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Stop Bad Road Privatization

WHAT'S NEW

Testimony given at the Pennsylvania House Transportation Committee raises questions about the hidden costs of privatizing the Pennsylvania Turnpike.

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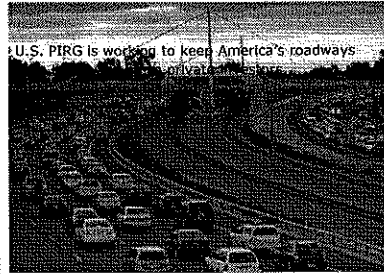
OVERVIEW

America's roadways must be operated for the long-term public interest. Elected officials in Indiana and Chicago recently sold off public roads to private toll-road companies. Tempted by short-term cash, these governments relinquished public control over the management and planning of transportation networks and failed to receive fair value for these assets. The private investors in these deals are expected to reap enormous profits from the rising tolls that they will collect for themselves over coming generations, while the public will lose the long-term toll revenues and its control over transportation planning.

These deals have encouraged a stampede of investment finance companies seeking similarly sweet deals from tolls on other public roads across the United States. As states consider these privatization or "monetization" deals, U.S. PIRG is pressing public officials to uphold six basic principles to protect the public interest:

1. Retain public control over transportation planning and management.
2. Ensure that the public receives fair long-term value for assets. Just because a state or locality faces dire fiscal straits, they shouldn't sell public assets at a discount.
3. No deals longer than 30 years because lawmakers can not reasonably anticipate our transportation needs or assess the value of toll roads beyond a few decades.
4. Require state-of-the-art safety and maintenance standards that will increase over time.
5. Complete transparency and accountability must be maintained so the public knows the complete terms of specific proposed deals and lawmakers must vote on them.
6. No budget gimmicks. If governments do sign these deals, the money must be used to address other long-term transportation needs.

U.S. PIRG will continue to rally public pressure, mobilize coalitions of stake holders, and educate public officials to protect against bad privatization deals.



NEWS

Pennsylvania House Passes Transportation Plan Without Turnpike Lease

June 27, 2007

Governor Rendell Submits Legislation that Would Authorize Privatization of the Pennsylvania Turnpike

May 21, 2007

U.S. House Transportation Committee Echoes NJPIRG's Call on Corzine

May 14, 2007

REPORT

Road Privatization: Explaining the Trend, Assessing the Facts, and Protecting the Public

(9/6/2007)

More Reports.

RESOURCE

Testimony to the Pennsylvania Legislature on Turnpike Privatization (June 27, 2008)

Pittsburgh Post-Gazette Op-Ed: "Leasing the turnpike would be like signing up for an HMO -- for 75 years!" (June 1, 2008)

Philadelphia Inquirer Op-Ed on Pennsylvania Turnpike Privatization (May 27, 2008)

Altoona Mirror Article on Road Privatization in Pennsylvania (May 25, 2008)

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Road Privatization

Explaining the Trend, Assessing the Facts, and Protecting the Public

U.S. PIRG Education Fund
Fall 2007



Road Privatization

Explaining the Trend, Assessing the
Facts, and Protecting the Public

U.S. PIRG Education Fund

Written by:
Phineas Baxandall, Ph.D.
U.S. PIRG Senior Analyst for Tax and Budget Policy

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The author, Phineas Baxandall, Ph.D., Senior Analyst for Tax and Budget Policy at U.S. PIRG, can be contacted at (617) 747-4351, phineas@pirg.org, or:

U.S. PIRG, Federation of State PIRGs
44 Winter Street, 4th floor
Boston, MA 02108

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Executive Summary

Privatization of toll roads is a growing trend. During 2007, sixteen states had some privatized road project formally proposed or underway. In the last two years Indiana and Chicago signed multi-billion-dollar private concession deals for public roads for 75 years and 99 years respectively. As a result of these deals, toll rates on these roads will increase steadily and revenues will be paid to private company shareholders rather than to the public budget.

Encouraged by the enormous anticipated profits that private road operators will reap from these deals, Wall Street investors and high-priced consulting firms have promoted similar deals to other states and local governments. Although offering a short-term infusion of cash, privatization of existing toll roads harms the long-term public interest. It relinquishes important public control over transportation policy while failing to deliver the value comparable to the tolls that the public will be forced to pay over the life of the deal.

Proposed deals to construct new roads or bridges that would be privately operated are a more complicated matter. There may be instances where private companies can deliver services that the public sector

currently lacks and can not efficiently create. However, private deals for new construction should also follow the principles outlined below to adequately protect the public interest. Any potential advantages of private construction should be weighed against the disadvantages of private financing and control.

Governments have a long history of outsourcing service delivery on public thoroughfares. Private companies, for instance, operate gas stations and food service at public rest stops. But the public interest is best served by outsourcing only those functions where public capacity is lacking and where continual competition exists for privately provided service.

In general, privatization makes sense only for activities where the private sector has a clear comparative advantage over public provision of those same services. The common characteristics of road privatization deals are that they enlist a private intermediary to borrow large sums of money backed by a schedule to collect multiple decades of steadily increasing toll rates. Private proposals should thus be judged according to the relative costs and benefits of enlisting this intermediary

to borrow and to hike tolls. Governments can borrow upfront sums at substantially lower cost than can private companies. Government is also more democratically accountable than private companies when it comes to setting tolls. (In fact, according to a chorus of investment analysts, a chief contribution of the private intermediary is precisely that it can diminish public accountability for future toll hikes.) Thus toll road concessions are a bad idea precisely because they outsource activities where the private sector is less capable of serving the public.

In addition to an inability to ensure that the public will receive the full value for its future toll revenues, privatization of toll roads entails a number of additional problems. Over the long-term, these may be of even more serious concern:

- Loss of public control of transportation policy due to a fragmented road network, and an inability to prevent toll traffic from being diverted to local communities, or to change traffic patterns on toll roads without paying additional compensation to road operators.
- An inability to ensure fair or effective privatization contracts due to leases that last for multiple generations and therefore can not fully anticipate future public needs.
- The upfront privatization payoff is a short-term budget fix that does not

address long-term budget problems and requires drivers and taxpayers to pay more over the long term.

For both existing toll roads and new construction, the safeguards to protect the public interest against bad privatization deals can be expressed in seven basic principles:

- **Public control** retained over decisions about transportation planning and management;
- **Fair value** guaranteed so future toll revenues won't be sold off at a discount;
- **No deal longer than 30 years** because of uncertainty over future conditions and because the risks of a bad deal grow exponentially over time;
- **State-of-the-art maintenance and safety standards** instead of statewide minimums;
- **Complete transparency** to ensure proper process;
- **Full accountability** in which the Legislature must approve the terms of a final deal, not just approve that a deal be negotiated; and
- **No budget gimmicks** because a deal must make long-term budgetary sense, not just help in the short term.

Introduction

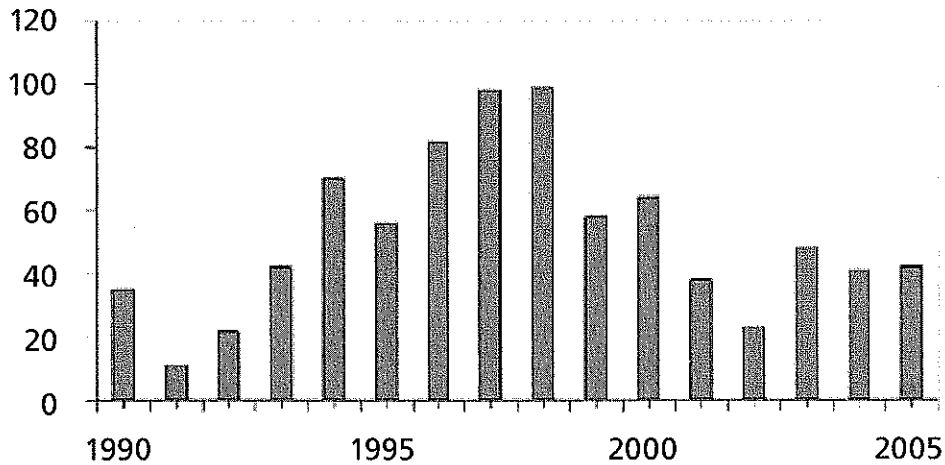
Faced with long-term budget woes and insufficient funds to sustain transportation infrastructure, state governments have experimented with privatizing roads. Numerous private investors currently offer public officials relief from the burden of managing these roads while also providing a large upfront payment. In return, the private entities seek the right to collect for themselves decades of future toll revenues and to steadily increase toll rates.

Once common only in developing countries, these road deals have spread to the United States in recent years.¹ In 2005 Chicago leased its 7.8-mile Skyway toll road to an international consortium that paid \$1.8 billion for a 99-year concession. Indiana followed with a similar a 75-year deal of its 157-mile Indiana Toll Road for \$3.8 billion. Governors in New Jersey and Pennsylvania shortly thereafter began exploring privatization options for their own well-established turnpikes. Other deals have enlisted a private company to construct or expand a new public road, and then typically operate it, in return for future toll revenue. Since 2001, agreements of one or the other type have been signed

in at least seven states, and were under way or officially proposed in at least sixteen states during 2007.² Between 1994 and early 2006, \$21 billion was paid for 43 highway facilities in the United States using various “public-private partnership” models.³ Recent legislation enabling private companies to operate public roads has passed in a majority of states.⁴

These developments mirror the earlier trend of infrastructure privatization in less developed countries. The rise in infrastructure privatization has been particularly pronounced in East Asia and in Latin America, where Enron was a major investor. In those countries, unlike the United States, access to long-term capital is a major problem for governments seeking to build infrastructure. According to World Bank records, infrastructure privatization outside of the United States reached a peak of over \$110 billion per year in 1997 and 1998.⁵ This trend largely bypassed the United States.⁶ The accompanying figure shows World Bank data for private participation in public infrastructure in the transportation sector, about half of which includes airports, seaports, or rail.

Number of Transportation Infrastructure Privatization Deals Outside U.S., 1990-2005



Source: World Bank Public Private Infrastructure data base

Many infrastructure privatization deals became high-profile failures. Two dozen private toll roads went bankrupt in Mexico after 1994. The Thai government seized one railroad that had been in private hands in 1993. Britain renationalized its rail system from Railtrack, the private company that had purchased the rail system in 2001.⁷ A World Bank study of over 1,000 infrastructure projects in Latin America and the Caribbean between 1982 and 2000 found that 55 percent of privatization contracts in transportation and 75 percent in water and sewer had been renegotiated, most during the first few years.⁸ Twenty-one toll road projects in Hungary, Indonesia, Mexico, and Thailand were subsequently taken over by the government.⁹ By the early years of the current decade, the volume of privatization deals had returned to the lower levels of the early 1990s.

With the broader global experience as background, this paper asks three vital questions about the current wave of highway privatization in the United States:

- What is driving the current toll road privatization trend?
- Do these deals benefit or harm the long-term public interest?
- How can the public best be protected?



Practical Objections to Privatizing Toll Roads

This paper focuses on the practical implications of road privatization. Privatization can make sense from a purely practical perspective when certain conditions are met.¹⁰

- First, privatization works best when private companies have some kind of proven comparative advantage over government agencies in providing a particular good or service. For instance, at least before recycling

programs were created, a variety of exhaustive studies concluded that smaller municipalities which used competitive contracting for household garbage collection had lower costs than comparable municipalities that used public agencies for collection.¹¹

- Second, the public must fully know what services it needs to contract for. For instance, it is less problematic to contract for private delivery of a ton of cement or for office windows to be washed each Friday than it would be to contract out “justice” from the courts.

- Third, privatization only succeeds when ongoing competition can discipline private contractors’ performance: either because multiple contractors can provide the same service simultaneously; or alternately because contracts are short enough, with a sufficient number of potential service providers, that unsatisfactory performers can be quickly replaced.¹²

- Finally, privatization works best when the government officials making the decision to privatize can be held accountable for the results of a deal.

“Privatization” or “Public Private Partnership”?

This paper uses the term “privatization” to refer to the transfer of traditionally public functions to the private sector. Recent road deals have received attention precisely because they are shifting the way in which roadways are financed and controlled. As long-time Harvard scholar of road privatization, José Gómez-Ibañez notes, privatization has often been repackaged under different names. He explains:

“Governments have experimented with many variants of privatization, often coining special terms—such as “peoplisation” (Sri Lanka), “capitalization” (Bolivia), or “equitization” (Vietnam)—to distinguish them from the standard fare. And many consultants now prefer to use the term “public-private partnerships” to emphasize that a wide variety of forms of public-private collaboration is possible. Such changes in terminology may be useful, but they do not eliminate the basic problem of persuading the public that the terms of the partnership are fair.”¹³

This paper avoids the term “public private partnership” (or PPP) because of its lack of precision. Interlocking relationships between the public and private sector are ubiquitous across the economy. Virtually all public programs have always involved some kind of partnership between public and private sectors. Medicare is a partnership between public financing and services by private medical providers, for instance. All government departments of transportation likewise have a long tradition of using private vendors for various kinds of service provision. Any transaction between two private companies involves some kind of partnership with the public sector that underwrites risks, defines property rights, and enforces contracts. Beyond a vaguely positive connotation, the term “public private partnership” fails to define what should be included or excluded in the category.

Toll road privatization fails to meet all of these conditions. Public entities, not private companies, have a clear and significant advantage when it comes to long-term borrowing of capital: the ability to issue tax-free debt, which makes for a cost of capital significantly less than private capital. Second, toll leasing deals are too long-term to predict future transportation needs, making it impossible to be certain of the services that must be contracted. Third, toll road privatization creates a

private monopoly with no meaningful ongoing competition because toll roads rarely compete with one another and deals last for several decades. Many lease contracts further limit potential competition from improved free roads. Finally, the length of these deals insulates them from public accountability. The downsides of a deal are likely to surface only after officials have left office and the public has no recourse to change the contract.

Explaining the Surge in Road Privatization

Given the obvious practical problems with toll road privatization, why is interest so widespread right now? The current growth of road privatization in the United States is being driven by factors on both the government side and on the part of private toll road operators.



Pressure from the Government Side

Budget squeeze for transportation

Roads across the country are under great strain in terms of growing congestion and years of insufficient investment in maintenance. The American Society of Civil Engineers graded the overall condition of the nation's infrastructure a "D."¹⁴ Part of the problem is perverse rules which discourage investment in maintenance while encouraging construction of new roads.¹⁵ Regardless, states are having great difficulty finding the money to fund their

transportation programs at accustomed levels.

Governments face immediate budget crunches due to rising health, pension, energy, and construction costs. These rising costs limit states' ability to use general revenue funds for transportation. Meanwhile, gas taxes, the traditional mainstay of transportation funding have not kept up with inflation. For example, states' gas taxes have lost 43 percent of their value during the 1970s, 80s, and 90s.¹⁶ The federal gas tax, last increased in 1993, has done only slightly better.

As a result of revenue shortfalls, states will soon be unable to sustain highway spending at traditional levels. According to the American Association of State Highway and Transportation Officials, the federal Transportation Trust Fund, used for state and local projects, is projected to run into shortfall during 2009 and will need to reduce payments by 42 percent the following year unless new revenues are obtained.¹⁷ Many state level transportation trust funds are also forecast to run into shortfall in coming years.¹⁸

In the context of great investment needs and stagnant revenues, the huge upfront

payouts of toll road privatization have obvious short-term appeal.

Political benefits

Privatization of roads may also offer some political benefits to elected officials beyond the avoidance of potentially unpopular tax increases. In the short term, privatization promises a huge budget windfall, which creates budget slack and an ability to dedicate resources to favored projects. The long-term financial downside, particularly the loss of toll funds and rising toll rates paid by drivers, often is overshadowed by the short-term and initial windfall.¹⁹

Privatization may also give elected officials political cover for the toll hikes brought about by privatization deals. Potential investors claim that by outsourcing toll collection to a private company, drivers' anger over the toll hikes will not be directed at the politicians who authorized the toll hikes. Moody's bond rating agency, after conceding that governments can generate these same upfront payments by borrowing against future toll collections without privatization, offers the counterpoint that, "If they pursue the option [without privatizing], governmental authorities must take responsibility for their own toll raising decisions, rather than distancing themselves from these decisions through a long-term concession to a private entity."²⁰ Fitch bond rating service, similarly, lists as a merit of toll road privatization, the ability to "Distance government from toll increases." The report explains that, "the political risk related to toll rate increases could be minimized by transferring the authority within an overall rate-setting framework to the private sector."²¹

Recent federal rules promote privatization

Aggressive policies by the federal government and particularly the Department of Transportation (DOT) have also promoted

road privatization. The Transportation Infrastructure Finance and Innovation Act (TIFIA), passed in 1998, established funds for the U.S. Department of Transportation to spend on secured (direct) loans, loan guarantees, and standby lines of credit to attract private investment in surface transportation infrastructure.²² The TIFIA website lists \$3.7 billion in past financing and two dozen current projects as of July 2007, mostly highway projects where private entities will be paid back through user fees. The DOT also publishes model legislation for states and a newsletter to encourage privatization of roads.²³

The biggest incentives are for private "green field" deals where companies construct a toll road and then operate it and collect tolls. The federal DOT allocates over \$2 billion per year in credit which can be used to subsidize private borrowing by narrowing the difference between the public and private sector's borrowing costs. The DOT does this by providing private developers and operators access to tax-exempt bonding for highway and surface freight transfer projects. The DOT also grants private projects special federal waivers that suspend normal requirements on contracting, project finance, compliance with environmental requirements, and right-of-way acquisition.



Pressure from the Investor Side

Low-Risk Profits

In addition to the federal subsidies for green field deals, a number of factors make road privatization attractive to investors. One is the reliability of toll revenues. Compared to stocks and other investments, toll road privatization is considered a relatively secure source of long-term revenue. United

States contract law further reduces the investment risks, making deals very hard for governments to undo compared to other nations with less rigid commercial laws. Toll profits reduce investors' portfolio risk as well, because the returns on these investments depend chiefly on traffic flow, which for cars isn't closely linked to other broad market outcomes.

Vast Amounts of Private Money Seeking Toll Road Investments

With all these factors favoring toll road deals, it's no surprise that private investors have been feverishly trying to take advantage of the profit opportunities. According to a report by McKinsey, private

infrastructure funds dedicated to investment in public infrastructure grew from \$5 billion in 2004 to approximately \$45 billion in 2007. At least ten such investment funds were launched in 2006, and more than a dozen large ones are expected in 2007.²⁴ Goldman Sachs, for instance, has started a \$3 billion fund just for infrastructure privatization and consults to states about how to structure privatization deals. Morgan Stanley and Carlyle Group are putting together their own funds, while Macquarie Infrastructure Co. Trust launched its initial public offering (IPO) in December, attracting over a half billion dollars in new funds for privatized infrastructure.

"New Jersey's roadways will not be sold, and they will not be leased to either a for-profit or foreign operator."

— Governor Jon Corzine (NJ), June 28, 2007



Governor Corzine of New Jersey decided not to privatize or lease the Atlantic City Expressway, Garden State Parkway, and New Jersey Turnpike (pictured here). Governor Corzine previously served as CEO for Goldman Sachs, which advised structuring of the road privatization deals in Indiana and Chicago. (Photo: Mark Gordon)

The Dangers of Road Privatization

The economics and governance of road privatization are highly problematic. For existing roads, outsourcing borrowing against future toll revenue to a private entity is likely to produce less money than a public entity could produce. This is the case because a private toll road operator will have higher capital borrowing costs and must divert some revenues to shareholder profits. Even without these fiscal problems, long term road contracts pose a variety of serious threats to the public interest. These include fragmentation and loss of public control over transportation policy, and an inability to prescribe future needs in contracts signed decades earlier.



Loss of Public Control

Transportation policy has tremendous impacts on quality of life, health, and cost of living. It determines the level of traffic congestion and air pollution, the safety and quality of the roads, the many costs

of driving and car ownership, the availability of high-quality and affordable mass transit alternatives, and the development of future land-use patterns. What may seem beneficial from a narrow profit perspective does not necessarily benefit transportation networks more generally.²⁵ Public control of key toll roads is therefore necessary to ensure coherent transportation planning and policy making over long periods of time.

Any driver knows how events that take place on one road affect other connecting and alternative routes. Thus, toll levels, maintenance and safety standards, and congestion on a toll road have a substantial impact on the number of cars using alternative routes, including local roads and mass transit. Decisions about how to operate and manage major roadways can have the effect of creating traffic policy for an entire jurisdiction.

Road privatization elsewhere has shown that a private operator's profit motives lead to very different management decisions than a government would pursue. Four examples from recent road privatizations illustrate these potential dangers:

- **Non-Compete Clauses**—Some privatization contracts explicitly limit the state's ability to improve or expand roads. Private investors fearing that improved free roads would compete with their paying traffic obtained non-compete clauses in California, Colorado, and to a lesser extent, Indiana. In Colorado, a private toll road deal went so far as to require adjacent municipalities to add stop lights as a way to slow nearby local roads.²⁶ California, which used a private concession deal to create new toll lanes in the median of State Road 91, subsequently was forced to buy back the road because non-compete clauses prevented the state from improving the corridor and led to constant litigation. Non-compete restrictions hinder the state's ability to conduct effective transportation policy because other major roads will compete for cars with the toll roads, especially when privatization deals send toll rates sharply upwards and drivers seek alternative routes.
- **Private Toll Decisions = Broad Private Control of Traffic Management**—Private toll operators can generally increase revenues by raising toll rates, even though the higher rates will cause some trucks and cars to choose alternative routes. For the private operator, the additional toll rates more than make up for any loss of income from diverted vehicles. But from the public perspective, the diverted traffic may clog local roads, increasing congestion and pollution in local communities. Substantial traffic diversion, particularly of trucks, resulted in the wake of the 1991 New Jersey Turnpike toll hike. New Jersey responded by rolling back some of the toll hike for trucks to entice them back onto the Turnpike, a move that would not have been possible under privatization,

at least not without paying the private firm for the lost revenue. From a private toll road operator's perspective, the gridlock and pollution on local roads may actually be desirable because drivers will be more likely to pay still-higher tolls.

It's important to recognize just how much control over toll policy private operators gain via the maximum toll hike schedule that privatization deals provide. If the rules for increasing toll rates under the Chicago toll road deal had applied to the Holland Tunnel since its inception, that roadway could presently charge a one-way toll of more than \$180. As a practical matter, an operator would be unlikely to charge that price because nearly all drivers would instead take alternate routes. But the operator would be free to charge whatever the market would bear to maximize profits. Moreover, in order to maximize profits, the toll operator can also offer discounts to particular types of motorists and encourage traffic between certain exits or at certain times. Together these provisions enable the operator to dictate who drives on the toll roads at what times.

- **Creates "Tax" on Normal Policy Making**—The Indiana deal also requires the state to pay investors compensation for reduced toll revenue when the state performs construction such as to add an exit or build a mass transit line down the median. This compensation would add significantly to the cost of construction, and the state could potentially not afford to do the work it would otherwise perform. As an added complication, the exact level of these future payments might be subject to dispute and lawsuits. Transportation policy should be made

according to what's best for the public, not limited by what kinds of extra payments may have to be made to a private operator.

- **Inability to guarantee state-of-the-art safety and maintenance standards**—The public may want major traffic arteries to have cutting-edge safety technologies and road management upkeep; but road operators do not know what these will cost. Private operators want protection against large increases in safety or maintenance costs. The Indiana privatization deal, as a result, does not guarantee state-of-the-art standards. Under that deal, the state of Indiana can require the operator only to meet generally applicable safety standards. To get state-of-the-art, Indiana must pay the cost of constructing and maintaining the higher standards, as well as compensate the private company for any lost tolls caused by the construction. In other words, if Indiana intends to bring its toll road up to state-of-the-art standards, it must pay dearly.

In the future, new standards may include things such as new surfaces, embedded road sensors, or technologies that are not currently envisioned. The Chicago Department of Transportation, for example, has recently conducted a study which finds that using a new type of road surface that includes recycled rubber is slightly more expensive than regular asphalt but creates a number of public benefits. It reduces the strain on sewers and other water infrastructure because the surface is porous enough to allow water to return back into the ground. It also creates an outlet for used tires that are otherwise difficult and costly to dispose of in landfills. Despite the potential public benefits, a private operator would most likely be dissuaded from upgrading to this standard by the

extra costs and few benefits for their own bottom line. Since the new technology was developed after the Chicago road deal, its installation isn't in the contract. Chicago would presumably miss out on the benefits unless they were going to pay more to the road operator.²⁷



The Public Will Not Receive Full Value

Private investors are so eager to purchase existing toll roads that they are willing to offer impressive up-front payments in order to collect future tolls from the public. To give a sense of scale, the \$1.8 billion sum paid for the 99-year lease on Chicago's Skyway is enough to pay every resident in Chicago a one-time sum of \$643.²⁸ The consortium that purchased a 75-year lease to operate the Indiana Toll Road paid an even greater sum: \$3.8 billion. Potential privatization deals for the New Jersey and Pennsylvania turnpikes mentioned payments between \$10 billion and \$30 billion. For elected officials struggling to plug chronic budget shortfalls, these short-term windfalls are enticing.

As impressive as the upfront payments are, they pale in comparison to the likely value of the tolls traded for them, and are less money than public entities could generate doing the same financing themselves.

Financial analysis by experts in asset valuation confirms how privatization deals and offers have failed to supply full value for the future tolls that private companies are expected to collect.

- Analysis of the Indiana and Chicago deals by Dennis Enright of NW Financial, a New Jersey investment bank, found that the private

investors in those deals would likely recoup their investment in less than 20 years. That analysis is confirmed in at least Indiana's case by the company that won the bid. The company Macquarie sent investors a presentation asserting an "Anticipated 15 year pay-back to equity."²⁹ Given that Indiana's deal is 75 years long, and Chicago's is 99 years, the analysis demonstrates that governments in these states received far less for their assets than they are worth.

- Economist and long-term valuation expert Roger Skurski at the University of Notre Dame finds that the \$3.85 billion Indiana Toll Road lease should have more reasonably been valued at \$11.38 billion.³⁰
- In Texas, the Department of Transportation initially excluded the public toll authority from bidding to build and run a new toll road they planned near Dallas, even though it connected to another one of their roads. The winning \$3.1 billion private bid would have generated an estimated 12.5 percent rate of profit on its equity investment and would have required the public to compensate Cintra, the private company, if a "competing roadway" was built within 20 miles. One state senator initiated hearings which led to a temporary moratorium on private deals and the toll authority was allowed to bid. The public authority's bid offered an estimated \$1.9 billion in additional proceeds, calculated on a net present value basis, despite the public entity's higher estimated investment for constructing the road itself.³¹ The state was able to cancel its initial contract with the private operator.
- In testimony before the New Jersey

Assembly's Transportation Committee, securitization expert Peter Humphreys made clear that without privatization the state could generate a large upfront payment even without aggressive toll hikes. By securitizing future toll revenue, he calculated, the state could generate an up front payment of \$1.2 billion for each annual \$100 million of future toll revenue it securitized for 15 years. Given that New Jersey tolls currently generate \$700 million a year, a single deal without a single toll hike would then generate \$8.4 billion over 15 years.³²

Figuring out the fair price for a toll road is a high-stakes guessing game. The long-term value of the upfront payment itself depends on predicting correctly the extent to which inflation will erode the value of those dollars and what rate of return investors could have otherwise garnered with the money. Expected revenues depend on future toll rates and how many cars and trucks will use the road, as well as whatever lesser revenue may be obtained from service-area vendors and development of future advertising and amenities. Private concession deals attempt to reduce uncertainty by indexing future toll rates to factors such as inflation and the growth of the national economy; but much uncertainty remains on the revenue side. Meanwhile, the road operator's costs will depend on factors such as future maintenance and improvements, the number of workers that will be employed, and the cost of providing road safety and snow removal. All of these factors will themselves be influenced by future trends in transportation technology and demographics. The actual cost for a private operator will depend also on which unanticipated future road improvements their lawyers would be able to force the state to pay for.

Despite the uncertainty over actual future costs and revenues on toll roads, a

number of factors prevent the public from receiving full value for a concession deal.

Private Investors Have Higher Costs of Capital

Private companies have higher long-term borrowing costs than public entities. According to analysis by Dennis Enright at the investment bank NW Financial Group, public sector costs for raising capital through debt are a full 35 percent less than the lowest cost of money that a private entity can hope to obtain.³³ The actual financing arrangements, would, of course, be more complicated; but the basic public advantage when it comes to the cost of raising debt stacks the cards against a private deal.³⁴ Government will continue to have lower borrowing costs because it can issue tax-free public-purpose bonds, and bond traders are willing to accept lower interest rates on public bonds.

The higher cost of capital alone means privatization deals will create significant public losses. Even when multiple private companies bid for a public toll road, their higher long-term borrowing costs will get passed onto the public in the form of a lower upfront payment than the government could raise borrowing against the same future toll hikes without using the private road operator as an intermediary. Stated differently, privatization requires greater toll hikes to generate the same up front payment as would be necessary without privatization. According to the NW Financial Group study, "doing such a deal with non-public ownership will result in tolls 20 to 30 percent higher than a public deal of equal size."³⁵

There's no debate about whether public borrowing costs are lower than the private sector. Deloitte, a major consultant on privatization projects, argues for instance, that, "with the maturing of the private finance market in the United Kingdom, the financing costs difference between the private cost of capital and public borrowing

is now in the range of only 1-3 percentage points."³⁶ Defenders of road privatization may argue that private-sector efficiencies will offset the private sector's higher borrowing costs, but the higher costs themselves are not at issue.

Minor Potential Cost Savings on Existing Toll Roads Do Not Offset the Higher Costs

Privatization advocates often counter concerns about the high capital costs of privatization by talking about potential efficiency increases from private operators. Relatively minor cost savings may be gained by avoiding public-sector rules about hiring standards.³⁷ Overall, however, the potential savings are so financially limited that road companies do not even mention them to their own investors. Macquarie Investment Group, in its own PowerPoint presentation to investors on the Indiana deal, reports "no significant cost savings envisaged."³⁸ Similarly, a leaked document from a private operator proposing a \$30 billion deal in New Jersey explicitly states that the value is due to toll rate increases, not operating efficiencies.³⁹ In sum, private operation cannot be expected to produce sufficient cost savings to offset the high costs of privatization.

Privatization decisions should be distinguished from other kinds of modernization that may accompany privatization efforts. Modernization can be accomplished under either public or private auspices. A particular public toll authority may, for instance, be slow to adopt electronic tolling while a potential private operator promises to install the new technology promptly. In this case, the elected officials have the authority to instruct the toll authority to modernize, even if they have to pass new legislation or appoint new toll authority managers to speed the process. Alternately, the public could hire the private operator just to install the new system.

Modernization does not require a private operator and the associated loss of public value and control.

Modernization should similarly be distinguished from privatization in situations where the state seeks to build a new toll road or expand an existing one. There are potential gains and risks to outsourcing construction project design and oversight to a private firm. In some cases a private builder in a "design-build" project may better manage the risk of cost overruns. But, as problems with Boston's Central Artery "Big Dig" project managed by Bechtel/Parsons Brinckerhoff illustrate, private outsourcing can lead to its own problems with cost, safety, and quality.⁴⁰

The point is that service provision should be distinguished from financing and long-term ownership. Giving greater discretion and incentives to a private builder need not entail private ownership or private financing of the completed road.

Private Deals Must Also Cover Private Shareholder Profits

While the high capital costs of privatization alone ensure the public cannot get as much value from a private deal as it could from a public one, the money the public loses in these deals is also driven by the high profits the investors make. For instance, Cintra, one of the companies purchasing the Chicago Skyway, revealed that it anticipates to bring in a 12.5 percent return on the equity they invested.⁴¹ Whatever the profit share allocated to shareholders, this is a net loss to the public.

Transaction Costs

Privatization deals also create significant legal and monitoring costs. For governments to try their best to avoid unintended consequences, they must spend dearly on high priced lawyers and analysts to conduct asset evaluation, performance monitoring,

and contract enforcement. Goldman Sachs was paid \$20 million for financial advice on the Indiana privatization deal and \$9 million for the Chicago Skyway deal.⁴² The state of Texas similarly spent \$19 million on upfront legal fees and an environmental study of the proposed deal to build State Highway 121.⁴³ Many of these costs would also be incurred if the government opts to use a public entity such as the turnpike authority to securitize future toll revenues for an upfront payment. Under a private deal, however, additional state inspectors and lawyers would be needed to interpret the contract and litigate to ensure that the private operator was upholding the terms of the deal.



Problems Compounded by Excessively Long Contracts

The loss of control and lost value from privatization are greatly compounded by the fact that the contracts last much longer than the public can foresee or for which elected officials can be held accountable. The Chicago and Indiana lease deals will stretch for multiple generations: 99 years and 75 years respectively. Private investors prefer deals at least 50 years long, because that length allows them to qualify for favorable tax treatment.

To appreciate how profound future changes will be over these time frames, they must be put in perspective. Consider these transportation-related milestones: Henry Ford introduced the Model T in 1908, 99 years ago; the George Washington Bridge opened in 1931, 76 years ago; and Congress created the interstate highway system in 1956, 51 years ago. Similarly, population changes during these

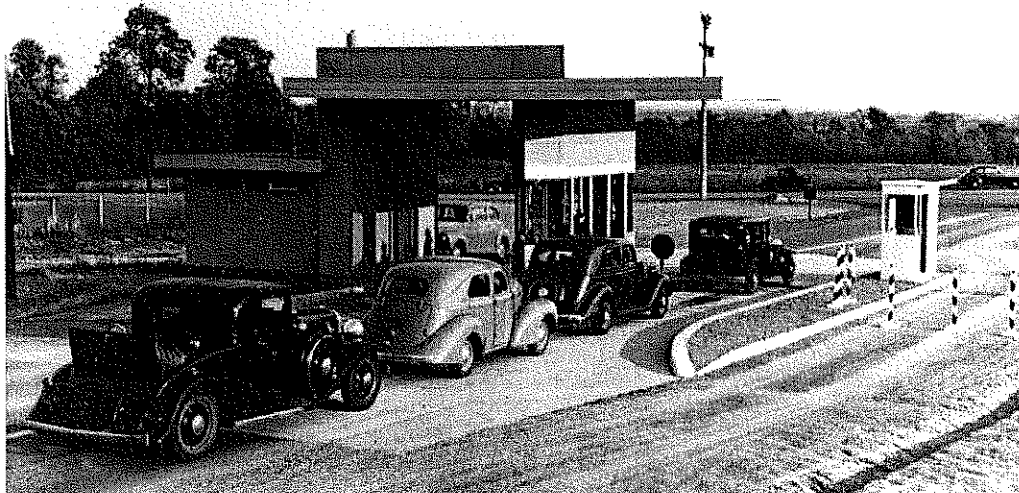
time periods can be dramatic. Metropolitan areas have doubled their populations in the course of a few decades, creating huge changes in transportation needs. Massive, unforeseeable changes will likely take place for transportation technology, networks, demographics, and the distribution of population over time frames like those in the Chicago and Indiana deals. In the face of such uncertainties, governments cannot predict their transportation needs, nor the revenue potential of the its toll roads, well enough to negotiate a deal that fairly allocates risks, dictates policy, or sets a fair price.

No contract can be well crafted enough to solve these problems. Even the most public-minded elected officials with the best lawyers and consultants can not draw up a leasing or concession contract that will predict the public's needs and contingencies in the distant future. Ambiguities in the future interpretation of a contract under unforeseen circumstances may have huge stakes and may need to be litigated. Officials should not believe that they can outfox lawyers for private toll-operating entities in drawing up these contracts.

Professor José Gómez-Ibáñez at Harvard

who has written numerous books on infrastructure privatization describes this problem as "the overuse of long-term concession contracts as the method of regulation." He explains that, "the concession contract attempts to describe completely the obligations of the private firm to the government and vice versa, and it can not be changed unilaterally by either party. ...The main risk with concession contracts is that an unforeseen event will make the contract unworkable for one or both parties. In such cases, the parties face a difficult choice of whether to renegotiate the contract or try to live with its unsatisfactory terms until the concession expires."⁴⁴

Beyond the uncertainties inherent in a multi-generational time frame, an additional issue of good-government arises: disenfranchisement of future generations of voters. Private investors specifically seek out essential thoroughfares which lack attractive alternative routes. These highways are vital infrastructure, integral to the daily lives of residents. So long as the State, directly or through a Turnpike Authority, retains control over its toll roads, voters have the ability to hold decision-makers accountable. Turning over control of the



Cars lining up for the opening of the Pennsylvania Turnpike in 1940 (Photo: Pennsylvania Turnpike Commission).



Winter road maintenance in the early days of the Pennsylvania Turnpike. (Photo: Pennsylvania Turnpike Commission.)

roads to private investors eliminates that accountability and binds future voters to present-day decisions. Doing so for several generations of voters is simply anti-democratic.



Lack of Transparency and Accountability

Given the profound implications of road privatization, no deal should be approved if the public has not had the opportunity to review, question and comment upon it. The Indiana and Chicago leasing deals were finalized with very little public deliberation or oversight. Texas would have lost billions of dollars in lost revenue if public hearings did not expose the higher payoff that could be offered by the public authority. Full transparency requires public hearings plus disclosure of a potential deal's terms, and any related contracts and subcontracts well before a decision is made.

Likewise, citizens need to be able to hold their representatives accountable for their decision to approve (or not approve) any privatization deal. Opinion polls show the public generally opposing road privatization.⁴⁵ In order to avoid a situation in which

the executive branch approves a deal which legislators subsequently disavow, the legislature should also be required to vote on the final terms of any potential deal. This is akin to the way that Congress is required to ratify trade deals negotiated by the federal executive branch. Legislators who must defend their votes will listen more closely to the public. Needing legislators' votes, states' governors must also be more attentive to public opinion.



Short-Term Budget Gimmicks

Politicians sometimes have a penchant for one-shot "solutions" that actually aggravate long-term budget problems. The payoff structure of road-privatization deals tends to lead to fiscally irresponsible budgeting. States or local officials may be attracted by the immediate payoffs of privatization deals because they face long-term revenue shortfalls that prevent them from funding public programs or force them to face criticism for tax increases. But because privatization payoffs are financed through future toll revenues, they can actually make future budget shortfalls worse.

For instance, the Indiana Toll Road deal used a 75-year lease to finance a ten-year transportation plan. Whatever structural budget shortfalls Indiana faced before the deal will return in year 11, but the state will need to face these shortfalls without the yearly revenue from its toll road or the possibility of raising those tolls for public purposes in the future.

If privatization deals are really intended to address long-term budget needs, then their proceeds should be dedicated to paying off other kinds of long-term budget shortfalls, such as debt and transportation trust funds.

Protecting Against Bad Privatization Deals

When considering potential privatization deals, public officials need to apply basic principles and to benchmark potential deals against the performance of similar borrowing and toll increases by a public authority. For “green field” deals to build new roads, public officials should specify exactly how private entities might add value, and whether those more limited tasks might be outsourced while retaining broader public control and financing.

Basic public interest principles can protect against bad privatization deals. The following seven guidelines can help public officials spot a lemon of a privatization deal, one that does not adhere to the following conditions:

- **Public control** retained over decisions about transportation planning and management without financial penalties;
- **Fair value** guaranteed so future toll revenues won't be sold off at a discount. Any upfront payment must exceed what a public entity could deliver, and windfall revenues must be shared if future traffic exceeds projections;
- **No deal longer than 30 years** because of uncertainty over future conditions and because the risks of a bad deal grow exponentially over time;
- **State-of-the-art maintenance and safety standards** instead of statewide minimums;
- **Complete transparency** to ensure proper process;
- **Full accountability** in which the Legislature must approve the terms of a final deal, not just approve that a deal be negotiated; and
- **No budget gimmicks** because a deal must make long-term budgetary sense, not just help in the short term.

Transparency and accountability will force public officials to face difficult questions. When forced to measure up to these public interest principles, public officials are less likely to see high-priced road sell offs as an “easy out” to their difficult budget problems. There are no easy and attractive answers to questions such as what happens

if diverted traffic from increased tolls leads to gridlock in nearby communities.

Public interest protections also prompt investors to internalize some of the risks that the public would otherwise incur from privatization. Many potential investors may be discouraged by a lack of secrecy or by the possibility of disruptions to future traffic flow, for instance. Investors may also reduce the upfront amounts they are willing to offer. But the tradeoffs will be more realistically expressed in the sale price.

By challenging privatization proposals to financially outperform what the public sector could produce with the same borrowing and toll increases, privatization proposals can be evaluated more pragmatically. Promised operational efficiencies can be evaluated on their own terms. And ideological claims that assert infrastructure privatization will “untap the dormant value of public assets,” can be understood as little different from taking out a second mortgage on one’s home.

If it is established that the public toll road authority or other public special-purpose entities can deliver better financing than private bidders, this still does not mean that public “monetization” of future tolls is a good idea. It should be evaluated the way any bond issuance or other borrowing would be: by judging whether the benefits of upfront investments would outweigh the longer-term debt burden.

If public agencies are going to outbid private contractors, they must be able to make a credible commitment that the agency will actually follow through in raising tolls. The state may need to circumvent statutory debt limits or have them

removed. “There is no doubt,” according to a study by the Keston Institute for Public Finance and Infrastructure Policy, “that if the public sector was willing to increase tolls at the same rate proposed by private investors that the public sector could raise as much money as the private sector through long-term concession deals.”⁴⁶

Similarly, when considering any potential privatization deal, it is important to spell out exactly where privatization would be expected to generate increased value. Government agencies may, for instance, lack certain kinds of technical expertise. The government may lack the capacity to install or manage electronic toll paying or certain kinds of new bridge-building techniques, for example. The government may even have less ability to contain construction costs. Once the specific public shortcomings have been identified, it will be possible to consider whether the government might outsource those activities separately or whether it would be cost efficient for the public sector to build those capacities in-house.

For existing toll roads, there simply are not enough potential efficiency gains for toll concession deals to advance the public interest. It is harder to make overall assessments of potential deals for new road construction through private companies that would claim future toll revenues. But no private deal should go forward unless the government is certain that the identified benefits can not be purchased separately and that the benefits truly outweigh the many associated downsides of road privatization.

Notes

1. Private infrastructure deals are common in Europe as well; but most such deals tend to be much shorter in length and the state typically retains much greater control, below-inflation toll increases, and revenue sharing. According to the World Bank's Private Participation in Infrastructure database, European road concession deals (such as in Indiana or Chicago) totaled \$4.2 billion between 1990 and 2005. This comprises about 2 percent of total private investment in European public infrastructure. Concession deals in Europe constituted only 29 percent of all transport-sector deals. See http://ppi.worldbank.org/explore/ppi_exploreRegion.aspx?regionID=3
2. Private leasing projects have been implemented since 2001 in Alabama, California, Illinois, Indiana, Michigan, Texas, and Virginia. New privatization initiatives have been officially proposed or are moving forward in Alaska, Colorado, Florida, Georgia, Illinois, Indiana, Missouri, New Jersey, Nevada, New York, Ohio, Oregon, Pennsylvania, Texas, Utah, and Virginia.
3. Deloitte Research, *Closing America's Infrastructure Gap? The Role of Public Private Partnerships* (2007).
4. Government Accountability Office, "Highway Finance: States' Expanding Use of Tolling Illustrates Diverse Challenges and Strategies," GAO-06-554, June 2006, pp.20-25.
5. Based on the World Bank's Public Private Infrastructure database (PPI) which counts only privatizations that grant operational control to a private firm. See José A. Gómez-Ibáñez, Dominique Lorrain, and Meg Osius, "The Future of Infrastructure Privatization," Working Paper, Taubman Center for State and Local Government, Kennedy School of Government, Harvard University (June 2004). Current levels of privatization in developing countries have revived behind telecommunications deals, but the total is still 30 percent below its peak in real terms. See "Revival of private participation in developing country infrastructure," *Gridlines* Note # 16 (Jan. 2007).
6. One reason privatization of infrastructure has been modest in the United States is simply because the U.S. never had much public infrastructure to speak of in the industries where privatization took place: no state telecommunications company, energy company, civilian shipyards, airline, or electricity generation and transmission. John D. Donahue, *The Privatization Decision: Public Ends, Private Means* (NY: Basic Books, 1989), p. 6. Municipalities in the United States have experimented with privatized service delivery. While these moves make headlines, the overall trend is more ambiguous because challenges with monitoring and a desire to better steer the process often prompt municipalities to subsequently contract these services back in. For a discussion, see M.E. Warner with Mike Ballard and Amir Hefetz, 2003. "Contracting Back In - When Privatization

fails," chapter 4, pp. 30-36 in *The Municipal Year Book 2003*. Washington, DC: International City County Management Association (2003).

7. José A. Gómez-Ibáñez, Dominique Lorrain, and Meg Osius, "The Future of Infrastructure Privatization," Working Paper, Taubman Center for State and Local Government, Kennedy School of Government, Harvard University (June 2004).

8. José Luis Guasch, "Concessions of Infrastructure Services: Incidence and Determination of Renegotiations—An Empirical Evaluation and Guidelines for Optimal Concession Design", manuscript, World Bank, May 2002, cited in José A. Gómez-Ibáñez, Dominique Lorrain, and Meg Osius, "The Future of Infrastructure Privatization," Working Paper, Taubman Center for State and Local Government, Kennedy School of Government, Harvard University (June 2004).

9. Gisele F. Silva, "Toll Roads," World Bank, Public Policy for the Private Sector, Note 224 (December 2000).

10. For more comprehensive discussion of the preconditions for successful privatization, see David Lowery, "Consumer Sovereignty and Quasi-Market Failure" *Journal of Public Administration Research and Theory*, (1998) pp.137-172; John D. Donahue, *The Privatization Decision: Public Ends, Private Means* (NY: Basic Books, 1989); Oliver Williamson, "Public and Private Bureaucracies: A Transaction Cost Economics Perspective," *Journal of Law, Economics and Organization* 15, 1 (1999):306-342; M.E. Warner and Amir Hefetz, "Pragmatism over Politics: Alternative Service Delivery in Local Government, 1992-2002," chapter in *The Municipal Year Book 2004*. Washington, DC: International City County Management Association (2004).

11. John D. Donahue, *The Privatization Decision: Public Ends, Private Means* (NY: Basic Books, 1989).

12. Donahue's broad survey of public versus private efficiency across a wide range of services bears this out. He observes, "Without a credible prospect of replacement, it is hard to harness private capabilities to public purpose." See John D. Donahue, *The Privatization Decision: Public Ends, Private Means* (NY: Basic Books, 1989).

13. José A. Gómez-Ibáñez, Dominique Lorrain, and Meg Osius, "The Future of Infrastructure Privatization," Working Paper, Taubman Center for State and Local Government,

Kennedy School of Government, Harvard University (June 2004).

14. American Society of Civil Engineers, "2005 Report Card for America's Infrastructure," available at <http://www.asce.org/report-card/2005/index.cfm>

15. See, for example, David Westerling and Steve Poftak, *Our Legacy of Neglect: The Longfellow Bridge and the Cost of Deferred Maintenance*, Pioneer Institute White Paper, No. 40 (July 2007).

16. Robert Puentes and Ryan Prince, *Fueling Transportation Finance: A Primer on the Gas Tax* (Brookings Institute, March 2003).

17. American Association of State Highway and Transportation Officials, *Transportation: Invest in Our Future; Revenue Sources to Fund Transportation Needs* (April 2007).

18. For instance, *Transportation Finance in Massachusetts: An Unsustainable System*, Findings of the Massachusetts Transportation Finance Commission (March 28, 2007); *Putting the Trust Back into the New Jersey Trust Fund*, Connecticut, New Jersey, New York Regional Planning Association (July 2005); Matt Sundeen and James B. Reed, *Surface Transportation Funding: Options for States*, National Council of State Legislators (Dec. 2006)

19. Governments may become less reluctant to hike tolls as a result of electronic tolling technologies, such as EZ Pass. Toll roads around the country are increasingly paid through electronic transponders that withdraw funds electronically from drivers' bank accounts. Electronic tolling makes toll collection and processing more efficient and convenient, while allowing cars to pay tolls without coming to a complete stop. Research suggests that electronic tolling also makes toll hikes more politically palatable. MIT economist Amy Finklestein examined data at 123 tolling facilities around the U.S. and found that electronic tolling (like EZ-pass) results in governments raising tolls more quickly. Automated tolling results on average in tolls that rise at a rate 75 percent faster than manual tolling would over time. One strong piece of evidence that drivers don't notice electronic tolls as much is that an increase in electronic toll rates reduces driving only 11 percent as much as the same increase reduces driving for manually collected tolls. See Amy Finklestein, "E-ZTax: Tax Salience and Tax Rates," NBER Working Paper No. 12924 (February 2007). The author tests a number of alternative hypotheses for why else this might be the case.

20. Moody's Investor Service, "Monetizing" and Other Creative Solutions for Financing U.S. Transportation Capacity: Multiple Roads to the Same Destination," Special Comment, June 2007, p. 2.
21. Fitch Ratings, "Special Report: U.S. Toll Road Privatizations: Seeking the Right Balance" (March 22, 2006).
22. <http://tifa.fhwa.dot.gov/> The TIFIA statute was enacted as part of the Transportation Equity Act for the 21st Century (TEA 21, Public Law 105-178, §§1501-04), as amended by the TEA 21 Restoration Act (Title IX of Public Law 105-206) and the Safe, Accountable, Flexible, Effective Transportation Equity Act: A Legacy for Users (SAFETEA-LU, Public Law 109-59). The substance of the legislation is codified within sections 601 through 609 of title 23 of the United States Code (23 U.S.C. §§601-609), with supporting regulations appearing in part 80 of title 49 of the Code of Federal Regulations (49 CFR 80).
23. <http://tifa.fhwa.dot.gov/> viewed August 21, 2007.
24. Research in Brief, "Private-investment opportunities for public transport," The McKinsey Quarterly (April 2007).
25. See also the position paper, "Public Interest Concerns of Public-Private Partnerships" by the House Transportation and Infrastructure Committee Chair, James Oberstar, available at <http://transportation.house.gov/media/file/press/ppp%20guidelines%20veritas.pdf>
26. *Rocky Mountain News*, "Road Fight is Hardy Perennial," December 12, 2005, available at http://www.rockymountainnews.com/drmn/local/article/0,1299,DRMN_15_4308424,00.html
27. The Chicago Skyway deal is not public record, so we can not say for sure what provisions it contains. Speculation here is based on the fact that, under public criticism, the government has not divulged any public interest provisions. Investors also are unlikely to promise to install technologies for which they have no idea of the costs.
28. The 2005 Census lists a Chicago population of 2.8 million people.
29. Macquarie Investment Group, "Indiana Toll Road," PowerPoint presentation, slide 5.
30. Roger Skurski, Professor of Economics, University of Notre Dame, report prepared for trial testimony May 15, 2006 in *Bonney, et al v. Indiana Finance Authority, et al*, St. Joseph County, Indiana Superior Court.
31. Dennis Enright, "Texas Hold 'em: Will the State Go All In to Public-Private Partnerships ("CDAs") and Lose \$2 billion?" NW Financial (April 2007).
32. Peter Humphreys is a partner at the law firm of McDermott, Will & Emery, where he heads the securitization practice. McDermott, Will & Emery is the 13th largest law firm in the country. He calculated that securitization by the state would yield an estimated upfront payment of \$8.4 billion.
33. Dennis J. Enright, "The Public Versus Private Toll Road Choice in the United States," NW Financial Group, LLC (June 2007), p. 8.
34. The public-private spread may typically be one to three percentage points in interest rates for debt. A relatively small portion—perhaps 20 percent on average—of an upfront payment would need to be financed through equity for private investors, while for public investors this cushion is covered by a toll revenue covenant that promises a "coverage ratio" in which revenues are expected to exceed expected payments by a prescribed percentage. The public sector could choose to reinvest that surplus amount, use it to reduce future toll hikes, or even securitize the revenue as a future income stream on the private bond market at comparable rates that a private entity would use to finance the equity portion of its upfront payment. Whether or not the public sector has a cost advantage on the equity side is debatable. The lower overall capital costs for the public sector are not.
35. Dennis J. Enright, "The Public Versus Private Toll Road Choice in the United States" NW Financial Group, LLC (June 2007), p. 10. As home buyer know well, a percentage point or two can make a huge difference in a long-term mortgage.
36. Deloitte Research, *Closing America's Infrastructure Gap? The Role of Public Private Partnerships* (2007).
37. National Association of State Highway and Transportation Unions, Highway Robbery II: *The Many Problems With Outsourcing Design, Engineering, Inspection & Supervision of Federally-Funded Transportation Projects: Increased Costs, Reduced Quality & Safety*, (May 2007).
38. MIG (Macquarie Infrastructure Group) PowerPoint presentation, "Indiana Toll Road," Slide 22, "Operating Expenses."
39. Governor Corzine's Remarks on the FY08 Budget Agreement, June 28, 2007, available at

http://www.state.nj.us/governor/news/speeches/070628_budget.html

40. National Association of State Highway and Transportation Unions, Highway Robbery II: *The Many Problems With Outsourcing Design, Engineering, Inspection & Supervision of Federally-Funded Transportation Projects: Increased Costs, Reduced Quality & Safety*, (May 2007).

41. Dennis J. Enright, "The Public Versus Private Toll Road Choice in the United States" NW Financial Group, LLC (June 2007).

42. Daniel Schulman, "The Highwaymen," *Mother Jones* (January/February 2007).

43. Jeffrey N. Buxbaum and Iris N. Ortiz, "Protecting the Public Interest: The Role of Long-Term Concession Agreements for Providing Transportation Infrastructure," USC Keston Institute for Public Finance and Infrastructure Policy, Research Paper 07-02 (June 2007), p. 9.

44. José A. Gómez-Ibáñez, Dominique Lorrain, and Meg Osius, "The Future of Infrastructure Privatization," Working Paper, Taubman Center for State and Local Government, Kennedy School of Government, Harvard University (June 2004).

45. For example, in New Jersey the Farleigh Dickenson PublicMind Poll conducted February 27th through March 4th found only 17 percent of the public supported a turnpike lease, compared to 58 percent against it—a ratio of more than three to one.

46. Jeffrey N. Buxbaum and Iris N. Ortiz, "Protecting the Public Interest: The Role of Long-Term Concession Agreements for Providing Transportation Infrastructure," USC Keston Institute for Public Finance and Infrastructure Policy, Research Paper 07-02 (June 2007), p. 8.