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CHAPTER 7

The Market for Tax-Exempt Revenue Obligations

ONE of the principal features of postwar state and local government finance has been an increasing resort to so-called "revenue" financing. A governmental project that is revenue-producing may be separated from other governmental activities and made to support its own financing. Revenue may come from sale of a public service or it may be based on a lease with a public agency such as a school district. The full faith and general credit of sponsoring governmental agencies is not pledged in support of such debt. The line of demarcation that sets a revenue obligation apart is often not clear. Some revenue projects are based on leases under which the lessee government agency covenants that it will collect taxes sufficient to service the lease contract. Some revenue bonds are even directly supported by ear-marked taxes even though not "full faith and general credit" obligations. The IBA estimated that tax or lease contracts supported about one-fifth of the revenue bonds sold in 1957.¹ The forms of revenue projects are almost as numerous as ingenious lawyers and investment bankers can devise. Because of the diversity in form, the Governments Division of the Bureau of the Census has bracketed the many forms of these obligations under the general title of "nonguaranteed" debt.

During the postwar period the amount of revenue or nonguaranteed debt has grown from about one-tenth to over one-quarter of the outstanding long-term debt of state and local government, as shown in Table 31. More than one-third of the net increase in tax-exempt debt since 1948 was in the form of revenue obligations. The proportion of net increase was greater than that of offerings because of the long average maturity of these obligations.² Explicit knowledge of the amount outstanding cannot be pushed back of 1948, the first year for which the Bureau of the Census collected a separate figure for this type of debt. However, until 1949 the Census compiled figures of so-called "enterprise" debt: the obligations of government-owned enterprises. For the two years

¹ *IBA Statistical Bulletin*, Oct. 1957, No. 5, p. 2.

² Over 40 per cent of those sold in 1956-1957 had a maturity in excess of thirty years. *Ibid.*, p. 1 and 2.

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TABLE 31

Nonguaranteed State and Local Government Long-term Debt

Year	LONG-TERM DEBT		<i>Nonguaranteed as a Proportion of Total (per cent)</i>
	<i>Nonguaranteed (millions of dollars)</i>	<i>Total</i>	
1948	1,920	17,614	10.9
1949	2,474	20,141	12.3
1950	3,264	23,141	14.1
1951	4,197	25,549	16.4
1952	5,314	28,720	18.5
1953	6,524	32,004	20.2
1954	8,645	36,898	23.4
1955	11,733	42,272	27.8
Increase, 1948-1955	9,813	24,658	39.7

Source: Bureau of the Census, Governments Division publications: "Government Debt" series (G-GF) for 1948 to 1951. "Summary of Government Finances" series for 1952-1955 data; Table 17 in 1955 summary. Figures for 1949, 1950, and 1952 were revised upward in the subsequent census tables presumably because of identification of additional cases. If this accounts for the revisions, the data for the early years may be low by as much as 10 to 15 per cent. Because of incomplete revision of the earlier data, the 1948-1955 increase shown above may be somewhat overstated.

These data do not square with those shown in Appendix A and used elsewhere in the text because they are based on the census fiscal year figures.

of overlap in which both figures were compiled, 1948 and 1949, the amount of enterprise debt was about three times the amount of nonguaranteed debt. But the growth appears to have been parallel. This slim evidence suggests that nonguaranteed or revenue debt had earlier been an even smaller portion of the total.³ The portion of revenue obligations in new public offering has also been increasing though not with the unbroken regularity shown by the outstanding debt; this is shown in Table 32. This table, being based on tabulations prepared by the trade publication, the *Bond Buyer*, may not classify securities in exactly the same way as that followed by the Census in its tabulation of "nonguaranteed" debt.

³ Revenue obligations are mentioned as "... increased in importance and popularity," by Harry L. Severson in *Municipals* (National Association of State Bank Supervisors, 1941), p. 34.

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But we have no reason to suspect a fundamental difference; indeed the ratio of revenue to total obligations in the new offerings series apparently should produce just about the ratio of nonguaranteed and total debt shown by the Census.

TABLE 32
Revenue Obligations as a Proportion of New State and
Local Government Security Offerings

Year	Revenue (millions of dollars)	Total	Revenue as a Ratio of Total (per cent)
1946	206	1,204	17.1
1947	386	2,354	16.4
1948	550	2,990	18.4
1949	683	2,995	22.8
1950	600	3,694	16.2
1951	730	3,278	22.3
1952	1,463	4,401	33.3
1953	1,567	5,558	28.2
1954	3,214	6,969	46.2
1955	1,710	5,904	29.0
Total: 1946-55	11,109	39,347	28.3

Source: The *Bond Buyer*, sales summaries.

Two other bits of evidence concerning the growth of revenue financing may be cited. The *Issuer Summary* compiled from evidence presented at the anti-trust trial of the investment bankers shows that the defendant investment bankers handled 1.7 billions of new issue "municipal" revenue bond sales from July 1933 through 1945.⁴ Although the use of revenue financing came to have material significance only in the 1930's, isolated intervals of its use may be found much earlier.⁵

⁴ Vol. 2, end section.

⁵ In 1871, Lawrence, Kansas, issued bonds with which to build a dormitory for the newly established University of Kansas. Although initially general obligations of the city, they were later made a kind of revenue obligation by a special act of the state legislature. A. M. Hillhouse, *Municipal Bonds: A Century of Experience* (Prentice-Hall, 1936), p. 96.

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FACTORS ACCOUNTING FOR RECOURSE TO REVENUE FINANCING

The circumstances underlying the growing importance of revenue financing can be roughly divided into two general groups. One reason was developed in Chapter 2: the fact that many state and local governmental units have approached debt limits that circumscribed their activities. The devices invented by lawyers for relief of this situation have often taken the form of a new governmental entity which had a kind or degree of borrowing power denied the basic governmental unit.⁶ But since it was generally not possible to give these new creatures of government taxing powers without breaching the basic prohibitions of the law, these new bodies had to be given a source of revenue with which to service their debts. Thus the school building authorities or corporations⁷ are created to provide the buildings; their revenues come from leases with the underlying school districts which have many of the same characteristics as a tax dedication.

But the most important circumstance lying back of revenue financing generally has usually been the inauguration of new business-type activities to which state and local governments have been willing to extend the privilege of tax exemption but not of their basic full faith and general credit. Some of this is a quite old story. During the period when development of public power facilities was considerably more important than it has been recently, such enterprises were usually subsidized by access to the privilege of making their securities tax-exempt. But this was felt by some to be an adequate subsidy and the second step of granting the subsidy of shelter under the public credit was denied them.⁸ This sort of circumstance accounts for a great proportion of the cases of revenue obligations: water and sewer systems, irrigation and drainage districts, bridges, tunnels, toll roads, off-street parking facilities, ports, airports, college dormitories, and sometimes even factories and

⁶ The Commonwealth of Pennsylvania has over one thousand authorities, most of which have borrowed.

⁷ Such as in Pennsylvania, Kentucky, or Indiana.

⁸ Public housing has been given both subsidies: tax exemption of its financing and a guarantee by the federal government. This is achieved by making the individual public housing authorities local governmental units (not federal) so their borrowing enjoys tax exemption, but the federal government then enters into a contract with each one up to their allotted quota of construction, for underwriting of debt service.

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hotels sponsored by local government to attract outside business. The philosophy is that since individual citizens do not benefit equally from all these various types of activities, the credit of "all the people" should not be used to support them. But the line is not sharply drawn. Toll road systems of two large states—New York and New Jersey—are financed by a combination of revenue and guaranteed obligations. A further possible flaw in the logic is that many investors in these obligations seem to assume that the sponsoring governmental agencies that created these creatures would not let their obligations go into default. Although this assurance is carefully and explicitly denied in each revenue financing, the hope apparently is a market factor of not inconsiderable importance.

The Investment Bankers Association has condemned the use of tax exemption (by cities mainly) to build industrial buildings and hotels which are used as bait to attract new businesses. But the importance of these instances is small; a far more important type of activity has been the use of tax exemption to finance the construction of electric power generation facilities for the service essentially of private enterprises.

Most of these cases are found in the western part of the United States where the public-private power issue is still a hot one. Special power districts or even irrigation districts have sometimes borrowed on a tax-exempt basis for the construction of a power plant, usually a hydroelectric one.⁹ The significant point in most of these cases is that the revenue bond financing was supported and made palatable to investors by being founded on a long-term contract with a financially responsible private utility firm for the sale of power at rates sufficient to service the bonds. This is not to say that the private utility benefited indirectly from tax exemption. Presumably the rates at which it resells the power to the public reflects its costs.

Sometimes tax exemption is used to support the revenue financing of public operation of utilities that have experienced serious financial problems under private operation: street railway systems are

⁹ In at least one case an irrigation district built a steam-generating plant with the candid intention of "rounding out" its power-generating facilities. In most cases the hydroelectric installations have some semblance of connection with the basic irrigation plans of the sponsoring districts, though in some cases it is hard to find much engineering justification for the projects on such grounds.

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a leading example. Isolated cases can also be found of ferryboat systems or other struggling public utilities that have been taken over after failing to survive under private and fully taxed operations.

FORM OF REVENUE OBLIGATIONS

The popular identification of revenue obligations with toll road bonds has led to the assumption that most revenue obligations were in term (single maturity) rather than serial form. An IBA analysis of the revenue obligations sold in the year ended June 30, 1957 showed that only about one-quarter were in term form; the great bulk were in serial form.¹⁰ Water and sewer bonds are almost always in serial form, as is true of most school building corporation and college dormitory bonds. On the other hand, most toll road, many port, airport, bridge, some public utility, and "industrial" bonds are in term form. Some toll road authorities have financed with a combination of serial and term bonds.

In some cases, by the wondrous magic of legal invention, it has been possible to issue tax-exempt "industrial" bonds which were convertible into common stock or to which common stock warrants were attached.

When term bonds are used, they are almost always callable. Call for refunding purposes is often made costly and sometimes prohibitive. But call by lot of bonds to be retired by earnings is generally permitted. And in most of the projects, the margin of coverage is such that—if realized—the outstanding issues would all be retired before ultimate maturity.¹¹ Call provisions are being attached to serial bonds with increasing frequency.

NATURE OF THE MARKET

The market for revenue obligations is partly but not altogether set apart from the market for full faith and credit obligations. Buyers tend to treat them as more nearly like corporate obligations, and the yields on them are often quite comparable to yields available on corporate bonds. Informed security analysts study the supporting economic expectations back of a revenue obligation very

¹⁰ *IBA Statistical Bulletin*, October 1957, No. 5, p. 4.

¹¹ Some such projects then pass into the realm of free public facilities: toll roads become free roads, toll bridges become free bridges, etc. Or school buildings revert from ownership by the authority or corporation to the ownership of the leasing school district.

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much in the same way that corporate obligations are scrutinized. The ratio of funds available for debt service to the minimum requirements is computed, the margins for under-realization of expectations given respectful attention. If the coverage is adequate and the basic revenue source has some degree of assurance and stability, then the obligation merits a high rating; if not, it is given a more modest standing.

High-quality revenue obligations are often bought by investors in tax-exempt obligations along with full faith and credit obligations. Since Federal Reserve member commercial banks cannot underwrite these issues, they are less enthusiastic investors in them; the remote maturities of most term issues are also inappropriate to their needs. (Nevertheless they owned \$1,849 million of them in mid-1956, or about one-sixth of the total amount outstanding.) A few of these bonds also turn up in the portfolios of fire and casualty companies.

Some of the larger and more publicized revenue projects have been new ventures. The investment rating agencies, as a matter of policy, will not assign ratings to an untested venture, so the obligations of such projects are sold "unrated." This has given the impression that revenue bonds are not of top credit quality. This impression is wrong. A very large proportion of revenue projects financed are of continuing and proved projects and so have relatively good credit standing. In the IBA survey of revenue bonds financing for the year ending June 1957, they found that almost 30 per cent of the obligations had a credit rating of Aa and another 30 per cent were rated A.¹² "Unrated" obligations were about one-third of the total, and obligations having a rating of Baa were less than 8 per cent of the total. None of a lower rating were marketed.

INVESTORS IN REVENUE OBLIGATIONS

In spite of the relatively good credit rating of revenue obligations, the market for them appears to be somewhat more limited than that for full-faith and general credit obligations. The investors who buy these obligations apparently view them much as they would the obligations of corporate ventures and apply some of the

¹² *IBA Statistical Bulletin*, October 1957, No. 5, p. 4.

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standards of investment analysis to them that are commonly applied to corporate obligations.

Individuals apparently buy most of the more speculative revenue bonds. A tax-exempt security with fairly generous returns appeals to investors who wish to enjoy tax protection combined with some opportunity for capital appreciation. Both life insurance companies and mutual savings banks have also concentrated their buying of tax-exempt obligations among revenue bonds. Life insurance companies particularly are concerned about their current earning rate. Since their marginal federal income tax liability is only 61½ per cent (see Chapter 3) they are not disposed to pay a large price for tax exemption. But the future is uncertain and tax laws are frequently changed; the value of tax exemption could be greater and life insurance company investment managers doubtless have had this in the backs of their minds. If their forecasting of these revenue projects turns out to be astute, they can then decide whether to realize the capital gains that will follow or to continue to use and enjoy the privilege of tax exemption at a fairly good rate of return, compared with cost. Mutual savings banks are in a similar position except that some are already exposed to federal income taxation and others are within its shadow.

COSTS AND YIELDS FOR TAX-EXEMPT REVENUE FINANCING

The costs of financing a project the revenue from which supports the credit cannot be generalized. The matter is one for security analysis, as we have already explained, and the basis of judgment depends on the individual case. There is a life cycle for most revenue projects not unlike that which prevails in business finance. When an enterprise is started, credit analysis is really a matter of forecasting. No matter how bright the prospects, investors quite reasonably expect a better rate of return as the price for risking their money on an unproved project. But, of course, all projects are not equally unproved. Water and sewer plants for residential communities that are already in existence and growing represent little gamble—the basic demand for these services is hardly touched by fluctuations in general business conditions. The operating problems of such public services have been encountered and solved many times before; few technological risks remain to be faced. A toll road or a toll bridge is something else. One much publicized

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toll bridge was built over a section of the Missouri River, which at that time was a dry branch. This was done with the expectation that army engineers would later rechannel the Missouri back into the stream bed that ran under this bridge. But Congressional appropriations were cut in the postwar economy drive and the river was not restored to its original channel. The investment banking firm which had marketed the bonds made strenuous efforts to secure the appropriation needed to put the river back in the channel which would have made the bridge useful. In 1953 such appropriations were made and the river was restored to its original bed. In 1956 tolling was finally started on the bridge.

INTEREST COST OF REVENUE FINANCING

It is not uncommon to find the coupon required to sell an unrated revenue bond about 2 percentage points above high-grade tax-exempt yields. A great deal of the financing of new toll roads has been at about this differential. After an enterprise has been in operation for some period, and has demonstrated adequate capacity to earn, then its obligations may appreciate to a lower yield basis. The record is not unmarred; several projects have only barely earned their debt service requirements and a few have failed to do even this much. An authority which has established the record of planning and executing successful revenue-producing projects can usually get money on its new ventures advantageously. The Port of New York Authority, which operates not only port facilities but three tunnels, a bridge, and four airports, furnishes a good example. Port of New York Authority financing is generally at relatively favorable rates for revenue obligations.

But revenue financing nevertheless involves the payment of a materially higher price for money than is true of full faith and credit financing. In the spring of 1956 the Port of New York Authority borrowed at a net cost to itself of 3.04 per cent. In the same week, two private utilities with the same credit rating as the "Port" also borrowed; their cost averaged 3.6 per cent. At the same time, high-grade full-faith and credit tax-exempt obligations of about the same maturity were being marketed at a cost of about 2.5 per cent. In other words, investors were accepting a return that was 30 per cent lower for the privilege of exemption from federal income taxes for the good general obligations. For the obligation

of a public authority with demonstrated earning capacity and some diversification of revenue sources, investors were willing to concede only a 15 per cent lower return for the privilege of tax exemption. A few weeks later, when the general market had improved another comparison could be drawn. The General State Authority of the Commonwealth of Pennsylvania sold a moderate-sized block of revenue bonds (\$20,000,000) at about the same time some full-faith and credit obligations of California for bonus payments were sold. The cost differential was about 30 basis points for equivalent maturities. It is invidious to compare the quality of credit of these two great states, but both deserve a high rating. It seems clear that most of the differential was due to the revenue status of the Pennsylvania borrowing.

Margins or differentials required for revenue financing can be tested in one more way: an examination of the borrowing costs of the school building authorities or corporations in Pennsylvania and Kentucky and Indiana. Exact measurement is impossible; comparison of the credit of school districts across wide areas is dangerous. But a general judgment, supported by the opinions of market observers, is about as follows: when these revenue devices for circumventing the debt limits were employed, investors required margins of from $1\frac{1}{2}$ per cent to $2\frac{1}{2}$ per cent over the going rate on general obligations. In the early postwar days these obligations required returns of $3\frac{1}{2}$ to 4 per cent to find a market when general obligations were selling from $1\frac{1}{2}$ to 2 per cent. In 1954 and 1955, with judicial testing of these obligations and some investment experience, they settled down to a differential of from about $\frac{3}{4}$ of 1 per cent to $1\frac{1}{2}$ per cent over general obligations.

It is thus quite evident that the costs of tax-exempt revenue borrowing lie somewhat between full faith and credit costs and the yields of fully taxable obligations, but rather nearer the latter. One further point seems fairly evident: when revenue financing has been substituted for full-faith and credit financing—such as in school building—this has not wholly sheltered the market for general obligations. Investors cannot put their money both places; if they buy tax exemption in one form, they have withdrawn their demand for other types of tax-exempt instruments.

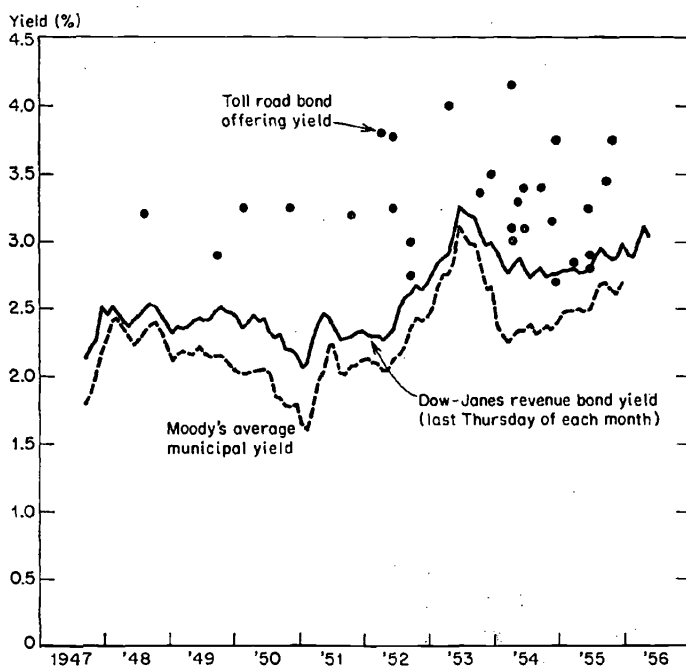
Although it is not feasible to compare borrowings costs of different debtors, particularly over periods of time, the secondary market

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for outstanding revenue bonds can be measured. This had been done by the *Wall Street Journal*. Until February 1957 they computed an index based on ten outstanding revenue bonds, the yields being the market reports of dealers but not based on actual transactions. The series is shown in Chart 13, together with the Moody's

CHART 13

Offering Yields on Toll Road Bonds Compared with
Yields on Outstanding Revenue Bonds



index. The ten bonds included in the Dow-Jones index, with two exceptions, would be counted as unusually high-grade revenue obligations. This series, therefore, cannot be used to measure new money costs. As indicated earlier, toll road bonds require the seasoning which can come only from actual operations. This is shown by the plotting of the new issue yield of most of the major toll road issues marketed during this period. Toll road bond interest rates show no clear pattern of conformity to the general market for outstanding obligations, though individual offerings clearly are so influenced.