PEER EXCHANGE SERIES ON STATE AND METROPOLITAN TRANSPORTATION PLANNING ISSUES

MEETING 3: INNOVATIVE FINANCE

Requested by:

American Association of State Highway
and Transportation Officials (AASHTO)

Standing Committee on Planning

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Table of Contents

1.0 Introduction

On October 24 and October 25, 2005, the Innovative Finance Peer Exchange was the third in a peer exchange series held as part of National Cooperative Highway Research Program (NCHRP) Project 8-36, Task 53 – Peer Exchange of Best Practices on State and Metropolitan Transportation Planning Issues. The objective of this project is to carry out separate peer review meetings to explore: reliability measures; non-traditional performance measures; innovative transportation financing; disaster response issues in transportation planning; work assignments and performance in external positions funded by transportation agencies; and public-private project planning. Peer exchanges offer a unique opportunity to not only engage in discussion and share experiences and lessons learned but also identify potential solutions and prioritize areas for additional advancement through research, technical assistance, and other activities.

The goal of the Innovative Finance Peer Exchange was for individuals from various agencies to discuss their experiences and lessons learned from implementing innovative financing initiatives. This report serves to document the participation of selected transportation professionals and share these findings with the larger transportation community.

Invitations to the peer exchange were extended to state departments of transportation (DOT), metropolitan planning organizations (MPO), and public transportation agencies exploring innovative finance. Participants were selected from across the county with input from the NCHRP 8-36 Task 53 oversight panel to create a mix of organizations with regard to sizes, jurisdictions, and experiences with innovative finance. Appendix A contains the list of participants who attended the peer exchange.

The remainder of this section contains background information on innovative finance taken from an overview memorandum distributed to participants prior to the peer exchange. Participants were also asked to respond to a set of questions related to innovative finance in their jurisdictions to create the foundation for the meeting and to facilitate discussion. Section 2.0 contains a summary of these responses with complete responses located in Appendix B. Section 3.0 summarizes the topics covered during the meeting as well as additional insight, research needs, and existing resources. Appendix C contains submitted case study material from five participants.

1.1 Why Innovative Finance?

For more than 200 years, our nation has engaged in developing its transportation system from coast to coast and border to border. In doing so, there have been constructed some

four million miles of roads and highways within the 50 states and the District of Columbia.[1] Public transit has also seen extensive growth, with Americans making 9.4 billion trips in 2003.[2] Today, the United States boasts a multimodal transportation network that is the finest in the world. But times are changing and what was once sufficient to address our needs no longer is able to keep pace with the demands of the 21st Century. Virtually every measure of our transportation system, be it number of registered vehicles, vehicle miles of travel (VMT), licensed drivers, hours wasted in congestion, or any other, is currently increasing faster than the growth in capacity of the system itself.

The demand for more facilities and improvement to existing roads and highways seems to be endless. Given this climate, many states and local agencies strive to answer: 1) what are the future needs for their transportation systems; and 2) how will those needs be met financially. The numbers are staggering by any measure. Tens of billions of dollars in needs lie in wait on the horizon in even smaller states and there is no obvious funding solution available to meet those needs. In the 1999 "FHWA Conditions and Performance Report," the Federal Highway Administration (FHWA) placed the backlog of highway repairs at $167 billion with an additional need of $87 billion for bridges.[3] The *Bottom Line Report*, published by the American Association of State Highway and Transportation Officials (AASHTO) in 2002 offered that it would take $92 billion per year just to maintain the current system into the future.[4]

On August 10, 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act for the 21st Century: A Legacy for Users (SAFETEA-LU) was enacted providing for the Federal surface transportation investment for the period from 2005 to 2009. At a record $286.5 billion in guaranteed funding, this legislation represents a 32 percent increase in core programs nationwide.[5] However, with an average contract authority of less than $38 billion available per year, this long-overdue reauthorization comprises less than half of what AASHTO said was needed just to maintain our nation's surface transportation system.[6]

The menu of traditional funding options available is long and populated with a variety of taxes, user fees, and debt instruments. Below is an illustrative list of these options:

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[1] http://www.fhwa.dot.gov/ohim/hs98/tables/hm10.pdf.

[2] http://www.apta.com/research/stats/factbook/documents/overview.pdf.

[3] http://www.fhwa.dot.gov/policy/1999cpr/.

[4] American Association of State Highway and Transportation Officials, *Transportation: Invest in America: The Bottom Line*, 2002.

[5] http://downloads.transportation.org/Reauthorization_Briefing_9-14-05.pdf.

[6] http://www.fhwa.dot.gov/safetealu/factsheets/oblim.htm.

- Statewide motor fuel tax
- Local motor fuel tax
- Indexing motor fuel tax
- Impact fees
- General sales tax
- Transportation-related sales tax
- Tax on rental cars
- Vehicle registration fees
- Per vehicle taxes (non-registration)
- General fund
- Property taxes
- Tolls
- Tax increment financing

For much of the last 50 years, a transportation agency could count on Federal dollars to offer sufficient funding to meet transportation finance needs. Given the condition of Federal funding today and the staggering system needs, states are turning to other finance tools.

Financing public infrastructure is not a new endeavor and there are many financing options available depending on the locale and specific circumstances existing in the state and local governments. States and local governments are realizing that gas tax receipts are not enough to satisfy demand for new capacity or to preserve the existing system, and they are looking to solve these funding shortfalls with alternative methods.

1.1.1 Innovative Financing Tools

Grant Anticipation Revenue Vehicle (GARVEE). GARVEE was established through the Transportation Equity Act for the 21st Century (TEA-21) as a financing tool for states to bond against their future Federal revenues. GARVEEs are a form of debt financing that has grown to become a highly attractive means to accelerate the delivery of transportation projects.

Transportation Infrastructure Finance and Innovation Act (TIFIA). TIFIA offers states credit assistance to help finance projects. While there were dollar limits and other conditions placed on the TIFIA program at its outset, the recently passed SAFETEA-LU legislation reduced the dollar threshold to $50 million while still allowing one-third of the project to be financed in this manner. TIFIA provides states a flexible financing tool offering borrowers three financing options: secured loans, loan guarantees, and lines of credit. TIFIA loans are particularly known for their flexible repayment provisions.

State Infrastructure Bank (SIB). SIBs are available to the 50 states and Puerto Rico to assist in building transportation projects. There is a variety of means for capitalizing a SIB and, once funded, the SIB offers a number of financing tools to state and local governments including:

- Below market-rate subordinate loans;
- Interest rate buy downs on certain loans; and
- Guarantees and other finance tools.

Tolls. Tolls are a financial tool to generate revenue that can then be recycled back into the transportation system. To date, the market penetration of tolls to finance projects continues to be small. However, the advent of Public-Private Partnership initiatives and the growth in non-state toll authorities means that greater use of tolls may become an attractive tool for future transportation projects, especially capacity expansion.

Public-Private Partnership. Public-Private Partnerships offer an opportunity to engage, and sometimes turn over, public infrastructure to the private sector to operate and maintain. These partnerships are attractive to the public sector because they supplement funding packages with private equity. Including the private sector in the provision of transportation services and facilities is gaining acceptance as an innovative way of maximizing limited public resources.

Voter Referenda. On the local and regional level, recent voter referenda on transportation funding packages have experienced mixed success. Many referendums that pass do so with specificity regarding the project, the terms of the tax (i.e., sunset date), and the cost estimates. Furthermore, this approach is vulnerable to an ever-changing political landscape and voter opposition to new taxes, which affect the longer term viability of exercising such an option.

1.2 What is Working in Transportation Innovative Finance?

Financing packages that assemble a combination of innovative funding approaches have led to a number of successful projects across the nation. As with any new initiative, the use of each of these tools brings with it lessons learned and valuable "real life" experiences upon which to further refine and develop its application. With each iteration, users of these tools find ways to make them more effective, more interesting to the public and private sectors alike, and ultimately more suitable for meeting the transportation funding gap.

The challenge of sharing these "Best Practices" is to frame them properly and assist those that are seeking information in understanding all aspects of their applications. For example, specific legislative language may need to be implemented in order to use a particular tool. Or there may be a requirement for a state DOT to accept unsolicited proposals for a particular project in a Public-Private Partnership environment. Therefore, those with experience must not only share their insights and knowledge but also offer the parameters around which their particular projects were implemented and the steps required to advance them to completion. Thus, the sharing process involves not just a discussion of the innovative finance tools themselves, but also must include the collateral issues and concepts that make the tools function as intended.

1.2.1 Barriers to Implementation

Following are a number of obstacles to implementing innovative financing mechanisms:

Financial. Barriers in the financial arena can take many forms. Is the business model something that will attract private sector funding? How does the transportation agency manage its Federal-aid program in light of the use of a particular tool? What is a reasonable return on investment and how is that related to the risk borne by each party? In addition to these questions, there are concerns relating to traffic volumes estimates, market conditions, and financial constraints either from the market or from statutory restrictions that may also impact the financial viability of a project. Financial questions are unique to individual projects and circumstances, and must be considered in order to properly choose and apply the most appropriate innovative financing tool.

Statutory. Most public entities find that they must make some changes in their governing legislations so that innovative finance tools can be utilized on their projects. These can range from matters of procurement methods (e.g., permitting the use of design-build and best value selection processes) to complex policy issues such as governance. With regard to governance, the public entity must determine how it will be organized, what authority will rest with the organizations involved (e.g., who will have the authority to adjust toll rates in the case of a toll authority), who will hold the liability for any debt incurred, how debt will be handled for a specific project in relation to other debt limitations and covenants already in place, and who will operate the facility when completed. For example, an important statutory element for a toll project is whether the owner is able to accept unsolicited proposals. Many states have allowed this approach with the idea that the private sector is in the best position to define the projects where the business model works to attract these innovative financing tools. In tandem with the ability to accept unsolicited proposals is often a requirement that a state further advertise for competing proposals before moving ahead with its evaluation process.

Social. When one considers the possible proliferation of innovative finance tools, there are a number of social impacts that must be considered. For example, a toll road may be planned to go through an economically depressed area of a community or one that consists largely of minority population groups that have long been without a high-speed facility. There may be questions as to why their facility has to be a toll road when other roads are free and built with gas tax dollars. These questions of environmental justice need to be addressed. What appears to be a financial discussion often includes issues that are typically outside economic markets or institutions.

Emotional. In some communities or states, there is an aversion to debt and a desire to use "pay-as-you-go" financing for transportation projects. In addition, there is often a reluctance toward engaging in Public-Private Partnerships because of a distrust of the private sector. Other situations arise where citizens or specific stakeholder groups outright oppose the use of tolls out of principle.

Cultural. In some communities, the implementation of specific innovative finance strategies may be more acceptable than in others. The statement that "all politics is local"

applies to the application of innovative finance tools. Finding the right solution for a given state or community, with its unique temperament, its collective experience over the years, as well as historical events that may have shaped certain attitudes and opinions, is a challenge that transportation leaders must address.

1.2.2 Expanding Tools and Promoting Their Use

One of the issues facing the transportation industry is how to expand both the use of available tools as well as the development of new tools for different applications. Though over the course of the last 15 years, innovative financing tools have evolved as a way to fill the transportation funding gap, these methodologies are largely in their infancies. The expansion of existing tools as well as the development of new tools should be addressed when discussing innovative finance for transportation projects. While current tools are finding their own unique equilibriums and uses on projects around the country, they certainly do not represent the final chapter on innovative finance. Constraint breeds innovation, and perhaps current financing tools are simply precursors to exciting innovations that lie ahead.

In the near term, there will continue to be more and more projects that utilize innovative financing techniques to fill critical transportation funding gaps. Those who have experienced success will likely find additional opportunities for replication on other projects. Others, new to the process, will look to their colleagues and fellow agencies for guidance as to how they might use innovative financing tools.

In the long term, innovative financing tools are very much a part of the future of transportation finance given the bleak nature of the Federal Highway Trust Fund. In fact, in the weeks following the passage of SAFETEA-LU, the consensus in the industry is that, by 2009, the Highway Trust Fund balance "goes negative" if expenditures continue at their current levels beyond that point.[7] The call for greater and greater use of innovative financing techniques will only grow louder as the realities of the Federal program sink in and as transportation agencies begin to address their own financial abilities and limitations.

[7] http://downloads.transportation.org/Reauthorization_Briefing_9-14-05.pdf.

2.0 Peer Exchange Material

2.1 Peer Exchange Questions on Innovative Finance

To establish a common foundation for the peer exchange, each participant received an overview memorandum on the current practice of state transportation financing and was asked to answer the following set of questions:

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:
   a. Ease of use
   b. Flexibility
   c. Complexity of statutory issues
   d. Interest by the private sector
   e. Public acceptance

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

4. What are the most effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:
   a. What should we continue to be doing?
   b. What should we stop doing?
   c. What should we start doing?

5. Who are the leaders in innovative finance that others should turn to for advice and direction in implementing their specific programs?

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

7. What do you see as the future for innovative finance in your market or jurisdiction?

2.2 Summary of Peer Exchange Material

The participant responses are summarized in the following tables with full responses included in Appendix B.

Responding Agency	1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?	
Colorado Department of Transportation (CDOT)	• GARVEE • SIB • Bonds backed by state funds • Tolling	• Certificates of Participation • TIFIA • Private Activity Bonds
Federal Highway Administration (FHWA)	• GARVEE • SIB • Flexible match	• Advance construction • Public-Private Partnerships • TIFIA
Idaho Transportation Department (ITD)	Agency is new to the innovative finance process with the Legislature recently authorizing project funding with bond proceeds	
Maryland State Highway Administration (SHA)	• Advance construction, which helps maximize the State's program based on cash flow and limit the amount of "excess obligations" • Toll Credit provisions	
Michigan Department of Transportation (MDOT)	• GARVEE • SIB	• Tolls (3 bridges) • Toll Credits
Minnesota Department of Transportation (Mn/DOT)	• Underway: SIB, HOT lanes on I-394, bond accelerated package	• Planning/Studies: HOT lane network
Missouri Transportation Institute (MTI)	• TIFIA • SIB • GARVEE	• Tolls • Toll Credits • Public-Private Partnership
Southern California Association of Governments (SCAG)	• GARVEE • TIFIA • SIB	• Public-Private Partnership • Tolling
Virginia Department of Transportation (VDOT)	• Tax Improvement District Bonds • GARVEE • SIB • Toll Facilities Revolving Account Loan	• Conduit Financing 63-20 • TIFIA • Transportation Partnership Opportunity Fund
Washington State Department of Transportation (WSDOT)	• Public non-profit financing under 63-20 • State-issued debt	

Responding Agency	2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:				
	2a. Ease of use	**2b. Flexibility**	**2c. Complexity of statutory issues**	**2d. Interest by the private sector**	**2e. Public acceptance**
GARVEE					
CDOT	High	High	Complex	N/A	Medium High
FHWA	Easy/Moderate	Moderate	Moderate	Low	Moderate
ITD	No issues	Authorization for specific corridors only	Constitutional conflict regarding state match of debt service	High	Some skepticism
Maryland SHA	GARVEEs used for specific projects; there are no issues with the use of GARVEE from a public perspective				
MDOT	Easy, and the indirect GARVEE is even easier	Good	Ongoing statutory authorization	No opportunity	Good
Mn/DOT			Constitution requires Trunk Highway bonds		
MTI	Good	Good	Moderate	Moderate to High	Moderate
SCAG	Relatively easy	Flexible	Some complexity at state level	N/A	Good
VDOT	Fair	Fair		Good	Fair
WSDOT	N/A	N/A	N/A	N/A	N/A
TIFIA					
CDOT	Cumbersome, but improving	Medium Low	Somewhat complex	Interest is high if a loan would enhance the viability of a Public-Private Partnership	Local governments may support, general public unaware
FHWA	Moderate to Difficult	Moderate (program is flexible but statute is limiting)	Easy to Moderate	Significant	High to Moderate
Mn/DOT	Project size limits potential	Only for large projects until recently			
MTI	Difficult	Good	High	Low to Moderate	Very Difficult

Responding Agency	2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:				
	2a. Ease of use	**2b. Flexibility**	**2c. Complexity of statutory issues**	**2d. Interest by the private sector**	**2e. Public acceptance**
SCAG	Difficult depending on the type of project	Flexible	More complex	Limited interest	Not understood
VDOT	Fair	Fair	Complex	Good	Good
WSDOT	C+	C	C	B	A
SIB					
CDOT	Medium High	Medium Low	Not that complex	N/A	High local government support for aviation, gaining for other modes
FHWA	Moderate to Difficult	Moderate (program is flexible but statute is limiting)	Easy to Moderate	Low to Moderate	Low to Moderate
MDOT	Easy	Moderate	Annual boilerplate authority	None	Good for local governments
Mn/DOT	Used Public Facilities to issue and administer		State law keeps funds in separate accounts	Limited; more local government match	
MTI	Good	Decent	Moderate	Low	Moderate to High
SCAG	Easy	Flexible	Complex at state level	Limited interest	Not understood
VDOT	Complex	Fair	Complex		Good
WSDOT	N/A	N/A	N/A	B+	N/A
Tolls					
CDOT	Mechanics are easy, planning is difficult to implement quickly	Medium High	State restrictions	Interest is high for Public-Private Partnerships	Public somewhat favorable
FHWA	Moderate to Difficult	Moderate	Moderate to Complex	High for concession; Low for all else	Low for existing capacity; Moderate for new

Responding Agency	**2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:**				
	2a. Ease of use	**2b. Flexibility**	**2c. Complexity of statutory issues**	**2d. Interest by the private sector**	**2e. Public acceptance**
MDOT	Tolls used for specific projects; the use of toll revenues for the Intercounty Connector requires much legislative involvement in the budget and fiscal projections for MdTA				
Mn/DOT	Technical issues learned on HOT lane project	Dynamic pricing used and successful	Revenue pays operating, capital, lastly corridor use – subject to local government veto		General acceptance of HOT lane pilot except with reverse peak direction; toll acceptance uncertain
MTI	Excellent	Decent	Simple	High	Low
SCAG	Easy	Need greater authority at Federal level	Complex at state/local level	Very interested	Understood, but resisted
VDOT	Complex	Specific purpose		Good	Bad
WSDOT	C-	B	C	A-	C-
Other Innovative Finance Tools					
CDOT				Private Activity Bonds: growing interest	
FHWA	Flexible match: Easy to Moderate Public-Private Partnership: Moderate to Difficult	Flexible match: Eponymously flexible Public-Private Partnership: States have wide latitude	Flexible match: Easy Public-Private Partnership: Complex from state enabling legislation; moderate from Federal	Flexible match: Low to Moderate Public-Private Partnership: High	Flexible match: High Public-Private Partnership: Moderate to Low
MTI	Toll Credit: Good Public-Private Partnership: Difficult	Toll Credit: Good Public-Private Partnership: Good	Toll Credit: Simple Public-Private Partnership: High	Toll Credit: Low Public-Private Partnership: High	Toll Credit: Very Difficult Public-Private Partnership: Very Difficult

Responding Agency	3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?	
CDOT	Obstacle: • Public-Private Partnerships are made difficult by the length of time it takes to carry a project through NEPA and MPO planning processes	Solution: • Streamlining NEPA process
FHWA	Obstacles: • Lack of understanding regarding tradeoffs between time and money • Distrust of private sector involvement in surface transportation • Difficulty in getting parties to work together • Lack of institutional awareness/ education within state DOTs	Solutions: • Public education/communication • Need a champion to act as a unifying force • Institutional awareness can be improved through workshops and training
ITD	Legislative approval for GARVEE bonding proved difficult; ITD encountered less difficulty within the Department, but internal change management is still needed	
Maryland SHA	Obstacle: • Due to limited number of states using innovative finance tools, a limited number of experts exist	Solutions: • Continued education and publications to expand general knowledge • Document case studies
MDOT	Obstacles: • Statutory • Aversion to debt	Solutions: • Recommend creating a team between financing and planning/program staff • Sharing and communicating experiences with other states, FHWA, etc.
Mn/DOT	Acceptability of new revenue sources will occur when there is perceived to be total depletion of traditional revenue sources	
MTI	Obstacles: • States don't want to issue debt • Issuance of debt may require legislative and/or voter concurrence • Tolls – may be constitutionally prohibited or face public opposition • Understanding TIFIA and RIFF requirements • Number of entities required to set up a SIB • Public-Private Partnerships are a difficult concept to understand	Solutions: • States/MPOs/transit authorities should have a trained staff • Review laws and regulations to ensure participation in Public-Private Partnerships and TIFIA • Better education for state legislatures and governors • Promote perception of transportation investments as a value generating value • U.S. DOT flexibility – don't try to make TIFIA applications be "A rated" • Better understanding of risk associated with financing tools

Responding Agency	3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?	
SCAG	Obstacles: • Use of the term "innovative finance" • Dependence on grant funding • Fear of trying a new tool • Perception that mechanisms are complex or burdensome	
VDOT	Obstacles: • Complex statutory requirements at state and Federal levels • Lack of political support	Solutions: • Simplify statutory requirements • Increase public education
WSDOT	Obstacles: • Cost • Lack of transparency • Slow developing revenue streams	Solutions: • Expand Private Activity Bonds • Provide full disclosure of all financing • Long repayment periods and credit enhancements

Responding Agency	4. What are the most effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:		
	4a. What should we continue to be doing?	**4b. What should we stop doing?**	**4c. What should we start doing?**
CDOT	Expand flexibility with SEP 15 and Private Activity Bonds	Minimize restrictions	
FHWA	Holding conferences/ educational programs		• Gather data on benefits • Communicate benefits to the public
ITD	Focus on advantages		• Focus on uniqueness of each situation • Create a clearinghouse of information
Maryland SHA	• Education sessions • Publications • FHWA assistance		• Peer-to-peer exchanges • Publication of what states are doing
MDOT	Share success stories	Nothing	• Identify leaders • Expand SCANs
Mn/DOT	• Support pilots • Flexibility (i.e., expanded tolling authority)		• Allow more use of mixed-use transportation facilities • Permit commercialization of Interstate rest areas

Responding Agency	4. What are the most effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:		
	4a. What should we continue to be doing?	**4b. What should we stop doing?**	**4c. What should we start doing?**
MTI	• Training • Educating • Sharing best practices	Stop selling innovative finance as something more than debt issuance	• Learn about international transportation financing • Uniform laws • Perceive transportation as an asset with value • Understand risk • Evaluate best roles within the whole scope of a project/program • Promote equity Public-Private Partnerships • Educate public regarding privatization • Wait until the near end of project's development before looking at financing options
SCAG	Share case studies		
VDOT	Communicate with private sector	Stop using public funds for full funding of PPTA	Collaborate with investors
WSDOT	Expand availability of Private Activity Bonds	Stop restricting revenue sources	Allow experimentation with tolling and enterprise-oriented activities

Responding Agency	5. Who are the leaders in innovative finance that others should turn to for advice and direction in implementing their specific programs?
CDOT	• DOTs: Texas and Virginia • (e.g., International banking community – concession purchases)
FHWA	• DOTs: Florida (Lowell Clary), Oregon (Jim Whitty), and Texas (Phil Russell)
ITD	ITD communicated and modeled its program based on the following groups: • Other states • Investment banking industry • Bond council
Maryland SHA	Leaders are states that have successfully used the tools are leaders
MDOT	FHWA should lead the effort to connect states to the "experts"

Responding Agency	5. Who are the leaders in innovative finance that others should turn to for advice and direction in implementing their specific programs?
Mn/DOT	• DOTs: Arizona, Florida, and Texas • FHWA innovative finance experts • TRB committees and conferences
MTI	Private Activity Bonds should provide the industry with new options and players
SCAG	• DOTs: Oregon, Texas • FHWA
VDOT	• DOTs: Massachusetts, Texas, and Virginia • Transurban • Macquarrie • Depfa Bank
WSDOT	• Public sector leaders are states engaged in innovative financing as well as their critics • Private sector leaders are Macquarrie

Responding Agency	6. What new tools would you like to see that might help you in delivering transportation projects to your customers?	
CDOT	Mileage tax	
FHWA	Focus on public education instead of developing new tools	
ITD	• Project scheduling and reporting software • Cash flow analysis • Accurate project cost estimating	• Public reporting tool via the Internet • Streamline the approval process
Maryland SHA	FHWA should continue to be open and flexible to financing opportunities	
MDOT	New tools would provide ways to identify new or increased revenue	
Mn/DOT	• Flexibility in generating non-traditional revenues • Encourage pricing/tolling	
MTI	• Better understanding of risk by the public sector • Understanding of public and private sector roles • Promote "equity" Public-Private Partnerships • Calculate order of magnitude financial information that will bring financial issues into the planning process early • Evaluate the benefits and risks of Private Activity Bonds	
SCAG	• Tax credit bonds • Tax credit equity structures • VMT fee	• Container fees • Land use value capture mechanisms
VDOT	Private sector access to low-cost financing	

Responding Agency	6. What new tools would you like to see that might help you in delivering transportation projects to your customers?
WSDOT	• Availability of Private Activity Bonds • Stop restricting revenue sources • Allow experimentation with tolling and enterprise-oriented activities

Responding Agency	7. What do you see as the future for innovative finance in your market or jurisdiction?
CDOT	• Agency has a good design/build statute in place • Agency can already implement many innovative finance techniques
FHWA	Increased interest in Public-Private Partnerships (concessions and other forms)
ITD	GARVEE bonded projects and other debt financing
Maryland SHA	• Electronic tolling • HOT lanes • Public-Private Partnerships
MDOT	• Expand use of indirect GARVEE and SIB • Investigate: - TIFIA - Tolls - Public-Private Partnerships
Mn/DOT	The "big picture" funding situation is key to driving options
MTI	Crisis of the motor fuel tax will lead to greater utilization of debt instruments and Public-Private Partnerships
SCAG	Reluctance regarding use of non "grant" funding mechanisms may dissipate because funding is unstable and immediate needs are great
VDOT	Privately owned and operated toll road concession funding (in part) through equity and private investments
WSDOT	Need to start modestly so that the state will benefit when new tools, such as Private Activity Bonds and HOT lanes, become more common

3.0 Peer Exchange Meeting Summary

3.1 Discussion Topics

As a way to bridge the discussion of innovative finance with its practice, participants were asked to share a 10-minute case study highlighting the innovative finance tool(s) used by their organizations (see Appendix C for submitted case study material). The presentations engaged participants in discussing lessons learned and how barriers were overcome. Much of the dialogue resulting from the presentations involved the range of tools as well as the extensiveness with which they were employed by an agency. These presentations were helpful in engaging the participants with both each other and the subject matter. In addition, the presentations helped guide the group in critically examining innovative finance, specifically in relation to key barriers to innovative finance, why they exist, and what can be done to overcome them. Although participants responded to the issue of barriers in Question 3, much of the discussion during the peer exchange focused on these issues. Table 3.1 provides a summary of the topics discussed during the peer exchange.

3.1.1 Main Themes

It became clear early in the peer exchange that many of the innovative finance tools currently available provide the means to deliver transportation projects, not generate new revenue. To that end, much of the discussion throughout the peer exchange focused on shifting the innovative finance paradigm toward a more business-like model. Many of the participants believed that much can be learned from the concessions industry and that state DOTs have been slow to adopt a commercial mentality. Perhaps this is because perceiving transportation projects as business opportunities is a philosophy that runs contrary to the traditional approach and practices of a state DOT.

However, participants agreed that, in light of the declining purchasing power of the gas tax as well as the deteriorating viability of the Highway Trust Fund, viewing the transportation network as an asset and pricing its value is a paradigm shift that must be embraced in order to finance future transportation projects. Shifting the ideology of state DOTs to follow a more business-like model that perceives the transportation network as an asset will help the financing community deliver transportation projects in innovative ways beyond debt issuance. Under the business model, state DOTs will not only be able to value the use of the system in accordance with demand and the market, but also will be positioned to broker deals better with the private sector.

Table 3.1 Summary of Key Discussion Topics

Key Barriers	**Why** does this barrier exist?	**How** can this barrier be overcome?
"Innovative finance" is no longer an appropriate term to describe how transportation projects are financed.	• The term "innovative finance" creates a perception that tools are new and untested, not tried and proven. • Lack of awareness that issuing debt is only a piece of the financing package that also contains traditional funding and user fees. • The term does not reflect that innovative finance tools provide a better way to mange debt and deliver projects faster, and often do not generate new revenue. • Innovative finance has matured to the extent that a new type of financing model, which is more business-like, is emerging.	• Re-term "innovative finance" to reflect the emerging business model. • Limit Federal earmarking and promote flexible Federal funds (i.e., Special Experimental Project No. 15 encourages states to experiment with approaches that advance project delivery). • Strengthen the Federal requirement for fiscally constrained plans by including an accountability component. • Advance policy that addresses the need to create revenue.
Seriousness of the transportation funding gap is either not understood and not widely broadcast.	• Prevailing public perception that transportation is unlike other services that are priced (e.g., water and electricity). • Traditional public dialogue has dealt with the process of building projects, not on what the project is meant to accomplish. • Non-pervasive understanding of the nation's transportation system as an asset with a monetary value. • Lack of widespread outreach educating the public and decision-makers about the transportation funding gap.	• Unite all levels of government to promote a message about the future of transportation and the nation's transportation needs. - Capitalize on the Interstate highway anniversary as an opportunity to communicate a unified and branded message to the public. • Have marketing and public relations campaigns illustrate how users' expectations are out of line with their willingness to pay. - Package these campaigns in a way that the public can mentally manage and to which it can relate. • MPOs can pull projects from their plans to enforce a consistent message.

Table 3.1 Summary of Key Discussion Topics (continued)

Key Barriers	**Why** does this barrier exist?	**How** can this barrier be overcome?
Communication between the innovative finance community (Federal, state DOT, and MPO practitioners) is weakened by the absence of a forum to share experiences and lessons learned when applying innovative finance tools.	• Ownership for sharing innovative finance information (i.e., clearinghouse, sponsoring peer exchanges, mentoring) is unclear. • The gap between those planning and engineering a project and those financing them has not been sufficiently bridged.	• Establish a repository of "deals" that helps to deconstruct projects and share lessons learned/best practices. - Promote *Innovative Finance Quarterly* and wwww.innovativefinance.org as vehicles for educating practitioners and facilitators of communication. • DOTs should internally broaden the types of participants in financing discussions and NCHRP, TRB, and IBTTA should be more active in facilitating exchange between different practitioners.
Perception that state DOTs are not commercial entities makes approaching transportation projects as business opportunities difficult.	• State DOTs have not followed the private sector example of protecting against risk (i.e., incorrect travel forecasting, market downturn, construction costs) and incorporating Operations & Maintenance (O&M) costs into cash flow management. • Innovation that engages the private and public sectors is lacking (i.e., include profit sharing in Public-Private Partnerships). • The private sector does not bring equity to Public-Private Partnerships (i.e., private equity bonds) because of weak requirements, promotions, or incentives. • The disconnect between economic development and transportation investment has not been adequately addressed. - DOTs pay the cost of economic development (highway demand) but don't receive a share of the benefits (revenue).	• Shift the internal and external perception of DOTs from one that provides a free service to one that provides a service that has an associated dollar value. • Build a business paradigm into innovative financing at state DOTs; for example, by including innovative finance as part of an entire business plan, linking performance measurement to investment decisions, and establishing a clear branding message that ties back to a business model. • Expand Private Activity Bonds with informed Federal guidance and remove restrictions on activities on rights-of-way. • Look to land use decisions as a way to impact transportation costs (e.g., share the cost of improvements).

Table 3.1 Summary of Key Discussion Topics (continued)

Key Barriers	**Why** does this barrier exist?	**How** can this barrier be overcome?
Demonstrated successes mean that there is little motivation to explore new financing strategies beyond the prevailing status quo.	• A needs-based planning paradigm does not drive the planning and programming process. • Users are accustomed to demand the best and pay nothing for transportation. • Lack of integration between planning and finance.	• Stop punishing states (through less Federal dollars) for using their own funding mechanisms. • Communicate a unified message (DOTs and MPOs) or else the legitimacy of transportation agencies will erode and interests will undermine each other. • Explore innovative finance by outsourcing the expertise and improve the understanding of the "expertise" being purchased in order to manage it.
Ribbons versus brooms.	• Political pressure focuses on capacity expansion, not maintenance. • Increasing VMT illustrates the growing demand for new roads but maintaining those roads is often neglected. • Federal money dedicated to maintenance means that new capacity is funded another way (i.e., local sales tax), but it is unclear how maintaining new capacity will be funded.	• For new or expanded highways, DOTs should be required to demonstrate how maintenance costs will be covered. • Control projects through a selection structure that considers financial feasibility. • Highway projects should be required to have a cash flow management plan similar to commercial contractors.
Accurate project cost estimates are not always calculated.	• Public expectation that DOTs can accommodate demand with the same amount of limited resources. • Risk has historically not been realistically priced (i.e., natural disaster) leaving DOTs vulnerable to unfunded liabilities. • Unexpected rise in cost after financing approval is complete (e.g., escalating cost of materials).	• Support projects with credible "real cost" estimates that include O&M. • Build O&M into total costs as a way to protect against capital costs from overshadowing total costs. • Promote and explore new strategies, such as the Federal Highways for Life program.

In light of the declining share of Federal dollars collected and the decreasing purchasing power of the gas tax, many participants felt that states need to "catch up" to the private sector in terms of the way financing packages are assembled. Many participants foresee a proliferation in the use of innovative finance as Federal funds decline. While many of the states represented in the peer exchange are preparing for this reality by becoming fluent in innovative finance, many participants agreed that innovative finance needs to move beyond a debt instrument and into a vehicle to generate revenue. As economic development expands, the transportation industry is often called upon to accommodate demand with the same amount of limited resources. Given that states are relying less on Federal funding and local governments are relying less on state funding, participants felt that states must be cautious in issuing debt and should realize that debt finance is only one part of the financing equation. States are limited in their abilities to amass debt in order to leverage funds to deliver transportation projects; therefore, innovative finance must evolve into revenue-generating ventures in order to support the financing of future transportation projects.

Some states perversely assume debt in order to match Federal dollars or design a project to Federal standards even when unnecessary just so that Federal dollars are not "left on the table." Many participants felt that Federal matching encourages debt finance because states must "spend it or loose it" and that projects that qualify for Federal funding may not always be the most appropriate or highest priority for a particular state. For example, designing to Federal standards is not always cost efficient; however, many states design to this standard in order to obtain matching Federal dollars. While this practice may be appropriate for certain states, it may be less appropriate for others. Many participants acknowledged the tension between the need to include Federal dollars in funding packages and abiding by the associated requirements for doing so, with a state's ability to select the most appropriate project that addresses its transportation needs.

Many participants felt that there was a pervasive lack of understanding of the seriousness of the funding gap and that the public and decision-makers have been poorly educated on this issue. The Highway Trust Fund will go into the red in a shorter horizon than many people realize and the gas tax is not going to cover future transportation expenditures. In addition, participants discussed the fact that innovative finance is more complicated than many people realize. Participants agreed that there exists a need to move beyond traditional innovative finance mechanisms as well as educate the public and decision-makers as to how these tools can fit into the future of transportation finance.

3.2 Additional Insights

The following ideas shared during the peer exchange did not fit into the structure of Table 3.1 above, but are worthy of noting:

- Transportation needs a national champion and an outside enemy. A champion like Eisenhower advocated on behalf of a national highway network. An "enemy," such as an offshore threat, highlights the importance of the nation's highway network for trade purposes.

- Even though some states may be reluctant to share their financial information, it is important to do so in order to create a national benchmark for what is considered "reasonable" debt and "reasonable" cash balance.

- DOTs should look to imitate international transportation models and concessionaires to generate revenue from the transportation system. If the public sector is going to take all the risk by mortgaging all their assets, then it must look to where it can capture some of the return.

- States that have demonstrated leadership in performance monitoring are also leaders in innovative finance.

- As financial tools become more decentralized, the national role needs to be redefined. This is especially true as the transition away from the gas tax gains momentum.

- Constraint and pressure breed innovation; as the gap between needs and revenue grows, more agencies will utilize and develop new innovative finance strategies.

- Mega-projects can bind a states' ability to implement other projects because mega-projects mire resources in debt service. One solution is to break up mega-projects into manageable pieces, which would help to free up resources for other projects.

3.3 Considerations for Future Research and Development

- Promote peer exchanges for larger audiences and involve other participants (e.g., planning) beyond the financing community.

- Continue and expand applied research through NCHRP.

- Establish and maintain a Federal Innovative Finance clearinghouse web site that provides a forum for practitioners to share experiences and lessons learned.

- Promote the exploration of the synergistic benefits of packaging innovative financing tools together.

- Develop financial guidelines to assist agencies with growing debt. For example, provide Federal guidelines for an acceptable debt to revenue ratio that considers the unique characteristics (e.g., population) of a state.

- Explore innovations in project delivery (e.g., phasing flexibility) for mega-projects in order to address the issue of tying up a state's resources in one project.

- Investigate the needs of the entire transportation network from both a Federal and a state perspective in order to set priorities.

3.4 Resources

During the peer exchange, participants discussed the following resources, which provide useful guidance regarding the application of innovative finance:

- Federal Highway Administration:
  - *Innovative Finance Quarterly*
    http://www.fhwa.dot.gov/innovativefinance/ifpubs.htm
  - *Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance Report*
    http://www.fhwa.dot.gov/policy/olsp/reportspubs.htm

- American Association of State Highway and Transportation Officials:
  - Transportation Finance Clearinghouse
    http://www.innovativefinance.org
  - *Bottom Line Report*
    http://www.transportation.org/bottomline/overview.html

- U.S. Chamber of Commerce:
  - *Future Highway and Public Transportation Finance Study*
    http://www.uchamber.com

Appendix A

Peer Exchange Participants

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Appendix B

Participant Submitted Peer Exchange Material

B.1 Peer Exchange Questions on Innovative Finance

Participants were asked to answer the following questions prior to attending the peer exchange:

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:
   a. Ease of use
   b. Flexibility
   c. Complexity of statutory issues
   d. Interest by the private sector
   e. Public acceptance

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

4. What are the most effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:
   a. What should we continue to be doing?
   b. What should we stop doing?
   c. What should we start doing?

5. Who are the leaders in innovative finance that others should turn to for advice and direction in implementing their specific programs?

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

7. What do you see as the future for innovative finance in your market or jurisdiction?

B.2 Colorado Department of Transportation (CDOT)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

- GARVEE Bonds – CDOT bonded for a program of strategic projects backed by future Federal funds.
- SIB – We have two SIB programs…one for surface transportation and one for aviation. The aviation SIB has been used very successfully, since we capitalized it with non-Federal or state tax funds.
- Bonds backed by state funds – We have two pending ballot initiatives this November the first of which would relax temporarily the State's Constitutional provision that limits growth in revenue and spending, and if passed, the second that would allow bonds to be issued against that increased revenue into the state general fund, $1.2 billion of which is earmarked for transportation projects.
- Tolling – We have the ability to issue toll revenue bonds on projects, and have not yet financed a project, but are planning to move forward on select projects pending the outcome of environmental studies.
- Certificates of Participation – We issued COPS to finance building construction and remodeling for the Department, backed by lease payment savings.
- TIFIA – have not used, but considering now that added flexibility has been provided with SAFETEA-LU.
- Private Activity Bonds – same as TIFIA.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use

- GARVEE – high.
- TIFIA – was cumbersome, improving.
- SIB – medium high.
- Tolls – mechanics are easy, it's the planning process that is difficult for us to implement quickly.

2b. Flexibility

- GARVEE – high.
- TIFIA – medium low.
- SIB – medium low.
- Tolls – medium high.

2c. Complexity of statutory issues

- GARVEE – complex in that our state statutes do no allow us to issue debt backed by tax dollars unless we go to a vote of the people.
- TIFIA – somewhat complex.
- SIB – not that complex.
- Tolls – State statues provide that we cannot accept any more than 10 percent of our annual revenue for state and local taxes to support toll projects.

2d. Interest by the private sector

- GARVEE – N/A.
- TIFIA – interest is high if a TIFIA loan would enhance the viability of a PPP.
- SIB – N/A.
- Tolls – interest is high for PPPs.
- Private Activity Bonds – growing interest.

2e. Public acceptance

- GARVEE – medium high (positive vote in 1999).
- TIFIA – public (local governments) interested if it would support pet projects, general public largely unaware.
- SIB – tremendous local government support for aviation projects. Surface transportation projects are gaining interest among local governments.
- Tolls – polling shows that the general public is somewhat favorable. There is considerable pushback among local governments (particularly staff) who want their "free lanes."

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

The most obvious concern for public and private interest for PPPs is the length of time it takes to carry a project through the NEPA process and MPO planning processes. Further streamlining of NEPA would help.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

4a. What should we continue to be doing?

Federal and state governments should continue to expand flexibility with such tools as SEP 15 and PABs.

4b. What should we stop doing?

Federal and state governments should minimize restrictions.

4c. What should we start doing?

(No response provided.)

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

Some DOTs are leaders – examples: Texas and Virginia. International banking community is a terrific resource with the recent Concession purchases that have surfaced. IBTTA is a great resource.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

I'm very interested to see how Oregon's pilot program on a mileage tax is received.

7. What do you see as the future for innovative finance in your market or jurisdiction?

With nearly a 40 percent decline since 2001 of our transportation revenues, we must explore any and all options for innovative finance. The appetite in Colorado for a gas tax increase is very low, and that alone would still not solve our growing needs due to the declining purchasing power of the gas tax. We have currently the ability to implement many of the techniques cited, and also have a good Design/Build statute in place.

B.3 Federal Highway Administration (FHWA)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

I am familiar with GARVEEs, TIFIA, SIBs, flexible match, advance construction, and public private partnerships. I have advised projects that have used all of these tools.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use 2b. Flexibility 2c. Complexity of statutory issues
2d. Interest by the private sector 2e. Public acceptance

(You'll probably get a higher response rate on this if you put it into a table format and ask people to fill it out – as with below.)

Tool	Ease of Use	Flexibility	Complexity of Statutory Issues	Interest by Private Sector	Public Acceptance
GARVEE	Easy/Moderate; usually requires decision by state DOT and agreement by legislature	Moderate; can change timing, etc., of bond issuance but can't really change primary features of tool	Moderate (usually requires enabling legislation)	Low (except through 63-20 vehicle, can't usually be utilized in any significant way by private sector)	Moderate; some GARVEE programs have been approved by voters, but often after significant public relations campaigns
TIFIA	Moderate to Difficult	Moderate (program is flexible but statute is limiting)	Easy to moderate (usually doesn't require enabling legislation)	Significant, especially from borrowers with low credit ratings	High to moderate; most public unaware of TIFIA but appreciate Federal support to projects
SIBs	Moderate to difficult; requires administrative infrastructure and development of loan policies, surveillance, repayment, etc.	Moderate; can design program according to State's needs, but limited by statutory mandates, such as following Federal requirements	Easy to moderate; generally requires enabling legislation	Low to Moderate; depends on availability of SIB funding	Low to moderate; most public unaware of SIB

Tool	Ease of Use	Flexibility	Complexity of Statutory Issues	Interest by Private Sector	Public Acceptance
Tolls	Moderate to difficult (on Federal-aid roads). Depends on type of road and project	Moderate; Under Federal law, can set tolls at whatever rate State allows; tolling agreement restricts use of excess proceeds	Moderate to complex; may require state enabling legislation and/or participation in Federal pilot project	High for concessions; low for all else	Low for existing capacity; moderate for new capacity projects
Flexible Match	Easy to moderate; depends on type of match	Epononymously flexible	Easy (generally no legislation required)	Low to moderate; some flexible matches involve private sector contributions	High
Public-Private Partnerships	Moderate to difficult	States have wide latitude to design programs	Complex from state enabling legislation perspective; moderate from Federal perspective (most rules already changed; SEP-15 can change any remaining)	High	Moderate to Low; not well understood

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

Lack of understanding of tradeoffs between time and money (e.g., opposition to use of debt in highway programs because of money "wasted" on interest, as opposed to money wasted on inflationary costs and in traffic jams).

Distrust of private sector involvement in surface transportation – highways are considered sacred to the public, while electric utilities, wastewater plants, etc., can be allowed to go private.

Perception that "highways should be freeways" – that it's somehow double dipping to pay tolls for the road system, because we already pay gas taxes.

Difficulty in getting players in the State to work together (legislatures, governors, DOTs, local governments, all have competing interests, and at least some of them oppose these tools to make political points).

Lack of institutional awareness/education within state DOTs (why should we do a SIB? We don't have any projects seeking loans).

Public education/communication can help overcome the first three barriers: education about the value of project acceleration, about how the private sector can benefit transportation, about how tolls are an equitable way to spread costs of highways, etc.

Political barriers can be overcome with a champion and unifying force behind projects of mutual benefit (picking a project or group of projects with broad support).

Institutional awareness can be improved through workshops and training in each state, that bring different constituencies together.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

4a. What should we continue to be doing?

Holding conferences/educating folks about these projects.

4b. What should we stop doing?

(No response provided.)

4c. What should we start doing?

Gathering better data on benefits and working on ways to communicate these simply to the public (e.g., the anti-litter campaigns of the 1970s, or anti-smoking campaigns) – we need a similar paradigm shift in how people think transportation should be paid for.

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

Do you mean states or people? Texas is very active – Phil Russell. Florida is also very active and experienced – Lowell Clary used to be the go-to guy. Oregon is doing some very innovative things as well – Jim Whitty.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

We don't really need more tools; we need better public education, and more information about the benefits of the tools we have. Well, maybe a "SIM-DOT" tool (like SIM-CITY) that could show the effect of these tools on a programmatic level.

7. What do you see as the future for innovative finance in your market or jurisdiction?

I see increased interest in P3 (concessions and other forms) which will probably make use of more tools.

B.4 Idaho Transportation Department (ITD)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

ITD is new to the innovative finance process. The Legislature approved a bill in its last session authorizing the Department to fund projects with bond proceeds. We are currently in the process of getting agreements with the FHWA, our financing entity, meeting with investment bankers and rating agencies. We have not actually issued any bonds nor have we used any other innovative finance tools at this time.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

Idaho has just started the process to use GARVEE and that will be the only tool used at this point in time.

2a. Ease of use

So far, there have been no issues that we have encountered at this time.

2b. Flexibility

The authorization for the Department to issue bonds was for a specific list of corridors and GARVEE will only be used on those corridors.

2c. Complexity of statutory issues

The biggest issue Idaho is facing with GARVEE is the state match on debt service. Idaho Constitution prohibits the pledging of state funds without voter approval and the authorizing legislation continuously appropriates Federal funds for re-payment, but we are still working out this issue with our investment bankers.

2d. Interest by the private sector

There is high interest in this financing approach by the private sector that would benefit from a great influx of additional work.

2e. Public acceptance

In Idaho, there is some skepticism from the public and I think most are taking a wait and see approach. They all want the projects completed quicker but are not sure debt financing is the best approach.

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

In Idaho, one of the barriers to overcome was the legislative approval of the concept of GARVEE bonding. This took two sessions, lots of outreach meetings, a coalition of private parties who wanted GARVEE, and a governor who wouldn't stop fighting for passage. In the Department itself there isn't a lot of barriers, but this is a new way of financing projects and the accuracy of cost estimates, delivery schedule, risk mitigation, and other areas is very different that the current pay-as-you-go process. Internal change management will be key to successfully delivering projects in an accelerated manner.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

4a. What should we continue to be doing?

Focus on the advantages that can be delivered with innovative financing. There must be a benefit.

4b. What should we stop doing?

(No response provided.)

4c. What should we start doing?

Focus on uniqueness of each different situation and provide some easy analysis tools that could be used when considering different financing options. Provide a data store with updated information of states that have used innovative finance tools, which tools, and some key information on outcomes.

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

In Idaho's case, we communicated with those states that have developed similar programs as the one we are developing and asked how they did what they did. This included getting copies of the agreements with the FHWA, legislation, and actual bond issue statements. We have also used the investment banking industry and bond council to bounce ideas off of and for education on how the process will work. This has been very valuable.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

The tools Idaho needs are available in the marketplace, but we haven't implemented them yet. Tools like project scheduling and reporting software, cash flow analysis, more accurate project cost estimating, and a good reporting tool available to the public via the web. In addition to technology, the ability to streamline some of the approval processes is also necessary.

7. What do you see as the future for innovative finance in your market or jurisdiction?

In Idaho, the future of innovative finance is successfully delivering GARVEE bonded projects. Idaho doesn't have the population to implement toll facilities or some of the other public/private financing options. Debt financing will be the vehicle for some time and we will evolve when other options make sense.

B.5 Maryland State Highway Administration (SHA)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

Maryland makes extensive use of Advance Construction. This tool allows us to maximize our program based on cash flow and limits the amount of "excess obligations." We have also used the Toll Credit provisions. I am personally familiar with both of these techniques.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use 2b. Flexibility 2c. Complexity of statutory issues
2d. Interest by the private sector 2e. Public acceptance

All of the tools are complex and used situationally. It would be difficult to rate them as easy to use or flexible. Our experience is in GARVEE and Tolls. Maryland did pass legislation allowing the use of GARVEE bonds; however, application to a specific project required additional work with the legislature as they grappled with the issue of restricting "pay as you go" Federal fund availability with ongoing debt service. The MdTA is an off-budget agency in Maryland, reporting to a Board of Commissioners. The use of toll revenues to pay for the ICC has created a greater level of involvement by the legislature in the budget and fiscal projections for MdTA. There appear to be no issues with the use of GARVEE bonds from a public perspective, and tolling on bridges and tunnels has been in use for a significant period of time.

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

All of these tools are unique and are used where they fit best in funding the transportation priorities of the State. Knowing that the tool is there is a first step, second is having the support to explore the application to a particular circumstance and receive approval for detailed proposal. Those steps are not barriers in Maryland; there is awareness of the need to be innovative and the will to explore possibilities.

Each application of innovative financing is unique and takes considerable development time. The State must find the right expertise to assist with the process. Because there are a limited number of states that have used some of the tools, there are a limited number of experts – and they don't all agree. As the number of practitioners increases and there are more successful implementations, more standardization and process improvement will occur. In the meantime, continued educational sessions and publications will expand the

general knowledge. Case studies of successful implementations will also continue to be useful.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

4a. What should we continue to be doing? 4b. What should we stop doing? 4c. What should we start doing?

We should continue educational sessions, publications, and assistance from the FHWA with the process. Peer-to-peer exchanges between the states would be beneficial. For example, the accounting for GARVEE Federal Aid projects at the detail level is complex. It would be helpful for us to spend time with a State that had a GARVEE project similar to ours to understand the challenges they faced and how they have modified their systems to address the accounting issues.

To improve the knowledge of who the experts are, it would be beneficial to have a publication listing the states that have implemented innovative financing, information about their projects, and a contact, so that states considering the use of innovative financing tools could gather information on an as-needed basis for their specific implementation needs.

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

States that have successfully used the tools are the leaders.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

Using the tools is geared to unique circumstances. The need to apply new tools will also be the result of unique circumstances. To date, the FHWA has been a leader in considering innovative finance tools. It is important that the FHWA continue to be open and flexible to potential financing opportunities.

7. What do you see as the future for innovative finance in your market or jurisdiction?

Electronic tolling and HOT lanes are under study, as are public-private partnership opportunities.

B.6 Michigan Department of Transportation (MDOT)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

MDOT has experience with GARVEEs, SIB, Tolls (on three bridges), and Toll Credits.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use 2b. Flexibility 2c. Complexity of statutory issues
2d. Interest by the private sector 2e. Public acceptance

GARVEE is relatively easy to use but does require special accounting. We found Indirect GARVEE easier than Direct GARVEE because no FHWA approval is necessary and you run the risk of project delays not allowing sufficient expenditures to allow advanced construction conversion to pay the debt service. The indirect GARVEE in Michigan pledges all Federal aid for debt service payments.

GARVEEs provide flexibility in that the Debt Service Coverage ratios use Federal revenue rather than state revenue.

In Michigan, ongoing statutory authorization allows issuance of debt pledging state revenue as well as Federal revenue (GARVEE).

There is no opportunity for private sector interest. There is public acceptance in that they enjoy the outcomes debt allows but most don't necessary know the details. However all debt is identified in the Five Year Plan which is communicated annually to the public and the legislature. Statute requires two times coverage and commission policy requires four times coverage. The public gets the benefits of the road/bridge work done earlier so it is well received.

The SIB in Michigan is a very easy to use program.

It is moderately flexible in that any Title 23 or Transit Capital project is eligible.

Michigan has annual boilerplate authority to increase the SIB bank but of course funding must be identified for deposit.

There has been no direct public interest in SIB because it is a small program and is not advertised.

It has been a great tool for local governments to bring the last few dollars to the table to make a project happen. Often it helps get over the last hurdle to make the financing of a project possible. It is innovative in that it is a revolving program with little credit risk

because the loans are given to local units of government who pledge their monthly gas tax distribution for non-payment.

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

- There are statutory barriers to issuing debt.
  - MDOT has a statutory two times coverage and Commission policy of four times coverage.
  - The length of the debt is limited to the length of the useful life of the project.
- Generally, there is an aversion to debt.
  - So start small and issue debt more frequently – much is learned in actually going through the process.
- Recommend Teaming of the Finance and Planning/Program staff.
  - Understand the desired outcome and support each other.
  - Develop the strategy together.
- Knowledge of the tools.
  - Contact other states.
  - Use a Financial Advisor.
  - Need to illustrate the benefits over "pay as you go."
  - The FHWA could be a facilitator.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

4a. What should we continue to be doing?

- Sharing success stories.
- Sharing knowledge of the tools.

4b. What should we stop doing?

Nothing.

4c. What should we start doing?

- Identifying leaders in using innovative techniques to help us.
- Possibly expand the SCANS done by the FHWA to financing techniques.

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

The FHWA should take a lead role in connecting states to the "experts." For Example – MDOT would like more information on the TIFIA loans under SAFETEA-LU.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

Need ideas of ways to identify new or increased revenue. Most (if not all) current innovative techniques are good for advancing the projects (spending revenue earlier) but we need to generate more revenue.

7. What do you see as the future for innovative finance in your market or jurisdiction?

- Expanding our use of indirect GARVEEs.
- Possible expanding our SIB.
- Investigate TIFIA loans now that the minimum dollar amount of the project is reduced to $50 million.
- Willing to consider Tolls and want to learn more on Public Private Partnerships.

B.7 Minnesota Department of Transportation (Mn/DOT)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

- Underway:
  - State Infrastructure Bank (SIB) – set up as Transportation Revolving Loan Fund. Made a number of loans. Recent activity limited due to budget actions. Limited success in leveraging non-traditional sources of transportation financing.
  - HOT lanes – one project underway on I-394. Initial indications are good success operationally and maintaining transit advantages. Unclear yet how revenues will cover operating and capital costs.
  - Bond Accelerated Package – 2003 legislature passed $400 million Trunk Highway bonds and authorized $400 million in Advanced Construction spending authority.
- Planning/Studies:
  - HOT lane ("MnPASS") network – HOT lane must be one of the alternatives to be studied in all expansion projects.
  - Mileage based pricing.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use 2b. Flexibility 2c. Complexity of statutory issues
2d. Interest by the private sector 2e. Public acceptance

	Ease	Flexibility	Statutory	Private	Public
GARVEE			Constitution requires TH bonds		
TIFIA	Project size limits potential	Only for large projects until recently?			
SIB	Used Public Facilities Authority to issue and administer		State law keeps funds in separate accounts	Limited on a few projects; more local government match	

	Ease	Flexibility	Statutory	Private	Public
Tolls	Technical issues learned in HOT lane project	Dynamic pricing used and successful	I-394: Revenues go to pay operating costs, then repay capital, then for corridor use 50/50 highway/transit Generally, tolls are subject to local government veto		General acceptance for HOT lane pilot except for initial operational issues with reverse peak direction Tolls acceptance still uncertain

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

- General environment with respect to the acceptability of new revenue sources.
- Conservative fiscal environment (e.g., use of bonding/private partnerships).
- Overcome – when there is perceived to be total depletion of traditional revenue sources.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

4a. What should we continue to be doing? 4b. What should we stop doing? 4c. What should we start doing?

- Continue to support pilots.
- Continue to give flexibility (such as expanded tolling authority).
- Allow more mixed use of transportation facilities (e.g., retail at transit or parking ramps).
- Permit commercialization of interstate rest areas.

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

- The FHWA innovative finance experts.
- TRB committees and conferences.
- Texas, Florida, and Arizona seem very active.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

Continue to offer flexibility for projects to allow for non-traditional revenues (especially tolling). Perhaps begin to investigate some more structured encouragement for pricing/tolling in certain situations.

7. What do you see as the future for innovative finance in your market or jurisdiction?

- Very much step by step, project by project. I-394 HOT lane is great learning experience.
- Big picture funding situation is key to driving options that can/must be considered.

B.8 Missouri Transportation Institute (MTI)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

I am personally familiar with TIFIA, SIBs, GARVEEs, tolls, Toll Credits, P3. In several of these areas, I was the author/coauthor or contributor in the legislation. I have been an applicant and used all of these tools.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use 2b. Flexibility 2c. Complexity of statutory issues
2d. Interest by the private sector 2e. Public acceptance

	Ease of Use	Flexibility	Complexity	Private Sector Interest	Public Acceptance
GARVEE	Good	Good	Moderate	Moderate to High	Moderate
TIFIA	Difficult	Good	High	Low to Moderate	Incomprehensible
SIB	Good	Decent	Moderate	Low	Moderate to High
Tolls	Excellent	Decent	Simple	High	Low
Toll Credit	Good	Good	Simple	Low	Incomprehensible
P3	Difficult	Good	High	High	Incomprehensible

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

- Obstacles:
  - Innovative financing is basically debt instruments. Some communities/states don't want to issue that much debt.
  - Issuance of debt often requires legislative and/or voter concurrence, and that is often difficult; Most DOTs cannot issue debt by them.
  - Tolls are not innovative; some of the barriers are constitutional prohibition and then there is public opposition to paying for something they believe they have already paid for... Another key impediment is the FHWA's historic opposition to toll. For the past 30 years, toll authorities were viewed as the "devil incarnate" by U.S. DOT. This has rubbed off on many state DOTs.

  - Understanding the requirements for TIFIA and RIFF requires considerable education and a long period of review and negotiation. The new changes in the law require a relearning of what and how to use TIFIA of RIFF.
  - There are often several transportation entities involved in SIBs and often the locals don't know why this isn't a grant program.
  - P3 is a difficult concept because it not only involves money, but the roles of the different players-public and private, design/build or design/build/finance, or design/build/finance/operate.

- Solutions:
  - States/MPOs/transit authorities need to have a small but dedicated and well-trained staff to handle innovative financing. This team can't be made up of new comers.
  - States need to review their laws and regulations to make sure they are able to engage in P3s or TIFIAs. Many states have limitations on the use of innovative financing techniques.
  - State legislators and governors need to be educated about the financing options available.
  - States and communities must begin to look at their transportation investments as assets capable of generating value.
  - U.S. DOT needs to understand that TIFIA was intended to provide the surety of junk bonds; and, they shouldn't try to have every application be an A rated loan.
  - All parties need a better understanding of risk.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

4a. What should we continue to be doing?

We need to: keep training and educating; continue looking at best practices.

4b. What should we stop doing?

We need to stop: selling; representing innovative financing as more then debt issuances; selling the "Chicago Skyway" as a solution- it is very unique; promoting P3 as a partnership when almost every deal is a contract and not a partnership.

4c. What should we start doing?

We need to start doing: a better understanding of international transportation financing; more uniformed laws; getting the public sector to understand they have assets of value that they can leverage as a revenue stream; help the public sector better understand risk; help the public and private sector understand their best roles within the whole scope of a project or program; promote "equity" P3s; help the public sector understand "privatization"; and, waiting to near the end of a project's development to look at the financing options.

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

There are many, including myself. The industry has grown and the new law with "private activity" bonds should provide the industry with new options and new players.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

Tools that would help the public sector better understand risk; help the public and private sector understand their best roles within the whole scope of a project or program; promote "equity" P3s; simple and flexible calculator to provide order of magnitude financial information to the public sector so that financial issues can be brought into the discussion in the early project planning stages; and, tools to evaluate the benefits and risks of "private activity" bonds.

7. What do you see as the future for innovative finance in your market or jurisdiction?

The crisis of the inadequacy of the motor fuel tax as a reliable and growing source of transportation finance and the costs of transportation investments exceeding the revenues will lead to greater utilization of debt instruments and P3 opportunities throughout the country.

B.9 Southern California Association of Governments (SCAG)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

I am familiar with GARVEEs, TIFIA, SIBs, Public/Private Partnerships, and Tolling. I have personally used GARVEEs, Public/Private Partnerships, and the SIB.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use 2b. Flexibility 2c. Complexity of statutory issues
2d. Interest by the private sector 2e. Public acceptance

	GARVEE	TIFIA	SIB	Tolls	Other
Ease of Use	Relatively easy to use	More difficult to use due to type of project, not necessarily TIFIA itself	Easy to use	Relatively easy to use	
Flexibility	Flexible	Flexible except for not being able to borrow for EIS activities	Flexible	Need greater authority to toll at Federal level	
Complexity	Some complexity, but more at a state level than Federal	More complex	Complexity at state level, until recently no authority for most states to fund the bank	More complex at state or local level	
Interest by Private Sector	N/A	Some interest	Limited interest	Very interested	
Public Acceptance	Accepted by public	Not necessarily understood by public	Not understood by public	Understood by public, but resistance to paying versus "free" roads	

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

I believe that one barrier is the use of the term "innovative finance." Many shy away from the term because it implies that these are mechanisms that are new and untested. This is not true as these financing mechanisms are "innovative" to transportation but not other infrastructure investments.

In addition, there is still a dependence on grant funding and a fear of trying something new.

Another barrier is the perception that these mechanisms are so complex or burdensome and cannot be readily used.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:
4a. What should we continue to be doing? 4b. What should we stop doing? 4c. What should we start doing?

One of the most effective means is to see them in action. The more that people use them and the projects are successful, the more apt others are to embrace the use of them on their projects.

Another effective means is to keep communicating through not only transportation organizations, but to business communities, state legislatures, and trade organizations.

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

I believe the best resource is the FHWA. They are most familiar with what various states have done are what states are trying to do. In addition, states like Texas and Oregon are willing to try new things and are more than willing to provide lessons learned.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

We are looking into the benefits of tax credit bonds and tax credit equity structures. In addition, we continue to look at other user investments in transportation such as a VMT fee, container fees on container shipments, and land use value capture mechanisms.

7. What do you see as the future for innovative finance in your market or jurisdiction?

There is still reluctance in Southern California to utilizing tolls, public/private partnership, and other non-"grant" funding mechanisms. However, state funding for transportation still is very unstable and the immediate needs are so great that innovative finance is the only option we have available to finance these infrastructure improvements.

B.10 Virginia Department of Transportation (VDOT)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

- Tax Improvement District Bonds.
- Federal Reimbursement Revenue Anticipation Notes.
- State Infrastructure Bank loan.
- Toll Facilities Revolving Account loan.
- Conduit Financing 63-20.
- Transportation Partnership Opportunity Fund.
- TIFIA.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use 2b. Flexibility 2c. Complexity of statutory issues
2d. Interest by the private sector 2e. Public acceptance

	GARVEE	TIFIA	SIB	Tolls
Ease of Use	Fair	Fair	Complex	Complex
Flexibility	Fair	Fair	Fair	Specific Purpose
Complexity		Complex	Complex	
Private Interest	Good	Good		Good
Public Acceptance	Fair	Good	Good	Bad

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

- Complex statutory requirements both at state and Federal levels that create barriers to private sector participation.
- Political support is needed.
- Simplify statutory requirements and increase public education of benefits.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

Must express need for alternative financing to provide transportation needs. Must make public and private partners that the state is willing to and desires to use innovative financial tools.

4a. What should we continue to be doing?

Dialog with private sector on possible use of tools and communication of need.

4b. What should we stop doing?

Should not use public funds for full funding of PPTA.

4c. What should we start doing?

More collaboration with investors of innovative finance.

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

Virginia, Texas, Massachusetts, Transurban, Macquarie, Depfa Bank.

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

Private sector access to low cost financing unfettered by Federal oversight and requirements.

7. What do you see as the future for innovative finance in your market or jurisdiction?

Privately owned and operated toll road concessions funded at least in part, through equity and private investments.

B.11 Washington State Department of Transportation (WSDOT)

1. What innovative financing tools are you familiar with and which do you have personal experience using on a project?

Public non-profit financing under IRC 63-20, and typically state-issued debt.

2. Please rate the following tools (GARVEE, TIFIA, SIB, Tolls, Others) using the listed criteria:

2a. Ease of use 2b. Flexibility 2c. Complexity of statutory issues
2d. Interest by the private sector 2e. Public acceptance

	GARVEE	TIFIA	SIB	Tolls
Ease of use	N/A	C+	N/A	C-
Flexibility	N/A	C	N/A	B
Complexity of statutory issues	N/A	C	N/A	C
Interest by private sector	N/A	B	B+	A-
Public acceptance	N/A	A	N/A	C- ???

3. What are the most significant barriers to implementing innovative financing tools and techniques? How can each one you list be best overcome?

- Barriers:
  - Relative high cost of money.
  - Lack of transparency.
  - Slow-developing revenue streams.
- How best overcome:
  - Expansion of PABs; cap reserve requirements.
  - Full disclosure of all financing elements.
  - Long repayment periods; credit enhancements.

4. What are the mot effective means for promoting the use of innovative financing tools? In considering the promotion of innovative financing, please answer the following:

4a. What should we continue to be doing?

Expand availability of private activity bonds, for example.

4b. What should we stop doing?

Restrictions on sources of revenues (i.e., need ability to toll existing facilities).

4c. What should we start doing?

Allow states to experiment with tolling and enterprise-oriented activities (tolling existing interstates; privatization of highway rest areas, etc.).

5. Who are the leaders in innovative finance that other should turn to for advice and direction in implementing their specific programs?

Private: Firms such as Macquarrie that are flexible in their terms in order to meet the legitimate needs of the public sector owner.

Public: Both the cheerleading states for innovative financing, and the critics in states on innovative financing. From the robust debates emerge new approaches that aim for the "sweet spot."

6. What new tools would you like to see that might help you in delivering transportation projects to your customers?

See items 4a, 4b, and 4c above.

7. What do you see as the future for innovative finance in your market or jurisdiction?

In Washington State, which is a very unusual jurisdiction, we need to take baby steps to ensure that all the policymakers and most importantly, the public is with us. With the frequent use of the state constitutional powers of citizens' initiative, it only takes about two to three percent of the population to subject a law to full vote of the public. Innovative financing is a very, very difficult concept to explain to the public, especially in the context of an initiative campaign.

Most recently, voters have turned against a DBFOM contract for the Seattle Monorail. The tipping point was the reported "innovative finance" structure used by the project, which was a very long-term debt issuance (50+ years).

Therefore, we need to start small, or at least modestly, in our use of innovative finance techniques. We are hopefully that by lagging somewhat behind states such as Virginia, Texas and even Oregon, we will benefit from advancements in the art and science of innovative finance, and be better situated when new tools (such as PABs, HOT lanes, etc.) arrive.

Appendix C

Participant Submitted Case Study Material

C.1 Peer Exchange Case Studies on Innovative Finance

Each peer exchange participant was asked to prepare a 10-minute case study for informal presentation on the first day of the peer exchange. This appendix contains submitted material from five participants: Maryland State Highway Administration (SHA), Michigan Department of Transportation (MDOT), Minnesota Department of Transportation (Mn/DOT), Virginia Department of Transportation (VDOT), and Washington State Department of Transportation (WSDOT).

C.2 Maryland State Highway Administration (SHA)

Maryland is developing a financial plan for a complex mega-project with a mix of Special Federal funds, GARVEE bonds, and toll financing. This project, the InterCounty Connector (ICC), has a projected cost of $2.4 billion. Logistically, the Record of Decision is expected to be issued this winter, and the majority of the funding cannot be committed until the STIP is approved in early spring. The Initial Financial Plan (IFP) development is just underway. All project activities are being carried out by SHA staff and consultants under contract to SHA; however, at completion, the completed roadway will be a toll facility. The State's tolling arm, the Maryland Transportation Authority (MdTA) is a partner in the project for financing and as the ultimate owner.

Although the IFP is not yet complete and planning is still underway, the issues the partners have dealt with provide "lessons learned" for others following this path. The opportunity to use GARVEE bond financing coincided with the timing of a new Surface Transportation Act. Maryland is conservative in the projection of Federal funds available, and uses straight-line projections for annual appropriations and obligational authority for fiscal years outside the Act under which we are operating. The initial planning for the ICC project occurred under TEA-21. Based on our conservative Federal Aid assumptions, and the high probability of additional funding under a new Act, debt service for GARVEE bonds was affordable without impacting the existing program. Our current assumption is that GARVEE bonds will pay for $750 million of the $2.4 billion cost, with annual debt service on 12-year bonds accounting for $40 million to $80 million of Federal funding per year.

More than half of the funding will be provided from toll sources, both general systemwide sources, and projected revenues from the new facility. The project has also received some Federal earmarks and High Priority Project funding. Part of the challenge we are facing is matching the various funding sources to the potential cash flows associated with extensive right-of-way acquisitions and design-build construction contracts. Because the overall project is not envisioned as a traditional 80/20 Federal project, there are opportunities to match contracts to optimize funding sources.

So, what are the lessons learned from a project that is not yet underway?

- This is Maryland's first use of GARVEE bonds. The State has a dedicated Transportation Trust Fund that supports highways, ports, aviation, transit, and motor vehicle administration. The State issues Transportation bonds for state purposes, and also has the authority to issue bonds for local transportation projects. The use of Federal funds for debt service was approved by the legislature; however, the legislature has capped the amount of bonds that can be issued and the term of the bonds. Ensuring that there is legislative support for debt using Federal funds is essential.

- We reviewed many GARVEE agreements between States and the Federal Highway Administration (FHWA). Based on our circumstances, we drafted an agreement

modeled after a mix of those agreements. We then requested a review by FHWA, and included Headquarters staff in that review. FHWA made a number of changes, and indicated that some of the agreements had not been reviewed by Headquarters. There seem to be multiple channels for advice, and not all sources seem to agree. It would be helpful to have a defined path, and some "boilerplate" language that can form the basis of the agreement.

- Bond counsel and others involved in the issuance process provided valuable feedback. All in all, open communication between all who will be users of GARVEE agreements is critical.

C.3 Michigan Department of Transportation (MDOT)

MDOT issued $600 million of short-term indirect GARVEE notes (GANs) in two tranches of $400 million in 2001 and another $200 million in 2002. These variable rate notes have their interest reset each week. These notes were issued anticipating a larger level of Federal aid through reauthorization (TEA-21). This allowed MDOT to advance the program while maintaining a level road and bridge program.

MDOT has authorizing legislation allowing it to issue bonds/notes after 30-day notice to the House and Senate appropriation committees.

Does not create new revenue, but does reduce the cost of the project by allowing you to complete the project sooner when the interest on the debt is less than the inflation on the materials to build the project.

C.4 Minnesota Department of Transportation (Mn/DOT)

Increased Use of Bonding and Advanced Construction (AC)

In 2002, Mn/DOT used $295 million of AC spending authority for large project in Rochester, MN to avoid 10+ years of small construction jobs. Design Build (DB) project completed in three years.

In 2003, the Legislature appropriated $400 million of bonding and $400 million of spending authority for Advance Construction. This package accelerated 13 highway projects and 11 transit projects by many years. As work progresses, the forecast increase in SAFETEA-LU funding will be used to pay contractors as AC is converted. This allows cash in the State's Trunk Highway fund to be used more efficiently. The use of AC has led to an increased focus on projecting and managing cash and project costs, as well as better management of Federal funds, AC levels, AC conversion, and STIP financial planning forecasts. SAFETEA-LU passed with funds to Minnesota in line with forecasted levels for 2005-2009.

C.5 Virginia Department of Transportation (VDOT)

Pocahontas Parkway: The 63-20 Financing Option

The Pocahontas Parkway (Route 895 Connector), a new 8.5-mile, four-lane toll road connecting I-95 and I-295 east of Richmond International Airport, is the first construction project approved under the Commonwealth of Virginia's Public-Private Transportation Act (PPTA). Through an innovative partnership between VDOT and a private sector, a not-for-profit corporation known as the Pocahontas Parkway Association (PPA) was established to finance the Pocahontas Parkway project.

Following are some of the major considerations that went into finalizing the finance plan as well as lessons learned from the experience.

In 1995, the Commonwealth of Virginia General Assembly enacted the Virginia Public-Private Transportation Act (PPTA) to allow public entities such as VDOT to authorize private entities to acquire, construct, improve, operate, and maintain qualifying transportation facilities. Among the public policy goals of the PPTA, the Commonwealth sought to provide access to new sources of capital in accelerating the delivery of needed transportation facilities.

Funding for the project of $27 million was provided by the State through Federal funding for roadway design ($9.0 million) and a SIB loan ($18 million). In July 1998, VDOT completed the financing for the construction of the Pocahontas Parkway through the sale of toll revenue bonds by a newly created not-for-profit private corporation – the Pocahontas Parkway Association (PPA). The PPA was established as a Virginia non-stock, not-for-profit corporation to sell $354 million in toll revenue bonds. The transaction was structured in conformity with the requirements of IRS Revenue Ruling 63-20.

As had been the experience with an earlier private toll road in Virginia – the Dulles Greenway, taxable equity financing proved to be cost prohibitive, as such, to achieve the lowest cost of capital and improve the financial feasibility of PPTA project proposal submissions, private entities have consistently sought to access the tax-exempt bond market to finance proposed road projects. Although the Commonwealth of Virginia Transportation Board is an active and well-received issuer in the tax-exempt bond market, in keeping with the goal to access new sources of capital, VDOT chose not to recommend issuance of state debt for the project. Further, debt issuance by the Transportation Board requires legislative approval and must be managed within the constraints of the Commonwealth of Virginia's overall debt capacity limits.

To meet its financing needs, Virginia first explored issuance of tax-exempt toll revenue bonds through either established conduit issuers. The Henrico County IDA was presented a proposal for issuance of bonds to finance the project. However, in a close vote, the IDA board declined to authorize the debt issuance. So, even though VDOT would prefer to utilize an established entity for conduit issues, IRS Revenue Ruling 63-20

provides a viable alternative and because every Plan A should have a Plan B, by default this was the option selected for financing the Pocahontas Parkway.

Creation of the not-for-profit entity to sell the bonds for the project allowed us to achieve the tax-exempt status on the bonds and providing the lowest cost financing possible without direct issuance by the Commonwealth Transportation Board. There are several requirements that had to be met in order for the financing to qualify for the tax exemption. The following requirements were set out in the Revenue Ruling and we were careful in the formation of the corporation and the business terms of the documents to heed the requirements:

- The corporation must engage in activities which are essentially public in nature;
- The corporation must be one which is not organized for profit (except to the extent of retiring indebtedness);
- The corporate income must not inure to any private person;
- The State or a political subdivision thereof must have a beneficial interest in the corporation while the indebtedness remains outstanding and it must obtain full legal title to the property of the corporation with respect to which the indebtedness was incurred upon retirement of such indebtedness; and
- The corporation must have been approved by the State or a political subdivision thereof, either of which must also have approved the specific obligations issued by the corporation.

VDOT did not proceed with this concept without fully weighing, among other considerations, accounting issues as well as the potential impact on the Commonwealth's and Commonwealth Transportation Board's credit ratings as a result of debt issued on behalf of VDOT by the PPA. Among issues considered was GASB 14, which establishes standards for defining and reporting on the financial reporting entity and determining whether an entity such as the PPA must be included as a component reporting unit.

A special-purpose entity such as PPA is fiscally independent if it has the authority to do all three of the following:

- Levy taxes or set rates or charges;
- Determine budget without modification from another government; and
- Issue bonded debt without approval by another government.

Among the requirements for tax exemption under the 63-20 rule is that the governmental unit must approve both the nonprofit corporation and the issuance of the bonds. VDOT, as the responsible public entity under the PPTA process, was the appropriate approving governmental unit for the Pocahontas Parkway project. VDOT officials met with the three major rating agencies to assess the potential impact on the Commonwealth's and Commonwealth Transportation Board's credit ratings as a result of debt issued by a 63-20

entity. Generally, the rating agencies perceived no adverse impact on either the Commonwealth's or the Commonwealth Transportation Board's credit ratings as a result of the debt issuance on behalf of VDOT for a VDOT-owned facility by this newly created private entity. However, one rating agency did caution that the expectation would be that Virginia, as a triple-A rated state, would not provide approval for project debt of a speculative nature.

Construction has now been completed on the Pocahontas Parkway, the first project of its kind in Virginia, and VDOT is still encountering the intricacies of utilizing the 63-20 concept. Recognizing these challenges, VDOT is carefully evaluating this financing approach prior to expanding its use on other projects. Not being an established conduit issuer, there is no staff to coordinate accounting and debt management issues such as arbitrage rebate compliance or continuing disclosure, or provide thorough review of contractor charges for legal and other services.

Project traffic volumes are considerably under projection. Based on the structure for the bond repayment, annual debt service increased dramatically in FY 05. At realistic growth projections, investors have expressed concerns that debt service requirements may not be met. Questions have been posed to VDOT as to what the plan is to address this situation – however these are non-recourse bonds issued by PPA and neither VDOT nor the State is obligated to provide any debt service deficiencies. In all, while IRS Revenue Ruling 63-20 provides a new avenue for funding transportation projects, this option should be pursued carefully, given issues related to overall debt burden, project essentiality, and potential impact of this type of issuance on the credit rating of the approving governmental unit.

C.6 Washington State Department of Transportation (WSDOT)

Financing Public-Private Partnerships in Washington State: Case Study on Tacoma Narrows Bridge Project

In 1993, the Washington State legislature enacted the Public-Private Initiatives program. The legislation was very typical of PPP enabling statutes that had passed in other states during this era: it was broadly crafted, provided few restrictions or guidance on how project-generated revenues were to be leveraged, and presumed the use of design-build contracting (which was considered very innovative back in the early 1990s). The number of projects WSDOT could develop was limited to six.

Unfortunately, the legislation brought with it one other distinguishing feature: it promoted the belief that the private sector would be "paying" for these projects, without a corresponding understanding that *tolls* would be the source of repayment. In other words, very few policymakers understood that "user fees" and "private funding" were euphemisms for tolls.

WSDOT solicited the private sector and received 12 proposals, which were examined and narrowed to the statutory-maximum of six projects. However, once the legislature convened in session, there were allegations that the legislature had been "duped" into passing the PPI law – that they were never informed that tolls would be the source of repayment. This was fueled by public shock and anger over the prospect of tolls being imposed on roadways (as opposed to bridges, where Washington had a history of constructing bridges paid for with tolls). One by one, the six projects were legislatively excised from WSDOT's PPI program until only one viable project remained: the Tacoma Narrows Bridge project.

A brief description of the project: the original Tacoma Narrows bridge was built in the 1940s.[8] It bridges a very deep channel between mainland Pierce County, where the city of Tacoma is located, and the rural-but-developing Kitsap peninsula. Without the bridge, people from Kitsap County must drive down the peninsula, around Puget Sound, and back up the mainland (about an hour and a half) to reach Tacoma. The other alternative is driving to a ferry terminal (about 30 minutes away), which provides ferry service to the Seattle area. Thus, there is no convenient way to travel from Kitsap County to Pierce County without the Tacoma Narrows Bridge.

[8] Actually, the *very first* bridge across the Tacoma Narrows was constructed a few years earlier, in the 1930s, but the bridge could not withstand the strong crosswinds in the Narrows, and it quickly succumbed to a windstorm shortly after it was built. This first bridge earned the nickname "Galloping Gertie," thanks to an amateur photographer who captured motion picture of the bridge tossing and turning in the windstorm.

Growth in the region has severely constrained the carrying capacity of the bridge. The steel-decked suspension bridge is also the scene of several fatalities each year, as it does not have a separated median or Jersey barrier, is substandard width, and contains no shoulders. Finally, the bridge is nearing the end of its useful life; the saltwater environment has taken its toll on the steel structure.

The PPP project proposed by a consortium of Bechtel and Kiewit (with Bechtel as prime), would construct and finance a new (or second) bridge parallel to the original bridge, and once complete, repair the old bridge. Upon opening to traffic, tolls would be imposed on both structures as a means of financing the project. The capital cost of the project (which is nearing its targeted 2007 opening) is valued at $615 million, which ranks it the 11th largest transportation project currently under contract in the United States.[9] There is a long and tortured history in the development of Tacoma Narrows Bridge project. This case study is narrowed to examine only the financing issues.

TNB I: 63-20 Financing Provided by Developer

The joint venture between Bechtel and Kiewit, "United Infrastructure of Washington," was to serve as the developer for the project, with responsibility for closing the financing arrangements on the bridge. A comprehensive development agreement was negotiated and entered into between WSDOT and UIW. In their original proposal, UIW had planned on a private form of financing that would have been taxable; at some point in the negotiations, the State decided that the financing must be provided on a tax-exempt basis. Thus, the final agreement specified the use of a tax-exempt issuance under IRC section 63-20, which allows a public non-profit corporation to issue tax-exempt financing for projects that meet certain "public use" tests. This is the financing model advanced in the development agreement.

The TNB project was proceeding, clearing all critical hurdles such as a public "advisory" vote on the project (narrowly approved), obtaining environmental permits and acquiring key sections of right-of-way. The project also received $50 million in state funding to help construct on-ramps and approaches on SR 16, which is the state route connected with the bridge. Opponents of the project had filed several legal challenges to the project, most of which were dismissed at the trial court level. However, one of the challenges focused on a provision in a 1952 statute – a remnant from the original TNB toll bridge – which required that once construction bonds on the old bridge were retired, that tolls could not be imposed, not even for continued maintenance and operation costs. The case was heard by the state Supreme Court, which ruled that the 1952 statute trumped the PPI Act; no tolls could be imposed on the original bridge as long as the 1952 statute remained on the books.

Without the ability to impose tolls on the parallel bridge, the financing for the entire project – both the new bridge and the old bridge – did not pencil out. The revenues would be insufficient to finance the project. For the next 16 months, supporters of the TNB

[9] *Public Works Financing*, September 2005.

project pushed the state legislature to repeal the 1952 statute and allow the project to continue. However, concerns had emerged about the agreement between UIW and WSDOT: did the State pay too much for the project? Did the maintenance and operations provisions in the contract skirt around state labor laws? Would the proposed financing on the project result in the lowest cost to the tollpayers?

The legislature took no action on the 1952 statute during the 2000 legislative session. UIW invoked the force majeuer provisions of the development agreement, essentially prolonging the time for the financing issue to be resolved. The following session, the legislature honed in on the 63-20 financing model proposed by UIW. A comparative analysis was conducted, comparing the 63-20 financing model against the possibility of state-provided financing. During the previous session, it had been asserted that 63-20 financing was the best option for the State. Legislative concerns about the costs and the exact terms of the financing agreement were brushed aside.

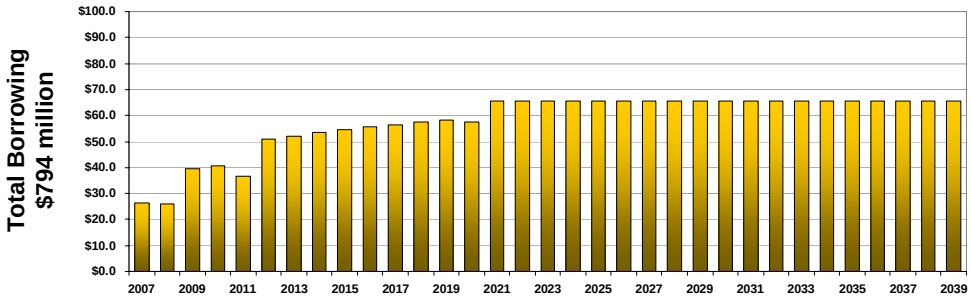
TNB II: Financing Provided by State

The Speaker of the state House of Representatives was convinced that state financing was a far better value for toll payers than the 63-20 financing model provided by UIW. The main factors were:

- The much lower interest rate (5.026 percent for state issuance, in comparison to 5.64 percent for the 63-20 issuance).
- Lower cost of issuance ($8.0 million state, in comparison to $16 million private placement).
- No need to pay debt service on $111 million that would otherwise be borrowed for bond insurance, reserve funds (debt service, renewal, and replacement) and financial closing under the 63-20 model; the State would essentially self-insure.
- State could refinance the vast majority of its bonds, whereas the 63-20 bonds could not be refinanced within the first 10 years.
- The State would borrow money only as needed, avoiding the larger capitalized interest costs under the 63-20 financing, which would have borrowed all the money through a single bond issuance.
- All project debt could be retired in 24 years, rather than the projected 34 years under the 63-20 plan.

Financing Comparison: TNB I (63-20) versus Conventional State Financing

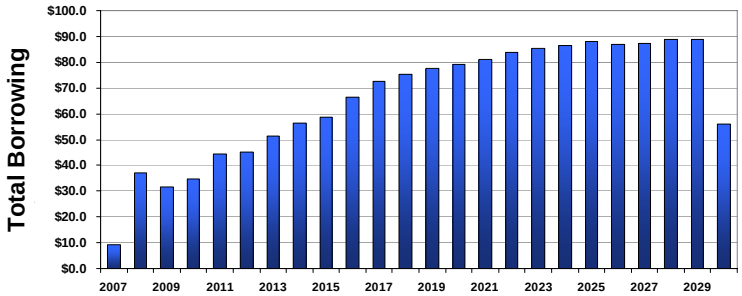
Original TNB I "Private Public Partnership" 63-20



Mortgage Statement: Total Principal and Interest Over 34 Years Estimated at $1.908 billion*

* United Infrastructure Washington (UIW) Preliminary Financing Plan dated January 25, 2001.

Conventional State Bond Financing**



Mortgage Statement: Total Principal and Interest Over 24 Years Estimated at $1.572 billion

"Risk" Considerations

The notion that the State could issue debt cheaper than the private sector was finally acknowledged, but with the following cautionary note: by issuing its own debt on the project, the State was also assuming certain risks. Oddly, the types of risks that were emphasized by the 63-20 proponents were *interest rate risk; risk of project cost escalation; and risk of default and ultimate financial liability falling upon the State.*

As it turns out, interest rates have proven to be much lower than anyone projected. The average bond sale on state-issued debt for the TNB has been below 5.0 percent. Project cost escalation did occur, but not as a result of switching the financing; it occurred because it took 16 months for the parties to agree to issue state debt for the project. The final caution against possible default on the state-issued bonds was essentially dismissed – not due to great faith that a default wouldn't happen, but rather because the legislature believed it would ultimately be pressured to bail out the public non-profit corporation under the 63-20 scenario anyway, so the issue seemed moot.

One Size Fits All: Financing Provisions – and Risks – in Washington's New Public-Private Partnerships Act

The cost savings achieved with the TNB II state-backed financing cannot be denied. Toll payers are projected to save at least $336 million over the original financing plan, and possibly much more, depending on the interest rates received on the last remaining bond sales. This savings – or more accurately, *projected* savings – provides policymakers more choices in managing the toll rates on the project. If lowest possible tolls are desired or demanded by the motorists, that can be accomplished more readily with the state financing. If retirement of the debt is the paramount policy goal, that too can be expedited by about 10 years.

When the legislature amended the 1952 statute that prohibited tolls on the original Tacoma Narrows Bridge to allow the TNB project to continue, it took the opportunity to close out the original PPI law of 1993. Washington's original PPI law, and its program, has remained dormant until this past March 2005, when the legislature enacted a new public-private partnership law, SHB 1541, the Transportation Innovative Partnership Act of 2005.[10] This new PPP law is patterned after the relatively recent PPP law enacted in Oregon,[11] except for one important difference: the Washington law requires that any debt issued for a state transportation facility *must be issued by the state treasurer.* In effect, the legislature has institutionalized the state-backed financing approach adopted in the TNB II project.

The Fallacy of EGAP: "Everything Goes According to Plan"

If there ever was a "sure bet" in toll projects, the Tacoma Narrows Bridge is as safe as it gets. There are no viable competing alternatives or diversionary routes for motorists to choose. The traffic projections on the bridge were very strong, with elasticity of demand within a comfortable range for planners. The project had already obtained environmental permits, design substantially completed, and commitments on materials (especially concrete and steel) were under contract. In short, the risks to the State seemed very well contained.

The bridge will not open to traffic until 2007. Therefore, it is premature to laud the wisdom of switching the financing mechanism from the 63-20 model to the state-backed financing. Two of the risks cited by 63-20 proponents – interest rates rising and project cost escalating – have not occurred (rates have actually fallen, and the project cost increases due to time and materials have been within reason). The third warning, that statewide taxpayers will be liable in the event of default – cannot be judged for several years. To this point, everything has gone according to plan.

[10] Now codified at chapter 47.29 RCW.

[11] Oregon Laws 2003, chapter 790, codified at ORS 367.800 to 367.826.

However, very recently, new unexpected issues have emerged – issues that were not "accounted for in the plan" ultimately passed by the legislature in 2001. Gas prices were about $1.00/gallon when the financing for TNB II was approved; world events since 2001 have led to gas prices of $3.00/gallon. There is evidence that motorists are economizing their travel; nationwide, vehicle trips were reported to have decreased in the month of September. If $3.00 per gallon is the tipping point for the general motorist, how much will the drop-off in travel be by the *specific* motorist who is also expected to pay $3.00 or $4.00 per trip across the bridge?

The vast improvements in the SR 16 corridor, which works in conjunction with the TNB to link Pierce and Kitsap counties, has resulted in significant economic development in formally rural Kitsap County. Neighboring Pierce County serves as the primary job and health care center for the Kitsap peninsula, but this, too has begun to change. It was recently announced that a major regional hospital will open on the Kitsap-side of the TNB. This will have a meaningful impact on the number of would-be toll payers crossing the bridge, as both patients and hospital workers can contain their commute within their resident county. Was this rapid expansion of economic development in Kitsap county "accounted for in the plan"? The projected 2007 traffic forecasts across the new TNB were recently revised downward. The margin of error is growing quite narrow before the bridge even opens to traffic.

While the project cost components – particularly the raw materials such as concrete and steel – are locked in by contract and therefore accounted for in the financing plan, what would happen if, say, a vendor refused to honor that contract? Corporations in the United States are within reach of the long-arm of U.S. law. But corporations in foreign countries, such as South Korea, where most of the structural steel for the bridge is derived, are not easily within reach. In fact, the awesome expansion of the Chinese economy and the accompanying ravenous appetite that nation has for raw materials – particularly concrete and steel – has caused a much greater-than-expected escalation in the price of materials, and some corresponding "wandering eyes" by suppliers that recognize the difference in profits a "re-pricing" of materials could bring. Will prices quoted on these raw materials by foreign corporations be honored? This is precisely the issue facing Bechtel on the construction of the bridge deck. The possibility that vendors might renege on their pricing commitments was not "accounted for in the plan."

Neither was the possibility (albeit extremely remote) that something unexpected might happen to either the prime contractor, or the bridge structure itself. When the State took over the financing of the bridge, it essentially "self-insured" against likelihood that the contractor could default. The surety bond on the TNB contractor's performance is reported to be in the 60 percent range, rather than the customary 100 percent surety bond. With a well-capitalized firm such as Bechtel, this seemed of little concern. However, Bechtel is a very closely held private firm, with ownership concentrated in 39 individual partners. There have been rumors (unsubstantiated, of course) that Bechtel's finances are not, in fact, entirely sound and that the firm may be experiencing some difficulty. With a privately held firm, there is no viable way of crosschecking information about financial condition, except as expressly permitted by the firm itself. Fortunately, the TNB project is nearing completion and any ripple effect from financial difficulties that a contractor might

experience would likely occur after construction is complete on TNB. But in formulating the new Transportation Innovative Partnership Act and the required state financing, are there adequate tools to account for this risk in future project plans?

Summary

Although the state-backed financing provided for the TNB II is clearly superior on many measures, including cost, it is not without risk. As it turns out, the risks that were being debated in the legislative arena (interest rates, project cost escalation, and bond default) are quite different from the risks that didn't receive much discussion. It now appears the biggest risk to the project's financing is *traffic volumes meeting expectations*. This would seem to be obvious, particularly to those states that have active toll facilities, but, in Washington State, this was never given much consideration by policymakers.

If the TNB represents a toll project that's about as "safe" as possible, was the institutionalization of the state-backed financing mechanism the best approach to finance other projects in the State where traffic volumes are even less predictable? Because general state transportation taxes are the backstop for these projects, does WSDOT have a method or formula for determining how many projects (and which ones) it is willing to finance, with recourse to the State's motor vehicle fund?

Conclusions

1. The State was probably better off financing the TNB project with the state-backed bonds, rather than the 63-20 based financing arranged by Bechtel. However, any projected cost savings could be offset or erased if the traffic volumes do not materialize as projected.

2. Each project ought to be evaluated on its own merits: both possibilities and risks. There may be some projects where the State does not want to assume the financial risk that toll revenues will not materialize. The State might want to pursue alternative forms of financing.

3. The variation in financing approaches, and the emergence of new market participants in infrastructure investment and development, make it very difficult to accurately legislate a preferred financing approach. The financing markets and options seem to change with each closed transaction.

4. The public values and attributes of state-backed financing, such as lowest-cost, transparency, accountability, fairness, control, etc., ought to be captured and used as a basis for comparison and *consideration of other possible financing mechanisms that might have these same attributes (if any do)*.

5. Public sector owners should keep in mind the logic fallacy of EGAP. Things that go wrong on a project are rarely the issues that were anticipated and planned for.