obligation holdings (millions)	Percent of holdings				
			Total	Grades 1 to 3	Grade 4	Unrated	Speculative and in default
Total	6,268	$4,009	100.0	55.9	15.3	28.1	0.7
Less than $1,000,000	422	11	100.0	24.2	10.5	63.8	1.5
$1,000,000 to $2,000,000	1,403	89	100.0	24.7	12.4	61.8	1.1
$2,000,000 to $5,000,000	2,342	559	100.0	33.9	14.3	50.8	.9
$5,000,000 to $10,000,000	1,204	848	100.0	46.0	16.7	36.7	.6
Over $10,000,000	897	2,502	100.0	65.5	15.1	18.8	.6

[1] The 1st 4 rating classifications are considered investment grade by Federal bank supervisory authorities, although grade 4 is generally considered to be marginal. Unrated issues are usually not well known, and speculative and defaulted issues are unsuitable for bank portfolios.

Source: Based on tabulations from Federal Deposit Insurance Corporation examination reports.

3. TYPE OF SECURITIES AND USE OF PROCEEDS OF STATE AND LOCAL DEBT HELD BY COMMERCIAL BANKS

There are no current data available either on the type of State and local obligations held by commercial banks or the use of proceeds by governmental authorities. The last general bank survey in 1956 showed 79.3 percent of total investments in State and local debt in general obligation issues, 14.5 percent in revenue bonds, and 6.2 percent in short-term notes and warrants. In recent years, however,

there has been an increase in revenue bond financing by State and local governments. During the period, 1961–65, total long-term issues totaled some $65.2 billion, of which about 25 percent were of the revenue type.[1] Short-term issues during the same period amounted to almost 30 percent of total flotations. As to purpose, the major use of proceeds of State and local debt continues to be for education, highway construction, and local utilities.[2] There is little reason to suppose that bank portfolios in recent years have not shared in these general patterns of State and local financing.

B. Portfolio Considerations

1. General considerations

Probably the most important element making municipal securities attractive to investment officers of banks is the tax exemption feature. Institutions that are subject to high Federal income taxation display a considerable interest in tax exempts, with the greatest demand coming from commercial banks which are subject to the standard corporate income taxes. Tax exemption, however, is a form of Federal Government subsidy, only part of which accrues to the investors. How this subsidy is shared between investors and borrowers depends on the market forces existing at a particular time. If the supply of tax exempts is high relative to demand then the cost of borrowing would be high also and investors would benefit more from the subsidy than otherwise. If the supply is small relative to demand, borrowing costs would be down and it would be the borrowers that would benefit more than otherwise.

Another advantage that makes municipals attractive is the security of such investments. With the exception of Treasury and Federal agency bonds, municipals generally involve the least risk and enjoy the lowest default rate of any form of investment. In addition, banks are constantly under pressure to assist local government units either in order to secure the deposits of such units or for the sake of the broader customer-banker relationships.

The difficulties encountered by banks in the purchase and sale of municipals may be summarized as follows:

First, investing in municipals presupposes a high degree of specialized knowledge not always available to all banks.

Second, marketability in the secondary market is considered less than adequate to insure easy liquidation of most municipals.

A third difficulty is perhaps the most serious factor impeding bank investment in municipals. Commercial banks during business cycle swings have a particularly difficult task in adapting their investment policy vis-a-vis State and local bonds to their major function as a private lender.

On the supply side, the postwar period has demonstrated that non-Federal governmental units have tended to be relatively heavy borrowers of funds in periods of business ebullience. While there is some interest elasticity in the supply of municipal bonds, the decrease or postponement of new issues is scarcely sufficient to free adequate funds

[1] Moody's Municipal and Government Manual, 1966, p. a21.
[2] Ibid, p. a19.

for business and consumer demand which also tends to be high at such times. With scarcity of bank reserves generally characterizing the advanced stage of cyclical recovery periods, banks tend to liquidate some of their municipal investments or at least withdraw from the market for new issues. In these periods, banks often take capital losses on their holdings of State and local bonds as well as Treasury securities in order to accommodate business and consumer borrowers. Similarly, in the early stages of a recession, State and local bond volume may be small at the very time commercial banks could use additional outlets for their funds, considering the lesser demand by private borrowers. Thus, despite the obvious investment attractions in the form of tax-exempt income and on the whole, excellent quality, municipal bonds as bank investments do not always harmonize with the responsibility of banks to accommodate first the needs of private customers.

The Department of Economics and Research of the American Bankers Association sent a questionnaire to the chief executive officers of over 300 banks across the country soliciting their views on subjects relating to municipal securities. The questionnaire, which was pretested, included questions pertaining to the ratios of municipal security holdings to total loans and investments, the method used in determining the volume of municipal holdings, the relationship between yields of tax-exempts and yields of taxable loans and investments, the importance of the tax exemption feature, and the means by which municipal securities can be made more attractive to investors. Apart from the questionnaire, to which there was an above average response, the Department of Economics and Research conducted comprehensive interviews with academicians, researchers, and bankers well versed in the municipal bond field, whose views and advice considerably enhanced the value of the survey results.

2. PROPORTION OF LOANS AND INVESTMENTS

According to the survey, the proportion of municipal security holdings to the holdings of all loans and investments is determined by commercial banks mainly as a result of an analysis of liquidity requirements, loan requirements, and legal needs for governments to secure government accounts. Following the satisfaction of these needs, the funds that remain are invested in bonds. Depending on the yield spreads between governments, municipals, and Federal agencies and corporations, on the relationship of a particular bank to the local government unit or home State, and on the tax position of the bank, funds are allocated accordingly. An eye is also kept on the ratio of municipals to total deposits, or some other similar ratio, and on the ratios carried by banks of comparable stature.

3. COMPETITION WITH OTHER LOANS OR INVESTMENTS

Municipal securities are not competitive with mortgage loans according to the response of surveyed bankers as a whole. In the event, for instance, of the removal of tax exemption and the subsequent lower demand for municipals, money that no longer would go into municipals would mainly be channeled into other investments; e.g., Treasury securities, rather than into loans. Of course this would depend on how loaned up the bank happened to be at the time and on the spread

between the yields of municipals and the average pre-tax return on loans and investments. According to table 10 the shift of funds that would occur if tax exemption were eliminated would depend also on the size of the bank.

For example the shift to Treasury securities arising from removal of tax exemption on municipals for instance ranges from 38.6 percent of the surveyed banks with assets of $10 to $99 million, to 64.3 percent for banks with assets of less than $10 million. A similar wide range exists in the case of a shift to consumer and business loans. From table 10 it is apparent that there would be a greater shift to business loans if tax exemption is removed in communities whose municipals are rated A or lower, presumably because business loans are better substitutes for high-yielding low-rated municipals than mortgages or Treasurys. Probably for the same reason there would be a slightly greater shift to mortgages and Treasurys in communities whose municipals belong to the top two ratings.

TABLE 10.—*If tax exemption were eliminated, where would you shift the funds to?*

[In percent]

	Bank's assets			
	$100,000,000 and over	$10,000,000 to $99,000,000	Under $10,000,000	Total
Consumer loans	16.0	38.6	14.3	19.8
Business loans	16.0	6.8	7.1	13.4
Mortgages	11.6	16.0	10.7	12.3
Treasury securities	44.8	38.6	64.3	45.8
Other	11.6		3.6	8.7

RATINGS (MUNICIPALS OF RESPONDENT'S COMMUNITY)

	Aaa	Aa	A	Baa	Ba and lower [1]	Total
Consumer loans	22.2	16.5	22.0	17.2		19.8
Business loans	7.4	8.8	16.5	27.6		13.4
Mortgages	11.1	16.5	9.9	6.9		12.3
Treasury securities	44.5	48.3	45.0	38.0		45.8
Other	14.8	9.9	6.6	10.3		8.7

[1] Too few cases.

4. YIELD SPREAD CONSIDERATIONS

On the average banks consider municipal securities attractive so long as their yield is no more than about 200 basis points lower than yields of taxable loans and investments. The survey also indicated that neither the size of the bank nor the rating of the municipals of the community where the bank is located produces a substantially different figure (table 11). Of course the actual spread between, say, high-grade municipal bonds and AAA corporate bonds at mid-March 1966 was about 1.25 percent, with some analysts maintaining that not all of the difference should be attributed to the tax exemption feature since this feature is not the only reason investors find State and municipal bonds attractive. In the A.B.A. survey, it was revealed that commercial banks attribute a higher premium to the tax exemption feature than the present market yield differential would suggest.

TABLE 11.—*At how much less yield expressed in basis points would you be willing to buy tax exempts as compared to your average pretax return on taxable loans and investments?*

BANK'S ASSETS

$100,000,000 and over	$10,000,000 to $99,000,000	Under $10,000,000	Total
211	224	207	213

RATINGS

[Municipals of respondents' community]

Aaa	Aa	A	Baa	Ba and lower	Total
210	206	220	212	Too few cases	213

5. EFFECTS OF CHANGES IN TAX-EXEMPT STATUS

Just over 300 banks that took part in the survey thought that the average yield of their community's municipals would go up between 200 and 225 basis points if tax exemption were removed, a differential which is about 1 percentage point higher than the actual difference between municipal and corporate bond yields.

If tax exemption were removed and replaced by a Federal guarantee the average yield of municipals would go up, according to respondents, by about 1.50 percentage points, 50 basis points less than if no Federal guarantee were involved and about 25 basis points more than most U.S. Government agency obligations. In the event that a Federal guarantee were added to the tax-exemption feature the yield would be expected to decline by about 25 basis points from the current yield, according to the ABA survey.

A most interesting situation presents itself when the size of banks is taken into consideration in the analysis of the yield differentials in the respondent's community. The spread between the current yield and the yield if tax exemption were removed is reported to be as high as 2.24 percentage points for banks with $100 million assets, 2.16 percentage points for banks with $10–$99 million assets, and 1.79 percentage points for under $10 million asset banks. It is apparent that the tax-exemption feature is thought to be worth more to the larger banks than those in the smaller asset group. This is what might be expected since the normal tax rates of 22 percent is levied on taxable income of $25,000 or less while the surtax rate of 26 percent (or a combined rate of 48 percent) is imposed on taxable income over $25,000. Tax exemption therefore becomes more valuable when a bank nears the $25,000 taxable income level. Being more likely to exceed that level, and being more sophisticated in subjects of taxation, banks with assets of $10 million and over are more sensitive to the tax-exemption feature of municipals and attach a higher premium to it.

Similar differences between large and small banks were reported in the spreads between current yield and the yield that would result if tax exemption were removed and replaced by a Federal guarantee. In the event that Federal guarantee were added to the tax-exemption feature, the current yield would drop by 28 basis points, according to banks in the $100 million and over asset group, 18 basis points for banks with assets of $10 to $99 million, and 9 basis points for the small banks. The

smallest banks believed the effect of tax-exemption removal would be less and the gain from Federal guarantees would also be less, compared with the large banks' assessment of these changes.

TABLE 12

	Bank's assets			
	$100,000,000 and over	$10,000,000 to $99,000,000	Under $10,000,000	Total
What would happen to differential spread (in percentage points) between current yield of your community's municipals and the yield if—				
Tax exemption is removed	+2.24	+2.16	+1.80	+2.19
Tax exemption is removed and replaced by a Federal guarantee	+1.66	+1.76	+1.23	+1.64
Tax exemption retained and Federal guarantee added	−.28	−.18	−.09	−.25

An analysis of yield differentials based on the rating of the municipals issued by the respondent's community also warrant comment. The spread between the current yield and the yield if tax exemption were removed is 2.26 percentage points for Aaa municipals, 2.15 and 2.14 percentage points for Aa and A municipals respectively, and 2.38 percentage points for Baa. Thus, it may be concluded that lower rated municipals apparently would lose most from removal of the tax exemption feature.

6. EFFECTS OF FEDERAL GUARANTEES

On the subject of Federal guarantee, if the current yield of the municipals issued by the respondent's community is compared with either the yield if tax exemption were removed and replaced by a Federal guarantee, or the yield if Federal guarantee were added to tax exemption, we find that a guarantee by the Federal Government is considered more important to communities with lower rated issues; i.e., the yields would rise less (if no tax exemption) or decline more (if added to tax exemption). Specifically, if tax exemption were removed and replaced by a Federal guarantee, respondents thought there would be an increase in yield of 1.89 percentage points for Aaa issues but only a 1.44 percentage point increase for Baa issues. If a Federal guarantee were added to the tax exemption feature the yield would go down only 11 basis points for Aaa municipals but would decrease 42 basis points for Baa issues.

TABLE 13

	Ratings (municipals of respondent's community)					
	Aaa	Aa	A	Baa	Ba and lower [1]	Total
What would happen to differential spread (in percentage points) between current yield of your community's municipals and the yield if—						
Tax exemption is removed	+2.26	+2.15	+2.14	+2.38	----------	+2.19
Tax exemption is removed and replaced by a Federal guarantee	+1.89	+1.73	+1.57	+1.44	(1)	+1.64
Tax exemption retained and Federal guarantee added	−0.11	−0.22	−0.28	−0.42	----------	−0.25

[1] Too few cases.

7. MAKING MUNICIPALS MORE ATTRACTIVE

A further question was asked in the survey regarding the alternatives, if any, that might increase the attractiveness of municipal securities if tax exemption were removed. Although it was made quite clear by the respondents that nothing could adequately replace the attractiveness of tax exemption, and that if the exemption feature were removed there would be an increase in yields, numerous suggestions were put forward that (according to the respondents) would partially offset removal of tax exemption. A Federal guarantee of municipals was by far the most often quoted suggestion with a State guarantee of the issues of political subdivisions following close behind.

Among the ideas put forward was one suggesting that the Federal Reserve System liberalize its regulations in order to permit banks to use municipal bonds to secure advances without the payment of a penalty discount rate. Other suggestions related to improvement in the municipal secondary market and the setting up of sinking funds. Some other recommendations that were mentioned include—

(*a*) Codification of the laws governing the issuance of municipal securities so that it will be easier to determine both the legality and the financial status of such issues.

(*b*) Uniform municipal accounting and financing reporting in order to have better standards for comparing various issues.

(*c*) Elimination of advance refundings which have been largely motivated by opportunities arising from the ability to obtain higher yields by short-term investment of the proceeds from the sale of such securities.

(*d*) Financing of the neediest State and local governments by some type of specialized Federal program.

(*e*) Use of municipal securities held by commercial banks to meet part of their reserve requirements.

C. Present and Future Municipal Bond Holdings

The past 20 years show clear evidence of a continuous municipal bond buildup by commercial banks, with such holdings rising from $3.5 billion in 1944 to $33.6 billion in 1964, an increase of nearly 10 times. Viewed as a percentage of total loans and investments, State and local government securities of commercial banks have gone from 3.3 percent in 1944 to 12.1 percent in 1964. Table 14 shows the growth of both loans and investments and State and local government securities of commercial banks during the 1944–64 period. Table 15 indicates that over the 1944–64 period, total loans and investments increased by $172.6 billion, or 162.8 percent, while municipal securities climbed $30.1 billion, or 860 percent. During the 1944–54 period a $50.8 billion increase for total loans and investments, or 47.9 percent, was accompanied by a $9.1 billion, or 260 percent increase, for municipals. Taking the 1954–64 period only we see that loans and investments increased by $121.8 billion, or 77.7 percent, while municipals rose $21 billion, or 166.6 percent.

TABLE 14.—*Municipal securities of all commercial banks*

Year (Dec. 31)	Loans and investments	Municipals	Municipals as a proportion of loans and investments	Percentage of total municipal debt outstanding
	Billions	*Billions*	*Percent*	*Percent*
1964	$278.6	$33.6	12.1	36.8
1963	255.2	29.8	11.7	34.7
1962	236.7	24.8	10.5	32.0
1961	216.1	20.4	9.4	28.5
1960	200.1	17.6	8.8	26.5
1959	190.9	17.0	8.9	27.5
1958	186.3	16.6	8.9	29.3
1957	171.1	14.0	8.2	26.9
1956	166.1	13.0	7.8	27.3
1955	161.7	12.8	7.9	30.0
1954	156.8	12.6	8.0	33.7
1953	146.4	10.9	7.4	33.8
1952	142.4	10.2	7.2	34.9
1951	133.3	9.2	6.9	34.5
1950	127.4	8.2	6.4	34.5
1949	120.9	6.6	5.5	32.2
1948	115.0	5.7	5.0	31.0
1947	117.0	5.3	4.5	31.9
1946	114.7	4.4	3.8	28.0
1945	124.7	4.0	3.2	24.4
1944	106.0	3.5	3.3	20.2

Source: Federal Deposit Insurance Corporation.

TABLE 15.—*Increases of municipal securities of all commercial banks*

[Dollar amounts in billions]

Item	Increase, 1944–64			Increase, 1944–54			Increase, 1954–64			Increase, 1960–64		
	Amount	Percent	Annual rate	Amount	Percent	Annual rate	Amount	Percent	Annual rate	Amount	Percent	Annual rate
Loans and investments	$172.6	162.8	4.95	$50.8	47.9	3.99	$121.8	77.7	5.91	$78.5	39.2	8.63
State and local government securities	30.1	860.0	11.97	9.1	260.0	13.66	21.0	166.6	10.30	16.0	90.9	17.55

As indicated earlier, purchases of municipal bonds by commercial banks are mainly geared to conditions in the money market and to monetary policies that subsequently evolve. When money was easy and monetary policy was expansive, commercial banks were heavy buyers of tax exempts; this happened in 1947, 1950, 1954, 1958 and the the 1961–64 period. On the contrary when money was tight and monetary policy became firm municipal bond buying by banks turned sluggish, as was the case during 1952–53, 1955–56, and 1959–60.

Changes since 1962 in the maximum rates payable on time and savings deposits under provisions of regulation Q and the consequent increases in bank funds also played a part in influencing the buying policies of banks' municipal bond departments. As a result of an inflow of high cost deposits, commercial banks were under pressure to examine all avenues of asset acquisition, and investment in tax-exempt bonds offered one possible way of preserving or improving after tax income in spite of higher costs. Specifically the annual rate of increase of municipal bond holdings averaged 17.55 percent during 1960–64 as against 11.97 percent during the 1944–64 period.

All indications are that over the next 10 years, commercial banks will continue to be a major force in the municipal market. On the basis

of their performance over the past two decades, table 16 presents two sets of extrapolations. On the assumption that the basic economic indicators over the 1966–75 decade will show a slightly less buoyancy than that experienced between 1961–65, but will outperform the post-war 1944–54 period, it would be reasonable to expect that by 1975 the total loans and investments of commercial banks will range between $475 and $525 billion while their State and local government bond holdings will reach $100 to $115 billion. These projections are shown on chart A.

CHART A. MUNICIPALS AS A PROMOTION OF LOANS AND INVESTMENTS

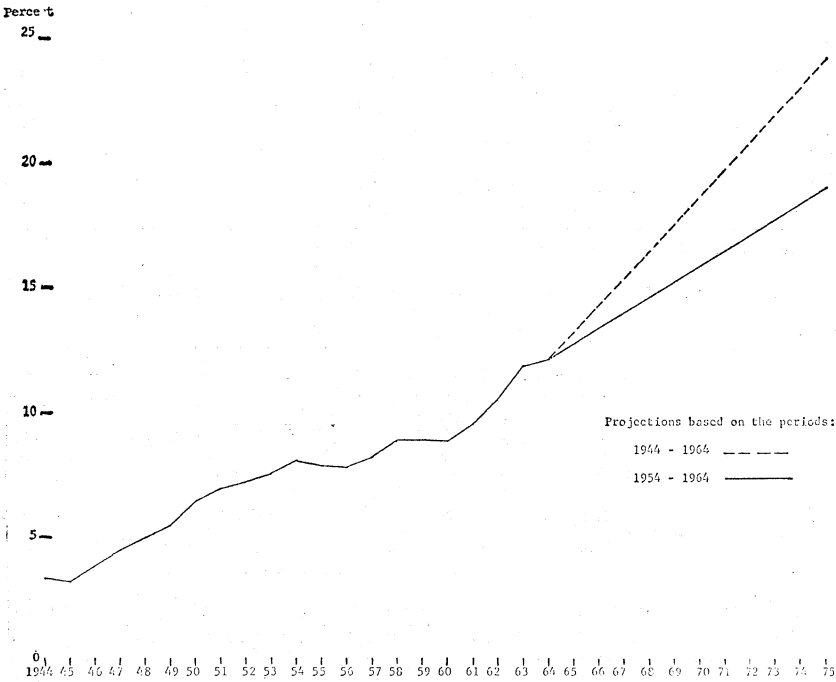

TABLE 16.—*Projections of loans and investments and State and local securities of commercial banks, 1975*

On the basis of performance in—	Loans and investments	State and local securities	Municipals as a proportion of loans and investments
	Billions	*Billions*	*Percent*
1944–64	$475	$115	24.2
1954–64	525	100	19.0

CHAPTER 22

Mutual Savings Banks*

INTRODUCTION: BASIC INDUSTRY FUNCTIONS AND CHARACTERISTICS

Mutual savings banks are the oldest specialized thrift institutions in the Nation. Throughout their 150-year history, savings banks have been devoted to the performance of two basic economic functions: (1) stimulating and safeguarding the savings of individuals and (2) channeling these savings into productive investments.

Currently, there are 506 mutual savings banks in 18 of the 50 States, in the Commonwealth of Puerto Rico and in the Virgin Islands. The three leading savings bank States are New York, Massachusetts, and Connecticut, where nearly three-fourths of all mutual savings banks, with over four-fifths of the industry's resources, are located (table 1).

TABLE 1.—*Number and assets of mutual savings banks, by State, May 31, 1966, and Dec. 31, 1964*

[In millions of dollars]

State	Number of banks		Amounts of assets	
	May 31, 1966	Dec. 31, 1964	May 31, 1966	Dec. 31, 1964
Massachusetts	179	179	9,714	8,859
New York	126	125	34,277	31,456
Connecticut	70	71	4,179	3,841
Maine	32	32	716	640
New Hampshire	32	32	982	882
New Jersey	21	21	2,304	2,049
Pennsylvania	7	7	3,522	3,211
Rhode Island	7	7	906	811
Maryland	6	6	810	744
Vermont	6	6	223	195
Indiana	4	4	86	74
Washington	4	4	695	616
Wisconsin	3	4	34	33
Delaware	2	2	272	236
Alaska	2	1	23	13
Minnesota	1	1	511	476
Ohio	1	2	3	32
Oregon	1	1	73	69
Virgin Islands	1	1	1	(1)
Puerto Rico	1		1	
Total	506	506	59,330	54,238

[1] Less than $500,000.

Source: National Association of Mutual Savings Banks.

The confinement of mutual savings banks largely to the New England and Middle Atlantic States of the country is principally due

*Prepared by Research Department, National Association of Mutual Savings Banks, with minor editing by committee staff. A preliminary draft was reviewed by the association's committee on corporate securities and portfolio management. Tabulations on the composition of savings bank municipal bond holdings were provided by the Federal Deposit Insurance Corporation.

to legal restrictions which prevent geographic extension of the industry. In contrast with all other deposit-type institutions, which may be either State or federally chartered, mutual savings banks are exclusively State-chartered institutions. Within their present geographic limitations, savings banks have achieved expansion through the establishment of branches and currently operate approximately 1,200 individual offices.

Savings deposits, held primarily by individual savers in more than 22 million accounts, are the basic source of funds for mutual savings banks (table 2). In addition to regular savings accounts, which represent 99 percent of the industry's total deposit liabilities, savings banks offer school savings, vacation and Christmas clubs, payroll and other special-purpose accounts. Deposits in nearly all savings banks are insured, in most cases by the Federal Deposit Insurance Corporation, and in the case of Massachusetts savings banks, by the Mutual Savings Central Fund, Inc. Savings banks in three States—Massachusetts, New York, and Connecticut—also offer low-cost savings bank life insurance.

As mutual institutions, savings banks have no capital stock or stockholders. Protection for depositors is provided by the reserves accumulated gradually through the retention of a portion of savings bank earnings. Except for amounts added to these protective reserves, net earnings of savings banks are distributed entirely as interest to depositors.

TABLE 2.—*Assets and liabilities of mutual savings banks—Selected yearend dates*

[Dollar amounts in millions]

End of year	Loans		Securities			Cash	Other assets	Total assets, total liabilities, and general reserve accounts	Deposits	Other liabilities	General reserve accounts
	Mortgage	Other	U.S. Government	State and local government	Corporate and other						
1945	$4,202	$62	$10,650	$84	$1,116	$606	$243	$16,962	$15,332	$48	$1,582
1950	8,039	127	10,877	96	2,260	792	255	22,446	20,025	137	2,283
1955	17,279	211	8,463	646	3,364	966	416	31,346	28,182	310	2,854
1960	26,702	416	6,243	672	5,076	874	589	40,571	36,343	678	3,550
1964	40,328	739	5,791	391	5,099	1,004	886	54,238	48,849	989	4,400
1965	44,433	862	5,485	320	5,170	1,017	944	58,232	52,443	1,124	4,665
	Percentage distribution										
1945	24.8	0.4	62.8	0.5	6.6	3.6	1.4	100.0	90.4	0.3	9.3
1950	35.8	.6	48.5	.4	10.1	3.5	1.1	100.0	89.2	.6	10.2
1955	55.1	.7	27.0	2.1	10.7	3.1	1.3	100.0	89.9	1.0	9.1
1960	65.8	1.0	15.4	1.7	12.5	2.2	1.5	100.0	89.6	1.7	8.8
1964	74.4	1.4	10.7	.7	9.4	1.9	1.6	100.0	90.1	1.8	8.1
1965	76.3	1.5	9.4	.5	8.9	1.7	1.6	100.0	90.1	1.9	8.0

Source: National Association of Mutual Savings Banks.

In productively investing funds entrusted to them by depositors, saving banks have sought to earn maximum returns for savers consistent with safety and liquidity. Mortgage loans have been by far the prime investment outlet for savings banks during the postwar period, reflecting, in part, their basic mortgage orientation, burgeoning postwar housing demands, and the attractiveness of mortgage yields relative to those available on alternative investment outlets. Also of profound importance have been institutional and legal changes, notably the widespread adoption of amortized mortgage loans, introduction of Federal mortgage insurance and guarantee programs and State legislation enacted in the early 1950's permitting savings banks to acquire mortgage loans on properties located beyond their own State boundaries.

Of the total $58 billion of assets held by savings banks at the end of 1965, mortgages represented 76 percent, U.S. Government securities, 9 percent, and corporate and State and local government securities combined, 9 percent (table 2). The $44 billion of mortgage loans held by savings banks included approximately $13 billion of loans on properties located in 32 nonsavings bank States.

MUNICIPAL BOND ROLE IN SAVINGS BANK INVESTMENTS [1]

Largely reflecting massive postwar mortgage lending by savings banks, State and local government securities currently occupy a secondary position in the industry's asset structure.[2] The $320 million of municipal obligations held by the Nation's savings banks at the end of 1965 represented about one-half of 1 percent of total industry assets. This contrasts with the much larger role of municipal securities in savings bank investments during an earlier stage in the industry's history. At the turn of the 20th century, State and local government issues represented one-fourth, and as late as 1930 nearly one-tenth, of aggregate savings bank resources.

The earlier prominence of State and local obligations in savings bank portfolios reflected, in part, legal restrictions on alternative private investments in major savings bank States. Gradual liberalization of these restrictions over the years has permitted savings bank participation in a broader range of investment outlets. Reduction in the industry's municipal bond role, particularly since 1930, is also due to shifts in investment flows to capital market sectors where expansion in credit demands was greater. Thus, during the depression decade and the World War II period, savings bank investment activity was confined largely to acquisitions of U.S. Government securities. And during the postwar period—when the increase in the total mortgage debt substantially exceeded the combined growth of Federal, State, and local government, and corporate long-term securities—savings bank investment flows have been dominated by mortgage lending to a degree unprecedented in the industry's earlier history. Indeed, since the end of World War II, savings banks have channeled 96 percent of their investible funds into mortgage markets.

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[1] The role of savings banks in financing community facilities operated by private, nonprofit organizations is discussed on p. 16.

[2] For ease of presentation, the terms "municipal bonds" and "State and local government bonds" are used interchangeably in this study.

Another basic factor, of course, was the transformation of the municipal bond market stemming from the introduction of Federal income taxation in 1913 and the exemption of municipal bond interest from taxation. Mutual savings banks, exempt from Federal income taxation prior to 1951, derived no benefit from the tax features of State and local government obligations. Municipal securities, in effect, were bid away by upper bracket taxpayers and other investors who were increasingly attracted by their after-tax yields.

While State and local government securities have not been a major investment outlet for the industry during the poswar period, savings banks have contributed significantly to the expansion and improvement of community facilities in the areas where they are located. In addition to their municipal bond investments, savings banks have been leading participants in community-oriented mortgage lending programs. Although confined to only 18 States, they rank either first or second, nationwide, among institutional holders of FHA-insured mortgages under the following major programs: (1) regular owner-occupied housing; (2) rental housing; (3) urban home redevelopment and relocation; (4) cooperative housing; and (5) servicemen's housing. Savings banks also have channeled a substantial volume of mortgage funds into such "special-purpose" FHA programs as housing for the elderly and nursing homes and into various types of community facilities operated by private, nonprofit organizations, including churches and synagogues, hospitals, schools, and fraternal buildings (see page 16). Thus, within the investment area savings banks emphasize most strongly, they have provided financing for a variety of facilities essential to sound community growth.

POSTWAR MUNICIPAL BOND FLOWS

During the period since the end of World War II, savings banks have channeled a varying volume of funds into State and local government security markets (table 3). Annual net additions to holdings expanded irregularly during the late 1940's accompanying the postwar revival of municipal borrowing, and accelerated after legislation enacted in 1951 extended Federal corporate income taxation to mutual savings banks. In the mid and late 1950's, however, net acquisitions of municipal obligations slackened, and beginning in 1959, gave way to modest, almost continuous net reductions in holdings. Over the 1946–65 period as a whole, savings banks channeled $236 million into State and local government security markets. In comparison, the industry's mortgage holdings increased by $40.2 billion, corporate security portfolios rose by $4.1 billion, while U.S. Government obligations declined by $5.2 billion.

TABLE 3.—*Net flow of investment funds from mutual savings banks, 1946–65*

[In millions of dollars]

Year	Total	Mortgage loans	Securities			Other assets	Cash
			U.S. Government	State and local governments	Corporate and other		
1946	1,700	249	1,095	—26	199	—27	209
1947	1,062	405	239	—1	324	30	66
1948	758	727	—475	16	471	22	—3
1949	1,021	896	—64	20	165	9	—5
1950	943	1,560	—567	3	—15	43	—80
1951	1,058	1,708	—1,000	44	230	35	91
1952	1,797	1,485	—384	195	435	32	35
1953	1,898	1,561	—252	92	386	46	65
1954	2,151	2,052	—436	181	237	73	43
1955	1,996	2,435	—291	38	—184	59	—60
1956	2,035	2,280	—481	30	184	69	—46
1957	1,835	1,412	—400	9	796	47	—30
1958	2,569	2,067	—313	44	627	112	31
1959	1,481	1,870	—337	—7	—83	107	—69
1960	1,626	1,933	—628	—49	232	94	44
1961	2,257	2,199	—83	5	—37	109	63
1962	3,292	3,155	—53	—150	137	183	20
1963	3,582	3,951	—244	—87	—103	109	—44
1964	4,535	4,322	—72	—49	25	219	91
1965	3,994	4,105	—306	—72	72	181	14

NOTE.—Data represent net changes in asset classification shown.

Source: National Association of Mutual Savings Banks.

TYPES OF MUNICIPAL OBLIGATIONS

While data are not available on the composition of savings bank acquisitions according to type of obligation, some observers have suggested that savings banks favored revenue bonds during the early postwar period and were a significant factor in this sector of the municipal bond market.[3] Partial support for this conclusion—at least as far as large institutions are concerned—is provided by inquiries at a number of savings banks whose combined municipal bond portfolios represent a significant share of total industry holdings.

The relative prominence of revenue obligations in the municipal bond holdings of some large savings banks is probably due to the higher yields characteristic of revenue bonds, as compared with general obligations, during much of the postwar period. Furthermore, unlike general obligations, which are supported by the taxing power of the State or local government, revenue bonds depend for their security on the income derived from highways, bridges, or other public facilities operated by the issuing authorities. Appraisal of revenue obligations requires techniques of investment analysis broadly similar to those applicable to corporate obligations. Revenue obligations, therefore, may be particularly suitable for financial institutions having large corporate bond portfolios and full-time security investment specialists.

PATTERN OF MUNICIPAL BOND HOLDINGS

Within their municipal bond portfolios, mutual savings banks have concentrated mainly on long-term issues, in keeping with their overall long-term investment orientation. A major share of their holdings

[3] Roland I. Robinson, "Postwar Market for State and Local Government Securities" (Princeton, N.J.: Princeton University Press, 1960), pp. 93–95, 208 and 209.

consists of issues that enjoy high quality ratings. Savings banks also hold unrated obligations, which are issued by communities with debt smaller than the minimum amount established for rating purposes by the various investment advisory services. With respect to the location of the borrower, savings banks have acquired bonds issued both by their own, as well as by other, States and communities.

These conclusions are based on data relating to over 300 mutual savings banks insured by the Federal Deposit Insurance Corporation, which account for close to nine-tenths of the total resources of all FDIC-insured savings banks and three-fourths of the aggregate resources of the entire savings bank industry. These data, which were compiled by FDIC, do not include the bulk of the savings banks in Massachusetts, whose combined portfolios of municipal obligations represent about 6 percent of the total holdings of the entire savings bank industry.[4]

Maturity structure.—The long-term nature of savings bank holdings of State and local government securities is clearly evident in table 4. Obligations maturing in more than 20 years represented about one-half of the "investment" municipals held by FDIC-insured savings banks in 1964 (see note to table 4). Bonds with maturities ranging from 10 to 20 years accounted for another three-tenths of total holdings. Long maturities were especially prominent, moreover, for banks holding relatively large dollar amounts of municipal securities.

TABLE 4.—*Percentage composition of municipal bond holdings of FDIC-insured mutual savings banks, by maturity, and size of holdings, 1964*

[Percent]

Maturity (years)	Total	Size of municipal bond holdings (thousand dollars)				
		Under 100	100 to 200	200 to 500	500 to 1,000	1,000 and over
Under 1	0.9	11.5	3.6	4.3	2.1	.5
1 to 5	5.8	21.5	22.2	17.3	11.2	4.5
5 to 10	11.8	20.8	31.3	16.2	15.5	11.0
10 to 20	30.1	41.0	30.4	26.0	35.5	29.8
20 and over	51.4	5.2	12.5	36.2	35.7	54.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of banks	302	148	22	41	26	65

NOTE.—Data are based on the par value of holdings of "investment" municipal bonds, essentially bonds rated Aaa through Baa (Moody's) and high-quality unrated obligations. Figures are as of various dates in 1964.

Source: Federal Deposit Insurance Corporation.

Quality ratings.—About one-half of the municipal bonds held by FDIC-insured savings banks in 1964 were rated in the top three quality grades (Aaa, Aa and A according to Moody's classification). Bonds in other quality grades, together with unrated issues, represented the remainder. While savings banks generally favor quality investments, they have participated in individual cases in local issues that may not have a broad market. In view of the small size of their overall munici-

[4] As noted earlier, all savings banks in Massachusetts are insured by Massachusetts Savings Central Fund, Inc. Eight savings banks in the State, representing about one-fifth of the resources of all Massachusetts savings banks, are insured by FDIC as well, and are included in the FDIC data cited above.

pal portfolios, acquisitions of such securities involves relatively little risk for the banks.

Location of borrower.—Savings banks holdings of municipal bonds are about evenly divided between local issues and issues of States other than those in which the banks are located. FDIC-insured savings banks held $154 million of municipal bonds issued by their own States and political subdivisions at the end of 1965. Holdings of obligations of other States and political subdivisions were almost equally large, totaling $153 million.

PORTFOLIO CONSIDERATIONS

In allocating investible funds among alternative outlets, savings banks have utilized their diversified investment powers flexibly, adjusting mortgage and security acquisitions in response to changing capital market demands and shifting yield relationships. While expanding their mortgage holdings steadily during the postwar period, savings banks at times have also increased their holdings of corporate and municipal securities, when bond investments were especially attractive and when savings inflows temporarily exceeded the supply of quality mortgage loans. A basic limitation on savings bank portfolio activity, of course, is the availability of investible funds, which, in turn, depends heavily on savings bank earning power and deposit interest rates and on the industry's competitive position in savings markets.

In a broad sense, therefore, all eligible investment outlets, including municipal bonds, compete for the supply of funds available to savings banks. In the postwar capital market setting, however, State and local government obligations clearly have not been closely and directly competitive with mortgages, as is amply demonstrated by the sharp contrast between the industry's large, steady mortgage acquisitions, and its modest, intermittent municipal bond purchases.

Further indication of the role of municipal obligations in savings bank investments is provided by table 5, which shows variations among the main savings bank States in the relative importance of municipal bonds in total assets. Relative to total assets, municipal securities are prominent in a number of States where savings banks have a proportionally higher investment in non-Federal securities (corporate bonds, corporate stocks, and State and local government obligations);[5] that is, in States where savings banks appear to have a greater orientation toward security investments generally. In some States, furthermore, investments in municipals are inversely associated with the relative size of holdings of corporate stocks. This suggests that for some banks tax-sheltered equity investments are alternatives to fully tax-exempt municipal bonds.

[5] U.S. Government obligations are excluded from this comparison, since, unlike corporate and municipal securities, they are held primarily for liquidity purposes.

TABLE 5.—*State and local government securities held by mutual savings banks, selected States, Dec. 31, 1965*

	State and local government securities		Non-Federal securities as percent of total assets	Corporate stock as percent of total assets
	Amount	Percent of total assets		
New York	$158,000,000	0.5	8.1	1.9
Massachusetts	33,000,000	.3	5.7	3.4
Connecticut	11,000,000	.3	12.9	5.1
Pennsylvania	47,000,000	1.4	22.0	1.4
New Jersey	25,000,000	1.1	13.3	1.7
New Hampshire	6,000,000	.6	9.1	5.1
Rhode Island	2,000,000	.3	12.8	6.2
Maryland	11,000,000	1.4	11.7	(1)
Maine	8,000,000	1.2	14.7	4.5
Vermont	(1)	.1	2.0	.8
All other States	18,000,000	1.1	14.0	2.3
Total	320,000,000	.5	9.4	2.4

[1] Less than $500,000 or 0.05 percent.

NOTE.—Non-Federal securities include corporate bonds, corporate stocks, and State and local government obligations.

Source: National Association of Mutual Savings Banks.

In keeping with their broad investment flexibility, savings banks generally have not followed fixed guidelines with respect to the proportion of assets invested in municipal bonds. Savings banks are mindful, of course, of the proportion of their resources invested in municipals, as is true of every other major type of asset. But this reflects primarily the basic concern of management that the overall composition of assets contribute, to the full extent possible, to realization of the basic investment of goals of safety, liquidity, and strong earning power. Ratios of municipal obligations to total assets or deposits, while hardly unimportant, do not play a role in management decisions comparable, for example, to the mortgage-asset ratio or the relationship of short-term Treasury obligations to anticipated liquidity needs.

The flexibility of savings bank portfolio activity is reflected in the changing position of State and local government securities in the industry's asset structure during the postwar period (table 6). From the low level of $57 million and 0.29 percent of total assets at the end of 1947, savings bank municipal bond holdings expanded gradually throughout the late 1940's and early 1950's, both in dollar amounts and relative to total assets. As noted earlier, this rise accompanied the increase in State and local government spending and borrowing following the World War II period of restrictions on materials and manpower, and was accelerated by legislation enacted in 1951 which made savings banks subject to Federal income taxation. Savings banks simultaneously expanded their holdings of mortgage loans and corporate securities, shifting funds from war-swollen U.S. Government securities portfolios into all major non-Federal investment outlets.

TABLE 6.—*State and local government securities held by mutual savings banks, yearend*

Year	Amount	Percent of total assets	Percent of total securities
1945	$84, 000, 000	0.50	0.71
1946	58, 000, 000	.31	.42
1947	57, 000, 000	.29	.42
1948	73, 000, 000	.36	.56
1949	93, 000, 000	.43	.67
1950	96, 000, 000	.43	.73
1951	140, 000, 000	.60	1.12
1952	335, 000, 000	1.33	2.64
1953	428, 000, 000	1.57	3.31
1954	608, 000, 000	2.07	4.71
1955	646, 000, 000	2.06	5.18
1956	676, 000, 000	2.02	5.54
1957	685, 000, 000	1.94	5.43
1958	729, 000, 000	1.93	5.62
1959	721, 000, 000	1.85	5.80
1960	672, 000, 000	1.66	5.60
1961	677, 000, 000	1.58	5.70
1962	527, 000, 000	1.14	4.46
1963	440, 000, 000	.89	3.87
1964	391, 000, 000	.72	3.47
1965	320, 000, 000	.55	2.91

Source: National Association of Mutual Savings Banks.

As a proportion of total assets, the industry's municipal bond holdings reached a peak of 2.07 percent at the end of 1954. Further expansion in the dollar amount of holdings kept the percentage of assets invested in municipal obligations near the 2-percent level until the end of 1958. Between 1958 and 1965, however, savings bank municipal security holdings declined significantly, from $729 to $320 million, and from 1.93 to 0.55 percent of total assets.

The first phase of the recent decline accompanied the sharp reduction in savings bank deposit gains—from $2.3 billion in 1958 to only $1.2 billion in the 1959 period of tight money and high interest rates—as the flow of individuals' saving shifted sharply from savings accounts to direct capital market investments, most notably the Treasury's "magic fives." Savings banks also reduced holdings of corporate bonds and stocks, as well as U.S. Government securities (see table 3), to supplement shrinking deposit inflows and provide funds for meeting mortgage commitments. Liquidation of municipals continued in 1960, as deposit growth showed only modest improvement, but with the stronger upturn in deposit gains in 1961, to an aggregate volume of $1.9 billion, reduction of municipal security holdings was temporarily halted.

During the 1962–65 period, by contrast, the decline in the industry's holdings of State and local government security holdings steepened despite strong deposit gains, as savings bank investment activity was dominated by mortgage expansion to an even greater degree than in earlier postwar years. Savings bank earnings and deposit interest rates were under increasing pressure as a result of escalating commercial bank competition in savings markets. With mortgage yields continuing attractive relative to alternative investments, savings banks expanded their mortgage holdings by $15.5 billion, 10 percent more than their total deposit growth, over the course of the 4-year period. At the same time, they reduced their holdings of all major types of debt securities—U.S. Government, corporate, and municipal—while continuing to expand corporate stock portfolios moderately.

Within debt security portfolios, moreover, municipal bond holdings showed the sharpest decline during the 1962–65 period—52 percent, compared with 11 percent for U.S. Government obligations and 10 percent for corporate bonds. The steeper decline in the industry's State and local government bond holdings stems largely from the diminished attractiveness of municipal bond yields relative to those on Treasury and corporate bonds. As shown in table 7, the yield advantage (before tax) of U.S. Government and corporate bonds over State and local government issues (Moody's Aaa) widened significantly during the 1960's. During most of the 1962–65 period, municipal bond yields were under strong downward pressure from accelerated purchases by commercial banks, which sought profitable investment outlets for their increased saving inflows.

TABLE 7.—*Selected bond yield spreads, 1946–65*

[Percent per annum]

Year	U.S. Government and municipal bonds	Corporate and municipal bonds	Year	U.S. Government and municipal bonds	Corporate and municipal bonds
1945	1.30	1.55	1956	0.57	0.85
1946	1.09	1.43	1957	.37	.79
1947	.80	1.16	1958	.51	.87
1948	.57	.95	1959	.72	1.03
1949	.66	1.01	1960	.75	1.15
1950	.76	1.06	1961	.63	1.08
1951	.96	1.25	1962	.92	1.30
1952	.88	1.16	1963	.94	1.20
1953	.63	.89	1964	1.06	1.37
1954	.51	.86	1965	1.05	1.57
1955	.66	.88			

NOTE.—Data refer to excess of U.S. Government and corporate bonds over yields on State and local government bonds, based on monthly average interest rate figures. Corporate and municipal bonds are for high-grade issues (Moody's Aaa).

RELATIVE ATTRACTIVENESS OF MUNICIPAL BOND YIELDS

While shifting yield relationships have clearly influenced savings bank municipal bond activity, their effect has hardly been static, and at times has been offset by other basic factors including: changing mortgage lending opportunities, variations in deposit flows, and competitive forces in savings markets. The specific impact of tax provisions is itself complex. The period from 1951 to 1962 witnessed two major changes in the tax treatment of mutual savings banks, both of which were preceded by uncertainty regarding the nature of the impending changes, and were succeeded by periods of adaptation to the new tax rules. Moreover, tax legislation enacted in 1962 provided for alternative bad debt reserve provisions for mutual savings banks and savings and loan associations which have different implications for the relative attractiveness of fully taxable and tax-exempt securities.

From all this, it should be apparent that a meaningful answer to the question: "At what interest rate levels are municipal securities attractive to savings banks?" requires detailed assumptions regarding a wide variety of capital market forces and income tax considerations. Under postwar conditions, municipal bond yields clearly have not been highly attractive to savings banks. Assuming no radical departures from these conditions, municipal bond yields would have to rise substantially relative to other interest rates to attract a significant volume of savings bank acquisitions.

PROPOSALS FOR INCREASING THE ATTRACTIVENESS OF MUNICIPAL OBLIGATIONS

Various proposals have been advanced to improve the attractiveness of State and local government obligations. Greater uniformity of accounting procedures and wider availability of pertinent information regarding the finances of governmental units would ease the task of making informed judgments regarding the credit standing of individual issues. This would be particularly important for the smaller community whose financial position is less well known to potential investors.

As discussed later in this paper, extension of a Federal guarantee to State and local government obligations—as proposed by some observers—is another possible means of improving the attractiveness of State and local government obligations. State underwriting of the obligations of political subdivisions would have a broadly similar effect.

A basic change in the financial position of States and municipalities, and hence in their ability to attract capital market funds, would be accomplished by adoption of proposed arrangements for Federal-State "tax sharing." Such arrangements have been proposed as a means of enabling State governments, in effect, to utilize efficient Federal tax collection machinery, while retaining broad discretion as to the uses of the revenue gained.

EFFECT OF FEDERAL GUARANTEES AND REMOVAL OF TAX EXEMPTION

The primary effect of the extension of a Federal guarantee to State and local government securities presumably would be to reduce the risk of investment losses, particularly on lower-quality issues. Such a guarantee would also tend to impart greater uniformity and broader marketability to municipal obligations. At the same time, yields on municipal bonds would tend to decline relative to other investments.

Since lower quality issues would be affected most, a secondary result of a Federal guarantee would be to narrow differences in yields among different municipal issues. Absolute uniformity would not necessarily result, however. The precise nature of the guarantee would be an important factor in determining the relative effect on municipal obligations of different quality grades.

On the other hand, removal of the tax exemption feature would tend to increase interest rates on municipal obligations. If elimination of the tax exemption feature were coupled with a Federal guarantee, the effects on interest rates of the two changes would be offsetting to some degree. In the abstract, it might be expected that yields on the highest grade municipal obligations (maturities and other features being equal) would be broadly comparable to those on obligations of Federal agencies. However, large-scale shifts of securities among investor groups with different tax positions and quality requirements, might cause a departure from the expected yield relationships between municipal obligations and other investments.

PROSPECTIVE MUNICIPAL BOND FLOWS

In projecting the industry's future municipal bond flows, a basic factor to consider is the dominant role of mortgage lending in savings

bank investment activity. As noted earlier, the industry's postwar emphasis on mortgage investments stems from a variety of factors including a fundamental mortgage orientation, strong housing demands, the relative attractiveness of mortgage yields, and basic institutional changes that have contributed to broadened savings bank participation in mortgage markets.

The forces underlying the postwar upsurge in savings bank mortgage lending are not likely to diminish in the future. While mortgage-asset ratios, in some instances, are approaching statutory or policy ceilings, there is still ample room for mortgage expansion by the industry as a whole. Recently enacted legislation permitting savings banks in New York to acquire conventional mortgages beyond their State boundaries, as well as expanding new Federal housing programs, will add impetus to strong growth of the industry's mortgage holdings.

So long as housing demands remain strong and mortgage yields relatively attractive, so long will savings banks invest heavily in mortgages.

Assuming, again, no radical changes in the overall environment, savings bank activity in State and local government security markets is likely to remain limited to a small proportion of the industry's resources. From time to time, savings banks will acquire municipal obligations when yields are especially attractive. The 1962 increase in savings bank taxation should, on balance, result in some increase in savings bank purchases of municipal bonds. And their purchases of local issues will contribute importantly to community improvements in individual instances. Over the next decade, however, it appears reasonable to assume that industry municipal bond flows will continue to average below $100 million annually.

FINANCING PRIVATE, NONPROFIT COMMUNITY FACILITIES

Many types of facilities, essential to sound community growth are operated by private, nonprofit organizations and are financed outside the market for State and local government obligations. Mutual savings banks have participated actively in financing the construction and improvement of such facilities, particularly through their mortgage lending programs.

While no comprehensive, industrywide data are available on savings bank holdings of obligations of private, nonprofit organizations, an indication of the extent of their activities is provided by information on the industry's participation in financing specific types of projects. Financing of cooperative housing projects is one example.

At the end of 1965, the face amount of FHA mortgage loans on management-type cooperative housing held by savings banks totaled $353 million, more than any other type of lender. Indeed, savings banks held over two-fifths of the total face amount of FHA loans on these cooperative housing projects. Nonprofit facilities are also financed under other "special purpose" FHA programs. As noted earlier, savings banks are leading participants in these programs.

Another measure of the industry's activity in financing nonprofit facilities is provided by data on the volume of new mortgage loans closed by New York savings banks on certain types of community

facilities located within the State.[6] During the 1950–63 period, New York savings banks supplied mortgage funds totaling $85 million on 238 hospitals, $68 million on 746 houses of worship, $67 million on 203 schools and libraries, and $14 million on 155 fraternal buildings. Close to 40 percent of the total $234 million volume of loans made during the entire 14-year period were closed during 1960–63, indicating that savings bank community-oriented mortgage lending has been increasing. Fragmentary data for other States also indicate that savings banks have contributed significantly to the financing of local nonprofit community facilities. In the decade ahead, further growth may be expected in the volume of savings bank mortgage flows to nonprofit organizations as needs for essential community facilities continue to expand.

[6] Data are from Savings Banks Association of New York State, "Savings Banks Fact Book," (1966), p. 44.

CHAPTER 23

Life Insurance Companies*

INTRODUCTION

Functions and structure of the life insurance business.—The principal function of life insurance companies is to make available contracts providing protection against financial loss from death; many companies also offer contracts providing protection against the financial risk attendant upon old age or financial loss from certain other contingencies, such as illness and accident. Most life insurance contracts are sold on a level-premium plan of payment (the premium is the same each year) under which the premium in the early years exceeds the cost of insurance and in later years is less than the cost of insurance. Level-premium insurance provides a practical means for an individual to acquire insurance extending to the later years of life. Policies sold under this payment plan will normally generate in their early lifetime premium income in excess of claims and expenses. This excess must be invested in assets which together with their earnings and future premium payments will be sufficient to meet future benefit payments and expenses under the policies. This accumulation of assets reflects a second main function of life insurance companies, that of serving as a source of capital funds for investment.

The accumulated assets of all U.S. life insurance companies totaled about $159 billion at the end of 1965. The growth of these assets over the postwar period is shown in the table below, with the data classified as to the assets held by mutual or by stock life insurance companies. Stock life insurance companies accounted for a growing share of total assets in this period, although their proportion of the total was still less than one-third by the end of 1965.

Total assets of U.S. life insurance companies classified by mutual and stock companies

End of year	Millions of dollars			Percent of total		
	Mutual	Stock	Total	Mutual	Stock	Total
1945	35,091	9,706	44,797	78	22	100
1950	49,551	14,469	64,020	77	23	100
1955	68,061	22,371	90,432	75	25	100
1960	87,533	32,043	119,576	73	27	100
1965	111,968	46,916	158,884	70	30	100

Source: Institute of Life Insurance.

*Prepared by Elizabeth H. Bancala, economic research associate, of the economic research staff of the Life Insurance Association of America, based on responses of a sample group of life insurance companies to a questionnaire of the Joint Economic Committee (coded by committee staff), with minor editing by committee staff.

The increasing share of total assets held by stock companies was in part accounted for by the considerably greater growth in the number of these companies as compared with that of mutual companies, as shown by the following table. As a practical matter, newly formed companies almost invariably begin business as stock companies.

Number of U.S. life insurance companies classified as to mutual or stock companies

End of year	Mutual	Stock	Total
1945	99	374	473
1950	142	507	649
1955	165	942	1,107
1960	155	1,286	1,441
1965	152	1,474	1,626

Source: Institute of Life Insurance.

About 95 percent of the assets of life insurance companies are represented by investments, and the bulk (82 percent of assets at end of 1965) are held in bonds and mortgages of a wide variety of borrowers. Data on the acquisitions and holdings of various classifications of investments are regularly available from industry sources. Investments in State and local government obligations are regularly set out in these aggregative data, but investments in the obligations of private, nonprofit organizations are not identifiable but are included with miscellaneous securities or with mortgage loans. The amount of State and local government bonds held by all life insurance companies at the end of each year, 1946–65, and their proportion of total assets are provided in table 1. As may be seen, municipal bond holdings of the business increased both in absolute amount and as a proportion of assets through 1961. Thereafter, the amount of these bond holdings increased for an additional year but at a lower rate than total assets and then decreased for 3 consecutive years. The holdings of State and local government bonds are widely dispersed among life insurance companies and usually comprise a smaller proportion of assets of large companies than they do of smaller companies. Despite this dispersion, it was thought that sufficiently representative views of the business could be obtained through a survey of a limited number of life insurance companies, selected on the basis of their holding fairly sizable amounts of State and local government obligations. Accordingly, a questionnaire was sent by staff of the Joint Economic Committee in April 1966 to a selected group of companies. Usable and systematic replies were received from 18 companies. These companies accounted for about 48 percent of assets of all U.S. life insurance companies. A summary of responses of this sample group of life insurance companies is provided below.

TABLE 1.—*Acquisitions and holdings of State and local government bonds and holdings as percent of total assets, U.S. life insurance companies*

[Dollar amounts in millions]

Year	State and local government bonds		Total assets	Holdings as percent of assets
	Acquired in year	Held at yearend		
1946	(1)	$614	$48,191	1.3
1947	$61	609	51,743	1.2
1948	322	872	55,512	1.6
1949	224	1,052	59,630	1.8
1950	217	1,152	64,020	1.8
1951	182	1,170	68,278	1.7
1952	175	1,153	73,375	1.6
1953	241	1,298	78,533	1.7
1954	749	1,846	84,486	2.2
1955	349	2,038	90,432	2.3
1956	377	2,273	96,011	2.4
1957	237	2,376	101,309	2.3
1958	409	2,681	107,580	2.5
1959	670	3,200	113,650	2.8
1960	466	3,588	119,576	3.0
1961	506	3,888	126,816	3.1
1962	486	4,026	133,291	3.0
1963	371	3,852	141,121	2.7
1964	365	3,774	149,470	2.5
1965	296	3,530	158,884	2.2

[1] Not available.

Source: Institute of Life Insurance and Life Insurance Association of America.

A. SUPPLY OF CAPITAL FUNDS

The combined totals for 18 life insurance companies are provided in table A–1, which shows the acquisitions in each year 1946–65 of State and local government bonds and of obligations of private, nonprofit organizations. State and local government bonds are further classified as to general obligation bonds, and other bonds (special assessment or limited tax bonds).

1. MUNICIPAL SECURITY ACQUISITIONS

a. Types of bonds

The relative proportions of the three categories of municipal securities are provided in table A–2. These proportions, derived from the dollar figures in table A–1, are averages for the 18 sample life insurance companies. Proportions for individual companies varied considerably from these averages. For example, three of the companies made no acquisitions of general obligation bonds in any of the 20 years; nine others did so in fewer than 10 of the 20 years. Although there were a few companies that acquired general obligation bonds in all but 2 or 3 years, none of these 18 companies acquired general obligation bonds in each year. On the other hand, four companies acquired revenue bonds in each of the 20 years, and only three companies acquired revenue bonds in fewer than 10 of the 20 years.

TABLE A–1.—*Acquisitions of State and local government bonds and of obligations of nonprofit organizations, annually, 1946–65, 18 life insurance companies*

[In thousands of dollars]

Year	State and local government bonds				Obligations of nonprofit organization
	General obligation	Revenue	Other	Total	
1946	7,725	9,310	488	17,523	6,680
1947	6,975	18,752	1,144	26,872	23,940
1948	29,508	119,992	3,057	152,558	21,994
1949	16,338	102,329	612	119,279	28,899
1950	7,365	104,623	1,866	113,855	31,531
1951	3,344	104,711	879	108,934	37,860
1952	3,870	67,671	1,227	72,768	47,370
1953	12,376	64,425	515	77,316	38,831
1954	29,428	303,576	3,663	336,667	38,379
1955	4,438	158,227	873	163,538	55,105
1956	8,885	169,874	3,717	182,476	37,581
1957	7,473	59,957	2,008	69,438	48,377
1958	26,167	90,312	3,073	119,551	53,019
1959	48,751	254,642	1,808	305,210	56,242
1960	40,581	147,047	1,710	189,338	30,402
1961	43,864	131,615	363	175,842	39,961
1962	29,104	197,659	2,904	229,667	44,754
1963	14,048	84,918	3,863	102,829	64,172
1964	42,700	81,028	2,936	126,663	41,007
1965	28,402	42,872	4,876	76,150	128,852
Total, 1946–65	411,343	2,313,541	41,582	2,766,466	874,957

TABLE A–2.—*General obligation, revenue and other bonds as percent of total State and local government bonds acquired, annually, 1946–65, 18 life insurance companies*

Year	State and local government bonds			
	General obligation	Revenue	Other	Total
1946	44.1	53.1	2.8	100
1947	26.0	69.8	4.3	100
1948	19.3	78.7	2.0	100
1949	13.7	85.8	.5	100
1950	6.5	91.9	1.6	100
1951	3.1	96.1	.8	100
1952	5.3	93.0	1.7	100
1953	16.0	83.3	.7	100
1954	8.7	90.2	1.1	100
1955	2.7	96.7	.5	100
1956	4.9	93.1	2.0	100
1957	10.8	86.3	2.9	100
1958	21.9	75.5	2.6	100
1959	16.0	83.4	.6	100
1960	21.4	77.7	.9	100
1961	25.0	74.8	.2	100
1962	12.7	86.1	1.3	100
1963	13.7	82.6	3.8	100
1964	33.7	64.0	2.3	100
1965	37.3	56.3	6.4	100
Total, 1946–65	14.9	83.6	1.5	100

Special assessment or limited tax bonds were much less frequently acquired than general obligation or revenue bonds: only 1 company acquired such bonds in most of the years; among the other 17, 7 showed no acquisitions in most years, and 10 companies made no acquisitions of special assessment or limited tax bonds in any of the 20 years.

The reason usually given for the emphasis on revenue bonds in the acquisitions of most of the sample companies was the higher yields on revenues relative to general obligation bonds. Many of the revenue

bonds issued in this period were very large and, to assure their success, were offered at yields competitive with those of corporate borrowers. One company, however, which at times invested more in general obligation bonds than in revenues, indicated that in times of tight money or of large supplies of general obligation bonds, these yields approached those of revenue bonds and, in addition, many general obligation bonds have the desirable feature of being noncallable.

b. Maturities

Most of the companies indicated 20 to 40 years as the usual maturities purchased, although a few also purchased 10- to 20-year maturities or occasionally shorter. Reasons cited for purchasing longer maturities were similar and recurrent in company replies: the higher yield on longer term maturities; the long-term character of life insurance company liabilities, making long-term investments appropriate; a minimum need for current liquidity.

c. Effect of ratings

Most of the sample companies indicated that the availability and level of bond ratings either have not been an influence or have been only a minor influence in their municipal bond purchases. The companies place greater reliance on the analyses of their own staffs than on the ratings of outside agencies. In addition, many of the acquisitions were revenue bonds for facilities not yet in existence, and these ordinarily were not rated. One company noted it preferred unrated bonds because of the lessened competition. As noted by one or two companies, purchases are influenced to the extent that ratings tend to influence market prices and thus yields; a large proportion of the purchases by these companies were unrated bonds.

All but one of the sample companies stated that they purchase unrated municipals. The one exception indicated that "municipal securities in the four highest ratings are usually purchased." Municipals below fourth grade are much less frequently purchased than municipals unrated by the services.

With respect to quantification of municipals by quality rating or lack of rating, 10 companies replied in terms of acquisitions, 4 gave information in terms of current holdings, and 4 did not have data readily available. Of the 10 companies, 7 indicated that most of their municipals were not rated at the time of acquisition; another indicated that most of its acquisitions were comprised of third and fourth quality and unrated bonds; another company indicated that 60 percent of acquisitions were unrated and below fourth quality bonds; and a 10th company replied that 10–15 percent of acquisitions were unrated and below fourth quality bonds. For the four companies providing data on current portfolio holdings by quality grade, the portfolio distributions are summarized below.

Distribution of municipal bond portfolio of individual companies by rating grade

[In percent]

Rating grade	Company A	Company B	Company C	Company D
1st and 2d	10	5	4	16
3d and 4th	78	39	42	68
Unrated	7	50	49	15
Below 4th	5	6	5	1
Total	100	100	100	100

It may be noted that the assets of companies A and B were in excess of $1 billion and those of companies C and D fell within the range of $100 to $600 million. Although the distributions for companies B and C appear remarkably similar, the companies differed widely in asset size—company B was roughly 10 times larger than company C—and in the proportion of assets held in municipals—the proportion for company C was more than 4 times that of B.

In summary, these 4 companies and the 10 providing rating-grade information on acquisitions have emphasized third and fourth quality and unrated bonds in their municipal investments; these 14 companies accounted for 45 percent of assets of all U.S. life insurance companies at the end of 1965.

d. Use of Proceeds

Replies varied as to the influence on purchases of the intended use of bond proceeds, as indicated by the following quotations of company replies. (The quotations are complete and are not excerpts from the replies to the question.) Although some replies noted preferences, most companies did not indicate prejudices as to the use of bond proceeds. A few, however, as indicated by the quotations, noted their objections to industrial revenue bonds, but one of the sample companies noted that it has been a substantial buyer of these bonds.

1. Use of bond proceeds has not been a determining factor.

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2. Bond purchases are influenced by the intended use of the proceeds only to the extent that the project being financed is economically sound and serves a useful public purpose.

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3. The intended uses of bond proceeds are not a major influence. Economic necessity, credit and yield considerations are major influences. There are no notable preferences or prejudices.

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4. Bond purchase is based upon adequate security and attractive price. An evaluation of the significance of the project to be financed is a basic element of the security. We have no notable municipal bond prejudices or preferences.

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5. We prefer bonds issued to construct essential services: water, sewer, and electric service, schools, etc. However, the security of the bond is considered more important than the purpose for which it is issued.

6. For the most part the intended use of the bond proceeds is not an influencing factor with our bond purchases. It is the community's responsibility to determine the necessity of a particular project. Our analysis is a judgment of the economics of the situation. In practice we have purchased more school, utility, and road bonds than those of other revenue-producing projects; but this result stems not from prejudice against the intended use of the proceeds but rather from an opinion that the willingness to repay or the necessity to use the facilities created is greater.

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7. We have not been particularly influenced by the intended use of the bond proceeds. We have been buyers of all different types of revenue projects, and we have also been a substantial buyer of industrial revenue bonds. I cannot think of any notable preferences or prejudices except to state that it is always easier to analyze a bond secured by the revenue from such services as water and sewer and electricity than it is to analyze a toll road or cigarette tax bond.

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8. The purpose of G. O. bonds is immaterial. Among revenue bonds, we have preferred those financing the most essential services—electricity, water, sewer. But this has not precluded us from buying other types (gas, parking, toll roads, bridges) when we felt yields were commensurate with additional risk.

Our only notable prejudice is industrial revenue bonds, of which we have yet to buy our first. We feel strongly that it is completely improper for the tax-exempt privilege of municipalities to be used for the benefit of taxable corporations.

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9. Municipal bond purchases have been influenced to some degree by the intended use of the bond proceeds. We have generally preferred issues for the purposes of constructive public facilities such as schools, highways, sewer, water, and other public utility purposes, hospitals, irrigation, bridges, public transportation and parking, and university student facilities.

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10. Due consideration has always been given to the intended use of proceeds. [The company favors] most those securities which are issued to finance necessary utility facilities, such as water, sewer, or electric services. Our investment committee tends to be somewhat prejudiced against revenue bonds which are dependent on net revenues generated by estimated traffic flows, such as toll roads, bridges, or tunnels.

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11. Bond purchases are influenced to a considerable extent by the intended uses of the bond proceeds. Direct general obligation or revenue bonds issued for the purpose of providing public services such as schools, utility systems, streets, city halls, etc., are readily acceptable; however, municipal bonds issued for the purpose of constructing plant for private industry (the so-called industrial revenue bonds) are neither desirable nor acceptable, in our opinion.

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12. The intended use of the bond proceeds very definitely influences our decision to purchase. There must exist a need for the facility or project to be financed and it must benefit the community. One type of financing that we have disliked is the industrial revenue.

e. Geographic location

Nearly half of the sample companies indicated that geographical location of the borrower is not, per se, an influence on bond purchases. One company in noting a limiting role of geography stated that—

Bond purchases have not been markedly influenced by geographical location of the borrower, except to avoid overconcentration in a particular area.

Another replied that it purchases bonds in the States in which it operates. About half of the companies indicated that geographical

location is an influence to some extent but, as indicated by the following quotations, the influences are those bearing more directly on offerings and indirectly on purchases:

Bond purchases are influenced by geographical location to the extent that (i) bond yields vary from State to State; (ii) small municipalities (population less than 10,000) should be suburban to a larger metropolitan center to be most attractive; (iii) areas that are depressed economically and vulnerable to loss of population should have a relatively low debt burden or other offsetting factors.

Bond proceeds are influenced by the geographical location of the issuer to the extent that it is desirable to have broad diversification. In addition, the number of emissions from certain geographical areas is low as compared with the number of emissions in other areas; and this tends to determine in part the geographical distribution of bonds purchased.

In the interest of diversification of investments by area a wide geographical distribution of investments is desirable, but it is difficult if not impossible to attain to the extent desired because investments tend to become concentrated in geographical areas where new issue volume of higher yielding acceptable quality bonds is the greatest—generally in the higher economic and population growth areas of the country.

Geographical location is bound to influence purchases. Laws governing the issuance of and various provisions of municipal bonds vary with each State. Additionally, the economies differ from area to area, some being dynamic, others going downhill.

Geographic location is of importance as an investment consideration only as it relates to growth in population and growth in a diversified economic climate.

2. OBLIGATIONS OF PRIVATE NONPROFIT ORGANIZATIONS

a. Types of facilities financed

The replies of 11 of the 18 sample companies are of particular pertinence to this and the following two questions; the remaining 7 companies had made only small or no investments in the obligations of private, nonprofit organizations. These 11 companies accounted for 44 percent of assets of all U.S. life insurance companies. Almost all of the 11 listed hospitals, churches, schools, colleges, nursing, retirement, or rest homes. In addition, faculty housing, college dormitories, parking facilities, office buildings, YM and YWCA's, community buildings, and seminaries were specified by some companies. One company reported a mortgage loan to a civic, nonprofit organization to set up manufacturing plants as a means of stimulating the influx of industries. Several of the companies specified that loans are usually for the purpose of constructing, expanding, or improving facilities.

b. Evidence of loans

Mortgage notes have been the usual instrument for many of the companies, and for a few this has been the only instrument used. One company, however, indicated that the "loans are generally evidenced in the form of bonds." Some companies also indicated first mortgage bonds, direct obligations with a negative pledge clause, promissory notes, or unsecured notes, but any of these forms are listed along with mortgage notes. One company provided a proportionate distribution of acquisitions between "mortgage notes" and "bonds" for each of the

20 years: the proportion for mortgage notes ranged from about 60 to 100 percent during these years, with any balance as bonds. (It may be noted that the terms "bonds" is used broadly to cover evidences of debt other than mortgage notes.)

c. Factors influencing purchase

The general tenor of replies was that (i) availability of bond ratings, (ii) intended use of proceeds, (iii) geographical location of borrower, and (iv) public relations considerations are of little influence with respect to investments. Of the factors listed, intended use of proceeds is of greater influence than the other three items. More important than these are yield, security of debt service, credit standing, and feasibility of the project.

With respect to availability of bond ratings, these bonds generally are not rated. A rating or lack of rating is not an element in the analysis of such loans. The "lack of rating * * *, in fact, may mean the yield on the security will be sufficiently high to be attractive."

As to intended use of proceeds, comments included such statements as that the company would want to be satisfied "that the intended use of proceeds is in the public interest" and "* * * that the proceeds will be applied to the construction of a feasible project which is undertaken in response to a demonstrable need with competent support." Another company answered, "The financial soundness of the borrower governs the purchase far more than the intended use of proceeds but the soundness of the project is, of course, considered."

Geographical location of the borrower is generally of no influence in these purchases. Only one company assessed location as of significant influence. One company commented that geographical location in a nationwide sense is not a determinant except "as the project may be affected by the economics of a particular area (which geographically may mean anything from the immediate neighborhood to a city, county, or more)." Another company noted that geographical location has had some influence on purchases which have been affected to some extent by the location of its mortgage loan offices. One company noted that geographical location is of importance in the case of local service facilities such as hospitals, which should have a sufficient population base, but of less importance in the case of schools where national reputation attracts students from a wide area.

Public relations are for the most part of little or no influence in making these loans. A few companies elaborated as follows:

Any favorable public relations that may accrue to us as lender are important collateral benefits but not a primary consideration.

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* * * our company has recognized the need to lend assistance in financing such local facilities as YM and YWCA's, homes for the aged, nursing homes, and educational facilities. We recognize, too, of course, our obligation to earn a fair and competitive rate of return on behalf of our policyholders.

Public relations considerations have a limited influence on our disposition to seriously investigate a particular loan proposal. However, the final investment decision is objective and competitive in the light of current market conditions and alternative opportunities.

B. Portfolio Considerations

1. PROPORTION OF ASSETS

The pattern of holdings of municipal bonds as a proportion of assets over the 20 years varied considerably among the sample companies. Two of them showed the highest proportions at the end of 1964 or 1965; their lows had been in 1946 for one company and in 1951–52 for the other. On the other hand, 1965 showed the lowest proportions for three of the companies; for these the highs had been in 1948 and 1949 and, in fact, the dollar investment in municipals was less at the end of 1965 than at end-1946 for two of these companies. The year of highest proportionate investment (but not largest dollar amount) for other companies was shown as 1956, 1959, 1961, and 1964. The magnitude of a "high" proportion varied with size of company: about 3.5 percent for a very large company and 35 percent for one of the smaller companies in the group.

Holdings of obligations of nonprofit organizations appeared as a growing, but small, fraction of assets for most of the companies making these investments. (Several of the smaller companies within the sample group had made few, if any, investments in these obligations.)

Some of the sample companies provided only the proportions requested, but 15 also provided the dollar amounts of holdings of municipals and nonprofit organization obligations. These aggregates are provided in table B–1. The 15 companies represented 43 percent of assets of all U.S. life insurance companies but only 33 percent of the holdings of municipals at the end of 1965. From 1946 through 1952, however, these 15 companies had accounted for over 50 percent of municipals held by all life insurance companies (the latter are provided in table 1 of the introduction). Among the 15 companies, 8 also provided the dollar amounts of either invested assets (including cash) or total assets. (Invested assets comprise the bulk of total assets for life insurance companies.) These eight companies accounted for 22 percent of assets and 19 percent of municipal holdings of all life insurance companies at the end of 1965; their data are the only available to provide some indication of the pattern of holdings of obligations of nonprofit organizations relative to assets. (As noted earlier, there are no industry data on such obligations.) As may be seen from table B–1, the holdings of the 15 companies of obligations of nonprofit organizations increased over the period to total $550 million at the end of 1965, or 0.8 percent of total assets (the same proportion as for the 8 companies).

TABLE B–1.—*Holdings of State and local government bonds and of obligations of nonprofit organizations, annually, 1946–65*

	15 companies [1] (millions of dollars)		8 companies [1] (percent of assets)	
	Municipals	Obligations of nonprofit organizations [2]	Municipals	Obligations of nonprofit organizations
End of year—				
1946	329	32	0.9	0.1
1947	343	54	.9	.2
1948	462	71	1.2	.2
1949	550	86	1.4	.2
1950	599	111	1.7	.3
1951	630	143	1.6	.4
1952	580	173	1.5	.4
1953	621	199	1.6	.5
1954	801	221	2.5	.5
1955	885	251	2.6	.5
1956	996	271	3.1	.5
1957	999	298	2.9	.6
1958	1,070	320	3.0	.6
1959	1,261	338	3.2	.6
1960	1,384	344	3.4	.6
1961	1,423	362	3.4	.6
1962	1,502	374	3.3	.6
1963	1,420	430	2.8	.7
1964	1,292	436	2.4	.7
1965	1,163	550	2.0	.8

[1] 15 of the 18 sample companies reported dollar amounts of annual holdings. 8 of these companies also reported dollar amounts of assets for each year. (Most companies provided total invested assets, but a few, noting that there would be little difference, provided total assets.) A compilation by staff of total assets of the 15 companies for the 1 year, 1965, produced ratios of 1.7 percent of assets held in municipal securities and 0.8 percent in obligations of nonprofit organizations.

[2] 1 company could not provide that part of its holdings in the form of mortgage notes prior to 1963.

Among companies showing a decrease in municipal bond holdings relative to assets, a number accounted for the variation in terms of yield relative to other types of investments:

"* * * The proportion of State and municipal bonds to assets has declined in each of the last 5 years because the yield in municipal bonds has been too low compared to other types of investments to attract our investment funds, thus resulting in very few purchases and sales of several million dollars of these bonds during this period.

Since 1962 municipal securities, as well as other securities, have been liquidated to provide funds for investment at greater yields available in other categories of investment.

The proportion of total investment holdings represented by municipal bonds has declined over the period under review because of the relatively low municipal yields vis a vis private placements and mortgages, even on an after-tax basis. Also, because of the widening of yield spread between tax-exempt and taxable bonds, a large proportion of the municipal portfolio has been liquidated and the proceeds reinvested in taxable securities.

The last company quoted above also noted—

The proportion of total loans and investments represented by private nonprofit organization securities, though small, has increased over the period because of increasing investment opportunities at relatively attractive yields.

2. MUNICIPAL SECURITY HOLDINGS

a. Investment guidelines

Most of the companies answered that there were no established guidelines, or, as one of these indicated, no internal guidelines; this

company noted the provisions of its State insurance law that public utility revenue bonds may not exceed 40 percent of admitted assets and that other municipal revenue bonds may not exceed 33⅓ percent of admitted assets. Another company, replying there were no guidelines, added that—

> Purchases of municipal bonds are dictated largely by the availability of such bonds at yields competitive with those obtainable from alternate media of investment after allowance for the tax-exempt feature.

One of the stock companies replied:

> The major guideline that we have followed in purchasing municipal bonds is to be sure that we have a sufficient income from tax-exempt securities so that we are not liable for an income tax under phase III of the life insurance tax law. Above this minimum requirement, we consider municipal securities only in relation to where else we can invest our funds at the particular moment.

(This aspect of phase III income tax is pertinent only to stock life insurance companies.)

Another company answered:

> Yes. These guidelines are based primarily on yields available on municipal securities as compared with yields available on other loans and investments.

b. Competition with mortgages

An apparent divergence in replies to this question arose, at least in part, from whether the question was interpreted as one regarding practical effect or one regarding the alternative investment outlets given consideration. On the one hand, about half of the companies observed that, because of their yield, municipal securities are usually not competitive with mortgage loans (or other securities) on an after-tax basis:

> Municipal securities are not competitive with mortgage loans in portfolio determinations because of yield.

> Municipal securities ordinarily, as noted earlier, are not competitive with other types of investments and in consequence of only very small holdings of such securities there has never been any competition between them and mortgage loans.

> This company's tax position has resulted in mortgage loans being considerably more attractive than municipal securities in recent years.

> They are not usually very competitive for life insurance companies because of unfavorable yield comparisons even after adjustment for the tax treatment differential.

> * * * municipal securities are highly desirable; however, during the past few years the yield from municipal securities has not compared favorably with that available from mortgage loans after tax consideration.

> Competition between these investment alternatives involves rate of return, relative quality, and the administrative and operational expenses involved. In today's market we are of the persuasion that municipal securities are seldom competitive with mortgage loans on an after-tax basis.

Other companies, seeming to reply from the viewpoint of the consideration given competing investment outlets, gave the following answers:

Investment funds are allocated between (1) mortgages and (2) bonds as a whole on the basis of relative interest rates prevailing at the time. Municipal purchases must then be competitive in rate (on an after-tax basis) with other bond acquisitions currently being made.

Municipal securities are strictly competitive with mortgage loans on an equivalent taxed yield basis, with due regard for relative investment quality.

Mortgage loans are completely competitive with municipal securities in portfolio determination. We try to obtain the maximum after-tax yield (risk considered) for our policyholders.

All purchases, whether municipal, corporate, or mortgage loans, are competitive.

Municipal securities are always compared on a taxable equivalent basis with all securities before any investments are made.

Municipal securities are competitive with mortgage loans to the same extent that they would be competitive with any other investment we might make. We attempt to relate quality and yield after taxes.

3. LEVELS OF MUNICIPAL SECURITY YIELDS COMPARED TO OTHER YIELDS

Several of the replies here were in general terms but two-thirds of the surveyed companies gave specific replies. Most of these answers, which were prepared in April–May 1966, were in terms of interest rates then available on corporate direct placements and/or mortgage loans and assumed that obligations of substantially the same investment quality, maturity, and other terms were involved. Since the effective tax rate varies widely among life insurance companies, the interest rates necessary for municipal securities to be attractive also vary by company. As explained by one company:

The value of tax exemption computed as the differential in interest rate at which tax exempt yield is equivalent to fully taxable yield depends upon the specific characteristics of each individual mutual life insurance company and is uniquely determined for that company. If choice is to be made between fully taxable investment income and so-called tax exempt income, the calculation must show that yield at which additional exempt income, less the increased tax liability associated with receipt of such income, is equivalent to fully taxable income, after tax, at yields available in current markets. For [this company] based upon the present nature of our business and the composition of our assets and liabilities, exempt yields would have to be within 0.59 percent of the return currently available in the corporate sector on direct placements and mortgage loans.

Another company indicated that municipal securities would be competitive at yields 50 to 60 basis points below corporate yields of similar quality and terms. Several companies answered in terms of the proportion of taxable yield needed to make a municipal security attractive; two indicated that municipal yields must be about 88 percent of

taxable yields, one indicated 85 percent. Another replied that $1 of tax-exempt income is the equivalent of $1.28 of taxable income. From this it may be inferred that municipal yields for this company should equal 78 percent of taxable yields to be attractive.

Still other companies indicated their yield requirements relative to taxable yields as follows: (1) 5⅜ percent to compete with 6 percent taxable; (2) 5.40 percent to compete with 6.25 percent; (3) 4.90 percent or better to compete with 6 percent or better. (This last company also noted, as explanatory to the rate requirements, that life insurance company tax laws "are somewhat unique in that tax-exempt income is not fully exempt from taxes.") The interest rate levels specified by these three companies produce proportions of taxable yield (comparable with those in the preceding paragraph) of 90 percent, 86 percent, and 82 percent.

One company indicated that municipal yields of 4.50 percent or higher would be attractive to them. Another said, as a rule of thumb, to add 15 percent to the tax-exempt yield to determine the corporate yield equivalent. One company replied that currently, tax-exempt loans are attractive "at interest rate levels approximately 1 percent lower than taxed yields."

4. MAKING MUNICIPAL SECURITIES MORE ATTRACTIVE

A large majority of the respondents indicated that higher yields were needed—that the yields offered are not competitive with alternative investment outlets, even after tax adjustments. One company added an alternative to higher yields: "* * * or a change in the Life Insurance Company Income Tax Act of 1959 regarding the taxation of municipal bonds is needed to make municipal securities more attractive as investments for our company." Another company simply replied, "Full tax exemption to life insurance companies." A third company also made a similar comment: "* * * the more tax exempt these municipal securities are to a life insurance company, the more interested they will be in them." This was amplified by the company as follows:

> If there was a way to change our [tax-equivalency] ratio substantially in favor of municipal securities, then we would undoubtedly purchase a great many more municipal bonds. If this ratio went for example to $2 to $1, obviously a 4-percent municipal would be the equal of an 8-percent corporate security. Since corporate securities of any quality are not available at 8 percent, wherein there are many municipals available at 4 percent, we would shift to a municipal security market immediately. Had the *Atlas Insurance* case recently decided by the Supreme Court ruled in favor of the life insurance industry, you would have seen this shift, of course. The effect of that case would have been to change this equivalency ratio.

Two of the companies did not mention yield in answer to this question, and one did so only indirectly:

> The attraction of municipal securities as investments is a relative matter. The fact that nearly $18 billion State and municipal securities were sold in 1965, contributing to an aggregate of nearly $100 billion of such securities outstanding at the end of 1965, indicates the attractiveness of such securities to certain classes of purchasers, principally banks and individuals.

Complete availability of financial, economic, and social facts of the obligor. Simplification and uniformity with respect to the legal requirements relating to municipal securities.

A lower demand for such securities from the investors now providing the largest sources of funds for tax-exempt bonds.

5. EFFECT OF FEDERAL GUARANTEE

The consensus of replies was that although a Federal guarantee of municipal securities would make them more attractive because of the absence of any credit risk, municipal securities would be less attractive to life insurance companies because of the lower yields that would be expected with increased quality. Some companies expect that there would also be little price differentiation within the municipal market regardless of credit of the issuer and that the spread would widen between municipal securities and other loans and investments, to the detraction of municipals.

A Federal Government guarantee of municipal bonds while adding to the security would not necessarily make such investments more attractive to this company. With few exceptions, purchases of municipal securities in the past have been confined to revenue issues which, because of the unproven nature of the project being financed, afforded relatively attractive yields. By eliminating all risks through a Government guarantee, such bonds as a group would tend to sell at yields which, under present conditions, would foreclose any interest in this field on the part of this company.

A Federal Government guarantee of municipal securities would probably have an effect similar to the experience of the federally guaranteed Public Housing Authority securities issues by various municipalities. Currently, the yields on such securities have a narrow spread among the various issues, and generally are about 10 basis points higher than the strongest nonguaranteed municipal securities. Such high-grade securities would have an appeal to certain buyers, but alternative investments of satisfactory investment quality, such as conventional mortgage loans and direct corporate obligations, would probably continue to be more attractive to [this company].

From observations of the response in the market to obligations of the Public Housing Authority, one must conclude that a Federal Government guarantee does give added attraction to municipal securities. To the extent that the resultant yields are lowered they would not necessarily be more attractive to a wide range of investors.

A Federal Government guarantee of municipal securities would tend to make them less attractive to this company since the higher quality would result in lower yields. An exception might be a Federal guarantee of more speculative revenue or land development issues that might not otherwise be considered by this company for investment. Yields, however, would have to be competitive with those of corporate private placements on an after-tax basis.

A Federal guarantee of municipal securities would not tend to make their purchase more attractive for two reasons. First, safety of principal has been adequately demonstrated by history. Second, such a guarantee would tend to drive yields even further below the available net yields on taxable investments.

6. YIELDS RESULTING FROM FEDERAL GUARANTEE IN LIEU OF TAX EXEMPTION

Most companies concluded that a Federal guarantee in exchange for tax exemption would not make municipal securities more attractive to them. Beyond this, taxable, guaranteed securities might also be less well received by other investors, unless interest rates were substantially above AAA corporates. The companies' expectations varied somewhat concerning the interest rate levels that would probably accompany such guaranteed securities. As one company noted, these levels might vary, dependent on whether the Federal guarantee was direct, as described below. A number of companies thought that interest rate levels would approximate those of other Federal Government guaranteed issues or Federal agency obligations. If yield levels approximated those of Federal agency securities, these might then not sell so well, one company added. In any event, life insurance companies are not usually investors in low yielding, no risk investments. For taxable guaranteed municipal securities to be attractive to most companies, yields would have to be considerably above expected levels in order to be competitive with yields on corporate bonds and mortgage loans. The following quotations are illustrative of replies to this question:

This avenue of approach, an exchange of yields of order of Federal agency obligations for elimination of tax exemption would be less fruitful than the retention of exemption. The volume of investment funds potentially tapped by a quasi-agency obligation might well be smaller than the volume currently receptive to tax-exempt issues, except at interest rates substantially exceeding those available at the quality of AAA corporate obligations.

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* * * a Federal Government guarantee would likely reduce the offered yield of municipal securities, making them less attractive investment opportunities to us. If the Federal Government were to guarantee directly municipal securities, I would expect that these securities would bear rates of interest somewhat higher than U.S. Treasury securities and somewhat lower rates of interest than either Federal agency obligations or corporate bonds. However, should Congress create a new instrumentality of the Federal Government, and municipal securities were to be guaranteed by this agency, with original capital only supplied by the U.S. Treasury, I would expect that these securities would earn a higher rate of return than U.S. Treasury securities and Federal agency obligations and a lower rate of return than corporate bonds. Under these circumstances municipal securities would be increasingly attractive compared to Federal agency obligations as the yield differential between Federal agencies and municipals widened. However, any form of Federal Government guarantee would remove municipal securities as an alternative investment consideration to mortgage loans.

A Federal Government guarantee of municipal securities in exchange for making the interest income taxable would probably make such securities the equivalent of other high-grade taxable Government-guaranteed issues such as the ship mortgage loans guaranteed under title XI of the Merchant Marine Act and certain Federal agency loans, both of which obtain yields equivalent to AAA-rated corporate bonds, but somewhat higher than the yields on direct U.S. Government obligations of comparable maturities. Such yields would not be attractive to [this company] in view of our practice of emphasizing higher yielding investments in satisfactory conventional residential, commercial, and farm mortgages and direct, nonrated, corporate obligations.

No. Under these conditions, the yield on municipal securities would approximate the average yield on outstanding securities which are guaranteed by the Federal Government. Yields on other loans and investments are more attractive. The level of interest rates necessary to make yields attractive would have to be at least equal to the average yield of our current purchases. Such yield would have to be close to 6 percent under present conditions.

C. Prospective Loans and Investments

1. POSSIBLE INVESTMENTS 1966–75

Most of the companies did not answer this question with specific amounts but instead indicated that these investments will depend on their supply and yield relative to other investment outlets. Many of the sample companies, based on the experience of recent years and assuming no change in existing tax laws and regulations, did not expect their purchases of municipal bonds to amount to much over the next 10 years. A few companies provided ranges of possible municipal bond purchases per year, e.g., 0 to $2 million, $2 to $5 million, $5 to $10 million, but there were too few of these replies to produce meaningful tabulations. Moreover, purchases alone do not provide an indication of likely changes in holdings. One company indicated that its holdings of municipals might increase $1 to $2 million a year and its holdings of securities of nonprofit organizations might increase between $10 and $20 million a year. Other companies also indicated that they expect to make somewhat larger purchases of nonprofit organization bonds than of municipal bonds, but companies that have not been active in this area generally do not expect to become so.

2. BASIS FOR PROJECTIONS

For the few companies that made projections of dollar amounts, these were based on the experience of the last 10 years, the expected continuance of the same investment policies, or on estimates of cash flow and an estimated average percentage of cash flow going into such securities. Among companies that indicated in a general way that they do not expect to purchase much in municipal bonds, there was the expectation that the tax-exempt premium will continue to price life insurance companies out of this market.

3. CIRCUMSTANCES FOR EXPANSION OF INVESTMENTS

Investments by life insurance companies in tax-exempt issues would be expanded if their yields were competitive with those on taxable investments (mortgage loans and corporate direct placement bonds). Other circumstances mentioned by some companies, all bearing on relative yields, included an increasing supply of new tax-exempt issues beyond the increase in demand, a decreasing supply of taxable investment outlets, a change in tax rates, and a decrease in the attractiveness of tax-exempt issues to those who currently buy and hold these investments.

CHAPTER 24

Fire and Casualty Insurance Companies*

[Owing to the fact that there are several trade associations to which fire and casualty insurance companies belong, there is no single group that is in a position to describe the activities of, or to canvass the views of all such companies. Accordingly, three of the major associations, the American Insurance Association (stock companies), the American Mutual Insurance Alliance (mutual companies) and the National Association of Independent Insurers (stock and mutual companies) undertook to canvass representative samples of their respective memberships. Committee staff combined the material developed by the three surveys and added certain aggregate data for all fire and casualty insurance companies, which appear in the early section of the chapter.]

INTRODUCTION

Fire and casualty insurance companies are financial intermediaries that obtain the bulk of their funds from businesses and households. They invest their funds mainly in the bonds and stocks of governments and corporations. The purpose of these insurance companies is to provide the public with a means of protection against economic loss from specific hazards causing injury to property and persons and in so doing to earn a reasonable profit. This involves a coordination of management functions in providing underwriting and claims services which, together with financial stability, will assure all policyholders that they will be indemnified for all protected losses.

The fire and casualty insurance industry is comprised of several types of private ownership organizations, proprietary and cooperative. Proprietary insurers may be unincorporated (American Lloyds), or incorporated (capital-stock companies). Cooperative insurers are nonprofit businesses owned by the policyholders, or members. Basically, incorporated cooperatives are called mutuals and unincorporated cooperatives are reciprocals.

As of December 31, 1965, there were over 1,216 fire and casualty companies included in Best's Aggregate and Averages. Their total admitted assets amounted to $41,843 million with stock companies accounting for about 75 percent of the total assets. Mutuals were second with 22 percent; reciprocals and Lloyds had only 3 percent of the total assets.

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* Prepared by committee staff, based on data furnished by the American Insurance Association, American Mutual Insurance Alliance and the National Association of Independent Insurers, and statistical compilations developed by John Dickie, Office of Economic and Market Analysis, Department of Housing and Urban Development.

TABLE 1.—*Assets of fire and casualty business—1965*

[Dollars in millions]

	Number of firms	Admitted assets
Stock companies	805	$31, 298. 7
Mutual companies	[1] 344	9, 436. 7
Reciprocals	53	1, 051. 2
Lloyds	14	56. 3
Total	1, 216	41, 842. 9

[1] Excludes some small mutual companies that are included in the total assets figures.

Source: Best's Fire and Casualty Aggregates and Averages, 1966.

The principal sources of new funds flowing into property and casualty insurance companies are premiums and investment income and, in the case of stock companies, new capital. Table 2 shows that for stock companies increases in reserves derived from premiums accounted for most of the fund increase in 1964.

TABLE 2.—*1964 principal sources of funds—Stock companies*

[Dollars in millions]

Source	Amount	Percent of total
Underwriting	−$417. 8	(47. 8)
Increases in reserves	+796. 7	91. 3
Investment income [1]	+371. 7	42. 5
New capital	+122. 4	14. 0
Total	+873. 1	100. 0

[1] After Federal income taxes and dividends paid to stockholders.

Source: Data furnished by the American Insurance Association.

Characteristically, the fire and casualty insurance business is marked by the uncertainty about the amount of claims; thus, the major categories of loans and investments reflect financial stability as well as the need for investment income which is used to pay dividends. Since stock companies are subject to regular Federal corporate income tax and the Federal tax law has been recently changed for mutuals and reciprocals (domestic Lloyds are taxed as partnerships), tax-exempt bonds are a major investment outlet. In 1965, holdings of bonds and corporate stocks represented over 85 percent of all property and casualty companies' assets. Municipal general revenue and State and local revenue bonds comprised about 27 percent and U.S. Government bonds accounted for over 12 percent. Relatively large proportions of capital, surplus, and reserves allow these insurance companies to pursue an active role in the corporate stock market which is reflected in their holdings of stock, which constitute 37 percent of the total assets.

TABLE 3.—*Major categories of investments, all property and casualty companies*

[Dollar amounts in millions]

	Amount	Percent
Bonds	$20,179	48.5
U.S. Government bonds	5,326	12.8
Municipal bonds	5,736	13.8
State and local revenue bonds	5,646	13.6
Corporate bonds	2,601	6.2
Other bonds	870	2.1
Corporate stock	15,260	36.7
Total assets	41,571	100.0

Source: Data based on Best's Fire and Casualty Aggregates and Averages, 1966. The following adjustments were made to Best's figures: (1) The assets of Travelers Insurance Co.'s accident department were excluded; (2) estimated holdings of public housing bonds were subtracted from the U.S. Government securities and then added to the State and local special revenue bonds; (3) estimated quasi-Federal Government special revenue bonds were deducted from the "Special revenue bonds" and listed in the "Other bonds" category.

A. SUPPLY OF CAPITAL

1. NET CHANGE OF HOLDINGS OF MUNICIPAL SECURITIES

Table 4 traces the net change of holdings of State and local government obligations by fire and casualty insurance companies during the years 1957–65. Table 5 shows the yearend holdings for these companies during 1956–65.

TABLE 4.—*Net change in holdings of municipal general obligation and special revenue bonds, all fire and casualty insurance companies*

[Dollar amounts in millions]

Year	General obligation bonds		Revenue bonds		Total municipal bonds
	Amount	Percent	Amount	Percent	
1957	$344	56.0	$270	44.0	$614
1958	446	59.8	300	40.2	746
1959	553	58.6	390	41.4	943
1960	562	55.4	453	44.6	1,015
1961	399	42.5	539	57.5	938
1962	203	23.1	674	76.9	877
1963	139	17.6	649	82.4	788
1964	—103	—33.4	411	133.4	308
1965	—22	—9.4	256	109.4	234

Source: Data based on Best's Fire and Casualty Aggregates and Averages. (See footnote to table 3.)

TABLE 5.—*Relative proportions of general obligation bonds and special revenue bonds to total municipal bonds, all fire and casualty insurance companies*

[Dollar amounts in millions]

	General obligation bonds		Special revenue bonds		Total municipal bonds	Percent of assets
	Amount	Percent of total	Amount	Percent of total		
1956	3,215	65.4	1,704	34.6	4,919	21.9
1957	3,559	64.3	1,974	35.7	5,533	24.3
1958	4,005	63.8	2,274	36.2	6,279	24.5
1959	4,558	63.1	2,664	36.9	7,222	25.9
1960	5,120	62.2	3,117	37.8	8,237	28.0
1961	5,519	60.2	3,656	39.8	9,175	27.9
1962	5,722	56.9	4,330	43.1	10,052	30.0
1963	5,861	54.1	4,979	45.9	10,840	29.6
1964	5,758	51.7	5,390	48.3	11,148	28.3
1965	5,736	50.4	5,646	49.6	11,382	27.4

Source: Data based on Best's Fire and Casualty Aggregates and Averages.

a. *Proportions of securities acquired*

The proportion of revenue bonds to total municipal bonds rose steadily from 35 percent in 1956 to 50 percent in 1965. As noted by several stock companies, this trend was accentuated by the change in regulation Q in late 1962 which raised the ceiling on interest rates which commercial banks were allowed to pay on time deposits, thus making the banks more after-taxes yield conscious. While some commercial banks have been buyers of revenue bonds, the majority have sought general obligation bonds, hence encouraging, on a comparable yield basis, the fire and casualty insurance companies more and more into the revenue bond market. This trend was reinforced by the increased acceptance and availability of revenue bonds at relatively favorable yields.

With respect to mutual companies, a survey found that probably the most important factor in variations in holdings of State-municipal bonds is the individual company's tax situation. The yield on State-municipal bonds is generally lower than that on taxable bonds by a sufficient margin to exclude further purchases in years when no tax saving is involved. Other variables which might influence holdings of State-municipal bonds include fluctuations in cash flow, underwriting results, availability of new cash for investments, feeling that State-municipal bond market is too high, shortage of available offerings of the type the company prefers, interest rate cycles, with companies not anxious to commit to long maturities in periods of low interest rates.

A survey of independent insurance companies regarding their municipal security acquisitions during 1946 through 1965 found the following:

	Range (percent)	Mean average (percent)	Median average (percent)
General obligation bonds	13 to 80	38	47
Revenue bonds	10 to 82	39	40
Other (special assessment, limited tax)	1 to 23	6	8

All of these companies expressed the opinion that any variances from year to year were due to the relative availability and to the yields on the purchases. Two of the mutuals indicated that the purchases were related to Federal income tax considerations and the profitability of the company's operations.

b. *Maturity distribution*

A survey of mutual companies found that there is no uniform pattern, with respondents about equally divided between preference for 20–30 or 20–40 range and 10–15, 10–20 or 10–25 range.

Those favoring longer terms simply have a policy of preferring them, or prefer them because they normally offer a better rate of return and more capital gains opportunities in the event sale of some bonds becomes desirable. Maturity ranges fluctuate, however, depending upon the interest rate cycle, and there are times when such companies have no interest in purchasing longer maturities.

Those favoring shorter terms (from 10 years up) give a variety of reasons. Some feel the typical yield curve gives the optimum yield in the 10–15 maturity range, and beyond that the additional yield does not warrant extension of maturity. Yields are attractive there, and fit into some company programs of attempting to keep something of a level maturity schedule. Emphasis on certain years may change from time to time as maturities schedules are reviewed. The Federal income tax situation is an important consideration for some companies. During the early 1950's, when interest rates were low, some companies favored shorter maturities (as low as 1–5 and 5–10). As interest rates increased some companies favored longer maturities up to the 20–40 year range. Some companies are not heavy buyers of State-municipal securities at present. They feel that, if they were, they probably would be trying to maintain a fairly even distribution, buying longer term bonds to replace maturities, with some purchases in intermediate ranges to replace called securities.

In the case of the stock companies, it was found that maturities of 20–40 years are generally purchased in order to get the higher return which usually prevails. A survey of independent companies revealed the following pattern of maturities of acquisitions:

Maturity	Number of companies	Percentage pattern
Under 1 year	1	3
1 to 5 years	2	2, 4
5 to 10 years	2	5, 17
10 to 20 years	6	5, 15, 72
20 to 40 years	11	85(2), 7

For the independent companies it was noted that the longer term maturities are purchased in order to give the companies the highest yields, largest call protection and still provide adequate liquidity when added to other items. Short-term bonds are generally purchased when a company feels that it might be able to purchase longer term bonds in a not-too-distant future at a more advantageous price.

c. *Bond ratings*

The survey of mutual companies found that dependence upon ratings assigned by bond rating services does not seem as great as would ordi-

narily be assumed. Some use assigned ratings primarily as a basis for determining the reasonableness of the offering price, but tend to avoid ratings below A because lesser rated bonds tend to perform poorly in adverse markets. Some prefer to do their own rating. Some find them a helpful guide to quality levels, not accepting them in total but using them more as a screening device to eliminate issues they would likely have no interest in. Some ratings have little influence on purchases, with Dun & Bradstreet municipal ratings mentioned as those upon which more reliance is placed than Standard & Poor's and Moody's. Unrated bonds are purchased by some, including those below the top four ratings, but with many purchases in third and fourth rating categories. Some do not go below a Baa rating in buying rated revenue bonds, in accordance with the amortization requirements of the Committee on Valuations of the National Association of Insurance Commissioners, but may go below that rating in buying general obligation issues. In general, ratings are an influence, with investment departments apparently having greater discretion to purchase securities in the top three ratings.

Most larger companies buy unrated bonds, with restrictions. Some do so in local market issues where they are familiar with special circumstances. Whether timely and proper annual operating figures are furnished by the issuing community is a factor in buying unrated municipals. More complete analysis and investigation of unrated issues is required.

Quantification varies by companies. Some buy 90 percent unrated, others 35 to 40 percent, but most are much stronger on rated bonds. Companies which are not now heavy buyers of State-municipal bonds, in some cases indicate that analysis of their present portfolios might be misleading, since they contain a residue of high yielding issues, many of which are not rated.

For the stock companies ratings are a market factor and an influence on price and yield spreads. However, the availability and level of assigned bond ratings are of little influence as to the creditworthiness of municipal investments, since most of the major companies do their own analyses.

Unrated bonds are purchased. Bonds with ratings below the top four grades are generally not purchased. As of December 31, 1964, according to Best's Aggregates and Averages, stock companies owned $3,737 million (50.8 percent) general obligation bonds and $3,624 million (49.2 percent) revenue bonds, for a total of $7,361 million. There are no figures available which would quantify ratings for the industry, but based on a sample representing approximately 40 percent of the municipal bonds owned by the stock fire and casualty industry, ratings are quantified as follows:

	Percent
Aaa	17.2
Aa	32.9
A	26.8
Baa	7.9
Ba	1.2
B	-----
Caa	-----
Unrated	14.0
Total	100.0

In the case of the independent companies it was found that in many companies the availability and level of bond ratings assigned by the municipal bond rating services have very little to do with the determination to purchase such securities. As has been indicated earlier, bond purchases are influenced primarily by the yield and availability. Some companies, however, indicated that they prefer bonds rated at least A by Moody's or Standard & Poor's. It appears that each company has its own policy in regard to this matter.

Nine companies indicated that they do purchase unrated bonds. Four companies indicated that occasionally they will purchase unrated bonds if their analysis indicates that the security is equal to or better than that obtainable on the rated bonds they purchase. Only two companies indicated that they do not purchase unrated bonds.

Six companies indicated that they will not purchase bonds with ratings below the top four. Seven companies indicated that occasionally they will purchase such bonds, and only two companies indicated that they do normally purchase such bonds. It would appear that companies will purchase small issues which are too small to be rated or local issues if secure even though not rated. One company has a rule that it can purchase up to 30 percent of such bonds.

d. Intended use of proceeds

The survey of independent companies reported that seven companies indicated that the purpose for which the issue is to be used does influence their purchase, three companies indicated that this may be a factor; five companies indicated that it does not affect their decision. The following reasons were given by those companies which indicated that it does influence their purchase:

The bond proceeds are considered inappropriate when used for advanced refunding.

Only for short-term funds.

Must have sound reasons for floating the issue.

The funds should be used for "productive purposes."

The company prefers bonds when the proceeds are used for schools or other favorable public needs since it feels that this not only helps the borrower and the country more but it also involves more favorable moral risk.

One company indicated that the credit of the borrower is the primary consideration.

Seven companies indicated that they had no preferences or prejudices regarding intended use of proceeds. The other companies seemed to prefer school bonds, public buildings, construction bonds, electric utility issues, and bonds of a double security such as general obligation water or sewer bonds. The prejudices seem to be against advanced refunding issues, and bond issues which are used for purposes which are not "productive." An example of this latter type may be commercial sport facilities. One company indicated that they would avoid Deep South school bonds and that they have some prejudices against issues from Alaska, Hawaii, Puerto Rico, and Las Vegas.

The survey of mutual companies reported "no unanimity of opinion." Some companies feel use of proceeds is very important, others are less concerned. Bonds designed to finance essential services are widely favored, there is some avoidance of revenue bonds, and much disinclination to invest in industrial revenue bonds. Industrial reve-

nue bonds are not avoided completely, however. Bonds issued for resort or recreational purposes, marinas, parking revenue, and bonds supported by automobile tolls are not in high favor with many companies.

For the stock companies it was found that with respect to unlimited tax general obligation bonds, and limited ad valorem tax bonds, purchases in general are not influenced by the intended use of the proceeds.

With revenue bond issues and special assessment bonds the intended uses of the proceeds are very important. Purposes which contribute to the economic growth of an area and/or the well-being of the populace are favored. Those where the economic feasibility of a project is doubted are generally not purchased.

Most intended uses of the bond proceeds are acceptable to the industry, but it should be noted that there may be differences of opinion with respect to certain purposes such as industrial revenue bonds, pure special assessment bonds, and certain other categories.

e. Geographical location of borrower

The stock company survey found that the location of a borrower, because of the accident of geography, is generally not a controlling factor in municipal bond purchases. There are certain (premium and other) tax advantages in various States which render their obligations more attractive for investment than those of other States; but this is not a factor of geography.

However, a conscious effort is made by most companies to spread purchases, geographically, with due consideration being given to population factors and the economic conditions of the areas.

For mutual companies, geographical factors do not seem to be as influential as economic and political factors. Important is company judgment as to ability of borrower to pay, so relative economic differences are a factor. There is some effort to achieve geographical diversification by States in which individual companies do business, and some companies plan carefully diversification of bond purchases within a State. There is a tendency to be influenced favorably toward geographical areas with which companies are most familiar, but this is weighted against yields. One-industry towns and depressed areas often are avoided, such as those where physical deterioration is adversely affecting the tax base, where the productive population is moving out, or where there is likelihood of legal challenges of existing financial practices.

For the independent companies it was reported that it appears that the geographic location has very little effect on the determination to purchase the obligations. All companies indicated that they try to have a portfolio widely diversified geographically. Companies may avoid issues of certain geographical areas where the economic, political, or social factors appear less favorable than they would like to see. If the geographic location might affect repayment or marketability, they may decide not to purchase the bonds.

2. OBLIGATIONS OF PRIVATE, NON-PROFIT ORGANIZATIONS

Apparently there has been little or no investment in this area by larger mutual fire and casualty insurance companies. A few buy church and hospital bonds, but the amount involved is not significant. Capacity to meet the requirements of the loan is the major considera-

tion. In the case of the independent companies, 12 of the companies indicated that they do not purchase this type of security. The others indicated that they had purchased hospitals, churches, schools, nursing homes, parking garages, and port facilities. Information is not available on stock company activity in such securities.

Factors influencing purchases

Only the survey of independent companies provided information regarding the factors influencing purchases of obligations of private, nonprofit organizations. This survey reported that two companies indicated that ratings are not a major factor and the other company indicated that usually such issues are not rated. One company indicated that use of proceeds and geographical location are important considerations, another company indicated that debt service capability of borrower is of primary concern rather than the intended use of proceeds. Four companies indicated that public relations considerations had no influence whatsoever.

B. Portfolio Considerations

1. GUIDELINES FOR MUNICIPAL SECURITIES

The survey on mutual companies reported that there are no particular guidelines regarding holdings of State-municipal bonds in major mutual companies. In general, holdings at any particular period are related directly to a company's tax situation.

For the stock companies it was noted that as a guideline, insurance liabilities are generally covered by fixed income securities, cash and agents' balances. Investment in fixed income securities is primarily in U.S. Governments, corporates, and municipals. The relative proportions in these categories depend on the tax position and investment philosophy of the individual companies.

In response to the question regarding the use of guidelines the survey of independent companies stated that six companies responded with a "no," and nine companies indicated a "yes" in their response. It appears that the guidelines are established to maximize after-tax investment return. All guidelines are highly flexible and depend upon the need for tax exempts related to underwriting profit and taxable portfolio income.

2. COMPETITION WITH MORTGAGE LOANS

Inasmuch as fire and casualty insurance companies do not make significant investments in mortgage loans, the surveys found that there is little basis for comparison or that mortgages are not competitive with municipal securities.

3. ATTRACTIVENESS OF TAX EXEMPT SECURITIES

The stock companies advised that as a class, municipal securities already have sufficient attributes to make them attractive as investments for the fire and casualty insurance industry. There has been considerable improvement since World War II in the responsibility of the municipal bond underwriters and on the part of the issuing authorities to improve and safeguard their credit standing.

The mutual companies noted that municipal securities are attractive as investments when they yield more than the after-tax yield on taxable securities.

For the independent companies it was found that many different responses were received to this question but they all tend to indicate that this type of yardstick is not used. It appears that municipal securities are attractive in direct proportion to a company's achievement of an underwriting profit. Companies will purchase municipal securities at any level where the net return is greater than the after tax yield on taxable loans and investments.

a. *Making municipals securities more attractive*

The survey of mutual companies found that there is a general feeling that nothing is needed to make municipal bonds more attractive as investments. Greater uniformity or standardization of municipal financial and reporting practices might be helpful. Some think clarification of the status of certain categories of municipal bonds would be useful. A ruling with regard to the Federal Government's attitude on industrial revenue type bonds would be a guide for the companies. Sometimes there seems a tendency to penalize owners of municipal bonds, making them less attractive, such as recent attempts to disallow a certain portion of investment expense based on the proportion of municipal bonds held. This reflects a tendency to pick away at the edges of the tax-exempt concept.

The survey of independent companies provided such suggestions to improve the attractiveness of municipal securities as:

Better presentation of information to aid in selectivity.

Longer and better call protection.

Continuation of a high yield.

Remove the tax liability on discount purchases.

The basic stress is on marketability—we would rather see general obligation bonds issued on a "term" basis rather than serial, with a sinking fund. We believe one large maturity year—rather than serials would be more marketable.

Interest receipts on a single payment basis; or larger principal sums on a single bond.

Better market set in case of liquidation.

More realistic handling for registered securities.

Stability in the income tax area.

b. *Use of Federal guarantee*

Mutual fire and casualty insurance company investment officers responding expressed no enthusiasm for Federal guarantees of municipal securities. They say they have no reason to doubt their continuing ability to select sound municipal obligations which are nonguaranteed. Municipal securities have sufficient quality now, and the power of local taxation is more than enough to insure debt service; local government is better equipped than Federal to determine needs. Defaults among municipal borrowers are negligible due to vigilance of municipalities themselves, municipal bond dealers, legal counsel, and institutional buyers to keep them sound and secure so they will be retired at maturity. The municipal market now allows the investor to direct buying in any one of a number of areas. If an insurance company desires a higher risk, higher income type of portfolio, the

company is free to move in that direction. Probably municipals would become less attractive on a relative basis, since a Federal guarantee would increase quality and decrease return on municipal securities. This would have the effect of equating returns closer to a corporate security in terms of after-tax income, and it seems doubtful that there would be much benefit to the municipal bond market. There might be certain social reasons why a government guarantee might be considered, but a guarantee might do more harm than good. A Federal Government guarantee might make some issues more attractive. The guaranteed issues would tend to sell on a parity with other guaranteed issues such as FHA's. How attractive they would be to the purchaser would still depend on his tax situation, and the yields on alternative investments. A Federal guarantee might be helpful to very marginal issues, or issuers with bad political situations.

The stock companies advised that the credit of most State and political subdivisions is acceptable without the need for a U.S. Government guarantee. From a credit point of view, it would improve their quality; but to the extent such guarantees reduce the rate of return or yield, they would actually become less attractive.

With respect to the independent companies it was reported that only three companies indicated "yes" in responding to this question and one of these responses stated that this would be to a very limited extent. One company indicated the Federal Government guarantee would make municipal securities less attractive to them because it would give all municipal securities a high degree of uniformity in quality, yield, and call protection. Most municipal bonds are now rated in the upper four investment grades. A Federal Government guarantee could increase the price and reduce the yield to the point where they might be unattractive to a large number of investors.

Actual responses of individual independent companies included:

This company would prefer to have the broader selectivity in municipals they now see in terms of maturity, quality, call protection, and yield so that they can select those items best suited to their investment objectives rather than be limited to a uniform yielding obligation which is Government guaranteed.

This will not stop defaults from taking place. It will only mean that more of our tax dollars will go to support this guarantee. This might lead to certain municipalities going into projects beyond what they can logically support. I doubt that issues that appear to be questionable without a Federal Government guarantee would be more attracted to an investor with it.

For the same reason that public housing administration bonds have lower yields than other municipals.

In the quality this company buys, there is sufficient security.

This company feels they would probably soon lose their tax-free status.

A Federal guarantee would lower rates—removing a lot of income reward for judgment.

Municipal credit is generally excellent, defaults are rare, and there is no need for the redundancy of Federal guarantee.

c. *Effects of Federal guarantee in lieu of tax exemption*

The survey of stock companies noted that the exchange of tax exemption for a Federal guarantee would not necessarily make these securities attractive as investments. Municipals, whether taxable or tax exempt, must compete on the basis of yield after tax. If taxable, but U.S. Government guaranteed, they would sell at yields similar to those of AAA corporates with minor variations reflecting marketability. To the extent that the aftertax yield spread compared to alternative investments was reduced, guaranteed municipals would lose their competitive attractiveness.

Among the mutual companies, the consensus seems to be that making State-municipal bonds subject to Federal income tax in return for a Federal guarantee would make them less attractive. Some felt they would not purchase municipals at all under such conditions. Inasmuch as 30-year federally guaranteed municipals (PHA bonds) in May 1966, afford a taxable equivalent yield (6.64 percent) significantly higher than either 30-year corporates (4.95 percent) or 30-year Treasurys (4.80 percent), there seems no reason to accept a lesser spread on other municipals under the circumstances outlined. Because of the soundness of municipals in general, together with their record of negligible defaults over the years, a Federal Government guarantee would add very little to their attractiveness as an investment. Addition of a Federal debt service guarantee would tend to lower their yield and make them less attractive to the institutional investor. A Federal guarantee in exchange for taxability of municipal bonds would be too high a price to pay. Short Treasurys, agencies, and AAA-rated corporates now are all yielding 5 percent or better, fully taxable. At current corporate income tax rates this return would be reduced to about 2.50 percent. Government-guaranteed, fully taxable municipals would have to yield considerably more than the latter to make them attractive, because of the historical objective of a minimum 4 percent tax-free municipal yield. Under the proposal municipals would take on the nature of U.S. Treasury Department bonds, which are not in any short supply at the present time. No doubt communities would have to pay considerably more for their borrowings than they do now or have in the past. It would seem reasonable that the yield on a municipal bond which is federally guaranteed, but taxable, would fall somewhere between the returns on Federal agency securities and U.S. Treasury bonds. Federal agency securities are not guaranteed by the Government, and therefore would have a slightly smaller degree of attractiveness than a municipal bond as far as credit is concerned. This is in the context that the Federal guarantee would be a full unlimited guarantee, and would not be in the nature of an agency affiliation. It is possible that the supply alone may force a higher interest rate level for both U.S. Treasury Department securities and municipals, and as a result both categories of bonds would suffer in terms of interest costs. Under the proposal the quality of municipal bonds would be improved, and their attractiveness increased in the sense that they could be purchased with a minimum of research and analytical effort. To the extent that the yield reflected this change they might be less attractive relative to other alternative investments

such as stocks, corporate bonds, Government bonds, or other non-guaranteed tax-exempt bonds. As to level of interest rates, a guess would be that they would tend to sell on a basis comparable with Federal agency obligations with variations depending upon the terms (coupon, maturity, call provision, et cetera) of the particular issue. One reason for so supposing is that as "guaranteed by the Federal Government" they would tend to be classified as such by the investor. It must be considered that such a move to guarantee municipal obligations in exchange for their present tax exemption might reduce the supply of tax-exempt securities to such an extent that the general market would be hard to appraise. There would be an increase in taxable bonds, and possibly a tendency for such yields to rise, including governments. If some tax-exempt securities remain, they may attain some scarcity value, and their yields might tend to decline relative to taxables. The particular investor would still have to choose from the alternatives prevailing at the time, and presumably he would tend to favor those investments providing the best net return after taxes. The actual effect of such a proposal cannot be determined, since so much would depend upon relativities at various points in bond markets.

With respect to the question regarding substituting a Federal guarantee in lieu of tax exemption for municipal securities, individual independent companies responded:

Such securities would then differ little from a Government agency obligation which is guaranteed. Such security would have little attraction to us as do Government agency obligations now outstanding.

Attractive, yes, but at a much higher interest rate, slightly higher than the rate for U.S. Government bonds.

We would need too much additional yield to offset the loss in taxes—hence there would undoubtedly be a net loss.

If a Federal guarantee were made and interest on municipal bonds became taxable, such bonds would be no more attractive as investments than U.S. Government bonds. It depends on the spread, if any, between straight Government obligations and such guaranteed obligations. It is quite possible that more favorable investments could be made in taxable bonds or corporations or in mortgage loans.

It would make it less attractive.

We believe "taxability" would offset any advantage gained by the guarantee unless interest rates on municipals were substantially better than rates on Federal Government obligations and at least as good as those in Federal agency obligations.

In such a case municipal securities would have to compete with all high-grade taxable securities, and would lose their attractiveness to tax-exempt purchasers.