Abstract - Bruce Davie was the authority on the economics of state and local bonds whose interest income is excluded from federal income taxation (by section 103 of the Internal Revenue Code). Beginning with his dissertation in 1963 and continuing to his untimely death in 2003, he accumulated vast knowledge about tax–exempt bonds. That knowledge was put to excellent use during his time at the House Ways and Means Committee from 1979 through the late 1980s. He played the critical role in writing sections 141 through 150 of the Code, the sections that determine what state and local issuers are permitted to do by section 103. His efforts focused on minimizing the federal subsidy’s economic distortions and maximizing its social benefits.

INTRODUCTION

That little limerick summarizes the role Bruce played in federal tax–exempt bond policy while working at the House Ways and Means Committee and the Treasury’s Office of Tax Analysis. His interest in state and local debt (often referred to as municipal bonds) began with his Harvard dissertation titled “State and Local Government Bond Issues before 1913: A Study of Increased Market Perfection” (Davie, 1963), and that interest continued for the next 40 years.

It is no accident that his dissertation analyzed the state and local bond market prior to 1913, for that year marked the end of what Edith Wharton might have called the market’s “age of innocence.” The adoption of the federal income tax in 1914 changed the market forever because the interest income earned by purchasers of municipal debt was excluded from the tax base. That treatment of state and local bond interest income was probably motivated more by the legal doctrine of intergovernmental tax immunity than by...
economic concerns.¹ From an economic perspective, the exemption of state and local interest income from the tax base meant that the federal government would pay a substantial portion of state and local governments’ interest costs. That subsidy would provide an incentive for bond market participants to adjust their behavior.

The reduction in borrowing costs probably generated additional state and local capital formation, a desirable thing if there were reason to believe the state and local sector under provides capital facilities across a broad range of its responsibilities. That might be the case if a significant share of the benefits from state and local capital facilities, such as for pollution control, accrue to persons outside the jurisdiction and if the jurisdiction’s taxpayers do not account for those benefits in determining capital spending. However, the interest subsidy applies to all capital facilities, even those for which spillover benefits are likely to be minimal.

The option of eliminating the exemption and allowing any federal concern with increasing state and local capital formation to be more carefully targeted using intergovernmental grant policy has largely been “off the table.” So Bruce did not worry too much about that idealized world. He focused instead on the incentive a subsidy provides for rent seeking, defined in the Palgrave dictionary as the socially costly pursuit of wealth transfers (Tollison, 1998). People and firms invest time and resources trying to capture that subsidy, to manipulate the legislative process to gain access to the subsidy for purposes not originally intended, and to receive a larger subsidy than intended.²

In the tax–exempt bond market, those seeking to gain are easily identified.

- Private businesses and individuals seek access to low–cost debt financing from state and local officials acting as adjuncts to the commercial banking system.
- State and local officials and their taxpayers try to earn arbitrage profits, borrowing at a low tax–exempt rate and investing the bond proceeds at high taxable rates.
- Underwriters and others involved in the financial production process try to capture some of the value of the tax subsidy both by increasing bond volume and issuance costs.

Bruce labored long and hard advising the Congress from the late 1970s through the late 1980s about ways to counter this behavior. The results of that labor appear on page after page of the Internal Revenue Code (the Code) in sections 141 through 150. Of course, some may argue that adding a great deal of complexity to the Code is not much of a legacy, and anybody who has read those sections has indeed confronted complexity. It is true that the social costs of taxation should be minimized, and compliance costs are an important component of those costs. But the alternative to those compliance costs imposed through the efforts of Bruce and others is to increase the other component of the social costs of taxation—distor-

¹ The belief that the Tenth Amendment of the constitution requires the exemption of interest income on state and local debt persisted until late in the 20th century when it was rejected by the Supreme Court in South Carolina v. Baker (1988). The Court held that the exemption rested on statutory, not constitutional, law and could be denied through the legislative process. For a discussion of the issue, see Davie and Zimmerman (1988).

² In a literal sense, the efforts of bond market participants are not directed toward establishing monopolies, which is the typical context in which rent seeking is analyzed. But participants’ efforts to capture the subsidy certainly are socially costly, and I could not devise a substitute term for “rent” that fit neatly into the title or the limerick running around in my head. So I exercise some poetic license.
tions that decrease economic welfare. One might say Bruce’s efforts generated private costs but public benefits.

This article focuses solely on Bruce’s contributions at the Ways and Means Committee. His time at Treasury is ignored, not because it was devoid of contributions, but because those contributions are obscured or buried within the bureaucracy and were more of the nature of what he managed to prevent rather than enact. We had many conversations that ensued after I would read about some ingenious new bond proposal that appeared in the Bond Buyer (the daily newspaper tracking the public securities market) or that had been brought to my attention by congressional staffers. Rare was the instance he had not heard about it and already delivered a strong dose of economic perspective to private users and their promoters at federal departments such as Transportation, Energy, and Housing and Urban Development (HUD). His success may at times have been less than he wished, as is evidenced by the whittling away in the last decade of some of the controls adopted during the 1980s, but that was not attributable to any flagging of his efforts.

BACKGROUND

For more than 50 years, the exemption of interest income on state and local debt stood untouched by legislative activity. State and local officials were free to issue bonds for any purpose, constrained only by their constituents and state and local legal structures. Federal law did not prohibit a jurisdiction from issuing bonds at low tax–exempt interest rates, investing the bond proceeds in taxable bonds with higher interest rates, and using the yield differential to finance current services. Nor did that law prohibit state and local officials from lending bond proceeds to private businesses that otherwise would have to finance the debt portion of their investments at higher taxable interest rates—a financial innovation pioneered in the 1930s by Mississippi.

Congress first placed restraints on bond issuance in 1968 when it enacted legislation to define and restrict the use of tax–exempt bonds for business activities deemed to be lacking a public purpose. That legislation was a direct attack on the commercial banking activity of state and local officials, although those officials characterized it as economic development activity. In 1969, arbitrage bonds were defined as bonds for which all or a major portion of the proceeds are used to acquire securities earning a yield materially higher than the yield on the tax–exempt bonds, and those bonds were declared to be taxable.

By the late 1970s and early 1980s, it was obvious that those few restrictions were not working. Arbitrage earnings, including those earned through the use of advanced refunding bonds (a second or third bond issue supporting one capital facility without retiring the earlier bond issues), were being issued more frequently. And the growing use of revenue bonds relative to general obligation bonds suggested use of bonds for private purposes was growing rapidly. General obligation debt pledges the state’s taxing power to pay debt service, and is the type of debt usually employed to finance public capital facilities. Revenue bonds pay debt service with project revenue, not tax revenue, and the absence of liability makes taxpayers less concerned about the use of tax–exempt bonds that finance facilities lacking a public purpose. Between 1969 and 1979, the revenue bond share of total bond issuance grew from 30 to 70 percent of total long–term bond volume. It was obvious that state and local use of tax–exempt bonds was drifting even further from its historical roots than had occurred in the 19th century’s canal, railroad, and land speculations. Those concerns dovetailed nicely with congressional interest in fed-
eral tax base broadening as a vehicle for controlling the growing federal budget deficit in the early 1980s.\textsuperscript{3} That is the policy environment that prevailed during much of Bruce’s time at the Ways and Means Committee.

**LEGISLATIVE ACTIVITY**

From the late 1970s through 1989, Bruce was a principal architect of many legislative provisions designed to restrict the rent-seeking behavior of the major players in the tax-exempt bond market and focus the federal subsidy of state and local interest costs on the construction of public capital facilities. Those efforts employed many tools that encompassed market-based manipulation of incentives, outright prohibition, redefining criteria and exceptions, volume limits, and improved information.\textsuperscript{4} The criteria defining taxable private use of bonds were made more inclusive, the exceptions that allowed bonds satisfying those private-use criteria but still qualifying for tax exemption were limited, volume caps were imposed on the remaining exempt private uses, beneficiaries were targeted more carefully to achieve social objectives, the use of bonds to earn arbitrage profits was limited, access to subsidies for private investment was denied or limited for the portion of private investments financed with tax-exempt bonds, and good government provisions were adopted requiring state and local officials to provide citizens more complete information about proposed bond issues.

**Public Purpose Definition**

In trying to control private use of tax-exempt bonds in 1968, Congress devised a two-part test. Bonds were considered to serve a private purpose and be taxable if more than 25 percent of the bond proceeds were used in a trade or business (the private use test) and if more than 25 percent of the debt service was secured by property used in a trade or business (the security interest test). It was a good start, but those criteria did not prevent huge growth in revenue bond (and private activity) usage.

In 1984, the private-use restrictions that previously applied only to proceeds used in a trade or business were extended to individuals. Those “consumer loan bonds” (later renamed “private loan bonds”) were made taxable, and were defined as bond issues for which more than five percent of the bond proceeds were loaned to individuals. In 1986, the 25 percent private use and security interest tests for trade and business activity were substantially tightened to 10 percent, and all of these bonds were renamed “private-activity bonds.”

**Limiting Tax Exemption for Private Activities**

When the criteria for determining private business activities that would not be tax-exempt were adopted in 1968, Congress decided to allow some activities to remain tax-exempt even though they qualified as taxable. Many activities were included in a list of “exempt facilities” and allowed to be financed with tax-exempt bonds. Additional activities were added to the list of exempt facilities in five tax acts between 1971 and 1981.

The effort to scale back bonds issued for those exempt activities began in earnest in the 1982 Act. Small-issue industrial development bonds (IDBs) were denied

\textsuperscript{3} “Congress was concerned with the volume of tax-exempt bonds used for private activities. . . . The increasing volume of private activity bonds has also caused mounting Federal revenue losses (Joint Committee on Taxation, 1982, pp. 98–9).}

\textsuperscript{4} This legislative history is developed more completely in Zimmerman (1991).
tax exemption if more than 25 percent of the bond proceeds were used for certain types of facilities—automobile sales or service, retail food and beverage service, or recreation and entertainment—even if no more than 25 percent of debt service was secured by prohibited property. In addition, no small-issue IDBs could be used for golf courses, massage parlors, hot tubs, and racetracks.

The 1984 Act limited the use of small-issue IDBs to manufacturing facilities, meaning that commercial facilities of any kind could no longer use tax-exempt bonds. Ironically, that restriction was motivated in part by the use of small-issue IDBs to finance shopping plazas on the outskirts of many smaller towns which many viewed as direct competition with struggling “main street” shopping districts. The Act also denied small-issue IDBs for land acquisition, airplanes, skybox or other luxury box, health club or gambling facility, and package liquor stores. Restrictions were placed on student loan bonds. However, when “consumer loan bonds” were defined as taxable bonds, Congress again decided to continue tax exemption for some activities that violated the five percent private use test, in particular qualified mortgage revenue bonds, veterans’ mortgage bonds, and student loan bonds, activities that had previously been granted the tax exemption privilege. No additional consumer loan bond provisions have been adopted, so the nation has been spared the development of state and local programs such as “automobile loan bonds.”

The 1986 Act imposed many more restrictions. Bonds issued to build facilities for sports, convention and trade shows, parking, and private pollution control were made taxable. The exceptions for airports, docks and wharves, and mass commuting facilities were narrowed. Use of bond proceeds was denied for many of those activities’ related facilities such as hotels and retail outlets both inside and outside terminals.

It should be noted that removing the exception for these activities did not mean they could not be financed with tax-exempt bonds. If taxpayers are willing to finance the activities with general obligation debt, then the private use test is not violated (less than 10 percent of the bond proceeds are secured by property used in a trade or business) and the bonds are not taxable private-activity bonds. Congress does not restrict the ability of state and local governments to issue bonds for any activity if taxpayers are willing to pledge their tax base as security for the bonds. This became an important issue in the 1990s as local governments began to finance professional sports stadiums with general obligation debt.

At or near the top of Bruce’s list of tax-exempt bond use lacking an economic rationale was the municipal electric utility industry. He could see no economic justification in the late 20th century for public provision of electricity—“municipal socialism” was his term for it. In his view, a public electric utility’s use of tax-exempt bonds simply enabled the utility to reduce its cost of capital and provide community residents with electricity prices subsidized by federal taxpayers. When Consolidated Edison in Chicago was threatened with public takeover of its investor-owned electricity facilities financed with tax-exempt bonds, the political leverage was suddenly available to curtail public power’s use of the tax-exempt bond subsidy. The 1987 Act defined tax-exempt bonds to finance the acquisition of investor-owned electric utility facilities as taxable private-activity bonds. Such bonds would only be tax-exempt to the extent they were able to receive an allocation from the state’s private-activity bond volume cap, an unlikely prospect given the size of most utility purchases and the intense competition among advocates of exempt private activities for scarce volume cap.
Volume Cap

Given the generous exceptions to the private–activity bond rules, another tool was needed to contain private–activity bond volume—the volume cap. The first volume restriction was imposed on mortgage revenue bonds in 1980. The volume of those bonds issued in a state was limited to the greater of $200 million or nine percent of the three-year average value of mortgages executed within the state for single-family residences. The concept of a volume cap was extended to qualified veterans’ mortgages in 1984, although that cap was structured differently.

The 1984 Act also extended the volume cap beyond the housing area. Certain IDBs and student loan bonds were constrained to the greater of $150 per state resident or $200 million. This Act also instituted the first cap based upon the outstanding stock of bonds rather than the annual issuance of bonds. Any one beneficiary’s use of small–issue IDBs was limited to $40 million at any one time. The 1986 Act reduced the volume cap established in 1984 to $150 million or $50 per state resident. Previous volume caps had excluded a variety of private–activity bonds from the cap, but this cap applied to most of those activities with the exception of nonprofit organizations, governmentally owned airports, docks and wharves, solid wasted disposal facilities, and qualified veterans’ mortgage bonds (which remained subject to their own cap). Particularly important was the inclusion of mortgage revenue bonds within the cap, for the volume of bonds issued for that activity is large.

Another candidate for Bruce’s list of unjustified tax–exempt bond use lacking an economic rationale, right up there with public power, was borrowing by very well endowed nonprofit organizations. Although a graduate of Harvard, it bothered him that such well endowed institutions could take advantage of their access to low–cost federally subsidized capital. As tax–exempt institutions, nonprofits do not have to pay federal income tax on the taxable earnings from their endowment funds invested in assets such as corporate stock and real estate, and those assets in effect constitute the collateral for the tax–exempt bonds. In effect, their tax–exempt borrowing allowed them to earn arbitrage profits denied to most users of tax–exempt bonds. The 1986 Act imposed a $150 million cap on a nonprofit organization’s outstanding stock of bonds, with an exception allowed for hospital facilities.

Targeting Beneficiaries

Absent restrictions on making loans to private individuals, states began to issue bonds and use the proceeds to make loans for the purchase of owner–occupied housing and the financing of a college education. Tax acts in 1980, 1982, 1984, 1986, and 1988 all included provisions to focus these mortgage subsidies on those less likely to own homes. The subsidy was restricted to mortgages for the financing of principal residences and a ceiling was imposed on the purchase price. Twenty percent of loanable bond proceeds were reserved for homes in areas with less than median income. In the 1986 Act, a limit was placed on the income of subsidy recipients. The 1988 Act tightened the purchase price and income limits to further target the subsidy to low and moderate income household.

Bruce was particularly concerned with the subsidy’s use by single, young people whose permanent income was markedly higher than their current income that satisfied the program’s target income rules. Evidence for this was the rapidity with which those receiving mortgage assistance sold their mortgage–bond financed homes and moved up. A provision to recapture the subsidy was adopted in 1988 for homes sold within 10 years of purchase by people whose incomes increased substantially during that time. The recapture was the lesser of 1.25 percent of the original...
loan balance for each year the loan is outstanding or 50 percent of the gain realized on the sale.

Several Acts during this time also improved the targeting of multifamily rental housing bonds to low and moderate income families. Bonds would be tax-exempt only if at least 20 percent of the units were occupied by low or moderate income households, and that target had to be met for a 20-year period. Those provisions were adjusted several times, and in 1988 they were applied to a nonprofit organization’s acquisition of for-profit residential housing property.

Arbitrage Profits and Advance Refunding

The general rule about what constitutes a “major” portion of a bond issue was first set at five percent. It allowed five percent of bond proceeds to be invested at unrestricted yield without violating the major portion standard that established a bond issue’s taxable status. The remaining 95 percent of bond proceeds could be invested at the materially restricted yield. The major portion standard was increased to 15 percent of bond proceeds, and exceptions were made for reserve funds, replacement funds, and sinking funds, all of which could be invested at unrestricted yields. Advance refunding opportunities multiplied the possibilities. Mortgage revenue bonds and student loan bonds, whose whole purpose was to borrow funds and acquire higher-yielding debt instruments in exchange for lending those funds to home buyers and students, were not subject to these restrictions.

Additional restriction of arbitrage earnings began in 1978 and used a technique Bruce often employed. A restriction would be imposed in exchange for granting exempt status to a particular activity that otherwise satisfies the conditions for taxable private-activity bond status. In subsequent years, that restriction would be extended to all private-activity bonds, and, if appropriate, eventually to all tax-exempt bonds.

The numerous arbitrage restrictions imposed between 1978 and 1989 frequently drew a distinction between high-yielding securities acquired in the pursuit of the purpose for which the bonds were issued, so-called “purpose” obligations such as mortgages and student loans, and so-called “nonpurpose” obligations, such as taxable federal government securities, that had no relationship to the purpose for which the bonds were issued. The dollar value of bonds earning nonpurpose arbitrage was restricted to 150 percent of annual debt service. Use of these earnings as a source of general revenue was first denied, and eventually subject to rebate to the federal government. Rebate requirements in turn were eventually extended to all tax-exempt bonds, with an exception provided for construction project proceeds of governmental and non-profit private-activity bonds that spent specified proportions of bond proceeds within set time periods from the date of issuance, beginning at six months and ending in three years. The length of time bonds can remain outstanding was restricted to 120 percent of the expected life of the facilities being built with all private-activity bonds, called the “term-to-maturity” provision.

The Private Cost of Capital

Another approach to controlling private business use was to deny the use of tax benefits intended for private investment to that portion of assets financed with tax-exempt bonds. Depreciation allowances for both equipment and structures historically have reflected a tax life that is shorter than the economic life of the asset and a more rapid rate of deterioration within that life span than is consistent with experience. In 1982, the portion of an asset financed with tax-exempt bonds was forced to take its depreciation deduc-
tions at a slower rate. Several types of private activities were exempt from this rule. In 1986, tax–exempt bond financed equipment was subjected to a longer asset life and a slower rate of deterioration within that new life, and all exceptions to the changed depreciation rules were eliminated except for multifamily rental housing.

Another technique used to reduce access to both the tax–exempt bond subsidy and private investment preferences was to impose governmental ownership requirements that are tantamount to denying depreciation and investment tax credits on the property. A three–part governmental ownership test was adopted in 1986 for tax–exempt bond financed property being leased or operated by a private party. The property is governmentally owned if the nongovernmental lessee elects not to claim depreciation or an investment tax credit, the life of the lease does not exceed 80 percent of the property’s expected economic life, and any lessee purchase of the property is at fair market value.

A tax–exempt bond that carries a federal guarantee can be issued at a lower yield, in effect lowering the cost of capital. The first instance of restricting the joint use of tax–exempt financing and federal guarantee occurred in 1980. The exemption for solid waste disposal was extended to include facilities configured to produce steam or alcohol. However, tax exemption was denied if the facilities received a federal guarantee, directly or indirectly.

That was Bruce’s first use of the strategy to impose a new restriction in exchange for granting private–activity bond status to a new activity in anticipation of applying the restriction more broadly in the future. That future arrived in 1984 when the prohibition on federal guarantee was extended to all tax–exempt bonds, whether private activity or governmental. The definition of federal guarantee was broadened to include any financial arrangement that transfers risk to the federal government.

**Good Government Provisions**

A final way to control private activity bond volume was to require that state and local officials inform their taxpayers about all potential bond issues. The theory is that a better informed public would force officials to consider the public benefits and costs of any bond issue as carefully as they consider their potential electoral benefits from providing public subsidies to private businesses and individuals.

In 1980, a registration requirement was imposed in exchange for extending tax–exempt status to solid waste disposal facilities configured to produce steam or alcohol, for the first time leaving a paper trail of those receiving interest income. Failure to register made the bonds taxable. That registration requirement was extended to all tax–exempt bonds in 1982.  

Also in 1982, a public hearing was required to discuss the merits of proposed IDB issues. Alternatively, the proposed bond could be approved by referendum to be held at the issuing jurisdiction’s normal election time. Officials also were required to file information reports on those bond issues to the Treasury Department. Those reports had to identify important characteristics of the issue such as interest rate, amount of proceeds, name of the elected official or legislative body that approved the issue, and the principal users of the bond proceeds. In 1984, information–reporting requirements were extended to mortgage revenue bonds, and the issuer

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5 It was this registration requirement that prompted the state of South Carolina to sue, claiming tax exemption was protected by the Constitution. The Supreme Court ruled tax exemption was a statutorily granted privilege. The history of the registration provision and the Supreme Court decision is discussed in Davie and Zimmerman (1988).
had to file an annual policy statement specifying how it intended to comply with the congressional intent to target the bonds to lower-income families. Finally, in 1986 the taxpayer approval and information reporting requirements were extended to all tax-exempt bonds.

SUMMARY

Bruce was involved in many economic issues over his years in government that encompassed service with Office of Management and Budget (OMB), the House Ways and Means Committee, and Treasury. Throughout his career, tax-exempt bonds remained a constant interest. Section 103 that established the exclusion of state and local interest from taxation may be a minor provision of the Code in dollar terms. But few have left as large an imprint on any part of the Code as Bruce did on those sections that struggle with defining what is authorized by section 103, specifically sections 141 through 150.

His interest in and enthusiasm for the policy battles over tax-exempt bonds and other issues never waned. Perhaps that was because those battles enabled him to apply such a broad spectrum of economic theory to structuring potential solutions. His legislative efforts reveal the application of the broad themes of public goods theory to defining public and private goods, efforts to incorporate theories about the role of imperfect information in economic decisions, and his knowledge of tax details such as accelerated and economic depreciation. He really did apply the full kit bag of economic tools. But I think his interest was also sustained because he had such a good grasp of economic history. That predilection toward the long view served him well when confronting the inevitable twists and turns of policy making in the U.S. Congress.

Two years ago, I asked Bruce if he was considering retirement. Unlike his usual protracted pause before responding to virtually any query, his response was immediate and direct. “No. I am having too much fun.”

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