ROSEN

Toll Roads
Private-Sector Funding

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The value of "private" toll facilities, implemented and operated by the private sector to provide a partial solution to the serious highway needs facing the United States, has been the subject of increasing discussion in recent years.

During the years 1831 to 1840, there were more than 450 chartered toll roads in the New England states alone, each operated as a private toll facility. The system of individual private toll operations flourished for a time throughout the United States and was then gradually replaced by improvements funded and implemented by public tax resources. In good measure, this transition resulted from the changing marketplace, with the breadth and scope of the projects and required funding changing radically as vehicle volumes increased. The questions of public responsibility, safety, and national defense were also key issues during this period, but the rapid increase in the cost of providing and maintaining private toll roads was an important factor.

Public-Sector Involvement

During the early part of this century, responsibility for the implementation and maintenance of highways completed a shift to the public sector as growth in the num-

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ber of motor vehicles and miles of highway expanded exponentially during the first few decades. During the late 1930s, the concept of offering a premier service to motorists to complement the publicly funded and operated highway system evolved into the so-called modern era of toll facilities, with completion of the first section of the Pennsylvania Turnpike in 1940.

Financing of that project was planned through the issue of revenue bonds; with maintenance, operation, and debt service to be paid from toll revenues alone. The private-sector investor market was not receptive, however, and this first section of the turnpike was subsequently funded using $29 million from a federal Public Works Administration grant and $40.8 million in revenue bonds purchased by the Federal Reconstruction Finance Corporation.

Private-Sector Financing

The revenue-bond concept was, however, more favorably received by the private sector in the post-World War II era, and many thousands of miles of toll roads were constructed in the United States through issuance of revenue bonds serviced only by the revenues derived from use and operation of the toll facilities. With few exceptions, these projects have proved successful. Most are still in operation today, and their initial debt for construction has been retired.

The success enjoyed eventually contributed to a sharp decline in and ultimate end to this form of private-sector financing. Traffic using the toll roads generally exceeded the financing forecasts after the first several years of operation and negated the need to subsequently raise toll levels commensurate with escalating costs of operation and right-of-way acquisition and construction. Although toll rates remained relatively low, the cost of implementing, operating, and maintaining toll projects greatly increased.

Government Guarantees and Subsidies

The changing economics of successful toll-road implementation as a result of generally static toll rates and rapidly rising costs led to increased use of government tax-based guarantees and subsidies, sometimes in combination with the use of project revenue bonds. For example, a recent Congressional Budget Office study found that assuming a passenger car-based toll rate of 10 cents a mile, a typical urban toll road would have to attract an average of nearly 100,000 vehicles daily to be totally self-supporting. Unfortunately, the average per-mile rate in the toll industry today is closer to 5 cents, and public acceptance of rates double that is just beginning to be tested on a relatively few new projects.

More research is needed to address toll elasticity and how motorists will respond to greatly increased tolls. Currently, motorist response is being modeled using either comparative trip times or costs as key inputs. However, the models require further calibration using actual motorist reaction to higher toll rates in "real-world" situations. Recently opened toll roads in Houston, Texas; Orlando, Florida; and elsewhere, operating under toll rates much higher than average, are beginning to provide the information needed for such calibration.

The last major new toll facility implemented solely through sale of toll revenue bonds is commonly acknowledged to be the Dallas North Tollway, financed in 1963. Since that time numerous new toll roads have been constructed, but all have been either extensions of earlier projects or were financed with support or guarantees from tax resources. In the face of rapidly rising costs, projected net toll revenues based on industry average toll rates have not provided sufficient coverage of debt service to continue to finance new projects with revenue bonds alone.

The similarities to the transition that occurred in the late 1800s are striking. In each instance, the private sector sensed an opportunity, which proved successful for a period, but then gradually the situation changed, and the public sector played a more significant role.

Recent Private-Sector Toll-Road Projects

United States

Today there is evidence once again that the private sector senses opportunity. In Virginia a private consortium was formed a few years ago to implement a 14-mile extension of the Dulles Toll Road. The consortium has successfully negotiated a financial plan with the state of Virginia that calls for the investor-developer to purchase all necessary rights-of-way and construct and operate the extension for a prescribed period of time. In return for the use of the venture capital required, the financial plan provides the investor-developer with a projected rate of return viewed as commensurate with the risk involved.

Are there more projects like the Dulles Toll Road Extension on the horizon? Perhaps, but the opportunities will be limited to a relatively few travel corridors that may possess essentially the same unique characteristics.

A greater likelihood is the development of private toll roads under programs that remove some of the uncertainties and risks associated with the extension project. In California, four consortia have been selected under the AB 680 Program to implement four new toll-road projects. In each instance, a developer is part of the consortium, providing the initial capitaliza-

tion for project implementation. Partly as a result of some difficulty experienced in right-of-way acquisition on the Dulles Toll Road Extension project, legislation in California calls for the projects to be owned by the state, with the selected consortia financing and constructing the facilities and operating them for 35 years under an approved financial plan. The consortia can also negotiate for commercial development leases on adjacent state-owned rights-of-way for terms of up to 99 years.

Private-sector attention is also being focused on variations of the basic toll road, including a "utility corridor" concept. One proposal visualizes not only a toll highway but a possible rail line; water, sewer, natural gas, coal slurry, and other pipelines; electronic banking systems tied to toll collection but also offering regular banking services; provision of roadside services including hotels, resort accommodations, and service stations catering in some instances to truckers only; corridor land-development programs; fiber-optic cable; and so on. However, implementation remains elusive, and after several years there is still no indication that the project will proceed.

Unfortunately, other impediments to private sector development of highways remain, beyond simply an attractive risk-reward rate of return. They include the need for tort indemnity, access to right-of-way condemnation powers, and reasonable assurance that interests will be protected in the future from the intrusion of a tax-funded project that would directly compete with the facility being planned.

These considerations are important if private ventures or public-private partnerships are to flourish, because risk-taking has an associated price tag; by minimizing risks up front, total project costs will be commensurately reduced. There appears to be increasing recognition that perhaps all required rights-of-way and environmental and local citizen approvals should first be in place before interest from the private sector is solicited.

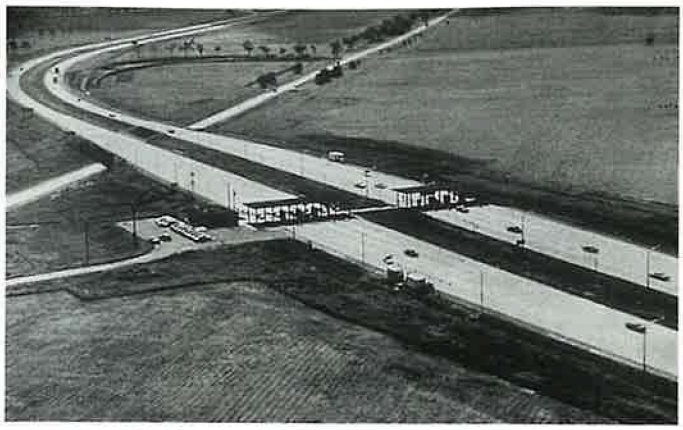
Europe

The Eurotunnel project connecting Great Britain and France is under construction by a consortium composed of some of the leading builders and bankers in both countries. They came together as equity partners in the venture in the early stages and leveraged that investment into sizable construction loans. It is interesting to note that the U.S. banking community and major institutional investors turned down an opportunity to become a significant partner in the venture in 1985, citing the level of risk associated with the project at that time and opportunities to obtain similar projected profits in less risky ventures.

In Marseilles and Paris, French consortia have recently been selected to build, operate, and transfer road tunnels that provide important vehicular traffic links in both urban roadway systems. In the Marseilles project, the private-sector participants in the 30-year concession agreement are eight banks and three Paris-based construction companies.

Based on these examples, if sufficient financial incentive is provided, accompanied and balanced by an acceptable level of risk taking, the private sector will continue to show interest in such projects. The resource side need not be limited only to toll income generated by the project; other income can possibly be included through capture of all or part of future land value escalations resulting from increased accessibility, direct land-development opportunities, use of free-trade zones, tax-abatement policies, special district tax levies, and so on.

The collateral land development made possible by the accessibility provided by the construction of a new toll road will be a powerful incentive for private-sector involvement. During the early years of operation, revenues collected from tolls may well be minimal, with the magnitude of future toll revenue and other sources of income the primary catalyst for investment. To a large extent, this was the motivation behind development of the initial sections of the French Autoroute System, in which land leases and land-use upgrades substantially enhanced revenues being generated by the early portions of that toll-road system. This was made even more attractive through strong involvement by the French government in providing project guarantees, and these early projects have proved very successful.



ILLINOIS STATE TOLL HIGHWAY AUTHORITY

East-West Tollway, late 1950s: Illinois State Toll Highway Authority.

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East-West Tollway, mid-1980s: Illinois State Toll Highway Authority.

Toll Road Demonstration Program

The U.S. government recently introduced a Toll Road Demonstration Program permitting nine states to commingle federal and nonfederal funds (including toll income) for implementation of new toll-road projects. Unfortunately, the federal funds employed must be allocated from current federal turn-backs to the states involved and compete with formula funding for Interstate, Federal Aid Primary, and Federal Aid Secondary highway programs. A December 17, 1990, General Accounting Office report reviewed the Demonstration Program and stated that Delaware, Georgia, and Pennsylvania had started construction of their respective projects, and that California, Florida, South Carolina, Texas, and West Virginia were in the process of arranging financing and preconstruction activities. Colorado decided not to participate unless the federal funds were provided in addition to its regular apportionment.

Proposed federal legislation envisions expanding the Toll Road Demonstration Program to all states and in a 50-50 matching formula if the improvements are on the newly planned System of National Significance. The legislation encourages use of electronic toll-collection methods and partnerships with the private sector. It is interesting to note that the private sector has embraced the challenge of developing appropriate electronic toll-payment systems, recognizing this as an added level of service for which motorists might be willing to pay.

Summary

Opportunities will continue for private ventures and public-private partnerships in the implementation of highway projects. However, they will be limited in number and dictated by the level of risk taking involved in each specific instance weighed against comparable investment opportunities.

In the course of the process, research will be required in a number of key areas beyond those already discussed. The "utility corridor concept" offers opportunity but will require a complex program of implementation and cooperation between the private sector and government regulatory agencies. Research into appropriate legislative actions designed to provide needed indemnity and to otherwise lessen the level of risk to private sector toll road developers will also be required.

There appears to be little doubt that the key ingredients for the success of future public and private partnerships will include income derived from collateral land development and various combinations of tax relief, indemnity, guarantees, and financial support. Whatever form this takes, the result will provide no more than a supplement to the vast improvement program needed to meet the nation's highway needs.

TEXAS TURNPIKE AUTHORITY

Dallas North Tollway, Mainline Barrier Plaza, AVI (automatic vehicle identification) Toll Lanes, Texas Turnpike Authority.