Financing High Speed Rail Meeting the Transportation Challenge of the '90s

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As cars and airplanes increasingly clog our decaying highways and graying skies it is clear that this nation urgently needs a solution to its growing transportation problems. The improvement and expansion of current passenger transportation systems is destined to be forever too little, too late. Population growth and development are occurring too quickly to keep up with their demands. Any expansion of our highways and skyways, however, means a corresponding increase in pollution and congestion thereby diminishing the quality of life for those who are the intended beneficiaries of such improvements. We need to exploit a new transport system, one whose progenitors have been with us for over 150 years but that is at the cutting edge of technology, namely high speed rail travel.

Travel by rail has had a long and glorious history in this country, help-

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ing to link the wide expanse between the east and west coasts. High speed rail can help to usher in a new Golden Age of train travel and alleviate many of our growing transportation problems. In order to adopt high speed rail in the future, planners and developers should look across the seas and bring the efficient, safe and convenient train travel of other countries back to our nation's shores.

High speed rail offers numerous advantages. The train can travel at speeds of up to 300 miles per hour. It can travel from city center to city center in many cases faster than an airplane or automobile, and it operates on efficient, low-polluting electricity, not ozone-depleting and smog-creating hydrocarbons. Thus high speed rail can meet tomorrow's growing transportation needs today with few of the problems associated with current systems.

However, high speed rail infrastructure, including acquisition of expensive rights of way, is costly. It requires a long-term commitment of capital and resources with no immediate financial payback. A spokesperson for General Electric Co.'s Transportation Systems Business Operation succinctly stated the problem surrounding high speed rail in this country: "The hangup isn't technology or equipment. Clearly, we have the technology to build equipment that will travel at [high] speeds. It's the financing, the economics of it and getting things in place."[1] To overcome this obstacle, various creative financing solutions have been developed to insure an adequate supply of working capital. High speed rail projects currently in various stages of development rely on numerous combinations of public and private financing options. This Article will explore these financing options, both as they have been proposed and how they otherwise could be utilized for maximum efficacy.

I. THE CASE FOR HIGH SPEED RAIL

Some high speed rail systems can make efficient use of existing rights-of-way and transportation corridors. British high speed trains travel on improved railbeds that are shared with other rail services while the French TGV trains use existing rights-of-way when traveling in and around urban areas.[2] A high speed rail system utilizing tilt trains, such as the TALGO Pendular from Spain, that has a passive tilt system, or the Bombardier LRC from Canada, that has an active tilt system, can use existing tracks after relatively modest railbed improvements have been made. This greatly reduces the cost of constructing and operating a high speed rail system. Given the lack of available funding for high speed rail in the

1. Sfiligoj, *Congress Puts High-Speed RR on Fast Track*, Metalworking News, Apr. 20, 1987.

2. Thompson, *High-speed Rail*, 89 TECH. REV., Apr. 1986, at 32A.

United States, tilt trains may be the most appropriate technology for high speed rail particularly in the Northeast Corridor.[3]

In some cases, proposed magnetic levitation ("maglev") trains can be built along or above existing interstate highways and city streets thus avoiding the need to acquire additional and most likely expensive rights-of-way.[4] The use of existing rights-of-way also helps to minimize any adverse environmental impacts of high speed rail systems.[5] Moreover, there are additional environmental advantages of high speed rail. High speed rail systems consume much less energy than other forms of transportation[6] and air pollution is much less than that caused by automobiles.[7]

High speed rail also helps the environment by reducing airline traffic,

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3. *See* Boston Globe, Feb. 20, 1989, at 41 (city ed.). Tilt trains can lean into curves by as much as ten degrees. This allows them to go quickly around sharp curves without flinging passengers from side to side. The Canadian Bombardier cars use a system of sensors and hydraulic motors to bank each car as it enters a curve. The TALGO Pendular cars, marketed by the RENFE-TALGO Group, a joint venture between the Spanish National Railway Co. (RENFE) and Patentes Talgo S.A. (TALGO), use a series of springs that suspend the car from above and allow the base of each car to swing outward as it rounds a curve. *See id.* Trains with tilting trailers can run through curves thirty percent faster than conventional trains and unlike many high speed trains they do not require a straight dedicated track. Rosen, *High Time for U.S. High Speed Rail*, MECHANICAL ENGINEERING, Feb. 1989, at 34.

At the request of the Coalition of Northeastern Governors (CONEG), Amtrak tested both the Bombardier LRC and the TALGO Pendular along the Northeast Corridor in April of 1988. *See Amtrak Evaluation of Tilt and Turbo Train Technologies*, Vol. 1 (Jan. 1989). The tests demonstrated that passenger trains could be operated safely and comfortably at higher than usual levels of tilt. *See id.* at 4; *Report of the CONEG High Speed Rail Task Force*, at 3 (Apr. 6, 1989). The performance of the LRC and the TALGO Pendular was similar with the TALGO Pendular superior in all aspects except on long, smooth curves. The TALGO Pendular was superior on the short curves which prevail in the Northeast Corridor. *Amtrak Evaluation*, at 5.

4. Chicago Tribune, May 10, 1989, at 1 (north sports final ed.); *Use of the Interstate Highway System Right-of-Way for Magnetic Levitation High Speed Transportation Systems: Hearing on S. 2072 Before the Subcomm. on Water Resources, Transportation, and Infrastructure of the Senate Comm. on Environment and Public Works*, 100th Cong., 2d Sess. 56 (1988) [hereinafter *Interstate Right-of-Way Hearings*] (statement of James R. Powell, Brookhaven National Laboratory).

5. *See Interstate Right-of-Way Hearings, supra* note 4, at 86 (statement of David H. Rush, Commissioner, Florida High Speed Rail Transportation Commission and Chairman, Florida High Technology and Industry Council). Use of high speed rail also reduces the need for additional road construction thus leading to fewer problems with runoff and destruction of vital wetlands. *Id.*

6. Amtrak's Metroliner and Japan's Shinkansen ("bullet train") consumer about one-sixth the energy of narrow body aircraft and France's TGV consumes about one-half the fuel of an automobile per passenger-mile. The TGV consumes as much energy at 170 miles per hour as the Metroliner does at 120 miles per hour. Rosen, *supra* note 3, at 34; Thompson, *supra* note 2, at 32. Maglev is particularly energy efficient, consuming only one-fifth the energy per passenger-mile of an automobile and one-tenth that of a 727. *Interstate Right-of-Way Hearings, supra* note 4, at 87 (statement of David H. Rush).

7. Thompson, *supra* note 2, at 32.

thereby alleviating the need for additional flights and airport expansion.[8] For instance, after the TGV line between Paris and Lyon opened, air traffic between the two cities dropped by fifty percent.[9] Presently, ten times as many travelers between Paris and Lyon travel by train rather than by airplane.[10]

High speed rail is also more reliable than either airplanes or automobiles. It can run effectively in all but the most severe weather conditions unlike automobiles and airplanes.[11] As for safety, high speed rail systems have a much better passenger safety record than either air or automobile travel.[12]

The French TGV is perhaps the most proven and successful of the high speed rail systems in use today. When it opened in 1981, the TGV Paris-Lyon line cut rail travel time between the two cities from three and one-half hours to two hours.[13] The two billion dollar investment in the Paris-Lyon line is expected to be paid off in ten years from startup rather than the expected fifteen years.[14] In 1988, seventeen million passengers traveled on the Paris-Lyon line earning the railroad 100 million dollars on revenues of 681 million dollars.[15]

Although not as well known or technologically advanced as the TGV, the TALGO Pendular has proved highly successful in the Madrid-Paris run. In tests their equipment proved itself capable of traveling between New York and Boston in two hours and forty-five minutes.[16] This represents a two hour savings in travel time over present Amtrak service while utilizing existing trackage with some improvements.

High speed rail also brings with it secondary economic benefits. Increased employment is accompanied by increases in spending and tax revenue.[17] Additional benefits come from increased development associ-

8. Transportation experts believe that the use of high speed rail for trips under 500 miles can relieve growing pressures being placed on airport capacity. *See* N.Y. Times, Apr. 30, 1989, § 12LI, at 10, col. 3.

9. N.Y. Times, *supra* note 8.

10. *High-speed Trains: Beyond the Chunnel*, ECONOMIST, Mar. 11, 1989, at 69.

11. Rosen, *supra* note 3, at 34; Thompson, *supra* note 2, at 32.

12. Thompson, *supra* note 2, at 32; Over two billion passengers have traveled on the Japanese bullet trains over the last twenty-five years without a single fatality occurring. *Tax Exempt Bonds for High Speed Rail Projects: Hearings on S. 1245 Before the Senate Committee on Finance*, 100th Cong., 2d Sess. (1988) 58-64 [hereinafter *Tax Exempt Bond Hearings*] (Statement of Richard A. Geist, Chairman, High Speed Rail Association).

13. *Chunnel Vision*, ECONOMIST, Feb. 14, 1987, at 41.

14. N.Y. Times, *supra* note 8.

15. *Id.*

16. *See Amtrak Evaluation*, *supra* note 3.

17. It is estimated that development of a high speed rail system in Texas linking Dallas, Houston, and San Antonio would create 9000 permanent jobs and would increase tax revenues by some eighty percent over a twenty-five year period. *Report Urges High Speed Rail Service Linking Texas' Largest Cities*, UPI, Feb. 15, 1989.

ated with high speed rail projects.[18]

II. FINANCING OPTIONS

The question of financing looms large as a potential stumbling block to the implementation of a high speed rail system. Financing a high speed rail system involves an enormous commitment that the states, without the help of the federal government, might find prohibitive. However, at the outset, it should be recognized that the federal government is not prepared to participate in the direct funding of high speed rail projects.[19] This is due in part to the fact that most high speed rail systems would operate in only one or two states with virtually all of their benefits being realized at the local or state level.[20] Coupled with the reality of the current federal budget deficit, there is little likelihood that there will be any movement toward federal grants-in-aid or subsidies for high speed rail in the near future.[21]

The financing costs associated with a high speed rail system, primarily capitalized interest and debt service, comprise the major costs of such a project.[22] Thus, the total costs of a capital financing program for a high speed rail system may be so large that any single entity would be unable to take on the task alone.[23] The cost of high speed rail is imposing. All projects now under consideration carry with them multi-billion dollar price

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18. The largest new shopping center in France is located in Lyon at the terminus of the Paris-Lyon TGV line. *Tax Exempt Bond Hearings, supra* note 12, at 5 (statement of Sen. Bob Graham).

19. *See, e.g.*, Rosen, *supra* note 3; L.A. Times, June 1, 1987, pt. 1, at 3, col. 1; Thompson, *supra* note 2.

20. *See* Thompson, *supra* note 2.

21. The current federal funding situation has been described as follows:

> Beginning with the Carter administration and extending through the Reagan administration, the federal government has progressively reduced revenue sharing grants and loans for construction and maintenance of state and local infrastructure . . . . The drastic cut in federal grant and loan programs for the basic network of transportation, water, sewer, drainage and park facilities is primarily responsible for the creation of public-private partnerships and joint development as a sophisticated means of financing public-sector development in urban areas.

Freilich & Nichols, *Public-Private Partnerships in Joint Development*, 7 MUN. FIN. J. 5, 6 (Winter 1986).

22. *Tax Exempt Bond Hearings, supra* note 12, at 15 (statement of Harriett L. Stanley, Vice President, Public Finance Department, Prudential-Bache Capital Funding).

23. Estimated costs for high speed rail projects under consideration:

—Florida's project (Miami, Orlando and Tampa)—$2 billion;
—Southern California to Las Vegas—$2-$3 billion;
—Texas' project (Ft. Worth, Dallas, Houston, San Antonio and Austin)—$4.3 billion;
—Ohio's project (Cleveland, Cincinnati and Columbus)—$2 billion.

Chicago Tribune, Apr. 30, 1989, at C5, col. 1 (final ed.). However, at $15-19 million per mile, high speed rail is still less expensive than urban expressways which costs more than $40 million/mile. *Id.*

tags.[24]

Furthermore, the lack of any United States experience with high speed rail combined with the long delay between project startup and return on investment will make it difficult to attract investment capital, absent any additional incentives.[25] In order to overcome these potential pitfalls, promoters of high speed rail must make creative use of the financial tools at their disposal. The use of tax exempt industrial bonds, exploitation of development rights, and use of existing rights-of-way all need to be fully explored. Through these and other financing mechanisms, solutions can be devised and high speed rail projects can begin to jump off the drawing board and into reality.

A. *Tax Exempt Industrial Revenue Bonds to Finance High Speed Rail Facilities*

1. *Introduction*

A major component of establishing a high speed rail system is the capital financing cost. As with other large scale projects requiring massive initial investment, long construction periods mean that several years may pass before an investor receives a return on his investment. While a 1984 feasibility study done in the Tampa-Orlando-Miami corridor, financed by the Federal Rail Administration, found that a high speed rail system could generate enough revenue to eventually recover 100% of its operating costs and up to 40% of its capital costs, such recovery could take years.[26] Furthermore, as previously noted any project may be too large and the cost too high for any single entity, public or private, to adequately finance it.

Tax-exempt bond financing may remedy this situation. Traditionally, tax-exempt bonds have been a means for states and municipalities to shift to private corporations part of their burden of providing traditional services by assisting private corporations with financing their projects.[27] The government entity sells an issue of industrial development bonds (IDB's) and then loans the proceeds to the private corporation. Because the interest on the IDB's is tax-exempt, the purchaser of the bonds

24. *Id.* It is estimated that a high speed rail financing program would carry with it costs ranging from three to ten billion dollars and that the magnitude of these capital requirements would cause the financial markets to raise interest rates in order to maintain market stability. *Id.* at 76-77.

25. *See id.* at 77. Nine to twenty years may pass before investors receive any repayment of capital or return on their investment. *Id.*

26. *Tax-Exempt Bond Hearings, supra* note 12, at 50 (Statement of David Blumberg, Chairman, Florida High Speed Rail Transportation Commission).

27. Ide & Ubell, *Financing Florida's Future: Revenue Bond Law in Florida*, 12 FLA. ST. U.L. REV. 701, 703 (1985).

achieves a greater after tax return on the investment as compared to taxable bonds.[28] The governmental entity can thus offer the bonds at a reduced interest rate and the savings are passed on to the private entity through lower interest rates. These savings act as an incentive to engage in the desired development project. The private corporation uses the proceeds to construct the facility and ownership remains in the private entity.[29] Under Florida's bond law, "[T]he debt service on the bonds is paid from the revenues of the project and secured by [both] the project", and any other guarantees given by the private corporation.[30] "The governmental entity does not pledge its full faith and credit behind the bonds."[31]

Tax-exempt bonds can relieve governments of the burden of subsidizing public transportation projects through large appropriations.[32] They attract investors by minimizing investment costs. The use of tax-exempt facility bonds creates an opportunity for a state to develop and operate a high speed rail project by working in conjunction with the private sector.[33]

Tax-exempt financing has often been used for large scale transportation projects. For example, in early 1988 the newly created Metropolitan Washington Airport Authority (MWAA) issued its first $125 million in tax-exempt revenue bonds for the purpose of financing the maintenance and improvement of Washington National and Dulles International airports. The proceeds of the bonds will be used for a variety of projects.[34] Tax-exempt bonds have also been used to improve and reconstruct bridges, acquire, construct, and maintain public buildings, and construct and operate mass transit facilities.

2. *Recent Legislation*

In the high speed rail area, the federal government has recently enacted legislation providing for tax-exempt financing for certain high speed rail facilities.[35] The provision amends section 142 of the Internal Revenue

28. *Id.*
29. *Id.*
30. *Id.*
31. *Id.*
32. Tax-exempt status for industrial development bonds is a form of subsidy and would mean a loss of revenue to the government. Compared however, to alternative transportation expenditures by the federal government such as direct running, it is a relatively modest federal participation. *Tax-Exempt Bond Hearings, supra* note 12, at 7 (statement of Sen. Graham (Florida)).
33. *Tax-Exempt Bond Hearings, supra* note 12, at 31 (testimony of Sen. Graham (Florida)).
34. At Dulles International Airport, plans include a new international arrivals terminal, a taxiway extension and an expansion of the baggage claim area. At National Airport there are plans to construct a two-level taxi holding area and a temporary parking area. Henderson, *Bond Sale Set for Renovating National, Dulles*, Washington Post, Mar. 23., 1988, at B6.
35. Technical and Miscellaneous Revenue Act of 1988, Pub. L. No. 100-647, § 6180, 102 Stat. 3342, 3727-28 (codified at 26 U.S.C.A. § 142(i) (West Supp. 1988)).

Code of 1986 by authorizing the issuance of tax-exempt bonds by states for high speed intercity rail transportation projects. Previously, such facility bonds were available only to finance transportation projects involving airports, docks, wharves, mass commuting and sewage facilities.

In order to qualify for the high speed rail facility exemption, the train must be reasonable expected to operate at speeds in excess of 150 miles per hour between stations while carrying passengers and baggage. In addition, high speed rail facility bonds differ from other facility bonds in three ways. First, the facilities financed with the proceeds of such bonds need not be government owned.[36] The government entity, therefore, need not pledge its full faith and credit behind the bonds. This allows the state to," . . . shift a portion of the responsibility for providing basic services to private entities, which in turn will recover their costs from the users of the facilities."[37] Thus, the public and private sector enter into a financing partnership which promotes overall cost effectiveness.[38] Second, only twenty-five percent of each bond issue must receive an allocation from state private activity bond value limitation.[39] If the facility is located in two or more states, this requirement must be met on a state by state basis for the financing of the facilities located within each state.[40] The rationale behind providing the state with partial relief from its private activity volume limitation is that the cost of a high speed rail project would quickly exhaust the entire volume of a state's bond activity.[41] Moreover, as with other large transportation facilities, a substantial number of persons who are non-residents of the state in which the facility is located will use and enjoy its benefits.[42] Finally, any proceeds of an issue not spent within three years of the date of issue must be used to redeem outstanding bonds.[43]

Tax-exempt bonds alone, however, are not a total solution to the

36. H.R. REP. NO. 1104, 100th Cong. 2d Sess. 205, *reprinted in* 1988 U.S. CODE CONG. & ADMIN. NEWS 5048, 5265.

37. Ide & Ubell, *supra* note 2, at 703; *see infra* notes 49-54 and accompanying text.

38. *Tax-Exempt Bond Hearings, supra* note 12, at 82 (statement of Richard A. Davenport, representing the Florida High Speed Rail Corporation).

39. H.R. REP. NO. 1104, *supra* note 35 at 5265. In general, the amount of tax-exempt private activity bonds that may be issued annually by any state (including local governments within the state) is limited to the greater of (1) $50 for every individual who is a resident of the State or (2) $150 million. Bonds subject to this limitation include most private activity bonds for which tax-exempt status is permitted. Congress has exempted airports, docks and wharves from the state volume limitation. *Tax-Exempt Bond Hearings, supra* note 12, at 38-39 (description of S. 1245 by the Joint Committee on Taxation).

40. H.R. REP. NO. 1104, *supra* note 35 at 5265.

41. *See generally Tax Exempt Bond Hearings, supra* note 12, at 38-39.

42. *Tax-Exempt Bond Hearings, id.* at 39 (description of S. 1245 by the Joint Committee on Taxation).

43. H.R. REP. NO. 1104, *supra* note 35 at 5265.

problem of high speed rail financing. These bonds can only cover the initial construction and interest costs. There will still be a period of time after capitalized interest has been depleted and before fare box and ancillary enterprise revenues are sufficient to cover operating costs.[44] Other financing techniques need to be used to cover this gap.

3. *CURRENT STATUS*

Presently, Florida is in the forefront of implementing a high speed rail system through the use of tax-exempt bonds. The Florida High Speed Rail Transportation Commission (FHSRTC) is authorized to issue tax-exempt bonds to finance high speed rail.[45] The Florida High Speed Rail Corporation (FHSRC), a consortium of equipment suppliers, contractors, consultants, and professional service firms, is now the sole applicant to finance, design, build, and operate a high speed rail system linking Tampa, Orlando, and Miami.[46] On December 4, 1989, FHSRC paid a $650,000 "Certification Component Fee" to FHSRTC which will be used to cover the cost of reviewing technical and financial information to be submitted by FHSRC.[47] The franchise for the project is expected to be formally awarded in 1991.[48] Moreover, Maglev Transit Inc., a Japanese-German consortium has applied to build and operate an approximately $500 million magnetic levitation rail system through private financing to demonstrate the feasibility and benefits of high speed rail. The fourteen mile line will travel from Orlando International Airport to a currently undeveloped area near Disney World and Sea World.[49]

Other front runners contemplating the use of tax-exempt bonds to help finance high speed rail systems include the California-Nevada Super Speed Grand Transportation Commission for a high speed rail system operating between Las Vegas, Nevada and a point in Southern California. The Texas Turnpike Authority is also considering a 620 mile system linking Fort Worth, Dallas, Houston, San Antonio and Austin. And the Pennsylvania High Speed Intercity Rail Passenger Commission is looking at the feasibility of a 225 mile rail line between Harrisburg and Pittsburgh.[50]

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44. *See Tax Exempt Bond Hearings, supra* note 12, at 78 (statement of Harriet L. Stanley referring to the hole in time after depletion of capitalized interest and before enterprise revenues are sufficient to support the system.).

45. FLA. STAT. § 341.329 para. 1 (1987).

46. BUSINESS WIRE, December 4, 1989.

47. *Id.*

48. *Id.*

49. Washington Post, Feb. 20, 1990, at A8. If the high speed rail line proves successful, FHSRTC plans to use tax-exempt bond financing to build a 300 mile line running from Tampa to Miami through Orlando. Chicago Tribune, Apr. 30, 1989, at C5.

50. Wiedrich, *High Speed Trains: Next Stop the U.S.*, Chicago Tribune, Apr. 30, 1989, at C5.

B. Public-Private Partnership Financing of High Speed Rail Facilities

A public-private partnership, or a joint development project, is basically "a pairing of public and private resources to achieve a project or a product that will benefit both sectors."[51] Such cooperation helps to ensure the success of development projects that might otherwise not succeed.[52]

In a joint public-private development project, value capture techniques can be used to generate new revenues that in turn will defray the costs of providing a public infrastructure and services.[53] Value capture takes advantage of the rising private property values which accompany the development of a transportation corridor.[54] The public sector recaptures part of this added value either from the sale or lease of property and property rights acquired by the public entity or alternatively through an equity interest in the joint development project.[55] Additional revenues can come from the leasing of land and air rights, contributions of property or capital costs from the developer, connection fees, and station concession fees.[56]

Joint development can benefit equally both the public and private sector. The public sector gets to share its costs, have improvements added to its transportation facility, expand job opportunities, and recapture value added to the facility and surrounding property.[57] The private sector has its land acquisition and site preparation costs reduced, shares risks and expenses with a public agency, and can take advantage of tax depre-

51. *See* U.S. Department of Transportation, JOINT DEVELOPMENT: A HANDBOOK FOR LOCAL GOVERNMENT OFFICIALS 1 (1983) [hereinafter JOINT DEVELOPMENT HANDBOOK].

52. Usually, the development would not take place without this public-private cooperation; because the developer requires the improved accessibility and expanded market created by the transit improvement, and the transit agency needs the financial resources and entrepreneurial skills of the private sector. Also, joint development projects often require contractual agreements between the developer and a public agency and close planning and cooperation among several public agencies. *Id.*

53. *See* Freilich & Chinn, *Transportation Corridors: Shaping and Financing Urbanization Through Integration of Eminent Domain, Zoning and Growth Management Techniques*, 55 UMKC L. REV. 153, 183 (1987). The Washington Metropolitan Area Transit Authority (WMATA) received nearly $1.5 million in lease revenues from joint development projects in 1983 and expects revenues of $9.32 million in 1990. The Dallas Area Rapid Transit (DART) expects to have an annual income of $33 million with twenty years from lease revenues, connector fees, dedication of rights-of-way, and concessions. *Id.*

54. *Id.* at 171-72; The local property and sales tax bases increase as a result of the increased development accompanying creation of transit stations. *Id.* at 186; *see* Comment, *New Financing Strategy for Rapid Transit: Model Legislation Authorizing the Use of Benefit Assessments to Fund the Los Angeles Metro Rail*, 35 UCLA L. REV. 519, 533-34 (1988).

55. Freilich & Chinn, *supra* note 52, at 186.

56. *See generally id.* at 187 n.113.

57. *Id.* at 186.

ciation and credit allowances unavailable to the public sector.[58]

1. *Railbed Financing*

Construction of dedicated track for the high speed rail system is a virtual necessity.[59] Even improvement of existing track will be expensive. The federal government has already spent $2.19 billion to upgrade the Washington-New York track on Amtrak's Northeast Corridor,[60] with improvements on the New York-Boston portion still to be started. High speed rail presents an equally expensive problem.[61] In order to finance the costs associated with land acquisition and construction of a high speed railbed, use must be made of both joint development techniques and tax-exempt bonds. The public sector will need to provide assistance for land acquisition through a combination of methods including the dedication of publicly owned property, the acquisition of lands through the expenditure of public funds, and the exercise of eminent domain power.[62] Once the land has been acquired the entity responsible for the construction of the high speed rail system can issue tax-exempt bonds to raise the capital needed for construction of the railbed.[63] Construction of rail facilities in and around rail stations also can be financed partially through the use of value capture techniques.[64]

2. *Stations*

Financing the construction of high speed rail passenger stations can be easily accomplished using existing joint development financing techniques. States could allow the municipalities where the stations are located to institute benefit assessment districts and issue franchises to interested vendors.[65] Additional value created by the development can be recaptured in part by the entity building the station and used to offset its costs.

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58. *Id.*

59. A high speed rail system comparable to the French TGV or the Japanese Shinkansen trains requires dedicated, i.e., single-purpose track. Maintaining the necessary tolerances would be difficult and expensive on conventional track continually worn by freight traffic. Many are therefore skeptical that upgrading Amtrak corridors will produce a world-class high speed rail system. *See* Rosen, *supra* note 3. "If an advanced Shinkansen or TGV were forced to share with freight trains most of the existing track in the United States, neither type of train could perform anywhere near its potential." Davis, *High-Speed Trains: New Life for the Iron Horse?*, HIGH TECH., Sept., 1984, at 28.

60. *See* Thompson, *supra* note 2, at 38; *see also* Chicago Tribune, *supra* note 4; Rosen, *supra* note 3.

61. *See generally* Rosen, *supra* note 3; Davis, *supra* note 58.

62. *See* Freilich & Chinn, *supra* note 52, at 185.

63. *See supra* notes 26-43 and accompanying text.

64. *See generally* Freilich & Chinn, *supra* note 52; Comment, *supra* note 50.

65. *See generally* JOINT DEVELOPMENT HANDBOOK, *supra* note 50.

3. ROLLING STOCK FINANCING

Acquisition of rolling stock, the rail cars themselves, presents another financial consideration. The Technical and Miscellaneous Revenue Act of 1988 specifically prohibits the financing of rolling stock with bond proceeds.[66] In a 1985 study, the Michigan Department of Transportation estimated that rolling stock for a system similar to the Japanese Shinkansen and the French TGV would cost $126 million.[67] In perspective it should be noted that rolling stock comprises only about twenty percent of the capital costs of a high speed rail system.[68]

There are a number of possible methods for financing the rolling stock itself. One method would share profit from services offered in the rail cars.[69] Vendors providing services in the cars would pay franchise fees up front and these fees would be used to cover the cost of the high speed cars. Another method would tap into the vendors of high speed rail technology, who might be willing to give favorable terms in return for the chance to showcase their products.[70] The makers of high speed rolling stock would donate their product in return for the benefits of the free publicity and advertising which would result once the system is successful. These methods may be workable but, as of yet, no private producer of high speed rolling stock has endorsed or advocated either of these proposals.

A lease-purchase or sale-leaseback transaction may also be used to finance the acquisition of rolling stock for a high speed rail system. In a sale-leaseback transaction, the high speed rail company would sell its rail cars to another party and then lease them back. This approach has numerous advantages for the high speed rail company.

First, the seller-lessee can deduct the entire rental payment as an ordinary and necessary expense which it would not be able to do in a conventional financing plan.[71] Second, the rail company will not have to tie up its cash by an outright purchase of the rail cars and will thus have a greater amount of working capital.[72] By not having to purchase the cars outright the rail company will be protected against tying up its cash in

66. *See* H.R. REP. NO. 1104, *supra* note 35, at 205.

67. *See* MICH. DEPART. OF TRANSP., DETROIT-CHICAGO CORRIDOR HIGH SPEED RAIL TECHNICAL REPORT 39 (1985).

68. *See* Thompson, *supra* note 2.

69. *See* Freeman, *Light Rail Expansion Plans Uncertain*, Business J., Portland, Oct. 5, 1987, § 2, at 3.

70. *See* Rosen, *supra* note 3.

71. *See* Maller, *Structuring a Sale-Leaseback Transaction*, 15 REAL EST. L.J. 291, 294 (1987).

72. *See id.* at 296-97; *see* Black, *Sale-Leaseback Transactions: Advantages and Disadvantages*, PROB. & PROP., May-June 1989, at 23, 24.

equipment that may one day become technologically obsolete.[73]

The buyer-lessor, as the owner of the rail cars, can take a deduction for their depreciation and also can receive a relatively high rate of return for what is essentially a passive investment.[74]

C. *Private Financing of High Speed Rail Facilities*

The lack of available public funds for high speed rail and the inherent difficulties in making use of what funding is available lead some to the conclusion that private financing techniques should be used either for the initial capitalization of high speed rail projects or to cover their total costs. Methods of private financing include private placements, syndicated tax benefits, and public offerings. Private financing, however, is the least viable option available to developers of high speed rail systems due to the tremendous amounts of capital involved and the high risk perceived on the part of private investors. It is therefore unlikely that any high speed rail project would be financed on a totally private basis.

1. *Private Placements*

Beyond the recognition that high speed rail will require the coupling of the private and public sectors, however, very little has been developed as to how such cooperation would come about. Various methods have been advanced regarding initial capitalization through private financing techniques. One such example is demonstrated by American High Speed Rail Corp.'s (a Los Angeles-based consortium that tried to build a high speed rail link between Los Angeles and San Diego) August, 1985 offering of a $50 million private placement.

Private placements are less highly regulated than public stock offerings. They are not registered offerings, and the company issuing the private placement does not provide a prospectus but investors instead can obtain an offering memoranda. Private placements generally have a limited appeal. There is less information available, they are less liquid than public offerings, and few individual investors can afford the $1 million minimum purchase limit likely to be set.[75]

Private offerings entail numerous difficulties (American High Speed Rail Corp.'s $3.1 billion high speed rail proposal was scrapped in November of 1985 because attempts to raise private capital for the venture had failed)[76] but are likely to be used again because they provide a mecha-

73. *See* Sponseller, *Lease Financing: Sale and Leaseback Options*, PUB. UTIL. FORT., Mar. 19, 1987, at 40, 40.

74. *See* Maller *supra* note 70, at 296, 300.

75. See *Companies in the News*, Financial World, Jan. 8, 1985, at 71.

76. See *West Coast Bullet Train Suffers a Fatal Wound*, Metalworking News, Jan. 18, 1985, at 13.

nism for the initial capitalization of companies before they attempt to go public.[77]

2. *Syndicated Tax Benefits*

Another financing technique that has been discussed is a syndicated tax benefit which essentially involves the selling of shares as partnership interests.[78] One immediate advantage of syndicated tax benefits, as compared to private offerings, is that they may be made available in units of $25,000.[79]

Syndicated tax benefits are a form of tax credit financing. They allow investors to buy a portion of a company's taxload and transfer it for their personal use. The credits can be subtracted directly from investors' personal tax loads. They are sold to raise funds at the outset of a project. Investors receive benefit only when the project is complete.[80]

Even with its advantages, syndicated tax benefits, like private offerings, include prohibitive side effects. It is doubtful whether the lure of such benefits could raise sufficient funds to cover the costs of a high speed rail system.[81]

3. *Public Offerings*

Finally, there is the possibility for the wholly private funding of high speed rail through a public offering. One example of the private financing of a large public project is that of the Channel Tunnel. In March of 1986, the governments of France and the United Kingdom awarded to a ten company Anglo-French consortium a 55-year right to build and operate a tunnel under the English Channel. The consortium founded Eurotunnel, and as of October 1988, had raised $10.2 billion to complete the project.[82]

Eurotunnel received $8.5 billion through a credit agreement underwritten by 198 private banks.[83] It then launched a $1.3 billion equity offer-

77. See *Companies in the News, supra* note 74, at 71.

78. *See id.*

79. *Id.*

80. *Id.*

81. Tax credit financing has never been used for anything on the scale needed to help finance a high speed line. The largest tax credit sale raised perhaps $40 million, whereas a rail line might raise $200 million this way. Tax credits could raise only 20% of the money needed. And although tax credit shares are negotiable, they cannot be traded freely like securities, thus limiting their appeal. *Id.*

82. *See* Morais, *Public Good Through Private Enterprise*, FORBES, Oct. 3, 1988, at 58. Eurotunnel plans to construct a 31-mile twin rail tunnel between terminals near Folkestone in the U.K. and Calais in France. *Id.*

83. *Id.*

ing in order to raise additional capital required by the financing banks.[84] Eighty percent of the offering was purchased by the public thus assuring the availability of the loan funds.[85] Investors were lured by the forty percent compounded annual return Eurotunnel projects they will receive if they hold their shares until 1995.[86]

Eurotunnel has recently faced some difficulties, which probably will not jeopardize the eventual completion of the project but could affect the project's final cost.[87] The project has fallen behind schedule and the cost of the rolling stock to be used to shuttle passengers and freight through the tunnel is more than double the original estimate.[88] As a result Eurotunnel was forced to request more capital from the financing banks, that had already pledged at least $183 million a year for 12 years.[89] While the project's completion is not in doubt, and it is virtually guaranteed to enhance inter-European trade (especially after the economic unification of Europe in 1992), a windfall for investors is not completely assured.[90] Reliance on such public offerings can be risky to investors who may be less willing to invest in a project with the perceived risk of high speed rail.

III. CONCLUSION

The responsibility of furthering high speed rail is now firmly in control of state and local governments. Although states might provide funds to offset construction costs, it is more likely that they will provide indirect assistance—low-interest financing, free use of existing rights-of-way, aids to property acquisition, and tax abatements.[91] The use of tax-exempt bonds will go a long way toward assisting the states in financing high speed rail projects, but does little to alleviate the perception of risk that private investors attach to high speed rail. Private investors need to be convinced that high speed rail has a viable future in this country.[92]

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84. N.Y. Times, Nov. 17, 1987, at D1, col. 6.
85. Morais, *supra* note 81, at 59.
86. N.Y. Times, Nov. 15, 1987, § 3, at 1, col. 2.
87. *See Fears of Overruns in Chunnel Costs Erode Confidence*, J. OF COMMERCE, Aug. 9, 1989, at 1, col. 3.
88. *See id.*
89. *See* Morais, *supra* note 81, at 62.
90. *See id.*
91. *See* Thompson, *supra* note 2, at 8.
92. As one author has put it:

> High-speed rail will become viable only when the public sector and private investors find a way to value indirect benefits high enough to make the sum of all benefits, public and private, direct and indirect, equal the costs, which will certainly exceed $5 million per mile and may be more than that. The returns from operating income alone are not likely to justify such large costs to any private investor.

Thompson, *supra* note 2, at 70.

One way to demonstrate to such investors and the public the benefits of high speed rail would be to introduce high speed technology into American transportation corridors through the upgrade of existing track and equipment.[93] The proposed use of high speed tilt trains on the Boston-New York Corridor is a model project. This would be a limited accomplishment in terms of advancing high speed rail because high speed trains would still have to share the rails with heavy freight trains, which already bear much of the blame for putting the track in its current condition, but would at least be a first step on the way to a full implementation of high speed rail technology.[94]

Thus the problem of financing high speed rail comes full circle. As previously discussed, the federal government is not willing to fully subsidize any high speed rail project. The role of the federal government, at this time and in the foreseeable future, is likely to be one confined to advice, facilitation, clearance, and, on a selective basis, providing a part of the financing.[95] Federal and state governments even though unable to provide all of the funds to construct a high speed rail system can help to foster a political atmosphere encouraging and aiding its development.[96] Creation of such a cooperative spirit will encourage private investors to aim capital toward high speed rail giving high speed rail the chance to demonstrate its true potential.

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93. *See* Rosen, *supra* note 3.
94. *See* Davis, *supra* note 58.
95. *See generally* Thompson, *supra* note 2.
96. Blanchette, *America is Still a Primative [sic]*, N.Y. Times, Sept. 3, 1989, § 3, at 2, col. 3.