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Tax-Exempt Bonds and the Economics of Professional Sports Stadiums

May 29, 1996

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Summary

Users of publicly owned stadiums receive subsidies from both state-local and federal taxpayers. The federal subsidy arises when the stadium is financed with state-local bonds issued at below-market interest rates paid for by exemption of the bonds' interest income from federal income taxes. A $225 million stadium built today and financed 100% with tax-exempt bonds might receive a lifetime federal tax subsidy as high as $75 million, 34% of construction costs. The total public subsidy for one year, 1989, of 21 stadiums with average construction cost of $50 million is estimated to have been $146.4 million, with $24.3 million, 17%, being federal subsidy. The federal subsidy will be at least quadrupled for the $200 million-plus stadiums now being built.

Proponents argue that these stadiums' economic benefits justify the subsidies. Economic analysis suggests this is not the case. One study found that a new stadium had no discernible impact on economic development in 27 of 30 metropolitan areas, and had a negative impact in the other three areas. The reasons for this can be illustrated with the Baltimore football stadium proposal. Economic benefits were overstated by 236%, primarily because the reduced spending on other activities that enables people to attend stadium events was not netted against stadium spending. And no account was taken of losses incurred by foregoing more productive investments. The state's $177 million stadium investment is estimated to create 1,394 jobs at a cost of $127,000 per job. The cost per job generated by the state's Sunny Day Fund economic development program is estimated to be $6,250. The economic case against federal subsidy of stadiums is stronger. Almost all stadium spending is spending that would have been made on other activities within the United States, which means benefits to the Nation as a whole are near zero. Non-economic benefits are sometimes used by state-local officials to support the political decision to provide subsidies. Such benefits might be of value to state-local taxpayers, but are less likely to be of value to federal taxpayers.

The change in treatment of tax-exempt bonds for stadiums made by the Tax Reform Act of 1986 has generated problems. It continues stadium financing as an open-ended matching grant for which the magnitude of the federal subsidy in any given year is determined without the input of federal officials and federal taxpayers; it virtually requires state-local governments to offer more favorable lease terms to its professional tenants; and it requires state-local governments to finance their subsidy with general revenue sources rather than benefit-type payments such as stadium-related user charges and rents.

Two options are considered to reduce the federal revenue loss from this subsidy. Elimination of stadium tax-exempt bond finance might be the solution Congress thought it was adopting in 1986. This would, however, restrict the independence of state-local officials in a way rarely invoked to control unproductive investments in private activities. A second option would allow stadium bonds to be issued only as tax-exempt private-activity bonds subject to the private-activity bond volume cap. Requiring stadiums to be financed with private-activity bonds would further reduce the incentive for such investments because these bonds are subject to rules that

increase project costs, rules that do not apply to stadiums financed with governmental bonds. One of these rules is the prohibition on use of private-activity bonds to finance luxury seating.

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I. INTRODUCTION

A professional sports team's use of a publicly owned stadium, arena, or training facility is subsidized by taxpayers when the team's lease or rental payment for use of the stadium or arena is insufficient to pay the operating and construction costs required if the stadium or arena were privately financed. (Hereafter, stadiums, arenas, and training facilities will be referred to as, simply, stadiums.) In the vast majority of these situations, both state-local taxpayers and federal taxpayers pay for the subsidy. The state-local subsidy arises because the tenants' lease or rental payments are insufficient to pay the operating and construction costs incurred by the state-local government.

A federal tax subsidy arises because some portion of the debt financing for the stadium is in the form of state-local bonds whose interest income is exempt from federal income taxes. This exemption causes the interest rate on these tax-exempt bonds to be lower than the interest rate on taxable bonds of equivalent risk. Thus, stadiums financed with tax-exempt bonds have lower interest costs than if they were financed with taxable private debt. These lower interest payments are paid for by federal taxpayers in the form of foregone federal tax receipts from the interest income that would have been taxed had taxable debt been used to finance the stadium.[1]

These bonds qualify as tax-exempt "governmental" rather than taxable "private-activity" bonds under the Internal Revenue Code (the Code) because a limited stream of rents is available to pay debt service on the bonds. If more substantial rents or other charges were paid by privately owned sports teams, the bonds would be "private-activity" bonds and not eligible for tax exemption because stadiums are not on the list of activities for which tax-exempt "private-activity" bonds can be issued.

One survey suggests that stadiums costing a total of more than $2 billion either have opened in recent years or are scheduled to be built by the turn of the century.[2] Many in Congress thought, mistakenly, that tax-exempt bond financing of these projects had been terminated in 1986. Renewed use of tax-exempt financing seems to have focused some congressional concern on the cost to federal taxpayers and its

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[1] Were the policy at issue here an evaluation of the federal subsidy to state-local government business enterprise, one would want to estimate the federal tax revenue foregone by not taxing the pre-tax return on a privately-financed-and-owned stadium.

[2] Morgan, John, "More Pro Teams Getting New, Richer Lease on Life," The Baltimore Sun, March 9, 1996. 1C.

role in benefiting owners and professional athletes at a time when programs for the less prosperous are being eliminated or reduced.[3]

Section II discusses the history, economic rationale, and current rules for the private use of tax-exempt bonds. Current law requires stadium bonds to be issued as governmental bonds, which are structured as an open-ended matching grant. Any stadium proposal prepared by sports franchise owners, state-local officials, and state-local taxpayers that satisfies the governmental bond rules is entitled to this federal subsidy. The section explains how the market structure of professional sports leagues interacts with this "entitlement program" to create a demand for federal subsidy whose budgetary costs are not subjected to routine evaluation by federal officials and federal taxpayers.

Section III examines the scale of this federal subsidy of stadiums. The present discounted value of the federal subsidy over the life of a stadium is estimated.[4] Estimates are also made of the total public subsidy in 1989 for each of 21 existing stadiums, and this total public subsidy is separated into amounts provided by state-local taxpayers and federal taxpayers. The factors that determine these state-local and federal shares are discussed.

Section IV reviews the literature that examines the economic benefits of stadiums to state-local taxpayers. This review indicates that most economic benefits studies overstate the economic benefits of stadiums and that most stadiums do not provide economic benefits that compensate for the costs incurred by state-local taxpayers. The economic benefits study prepared for the proposed Baltimore football stadium is used to illustrate these issues. It is then shown that, even if economic benefits did justify the state-local subsidy for most stadiums, the benefits would not justify a federal subsidy.

Section V examines two options that would change the tax-exempt bond law to control the federal revenue loss from this subsidy and make it less of an entitlement program for owners and players. One option is to eliminate the use of tax-exempt bonds for stadiums. The second option is to deny the use of governmental bonds for stadiums, but permit stadiums to compete with other private activities for the state's limited volume of tax-exempt private-activity bonds. A third option is to leave the law unchanged, perhaps on the basis that non-economic benefits are sufficient to justify the political decision to provide subsidies. Section VI presents conclusions.

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[3] Dorgan, Byron L., Testimony before the U.S. Senate Judiciary Subcommittee on Antitrust, Business Rights, and Competition, November 29, 1995.

[4] Relatively little has been written on the tax-exempt bond subsidy of publicly-financed sports stadiums. See Okner, Benjamin A., "Subsidies of Stadiums and Arenas," in Roger G. Noll, ed. Government and the Sports Business, Washington, D.C.: The Brookings Institution, 1974; and James Quirk and Rodney D. Fort, Pay Dirt: The Business of Professional Team Sports. Princeton: Princeton University Press. 1992. Both studies forego explicit discussion of tax-exempt bonds, leaving this federal subsidy subsumed within estimates of the total public subsidy.

II. PRO SPORT'S MARKET POWER AND THE PRIVATE USE OF TAX-EXEMPT BONDS

If state-local government officials are determined to provide big-league professional sports for their constituents, the pro leagues' monopoly position essentially requires publicly provided stadium subsidies. The entitlement nature of the tax-exempt bond law forces federal taxpayers to contribute to these subsidies.

A. PRO SPORT'S MARKET STRUCTURE

The number of metropolitan areas that desire to have professional sports franchises long has exceeded the number of available franchises. This situation prevails because the existing producers (holders of franchises in the four major professional sports leagues) control entry into the industry and prevent the entry of new competitors from equalizing demand and supply. In effect, the provision of "major-league" professional sports is characterized by monopoly.

This restriction of the supply of professional sports franchises intensifies competition among metropolitan areas for the scarce franchises. One way in which this competition manifests itself is by shifting a major portion of stadium facility costs from the private professional sports team to the public sector. If Cleveland, Houston, or New Jersey will not build or offer more favorable financial terms on a new or existing football, baseball, or hockey stadium, perhaps Baltimore, Northern Virginia, or Nashville will.[5]

B. PRIVATE USE OF TAX-EXEMPT BONDS: HISTORY AND ECONOMIC RATIONALE

Adam Smith might ask why the federal government of a nation usually devoted to markets free of government interference would subsidize the capital facilities of selected private businesses (such as professional sports teams) by allowing them to use tax-exempt bonds. It is a complicated story, but one whose telling is essential to the understanding both of current tax law that enables and legislative options that would change such subsidies for professional sports teams.[6]

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[5] This structure of the professional sports market has long been recognized and often explained in testimony to Congress. For the most recent instances, see Zimbalist, Andrew. Testimony before Committee on the Judiciary, House. Hearings on Professional Sports Franchise Relocation: Antitrust Implications. February 6, 1996; and Baade, Robert A. Testimony before the U.S. Senate Judiciary Subcommittee on Antitrust, Business Rights, and Competition, November 29, 1995.

[6] For a more complete discussion see Zimmerman, Dennis, The Private Use of Tax-Exempt Bonds: Controlling Public Subsidy of Private Activity, Washington, D.C.: The Urban Institute Press, 1991; and U.S. Library of Congress, Congressional Research Service, Tax-Exempt Bond Legislation, 1968-1990: An Economic Perspective, CRS Report 91-154 E, by Dennis Zimmerman, February 7, 1991, 42p.

The first modern income tax law in the United States, in 1913, excluded from taxable income the interest income earned by holders of the debt obligations (bonds) of states and their political subdivisions. This treatment was believed to be consistent with the Tenth Amendment to the Constitution and the doctrine of intergovernmental tax immunity: one level of government could not impose taxes on income received by individuals or businesses pursuant to contracts with another level of government (the bond is a contract between a state-local government and the bond holder) because such a tax would be equivalent to a tax on the government.[7]

This provision of the tax Code did not limit the purposes for which state-local governments issue bonds, though some states may have been constrained by their own laws. Eventually state-local officials began to issue bonds and use the proceeds to make loans to private businesses and private individuals for such things as manufacturing and commercial facilities, owner-occupied housing, and student loans. State-local taxpayers generally did not object to the issuance of bonds for these private purposes because the bond issues were structured to pay the debt service with revenue from the private capital facility being built or loan made, thereby avoiding any need to tax residents.

This situation prevailed until 1968 when Congress attempted to make bond issuance conform more closely to the economic, as opposed to the legal, rationale for the interest exemption. The economic rationale for this federal taxpayer-financed subsidy is that state-local public capital facilities tend to be underprovided because their benefits spill over political boundaries. The sheer number of state and local jurisdictions implies that any one jurisdiction's political boundaries likely fail to encompass all individuals and businesses who benefit from its public services. Thus, some of the collective consumption benefits spill over the border of a taxing jurisdiction, as in the case of some educational services or environmental projects. Collective consumption benefits from providing such goods exceed the benefits to taxpayers in the providing jurisdiction. Because taxpayers tend to be unwilling to pay for services received by nonresidents, it may be desirable for a higher level of government (which does receive payments from the nonresident spillover beneficiaries) to subsidize residents' consumption in order to induce state-local governments to provide the proper, that is, a larger, amount of facilities.

This economic perspective suggests the subsidy be restricted to capital facilities that generate benefits to the general public. The Revenue and Expenditure Control Act of 1968 (P.L. 90-364) began partial application of this restriction. It declared state-local bonds to be taxable if more than 25% of the bond proceeds was to be used by a nongovernmental entity and if more than 25% of the debt service (interest and principal repayment) was secured by property used directly or indirectly in a private business.

Congress did, however, make an exception for a limited list of "exempt facilities" and types of loans that exceeded these two 25% tests, specifically including sports

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[7] The U.S. Supreme Court in 1988 rejected this constitutional protection for the tax exemption, maintaining that the exemption is based in U.S. statutes. See South Carolina v. Baker, 485 U.S. 505, (1988).

facilities. This exception enabled continued tax-exempt bond financing of sports stadiums when a professional sports team used more than 25% of the stadium's useful service and when more than 25% of the debt service was paid for with revenue generated by the stadium through rents, ticket taxes, shares of concession and parking facilities, etc. These user-type financing fees met little resistance among state-local taxpayers, probably because nonusers of the stadium perceived it to be a free good—general taxes were not being levied to pay for the stadium.

This situation prevailed essentially unchanged until the Tax Reform Act of 1986 (P.L. 99-514), which adopted several provisions affecting private-use bonds. First, a bond issue was deemed to be a "private-activity" bond and taxable if more than 10% of the bond proceeds was to be used by a nongovernmental entity and more than 10% of the debt service was secured by property used directly or indirectly in a private business. A bond issue which did not exceed one of these tests was deemed to be a "governmental" bond and tax-exempt. Second, sports facilities were removed from the list of "exempt facilities" that retain eligibility for financing with tax-exempt private-activity bonds even though the bonds exceed the two 10% tests. Third, the total volume of most tax-exempt private-activity bonds for exempt facilities that could be issued by all the political jurisdictions in a state was limited to the greater of $50 per resident or $150 million. (Sections 141, 142, and 146 of the Code.)

C. CURRENT PRACTICE IN STADIUM FINANCING

Promoters of stadiums did not immediately react to this change in the law because $2.7 billion of bond financing for virtually every stadium in the planning or gleam-in-the-eye stages was allowed to remain eligible for tax-exempt financing by both general and stadium-specific transition rules included in the 1986 Act. Under these transition rules the bonds had to be issued before the end of 1990. But non-grandfathered post-1986 stadiums have been forced to alter their financial arrangements, and it is these stadiums that have been receiving considerable attention for their apparently generous public subsidies.[8]

Eligibility for tax-exempt bonds now requires that stadium bonds be issued as governmental bonds; they can exceed one but not both of the 10% bond tests. Since professional sports teams almost always will consume more than 10% of a stadium's useful services, stadium bond issues generally exceed the use test. In order to avoid exceeding the security interest test, a stadium bond issue must be structured so that no more than 10% of the debt service for the bonds is secured, even indirectly, by property used in a trade or business. In practical terms this means state-local taxpayers must be willing to pay at least 90% of the debt service from some revenue source other than stadium-generated revenue.[9]

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[8] See Morgan (1996), note 2, for a discussion of the lease terms for 6 recently built or soon to-be-built stadiums.

[9] Unresolved at this point is the tax-treatment of bonds issued to finance facilities "related to" a stadium. For example, the new Washington Redskins stadium in Maryland is privately financed with public financing for road improvements and parking. The Treasury (continued...)

The effect of these changes in bond law can be seen in the terms negotiated for new stadiums. The proposed $250 million stadium for the Milwaukee Brewers baseball team envisions a $160-million tax-exempt bond issue, a $40-million capital contribution from the team, and a $50-million loan from the state to be financed with taxable debt. The tax-exempt bond issue is to be paid with a 5-county regional sales tax of 0.1%. Public revenue generated from the stadium will not exceed 10% of the debt service on $160 million.

The proposed $200-million Baltimore football stadium is to be financed with $99 million in cash and $86 million in tax-exempt bonds. Both the cash and the debt service on the bonds would be paid from state lottery funds. Public receipt of stadium-generated revenue is not to exceed 10% of the debt service on $86 million. In both these deals, the tax-exempt bonds are being serviced with revenue generated from public sources other than the stadium.

The 1986 Act has had two noteworthy effects. The law says that stadium revenue cannot be used directly or indirectly to finance debt service. This precludes paying for debt service with general revenue (e.g., taxes or lottery receipts) and replacing that general revenue with infusions of revenue earned from the stadium. Thus, stadiums now being financed with tax-exempt bonds cannot generate stadium-based payments that exceed 10% of the debt service on the bond issue. In effect, the changes instituted by the 1986 Act virtually require that if a stadium is to be publicly financed, it must provide a more favorable lease to its professional tenants.[10] Cities, however, might attempt to substitute an up-front capital contribution from the team owner (as in the Milwaukee deal) for the stadium-generated revenue which the 10% rule forces them to forego.

The 1986 Act also redistributes the burden for debt service among state-local taxpayers as general revenue sources are substituted for stadium-related revenues. Stadium proposals now routinely must contend with organized taxpayer opposition to public financing, in large part because state-local taxpayers who are not fans, and hence not direct beneficiaries of the stadiums, are now being asked to pay for it along with those who are fans. Some stadium proposals have been defeated.

III. FEDERAL AND STATE-LOCAL STADIUM SUBSIDIES

The market structure of the professional sports leagues results in most franchise owners' stadium lease or rental payments being lower than would be necessary were the stadiums financed privately. Private ownership would require a rental payment at least equal to the sum of fixed costs (depreciation of buildings and equipment, a

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[9](...continued)
Department has issued proposed regulations on such facilities for public comment. See Federal Register, vol. 59, no. 250, December 30, 1994, 67658-67690. The federal subsidies calculated in this report do not account for related-facility financings that were not counted as part of the stadium bond issue.

[10] This does not preclude negotiating a lease agreement requiring the team to assume the operating cost of the stadium. These payments would not be counted in the 10% rule.

market rate of return on invested capital, and property taxes) plus operating expenses. In this section, the size of the public subsidy is estimated for 21 stadiums and then disaggregated into the shares provided by state-local and federal taxpayers.

A. THE SIZE OF THE STADIUM SUBSIDY

The market-based approach used by Quirk and Fort to estimate the annual subsidies received in 1989 by users of 21 publicly financed stadiums with 40-year useful lives is presented in the first five columns of table 1.[11] Of these stadiums, Lambeau Field opened first in 1957 (column 1), and the Orlando and Miami Arenas opened last, in 1988. The original cost of each stadium is presented in column 2. Column 3 contains estimates of the fixed cost that would have been incurred in 1989 had the stadiums been privately financed (depreciation and property taxes both based on replacement cost, plus a pre-tax real return on equity). Column 4 contains estimates of the public authority's operating income or loss (revenue minus variable cost) in 1989.[12] This operating income (loss) is deducted from (added to) fixed costs to obtain the total public subsidy in column 5.

These one-year subsidies total $146.4 million in 1989 for the 21 stadiums, and are quite substantial for some stadiums. Users of the Superdome received a subsidy in 1989 estimated to be $35.8 million;[13] the Orlando Arena, $12.5 million; Riverfront Stadium, $10 million; and Arrowhead Stadium, the Hoosier Dome, and the Kingdome, each about $9 million. At the other end of the scale, users of Lambeau Field and the L.A. Sports Arena received subsidies of $143 thousand and $331 thousand respectively.

B. WHO PAYS: FEDERAL OR STATE-LOCAL TAXPAYERS?

Who is paying these subsidies, state-local or federal taxpayers? In order to calculate the federal share of this annual total subsidy, it is first necessary to

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[11] Quirk and Fort (1992), note 4. Tables 4.14-4.16.

[12] Rental contracts usually include payments based upon shares of revenue from admissions (sometimes termed an admissions tax), concessions, parking, and luxury boxes. These revenues are offset by operating expenses for such things as labor, management, and supplies.

[13] Were the Superdome privately financed, its cost presumably would have been better controlled. Private owners would have realized that utilization of the facility could not generate a revenue stream adequate to provide a market rate of return on a facility costing $168 million.

Table 1. Federal and State-Local Subsidies to Users of Selected Publicly-Owned Stadiums, 1989 ($1,000s)

	(1) Year Opened	(2) Original Cost $	(3) Fixed Cost[1] $	(4) Net Operating Income $	(5) Total Public Subsidy $	(6) Interest Rate Spread[2] % points	(7) Maximum Federal Subsidy[3] $	(8) Maximum Federal Subsidy[3] % Total
Green Bay Lambeau Field	1957	969	293	150	143	0.76	5	3.5
L.A. Sports Arena	1959	5,000	1,265	934	331	1.03	41	12.5
Atlanta-FultonCounty Coliseum	1964	18,000	5,079	(1,478)	6,557	1.29	237	3.6
Anaheim Stadium	1966	24,000	6,445	5,605	840	1.37	346	41.2
San Diego Jack Murphy Stadium	1967	26,000	6,907	(64)	6,971	1.33	365	5.2
Salt Lake City Salt Palace	1969	17,000	4,200	(639)	4,839	2.05	363	7.5
Cincinnati Riverfront Stadium	1970	45,000	10,216	118	10,098	2.09	968	9.6
Kansas City Arrowhead Stadium	1972	53,000	11,577	2,599	8,978	2.80	1,469	16.4
Atlanta Omni	1972	17,000	3,353	1,130	2,223	2.80	471	21.2
Buffalo Rich Stadium	1973	22,000	4,070	0	4,070	2.45	517	12.7
Denver McNichols Arena	1975	13,000	2,152	(799)	2,951	2.92	341	11.6
Louisiana Superdome	1975	168,000	27,832	(7,922)	35,754	2.92	4,406	12.3

Pontiac Silverdome	1975	56,000	9,287	205	9,082	2.92	1,469	16.2
Seattle Kingdome	1976	67,000	10,455	1,535	8,920	2.39	1,398	15.7
New Jersey Giants Stadium	1976	68,000	10,896	5,150	5,746	2.39	1,419	24.7
New Jersey Byrne Meadow-lands Arena	1981	85,000	10,243	2,541	7,702	4.46	2,875	37.3
Minnesota Metrodome	1982	62,000	6,674	5,554	1,120	4.14	1,932	172.5

continued on next page

Hoosier Dome/Mkt Sq. Arena	1984	77,000	8,294	(1,100)	9,394	2.59	1,484	15.8
Charlotte Coliseum	1985	55,000	6,126	3,632	2,494	3.18	1,294	51.9
Orlando Arena	1988	110,000	12,628	128	12,500	2.54	2,014	16.1
Miami Arena	1988	50,000	5,708	(11)	5,719	2.54	915	16.0

1. Assumes a 7% pre-tax real rate of return on invested capital (Quirk and Fort assumed a 10% rate), a 40-year stadium life with straight-line depreciation based on replacement cost, and property taxes equal to 2% of replacement cost.

2. Moody's corporate and state-local long-term Aa bond yields. Bonds used to finance a stadium in year X are assumed to be issued in December of year X-2 (e.g., the yields for the Miami arena are those that prevailed in December 1986).

3. Present value of 30-year interest savings allocated across 40-year life of stadium such that the subsidy remains a constant fraction of the remaining real value of the stadium.

Sources: Quirk and Fort, *Pay Dirt*, note 4; *Moody's Municipal & Government Manual, 1990*; Federal Reserve Board of Governors, *Annual Statistical Digest* and *Banking and Monetary Statistics*, various issues; and CRS calculations.

calculate the interest savings for state-local taxpayers (the value of the federal subsidy) over the lifetime of each stadium. We illustrate this lifetime subsidy with a hypothetical $225 million stadium financed 100% with 30-year tax-exempt bonds rather than with the average $50 million stadium in table 1. The $225 million cost is

comparable to stadiums being built today—$233 million for Chicago's Comiskey Park in 1991, $225 million for Denver's Coors Field in 1995, $244 million for Cleveland's Jacobs Field in 1994, and $250 million for the proposed stadiums in Milwaukee and Northern Virginia—and provides a better idea of the magnitude of the typical maximum federal subsidy for stadiums beng built today.

The interest rate spread (differential) between long-term taxable corporate bonds and long-term tax-exempt state-local bonds, each rated Aa by Moody's Investors Service, has ranged between 2% and 4.5% over the last quarter century. The interest expense savings, assuming 1/30th of the bond principal is retired at the end of each year, are presented in table 2 for interest rate differentials of 2% and 4%, both undiscounted and discounted at a 7% rate.

The present discounted value of the interest savings if the interest rate spread is 2% is $37.7 million. This interest saving is equal to almost 17% of the $225 million construction cost. Should the interest rate differential be twice as high, the present value of the savings doubles to $75.4 million, about 34% of construction cost. The cost to state-local taxpayers and tenants of professional sports stadiums clearly is reduced by the substantial decrease in interest expense made possible by tax-exempt bonds.

The federal taxpayers' revenue loss usually exceeds the value of the interest savings to state-local taxpayers. The last row of table 2 estimates the present value of the federal revenue loss on these $225 million of bonds to be $47.1 million or $94.2 million depending on the interest rate differential.[14]

Table 2. Interest Savings and Federal Revenue Loss on Hypothetical $225 Million Stadium Financed With 30-Year Tax-Exempt Bonds ($ millions)

	Interest Rate Differential	
	2%	4%
Value of Interest Savings		
Undiscounted	$69.8	$139.5

[14] If the marginal tax rate of the bond purchaser who clears the market is lower than the average marginal tax rate of all purchasers of the bonds (meaning some of the bonds are purchased by those with marginal tax rates above the market-clearing rate), the revenue loss exceeds the value of the interest savings. Zimmerman estimated that the interest savings on tax-exempt bonds were about 60% of revenue loss prior to the 1986 tax act, and rose to about 80% after 1986 due to the decrease in progressivity of the marginal rate structure. See Zimmerman, The Private Use of Tax-Exempt Bonds, note 6, 101-102.
Some might argue that this revenue loss should be reduced by the revenue loss that would result from interest deductions on the debt-financed portion of the alternative privately-financed stadium. This is not done here. The creditors of a 100% debt-financed private stadium would pay taxes on their interest income. If some portion were equity financed, even higher taxes would be paid, and this revenue-loss estimate would be understated.

Discounted at 7%	$37.7	$75.4
Savings (Present Value) as Percent of Construction Cost	16.8%	33.6%
Present Value of Federal Revenue Loss	$47.1	$94.2

Calculations by CRS

With this background, we return to the 21 stadiums in table 1 for which the 1989 total subsidy was calculated. The first step in estimating the annual (1989) value of the tax-exempt bond subsidy is to make a calculation similar to that made in table 2 for each of these 21 stadiums, assuming that 100% of each stadium's original cost was financed with tax-exempt 30-year non-callable serial bonds. The present value of the 30-year interest savings is based upon the interest rate differential in column 6 of table 1, and is allocated across the 40-year life of the stadium such that the annual subsidy is a constant fraction of the undepreciated real value of the stadium.[15] The dollar value of the maximum federal subsidy and the federal share of the total subsidy for each stadium is presented in columns 7 and 8.[16] The one-year federal subsidies total $24.3 million and represent 16.6% of the total public subsidy.

Several factors determine these federal subsidies and subsidy shares. Other things equal, more recently built stadiums tend to have higher federal subsidies and subsidy shares because they are more costly (requiring larger bond issues) and because more of the original investment is undepreciated (implying a larger dollar payment for rate of return). Lambeau Field and the L.A. Sports Arena were built in the 1950s and, in 1989, have but 8 and 10 years of useful life remaining, respectively. Their federal subsidies were $5,000 and $41,000; 3.5% and 12.5% of the total subsidy.

The difference in interest rates between taxable and tax-exempt bonds is also important; other things equal, the larger the rate difference, the larger the federal subsidy and subsidy share. As illustrated in column 6 of table 1, bonds for the Byrne Meadowlands Arena were issued in 1979 when this spread was very high (4.46%); its federal subsidy and share are substantially higher than those for the Hoosier

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[15] Although the bonds issued to finance these stadiums all are retired after 30 years, one cannot assume state-local taxpayers receive zero subsidy for the last 10 years of the 40-year stadium life. Had taxpayers been forced to pay the higher interest cost for 30 years, those higher expenses would show up over the next 10 years as some combination of higher taxes, lower services, and higher debt burden.

[16] If some portion of a stadium was financed with current revenue, calculating the federal subsidy based on 100% tax-exempt financing still is reasonable. The stadium probably was each government's marginal investment; any current funding simply shifted the extra tax-exempt bonds to other planned investments. The estimate does overstate the actual subsidy if some portion of the original cost was financed with taxable debt or if call provisions were exercised.

Dome's comparably sized bond issue in 1982 that experienced a smaller interest rate difference (2.59%).

But the most important factor explaining the federal subsidy share is the rental contract with stadium tenants and whether it requires a large subsidy from state-local taxpayers. Anaheim Stadium was built in 1966. In absolute terms, it has little federal subsidy ($346,000) because the value of the original bond issue was small in 1989 dollars and only 17 years of useful life remained. But its federal subsidy share is 41.2% of the total subsidy, much higher than for stadiums of comparable vintage. For example, Jack Murphy Stadium was built one year later for almost the same cost, yet its federal subsidy share is only 5.2% of a much larger total subsidy. Column 4 shows that Anaheim Stadium's rental contract produced a $5.6-million operating profit for the public stadium authority to offset its facility subsidy; Jack Murphy Stadium's rental contract produced a $64,000 operating loss for San Diego. In effect, Anaheim Stadium uses its operating profit to pay a substantial share of its fixed cost, thereby reducing the annual subsidy required of state-local taxpayers.

The federal share of the Metrodome's total subsidy is 172.5%, implying that the federal subsidy of the Metrodome is 73% greater than the total subsidy received by users of the Metrodome. The size of the bond issue, share of useful life remaining, and interest rate differential contribute to this high federal share. But the Hoosier Dome (built two years later) has a greater original cost and more remaining useful life than the Metrodome, yet has a federal share of only 15.8%. And the Byrne Meadowlands Arena (one year older) has an even higher interest rate differential than the Metrodome, yet has a federal share of only 37.3%. The Metrodome's rental agreement that generates an operating profit of $5.5 million for the public authority is primarily responsible for reducing the state-local share of the subsidy and boosting the federal share above 100%. In contrast, the Hoosier Dome has an operating loss of $1.1 million.

This discussion illustrates that tax-exempt bonds play an important role in subsidizing professional sports stadiums. As has been shown by the Metrodome, it is even possible for stadiums built under the tax-exempt bond rules prevailing before 1986 for state-local taxpayers to make money while federal taxpayers were subsidizing a stadium.[17] Under the post-1986 tax-exempt bond law, such financial arrangements are no longer possible and the future state-local share of stadium subsidies will have to be larger.

The value and time path of the federal subsidy is determined by state and local officials at the time stadium financing is arranged. This is possible because the tax-exempt bond rules discussed in section II currently are structured in a way that makes

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[17] It is possible the year of 1989 was an above-average year for the Metrodome. Baim calculates that 13 of 14 stadiums had a net subsidy over their lives (a negative accumulated net present value of cash flow); the Metrodome's net subsidy after 10 years of life was $43,500. The value of the tax-exempt bond financing in any one year far exceeds this $43,500 lifetime subsidy, so it is likely that only federal taxpayers subsidized the Metrodome for its first 10 years. Baim, Dean V. The Sports Stadium as a Municipal Investment (Westport, Connecticut: Greenwood Press), 1994.

this tax preference the equivalent of an open-ended matching grant. The current bond law essentially makes stadium subsidies a federal entitlement program. Because the cost of a stadium being built today far exceeds the cost of almost all the stadiums in table 1, the dollar value of the federal subsidy and revenue loss can be expected to grow. Should Congress wish to curtail this subsidy, it would be necessary to change the tax rules. Whether it would be desirable in an economic sense to do so depends at least in part upon comparing federal taxpayer benefits to the federal revenue loss.

IV. ECONOMIC BENEFITS COMPARED TO COSTS: ARE STADIUMS WORTHWHILE TAXPAYER INVESTMENTS?

Section III shows that stadiums generally are money losers for state-local taxpayers when the public sector's benefits are limited to revenues flowing directly from the stadium. This is hardly surprising—the idea of a subsidy is to provide a net cash contribution from the public sector. But proponents of publicly financed stadiums generally publicize economic benefits studies that suggest stadiums will be profitable investments for the cities' (counties', regions', etc.) taxpayers when account is taken of the stadium's impact on economic development.

An evaluation of the reasonableness of these studies' estimates of economic benefits to state-local taxpayers is an important element in evaluating whether federal taxpayers receive benefits commensurate with their tax-exempt bond subsidy of the stadiums. Thus, this section begins with a discussion of the studies that estimate economic benefits for state-local taxpayers, and then turns to evaluating the soundness of the subsidy for federal taxpayers. Although the political unit backing any given stadium can range in size from a city to a state, this discussion proceeds from the perspective of a city.

A. STATE-LOCAL TAXPAYERS

The accuracy of the studies estimating the economic benefits from stadiums has been questioned.[18] Most of these studies appear to be conceptually flawed, and empirical evidence has emerged that suggests the economic benefits generated by these stadiums are not adequate, of themselves, to make them sound public investments.

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[18] For a discussion of benefit/cost methodology, see Gramlich, Edward M., Benefit-Cost Analysis of Government Programs, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1981, particularly chapter 5. For general criticism of the use of regional economic models by state-local governments to promote economic development schemes, see Mills, Edwin S., "The Misuse of Regional Economic Models," Cato Journal, vol. 13, Spring/Summer 1993, 29-39. For recent criticism specific to the methodology used in stadium studies, see Quirk and Fort, Paydirt, note 4, 172-176; Zimbalist, Testimony, 1996, note 5; Baade, Robert A., Stadiums, Professional Sports, and Economic Development: Assessing the Reality, Heartland Policy Study, No. 62, April 4, 1994, 5-8; and Baade, Robert A., Testimony, 1995, note 5.

1. Conceptual Issues

The economic benefits of a new stadium are usually expressed as an increase in income and jobs. The increase in income and jobs is in turn dependent upon the extent to which spending is increased. Thus, in these studies the starting point for assessing economic benefits is to estimate the spending increase associated with the stadium.

The process begins by estimating direct spending on goods and services by the team, the fans, and the players. This direct spending appears as income received by businesses; the businesses and their employees spend a fraction of this income on other goods and services; this second-round spending in turn appears as income received by businesses; these businesses and their employees in turn spend a fraction of this third-round income on other goods and services; and on and on with smaller amounts spent in each successive round. All of this second, third, and subsequent-round spending is referred to as indirect spending. The procedure usually followed is to estimate direct spending and multiply it by a "multiplier" to estimate indirect spending.[19] The sum of direct and indirect spending forms the basis for estimating the stadium's impact on the city's economy, usually expressed in terms of tax receipts and jobs created.

The procedures used to make these spending estimates generally suffer from two major conceptual flaws: unrealistic assumptions; and a failure to consider opportunity cost, that is, to compare the benefits from the stadium investment to the benefits that would accrue to the city from alternative investment opportunities (schools, roads, manufacturing subsidies, returning the tax dollars to citizens, etc.).

Unrealistic assumptions. Note the number of times the word "increase" was used in the first paragraph of this section describing economic benefits. Only additional spending that takes place in the city produces economic benefits for those living in the city. Since detailed information on geographic spending patterns for professional sports activities generally is not available, the economic benefits studies must make assumptions. These assumptions about direct spending often are too optimistic in three ways.

- One wants an estimate of income and jobs added to the city from direct spending. For two reasons, much of direct spending does not represent an increase in either. First, to the extent those attending the games are from the city, most of the dollars spent are dollars that otherwise likely would have been spent on restaurants, amusement parks, movies, theater, or other entertainment located in the city. Income and jobs created by stadium spending are offset by income and jobs lost in these other activities. Such spending should not be included as increases in direct spending. Second, much of the income generated by this adjusted direct spending immediately leaves the city as profits

[19] These "multipliers," which enable one to estimate the amount of second, third, and subsequent-round spending generated by one dollar of direct spending, are available from the Commerce Department for industry subgroups (including the entertainment industry) for different-sized geographic areas.

and wages remitted to the home offices of businesses providing imported goods and services, savings by franchise owners and players, and spending by owners and players outside the city. No city income and jobs are created by such "imported" goods and services and "exported" income.

- The "multipliers" used to estimate indirect spending from direct spending often are too large, in effect overestimating the share of second, third, and subsequent-round spending that occurs in the city.

- Studies for stadiums with state or regional public financing should extend the economic area of analysis beyond the city to include all the political jurisdictions contributing financial support to the subsidy.

Opportunity cost. Establishing that a stadium will generate positive economic benefits is necessary but not sufficient information to justify a subsidy on economic grounds. One needs to know whether an equivalent subsidy of some alternative activity (or returning the tax dollars to citizens for personal consumption and saving) can generate a greater amount of benefits. If an alternative generates $2 million of benefits net of subsidy and the stadium generates $1.5 million net of subsidy, the stadium can be viewed as imposing a $0.5 million loss on taxpayers, not a $1.5 million benefit. Economic benefits studies for stadiums rarely make an effort to compare the benefits to be gained to those from alternative investment projects.

2. Empirical Evidence

The importance of these assumptions about direct and indirect spending is illustrated in the economic impact estimates for the soon-to-be-built football stadium at Camden Yards in Baltimore presented in table 3. The first row contains the estimates prepared by the Maryland Department of Business and Economic Development (part of the state's executive branch).

Table 3. The Role of Assumptions and Opportunity Cost In Assessing the Economic Impact of Stadiums: The Case of the Baltimore Football Stadium

Source of Estimate	Economic Benefits ($ millions)	Jobs Created	Cost of Investment ($million)	Cost per Job ($1000s)
Dept. of Business and Economic Development	$110.6	1,394	$177	$127
Department of Fiscal Services	$33.0	534	$177	$331
Sunny Day Fund Development Activities	not available	5,200	$32.5	$6.25

Sources: Maryland Department of Business & Economic Development, *The Impact of a Baltimore Pro Football Team on the Economy of Maryland*, November 1995; Maryland Department of Fiscal Services, *Estimated Impact of a Football Stadium at Camden Yards*, January 1996; and Office of the Governor, *Summary of Legislation Proposed by Parris N. Glendening, Governor, Kathleen Kennedy Townsend, Lt. Governor*, 1996 Session of the Maryland General Assembly, no date.

Two assumptions were made in calculating the first row that some would consider overly optimistic. First, all direct spending is considered to be additional spending; that is, none of the football spending is judged to replace other entertainment spending. Second, the size of the multipliers used to calculate indirect spending exceed those used in a 1987 economic impact study of the baseball stadium now known as Oriole Park at Camden Yards: for output multipliers, a range of 1.04 to 1.4 in 1987 compared to a range of 1.9 to 3.8; and for employment multipliers, a range of 1.2 to 1.4 in 1987 compared to a range of 1.5 to 2.0. These assumptions produced economic benefits of $111 million and 1,394 additional jobs.

The second row contains estimates made by the Maryland Department of Fiscal Services (part of the state's legislative branch). These estimates assume 80% of direct spending replaces or substitutes for other spending in the state, and uses the lower multipliers to calculate indirect spending. These assumptions produce economic benefits of $33 million and 534 additional jobs.[20] The sensitivity of the estimates to the assumptions is striking.

Dueling assumptions are nothing new in economics. Although extreme assumptions (such as no substitution in direct spending) can be easily dismissed, the exact values to use often are unknown. Thus, dispensing with assumptions is not feasible. What is needed is a test of whether proponents' optimistic assumptions represent reality.

Suppose proponents' claims of substantial economic benefits from stadiums are true. If one adjusts for all other factors that might create differences in economic development among cities, one should expect to observe higher economic development in cities that constructed stadiums. Baade (1994) estimates the effect construction of a stadium has had on an area's real per capita income growth from 1958 through 1987; in this effort he studied a sample of 48 metropolitan areas, 36 with and 12 without professional sports teams.

Of the 30 MSAs where there was a change in the number of stadiums or arenas ten years old or less, 27 MSAs showed no significant

[20] Neither study adjusts these estimates downward to reflect the adverse effect on the Maryland economy of the $80 million in personal seat licenses. Much of this $80 million can be expected to reduce Marylanders' spending on other goods and services in Maryland. Only $20 million of this revenue is to be used to fund construction of the stadium and perhaps replace spending previously financed with the personal seat license money. The remaining $60 million goes to the football team, and one might expect that a very substantial share of that $60 million will not be spent in Maryland.

> **relationship between the presence of a stadium and real, trend-adjusted, per capita income growth.** In all three of the remaining cases (St. Louis, San Francisco/Oakland, and Washington, D.C.), the presence of a sports stadium was significantly *negative*.[21] [emphases in original]

Baade (1996) extended his analysis to job creation. He concluded "Apparently, adding a ... stadium to a city's economy does not increase aggregate spending in the city ... in an amount sufficient to ... induce job growth that is measurably different from zero."[22]

None of the information in this section has taken the final step, which is to compare the economic benefits of a stadium with the economic benefits from the best alternative public investment or tax reduction. The last row of table 3 makes a rough attempt to do that for the football stadium at Camden Yards. The returns to the state are estimated by the Economic Development Department as 1,394 full-time "jobs created," a cost per job created by the stadium of $127,000. In contrast, the 5,200 full-time jobs created or retained by the state's Sunny Day Fund for economic development since its inception have cost Maryland's taxpayers $32.5 million, a cost of $6,250 per job. As a wealth generator or a job creator, the stadium appears to be a poor investment compared to Maryland's Sunny Day Fund.[23] The stadium will impose losses on Maryland taxpayers relative to alternative investments.

B. FEDERAL TAXPAYERS

The preceding section indicates that the state-local economic benefits from a stadium are generally overestimated and may be smaller than can be obtained with alternative public investment opportunities. The most straightforward way to assess the benefits received by federal taxpayers is to utilize the same conceptual framework used to assess the economic benefits for state-local taxpayers.

The crucial issue in determining the magnitude of economic benefits from direct spending for the state-local government was the share of the spending that came from outside the political jurisdiction providing the subsidy. Table 3 shows that the economic benefits for Maryland declined from $111 million to $33 million when direct spending was adjusted downward primarily to reflect the alternative assumption that 80% of direct spending would be by Maryland residents who would spend on other activities, thus providing no net economic benefit.

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[21] Robert A. Baade, Stadiums, Professional Sports, and Economic Development: Assessing the Reality, note 18, p. 15.

[22] Baade, Robert A., "Professional Sports as Catalysts for Metropolitan Economic Development," Journal of Urban Affairs, vol. 18, March 1996 (forthcoming).

[23] As discussed, the stadium jobs are probably overstated. It is also likely that the 5,200 jobs created or retained by the Sunny Day Fund are overstated. What is important here is that both job estimates have been produced by stadium proponents, that is, the executive branch of Maryland's state government. Using the Department of Fiscal Services estimates would increase the stadium's cost per job to $331,000.

Now consider whether any increased spending on a stadium that is counted as a benefit to state-local taxpayers represents a benefit to federal taxpayers. Unless the fans attending the games come from foreign countries, all spending is made by residents of the political jurisdiction providing the tax-exempt bond subsidy, the United States of America. Except for those few U.S. residents who will reduce their savings to attend games, all of this spending is offset by reductions in spending on alternative entertainment or other activities. To the federal taxpayer, very little increased spending and economic benefit arises from this subsidy.

The subsidy is only worthwhile to federal taxpayers if they value spending and associated jobs in one location more than they value them in another location. If that is the case, it is only this differential valuation that should be included in taxpayer benefits.[24] But it is unlikely that federal taxpayers value the spending and associated jobs attached to a stadium differently according to their location—the subsidy is not approved for some locations and disapproved for others. It is, in effect, an entitlement program without regard to the location of the spending and associated jobs.

Some proponents of stadiums counter evidence that economic benefits are not sufficient to justify state-local subsidies with a case that qualitative benefits justify such a subsidy.[25] By this they mean such benefits as the stadium acting as a sort of "take-off" factor motivating corporations and individuals who are making locational choices to view the city more favorably, the psychic income residents receive from living in a "big league" city, and some unspecified intangible entertainment value. Such arguments are not directly testable propositions. If, however, the analysis in this report is correct that stadiums represent a drag on a local economy (compared to alternative investments) and business accurately perceives this effect, a stadium is unlikely to act as a "take-off" factor for development.

One need not pass judgment on the validity of such qualitative benefits as factors in justifying a state-local subsidy in order to render judgment on their validity in justifying a federal subsidy. Reiterating the analysis above, the subsidy is only worthwhile to federal taxpayers if they value qualitative benefits in one location more than they value them in another location. If that is the case, it is only this differential valuation that should be included in taxpayer benefits. But it is unlikely that federal taxpayers value the qualitative benefits attached to a stadium differently according to their location—the subsidy is not approved for some locations and disapproved for others. It is, in effect, an entitlement program with absolutely no attention paid to the location of the qualitative benefits.

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[24] For a more complete discussion of these issues, see U.S. Library of Congress, Congressional Research Service, Is Job Creation a Meaningful Policy Justification?, Report 92-697 E by Jane G. Gravelle, Donald W. Kiefer, and Dennis Zimmerman, September 8, 1992, 18p; and Courant, Paul N., "How Would You Know a Good Economic Policy If You Tripped Over One? Hint: Don't Just Count Jobs," National Tax Journal, December 1994, 863-881.

[25] For example, see Chema, Thomas V., "When Professional Sports Justify the Subsidy: A Reply to Robert A. Baade," Journal of Urban Affairs, vol. 18, March 1996 (forthcoming).

V. OPTIONS REDUCING THE USE OF TAX-EXEMPT BONDS FOR STADIUMS

The economic case for federal subsidy of professional sports stadiums is weak, which suggests its status as an entitlement for cities, owners of professional sports franchises, and professional athletes might bear reconsideration. Two options are discussed for reducing federal revenue loss from the use of tax-exempt bonds to finance these stadiums: elimination or limitation.

A. ELIMINATION

State-local governments cannot issue tax-exempt private-activity bonds to finance stadiums for professional sports teams, but can issue governmental bonds for this purpose. The authority to issue federal tax-exempt governmental bonds for stadiums could be withdrawn. Such a move would be consistent with the information provided in this report that these stadium projects provide no economic benefits for the federal taxpayer.

Some believe elimination would also be consistent with the intent of Congress in 1986. The general explanation of the 1986 Act states: "The Act repeals the prior-law exceptions permitting tax-exemption for interest on bonds to finance sports facilities; .... "[26] This seemingly unambiguous statement of intent is supported by H.R. 3838, the House bill that led ultimately to the Tax Reform Act of 1986. This bill proposed repeal of the security interest test.[27] Had repeal been adopted, stadium bonds would have been eliminated because they would always exceed the one remaining test, the 10% use test.

The House/Senate conferees decided, however, to retain the security interest test, apparently to avoid prohibiting tax-exempt bond use for public facilities managed by private entities which do not generate any substantial revenue, such as New York City's zoos and libraries. Some might argue that retention of the security interest test need not indicate waning congressional intent to eliminate bonds for stadiums. Rather, it might be viewed as a reasonable response to the problem of maintaining bond issuance authority for such privately managed public entities, particularly if legislators generally believed that stadium proponents would be unable to induce state-local taxpayers to switch to governmental bond financing.

The 1986 Act could have included an outright prohibition of governmental bonds for stadiums. At that time, however, Congress had never imposed an outright prohibition on tax-exempt bond use for any activity financed with governmental bonds. Two such prohibitions were enacted, however, in the Omnibus Budget Reconciliation Act of 1987 (P.L. 100-203). This act generally eliminated the ability of municipalities to use tax-exempt governmental bonds to finance the takeover of

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[26] Joint Committee on Taxation, General Explanation of the Tax Reform Act of 1986 (H.R. 3838, 99th Congress: Public Law 99-514), May 4, 1987, 1175.

[27] U.S. Congress. House. Tax Reform Act of 1985. Report of the Committee on Ways and Means on H.R. 3838, 99th Congress, 1st sess, Report 99-426, 520.

investor-owned electric and gas utilities in order to convert them into municipal utilities (section 141(d) of the Code). The act also denied the use of governmental bonds to finance residential rental property which is not located within the jurisdiction of the issuer [section 148(b)(2)(E)]. Thus, precedent does exist for such a prohibition directed to a specific activity.

With these two exceptions, the tax-exempt bond law currently allows state-local governments to issue tax-exempt bonds whose proceeds will be used by governmental or private entities for virtually any activity, provided taxpayers agree to pay 90% or more of the debt service on the bonds from other revenue sources. For example, nothing in the federal tax law would prevent a local government from issuing bonds to finance a privately owned car dealership, provided at least 90% of the debt service on the bonds was paid from general revenue (meaning the dealership's revenue contributions to the local government did not exceed 10% of the debt service). Constraints on such projects would have to come from the state's constitution, statutes, or through citizen resistance encountered in the political process required to implement such a policy.

In fact, U.S. tax-exempt bond law currently allows for federal subsidy of certain private businesses that requires less fiscal responsibility of state-local taxpayers than they have for stadium bonds. For example, tax-exempt small-issue industrial development bonds can be issued for up to $10 million of private investment in manufacturing facilities and the debt service on those bonds can be paid by revenue generated from the manufacturing facility, not from state-local taxes. In other words, these are exempt private-activity bonds issued for facilities that exceed both the use and security interest tests but retain the tax-exempt bond issuance privilege, albeit subject to state volume caps. This contrasting federal tax treatment raises the question of what rationale would justify total denial of bond subsidy for stadium projects that are alleged to stimulate economic development but allow subsidy for privately owned manufacturing facilities that are also alleged to stimulate economic development, particularly when the evidence suggests that manufacturing facilities are no more successful at generating benefits for federal taxpayers than are stadium projects.[28]

B. LIMITATION

An alternative option would reverse the policy decision made in 1986 that eliminated use of tax-exempt private-activity bonds to finance stadiums and ushered in the use of tax-exempt governmental bonds. The reverse policy would deny governmental bond financing and permit tax-exempt private-activity bond financing that is subject to the state volume cap.

Implementation would entail repeal of the security interest test for stadium bonds, in effect adopting a more targeted variant of the repeal originally proposed by H.R. 3838 as passed by the House in 1985. Use of governmental bonds to finance

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[28] U.S. Library of Congress. Congressional Research Service, Small-Issue Industrial Development Bonds, CRS Report 94-771 E, by Dennis Zimmerman, October 4, 1994, 10 p.

stadiums used by professional teams would be precluded because such bonds would always fail the 10% use test. Stadium bonds for which private use exceeds 10% of bond proceeds would be classified as private-activity bonds, and stadiums would be added to the list of private activities for which tax-exempt private-activity bonds can be issued. These bonds would be subject to the state volume cap.

This scheme would have several effects relative to the current situation.

- Use of the volume cap for a stadium would force most states to forego its taxpayers' benefits from other bonds: small-issue IDBs, mortgage revenue bonds for first-time home buyers, student loans, etc. State-local governments would be forced to weigh their taxpayers' benefits from a bond-financed stadium investment against their taxpayers' benefits from other bond-financed private activities, all of which provide few net benefits to the federal taxpayer.

- If states in which stadiums are built already use most of their private-activity bond allotment, stadium bonds would replace tax-exempt private-activity bonds issued for other purposes. Tax-exempt bond financing of stadiums would entail no additional cost to federal taxpayers.

- State-local governments could use rents or benefit-type user taxes to finance stadiums, unlike the current system which forces financing from revenue sources unrelated to stadiums. This would eliminate the adverse distributional consequences among state-local taxpayers that occur when all taxpayers are forced to contribute to a facility whose benefits are consumed primarily by an identifiable subset of taxpayers, fans of the team.

- The size of the state-local subsidy to professional sports teams might be reduced. Current treatment requiring governmental bond financing prohibits tax-exempt financing if stadium revenue flowing into state-local coffers exceeds 10% of tax-exempt bond debt service. This leaves most of the revenue associated with the stadium (parking, concessions, tickets, etc.) in the hands of the team. Allowing stadium financing only as private-activity bonds within the volume cap would allow more than 10% of debt service to be paid by stadium-related revenue. This advantage only results if state-local governments have not reacted already to the interaction of the governmental bond/10% rules by requiring the team to contribute a larger share of the project's capital costs than it would under the private-activity bond option.

Requiring private-activity bond financing would also subject stadium bonds to a series of restrictions that do not apply when issued as governmental bonds. These restrictions taken together would reduce the public subsidy, raise the cost of stadium projects, and perhaps reduce the volume of stadium bonds.

- Requiring stadiums to be financed with private-activity bonds would reduce the incentive for investing in such facilities because no portion of the proceeds of a tax-exempt private-activity bond issue may be used to finance a "skybox or other private luxury box." (Section 147(e) of the Code.) Tenants are pressuring cities to replace or upgrade stadiums that are quite new, such as the

Charlotte and Miami facilities built in 1988, due to inadequate luxury seating. The exclusion of luxury seating revenue from sports leagues' pool of shared revenue increases the return on luxury seating investments relative to alternative investments (such as developing better players or more appealing give-aways and promotional efforts).

- Issuance costs financed with the proceeds of a tax-exempt private-activity bond issue are limited to 2% of bond proceeds. Costs in excess of 2% must be financed with more expensive revenue sources. (Section 147(g) of the Code.)

- Tax-exempt private-activity bonds issued for construction of facilities must rebate arbitrage profits earned on unspent bond proceeds even if the requirement for spending an increasing share of bond proceeds over a 2-year period is met. (Section 148(f)(C) of the Code.)

- Advance refunding to take advantage of favorable interest rate changes that precede call dates on the original stadium bond issue is prohibited for private-activity bonds. (Section 149(d) of the Code.)

- Private-activity bonds issued to finance purchase of an existing stadium must make rehabilitation expenditures that equal or exceed the dollar value of the bond issue. (Section 147(d) of the Code.)

VI. CONCLUSIONS

Publicly owned stadiums used by professional sports teams are heavily subsidized by both state-local and federal taxpayers. Proponents of stadiums argue these subsidies are justified by the economic benefits produced by the stadiums. Economic analysis suggests, however, that neither of these groups of taxpayers appears to receive economic development benefits sufficient to justify their subsidy. Non-economic benefits are sometimes used by state-local officials to support the political decision to provide subsidies. Such benefits might be of value to state-local taxpayers, but are less likely to be of value to federal taxpayers.

The change in treatment of tax-exempt bonds for stadiums made by the Tax Reform Act of 1986 had some detrimental economic effects. It continued stadium financing as an open-ended matching grant for which the magnitude of the federal subsidy in any given year is determined without the input of federal officials and federal taxpayers. It virtually required state-local governments to offer more favorable lease terms to its professional tenants. And it forced state-local governments to finance their subsidy with general revenue sources rather than benefit-type taxes such as stadium-related user charges and rents.

If it is desired to reduce the federal revenue loss from this subsidy, two options might be considered. Elimination of stadium tax-exempt bond finance might be the solution Congress thought it was adopting in 1986. This would, however, restrict the independence of state-local officials in a way that rarely has been invoked to control unproductive investments in other private activities. A second option would allow

stadium bonds to be issued only as tax-exempt private-activity bonds subject to the private-activity bond volume cap. This option also would subject stadium projects to a variety of rules that apply only to private-activity bonds, rules whose effect is to increase stadium costs.

The economics of professional sports forces owners to obtain the best players and stadium deals for their money. Thus, no longer do sports team owners look for simple operational stadium leases that would allow them to play on "any old field," private sta-dium or municipal stadium. Instead owners are seeking to build new state of the art stadiums.Â Section II of this Article provides a background of tax-exempt bond financing for sports stadiums and the basics of tax-exempt bond financing within the intricate statutory framework of the Code.1 Section III considers the congressional threat to curb or. * Member, DeCotiis, Fitzpatrick, Gluck, Hayden & Cole, LLP, N.J.; former General Counsel to the West Virginia State Treasurer.