By Gerald Auten and Edward Chung*

In a reversal of the rapid upward trend of recent years, the face amount of long-term private activity tax-exempt bonds in 1986 decreased to \$29.9 billion. This volume, which represented a 75 percent decrease from the 1985 volume of \$122.0 billion was the smallest since 1981. (Private activity bonds are bonds issued by State and local Governments that provide a benefit for private businesses, organizations, or individuals.) In contrast, the face amount of public purpose tax-exempt bonds continued to increase in 1986 to \$115.5 billion. However, as shown in Figure A, the

total dollar volume of all types of tax-exempt bonds declined by 33 percent in 1986 to \$145.7 billion [1].

The primary factor affecting the issuance of tax-exempt bonds in 1986 was tax reform, which had four main effects:

1. The issuance of a considerable volume of tax-exempt bonds was accelerated in 1985 in anticipation of restrictions included in the House bill that went into effect on December 31, 1985.



^{*}Gerald Auten, now on the faculty at Bowling Green State University, was formerly a financial economist with the Office of Tax Analysis, U.S. Department of the Treasury. Edward Chung is a statistician with the Foreign Special Projects Section, Foreign Statistics Branch, Statistics of Income Division, Michael Alexander, Section Chief. Dorothy Wallace, Foreign Special Projects Section, contributed to this article.

- 2. From January 1986 until September 1986, when the Tax Reform Act was passed, there was considerable uncertainty as to how tax reform would affect taxexempt bonds issued in 1986 and later years. This uncertainty discouraged the issuance of all taxexempt bonds, especially private activity bonds.
- 3. Uncertainty about the regulations implementing the bill discouraged issuances in the last quarter of 1986.
- 4. Some of the provisions of the Tax Reform Act that restricted issuance of tax-exempt bonds took effect as soon as the bill was signed into law on October 22. 1986.

New Issues of Private Activity Bonds by Purpose

There are four main categories of tax-exempt private activity bonds: student loan bonds; private exempt entity bonds; mortgage revenue bonds; and industrial development bonds (IDB's), including bonds for multi-family rental housing. The total volume of private activity bonds includes the face amount of both new issues and refunding issues.

As shown in Figure B, the volume of new issues of long-term private activity bonds in 1986 totaled \$17.2 billion [2]. The largest category was the \$6.8 billion of small-issue IDB's, which further regional economic development by providing subsidized financing for construction and improvement of private business facilities that range from manufacturing plants to shopping centers. Small-issue IDB's are limited to issues of up to \$1 million or up to \$10 million over a 6-year period for facilities for the same principal user in the same municipality or unincorporated areas of a county. Congress limited the issuance of taxexempt small-issue IDB's after December 31, 1986, to manufacturing facilities and repealed the tax-exemption altogether for bonds issued after December 31, 1988.

Two types of tax-exempt bonds are intended to provide subsidies for low-income housing. Qualified mortgage

bonds (also called mortgage revenue bonds or mortgage subsidy bonds) are issued to fund mortgages for first-time home buyers with low and middle incomes and home buvers in certain designated low-income areas at belowmarket interest rates. Mortgage loans were required to be made for houses costing no more than 110 percent of the average area purchase price (120 percent in targeted areas). New issues of qualified mortgage bonds amounted to only \$1.3 billion in 1986, compared with \$13.9 billion and \$13.6 billion in 1984 and 1985, respectively. The provision permitting these bonds to be tax-exempt was to expire on December 31, 1988 [3].

In addition tax-exempt bonds valued at \$1.5 billion were issued to finance multi-family rental housing. Tax-exempt IDB's could be used to finance multi-family housing projects if at least 20 percent of the units (15 percent in targeted areas) were set aside for low- or moderate-income households with incomes below 80 percent of median gross family income. The relatively small volume of new issues in 1986 reflects the acceleration into 1985 (when the volume amounted to \$25.2 billion) of issues that would normally have been made later.

Tax-exempt student loan bonds could be issued to finance loans for financing post-secondary education expenses in connection with Guaranteed Student Loans and Parent Loans for Undergraduate Students programs of the U.S. Department of Education. In 1986, \$1.7 billion of these bonds were issued, a decline of 65 percent from 1985, but still 24 percent more than in 1984.

Private exempt entity bonds are issued by State and local Governments to finance the activities of charitable, educational, religious, and similar organizations that are taxexempt under section 501(c)(3) of the Internal Revenue Code. The primary beneficiaries of these bonds are private, nonprofit hospitals, colleges, and universities. In 1986, the volume of new issues of private exempt entity bonds was \$2.5 billion, down from \$25.7 billion in 1985.

Other industrial development bonds are issued to finance certain other exempt activities, including airports, docks,

Figure B. — New Issue Private Activity Bond Volume, Calendar Years	1983-86
[Money amounts in millions of dollars]	·

Type of bond	1983	1984	r1985	1986
	(1)	(2)	(3)	(4)
Total	49,911	65,816	99,770	17,215
Student loan bonds rivate exempt entity bonds Dualified mortgage bonds ¹ dustrial development bonds, total Small-issue Multi-family rental housing Airports, docks, etc. ² Sewage and waste disposal Pollution control	3,086 8,202 10,800 27,823 13,791 5,349 2,109 1,442 3,411 1,721	1,370 9,037 13,900 41,509 16,967 5,346 3,713 6,314 7,599 1,570	2,803 25,737 13,561 57,669 17,058 25,216 3,554 5,073 5,230 1,538	1,696 2,545 1,319 11,656 6,781 1,501 463 1,307 1,274

Qualified mortgage figures for 1983 and 1984 are based on estimates developed by the Office of Tax Analysis, U.S. Department of the Treasury ² Volume for new issues is the purchase price of the bond minus any amount used to refund earlier obligations

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and wharves; sewage and waste disposal facilities; pollution control facilities; and mass transit, water, and heating and cooling facilities. The volume of new issues of these types of bonds declined in 1986.

VOLUME OF ISSUES BY MONTH

The dollar volume of private activity bonds issued by month in 1986 is shown in Figure C. Less than 5 percent of the bonds were issued in the first 3 months of the year. In contrast, almost 39 percent of the bonds issued in 1986 —more than \$12.5 billion—were issued in December. The large volume at the end of 1986 suggests the possibility that some State and local Governments attempted to issue bonds before the stricter volume cap went into effect in 1987. Unused volume caps can be carried forward to future years, however, so that the end-of-the-year increase in volume may simply reflect a normal seasonal pattern [4].

PRIVATE ACTIVITY BONDS BY STATE

The per capita amounts of private activity bonds for the 10 States with the highest per capita volumes of issues are shown in Figure D. Delaware and Alaska had the largest per capita amounts of bonds. Each of these States issued approximately \$240 per capita of private activity bonds, three times the national average of \$71 per capita. Almost all the bonds issued by Delaware were small-issue IDB's; most of the bonds issued by Alaska were qualified mortgage bonds. Table 7 at the end of this article shows the private activity bonds issued by type for each of the States.

Figure C Private Activity Tax-Exempt Bond Volume By Month, 1986



Millions of Dollars

Four States issued more than \$1 billion in private activity bonds: California, New York, Pennsylvania, and Texas.

SIZE OF ISSUES

A distribution of the main types of private activity bonds by size of issue is shown in Table 5. The largest issues were student loan and mortgage revenue bonds. The student loan bond issues with face values of \$50 million or more accounted for almost 90 percent of the total volume of student loan bonds. For mortgage revenue bonds, nearly two-thirds of the dollar volume was accounted for by issues of \$50 million or more. Most multi-family housing and private exempt entity bonds were of intermediate size (between \$2 million and \$50 million). The small-issue IDB's were generally the smallest issues. Although two-thirds of the small-issue IDB's were under \$2 million in size, more than two-thirds of the dollar volume was accounted for by bonds with values between \$2 million and \$10 million.

MATURITIES OF ISSUES

Table 6 shows the distribution of the weighted-average maturities of the major types of private activity bonds. Many of the bond issues are serial bonds in which a percentage of the bonds mature each year. Thus the average amount of bonds outstanding over the life of the bond issue is only a fraction of the face amount of the bond. The weighted average maturity is calculated as the average maturity of the new bonds with weights determined by the amount of the bonds outstanding in each maturity class. The shortest maturities are for student loan bonds, which have a mean weighted-average maturity of 14 years. The longest maturities were reported for qualified mortgage revenue bonds, with 70 percent reporting weighted-average maturities of 20 years or more.

THE TAX REFORM ACT OF 1986

The Tax Reform Act of 1986 included a number of provisions that restrict both the supply of and the demand

Figure D.—States with the Largest Per Capita New	Issues
of Private Activity Bonds, 1986	

	New issues of private activity bonds					
Selected States	Per capita (dollars)	Total issues (million dollars)				
United States, total	\$71.41	\$17,215				
Delaware	240.13	152				
Alaska	239.70	128				
Maine	169.65	199				
Montana	123.32	101				
Georgia	117.63	720				
Pennsylvania	117.51	1,397				
Mississippi	116.57	306				
Colorado	114.78	375				
Missouri	99.49	504				
South Dakota	98.87	70				

Source: U.S. Department of Commerce, Bureau of the Census — Resident population for 1986; Table 7. for tax-exempt State and local securities. These restrictions reflect congressional concern about four undesirable effects stemming from the large and increasing volume of tax-exempt bonds that were being issued under prior law: [5]:

- The large volume of tax-exempt issues increased the interest rates that State and local governments had to pay to issue bonds for traditional governmental purposes.
- 2. The issuance of large volumes of private activity bonds resulted in an inefficient allocation of capital, because subsidized activities may be less productive than competitive but unsubsidized activities.
- 3. The equity of the tax system was harmed as highincome individual and corporations limited their tax liabilities by investing in tax-exempt bonds.
- 4. The increasing volume of private activity bonds resulted in mounting revenue losses to the Federal Government. Because the tax rates are progressive and because the large volume of tax-exempt bonds had narrowed the interest rate spread between taxable and tax-exempt bonds, the revenue loss to the Federal Government was considerably greater than the interest saving to the State and local Governments.

The major provisions of the Tax Reform Act of 1986 that restricted the issuance of tax-exempt bonds dealt with —

- tightening the definition of governmental use as opposed to private activity bonds. The percentage of proceeds of a governmental purpose bond that could be used by a non-governmental person in any trade or business, or secured by payments or property used in a trade or business, was reduced from 25 percent to 10 percent.
- restricting the purposes for which tax-exempt private activity bonds could be issued. Tax-exempt private activity bonds can no longer be used to finance pollution control facilities, sports stadiums, convention facilities, or parking facilities.
- imposing a single, unified volume cap by State for most private activity tax-exempt bonds. The annual State volume cap was the greater of \$75 per capita or \$150 million (face amount) in 1987 and \$50 per capita or \$100 million (face amount) in 1988 and thereafter. The volume cap applied to all private activity bonds except those issued for tax-exempt nonprofit hospitals and private universities and colleges; qualified veterans' mortgages; and publicly owned airports, docks and wharfs, and solid waste facilities.

- restricting advance refundings to governmental use and private exempt entity bonds, and imposing a limit of two advance refundings for issues for which taxexempt refundings are permitted.
- tightening a number of restrictions on the ability of State and local Governments to profit by issuing tax-exempt bonds and investing the proceeds in taxable investments with higher yields.
- not extending the December 31, 1986, cutoff date for small-issue IDB's other than manufacturing facilities. The cutoff date for issuing tax-exempt IDB's for manufacturing facilities was extended for 1 year to December 31, 1989.

A number of provisions in the Tax Reform Act of 1986 tended to reduce the demand for tax-exempt securities. Most important, the reductions in marginal tax rates for both individuals and corporations reduced the advantage of holding tax-exempt securities. Another provision subjected the interest on certain private activity bonds, otherwise tax-exempt, to the alternative minimum tax at a 21 percent tax rate for individuals and a 20 percent rate for corporations. This minimum tax would only be paid, however, if the interest on these bonds plus other forms of "tax preferences" subject to this tax amounted to a significant percentage of total taxable income. Finally, banks were no longer able to deduct the interest they pay when they borrowed to finance the purchase of tax-exempt municipal bonds.

Conversely, the elimination of many other ways of sheltering income from tax under the 1986 tax reform caused some investors to increase their purchases of tax-exempt bonds. Similarly, the broadening of the corporate income tax base could tend to induce some businesses to purchase tax-exempt bonds.

Other provisions of the Tax Reform Act of 1986 improved the reporting of information on tax-exempt bonds beginning in 1987. State and local Governments are required to file Form 8038 information returns with the Internal Revenue Service (IRS) for public purpose bonds issued after December 31, 1986, as well as for private purpose bonds. In addition, individual taxpayers were required to report taxexempt interest on their individual income tax returns (Form 1040) beginning with 1987 returns. These two requirements will substantially improve and expand the information available about tax-exempt bonds.

Several private activity bond provisions are scheduled to expire in 1988 and 1989. The provision permitting issuance of tax-exempt bonds for qualified mortgage subsidy bonds was extended for 1 year by the Tax Reform Act of 1986, but it is currently set to expire on December 31, 1988 [6]. The exception permitting tax-exempt small IDB's for manufacturing facilities is set to expire on December 31, 1989. If these provisions are allowed to expire, the volume of private activity bonds can be expected to decline further after 1988.

HIGHLIGHTS FOR 1986

A total of 5,220 information returns were filed for private activity bonds issued in 1986. Some returns included descriptions of more than one activity (multiple-lot issues), thereby reducing the number of returns. But multiple returns may be filed for a single activity when a bond is refunded, especially in the case of short-term obligations that have maturities as short as 1 day.

Table 1 (columns 4, 5, and 6) shows the total face amount of new issues by type of private activity bond. The bonds are further categorized into short-term obligations (with maturities of 1 year or less) and long-term obligations. In some cases, bonds issued to refund previous issues may include a component of new-issue funding; this is included in the new-issue columns in Table 1. For example, a bond issue with a \$100 million purchase price sold to refund a \$95 million outstanding obligation would have \$5 million of new-issue volume. New-issue volume, therefore, represents the net increase in private activity bonds excluding nonrefunded retirements.

Table 2 shows the relationship between the aggregate face amount and lendable proceeds for long-term private activity bonds. It also shows the purchase price allocations to issuance costs and reserve or replacement funds as well as the allocation of the lendable proceeds between refundings and non-refunding (new issue) proceeds. Issuance costs averaged 1.3 percent of the purchase price for all private activity bonds in 1986, compared with 2.6 percent in 1985 [7]. In 1986, more than 45 percent of the lendable proceeds were used to refund prior issues. Refunding volume was most important for private exempt entity bonds and qualified mortgage bonds, which accounted for more than 60 percent of the total volume in both cases.

Table 3 shows the uses of the non-refunding lendable proceeds for each of the types of IDB's. Almost 90 percent of the proceeds were used for depreciable property. The remainder was used for land and other property.

Table 4 shows the volume of industrial development bonds and private exempt entity bonds by industry grouping. Table 5 shows private activity bonds by size of face amount and by type of bond. Table 6 shows the distribution of average maturities by type of bond issue.

Table 7 shows the new-issue volume by type of bond for each State. No one type of bond was issued by every State, and most States issued bonds in all the major categories. The States with the largest total volumes were California with \$1.7 billion, New York with \$1.5 billion, and Pennsylvania with \$1.4 billion.

DATA SOURCES AND LIMITATIONS

Form 8038, Information Return for Private Activity Bond Issues, has been required for all student loan bonds, private exempt entity bonds, and IDB's since 1983. The reporting of qualified mortgage bonds has been required since 1984. The data in this article on private activity bonds were extracted from the 5,219 returns filed with IRS for 1986.

Because the entire population of Forms 8038 was used for this study, there is no sampling error. A number of checks were performed to ensure that each return was internally consistent and to exclude duplicate and amended returns. A certain amount of filer and processing error may remain, however.

DEFINITIONS

Private Activity Bonds.—Includes four types of taxexempt, State or local Government bonds issued for other than public purposes: industrial development bonds, private exempt entity bonds, student loan bonds, and qualified mortgage bonds. Private activity bonds were classified as short-term if their final maturity was 1 year or less from their date of issue.

Industrial Development Bonds (IDB's).—State or local Government obligations, all or a major portion of the proceeds of which are used in a private trade or business, with payments of principal and interest secured by the property used in a private trade or business. Under the small-issue exemption in effect in 1986, virtually any private trade or business could finance depreciable property or land with an IDB, if the bond's face amount did not exceed \$1 million or \$10 million including related capital expenditures during a 6-year period beginning 3 years before and ending 3 years after the date of issue.

Private Exempt Entity Bonds.—State or local Government obligations issued for use by tax-exempt charitable, religious, educational, and similar organizations (described in Internal Revenue Code section 501[c][3]). Most were for use by private, nonprofit medical facilities, colleges, and universities.

Qualified Mortgage Bonds.—State and local Government obligations issued to finance mortgages for owneroccupied residences. In general, the loans had to be made to new homeowners and purchasers of homes in designated low-income areas. Restrictions also applied to the purchase price of the residence and the income of the recipients of the mortgage loans.

Residential Rental Housing Industrial Revenue Bonds.—IDB's issued to finance multi-family residential rental projects. In general, at least 20 percent of the units in the project financed (15 percent in certain targeted areas) had to be set aside for lower-income individuals or families with incomes below 80 percent of median family income.

Student Loan Bonds.—State or local Government obligations issued to finance the post-secondary education expenses of individuals.

NOTES AND REFERENCES:

- Estimate made by the Office of Tax Analysis, U.S. Department of the Treasury. See U.S. Office of Management and Budget, Special Analyses: Budget of the United States Government, FY 1989, Special Analysis F, Table F–17.
- [2] Although Figure B shows only new issues of private activity bonds, the volume of current and advance refunding issues is nearly equal to the volume of new issues. Such refundings are generally undertaken to refinance at interest rates lower than those specified by the original issue. The dollar value of refunding issues can be computed as the difference between total issues and new issues as shown in Table 1.
- [3] U.S. General Accounting Office, Resources, Community and Economic Development Division, *Home Ownership: Mortgage Bonds Are Costly and Provide Little Assistance to Those in Need*, Report to the Chairman, Joint Committee on Taxation, U.S. Congress, March 1988.
- [4] This monthly pattern may be similar for prior years as well. For 1983, when the only other year for which this information was tabulated, nearly one-fourth of the total volume occurred in December. See Clark, Philip, and Neubig, Tom, "Private Activity Tax-Exempt Bonds, 1983," *Statistics of Income Bulletin*, Summer 1984, Vol. 4, No. 1.
- [5] U.S. Congress, Joint Committee on Taxation, General Explanation of the Tax Reform Act of 1986, May 4, 1987.
- [6] As this article was in preparation, Congress was considering a 2-year extension of tax-exempt mortgage revenue bonds.
- See Clark, Philip, "Private Activity Tax-Exempt Bonds, 1985," *Statistics of Income Bulletin*, Spring 1987, Vol. 7, No.1, Table 2.

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Table 1.—Volume of Private Activity Bonds by Type of Activity

[Money amounts in millions of dollars]

		All issues ¹		New issues ²			
Type of activity	Total	Short- term	Long- term	Total	Short- term	Long- term	
	(1)	(2)	(3)	(4)	(5)	(6)	
Total	32,472	2,535	29,937	17,215	433	16,782	
Student loan bonds	2,557	570	1,987	1,696	244	1,452	
Private exempt entity bonds	6,554	201	6,353	2,545	58	2,487	
Qualified mortgage bonds ³	5,325	-	5,325	1,319	-	1,319	
ndustrial development bonds: Industrial park	53 7,853 2,301 68 1 2,588 2,222 2,380 154 63 5 77 272		53 7,819 2,299 68 1 1,067 2,176 2,367 151 63 5 77 126	51 6,781 1,501 60 1 463 1,307 1,274 38 44 (5) 11 125		51 6,754 1,501 60 1 417 1,262 1,262 37 44 (5) 11 125	

NOTE: Detail may not add to totals because of rounding.

Table 2.—Computation of Nonrefunding Lendable Proceeds for Long-Term Private Activity Bonds, by Type of Bonds [Money amounts in millions of dollars]

Item		Type of bond							
	Total	Student	Private	Qualified	Industrial development bonds				
		loan	exempt entity	mortgage bonds	Small issue	Other			
	(1)	(2)	(3)	(4)	(5)	(6)			
Face amount	29,937	1,987	6,353	5,325	7,819	8,453			
Purchase price	29,849	1,953	6,317	5,322	7,812	8,446			
Bond issuance costs	404	17	133	15	138	101			
Allocations to reserve or replacement funds	688	81	218	124	89	176			
Lendable proceeds	28,746	1,856	5,966	5,113	7,587	8,224			
Proceeds used to refund prior issues	13,067	501	3,830	4,003	1,058	3,676			
Nonrefunding lendable proceeds	15,679	1,356	2,136	1,110	6,529	4,549			

¹ Includes qualified veterans' mortgage bonds. NOTE: Detail may not add to totals because of rounding.

Table 3.--Nonrefunding Lendable Proceeds from Sales of Long-Term Bonds, by Type of Property Financed

[Money amounts in millions of dollars]

				Type of industrial	development bond		
Total		Private exempt entity		Small issue		Multi-family rental housing	
Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
14,139	100	1,758	100	6,486	100	1,377	100
{							
91 2,041 962 2,736 6,803	1 14 7 19 48	6 233 42 162 1,032	(¹) 13 2 9 59	67 996 115 310 4,121	1 15 2 5 64	6 37 14 131 1,021	(¹) 3 1 10 74
834 552 120	6 4 1	81 156 46	5 9 3	570 257 50	9 4 1	122 30 16	9 2 1
	Amount (1) 14,139 91 2,041 962 2,736 6,803 834 552	Amount Percent (1) (2) 14,139 100 91 1 2,041 14 962 7 2,736 19 6,803 48 834 6 552 4	Private ex Amount Percent Amount (1) (2) (3) 14,139 100 1,758 91 1 6 2,041 14 233 962 7 42 2,736 19 162 6,803 48 1,032 834 6 81 552 4 156	Private exempt entity Amount Percent Amount Percent (1) (2) (3) (4) 14,139 100 1,758 100 91 1 6 (¹) 2,041 14 233 13 962 7 42 2 2,736 19 162 9 6,803 48 1,032 59 834 6 81 5 552 4 156 9	Total Private exempt entity Small Amount Percent Amount Percent Amount (1) (2) (3) (4) (5) 14,139 100 1,758 100 6,486 91 1 6 (¹) 67 2,041 14 233 13 996 962 7 422 2 115 2,736 19 162 9 310 6,803 48 1,032 59 4,121 834 6 81 5 570 552 4 156 9 257	Private exempt entity Small issue Amount Percent Amount Percent Amount Percent (1) (2) (3) (4) (5) (6) 14,139 100 1,758 100 6,486 100 91 1 6 (¹) 67 1 2,041 14 233 13 9966 15 962 7 42 2 115 2 2,736 19 162 9 310 5 6,803 48 1,032 59 4,121 64 834 6 81 5 570 9 552 4 156 9 257 4	Total Private exempt entity Small issue Multi- rental Amount Percent Amount Percent Amount Percent Amount (1) (2) (3) (4) (5) (6) (7) 14,139 100 1,758 100 6,486 100 1,377 91 1 6 (¹) 67 1 6 2,041 14 233 13 996 15 37 962 7 42 2 115 2 14 2,736 19 162 9 310 5 131 6,803 48 1,032 59 4,121 64 1,021 834 6 81 5 570 9 122 552 4 156 9 257 4 30

Type of property financed	Sports and convention		dispos	e, waste sal and n control		port dock	Other exempt activity ²		
	Amount	Parcent	Amount	Percent	Amount	Percent	Amount	Percent	
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
Total	60	100	1,732	100	230	100	2,495	100	
Depreciable property:									
3-year ACRS 5-year ACRS 10-year ACRS 15-year ACRS 18-year ACRS		2 17 - 7 54	9 13 20 1,293 295	1 1 1 75 17	1 12 3 167 5	 5 1 72 2	2 740 769 668 295		
Land Other property Other uses	8 5 (*)	13 8 (¹)	35 58 7	2 3 (¹)	8 33 1	4 14 (¹)	9 13 (³)	0 1 (¹)	

¹ Includes wharves, mass commuting facilities, or storage facilities directly related to any of the preceding. ² Consists of industrial parks, water furnishing facilities, hydroelectric generating facilities, mass commuting vehicles, local heating and cooling facilities, and facilities for the local furnishing of electrical energy ^a Consists of madding property for tax purposes. ^a Less than \$500,000. NOTE: Detail may not add to totals because of rounding. ACRS is the Accelerated Cost Recovery System of depreciating property for tax purposes.

Table 4.—Volume of Industrial Development Bonds and Private Exempt Entity Bonds, by Industry¹ [Money amounts in millions of dollars]

Industrial development bonds Private exempt entity bonds Small issue Other Industry Amount Percent Amount Percent Amount Percent (1) (2) (3) (4) (5) (6) All industries 4,486 6,315 100.00 100.00 2,140 100.00 Agriculture, forestry, and fishing 60 .95 39 .78 17 .88 .29 Mining... 18 12 (2) ____ .29 Construction 81 1.28 34 (2) 65 .75 Manufacturing Food and kindred products 181 2.86 _ ____ _ (2) .03 Textile products.... 1.33 1 84 157 1 .04 Lumber, wood products, and furniture 2.49 2 9 .20 73 1.16 Paper and allied products Printing and publishing ... 109 1.73 1 1.82 110 82 Chemicals and allied products.... 1.74 145 54 32 Rubber and miscellaneous plastics products 2.29 _ .85 .51 Stone, clay, and glass products 32 .07 Primary metal industries. Fabricated metal products 199 3.15 (2) .04 69 130 Machinery, except electrical. 1.09 65 _ 1.46 2.07 Electrical and electronic equipment Transportation equipment 103 104 (2) (2) 2.32 1.93 Other manufacturing ... 125 18 .40 Transportation (2) (2) (2) Trucking and warehousing 160 2.53 2 _ .04 336 7 48 Transportation by air06 4 37 .59 45 1.01 Other transportation _ Electric, gas, and sanitary service 22,555 .36 2,321 ----51.73 Wholesale trade 3.73 236 2 .04 Durable goods _ Nondurable goods 223 .42 .02 _ .02 1 Retail trade .03 (^) 1.40 General merchandise stroes 89 ----1 80 242 1.25 Food stores .. .03 1 .06 1 Other retail trade 3.83 Finance and insurance 94 1.49 _ 23.52 30.07 Real estate 1,485 1,349 2.40 51 Services Hotels and other lodging places..... Personal and business services..... 849 13.44 .14 3 .02 95 1.51 1 .19 Medical and health services 766 12.13 4 80.75 1,728 .09 Educational services 11 .18 10.49 224 Other services ... 2.60 36 4.63 99 .81 164 Other industries .. 27 .42 15 .49 10 .34

¹ Consists of the nonrefunding lendable proceeds of the bonds.

² Less than 0.005 percent.

³ Less than \$500,000.

NOTES: Detail may not add to totals because of rounding.

Face amount by type of bond Total number of bond issurances Size of face amount Private exempt entity Small issue IDB Qualified mortgage Total face amount Student loan Rental All other (1) (2) (3) (4) (5) (6) (7) (8) 32,475 2,557 6,554 5,286 7,855 2,301 7,921 5,220 Total. 10 (¹) Under \$100,000 191 11 (1) 1 (1) \$100,000 under \$500,000 1,013 285 4 5 600 264 з 8 \$500,000 under \$1,000,000. 821 580 2 19 536 9 14 _ 1,113 62 \$1,000,000 under \$2,000,000 919 1.249 2 44 4 24 3,384 13 247 16 2,723 136 248 \$2,000,000 under \$5,000,000 1,055 \$5,000,000 under \$10,000,000..... 601 4,225 17 359 49 2,979 483 339 745 475 776 879 \$10,000,000 under \$20,000,000 230 3,142 36 230 \$20,000,000 under \$50,000,000 2,193 1,280 676 2,712 235 7.057 196 \$50,000,000 under \$100,000,000 91 6,373 1,237 1,878 1,606 194 1,457 _ \$100,000,000 or more..... 34 6,168 1,049 1,063 1,856 2,201

Table 5.—Number and Face Amount of Private Activity Bond Issuances, by Type and Size of Face Amount [Money amount in millions of dollars]

¹ Less than \$500,000.

NOTE: Detail may not add to totals because of rounding.

Table 6.--Number and Face Amount of Private Activity Bonds, by Weighted Average Maturity and Type of Bond [Money amounts in millions of dollars]

		Face amount by type of bond							
Weighted average maturity in years	Total number of bond issuances	Total face amount	Student Ioan	Private exempt entity	Qualified mortgage	Small issue IDB	Rental	All other	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Totai	5,220	32,475	2,557	6,554	5,286	7,855	2,301	7,921	
Less than 5	403	2,833	571	286	-	216	7	1,754	
5 under 10	1,205	2,772	441	487	51	1,624	25	144	
10 under 15	1,187	4,157	418	873	648	1,598	275	345	
15 under 20	1,047	6,605	176	1,943	876	1,386	496	1,727	
20 under 25	810	7,095	380	1,628	1,336	1,598	985	1,167	
25 under 30	247	3,130		498	789	586	166	1,091	
30 or more	321	5,884	571	840	1,587	846	347	1,693	
Mean of the weighted average maturity in years	N/A	N/A	14.0	18.9	23.5	16.4	21.3	18.2	

N/A Not applicable

NOTE: Detail may not add to totals because of rounding.

Table 7.—Volume of New Issue Private Activity Bonds by Type of Bond and State

[Money amounts in millions of dollars]

						Volume by	type of bond				
State	Total						Indu	strial development	bonds		
State	Student ioan	Private exempt entity	Qualified mortgage bonds ¹	Small issue industrial park	Multi- family housing	Sports and convention	Airport and docks ³	Sewage waste disposal	Pollution control	Other exempt activities ⁴	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Total	17,215	1,696	2,545	1,319	6,832	1,501	61	463	1,307	1,274	219
Alabama	290	3	10	2	216	-	-	-	11	48	-
Alaska	128	-	20	49	22		-	37	-	-	-
Arizona	183	-	19	-	52	42		60	10	-	-
Arkansas	39	(*)		ර	36			3			-
California	1,675	209	127	331	162	294	-	_	46	360	147
Colorado	375	57	170	83	46	0	15	2		2	-
Connecticut	223	-	10	14	114	13		8	45	8	13
Delaware	152 562	_	5 198	- 3	140 234	7	15		19	ā	- 6
Florida	562 718	4	162	ଁ	443	88	15	19	8	(*) 12	o
Georgia Hawaii	62	4	5	<u> </u>	440	°°	_	57		12	_
Idaho	14	_	5	_	9	. —		57	_	-	ē
Illinois	623	112	61	6	280	14			_	151	0
Indiana	262		64	_	153	5	· _	1	_	38	
lowa	99	_	26	_	72	2	_	_	_		_
Kansas	137	1 _	13		121	4					_
Kentucky	305	_	6		159	43	_	15	16	67	
Louisiana	158	l _	16	_	99	2	_		25	17	_
Maine	199	l _	4	_	38		_	_	157	-	
Maryland	312	I _	90	37	127	59	_	_	_	_	_
Massachusetts	420	l _	49	Ó	136	128	- 1	_	104	2	_
Michigan	807	24	142	<u> </u>	382	25	- 1	164	3	67	ල් ෆ්
Minnesota	329		45	114	110	59	_	(*)	-	_	<u>ଁ</u> ନ
Mississippi	306	- 1	10	150	43	7	_	`ź	2	91	<u> </u>
Missouri	504	145	53	-	161	145	-	_		_	_
Montana	101	28		_	4	-	-	_	Ó	70	_
Nebraska	136	104	4	_	28	_	-		<u> </u>	_	_
Nevada	26	- 1	ර	_	14		_	12	-	_	-
New Hampshire	48		<u> </u>	_	3	1		-	30	14	_
New Jersey	531	- 1	76	-	350	12		10	83	_	_
New Mexico	6	_	4		2	_		-		_	_
New Ycrk	1,515	376	67	372	628	8	9	2	14	40	-
North Carolina	168	0	60	6	54	-	-		48	-	-
North Dakota	64	-	27	-	23	13	-	- 1	-		-
Ohio	729	80	195	-	392	14	17	31	ල	ෆ	
Oklahoma	69	19	16	-	30	2	-	- 1	2	-	ෆ්
Oregon	45		15		30		-	<u> </u>	-		
Perinsylvania	1,397	80	197	47	573	24	1	13	444	19	
Rhode Island	49	-	3	-	46	_	- 1			-	-
South Carolina	237	-	50		120	47	-		20	· —	-
South Dakota	70	-	6	7	58			-	-	-	—
Tennessee	412		11		228	164	-	9		_	-
Texas	1,194	319	197	20	213	74	4	10	93	263	2
Utah	94		10	2	73	9	-	-	-	-	_
Vermont	48	11	2	-	29	5		_		-	1
Virginia	523	3	92	70	301	39		2	15	-	
Washington	297	123	19	2	52	50) ମ	_	6	44
West Virginia	96	-	16	-	72	ରୁ ଅ	-	_	7	-	_
Wisconsin	402		104	-	148	33	-	4	105	-	6
Wyoming	6		3	Ó	2		1 –	-	-	-	_
Others ⁶	70		62	4	5	-		-	-	-	-

Volume for new issues is the purchase price of the bond minus the amount used to refund earlier obligations.
 Consists of qualified mortgage bonds and qualified veterans' mortgage bonds.
 Includes wharves, mass commuting facilities, parking facilities, or storage facilities directly related to any of the preceding.
 Consists of water furnishing facilities, hydroelectric facilities, mass commuting vehicles, local district heating and cooling facilities, and facilities for local furnishing of electric energy of gas.
 Less than \$500,000.
 Includes District of Columbia, Guam, Puerto Rico, and the Virgin Islands.
 NOTE: Detail may not add to totals because of rounding.

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