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FINANCING 21st-CENTURY INFRASTRUCTURE

HEARING

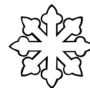
BEFORE THE

COMMITTEE ON FINANCE
UNITED STATES SENATE

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

MAY 17, 2011



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FINANCING 21st-CENTURY INFRASTRUCTURE

TUESDAY, MAY 17, 2011

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, DC.

The hearing was convened, pursuant to notice, at 10:05 a.m., in room SD–215, Dirksen Senate Office Building, Hon. Max Baucus, (chairman of the committee) presiding.

Present: Senators Conrad, Kerry, Wyden, Nelson, Menendez, Cardin, Hatch, Grassley, Snowe, Coburn, Thune, and Burr.

Also present: Democratic Staff: Russ Sullivan, Staff Director; Lily Batchelder, Chief Tax Counsel; Thomas Reeder, Senior Benefits Counsel; Ryan Abraham, Tax Counsel; and David Hughes, Tax Advisor. Republican Staff: Chris Campbell, Republican Staff Director; Mark Prater, Deputy Chief of Staff and Chief Tax Counsel; Christopher Hanna, Senior Tax Policy Advisor; and Nick Wyatt, Tax and Nomination Professional Staff Member.

OPENING STATEMENT OF HON. MAX BAUCUS, A U.S. SENATOR FROM MONTANA, CHAIRMAN, COMMITTEE ON FINANCE

The CHAIRMAN. The committee will come to order.

Today we welcome the newest member to the Committee on Finance. Senator Richard Burr is the 12th Senator from the Tar Heel State to serve on the Finance Committee. The last Senator from North Carolina to serve on the Finance Committee was Senator Clyde Hoey, who served until he passed away on May 12, 1954. Your membership, Senator, ends the longest period of time the State has not had a member on the committee.

North Carolina has been well-represented on the Finance Committee since its creation in 1816. Nathaniel Macon was the first Senator from North Carolina to be appointed to the committee, serving for 4 years in the early 19th century.

The North Carolinian with the most seniority on the committee was Senator Furnifold Simmons. He served for 22 years and was chairman from 1913 to 1919. Senator Burr, you will be the first member of the Republican party to serve on the committee from North Carolina. Every prior member who has served on the committee was a Whig, a Jacksonian, a Crawford Republican—I am not sure what that is—or a Democrat.

Senator HATCH. Neither are we. [Laughter.]

The CHAIRMAN. Senator Burr, I am very pleased to welcome you to the committee today. We are very, very happy to have you with us.

Speaking about the interstate highway system, President Dwight Eisenhower had this to say: “Its impact on the American economy—the jobs it will produce in manufacturing and construction, the rural areas it will open up—is beyond calculation.”

Infrastructure moves our country forward. It does not just move our buses, planes and trains. Infrastructure also moves our economy. Building bridges, roads, and railways creates jobs. According to the Federal Highway Association, every billion dollars invested in infrastructure creates nearly 28,000 jobs.

A more efficient transportation system cuts costs for the businesses that help our economy grow. But over the last several decades, our investment in transportation infrastructure has slowed significantly. Highways, railways, and roads have not kept up with our growing population, and our existing infrastructure is falling apart. The American Society of Civil Engineers gave the United States an overall grade of “D” on their report card for America’s infrastructure.

Experts estimate that the roadway conditions contribute to more than half of all car crashes. We all remember the tragedy in Minnesota in August of 2007, when the Interstate 35 West Bridge in Minneapolis collapsed, killing 13 people, injuring another 154. Ensuring quality infrastructure is a safety issue we must take seriously.

Maintaining our infrastructure is also an issue of America’s global competitiveness. Today the United States spends about 2 percent of our Gross Domestic Product on infrastructure. That is a 50-percent decline from 1960. But China spends close to 9 percent of the country’s GDP on infrastructure.

Today we will look at our existing tools to finance infrastructure investment: the Highway Trust Fund and the Airport and Airway Trust Fund. Both of these funds need to be reauthorized this year. These trust funds are financed by the people who use them through excise taxes paid at the pump and airline ticket counters. Infrastructure on a State and local level is usually financed through tax-exempt bonds.

In February, we passed a bipartisan bill to reauthorize the Airport and Airway Trust Fund through September 2013. It was a good start, and I hope we can begin discussions with the House soon to get it enacted into law. We should continue that good progress as we put together a highway bill. Congress must pass a highway bill by September 30, when the authority for the Highway Trust Fund expires.

The Highway Trust Fund faces significant challenges. It relies on fuel taxes for 90 percent of its revenue. But given our tough economy and skyrocketing gas prices, many families have had to cut back at the pump. Cutting back at the pump means fewer contributions to the trust fund.

The Congressional Budget Office estimates that the trust fund would need an additional $25 billion per year just to maintain current performance. Without that additional money, the Highway Trust Fund will be insolvent by the end of next summer. That shortfall will force the Transportation Department to slow payments to existing projects, and States would have to suspend critical infrastructure projects and cut jobs.

Just like many families in Montana and across the country, the Federal Government is currently facing the significant challenges of a tight budget. So today we will consider how to ensure that the Highway Trust Fund remains sustainable. To get our budget in order, we will have to make a lot of difficult choices. We will also need to look for ways to be creative, because the longer we wait to address our aging infrastructure, the more it will cost in the long run.

Every failed bridge and broken levee has a significant cost in terms of dollars and cents. More importantly, these tragedies can cost lives. The committee has already started to think creatively. We have looked at alternative funding proposals, such as the use of public/private partnerships, increasing the efficiency of the infrastructure bond market, and creating a national infrastructure authority.

Today we will consider these and other proposals to finance a 21st-century infrastructure. All options should be on the table. So let us be creative in our efforts to develop infrastructure solutions and work together across the aisle to find the most efficient ways to build roads and bridges. Let us begin on the path to a 21st-century infrastructure that will enable businesses to create the jobs the economy needs.*

[The prepared statement of Chairman Baucus appears in the appendix.]

The CHAIRMAN. Senator Hatch?

OPENING STATEMENT OF HON. ORRIN G. HATCH, A U.S. SENATOR FROM UTAH

Senator HATCH. Well, thank you, Mr. Chairman. I appreciate your remarks and I, likewise, want to join with you in welcoming Senator Burr to this committee. This committee has challenges like no other committee in Congress. That is why a lot of us love being on it. Frankly, having witnessed Senator Burr and his work on so many other committees, I just have to say we are very fortunate to have you on this committee, and we look forward to working with you. You are one of the people whom I most respect in this body, and I just want you to know that. I am grateful that the chairman has made such a great statement on your behalf.

Well, Mr. Chairman, I would like to begin today with a quote attributed to one of America's greatest and most pragmatic statesmen. Franklin warned, "When the people find that they can vote themselves money, that will herald the end of the Republic. Sell not liberty to purchase power."

Now, this sentiment seems applicable to a variety of policies being considered by this Congress. Today it illuminates this committee's examination of the Federal role in infrastructure financing. The committee's role in infrastructure financing is most apparent in the maintenance of various trust funds. If the Highway Trust Fund is not the greatest of these funds, it is certainly the most troubled. That particular trust fund is the main subject of this hearing.

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*For further information, *see also,* "Overview of Selected Tax Provisions Relating to the Financing of Infrastructure," Joint Committee on Taxation staff report, May 13, 2011 (JCX–29–11), *https://www.jct.gov/publications.html?func=startdown&id=3789*.

According to the Congressional Budget Office, this trust fund's highway account will be under-funded by around $104 billion in 2021 if current trends persist. Under current law, the trust fund is not actually able to incur negative balances, but the CBO estimate shows that the demands on the fund far outstrip its resources.

The current solvency of the trust fund is an illusion created by gimmicky general fund transfers over the past few years. The last long-term surface transportation reauthorization, tortuously named the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, or SAFETEA–LU, expired in 2009. Keeping with recent tradition, Congress has enacted a serious of short-term extensions. The most recent extension expires this September.

Now, what these extensions have done and continue to do is mask an enormous, yet simple, problem. There is no such thing as a free lunch. To most people, this is a cliché, but it evidently has not been said enough to sink in with those who want to finance infrastructure projects in excess of our ability to pay for them.

Already this year I have heard from colleagues eager for federally funded infrastructure spending to continue unabated. One colleague, speaking in another committee, extolled the virtues of more investment in infrastructure. She closed her remarks with the following: "I am grateful to my colleagues on both sides of the aisle for their interest in moving forward together on a transportation bill that invests in our transportation system to help ensure we will meet America's needs in the coming years."

We hear this sentiment from the President all the time: we need to invest in America. Well, of course we do. But that is not the issue. The first issue is who, in a constitutional system of enumerated powers, is going to pay for it. Will the States pay for it or will the Federal Government?

The second issue is, how are we going to pay for it? If the Federal Government takes on significant infrastructure responsibilities, how are we going to pay for it? Believe me, if the President gets his way, we are going to pay for it. There is a lot of rebranding going on over on the left. What used to be called raising taxes is now called "shared sacrifice." What used to be called government spending has now been dubbed "investments."

Apparently some strategists figured out that, to the American people, higher spending and higher taxes are equivalent to dirty words, so there is an effort to spin this Carter-era message of tax and spend in a way that will be more palatable to the American people. I know that Utahans are not going to buy it, and I do not think many Americans will.

For them, the issue remains, how are we going to pay for all of these investments? It is not at all clear where this spending will come from. Traditionally, the spending has come from the trust funds which are maintained by the Finance Committee. Some seem to view this committee as a no-limit credit card, and they view the balances they run up here as somebody else's problem.

Our current circumstances make it impossible to continue that approach. The voters have made it clear that it is time to think twice about giving Federal policymakers an unlimited credit line. That is why this hearing is so important. The negative signs are

obvious. The Highway Trust Fund's projected end-of-year balances are telling us that our current approach to highway financing does not work. Now is the time to thoroughly examine the Federal Government's role in promoting infrastructure investments and improvements.

The financing of these projects has deteriorated to the point that I am not sure most Americans, or even their elected representatives, know what they are actually paying for. Around 89 percent of the Highway Trust Fund's revenues comes from excise taxes, and most of that is the 18.3 cents per gallon Federal gas tax. But I wonder if people, as they watch the number spinning around and around on the gas pump, realize that around 14 percent of Highway Trust Fund revenues go to the mass transit account. So, when we say that by paying Federal gas taxes taxpayers are paying for the roads they drive on, that might only be 86-percent true. And even 86 percent might be too high.

A Government Accountability Office report from 2004 titled "Trends, Effect on State Spending, and Options for Future Program Design" found, in part, that "increased federal highway grants influence States and localities to substitute Federal funds for funds they otherwise would have spent on highways." In other words, an additional dollar of Federal money may not overall buy an additional dollar's worth of infrastructure. It might just shift the burden of paying for it from States and localities to the Federal Government.

From this hearing I hope we can get a clearer picture of what the appropriate Federal role in infrastructure financing ought to be and how we can make that happen. What is certain is that continuing the flawed policies of the past will not work. We need to look beyond simply putting more money into a leaky and broken-down highway trust fund or hiding the rusted-out shell of the trust fund among other financing vehicles that appear to be in better shape.

I just hope that today's witnesses can help us determine if our current policies need merely a tune-up or a complete engine rebuild. When I look at the roads in the District of Columbia, the greatest city in the world—take Constitution Avenue. I come in on it every day. It is a doggone mess. It is one of the lousiest roads in the country. You would think we would keep those roads up so that they would shape up and look good in our country's capital. But that is an indication of how bad it is everywhere else.

Now, taxpayers need to know if Washington can continue with business as usual or if fundamental reform of highway financing is in order—and I am going to be very interested in learning how we might solve these problems from these experts who are here today, and I want to personally welcome all of you here today. We are grateful for you taking time to be with us. Governor, we are grateful to have you here, and the others as well. So, we appreciate you.

The CHAIRMAN. Thank you, Senator.

[The prepared statement of Senator Hatch appears in the appendix.]

The CHAIRMAN. All right. Let us get down to work.

Our first witness is Dr. Joseph Kile. Dr. Kile is the Assistant Director for Microeconomic Studies at the Congressional Budget Of-

fice. Thank you, Dr. Kile, for taking your time to come here, and thanks for your testimony, too.

Second, Governor Ed Rendell. Governor Rendell is the co-chair of Building America's Future Educational Fund. Mr. Rendell served 2 terms as the Governor of Pennsylvania and, before that, served as Mayor of Philadelphia for 8 years.

Next, Mr. Matthew Posner. Mr. Posner is the director of Municipal Market Advisors. That is an independent research advisory firm for the municipal bond industry. Thank you, Mr. Posner.

Finally, we have Mr. Gabriel Roth, a civil engineer and transport economist, formerly with the World Bank.

Thank you all for coming. As you probably know, our customary practice here is to have your statements automatically included in the record, and we need you to speak for about 5 minutes, beginning with you, Dr. Kile.

STATEMENT OF DR. JOSEPH KILE, ASSISTANT DIRECTOR FOR MICROECONOMIC STUDIES, CONGRESSIONAL BUDGET OFFICE, WASHINGTON, DC

Dr. KILE. Thank you. Chairman Baucus, Senator Hatch, members of the committee, thank you for the invitation to testify today on issues related to funding of highways. My testimony today examines the Federal role in paying for highways, but it is also relevant to other types of infrastructure that are funded by the Federal Government.

The United States spends about $160 billion per year on highways, with about one-fourth of that total coming from the Federal Government. Federal highway spending is funded mainly through taxes on gasoline and other motor fuels that are set to expire on September 30. The revenues from those taxes accrue to the Highway Trust Fund, and the Congress spends money from that fund for highways and other surface transportation programs.

In recent years, the Congress has spent more than it has collected in transportation-related taxes, and it has supplemented the Highway Trust Fund with money from the general fund of the Treasury. Even if the provisions of current law are extended, CBO projects that the trust fund will be unable to meet its obligations in a timely manner sometime during the second half of 2012, unless the Congress chooses to transfer money as it has done in the past, identifies other sources of revenue, or reduces spending.

To shed light on that choice I will turn briefly to three questions facing the Congress: (1) how much should the Federal Government spend on highways; (2) how should the Federal Government direct the use of those funds; and (3) how should the Federal Government raise those funds?

The Congress has a range of options for future spending on highways. It can limit spending to the amount it collects in current taxes on fuel and other transportation activities. Doing so would reduce spending by about $13 billion per year. It could choose to maintain current spending, or it could target a particular goal. For example, maintaining the current performance of the highway system would require about $14 billion per year more, and funding projects whose benefits exceed their cost would require more money than that.

The Congress currently directs funds for highway infrastructure through three mechanisms. First, the Federal Government provides grants to State governments under formulas that allocate 80 percent of Federal spending. The remaining 20 percent goes to specific projects or purposes that are identified by the Congress or the Secretary of Transportation.

Second, the Federal Government provides credit assistance through loans and loan guarantees that reduce the cost of borrowing by State and local governments. Those lower costs, however, impose a cost on Federal taxpayers who bear the risk of default. That is a cost that otherwise would be borne by the borrowers through higher interest rates.

Third, the Federal Government reduces the cost of borrowing by State and local governments by providing tax preferences for the bonds that they issue. Tax-exempt bonds are widely used but are generally not considered cost-effective because the Federal revenues that are foregone are greater than the savings to State and local governments.

Tax credit bonds are an alternative that allows bond holders to claim a credit against their tax liability or bond issuers to claim a credit payable to the Treasury. Tax credit bonds can be a more cost-effective way for the Federal Government to reduce the cost of borrowing by State and local governments.

In recent years, other ideas for directing Federal money have also been proposed. For example, a Federal infrastructure bank might rely on cost/benefit analysis to select projects, and such a bank could attract private financing by reducing the cost of borrowing. However, doing so would impose the cost of such credit assistance on Federal taxpayers and would draw on future tolls or taxes to pay the financing costs.

Regardless of how projects are chosen or how financing is structured, money for highways ultimately comes from highway users or taxpayers. Taxes, tolls, and fees imposed on highway users now fund about half of highway spending by the Federal, State, and local governments. The rest comes from the Treasury's general fund and from similar State and local funds.

A system that charged users for the full cost of travel would increase the cost to motorists, but could promote more efficient use of the highway system. Although taxes currently are charged for fuel, most of the cost of using a highway, especially the cost of pavement damage and congestion, are tied more closely to the number of miles traveled than to the amount of fuel consumed.

Charging users based on the costs they impose would require a combination of fuel taxes and per-mile charges, sometimes called VMT taxes. Imposing such prices would encourage motorists to use the highways only when the benefits to them outweigh the costs, and a system like that would also reduce highway use, and thus future spending.

Thank you again for the invitation. I would be pleased to answer any questions that you might have.

The CHAIRMAN. Thank you, Dr. Kile, very much.

[The prepared statement of Dr. Kile appears in the appendix.]

The CHAIRMAN. Governor Rendell?

STATEMENT OF HON. ED RENDELL, CO-CHAIR, BUILDING AMERICA'S FUTURE EDUCATIONAL FUND, WASHINGTON, DC

Governor RENDELL. Good morning, Senator Baucus, Senator Hatch, members of the committee.

The CHAIRMAN. Good morning.

Governor RENDELL. Let me begin by speaking to some of the points that Senator Hatch made. Senator, I respectfully disagree, and I think the American people disagree, that spending on infrastructure is not investment. They see it as investment. They see it as worthwhile. They see it as providing value to them. They see it as improving the quality of their life, their safety, and our Nation's economic competitiveness.

In the 2010 election, I think we would all warrant that that was the most conservative anti-spending election, certainly in my lifetime. Sixty-four percent of all transportation infrastructure referendums were approved, and each and every one of them called for either increased taxes, increased tolling, or increased borrowing. The American people approved them, even in the atmosphere that predominated in the 2010 election, because they knew the projects. They knew the projects were worthwhile and necessary, and they were willing to invest in things that had a benefit to them in the future.

I think the key for this committee, and the key for infrastructure advocates like Building America's Future, is to convince the American people that these projects are going to be worthwhile, they are going to change their lives, they are going to make us more economically competitive, they are going to make us safer, and they are going to give us back 10, 15 hours of our time that we spend in congestion. I think if we do that, spending, investment—however you want to call it—will be supported by the American people.

What is the Federal Government's role? I think the Federal Government should—as is done in every other developed nation in the world—have a significant role in infrastructure spending. I believe—and I will get off this because I know you guys have been wrestling this for 25 years—we should have a Federal capital budget. It is nuts.

There is no corporation in America that does not separate operating and capital costs, and there is no other political subdivision in America. Every city, every State, every county has a Federal capital budget. Infrastructure, building a bridge which has a 40- or 50-year lifespan, should not be paid for the same as buying paper clips, which have a 40- or 50-day lifespan. So, I think there are things that have to be done, and I think we should make a significant new investment in infrastructure.

Having said that, I am going to address what I think the Congress is more likely to do and how you should do it, and I do it with a heart that is somewhat heavy, because I think we are missing a great chance to revitalize the American economy.

Senator Baucus read a quote from Dwight David Eisenhower, a Republican who did more for the infrastructure of this country than any single person alive. He noted that it is the best job creator we have. Well-paying jobs that in fact will produce new Federal taxes which the CBO does not score when they talk about infrastructure spending, and they ought to score. You want to take

a look at, I think it is the 1974 Budget Act and the way you score around here.

But I think that, if we are not going to do that, first we have to uncap States' abilities to toll highways that were built with some Federal money. Right now, you have only given us a pilot project. Only three projects can be done with tolling on Federal highways, and two grants have been issued. They have not been built.

I wanted to toll Pennsylvania I–80. We got turned down by the Department of Transportation in our bid to toll I–80. But you have to do it. First of all, we need to maintain those highways. The only way we are going to keep up with rising maintenance costs, if you are not going to give us the money—and my guess is you are not—is to allow us to toll. There are no ifs, ands, or buts about it.

Congressman Oberstar, whom I admire greatly, used to say, well, we are not going to let you toll for maintenance because that would be having the people pay twice for it. Well, when you buy a car, you pay for it the first time, but you do not stop paying for its maintenance. When we were trying to toll I–80—I–80 goes through the northern tier of Pennsylvania. The weather is awful up there. The road gets the living daylights kicked out of it. We are spending right now $90 million a year on maintenance for I–80. It is a toll-free road. We wanted to toll it.

One of the things we would have done, we would have used some of the tolls for other roads in Pennsylvania, but we would have increased our maintenance on I–80 to $200 million a year. States simply do not have that capacity without you allowing us to toll. So job one is, lift the cap on tolling. It will be our decision. It will be Governors and legislatures who will decide whether to toll or not. But for Lord's sake, lift the cap.

Second, unleash the private sector. I believe Felix Rohatyn, who serves as an advisor to Building America's Future (BAF), has estimated there may be as much as $150 billion in foreign capital ready to invest in American infrastructure. I am sure Mr. Posner will tell you that there is a whole boatload of American dollars willing to invest in American infrastructure, because it is a stable investment with a fairly safe return. We can get, in my judgment, up to $20 billion a year invested from the private sector, helping us rebuild the American infrastructure.

Third, bonding. Again, I know the Congress let Build America Bonds lapse. Senator Wyden has the Transportation and Regional Infrasturcure Project (TRIP) proposal, and he says that it is in great part paid for by the $900 million a year in user fees. There has to be some form of bonding if you are not going to do a capital budget. My guess is you will not.

Build America Bonds were very successful. The State of Pennsylvania, in the teeth of the recession in early 2010, we did a $100-million construction bond, and we received an interest rate of 3.1 percent; 58 percent of it was backed by BABs. It was the lowest interest rate in the history of the Commonwealth of Pennsylvania, and it was a significant savings to us and allowed us to do much more work with our own State dollars.

Next, expand the Transportation Infrastructure Finance and Innovation Act. TIFIA should not be scored as anything other than zero. It actually makes money for the Federal Government. You

loan money out, and the loans are repaid with interest. TIFIA is, I think, at about $200 million now. I think you should quintuple it, get TIFIA up to $1 billion. TIFIA is those last dollars in to make projects work, and you actually make a slight profit on TIFIA.

Private Activity Bonds are capped at $15 billion. If we are really serious about getting the private sector involved, either lift the cap or raise the cap on Private Activity Bonds. The Infrastructure Bank is a good idea for leveraging private dollars and getting them through the process and giving the public some confidence that projects of national and regional significance are going to be selected based on merit, based on cost/benefit analysis. We cannot do multi-state projects. We cannot do them.

The Transportation Investment Generating Economic Recovery (TIGER) program, under stimulus, was the first Federal program in a while that allowed us to do multi-State projects. Pennsylvania joined with five other States on the Crescent Corridor project with Norfolk Southern. One-third private funding, one-third Federal funding, one-third made up by all six States. Enormously successful freight rail project. We need the Infrastructure Bank for those type of projects.

Lastly, speed up the process. Lord knows, we do not need 2 years to do an environmental impact statement. We could do an environmental impact statement in 6 months. We do not need 2 years. That delay—the cash register, as Chairman Baucus said, keeps clicking and keeps running up each month we delay. There is no excuse. That work can be done in 6 months. There is no excuse for that at all.

I know the committee has questions about, will the rural areas be left out of the Infrastructure Bank, et cetera? The answer is no. Number one, as you know, in Senator Kerry's bill there is a rural set-aside. I think that is important. Number two, remember, we are just using the Infrastructure Bank to leverage new funding for national and regional projects. The basic formula funding that comes out of the Intermodal Surface Transportation Efficiency Act (ISTEA) or SAFETEA–LU, or whatever you call it, is going to continue. Then, three, take water projects. There may be a very important water project that will affect three or four rural States. There is no avenue to do it now. The Infrastructure Bank can be that avenue.

So, that is it.

The CHAIRMAN. Thank you. Very good. Thank you very much, Governor.

[The prepared statement of Governor Rendell appears in the appendix.]

The CHAIRMAN. Mr. Posner?

STATEMENT OF MATTHEW POSNER, DIRECTOR, MUNICIPAL MARKET ADVISORS, CHICAGO, IL

Mr. POSNER. Good morning, Chairman Baucus, Ranking Member Hatch, and members of this committee. I am Matt Posner, and I am a director at Municipal Market Advisors, MMA. We are the only independent research and data provider for the municipal securities industry. Our clients include investors, securities dealers, issuers, and regulators. Thank you for inviting me to testify before

you today and share my thoughts on infrastructure and the most important way in which it is financed in the United States: the municipal bond market, which has existed for over 100 years.

I have to say, it is a bit of a daunting task to speak after Governor Rendell, a seasoned public speaker, so I think I am going to stick to my written remarks here.

The market plays an integral role in the building and maintaining of our Nation's infrastructure. Last year, the municipal market helped finance roughly $300 billion in new projects, with $70 billion going directly towards transportation. Given the magnitude of these figures, it is no surprise that this committee is eager to understand the drivers that have contributed to the dramatic reduction in municipal issuance this year.

It is also important to understand the implications of this decline, as well as possible remedies to getting infrastructure projects moving in a down economy. I want to emphasize that MMA believes it is critically important to provide issuers flexible access to a wide variety of lenders, thereby ensuring that officials in all of their own communities can build schools, hospitals, and bridges at the lowest cost possible.

Regardless of the innovative financing means that may be considered by Congress—taxable loans with subsidies, an Infrastructure Bank, or tax credit securities—there is a demand base made up of individuals and institutions that facilitate a low cost of capital for the current tax-exempt structure.

During the first 4 months of this year, the municipal market has registered half the amount of issuance, roughly $62 billion through April, compared to the $131 billion during the same time last year. This decline has not only occurred because of reduced investor demand, but also because States must balance their budgets and are doing so by prioritizing their expenditures, including capital costs that are associated with servicing debt that finances them. We believe that this decline has facilitated projects being postponed.

In a healthy environment, the municipal market allows communities to build what they need, when they need it. Perhaps, in the current setting, this has never been more important as the Federal Government's expenditures to stabilize the United States' economy and ensure our country's freedoms and safety militarily have reduced the ability of States and localities to finance new projects, as well as the large amount of maintenance of older infrastructure that will be needed, especially in the next 5 years.

How can lawmakers ensure that capital markets work and important infrastructure projects are completed? MMA believes Congress should be proactive; however, do not harm the current tax-exempt structure. As I said earlier, the tax-exempt market helps States and local governments finance trillions of dollars of infrastructure projects.

These governments bear the responsibility of financing a significant portion of the country's roads, schools, airports, and sewers, among countless other projects that create jobs and improve the quality of life of the citizens living in those communities. Without the tax-exempt market, we believe some issuers may be priced out of whatever alternative market is created, and the country's already broken infrastructure will continue to deteriorate.

As policymakers think about infrastructure, there are a few steps that could be taken to improve, or at least maintain, the municipal market. Direct subsidy bonds at a revenue-neutral rate and tax credit bonds are two ideas that should be enacted. Giving issuers more financing options, Congress can open them to a broader investor base and lower the cost of building to both State and local governments, as well as to the Federal Government.

Our recommendations also offer taxable options that will work better for larger-scale projects, while maintaining the smaller projects that are facilitated through the tax-exempt market. Smaller communities such as those in Montana or Utah definitely take advantage of these tax-exempt options.

A national infrastructure authority to encourage private investment is an excellent idea. This, along with improving the disclosure methodology of the current market, should occur. These five recommendations are fleshed out in greater detail in my written testimony.

Finally, I implore you to think broadly and forwardly when defining infrastructure. The U.S. and global economies have changed dramatically in the past 20 years. Our Nation's competitiveness, relevance, and leadership are dependent not only on simply the restoration of the infrastructure of the 19th and 20th centuries' economies, but perhaps more importantly on the infrastructure needs of a global information economy defined by the speed of gigabytes and the capacity of clouds.

Thank you again for inviting me here today. I look forward to answering any of your questions.

The CHAIRMAN. Thank you, Mr. Posner.

[The prepared statement of Mr. Posner appears in the appendix.]

The CHAIRMAN. Mr. Roth, you are batting clean-up here.

STATEMENT OF GABRIEL ROTH, CIVIL ENGINEER AND TRANSPORT ECONOMIST, CHEVY CHASE, MD

Mr. ROTH. Mr. Chairman, I would like to start by thanking you and Senator Hatch for inviting me to speak before this important committee. I would also like to thank the other testifiers for their informative and helpful testimony.

However, I could hear nothing in what was said to justify Federal expenditures on road or rail infrastructure other than expenditures from the Federal Highway Trust Fund. As you, Mr. Chairman, mentioned, President Eisenhower, in setting up that fund—I would like to point out that the fund was set up in such a way that monies could only be spent from funds accumulated in it. It was set up to protect taxpayers from spending on highways.

The taxes had to be paid first—probably the fuel taxes. They went into the Highway Trust Fund, set up by Congress in the early 1950s, and legislated in 1956. Monies had to come from that fund. There was no obligation from general taxpayers to finance infrastructure. What a contrast this is to the current proposals to finance high-speed rail infrastructure, for which there is no apparent source. I just cannot help wondering whether, because China is always mentioned in connection with that, we are all going to be invited to use chopsticks with Federal subsidies.

Why is Federal financing undesirable? Really, two reasons. First is that good government does not finance services that can be provided and sustained commercially. The U.S. has a strong user-pays tradition for transportation. The travelers pay for what they get and get what they are prepared to pay for. Payment for rail services and similar services are made out of fare boxes, and payments for roads out of tolls, out of dedicated trust funds, and for local roads out of property taxes. Having users pay the full cost of services protects taxpayers from capricious investments made more for political correctness than for customer satisfaction.

The second basic reason is the accepted principle of subsidiarity. Matters ought to be handled by the smallest, lowest, or least-centralized competent authority. The application of that principle to U.S. transportation infrastructure indicates that the Federal Government should not involve itself in matters such as local transit. That is the responsibility of States and local authorities.

In addition to these two basic reasons, I mention in my testimony five reasons why Federal financing is damaging to highway financing. First, it encourages States to choose low priority projects.

Second, it forces road users to pay for non-road facilities, and much more than 14 percent of payments by road users are spent on non-road facilities. Twenty percent goes to transit.

Third, it increases highway costs by high specifications, also by regulations, such as Davis-Bacon labor project agreements, that increase road costs enormously when they are federally funded.

Fourth, the system favors some States at the expense of others.

Fifth, it enables the Federal Government to impose conditions on States, for example, 55 mile-an-hour speed limits, which the Federal Government may not even have the constitutional power to impose. Governor Rendell gave a good example of this, how Federal regulations stopped the State of Pennsylvania tolling a road that the people there thought should be tolled. It seems to me that should not be the job of the Federal Government. There are many, many regulations that discourage the efficient production of transport facilities, and these regulations need to be looked at and abolished.

Governor Rendell spoke eloquently on the need for an infrastructure bank. What he said made a lot of sense, but such a bank cannot be financed by governments. There are solid commercial banks in Pennsylvania capable of raising $10 billion for an infrastructure bank. Governor Rendell himself sounds like the ideal person to lead such as bank. [Laughter.]

This committee has enormously important responsibilities. I am sure that all of us testifying today wish its members all success in steering this country to a financially sustainable future. Thank you.

The CHAIRMAN. Thank you, Mr. Roth, very much.

[The prepared statement of Mr. Roth appears in the appendix.]

The CHAIRMAN. I think we all agree that our country is in dire straits. We must address the infrastructure gap, such as it is. We have all mentioned the reasons why. The next question, really, is how do we do it, and at what speed and to what degree? I am going to let you, Governor, follow up on the challenge that Mr. Roth gave

to you: why do we need Federal Government help here? You mentioned in your testimony, open up the gates, let the private sector, foreign and domestic, invest in U.S. infrastructure. Why can that not be addressed commercially alone? Why do we need the Federal Government?

Governor RENDELL. Sure. I mean, there is an easy answer to that. The private sector is only going to invest when they can make a return on their investment. Basic American capitalism—we understand that. There are just so many parts of our infrastructure that can in fact be tolled to give that return on the investment.

Pennsylvania, for example, has 5,500 structurally deficient bridges. Only 2 or 3 of them could be tolled to produce the type of revenue needed to make the repairs on those bridges, so that leaves 547 bridges that we cannot toll and the private sector would have no interst in doing. No one is going to invest in something that would lose money, clearly, so that has to be done governmentally. That is the basic answer.

Most of our infrastructure—some of the large projects, yes, we can toll. We can get a return on investment, and we should. But most of what we do in Oklahoma, in Florida, in Pennsylvania, in Montana and Utah, those things are not susceptible to any sort of structure that would give a return on the investment. So our government has to be involved.

The CHAIRMAN. I think that is a good point. There are a lot of donee States under the Highway Trust Fund, too. I take my State of Montana. If there were not a Highway Trust Fund, interstate highways would stop at the border.

Governor RENDELL. Absolutely.

The CHAIRMAN. We have a very high gasoline tax. Very high State gasoline tax. But frankly, we cannot afford to build these interstate highways. The truck traffic that goes across the country would not be able to go through States like Montana.

Governor RENDELL. And it would be very, very hard. The specific question on the Infrastructure Bank is, the Infrastructure Bank, as opposed to PNC or any bank that I might start—thank you, Mr. Roth; I have never aspired to be a banker, but maybe—the difference is, the Infrastructure Bank—and we have seen it work in California and in South Carolina, and now Virginia where Governor McDonnell has gone down that road—infrastructure banks do require a return on their investment.

If we loan money to a project, the Infrastructure Bank, we want to get some money back. We want to make a return. But our rates are significantly lower, and that allows projects to go forward because the rates are lower than you could get in the private market. Infrastructure banks anywhere in the world do not finance the entire project, but they are often that key last money in that makes a difference.

The CHAIRMAN. Right. So what is the percent? What percent is financed by Uncle Sam or by the public?

Governor RENDELL. The European Investment Bank, what is the rate of return? I think they charge—we would suggest, Building America's Future—an interest rate at about a third of what the private sector interest rate is. By the way, the Infrastructure Bank,

a Federal Infrastructure Bank, can encourage State and local investment.

For example, I think everybody knows about what Los Angeles County voters did in approving the 30-year project for all sorts of transportation. They agreed to lift their sales tax by half a cent. But that money comes in over 30 years. The Infrastructure Bank could make a loan to allow some of that work to begin right now and get a rate of return on their investment.

The CHAIRMAN. Right. I do not have a lot of time here, but you suggested—and it is very appealing—just try to find ways to bolster the Highway Trust Fund; in addition, create some kind of Infrastructure Bank, look at the new debt financing and the bonding ideas that have been talked about, add more to TIFIA, and so forth.

A couple of questions come to my mind. There is not time to go through all of them right now. But one of the benefits I think of the Highway Trust Fund is it is an American program. It is for America. People drive across the country, and they pay the gasoline taxes or diesel fuel. We are together as a country with the interstate highway system and the Federal roads that we have here.

I am a little concerned—at least it is a question in my mind—how much of that—if that is important, and I think that it is—would be lost if we also grafted on top of it all these different proposals where we start to lose the sense of one country driving together, if you will, on the Highway Trust Fund?

Governor RENDELL. I have never been asked that question. It has a very empathetic ring to it. But I think it ignores reality. When I was trying to privatize the Pennsylvania Turnpike, which would have gotten us $13 billion from private investors, the legislature turned it down. Boy, would they like to have that deal back right now!

But one of the knocks on it was that the investor was a Spanish company, and we did not want to turn our turnpike over to foreign intervention. Well, I said to the public, so no one can fly in to Disney World because that same Spanish company, Abertis, runs the Orlando Airport? We are a new world. We are one world. People want to invest. I am told by Felix Rohatyn that there is money in China that wants to invest in the American infrastructure. Would it not be great to get the Chinese investing in something American?

So I think we have to take a more global view. It is not what it was back in 1956. But we still control it. I was going to lease the Pennsylvania Turnpike, not sell it. The State of Pennsylvania would control the conditions. I think we could do the same with private investment all across our infrastructure.

The CHAIRMAN. Thank you very much.

Senator Hatch?

Senator HATCH. Thank you. Thank you, Mr. Chairman. I have enjoyed this today. This is a very interesting set of discussions. Let me just ask you this, Mr. Roth. I certainly enjoyed, Governor Rendell, your remarks. I have enjoyed all your remarks. Sorry. I just wanted to mention that.

Mr. Roth, the administration has proposed the creation of a national Infrastructure Bank, and legislation has been filed by some of our members that would create an Infrastructure Bank. What

impact do you think the creation of a national Infrastructure Bank would have on infrastructure spending? Would the Infrastructure Bank lead to efficient allocations of public and private capital?

Mr. ROTH. I would be concerned that, if there was an Infrastructure Bank, and if it lent on favorable terms, it might even reduce the amount of private sector involvement. States would be queuing up to get money from the Infrastructure Bank, and this would cause delays.

Also, the bank would be run by politicians and would probably have to be careful not only to lend to good projects, but also to be fair, which means that, if it lends for projects in the South, it would have to lend to projects in the North. Already in what we have heard, it has allocated a certain amount to be lent to rural projects. I am just wondering how much litigation that would lead to as to what is rural and what is not rural.

I would be concerned about lending being controlled by politicians rather than by people who see profitability as their principal criterion for investment.

Senator HATCH. All right. The discussions of highway funding today frequently revolve around getting more money to feed into the Highway Trust Fund and how to separate hardworking Americans from more of their money. It is a constant battle back here in Washington.

Now, I am a believer that this country does not have a tax problem, but really has a spending problem. I think that is true with regards to Federal funding of highways as well. With all of the other pressure my fellow Utahans and other Americans are facing right now, including high gas prices, the last thing they need is for us in Washington to pile on further by raising gas prices even more. Now, this clearly is not a popular topic of conversation. I think we need to look at ways to extract greater value from the money that we are spending right now.

Now, would you elaborate—you made the point in the section of your written testimony where you discuss how factors such as the Davis-Bacon laws and Federal construction specifications increase the cost of highway construction. I agree with Governor Rendell, the environmental delays are crippling and very, very expensive, not just in highway construction, but in almost everything else where we try to utilize our lands better.

Assuming a Federal role in highways financing was maintained, what could we do to use existing dollars more efficiently, and how would eliminating the Federal role in the funding of highways lead to more efficiency in highway spending? Of course, anybody else can answer that, too. Go ahead.

Mr. ROTH. Well, it would improve the efficiency because the States who are closer to the projects have a better idea of what they want and of what they are prepared to pay for. Of course, they are encouraged to choose expensive projects, because under the present system they only have to pay a small proportion of the costs, so we get very wasteful projects that would never be financed if they had to be financed by the States alone.

Now, I do not know how important transit is in Utah.

Senator HATCH. It is important.

Mr. ROTH. But would it take up 20 percent of the money that local people would pay into a Utah Highway Trust Fund? I do not even know if there is a dedicated Highway Trust Fund in Utah, but certainly one could be established, and there would be no Davis-Bacon laws that need apply there. There would be no double administration from Washington and from the State. I suspect that the cost of providing highways could probably drop by anything on the order of 20, 30 percent. So I think there would be considerable economies from that side.

Senator HATCH. Thank you.

My time is up, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Burr, you are next. Welcome to the committee. I have just learned that Senator Nathaniel Macon, as a Crawford Republican from North Carolina, when he first ran for the Georgia House of Representatives, was a member of the Democratic Republican Party. So you, Senator, are potentially in a very good position to break down this partisanship that exists here by being the leader of the Democratic Republican Party and getting us to work together here.

Thank you very much for joining this committee and choosing this committee. We are honored to have you here.

Senator BURR. I thank the chair for his gracious acceptance of me to the committee and to Senator Hatch. I appreciate the history as it relates to North Carolina because the take-away from this hearing is, not only do we get gypped on the Highway Trust Fund, we have been gypped on representation from this committee for years from North Carolina.

The CHAIRMAN. But you are making it up, Senator. We are glad to have you.

Senator BURR. Mr. Chairman, I am reluctant to even ask the question at the first hearing, but as I understand the challenge before us, it is really a 2-fold problem. First, how should we fund projects in the future? And something that I think has gone unnoticed: how do we reduce the cost of the projects that are currently in the system?

Let me ask, Governor Rendell, do you support the State Flexibility Act, which is legislation that is floating around right now?

Governor RENDELL. Well, I have not seen it, Senator. I do generally support the concept of giving States more control and more flexibility, but I would never believe that flexibility is a goal worth obtaining at the cost of significantly reduced spending.

When I hear flexibility here in Washington, it generally tends to be a little bit of a synonym for reduced spending. If we got the same amount of money and more flexibility, we could put it to better use and stretch it. Yes, I think there is no question about that.

But as I said—and I know the situation in Georgia is very much the same—who is going to fix our bridges? I was probably as dedicated to spending money on infrastructure—I call it investing, Senator Hatch—as any Governor in the country.

By the way, as a result Pennsylvania, from March to March, this year to last, was the third-highest State in job creation behind only California and Texas, and I think a lot of it was due to the fact that we did invest in our infrastructure significantly. But who is

going to take care of those 5,500 bridges? It cannot just come from giving us flexibility. The Amish build bridges in Pennsylvania. One county came in to me and said, Governor, we need more money for our covered bridge repair. I said, what do you need? They said, $75,000. I said, how many bridges do you have? They said 31. I said, how do you do 31 bridges on $75,000? They said, well, we let the Amish do it. So I immediately contacted my PennDOT secretary and said, are there enough Amish to take over the State highway program? [Laughter.]

Unfortunately, there are not.

Senator BURR. Well, I tend to believe that people lead with what they believe is the strongest statement that they are going to make, and you led with flexibility. You said when you were Governor there were things you could have done, and the Federal Government stood in the way of that. A lot of it dealt with tolling of I–80.

Governor RENDELL. Oh, sure.

Senator BURR. But I think it all wraps into the same thing: how much are we willing to let States play the role of decision making? More importantly, how much are we willing to empower them to make decisions as they relate to tolling? If so, then the question is, should the design of what we look at for the future not more resemble the flexibility that we are going to administer at the State level?

Governor RENDELL. Sure. I think there is no question about it. But remember, infrastructure rarely stops at State lines. That freight project I talked about, there were six States.

Senator BURR. True.

Governor RENDELL. Georgia was part of it, the Crescent Corridor. We need something to do regional and national projects, projects of national and regional significance. Our airport system. It cannot be broken down State by State. Our ports. What happens in the Port of Philadelphia often affects seven or eight other States that feed in——

Senator BURR. Well, again, let me remind you, I have not talked about reduced funding. All I have addressed is the flexibility——

Governor RENDELL. I am all for more flexibility.

Senator BURR. The Heritage Foundation reported that the Davis-Bacon Act increases the cost of federally funded construction projects by 9.9 percent. Repealing Davis-Bacon restrictions would allow the government to build more infrastructure, create 100,000 more constructed-related jobs at the same cost to taxpayers, or save the Federal Government $9 billion in annual construction costs.

Would you be in favor of——

Governor RENDELL. Repealing Davis-Bacon?

Senator BURR. Yes.

Governor RENDELL. No. But I will tell you why. One of the things that the Heritage Foundation study does not look at is the quality of the work, because I could reduce—when I was Mayor or Governor, I could reduce the cost of construction of anything—buildings, et cetera—by going strictly to a low bid and taking off any regulation or oversight. You need to do quality work, because you do not want to pay for it two, three, or four——

Senator BURR. Davis-Bacon is only a mandate on what wage level you have to reimburse. It does not get into preference of who you award a contract to.

Governor RENDELL. Wage-level reimbursement often is keyed into the training that individuals who build stuff have. We find, when we do not use Davis-Bacon, it is amazing how many illegals find their way into doing that construction work.

Senator BURR. Mr. Roth, let me just ask you. My time has expired. Do you see any down side to placing the management planning and funding responsibilities with the States in the United States?

Mr. ROTH. No. Obviously, some States are better than others, but looking back at history I noticed that, in the 19th century, Pennsylvania led the United States in the provision of roads, all of them privately financed, under incredibly difficult conditions, and they did better in the 19th century in terms of percentage of GDP than in the 20th century. So I think the proposition that roads cannot be privately provided just has no legs to stand on.

The CHAIRMAN. Senator Cardin?

Mr. ROTH. Incidentally, these were people who provided these roads either for profit or because they wanted roads in their areas. So people from Pennsylvania would finance those roads, and they were prepared to accept low returns for them. But I do not understand why Governor Rendell is prepared to accept no returns for his national infrastructure. Thank you.

The CHAIRMAN. Senator Cardin?

Senator CARDIN. Mr. Chairman, this is a very interesting discussion. A week ago I was out in Cumberland, MD celebrating the anniversary of the national highway, the first highway, which predates the automobile. It proved to be an economic engine for America. By the way, I understand it was an earmark that started the national highway system. [Laughter.]

So I would just point out the fact that transportation projects have been critically important to the economic growth of America.

Senator Burr, I welcome you to the committee. I have somebody I can look directly across to sitting on this side, so we might have a lot in common.

Chairman Baucus, I just want to agree with your initial observations. That is, we are going to have to find creative ways to help finance our national infrastructure. This is critically important to our economy. This is about jobs. If we are going to be able to grow our economy, we have to figure out how we can finance the infrastructure growth of our transportation system.

So traditionally, this has always been a bipartisan product. Democrats and Republicans have agreed that infrastructure development—roads, bridges, transit, ports—is critically important to America's growth. So I look forward to working with all the members of this committee as to how we can have a robust infrastructure commitment to our Nation.

Senator Hatch, I do not want to make this an ongoing issue, because I think at the last hearing I also took exception to one of your comments, because, as you know, I consider you to be one of the great members of the Senate and a very creative thinker as to how we can move together, Democrats and Republicans.

But I must tell you, multimodal transportation is critically important to this country. Transit saves us money, saves us highway money on road construction and repair. It provides a more sensible way for having the type of roads that we need but not building roads that we do not need because we have adequate public transit for the people of this Nation.

Senator HATCH. I do not disagree with you, Senator.

Senator CARDIN. Good.

Senator HATCH. I think it is something—and I appreciate the comments, too. Very nice. Usually they are the other way around.

Senator CARDIN. Never! Never with you, Senator Hatch. But I guess my point here is that, obviously I live in the State of Maryland and represent this great State, and I look at the congestion in the Washington area and know how it is critically important that we give the State of Maryland, the State of Virginia, and the District the flexibility to move forward with public transit. I will continue to fight for the flexibility that Senator Burr is talking about for our local governments to be able to develop the transit projects and transportation projects that they need for their economic growth.

The last observation I would make is on the Federal role. I started with the national road that was built and how important that was to the economic growth of America when we were a very young country. The national highway system is very, very important; not just the interstates, because economic growth does not stop at a State border, but also the policies that we have been able to implement.

I think about highway safety, the role that the Federal Government has played in highway safety. I doubt if that could have been done at the State level without the direction of a national uniform policy that we were able to implement through our transportation program issues.

So, to Governor Rendell, let me just come back to you, if I might. I respect so much what you have done in Pennsylvania in developing the infrastructure issues. Where do you see the future as far as the Federal/State partnership? If we are going to be able to do as President Obama has pointed out, and that is to out-educate, out-innovate, and out-build our competitors, what type of partnership—how do you see federalism evolving as far as our transportation financing is concerned?

Governor RENDELL. Well, Senator, let me go back. I certainly agree with what you said and what Senator Burr said about giving States flexibility. But as you said, we cannot build a transportation system one State at a time. That road you talked about, the first national highway, as I recall, it went from Maryland into Pennsylvania.

Senator CARDIN. It did, yes.

Governor RENDELL. It did. Everything we build, or almost everything we build, goes from one place to another. You do not build a road up to the Pennsylvania State line and then say, all right, Pennsylvania, you build the next leg of that road. Good Lord, that would be mass chaos! There has to be a close working relationship.

However we slice it—however we slice it—we are going to have to invest more money in our infrastructure, or else those bridge col-

lapses, those levees breaking, the pipelines blowing up in California, we are going to see more and more of that. We are going to fall further behind economically. Metallurgical coal is mined in Australia and the U.S. Because Australia is a high labor cost country, it is the same cost to mine it but it costs us 8 times more money to get it from where we mine it in America to our port cities than it does in Australia because of our logistics breakdown.

We have to find a way to invest. I know the problem confronting all of you, and we confronted it on a State level. I would suggest that we do need to find more money to invest. The United States—and I think you probably deserve some credit for this—has invested heavily in the Iraqi infrastructure and the Afghani infrastructure. We have invested heavily.

As our troops are coming home, let us take that money, put it in an infrastructure fund, and then let us create a second GI bill. Because, when those troops come home, they are going to have trouble finding jobs. Let us train them and put them to work building back the American transportation system and—I would not stop there—the American infrastructure system as well.

Let us say, what are we spending in Afghanistan? I think on your books, on the CBO's books, we are spending $104 billion a year. My guess is, that is just a part of it. Let us take some of that money. It is all right to rebuild the Afghani and Iraqi infrastructure, but let us rebuild ours. Let us rebuild ours. Let us give those soldiers, sailors, and Marines a chance to have good, well-paying jobs, American jobs that cannot be outsourced.

The CHAIRMAN. Thank you.

Senator Coburn?

Senator COBURN. Thank you, Mr. Chairman, and thank our witnesses for being here.

The CBO testimony that we have shows an annual deficit of $13 to $14 billion per year. Do you think it is reasonable for the States and Congress to assume a significant decrease in Federal transportation funding in the immediate future, given the rest of our problems? Just a yes or no, if you would, please.

Dr. KILE. I am not sure I have a yes or no answer to that question. I am not trying to be evasive, but it is ultimately a judgment that the Congress would have to make on its own as to what is the right level of funding by the Federal Government.

Senator COBURN. All right.

Governor Rendell?

Governor RENDELL. No, because I think, respectfully, the Federal Government has to find new sources of revenue, one of which is uncapping tolling that lets the States have the power to find some of those new sources of revenue. But I think you should look at it as well. Again, I do not know how, and I know the work you are doing trying to put together a realistic proposal to the deficit challenge, Senator, and I think all Americans applaud you. I do not know how the scale-down in Iraq and Afghanistan, how those dollars are figured in the plan. But I would submit that it would be a terrific idea to use some of those dollars to repair our infrastructure and put our people to work.

Senator COBURN. Mr. Posner?

Mr. POSNER. I have to say I really do not have the figures in front of me.

Senator COBURN. All right.

Mr. Roth?

Mr. ROTH. I do not understand the question.

Senator COBURN. First of all, in the last 3 years we have borrowed $39 billion from the general fund to fund the Transportation Trust Fund. We have just transferred it. In other words, we have been subsidizing the trust fund because we have actually authorized more spending than what we have had money to do.

Do you think it is realistic for us to expect to continue to do that?

Mr. ROTH. I do not know whether it is realistic to expect that, but it sounds to me a very bad idea. If more money is needed in the trust fund, the proper thing to do would be to raise the fuel taxes that fund the trust fund and get the money from that source. The fact that the administration is not prepared to do that, to me, illustrates why this is not a job for the Federal Government. It should be left to the States who have a closer view of what is happening. Let them raise the charges. Let them impose tolls rather than the Federal Government.

Senator COBURN. Governor Rendell, in your opening statement you have talked about the 64 percent of local bond issues and taxes. My evaluation of that is, the reason those passed is they were under the control of the people in the State or in the communities. They trust themselves. They do not trust us.

When you look at the last significant funding bill for the Highway Trust Fund, almost a third of that did not go to build highways, bridges, or mass transit. So I think what you said is true. I think the American people are willing to invest in infrastructure, but they want to control it. They do not trust us to control it because of all the shenanigans that go on with the Highway Trust Fund.

Governor RENDELL. Well, I agree with that. However, understand, most of the Federal money that goes into transportation infrastructure is dispensed by the States.

Senator COBURN. Yes, it is.

Governor RENDELL. You give us a block grant, we dispense it. The reason we know it goes to our rural parts of Pennsylvania, Senator Baucus, is because we have metropolitan planning organizations and rural development organizations that allocate the money in their district.

Senator COBURN. But fully a fourth, close to a third, did not help you on any of those programs.

Governor RENDELL. We should remedy that.

Senator COBURN. That is right.

Governor RENDELL. Right.

Senator COBURN. We should remedy that.

And the remedy for that is the State Flexibility Act, which allows you to have the flexibility for your priorities rather than a politician's priorities.

Governor RENDELL. Well, I am with Senator Burr. As long as it does not mean a reduction in the Federal commitment in terms of dollars, I am for flexibility.

Senator COBURN. The point being, the people of our States will do what is in their own best economic interest. That is why they voted for 64 percent of local bond issues.

The other thing that I see as I look at transportation now, with about 13 years in Congress, is we do not really look at cost/benefit analysis.

Governor RENDELL. Right.

Senator COBURN. That is what we have to do.

Governor RENDELL. No question.

Senator COBURN. And the reason we do not is because we have other matrons we are waiting on. So the whole idea would be, with the State Highway Flexibility Act, to bring it back to a position where cost/benefit analysis can be done. In regard to the statement that Senator Burr made about Davis-Bacon, there is nothing that prohibits Davis-Bacon in the State Flexibility Act. You can still use Davis-Bacon.

Governor RENDELL. Sure. On a State-by-State basis.

Senator COBURN. And there is also a limitation of 2 years on an environmental impact study, which we have all the records on to show we are wasting money, wasting time, and have lost opportunities. The costs of the projects are going up as we dilly-dally with Federal Government rules that are not in the best interests of the citizens of your State or mine.

The other point I would make is, Oklahoma beat you on deficient bridges. Our State highway director has told us, if we had the State Flexibility Act, we would be very low on that because our capability to spend these dollars would be much better.

I have one other question for each of you. Do you think it is wise that we take and wall off 10 percent of all the highway trust fund money that has to be spent on enhancements when you have 5,700 bridges that are in disrepair——

Governor RENDELL. It is 5,500.

Senator COBURN [continuing]. And Oklahoma has close to 8,000? Do you think it is wise that we make things beautiful or we make things safe?

Governor RENDELL. That is an area where I would leave it to the States to decide. Absolutely leave it to the States.

Senator COBURN. So you would agree that we should rescind this mandate——

Governor RENDELL. The mandate on that, yes.

Senator COBURN [continuing]. To let the States decide. If they want to spend it on beautification and enhancement, they can.

Governor RENDELL. And in certain parts of Pennsylvania, the answer is, the public would.

Senator COBURN. Yes. But let them decide.

Governor RENDELL. Can I just say one quick other thing? Your arguments are a perfect argument for why we need an Infrastructure Bank: cost/benefit analysis, the ability to do these projects based on merit. It is why, gentlemen and ladies, this is an idea whose time has come.

Senator COBURN. Thank you, Mr. Chairman. You were very gracious with the time.

The CHAIRMAN. Senator Grassley?

OPENING STATEMENT OF HON. CHUCK GRASSLEY, A U.S. SENATOR FROM IOWA

Senator GRASSLEY. Yes. One of the main points regarding reauthorization of our surface transportation laws has been made clear by witnesses before this committee, both today and in previous hearings. It is that Congress should not focus only on how to pay the bill, but should make major reforms to transportation policy. Also in today's hearing, and in previous hearings, we have heard that it is vital that Congress more clearly define the Federal role, the State role, and the local role in regard to policy.

You have heard this morning from Dr. Kile, saying this: "Economic efficiency could be improved if the Federal Government limited its support to projects such as the interstate highways that offer significant multi-State benefits, leaving State and local governments to fund projects with more localized benefit. If the people who benefit from the project bear its cost, the likelihood is diminished that too large a project or too many projects will be undertaken or that too many infrastructure services will be consumed relative to resources needed to provide them."

Dr. Kile's comments also bring up another important point that this committee has heard before. It is crucial that we more rigorously evaluate, analyze, and assess projects. When someone else is paying the bill, priorities get skewed.

Should the need for a project or the availability of Federal funds drive our Nation's transportation decisions, is the basic question. Much of the revenue collected from the gas tax, which is meant to be a user fee to pay for our Nation's roads and bridges, is diverted to other projects or modes. While these projects or modes may have merit, should they be funded by the gas tax, which is paid for by the users of roads and bridges for their upkeep, safety, or improvement?

As Mr. Roth pointed out, is it right that the driving public only receives 62 percent of what they pay into Federal Highway Trust Fund for general purpose road safety programs? Furthermore, I am concerned with recent talk of proposals from the administration and others that would tax drivers by mileage in addition to the current fuel tax. At a time of record gas prices and a recovering economy, the middle class cannot afford this proposal.

It also disproportionately hurts rural and suburban Americans. This is another example of the administration trying to dictate where and how people live. Should that not be an individual decision and not directed by the Federal Government?

So I look forward to the debate, Mr. Chairman, that we are going to have over the next several months on these crucial questions, as Congress continues to wrestle with the future of surface transportation in America and how we fund our roads, bridges, and transportation programs. It is my hope that Congress will act in a prompt and prudent manner to reauthorize the highway bill.

I yield back the balance of my time.

The CHAIRMAN. Thank you, Senator, very much.

Senator Kerry?

Senator KERRY. Maybe I can claim a moment of the balance of his time, Mr. Chairman. But thank you very much, and thanks for having this hearing.

Folks, Senator Grassley, we are not going to build anything in America right now. We are not building. We are falling behind almost every other country in the world. You fly to any airport almost outside of America, and they have better airports nowadays. They have better transit systems that get people from an airport to downtown. Go to Shanghai. Twelve minutes, 300 miles an hour from the airport to downtown. They are building 55,000 miles of that because they are putting 9 percent of their GDP into infrastructure. Europe puts 5 percent of its GDP into infrastructure. We are putting 2 percent or less. Two percent or less.

I drove across the country a few years ago, and I was stunned by the state of our roads in so many States. Now, I have to tell you something: the Highway Trust Fund is not going to do it. It is not going to build high-speed rail, low-speed rail, light rail that we need in cities.

With the cost of energy going up, you are already seeing more Americans starting to say, I have to find mass transit. We do not build it. There are not great building projects in America, many of them, right now. We have this effort to build out to Dulles Airport, but we are not going to appropriate it.

Let us not kid ourselves. Nobody on that side of the aisle will vote for any increased revenue no matter where it might come from, apparently, so what are we going to build? Are we going to keep cutting everything? Then Americans are going to turn around and say, well, why does this not work? Why does my school not work? Why can't we fill the potholes? It is just crazy, honestly. It really is crazy. We are in a crazy place right now.

Now, here we have this Infrastructure Bank, which is completely independent from government, privately run by bankers. All we do is charter it. It will not even issue stock. It is not for profit, unlike Fannie Mae, Freddie Mac. It is completely different. Ten billion dollars can leverage maybe $650 billion of private sector investment that comes in to help build America. The Chinese right now would love to invest in building projects in America. There are other sovereign funds in various parts of the world that would invest if they were attracted into a deal where there was a revenue stream and the deal was attractive.

So I just heard Governor Rendell, who is a champion of this, say it is an idea whose time has come. I think people who sit on the other side of the aisle and say, oh, no, we cannot do this, it is a Federal thing, or this or that, and Mr. Roth, this is not a Federal Government thing. But Eisenhower built the interstate highway system of our country—a Republican President. Nixon, Ford, Reagan, they were all committed to these kinds of things. America got strong because we did that.

We have a second-rate air traffic system in America today because we are not managing our aircraft as effectively as we could with GPS and various alternatives. We could save flight fuel, save time, productivity, be more competitive. We do not do it because we are living by simplistic, silly little 6-word-slogan politics. Well, this is a different idea.

Governor, I want to ask a question about this. I want you to talk to me, if you will, and to others listening about, one, here you have Governor Schwarzenneger of California, a Republican, you have

Mayor Bloomberg, an Independent, very successful business person. He has been a very successful mayor, running one of the biggest, most complex cities in the world. He is for it. Share with us, what is the vision here? How do we get un-stuck? Why is it so important that this be independent the way it is? What are the virtues of that?

Governor RENDELL. Well, first of all, Senator, I agree with your statement. I think if we do not build our infrastructure we are headed towards becoming a second-rate economic power, no ifs, ands, or buts about it. If we were a corporation, there is no way we would not invest in our own growth. No corporate board, no corporate CEO would look at this situation and say we cannot invest. We have to find a way to invest.

Before you got here, I suggested taking the money we are spending in Afghanistan, $104 billion a year, as we phase out, take some of the Iraq money as we phase out, put it in a program of investment in our infrastructure, and let us hire those GIs and Marines coming home to help us to rebuild the American infrastructure. Let us do a new GI bill for doing it.

But the Infrastructure Bank should appeal to everybody. I think Senator Coburn was agreeing with us. Look, one thing the Republican Party says that they deserve credit for is, we want to get away from earmarks. Senator Cardin pointed out that not all earmarks are bad, and they are not. But the American people have lost confidence in our ability to do this right because they read about the earmarks that are wasteful. The Infrastructure Bank solves so many of those problems, number one.

Number two, it can, as Senator Kerry said, leverage all that money. Again, I wish that Felix Rohatyn——

Senator KERRY. Well, it all has to be paid back, right?

Governor RENDELL. Right. It all has to be paid back.

Senator KERRY. It is a loan, not a grant.

Governor RENDELL. The European Infrastructure Bank makes money. It makes money. The California Infrastructure Bank makes money. It does not cost the Federal Government anything. And no offense to Dr. Kile, I have no idea how the CBO would score it, but it should be scored as a positive to the Federal budget, not a negative. It makes money, and we have to do it. Give the public confidence in it. It is not controlled—and I am a lifelong politician. I do not think politician is a dirty word. I think we have a lot of great politicians in this country. But it is controlled by people who are experts, who are bankers, who invest money, who are former DOT secretaries, retired DOT secretaries, people like that on the board. It could be an amazing thing.

And yes, throw in some elected officials. I would like to see Senator Voinovitch, for example, be the chair or co-chair of the Infrastructure Bank, were I President. But I would love to appoint someone like Senator Voinovitch to chair it because he was a true transportation advocate. So I think it clears up so many of our problems, and it is cost-effective.

I understand the problem you all are wrestling with. I would take that Afghanistan and Iraq money and stick it into rebuilding the American infrastructure. I would do the bond. Senator Wyden—before you got here—I think your bond proposal is an

excellent proposal. You pay for it. Those are the type of creative and innovative things that we desperately need, and I think we have to do them.

The CHAIRMAN. Thank you very much.

Senator Wyden?

Senator WYDEN. Thank you, Mr. Chairman. I want to thank all our witnesses.

Governor, it has been great to work with you on this. Here is a little bit of the history of these Build America Bonds. For years and years—I think Senator Hatch and I have talked about it—this has been a bipartisan effort. We had Jim Talent involved, Liddy Dole, Roger Wicker, John Thune—a big group of Democrats and Republicans. As Chairman Baucus knows, he and I talk about it often in the Recovery Act; we added discussion about what would happen if we test it. We would experiment with it.

I remember the day the chairman talked to me about it. I said, nobody has ever done this. Let us do a rough envelope kind of analysis. We talked about how it might do $6, $8, maybe even $10 billion worth of Build America Bonds. Well, at the end of the year, looking at infrastructure, it came in at $181 billion. That is, in effect, a very significant increase beyond anybody's dreams, certainly beyond mine.

The Treasury Department issued their final report on Build America Bonds yesterday, and they said that Build America Bonds issuers saved well over $20 billion in borrowing costs on a present-value basis as compared to tax-exempt bonds. So that alone is well beyond the cost of the program to the Federal Government.

So I have just a couple of questions. The first is for you, Mr. Posner, with respect to the municipal bond market. I mean, my sense is that the municipal bond market has taken a real hit since the expiration of Build America Bonds. What can you say about sort of the appetite in terms of the marketplace for a similar tool? As you know, we are working on trying to possibly rebrand them, call them TRIP bonds, Transportation Regional Infrastructure Program bonds. But what is your sense about the market's appetite for bringing a concept like this back?

Mr. POSNER. Yes. This year has seen a dramatic drop in issuance, so that means that issuers are not utilizing the market for a variety of reasons. I mean, a large part of it has to do with the expiration of the Build America Bonds program, as well as our investor base has shrunk for a variety of different reasons.

But I have seen a lot of different proposals regarding, sort of, tax credits. I have not seen any draft or anything, but from what I understand the idea is on a different scope than what we have seen in the past. I think that is a very good thing, because tax credit ideas in the past have not really been able to take hold because either they have been too small or they have not been made permanent. So this solution obviously, I think, accomplishes both of those.

So our proposal to really help the market right now—which is, I think, not in dire straits, but, if we continue along where we are, we are going to be finding ourselves in a difficult situation—is to continue the tax-exempt market, because it does provide a need for certain capabilities, but also let us look at these taxable options.

Let us look at these direct subsidies, let us look at these tax credits. Let us get them going, build the base of investors, and let us better understand how much the cost of these really is. The underlying assumptions for a lot of these are not really understood. So I guess that is a long answer, but, yes, Congress should move forward with this idea.

Senator WYDEN. Thank you.

A quick question for you, Dr. Kile. You cannot score any specific proposal when you do not have all the details in front of you, but is it not correct that CBO has said on a number of occasions that narrowly tailored tax credit bonds are a more efficient and better deal for the American taxpayer than tax-exempt bonds? This was something Senator Hatch and I had talked about over the last few months, because clearly we want to use scarce resources in the most effective kind of way. But I just want to be clear for the record about what CBO's position is.

Dr. KILE. In my statement today and on other occasions, CBO has noted that tax credit bonds tend to be a more efficient way of transferring subsidies from the Federal Government to State and local governments than tax-exempt bonds would be. That is a statement about the tax credit bonds in general; CBO has not evaluated the particular experience with Build America Bonds.

Senator WYDEN. Right. I understand.

Governor, let me ask you a question, because you were one of the first users of Build America Bonds. The Pennsylvania Turnpike was one of the projects. As you know, in my home State we did a very large issue for our State. If you go to the website of the Treasurer of the State of Oregon, he said he saved 10 percent just on the particular issue that I am talking about. What do you think the potential is for this kind of approach for States that are big, like Pennsylvania, and smaller States like Oregon? Because, as far as I can tell, this kind of approach works for both States.

Governor RENDELL. I agree. I think it absolutely works for both States. Before you joined us, in my testimony I talked about how, under Build America Bonds in the teeth of the recession, we have floated I think one of the largest municipal or State bond issues at a 3.1-percent interest rate, and 58 percent of that issue was backed by Build America Bonds. It was enormously successful. I think TRIPS is an improvement. I am speaking for myself, because BAF has not had a chance to totally analyze it, but I think TRIPS improves upon BABs, and I think we need it.

I mean, I think what we need to come to grips with as a Congress and as a country is that we have to do something. Doing nothing is not a real option, or the American infrastructure will literally continue to crumble.

Senator WYDEN. I know my time is up. Thank you, Mr. Chairman.

Mr. POSNER. Mr. Chairman, can I just, because this is a bond issue, make one quick comment?

The CHAIRMAN. Yes. Very briefly. Very briefly, please.

Mr. POSNER. The underlying assumptions for the cost of a tax exemption are very unclear. I think, if we are going to talk about efficiency of whatever bond program we are going to enact, we need to better understand what is in this black box that decides the cost

of every bond program. Is an investor that is not buying a tax-exempt bond buying a taxable bond? I think that is an important distinction to make and is outlined in my testimony as something I implore you guys to really start looking at and better understanding.

The CHAIRMAN. Thank you. That is a valuable point. Thank you. Senator Menendez?

Senator MENENDEZ. Thank you, Mr. Chairman. Number one, I want to thank you for holding what I think is an important hearing. I have seen the use of these bonds at work, and they make a real difference. I am thrilled to see Governor Rendell here, who is a big advocate of it.

Last week, Senator Crapo and I joined to offer legislation to exclude private activity bonds for water and waste water projects from the federally imposed State volume caps. I understand that you advocated, Governor, just raising private activity bond caps across the spectrum.

So in this one, we think that our legislation would generate about $50 billion in private capital investment and create or support about 1.4 million jobs, rebuilding water infrastructure in communities across America, generating billions in tax revenue at the Federal, State, and local levels. So it seems to me that creating private sector jobs to help ensure American families have access to clean water would be a win for the workers, the taxpayers, and our communities, at the end of the day. Is that the type of power that gets unlocked with the private activity bonds?

Governor RENDELL. Yes, no question about that. You are correct, Senator. And again, we all focus on transportation because it is really the current challenge. But water, waste water, and other forms of the American infrastructure are equally as important.

Senator MENENDEZ. Mr. Posner, you write in your testimony about a decline in the issuance of infrastructure projects due to troubles with financing in the municipal bond market. Particularly, there was a quote that I looked at: "Large issues over $1 billion are having difficulty coming to market in the current environment."

So, I look at my home State of New Jersey, which has large infrastructure needs. It is a corridor State. It also has the mega-port of the East Coast. It has a whole host of issues; it is densely populated. So for New Jersey families, large infrastructure projects, whether they are widening a well-used highway or creating a new parking garage by a transit village or looking at the reconstruction of turn-of-the-century schools—and not the century we just turned, the century before—are among many of the issues that we have.

In your opinion, do you believe that the Build America Bonds were responsible for job creation and economic development that would not have happened in the depths of the recession if the program were never created?

Mr. POSNER. The Build America Bonds program enabled larger issues, right? And the underlying concept there is that the taxable buyers want big deals, right? So the Build America Bonds program enabled that and allowed taxable investors to jump into the market, understand the market. They had zero exposure to it in the past, or very limited.

Yes, the Build America Bonds—we saw, I do not have the numbers in front of me, but a huge jump in issuance as a result of them. In the first quarter of 2008, before it was created, we estimated that about $100 billion worth of infrastructure projects had been postponed or delayed because they could not access the municipal market.

One important element to really think about with BABs, though, is the subsidy level. The 35 percent was originally sort of intended to be a kick-start rate, and we believe, as the market develops and spreads tighten, that that rate should be lowered to a more revenue-neutral one which will, while still allowing taxable large infrastructure projects to get done, come at a lower cost to the government.

Senator MENENDEZ. But it would be desirable, though?

Mr. POSNER. Absolutely, yes. And we recommend that at a revenue-neutral rate.

Senator MENENDEZ. All right.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator.

Mr. Posner, how much lower than 35 percent do you think that might end up down to?

Mr. POSNER. Yes. I mean, the real question here is, it goes back to understanding the true cost of a tax exemption. We do not understand—not knowing the underlying assumptions that go into that cost, makes it very difficult. That is square one, to really understand where you find a revenue-neutral rate.

Our estimates are somewhere between 20 and 25 percent. But until we can really get a number—we do not want to get steeped in numbers and revenue and all that because the major point gets lost, but, if we can understand what goes into that box to make that number, then we can start to better come up with what is truly revenue-neutral.

The CHAIRMAN. Governor Rendell, I would like you to just help us a little bit here. As Governor, you have a lot of experience in a major State, and you served in so many capacities, also as Mayor of Philadelphia. Here is the basic question. I think we start with the premise that we all need to dramatically address our infrastructure needs. That is almost a given.

Not long ago when I was over in China, I got off the plane in Chongqing. It has a massive, brand-new airport. It just blew me away. Our local counsel over there from Chengdu came over, and he was just really irritated and angry and said, why are American companies, at least maybe the architectural engineering firms, being a part of this airport? These are Germans who came here and did all this. So I get in the car. There is a massive new interstate-like highway. Chongqing has a population of 30 million people. It rivals our interstate highways, it was so good. I just marveled at it.

At the end of the day, I sat next to the mayor of Chengdu and said, where do you get all the money to pay for this? He kind of sheepishly looked at me and said, well, the Federal Government just gave it to them. The fact is, China has about $3 trillion in reserves, and we have a huge budget deficit. All the talk these days is how to get the budget deficit down as we approach the debt

limit, which expires, I guess, August 2, according to Secretary Geithner now. We are in a pickle. We have problems here as we try to cut spending to get the deficit and debts down and, at the same time, address infrastructure.

So what would you do as a Governor? Let us say you were president, you are king. You have carte blanche to decide how we handle the basics here, and the basics being that we have debt and deficit, but at the same time we have huge infrastructure problems that have to be addressed. No one denies that. I mean, how do you kind of square that circle as Governor?

Governor RENDELL. Well, I actually think that the Deficit Reduction Commission did a good job in addressing that issue. I am not sure that I agree, or anyone here would agree, with the 15-cent increase in the gas tax, but I think clearly we can invest in things that are crucial to us and that create jobs, both jobs on-site and jobs back in factories, at the same time as we are reducing deficits. We can do that, and we must do that.

Again, I do not mean to sound like a broken record, but, if we are in fact phasing out of Afghanistan and Iraq, that money, I think, should be put into a significant infrastructure fund to get this job done. In the long term, I would have a Federal capital budget, but, in the short term, let us take that money. Almost all our competitor nations have, in fact—and you are right, it is done by the Federal Government—invested in 5-year or 10-year infrastructure revitalization programs. Many of them have done it already. Many of them are in the midst of doing it. It does not hurt their economies because they are spending or investing money. It helps their economies.

Look at American manufacturing. We all know American manufacturing is teetering on the brink. What better way to revitalize American manufacturing than to go on a 10-year significant infrastructure repair program? I think if it was explained to the public well, if there were controls, if we speeded up all the delays, the environmental processes, et cetera, if we made sure that we were going to make major decisions by a cost/benefit analysis, I think you would find public support for it. I really believe that to be the case. I think the public understands this issue maybe better than we do.

So I think we have to do it. I think there is no time to waste, because I think the point was made by a number of Senators today: when we delay, the expense goes up. There is no question, now is the time to do it. There cannot be something different between us and all the other developed nations in the world that have done this in the last decade, and we have to start because, as Senator Kerry said, I still believe we have the capacity to be the best and do good things and do bigger things.

The CHAIRMAN. No question, this takes a little willpower and a little teamwork. We have to work together to get this done.

Governor RENDELL. No question. And again, the point Senator Cardin made and Senator Hatch: this has always been an issue that cut across party lines. I remember when I was a fairly young Mayor, Republicans were the leaders in the desire to spend or invest money on infrastructure. It was sometimes Democrats who would say, no, no, we need to do it for social programs. Well, the

best social program in the world is a well-paying job, and that is the way to create well-paying jobs.

The CHAIRMAN. In a very, very minor, minor way, it also might get a little bit at this unfortunate growing disparity of income in America. If you have a lot of infrastructure jobs, that means middle-class America is going to get a lot more jobs and get some income.

Senator Hatch?

Senator HATCH. Governor, I have enjoyed every word you have said here today. I agree with a number of the things that you have said. The Republicans are properly saying, let us restrain spending. For the fiscal year that we just finished, we spent 25.3 percent of the GDP, of our total economy, on Federal problems. The Senator from Massachusetts is correct that those on our side are arguing for restraint, no question about it. My experience with you is that you believe in restraint as well.

Now, Senator Kerry is also correct that we resist raising taxes. We believe taxes, if they are not raised, will return to their historic levels of around 18 percent of GDP. Now, spending is 20 percent above its historical average, and that is not a 6-word political slogan, by the way. It is fiscal fact. All we are saying is, let us live within our means.

Now, look. We are not against Build America Bonds without the direct payment. Let me just ask Dr. Kile this. I noticed in President Obama's fiscal year 2012 budget that the President's proposal for Build America Bonds resulted in an outlay of $60 billion, as well as $58 billion in tax increases—$59 billion, actually, I think it was. Outlays are defined as spending under the Congressional Budget Act. Therefore, the President's Build America Bonds proposal would increase spending and taxes by about $60 billion. This would increase the size of the Federal Government by about $60 billion.

Now, do you agree that the President's proposal increases outlays and taxes by about $60 billion, and do you agree that the President's proposal increases the size of the Federal Government by about $60 billion?

Dr. KILE. Well, on the specific numbers, I would have to get back to you for the record on that.

Senator HATCH. Well, you know it is increasing. It would increase the Federal Government, no question about that. You agree with that?

Dr. KILE. Well, I think the basic point of tax credit bonds is that, as we discussed earlier, they are efficient relative to tax-exempt bonds. What direct-pay bonds also do is draw to light the specific expenditures that go to that payment, and I think that that is what you are probably referring to.

Senator HATCH. All right. Well, our analysis is, it is going to increase government by another $60 billion. We do not think you need to do that.

Now, let me just go to my friend, Governor Rendell, whom I have admired. I have watched you on television many times. You always make a lot of common sense. Being from Pennsylvania, you have to be for the unions. But to be honest with you, there are a lot of great non-union contractors who do terrific work, too, at about

somewhere around 20 percent less. Some say 9 percent less, but that is still a big figure if you start talking about infrastructure.

Let me just say this, Governor Rendell. In his written testimony today, Dr. Kile writes, "A Federal Infrastructure Bank could lower the cost of borrowing by providing credit assistance and thus attracting private financing; however, it would impose the cost of such credit assistance on Federal taxpayers."

Now, are you concerned that a Federal Infrastructure Bank would be a mechanism for providing corporate welfare at taxpayers' expense? Why should Federal taxpayers subsidize infrastructure projects for the benefit of private capital that would not be engaged but for a subsidy provided at taxpayers' expense? I think that is a legitimate question.

Governor RENDELL. It is a legitimate question. But remember, we get a return on that investment. It has to be subsidized originally, but we get a return on the investment. The EIB, the European Infrastructure Bank, has invested $300 billion over the last couple of decades, and they have made money on that. The countries who contributed have gotten a return on their investment, not a big return, but a return on the investment, plus they have gotten all the work that is done and all the jobs that are created. I would say to you first of all, Senator, look at what Senator Baucus said about the decline in the percentage of our GDP. That is being spent on infrastructure. All we are saying is——

Senator HATCH. I agree with that.

Governor Rendell [continuing]. Spend more of what we are going to spend on infrastructure because it is important, and it has so many other ramifications to it. That is number one.

Number two, the American taxpayer, as concerned as they are about the deficit, and they are, but every poll shows they are more concerned about jobs. They are more concerned about jobs. If we can create jobs—and by the way, U.S. DOT is a little more conservative than the figure you quoted, Senator Baucus. U.S. DOT says 25,000 jobs for $1 billion in infrastructure spending. But that is still an awful lot of jobs that come in at $50,000 to $60,000. That is a great thing for America. That is a great thing right now.

So let us devote more of our spending. Let us get that money out of Afghanistan and Iraq, get it into America, spend it here, create those jobs. And again, I do not know if the Congress—I am sure you have—has given some thought to when those soldiers start coming home, where are they going to find jobs?

Senator HATCH. That was a good suggestion. We all agree that we need to do a better job on infrastructure. The question is, are we going to restrain growth in other areas of the Federal Government?

Governor RENDELL. We have to.

Senator HATCH. If we do that, I do not think anybody is going to gripe about trying to fix our roads and our bridges and build better transportation facilities, whether they be light rail or whatever it is, for our people. You make a lot of sense in a lot of ways. But our problem is 25.3 percent spending of GDP. Frankly, we have to find some way of resolving that problem, and yet still accomplish what you and the other witnesses indicated we need to accomplish. I do not disagree. I would like to do it.

Governor RENDELL. Not an easy task.

The CHAIRMAN. Governor, thanks so much. This has been a very constructive, helpful hearing. I think it has advanced the ball more than you might think. Thank you, each of the four of you, very much for taking the time to come.

The hearing is adjourned.

[Whereupon, at 11:53 p.m., the hearing was concluded.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Hearing Statement of Senator Max Baucus (D-Mont.)
Regarding 21st Century Infrastructure Funding
As prepared for delivery

In speaking about the interstate highway system, President Dwight Eisenhower said, "...Its impact on the American economy – the jobs it would produce in manufacturing and construction, the rural areas it would open up – was beyond calculation."

Infrastructure moves our country forward. It doesn't just move our buses, planes and trains. Infrastructure also moves our economy.

Building bridges, roads and railways creates jobs. According to the Federal Highway Association, every billion invested in infrastructure creates nearly 28,000 jobs, and a more efficient transportation system cuts costs for the businesses that help our economy grow.

But over the last several decades, our investment in transportation infrastructure has slowed significantly. Our highways, railways and roads haven't kept up with our growing population, and our existing infrastructure is falling apart.

The American Society of Civil Engineers gave the U.S. an overall grade of "D" on their Report Card for America's Infrastructure.

Experts estimate that roadway conditions contribute to more than half of all car crashes, and we all remember the tragedy in Minnesota in August 2007. The Interstate 35 West Bridge in Minneapolis collapsed, killing 13 people and injuring another 145. Ensuring quality infrastructure is a safety issue we must take seriously.

Maintaining our infrastructure is also an issue of America's global competitiveness. Today, the U.S. only spends about two percent of our Gross Domestic Product, or GDP, on infrastructure. That is a 50 percent decline from 1960. But China spends close to nine percent of the country's GDP on infrastructure.

Today we will look at our existing tools to finance infrastructure investment: the Highway Trust Fund and the Airport and Airway Trust Fund. Both of these funds need to be reauthorized this year.

These trust funds are financed by the people who use them through excise taxes paid at the pump and airline ticket counters. Infrastructure on a state and local level is usually financed through tax-exempt bonds.

In February, we passed a bipartisan bill to reauthorize the Airport and Airway Trust Fund through September 2013. That was a good start, and I hope we can begin discussions with the House soon to get it enacted into law. We should continue that good progress as we put together a highway bill as well.

Congress must pass a highway bill by September 30 when the authority for the Highway Trust Fund expires. The Highway Trust Fund faces significant challenges. It relies on fuel taxes for 90 percent of its revenue, but given our tough economy and skyrocketing gas prices, many families have had to cut back at the pump. Cutting back at the pump means fewer contributions to the Trust Fund.

The Congressional Budget Office estimates that the Trust Fund would need an additional $25 billion per year just to maintain current performance, and without that additional money, the Highway Trust Fund will be insolvent by the end of next summer.

That shortfall would force the Transportation Department to slow payments to existing projects, and states would have to suspend critical infrastructure projects and cut jobs. But just like many families in Montana and across the country, the federal government is currently facing the difficult challenges of a tight budget.

So today we will ask how to ensure the Highway Trust Fund remains sustainable. To get our budget in order, we will have to make a lot of difficult choices. But we also need to look for ways to be creative. Because the longer we wait to address our aging infrastructure, the more it will cost in the long run. Every failed bridge and broken levee has a significant cost in terms of dollars and cents. More importantly, these tragedies can cost lives.

This Committee has already started to think creatively. We have looked at alternative funding proposals such as the use of public-private partnerships, increasing the efficiency of the infrastructure bond market and creating a National Infrastructure Authority.

Today, we will consider these and other proposals to finance a 21st century infrastructure. All options should be on the table.

So let us be creative in our efforts to develop infrastructure solutions. Let us work together across the aisle to find the most efficient ways to improve our roads and bridges, and let us begin on the path toward a 21st century infrastructure that will enable businesses to create the jobs our economy needs.

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STATEMENT OF HON. ORRIN G. HATCH, RANKING MEMBER U.S. SENATE COMMITTEE ON FINANCE HEARING OF MAY 17, 2011 FINANCING 21st-CENTURY INFRASTRUCTURE

WASHINGTON – U.S. Senator Orrin Hatch (R-Utah), Ranking Member of the Senate Finance Committee, today delivered the following opening statement at a committee hearing examining the federal role in infrastructure financing:

I would like to begin today with a quote attributed to one of America's greatest and most pragmatic statesmen.

Franklin warned, *[w]hen the people find that they can vote themselves money, that will herald the end of the republic. Sell not liberty to purchase power.*

This sentiment seems applicable to a variety of policies being considered by this Congress. Today, it illuminates this committee's examination of the federal role in infrastructure financing.

This Committee's role in infrastructure financing is most apparent in the maintenance of various trust funds. If the Highway Trust Fund is not the greatest of these funds, it is certainly the most troubled, and that particular trust fund is the main subject of this hearing. According to the Congressional Budget Office, this trust fund's highway account will be underfunded by around $104 billion in 2021 if current trends persist. Under current law the trust fund is not actually able to incur negative balances, but the CBO estimate shows that the demands on the fund far outstrip its resources. The current solvency of the trust fund is an illusion created by gimmicky general fund transfers over the past few years.

The last long-term surface transportation reauthorization, the tortuously named SAFETEA-LU, expired in 2009, and keeping with recent tradition, Congress has enacted a series of short-term extensions. The most recent extension expires this September. What these extensions have done and continue to do is mask an enormous yet simple problem. There is no such thing as a free lunch. To most people, this is a cliché, but it evidently has not been said enough to sink in with those who want to finance infrastructure projects in excess of our ability to pay for them.

Already this year I've heard from colleagues eager for federally funded infrastructure spending to continue unabated. One colleague, speaking in another committee, extolled the virtues of more investment in infrastructure. She closed her remarks with the following. *I am grateful to my colleagues on both sides of the aisle for their interest in moving forward together on a transportation bill that invests in our transportation system to help ensure it will meet America's needs in the coming years.*

We hear this sentiment from the President all the time. We need to invest in America.

Well of course we do.

But that is not the issue. The first issue is who, in a constitutional system of enumerated powers, is going to pay for it. Will the states pay for it, or will the federal government.

The second issue is how are we going to pay for it. If the federal government takes on significant infrastructure responsibilities, how are we going to pay for it?

And believe me, if the President gets his way, we are going to pay for it.

There is a lot of rebranding going on over on the left.

What used to be called *raising taxes* is now called *shared sacrifice*.

And what used to be called *government spending* has now been dubbed *investments*.

Apparently some strategist figured out that to the American people higher spending and higher taxes are equivalent to dirty words.

So there is an effort to spin this Carter-era message of tax-and-spend in a way that will be more palatable to the American people.

I know that Utahns are not going to buy it, and I don't think many Americans will.

For them the issue remains, how are we going to pay for all of these investments?

It is not at all clear where this spending will come from. Traditionally, the spending has come from the trust funds, which are maintained by the Finance Committee. Some seem to view this Committee as a no-limit credit card, and they view the balances they run up here as somebody else's problem.

Our current circumstances make it impossible to continue that approach. The voters have made it clear that it is time to think twice about giving federal policy makers an unlimited credit line.

That is why this hearing is so important. The negative signs are obvious, and the Highway Trust Fund's projected end of year balances are telling us that our current approach to highway financing does not work. Now is the time to thoroughly examine the federal government's role in promoting infrastructure improvements.

The financing of these projects has deteriorated to the point that I'm not sure most Americans, and even their elected representatives, know what they're actually paying for. Around 89 percent of the Highway Trust Fund's revenues come from excise taxes, and most of that is the 18.3 cents per gallon federal gas tax. But I wonder if people, as they watch the

numbers spinning around and around on the gas pump, realize that around 14 percent of Highway Trust Fund revenues go to the mass transit account. So when we say that by paying federal gas taxes taxpayers are paying for the roads they drive on, that might be only 86 percent true.

And even 86 percent might be too high. A Government Accountability Office report from 2004 titled *Trends, Effect on State Spending, and Options for Future Program Design*, found in part that "increased federal highway grants influence states and localities to substitute federal funds for funds they would otherwise have spent on highways." In other words, an additional dollar of federal money may not, overall, buy an additional dollar's worth of infrastructure. It might just shift the burden of paying for it from states and localities to the federal government.

From this hearing I hope we get a clearer picture of what the appropriate federal role in infrastructure financing ought to be, and how we can make that happen. What is certain is that continuing the flawed policies of the past will not work. We need to look beyond simply putting more money into a leaky and broken down highway trust fund, or hiding the rusted out shell of the trust fund among other financing vehicles that appear to be in better shape. I hope today's witnesses can help us determine if our current policies need merely a tune-up or a complete engine rebuild.

Taxpayers need to know if Washington can continue with business as usual, or if fundamental reform of highway financing is in order.

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Testimony

Statement of
Joseph Kile
Assistant Director for Microeconomic Studies

The Highway Trust Fund and Paying for Highways

before the
Committee on Finance
United States Senate

May 17, 2011

This document is embargoed until it is delivered at 10:00 a.m. (EDT) on Tuesday, May 17, 2011. The contents may not be published, transmitted, or otherwise communicated by any print, broadcast, or electronic media before that time.

CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515

Notes

Unless otherwise noted, all years referred to are federal fiscal years, which run from October 1 to September 30.

Numbers in the text and tables may not add up to totals because of rounding.

Chairman Baucus, Senator Hatch, and Members of the Committee, thank you for the invitation to testify on issues related to the funding of highways. My testimony draws on several publications of the Congressional Budget Office (CBO) that discuss highways and other infrastructure related to transportation, water resources, and wastewater.[1] Although the testimony is focused on highways, the principles discussed here are relevant to all infrastructure that is financed by the public sector.

Summary

This testimony reviews the status of the Highway Trust Fund and examines three questions facing the Congress:

- How much should the federal government spend on highways?
- How should the federal government direct the use of those funds?
- How should the federal government raise those funds?

Status of the Highway Trust Fund

The United States spends about $160 billion annually on highways, with about one-fourth of that total, or roughly $40 billion, coming from the federal government. Federal highway spending is funded mainly through taxes on gasoline and other motor fuels that accrue to the Highway Trust Fund. In recent years, the Congress has spent more on highways than the revenues accruing to the fund for that purpose, and it has supplemented the trust fund's balance with money from the general fund of the Treasury.

The law that authorizes collection of taxes for and spending from the Highway Trust Fund is set to expire on September 30, 2011. Even if the provisions of that law are extended, the trust fund will be unable to meet its obligations in a timely manner by the summer or fall of 2012, CBO projects, unless transfers similar to those in the past are made, other sources of revenue are identified, or spending is reduced.

How Much Should the Federal Government Spend on Highways?

The Congress has a range of options for future spending on highways, and the one it selects will influence the amount and distribution of economic benefits from the nation's network of highways and roads. Those options include the following:

- Limit spending to the amount that is collected in current taxes on fuel and other transportation activities; doing so would result in spending that would be about $13 billion per year below the current amount.

1. See Congressional Budget Office, *Alternative Approaches to Funding Highways* (March 2011); *Spending and Funding for Highways*, Issue Brief (January 2011); and *Public Spending on Transportation and Water Infrastructure* (November 2010).

- Maintain current capital spending, adjusted for inflation.

- Spend enough to maintain the current performance of the highway system; doing so would require about $14 billion per year more than current spending.

- Fund projects whose benefits exceed their costs; doing so would require even more spending than maintaining current services, up to about $50 billion more than current spending, depending on the degree to which benefits would be expected to exceed costs.

The additional spending needed to meet specific performance goals or to fund projects whose benefits exceed their costs would be less if highway users paid tolls that varied with congestion. Doing so would reduce demand for future spending by providing an incentive to use those roads less during congested periods. Although the size of that reduction is uncertain, the Federal Highway Administration (FHWA) estimates that the spending required to maintain current services or realize additional benefits from highways could be one-quarter to one-third less than current estimates if congestion pricing was widely adopted.

How Should the Federal Government Direct the Use of Highway Funds?

From the point of view of economic efficiency, the authority to make decisions about which highway projects to undertake is best placed with those who have the incentive and the information to weigh all of the costs and benefits of the decisions. Whether the federal government or state or local governments are more likely to make more efficient decisions about highway projects depends on who receives benefits from those decisions and who bears the costs.

The Congress currently directs resources for highway infrastructure through three mechanisms:

- About 80 percent of the money the federal government spends goes to grants to state governments under formulas that allocate funds for such purposes as construction, rehabilitation of existing roads, and safety programs. The remaining 20 percent goes to specific projects or purposes identified by the Congress or by the Secretary of Transportation.

- The federal government lends money to state and local governments and provides loan guarantees that reduce their cost of borrowing. Although that leverage allows more projects to be built today with a given amount of federal funds, the borrowed money ultimately must be repaid—either by state and local taxpayers or by highway users. The reduction in the cost to state and local governments imposes a cost on federal taxpayers, who bear the risk of default; that cost would otherwise be borne by the borrowers through the interest rates they would pay.

- The federal government also reduces the cost of borrowing for state and local governments by offering tax preferences for bonds they issue. Tax-exempt bonds use a well-established tax preference. However, they are not generally considered

cost-effective because the federal revenues that are forgone may be significantly greater than the reduction in state and local borrowing costs. In recent years, the Congress has authorized tax credit bonds, which allow bondholders to claim a credit against their tax liability (or, in certain cases, to bond issuers, who can claim a credit payable by the Secretary of the Treasury). Such bonds can be a less expensive way for the federal government to reduce the cost of borrowing by state and local governments.

Some funding mechanisms concentrate decisionmaking authority with the federal government; others offer greater latitude for state and local governments. Currently, state and local governments choose most federally funded projects. However, concerns about that process have motivated proposals for a federal infrastructure bank that might use the results of cost–benefit analyses to select projects. In addition, a federal infrastructure bank could lower the cost of borrowing by providing credit assistance and thus could attract private financing; however, it would impose the cost of such credit assistance on federal taxpayers.

How Should the Federal Government Raise Funds for Highways?

Funding for highway infrastructure ultimately comes either from highway users or from taxpayers, regardless of how the financing of a project is structured. Taxes, tolls, and fees imposed on highway users now fund about half of highway spending by federal, state, and local governments; the rest comes from the Treasury's general fund and from similar state and local funds. Judging from estimates of the costs of highway use, a system that charged for the full cost of travel would have most if not all motorists paying substantially more than they do now—perhaps several times more, potentially providing more than sufficient revenue for spending on highways.

As with other decisions, concerns about fairness are important in determining where to find the required funds. For example, whether increased user charges would impose relatively greater burdens on low-income and rural users would depend on the structure of those charges.

Increasing the charges that users pay also could promote more efficient use of the highway system. Although taxes currently are charged for fuel, most of the costs of using a highway—including pavement damage, congestion, accidents, and noise—are tied more closely to the number of miles traveled than to the amount of fuel consumed. Fuel consumption depends not only on the number of miles traveled but also on fuel efficiency, which differs among vehicles and changes with driving conditions; therefore, charging highway users for the full costs of their use, or charging in proportion to the full costs, could not be accomplished solely through fuel taxes. Charging users according to costs would require a combination of fuel taxes and per-mile charges, sometimes called vehicle-miles traveled (VMT) taxes. Imposing such prices on system use would promote efficiency by encouraging motorists to use highways only when the benefits to them outweigh the full costs of that use. Alternatively, revenues could be raised from sources unrelated to transportation. That approach, however, would not promote efficient use of highways.

Table 1.

Estimated Revenues and Interest Credited to the Highway Trust Fund, by Source, 2011

(Billions of dollars)

	Highway Account	Mass Transit Account	Total	Share of Total Trust Fund Revenues and Interest (Percent)
Gasoline Tax	20.2	3.9	24.0	65
Diesel Tax	7.6	1.0	8.7	24
Tax on Trucks and Trailers	2.2	0	2.2	6
Use Tax on Certain Vehicles	1.0	0	1.0	3
Truck Tire Tax	0.4	0	0.4	1
Interest Credited	0.4	0.2	0.6	2
Total	**31.8**	**5.1**	**36.9**	**100**

Source: Congressional Budget Office.

The Highway Trust Fund

The federal government's surface transportation programs are financed mostly through the Highway Trust Fund, an accounting mechanism in the federal budget that comprises two separate accounts, one for highways and one for mass transit. The trust fund records specific cash inflows from revenues collected on excise taxes on the sale of motor fuels, trucks and trailers, and truck tires; taxes on the use of certain kinds of vehicles; and interest credited to the fund (see Table 1). In some years, the Congress has enacted laws to transfer money from the general fund of the Treasury to the Highway Trust Fund to ensure that the fund retains a positive balance. The Highway Trust Fund also records cash outflows for spending on designated highway and mass transit programs. (Some transit programs receive appropriations from the Treasury's general fund.) The largest component of spending, by far, is for the federal-aid highway program (see Table 2).

Excise taxes on motor fuels generate 89 percent of the Highway Trust Fund's revenues and interest, mostly from the tax of 18.3 cents per gallon on gasoline and ethanol-blended fuels. Under current law, most of that tax—14 cents per gallon—is set to expire on September 30, 2011. The remaining 4.3 cents per gallon will no longer be credited to the trust fund but will go to the Treasury's general fund. The gasoline tax is the source of about two-thirds of the fund's total revenues and interest. The second-largest source is the diesel fuel tax of 24.3 cents per gallon, which accounts for about one-quarter of the fund's revenues and interest. The balance comes from the other taxes and interest that are credited to the fund. Most of the revenue from fuel taxes is credited to the highway account of the trust fund, but 2.86 cents per gallon of all fuel

Table 2.

Components of the Highway Trust Fund, 2011

(Billions of dollars)

	Estimated Revenues and Interest[a]	Budget Authority and Obligation Limitations[b]	Estimated Outlays
Highway Trust Fund	36.9	52.7	44.3
Highway account	31.8	44.3	36.7
Federal-aid highway program	n.a.	43.0	35.4
Motor carrier safety program	n.a.	0.6	0.5
Highway traffic safety program	n.a.	0.7	0.7
Mass transit account	5.1	8.4	7.6

Source: Congressional Budget Office.

Note: n.a. = not applicable.

a. Revenues are deposited in the highway and mass transit accounts but are not designated for specific purposes. Those designations come from budget authority as specified in legislation such as the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users.

b. Obligation limitations enacted in appropriation acts limit the amount of budget authority available to most Highway Trust Fund programs. The amounts shown are the sum of obligation limitations and budget authority that is not subject to any such limitation.

taxes credited to the Highway Trust Fund goes to the mass transit account, which receives about 14 percent of the trust fund's revenues and interest.

Spending from the Highway Trust Fund is determined by authorization acts that provide budget authority for highway programs, mostly in the form of contract authority (the authority to incur obligations in advance of appropriations).[2] Annual spending from the fund is largely controlled by limitations on the amount of contract authority that can be obligated in a particular year, and such obligation limitations are customarily set in annual appropriation acts.[3]

The most recent authorization law to govern spending from the trust fund is the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (often called SAFETEA-LU), which expired in 2009 but has since operated under a series of short-term extensions, the latest of which is set to expire on September 30, 2011. SAFETEA-LU provides specific amounts of contract authority and authorizes appropriations for some programs that are not funded through contract authority. It also

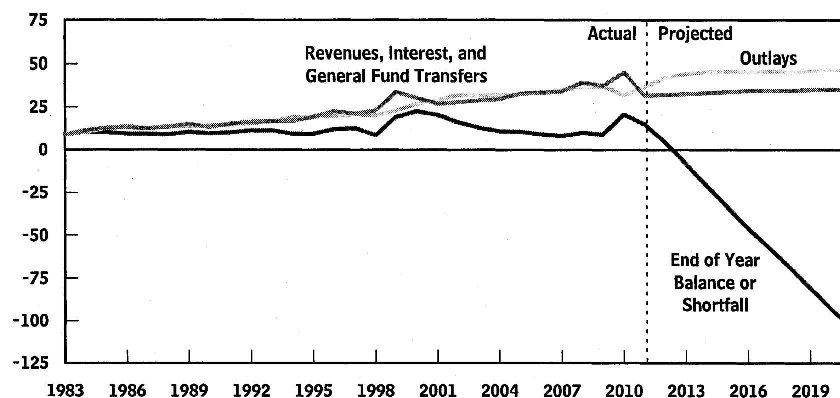
2. An authorization act is a law under the jurisdiction of a committee other than the House or Senate Committee on Appropriations. Budget authority is the authority provided by law to incur financial obligations that will result in immediate or future outlays of federal government funds.

3. An obligation limitation is a provision of a law or legislation that restricts or reduces the availability of budget authority that would have become available under another law (in this case, the authorizing law).

Figure 1.

Status of the Highway Account of the Highway Trust Fund

(Billions of dollars)



Source: Congressional Budget Office.

Note: Under current law, the Highway Trust Fund cannot incur negative balances. The negative balances shown above illustrate the projected inability of the fund to pay obligations as they are incurred by the states. If the Highway Trust Fund was unable to meet its obligations in a timely manner, spending on programs financed by the fund could continue more slowly, to keep pace with tax collections. The Department of Transportation has stated that if the fund faced a shortfall, it would ration the amounts it reimburses to states in order to maintain a positive balance in the fund.

specifies annual obligation limitations, which may be superseded each year by limitations set in appropriation acts.

History of the Highway Trust Fund's Revenues and Outlays

Highway Trust Fund balances once were stable, but over the past decade, the fund's receipts have fallen behind its expenditures. Balances in the highway account of the Highway Trust Fund were steady during the 1980s and the first half of the 1990s, in the vicinity of $10 billion (see Figure 1). The most recent increase in the gasoline tax occurred in 1993; after the Taxpayer Relief Act of 1997 redirected 4.3 cents of that tax from the general fund to the Highway Trust Fund, the unexpended balance in the highway account began growing rapidly. Then, an agreement to spend down balances in the trust fund, which began with the enactment of the Transportation Equity Act for the 21st Century (known as TEA-21) in 1998, also eliminated the practice of crediting interest to the trust fund. Since 2001, outlays, which were boosted by TEA-21 and SAFETEA-LU, have generally exceeded revenues.

On several occasions since 2008, the Department of Transportation (DOT) has indicated that the trust fund would not meet its obligations on time without a transfer from the Treasury's general fund. Since then, the Congress has appropriated a total

of $34.5 billion from the general fund to the Highway Trust Fund. In 2010, the Hiring Incentives to Restore Employment Act (Public Law 111-147) authorized the most recent transfer from the general fund and the resumption of interest credits to the trust fund. That law also shifted certain refunds for tax-exempt use of motor fuels, such as fuel consumed by state and local governments, from being paid out of the Highway Trust Fund to being paid out of the general fund, also boosting trust fund balances. Because of the infusion of general revenues, at the end of 2010, the account balances were positive: The highway account had $20.7 billion and the transit account had $8.9 billion.

Projections of the Highway Trust Fund's Revenues and Outlays

CBO estimates revenues and outlays independently to project what the trust fund's balances might be in the future. Revenues depend on the collection of various taxes. Under the rules that CBO follows in constructing its baseline revenue projections, the expiring excise taxes dedicated to the Highway Trust Fund are assumed to be extended beyond their scheduled expiration. Outlays depend on the obligation limitations set in appropriation acts as well as on the timing of spending for obligations that are incurred. For its projections, CBO assumes that policymakers will continue to control spending through such limitations. Furthermore, for the purpose of those projections, the agency assumes that appropriation acts will set obligation limitations equal to those enacted in the 2011 DOT appropriation act, adjusted for inflation.

If the current taxes are extended beyond their 2011 expiration date, CBO estimates, revenues and interest credited to the Highway Trust Fund will grow from $36.9 billion in 2011 to $40.9 billion in 2021. Over that period, the estimated rate of increase is projected to average a little more than 1 percent per year, which largely reflects expected growth in gasoline and diesel fuel consumption.

CBO bases its estimates of trust fund outlays for a given set of obligation limitations primarily on historical spending patterns, which reflect states' multiyear projects to plan and build roads, bridges, and other transportation infrastructure. Most obligations for the highway account involve capital projects on which money is spent over several years. (The federal-aid highway program, for example, typically spends about 25 percent of its budgetary resources in the year they are made available for spending; the rest is spent over the next several years.) Most of the highway account's existing obligations will therefore be met using tax revenues that have not yet been collected, because the obligations far exceed the amounts currently in the account. CBO estimates that at the end of 2011, the balance in the highway account will be $14.8 billion but outstanding obligations will total about $75 billion (by comparison, at the end of 2007, outstanding obligations totaled about $45 billion).

Even if lawmakers set obligation limitations to increase at the rate of inflation, CBO estimates, outlays from the highway account would rise from $32.0 billion in 2010 to $36.7 billion in 2011 and subsequently to $41.9 billion in 2012. That increase is largely attributable to the fact that general funds appropriated under the American Recovery and Reinvestment Act of 2009 (ARRA, P.L.111-5) temporarily displaced

some spending from the highway account in 2009 and 2010. States had greater incentive to use ARRA funds than highway account funds because they were required to obligate ARRA funds more quickly than highway account funds and because they did not need to contribute any state or local resources to projects using ARRA funds, as is the case for projects funded from the highway account. Now that funds from ARRA have mostly been spent, CBO expects that state governments will spend the unused balances from appropriations for regular programs of the trust fund. In addition, CBO anticipates that about $2 billion from the highway account will be transferred to the mass transit account between 2011 and 2012 as states use some highway money for transit projects, as they are allowed.

Under those baseline assumptions, outlays would exceed revenues and interest credited to the highway account by about $5 billion in 2011 and by almost $10 billion in 2012. As a result, the highway account would be unable to meet its obligations sometime toward the end of fiscal year 2012 or early in fiscal year 2013, CBO estimates.[4] In all, outlays would exceed revenues and interest credited to the highway account by about $115 billion (or 31 percent) between 2011 and 2021.[5] If obligation limitations were held constant at 2011 amounts rather than increasing with inflation, that gap would be $85 billion (or 19 percent).

The situation for the Highway Trust Fund's mass transit account is similar. Under CBO's baseline projections and including transfers from the highway account, the obligation limitation for mass transit would grow from $9.3 billion in 2010 to $9.4 billion in 2012. Outlays would exceed revenues and interest credited to the mass transit account by about $2.5 billion in 2011 and by about $3.2 billion in 2012. The mass transit account would be able to meet obligations in a timely manner through 2012 but would be unable to meet some such obligations during 2013. Subsequently, projected spending from the transit account would exceed receipts by $4 billion to $5 billion a year, CBO projects.

Thus, future obligations for spending on transportation programs funded by the Highway Trust Fund will need to be significantly lower than in 2011, revenues available to the trust fund will need to be significantly higher, or both. If the Congress chose solely to cut spending, those cuts would need to decrease spending by about

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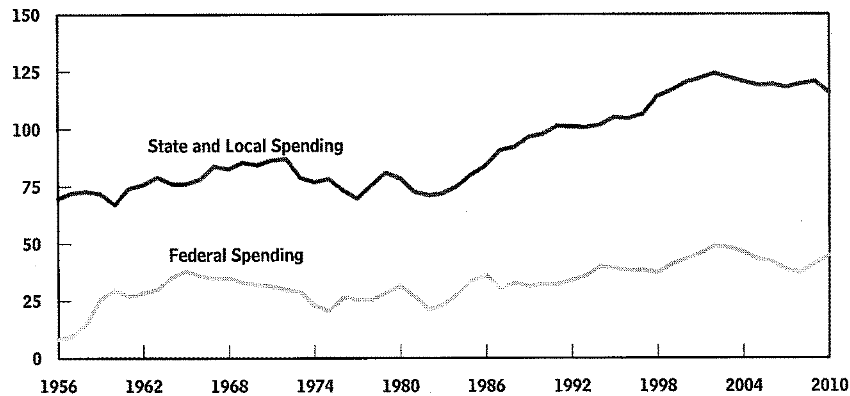
4. Under current law, the Highway Trust Fund cannot incur negative balances. If the trust fund is unable to meet its obligations in a timely manner, spending could continue more slowly, to keep pace with tax collections. DOT has stated that, in the event of a shortfall, reimbursements to states would be rationed to maintain a positive balance.

5. CBO's projections of spending from the trust fund are based on historical averages, but actual spending will differ from projections from year to year depending on such factors as the states' construction schedules and plans. Future revenues might differ from CBO's projections depending on changes in the price of oil, the economy, and the fuel efficiency of vehicles. Small deviations from the projections of spending and revenues, however, would not significantly affect the status of the Highway Trust Fund or the expected imbalance between obligations and resources.

Figure 2.

Spending for Highways, by Level of Government

(Billions of 2010 dollars)



Source: Congressional Budget Office based on information from the Census Bureau and the Bureau of Economic Analysis.

Note: State and local spending from 2008 through 2010 were estimated by updating prior-year spending for changes in the value of state and local highways.

one-third. If the Congress chose to boost revenues, it could do so by increasing taxes that are dedicated to the Highway Trust Fund or by making transfers from the Treasury's general fund.

How Much Should the Federal Government Spend on Highways?

Almost all spending on highway infrastructure in the United States comes from public funds. The private sector participates in building, operating, and maintaining highways, but the federal government and state and local governments typically determine which projects to undertake and how much to spend on them. Despite several prominent examples of private financing for highways, private spending constitutes just a small share of the total. Spending by federal, state, and local governments has increased over the past half-century (see Figure 2). In 2010, the federal government spent $45 billion and state and local governments spent $116 billion on highways.

Determining whether the federal government—rather than state or local governments—should fund infrastructure projects depends, at least in part, on whether a project will benefit the nation as a whole more than it will a particular state or locality. Economic efficiency could be improved if the federal government limited its support to projects (such as the Interstate highways) that offer significant multistate benefits, leaving state and local governments to fund projects with more localized benefits. If the people who benefit from a project bear its costs, the likelihood is diminished that

too large a project (or too many projects) will be undertaken or that too many infrastructure services will be consumed relative to the resources needed to provide them. In the past, the Congress also has considered other factors, including equity among the states and between urban and rural areas, in choosing which projects to fund.

Economic Returns on Public Spending for Highways

Highway spending has contributed to the nation's economic growth and prosperity and can continue to do so, depending on how and where funds are spent. Specifically, public investment in infrastructure can increase economic output by raising the stock of capital in the economy, thereby increasing the productivity of labor. Increasing transportation infrastructure would, in general, make it easier to move materials and workers to production facilities, supply finished goods to consumers, and transport service providers and customers to places of business. Consequently, workers would produce and deliver more in a given time and at a given cost. A more productive national economy would result in more goods and services and more resources for further investment and continued growth.

Over the past three decades, economists have produced a wide range of estimates of the benefits of investing in infrastructure.[6] A review of the literature indicates that the returns on investment in public capital in the United States are positive, although they are lower than some early estimates suggested. The literature also suggests that the returns on the initial phase of a system of public investments can be large but that the economic payoff declines as the system expands. In particular, economic gains from investing in highways appear to have been greatest during the initial construction of the Interstate Highway System and to have fallen off since then. According to one study of data spanning the period from 1953 to 1987, that initial construction made vehicle-intensive industries in particular more productive, but capital spending after the system was essentially completed in 1973 appeared not to have affected productivity in those industries.[7] Another study, which focused on the period after 1973, showed that even into the 1990s, the costs of logistics fell in vehicle-intensive industries because of highway improvements, although not as much as they had during the 1970s.[8] One 2006 report stated that every dollar of capital or maintenance spending for highways in 1996 reduced annual congestion costs to drivers by $0.11 that year.[9]

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6. See Congressional Budget Office, *Issues and Options in Infrastructure Investment* (May 2008); and *The Economic Effects of Federal Spending on Infrastructure and Other Investments* (June 1998).

7. See John Fernald, "Roads to Prosperity? Assessing the Link Between Public Capital and Prosperity," *American Economic Review*, vol. 89, no. 3 (June 1999), pp. 619–638.

8. See Chad Shirley and Clifford Winston, "Firm Inventory Behavior and the Returns from Highway Infrastructure Investments," *Journal of Urban Economics*, vol. 55, no. 2 (May 2004), pp. 398–415.

9. Congestion costs reflect both the amount of gasoline consumed and the value of the time that motorists lose to traffic delays. See Clifford M. Winston and Ashley Langer, "The Effect of Government Highway Spending on Road Users' Congestion Costs," *Journal of Urban Economics*, vol. 60, no. 3 (November 2006), pp. 463–483.

Total benefits over time would be greater, but whether they would be enough to justify the costs would depend on what else would be forgone to pay for more highway investment and the rate at which new or improved highways deteriorate.

Options for Federal Spending

The Congress faces difficult decisions about how much to spend on highways. The options include the following:

- Spend only what is collected from highway users through the gasoline and other taxes that are credited to the Highway Trust Fund;
- Maintain current capital spending, adjusted for inflation;
- Spend enough to maintain the highway system's current performance; or
- Fund projects whose expected benefits exceed costs by a particular amount.

Those options could be coupled with policies to manage use of highways by imposing congestion pricing during periods of peak demand.

Spend Revenues Credited to the Highway Trust Fund. The highway account of the trust fund received $30 billion in 2010 (see Figure 3). CBO projects that if current highway taxes are extended beyond their 2011 expiration date, revenues and interest credited to the Highway Trust Fund will rise at an average annual rate of a little more than 1 percent per year over the coming decade. That growth rate is slower than the expected growth in nominal gross domestic product, which CBO anticipates will increase by about 4 percent annually over the next 10 years—in part because fuel tax revenues depend on how much fuel is consumed and because fuel efficiency is expected to increase. Revenues for the highway account are projected to average $34 billion annually over the 2011–2021 period.

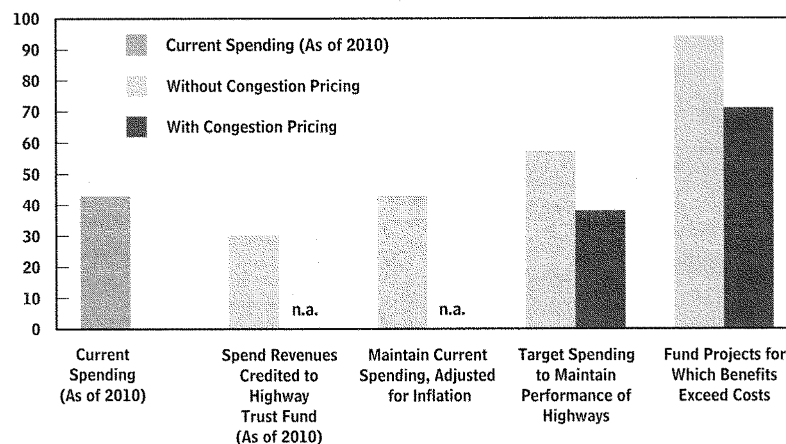
Maintain Current Capital Spending, Adjusted for Inflation. Total federal spending on highway infrastructure for 2010 amounted to $45 billion. Historically, federal spending for highway infrastructure has been predominantly for capital spending. Of that $45 billion, $43 billion was spent on capital projects, and $2 billion was spent on operations and maintenance. Real spending (that is, spending adjusted for inflation, in this case because of the rising costs of highway construction) by the federal government for highway construction has increased, on balance, over the past 30 years (see Figure 4). However, real spending declined in the middle of the 2000s, when the cost of materials increased sharply because of higher demand, attributable in part to a boom in residential and commercial construction in the United States and in part to increased demand from countries such as China.

Target Spending to Maintain Performance of Highways. Spending could instead be targeted to achieve specific goals for highway system performance, such as

Figure 3.

Selected Options for Annual Federal Capital Spending for Highways, With and Without Congestion Pricing

(Billions of 2010 dollars)



Source: Congressional Budget Office based on Department of Transportation, Federal Highway Administration and Federal Transit Administration, *2008 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance,* Chapter 8.

Notes: Current spending is for capital projects and excludes $2 billion spent by the federal government for operations and maintenance.

n.a. = not applicable.

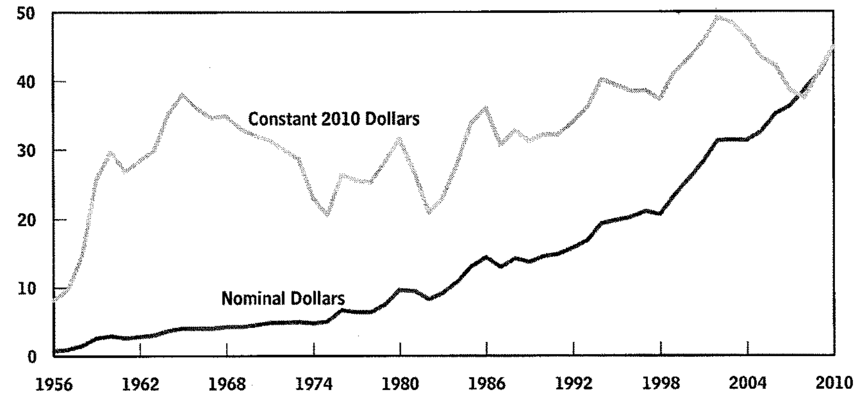
maintaining average delays or pavement quality. According to the FHWA, if current spending for highway capital was maintained over the coming decades, even adjusted for inflation, the performance and quality of the highway system would decline. On the basis of the FHWA's most recent projections (using 2006 data), CBO estimates that maintaining the current performance of the highway system would require $127 billion per year in combined capital spending by federal, state, and local governments.[10] Historically, federal capital spending has constituted about 45 percent of all such spending. If the FHWA's assessment is accurate, and if the federal government

10. See Department of Transportation, Federal Highway Administration and Federal Transit Administration, *2008 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance,* pp. ix, xii. The FHWA's report defines the system's performance in terms of average user costs, including the costs of travel time, operations, and accidents. The FHWA's estimate is similar to the $131 billion (in 2008 dollars) estimated by the Congressionally chartered National Surface Transportation Infrastructure Financing Commission for the average annual spending needed to maintain the current performance of the highway system. See National Surface Transportation Infrastructure Financing Commission, *Paying Our Way: A New Framework for Transportation Finance* (February 2009), p. 53. Unless otherwise noted, figures in the text that are based on the FHWA's spending estimates are expressed in 2010 dollars.

Figure 4.

Total Federal Spending for Highways, in Constant and Nominal Dollars

(Billions of dollars)



Source: Congressional Budget Office based on information from the Department of Commerce, Bureau of Economic Analysis.

funded a share of that total in proportion to its historical average, then the federal portion would be about $57 billion per year. That amount exceeds what the federal government actually spent in 2010 by $14 billion, or about one-third. State and local governments also would need to increase their spending significantly to meet that target.

Fund Projects for Which Benefits Exceed Costs. By the FHWA's estimates, the amount of public spending that could be justified for projects whose benefits outweigh their costs would be $209 billion per year. If the federal government maintained its historical share of funding, federal annual capital spending for highways would need to be about $94 billion, an increase of about $51 billion from the $43 billion spent in 2010; that increase would represent more than a doubling of federal spending.

Selecting projects carefully can increase the highway system's contribution to the performance of the economy. Even within a group of projects for which the benefits exceed the costs, some projects will offer greater returns than others. Systematically ranking and funding projects to identify those with the highest net benefits, and then undertaking those projects, could yield a large share of total possible benefits at a lower overall cost. For example, if benefits had to exceed costs by some stated amount (such as 20 percent or 50 percent), those estimates of future spending would be lower. According to the FHWA's analysis, $188 billion per year would pay for all projects whose benefits outweighed their costs by at least 20 percent; and $165 billion would pay for projects whose benefits exceeded costs by at least 50 percent. In either

scenario, travel delays and user costs would be less than they are currently, and pavement quality would be expected to improve.

The size of returns on investments in infrastructure depends on the investments undertaken and the type and amount of infrastructure already in place. For example, the FHWA groups capital spending into three categories, one each for expanding, enhancing, or rehabilitating highways. According to the FHWA's analysis of future needs, spending for Interstate highways should shift over time, going more toward expansion and less toward rehabilitation if the goal is to sustain the system's performance.[11]

Use Congestion Pricing. If highway users were charged fees that reflected the costs of driving when traffic was especially heavy, the existing infrastructure would be used more efficiently and the demand for future spending would be lower. Specifically, congestion pricing would result in fewer trips whose value to the driver was less than the costs of additional congestion imposed on other drivers. To the extent that some drivers would avoid paying a fee by choosing not to drive during peak hours, congestion would be reduced; the eventual outcome would be less need for spending on highways.[12]

According to the FHWA's estimates, widespread use of congestion pricing would reduce by nearly one-third the amount of capital investment needed to sustain the operational performance and condition of the highway system—from $127 billion per year to about $85 billion per year. The federal share, at the historical average of 45 percent, would be $38 billion—a little less than federal highway spending in 2010. Congestion pricing could reduce spending by about one-quarter, from $209 billion to $158 billion, for the set of projects for which benefits exceed costs. On the basis of historical averages, the federal share of that figure would be $71 billion.

How Should the Federal Government Direct the Use of Highway Funds?

A second major issue facing the Congress is how best to direct federal spending for highways. From the point of view of economic efficiency, which level of government directs the use of highway funds should depend on who will benefit from the projects and who will bear the costs. The level of government with the incentives and information to weigh all of the costs and benefits is best positioned to make efficient decisions about highway investment.

If guided by that general principle, the federal government would select highway projects of national importance that provide broad geographic benefits, whereas state and

11. Department of Transportation, *2008 Status of the Nation's Highways, Bridges, and Transit,* Chapter 8.

12. For a comprehensive discussion of the benefits and challenges of congestion pricing, including options for its design and implementation for highways, see Congressional Budget Office, *Using Pricing to Reduce Traffic Congestion* (March 2009).

local governments would be better situated to select highway projects if the benefits accrue primarily in their jurisdictions and their taxpayers would fund the projects. For projects that involve a mix of federal, state, and local benefits, efficiency is enhanced when decisionmaking can be coordinated among federal, state, and local governments and the costs can be shared. In contrast, transfers from the federal government may cause state and local governments to undertake some projects for which the costs exceed the benefits simply because federal money is available to be spent.

Some mechanisms that have been proposed would change the way the federal government directs a portion of spending for infrastructure, including highways, by placing decisions about which projects to fund in the hands of a federal infrastructure bank that selects projects on the basis of cost–benefit analysis rather than according to the geographic distribution of funds among the states. Concerns about project selection also have motivated federal and state initiatives to encourage private entities to finance highways.

Federal funds to support highway projects currently are provided in three different forms: grants to states; loan guarantees and other forms of credit assistance to states and localities; and tax preferences for debt issued by state and local governments for their own projects or for those undertaken by private entities on behalf of the public sector. In addition, partnerships between state and local governments and private entities sometimes use federal funds to support highway projects.

Federal Grants to States

About four-fifths of the funding appropriated to DOT for highways under SAFETEA-LU from 2005 to 2009 was distributed according to formulas. Those formulas allocated spending to states through various programs for constructing, improving, and maintaining highways and bridges; enhancing safety; reducing pollution; planning; and promoting alternative forms of transportation.[13] The formulas apply criteria that typically are related to the use and extent of state roadways (such as each state's share of highway lane-miles, vehicle-miles traveled, or fuel use) to determine a state's share of funds. An additional formula program, the Equity Bonus program, guarantees that each state's share is at least a specified percentage of that state's contributions to the highway account of the Highway Trust Fund. Once the Congress determines the formulas and the grants have been allocated, the states select the projects.

In most cases, the law requires that state and local governments match some portion—generally 20 percent—of federal highway funds.[14] If capital spending is anticipated to provide predominantly local benefits, however, the federal government

13. See Department of Transportation, Federal Highway Administration, *Highway Statistics 2009* (December 2009), Table FA-4A, for a list of 2010 apportionment formulas. For descriptions of various programs see Department of Transportation, Federal Highway Administration, "Fact Sheets on Highway Programs," www.fhwa.dot.gov/safetealu/factsheets.htm.

14. In general, the match is smaller for some projects on Interstate highways and for projects in states with high concentrations of tribal or federal land.

could place more of the responsibility of paying for highway infrastructure with state and local governments by increasing the required matching rate. Evidence suggests that if federal spending decreases, state spending will increase somewhat. Confirming earlier analyses, the Government Accountability Office has reported that states reduced their own funding to offset roughly half of the increase in the federal highway grants that occurred during the 1990s.[15] Effectively, although an 80 percent federal contribution might be required to induce state and local spending on some projects that generate primarily national benefits, a smaller federal contribution might have been sufficient to foster state and local spending on most projects. Raising the state and local matching rate above 20 percent would reduce the ability of those governments to substitute federal grants for their own funding and thereby divert to other uses some funds they otherwise would have spent on highways.

Moreover, formula grants are not closely linked to the performance of the transportation system. Although the current formulaic approaches to dividing federal resources for highways among the states may address notions of equity, the formulas do not necessarily promote the most economically advantageous projects. For example, the economic benefits of highway spending may be greater in areas with more traffic congestion or in areas of greater anticipated population growth and economic activity, but the current approach may direct federal resources to other areas. Similarly, costs to construct and improve highways could depend more on population density and geographic features than on other factors that are more important in the formulas, such as the size of a state's highway system and its recent volume of highway use.[16]

The remaining one-fifth of highway funding provided by SAFETEA-LU was allocated through mechanisms other than formulas to special-purpose programs and specific projects. The funds were divided among states on the basis of criteria specified in law or at the discretion of the Secretary of Transportation. About half of that amount was directed by the Congress to individual projects, such as building a specific bridge or widening a particular stretch of road. The Congress may specify particular projects for reasons it deems appropriate—equity, efficiency, or some other consideration—but to the extent that the selection of those projects gives little weight to efficiency, the federal government could promote efficeincy by encouraging the funding of high-value projects through more systematic analyses of costs and benefits.

On occasion, highway funding has been distributed competitively to states and localities that apply for DOT funding. ARRA authorized $1.5 billion for the Transportation Investment Generating Economic Recovery program (known as TIGER),

15. See Government Accountability Office, *Federal-Aid Highways: Trends, Effects on State Spending, and Options for Future Program Design*, GAO-04-802 (August 2004), www.gao.gov/products/. GAO-04-802.

16. For a discussion of the importance of performance metrics for transportation, see National Transportation Policy Project, *Performance Driven: A New Vision for U.S. Transportation Policy* (Washington, D.C.: Bipartisan Policy Center, June 2009), www.bipartisanpolicy.org/library/report/performance-driven.

which provided grants that would fund up to 100 percent of the cost of various highway, bridge, transit, rail, and port projects. DOT chose state and local recipients on the basis of the results of cost–benefit analyses, among other criteria, and recipients had to demonstrate a significant benefit from the project for the nation, a region, or a metropolitan area.

Federal Loans and Loan Guarantees

The federal government also directs resources to state and local governments by providing and guaranteeing loans for infrastructure. Such credit assistance reduces state and local governments' costs because it allows borrowing at interest rates that are lower than otherwise might be available. Specifically, in providing loans and loan guarantees, the federal government assumes the risk that would be borne by a lender and paid for by a borrower in the form of higher interest rates.

The cost to the federal government of providing loans and loan guarantees largely depends on the cost of each loan and the number of loans made:

- The cost of each loan or loan guarantee depends on the creditworthiness of the projects financed by the loan and the structure of the loan. Creditworthiness depends on the borrower's likelihood of defaulting on the loan and on the lender's prospects for recovering the amounts owed if a default occurs. The loan's cost also depends on the structure of the loan, including the loan's period of repayment; the effective interest rate, including fees; whether the debt is subordinate to other debt (meaning that it is repaid only after other debts are repaid in the event of default); and whether the borrower can choose to defer payments to the federal government.

- The number of loans and loan guarantees made depends on demand and on limits on the amount of loans or loan guarantees that the government is authorized to make. Demand for loans and loan guarantees depends on the size of the subsidies provided and on how those subsidies compare with subsidies offered through the tax code and by other federal programs for financing infrastructure. Demand also is limited by the total value of loans that the federal government is authorized to make or guarantee. In some cases, appropriation acts specify a maximum amount of loans or guarantees. For most credit programs, however, the budget authority appropriated for the subsidy cost ultimately limits the number of loans issued or guaranteed.

The Federal Credit Reform Act of 1990 (FCRA) requires the subsidy costs of loans and loan guarantees to be calculated on an accrual basis—unlike most items in the federal budget, which are calculated on a cash basis—and those subsidy costs must be recorded in the budget when loans are disbursed and loan guarantees are committed to. As a result, the lifetime cost of a credit commitment is recognized in the year in which the loan or loan guarantee is made. The budgetary impact of most federal credit programs is calculated by that method.

The lifetime cost of a direct loan or loan guarantee is calculated as the net present value of expected cash flows over the life of the loan or loan guarantee (including any fees paid by the borrower to the government).[17] Under FCRA, net present value is estimated by discounting cash flows back to the time a loan is disbursed or commitment of a loan guarantee is made using the interest rates on Treasury securities of comparable maturity. (For example, cash flows that will occur one year after disbursement are discounted using the rate on one-year Treasury securities; flows that will occur five years out are discounted using the five-year rate; and so on.)

The budgetary cost of a credit program tends to be lower than the budgetary cost of an economically equivalent grant or benefit payment because FCRA accounting does not provide a comprehensive measure of the economic cost of credit assistance. Through its use of Treasury rates for discounting, FCRA implicitly treats market risk—a type of risk that investors require compensation to bear—as having no cost to the government. Specifically, FCRA's procedures incorporate the expected cost of defaults on government loans or loan guarantees but not the cost of uncertainty about the magnitude of those defaults. Investors require compensation (a "market risk premium") to bear certain types of risk. The market risk premium on a risky loan or guarantee compensates investors for the increased likelihood of sustaining a loss when the overall economy is weak and resources are scarce; that likelihood is reflected in higher expected returns and lower prices for assets that carry more market risk. Taxpayers bear the investment risk for federal credit obligations. When a borrower defaults on a loan, the loss ultimately must be covered by higher taxes or by reduced spending on other programs. By omitting the cost of market risk and thereby understating the economic cost of federal credit obligations, FCRA accounting may lead policymakers to favor credit assistance over other forms of aid that have a similar economic cost.[18]

An important aspect of the budgetary treatment of federal credit programs is that agencies must receive an appropriation equal to the estimated subsidy cost before they can make or guarantee a loan. In the case of direct loans, FCRA specifies that loan repayments are unavailable for future spending; those repayments are already accounted for in the estimated net present value of the loan, so they are not available to "revolve" into new loans. Such a revolving fund is the model on which many state infrastructure banks are based. However, for the federal government, those repayments represent part of the financing for the original loans and are implicit in the

17. Present value is a single number that expresses a flow of current and future payments in terms of an equivalent lump sum received today. Thus, a $100 million, 30-year loan disbursed in 2011 that is determined to have a subsidy cost of 10 percent would be recorded as $10 million in budget authority and $10 million in outlays on the budget that year. The cash flows repaid to the government over the next 30 years (principal and interest) would not be recorded on the budget (except for credit reestimates, which are adjustments made to the original subsidy rate).

18. Moreover, subsidy rates computed under FCRA exclude federal administrative costs, even those that are essential for preserving the value of the government's claim to future repayments, such as loan servicing and collection costs; those costs are accounted for separately in the budget.

subsidy calculation. Allowing loan repayments to be used for new loans—without any additional appropriation to cover the subsidy costs of the new loans—would raise the effective subsidy cost on the original loans to 100 percent (the same as for grants).

Because the federal budget records the lifetime cost of loans and loan guarantees rather than the initial amount of lending, loans and loan guarantees with a given budgetary cost lead to more money flowing initially to projects than if that same budgetary cost was incurred through grants or other direct payments to the states. As a result, credit assistance initially provides greater leverage for federal funds than grants and other direct payments do. Unlike grants and other direct payments, however, funds borrowed under credit assistance programs ultimately must be repaid by state and local governments or by users of the projects that are financed by the credit.

A program created by the Transportation Infrastructure Finance and Innovation Act of 1992 (TIFIA) provides credit assistance for highways and other types of surface transportation infrastructure. Some recent proposals would create a federal infrastructure bank to offer similar assistance under a different organizational structure.[19] Whether federal credit assistance is provided through a federal program or a special entity, however, it involves similar budgetary costs to the federal government. Therefore, differences between the existing TIFIA program and an infrastructure bank would be primarily operational, concerning the scope of infrastructure to fund, the kinds of credit assistance to provide, the selection process for projects, the amount of leverage to provide for federal funds, and the amount of private-sector participation to encourage or require.

Transportation Infrastructure Finance and Innovation Act. The TIFIA program offers federal loans to qualifying state and local projects for up to 35 years at the interest rate on a Treasury security of similar maturity. (For example, 4.26 percent was the rate for a 30-year Treasury bond as of May 5, 2011.) It also provides loan guarantees and lines of credit. TIFIA assistance can be used for up to one-third of a project's costs.

DOT administers the TIFIA program and selects projects on the basis of criteria, established by statute, that include an analysis of a project's benefits and costs and whether it has national or regional significance. Loans made by the federal government at Treasury rates for risky projects represent taxpayer-financed subsidies, and riskier projects involve larger subsidies. TIFIA loans are restricted to projects that are considered relatively safe—as evidenced by a high rating from a credit-rating agency—to keep the subsidy rate relatively low. (Subsidy rates average around 10 percent.) As access to credit became more restricted during the recent financial crisis, demand for TIFIA assistance outpaced availability, and project selection became competitive.

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19. Other government programs that provide credit assistance for infrastructure projects include the Environmental Protection Agency's grants for states' revolving loan funds for water projects and states' infrastructure banks, all of which are capitalized with federal funds and administered by states.

Several features of the TIFIA program attract private finance. The program subsidizes credit assistance, and TIFIA loans encourage private-sector participation by having lower priority for repayment than private debt in the event of a default.[20] TIFIA's loan terms also allow private managers to defer repayment for up to five years after a project's completion—a valuable benefit, for example, if there is uncertainty about how much toll revenue a highway project will generate.

From fiscal year 2005 through fiscal year 2010, the TIFIA program provided about $5 billion in loans for highways, transit, and intermodal projects, supporting $18 billion worth of projects. As authorized by SAFETEA-LU and its extensions, TIFIA received about $732 million of budget authority over that period.

Proposals for a Federal Infrastructure Bank. In recent years, the Congress has considered several proposals for establishing a federal bank to fund infrastructure projects through loans and grants. The President's budget requests have suggested creating a similar entity. In principle, an infrastructure bank could use any of several methods to finance projects, including providing federal loans, lines of credit, and guarantees for private loans. Moreover, some proposals suggest mechanisms for disbursing grants to fund projects that would not create enough revenue to repay a loan.

An infrastructure bank could focus on financing transportation infrastructure, or it could define infrastructure more broadly to include sewers, wastewater treatment facilities, drinking water supply facilities, broadband Internet access, or even schools. A federal infrastructure bank could be located within an existing federal agency, such as DOT or the Treasury, or it could be created as a separate entity. Most proposals would have such a bank select projects on merit, considering, for example, their likely impact on the national or regional economy.

Some financial and transportation analysts contend that making funds available through an infrastructure bank would encourage state and local governments to work together across jurisdictional lines and transportation modes to plan and complete comprehensive projects. For example, an infrastructure bank could participate in developing projects that involve more than one mode of transportation—although the Congress could encourage this otherwise through language authorizing more funding for mass transit or other projects involving more than one mode of transportation. As another example, an infrastructure bank could fund cross-jurisdictional projects by helping different government entities gain coordinated access to credit markets.

Other analysts point to the potential capacity of an infrastructure bank to use cost–benefit analysis effectively in project selection. The capacity of state and local governments to complete such analyses varies significantly, and proponents believe

20. However, upon bankruptcy, insolvency, or liquidation of an asset backed by a TIFIA loan, that loan would have equal priority with private debt in its claim for repayment.

that a bank could help bolster that capacity nationwide, thus leading to better selection of projects overall.

In addition, some financial and transportation analysts suggest that an infrastructure bank could encourage more private funding of infrastructure projects by using funds more efficiently than occurs under the current system of distributing formula grants. By providing federal funds that reduce the amount of private investment a project requires, for example, an infrastructure bank could allow projects that rely on tolls or other funding mechanisms to offer returns sufficient to attract private-sector participation. As a result, private-sector entities, in conjunction with state and local governments, could choose to fund projects that, in the absence of federal financial assistance, would not be built.

Regardless of how it was constituted, however, an infrastructure bank would be unlikely to supplant the established methods of distributing most federal infrastructure funds. One limitation is that few surface transportation projects are good candidates for bank funding because they mostly do not involve toll collections or other mechanisms for charging users directly to repay construction loans. Furthermore, about three-quarters of current federal funds spent on surface transportation are used to maintain existing infrastructure. Those projects are not good candidates for funding from an infrastructure bank because, in general, they would not generate revenue that could be used to repay loans.

Tax Preferences

The federal government provides several types of tax preferences for infrastructure financing. Tax-exempt bonds use the well-established tax preference of paying interest that is not subject to federal income tax. Such bonds can be issued to finance either the functions of state and local governments or certain projects undertaken by the private sector. A second, more recent type of tax preference for infrastructure financing is used by tax credit bonds. Such bonds come in two basic forms: those that provide a tax credit to the bondholder in lieu of interest and those that provide a tax credit to the bond issuer, payable by the Secretary of the Treasury. Tax-exempt and tax credit bonds alike transfer some of the cost of borrowing from state and local governments and the private sector to the federal government in the form of forgone federal tax revenues.

In contrast to grants and credit assistance, tax preferences are outside the annual appropriation process, so the federal government may exercise less oversight over their allocation. Also, because forgone revenues do not appear directly in the federal budget, the use of tax preferences can mask the full scope of the government's financial activities. Moreover, some tax preferences are an inefficient way to deliver a federal financial subsidy to state and local governments. With a tax exemption for interest income, for example, state and local borrowing costs are reduced by significantly less than the federal revenues that are forgone, and the remainder of that tax expenditure

accrues to bond buyers in the highest income tax brackets. Modifying federal tax preferences for infrastructure financing by increasing the use of tax credit payments made directly to borrowers can improve both budgetary practice and economic efficiency.[21]

Tax-Exempt Bonds. Federal tax exemptions for interest income from government bonds (and qualified private activity bonds—bonds issued by a government on behalf of a private entity—under certain circumstances) enable issuers of such debt to sell bonds that pay lower rates of interest than do taxable bonds with the same maturity, risk, and so on. Because purchasers of tax-exempt bonds demand a return that is at least as high as the after-tax yield they could obtain from comparable taxable bonds, the amount by which the return from tax-exempt bonds is lower than the yield on comparable taxable bonds depends on the income tax rate of the marginal (or market-clearing) buyer of tax-exempt bonds.[22]

The amount of subsidy that state and local borrowers receive by issuing tax-exempt bonds is largely determined indirectly by the federal tax code. Data on tax-exempt and taxable bond transactions allow estimation of the marginal tax rate faced by the market-clearing buyer of tax-exempt bonds and, thus, the amount that states and localities save in financing costs by issuing such bonds. In 2007, the average yield on (taxable) high-grade corporate bonds was 5.6 percent, and the average yield on tax-exempt municipal bonds of similar creditworthiness was 4.4 percent—a difference of 1.2 percentage points, or approximately 21 percent of the taxable return. That 21 percent also represents the marginal tax rate at which an investor would be indifferent between purchasing a taxable bond yielding 5.6 percent and a tax-exempt bond yielding 4.4 percent. Thus, the market-clearing investor in 2007 paid income tax at a rate of 21 percent—which is also the average implicit income tax rate observed for such buyers of tax-exempt bonds during the two decades just before that, according to the staff of the Joint Committee on Taxation.[23] Investors' appetite for risk, the desired time-horizon of their investments, and other bond-specific features can also influence the demand for taxable and tax-exempt debt. The implicit tax rate of the marginal buyer of tax-exempt bonds fell to an average of about 15 percent per year from 2008

21. For a more complete discussion of how federal tax preferences operate in financing investment in highways and other infrastructure, see Congressional Budget Office and Joint Committee on Taxation, *Subsidizing Infrastructure Investment with Tax-Preferred Bonds* (October 2009).

22. Issuers of tax-exempt debt need to increase the interest rate they pay until the pool of bond purchasers is large enough to purchase all of the debt the issuers are bringing to market. The marginal buyer of tax-exempt bonds will typically demand a higher tax-exempt yield than someone in a higher income tax bracket does. Issuers raise the interest rate enough that the yield on tax-exempt bonds is competitive with the rate of return on taxable instruments (after taking taxes into account) to draw in bond buyers from lower income tax brackets. The market-clearing buyer thus determines the interest rate that issuers of tax-exempt bonds must pay—and, implicitly, the savings in financing costs that issuers enjoy relative to issuing taxable debt.

23. See Joint Committee on Taxation, *Present Law and Issues Related to Infrastructure Finance*, JCX-83-08 (October 24, 2008), p. 28, www.house.gov/jct/x-83-08.pdf.

to 2010 because turbulence in financial markets led investors to favor less risky debt—such as U.S. Treasury securities—which reduced the yield on those securities relative to tax-exempt debt.[24]

However, the loss in federal revenues results from both the market-clearing investor and investors in higher income tax brackets. Several analysts suggest that about 80 percent of the tax expenditure from tax-exempt bonds translates into lower borrowing costs for states and localities, with the remaining 20 percent taking the form of a federal transfer to bondholders in higher tax brackets.[25] If 20 percent of the federal revenue loss from tax-exempt bonds accrued to that group without lowering borrowing costs, and if the outstanding stock of tax-exempt debt for infrastructure during the 2010–2014 period instead took the form of tax credit bonds designed to deliver the same amount of interest subsidy per year, the federal government would save more than $32 billion (20 percent of an estimated $162 billion in tax expenditure).[26] Moreover, a direct appropriation of funds would purchase more infrastructure per dollar of impact on the federal budget.

Tax Credit Bonds. Starting in the late 1990s, the Congress turned to tax credit bonds as a way to finance public expenditures. In their early form, tax credit bonds allow bondholders to receive a credit against federal income tax liability instead of—or in addition to—the cash interest typically paid on the bonds. The amount of tax credit equals the credit rate, which is set by the Secretary of the Treasury, multiplied by the face amount of the holder's bond. Because bondholders pay taxes on the amount of credit they claim, tax credit bonds do not, in contrast to tax-exempt debt, provide a revenue transfer to investors in high marginal tax brackets. As a result, the revenues forgone by the federal government through tax credit bonds reduce state and local borrowing costs dollar for dollar. Tax credit bonds also allow the amount of federal subsidy to be determined independent of other federal policy decisions (such as marginal income tax rates). Thus, tax credit bonds offer the promise of increasing

24. CBO calculation based on Council of Economic Advisers, *Economic Report of the President* (February 2011), Table B-73, p. 276, www.gpoaccess.gov/eop/.

25. See Dennis Zimmerman, *The Private Use of Tax-Exempt Bonds: Controlling Public Subsidy of Private Activity* (Washington, D.C.: Urban Institute Press, 1991), pp. 103–104; and James Poterba and Ramirez Verdugo, *Portfolio Substitution and the Revenue Cost of Exempting State and Local Government Interest Payments from Federal Income Tax*, Working Paper 14439 (Cambridge, Mass.: National Bureau of Economic Research, October 2008), www.nber.org/papers/w14439.

26. In addition to being an inefficient means of providing a subsidy for debt financing, tax-exempt bonds also are regressive: The amount by which the benefits captured by an investor exceeds the issuer's cost savings increases with the investor's marginal tax rate. One study estimates that eliminating the tax exemption on state and local debt would reduce after-tax income primarily for taxpayers in the highest income quintile—and particularly for individuals in the top 1 percent of the income distribution. See Leonard Burman, Eric Toder, and Christopher Geissler, *How Big Are Total Individual Income Tax Expenditures, and Who Benefits from Them?* Discussion Paper 31 (Washington, D.C.: Urban Institute, December 2008), p. 11, www.urban.org/publications/1001234.html.

the efficiency and equity with which federal resources are allocated to support infrastructure and other investments.

ARRA authorized Build America Bonds, a new type of tax credit bond that was sold only in 2009 and 2010. State and local governments were authorized to issue Build America Bonds either as traditional tax credit bonds or, if certain conditions were met, as direct-pay tax credit bonds (known as qualified Build America Bonds). In contrast to earlier tax credit bonds, Build America Bonds have an interest rate (or coupon) that is set by the issuer rather than by the Secretary of the Treasury. In the direct-pay scenario, a credit equal to 35 percent of each interest payment could be claimed by the issuer in lieu of a tax credit going to the bondholder. Because state and local governments issuing direct-pay Build America Bonds are not liable for taxes on that credit, they pay less interest than they would for Build America Bonds that provide the credit to the bondholder. As a result, the direct-pay version of Build America Bonds proved to be the one used by issuers. Sales of those bonds financed $38 billion in transportation spending in 2009 and 2010.[27]

Direct-pay tax credit bonds offer several advantages over other types of tax-preferred bonds. Making a payment directly to state and local governments to compensate them for the interest they pay on a direct-pay tax credit bond is a more cost-effective way to provide a federal financing subsidy than offering a tax exemption on interest income. And unlike other tax preferences, interest subsidies on direct-pay bonds appear as outlays in the federal budget, making the cost of that financial subsidy more transparent and, in principle, enabling comparison with other federal outlays for the same purposes. Also, because the yields provided to holders of direct-pay tax credit bonds are similar to the yields of other taxable securities, direct-pay tax credit bonds are more attractive to tax-exempt entities than other tax credit bonds and thereby potentially increase the pool of funds available to state and local governments to finance their investments in infrastructure and other activities.

Public–Private Partnerships

Public and private financing are distinguished by the entity that issues debt or raises equity to provide the funds for a project. In the traditional approach to building highways, a state or local government uses its own tax receipts, federal grants, public bond issues, and sometimes toll revenues to cover the costs of construction. In public–private partnerships that include private financing, the private partner enters into contracts with a state or local government to build and finance a highway in exchange for future payments from the public sector or the right to collect toll revenues. To finance construction, the private entity usually raises equity or borrows in the private capital market. It does so with the expectation that some combination of future toll revenues and payments from state and local governments will cover the project's costs, which include debt payments and a market return to equity holders.

27. Section 301 of the Hiring Incentives to Restore Employment Act extended the direct-pay provision to other tax credit bonds: new clean renewable energy bonds, qualified energy conservation bonds, qualified zone academy bonds, and qualified school construction bonds (also authorized by ARRA).

Although private sources can provide additional financing for infrastructure, that financing needs to earn a return over time—and the ultimate sources of payment for the return on private financing are the same as the sources of public financing, namely taxes or user fees. Therefore, private financing does not provide truly new resources for infrastructure investment.

Still, an argument is sometimes made that public–private partnerships can accelerate the availability of funds for infrastructure investment by tapping private capital markets in ways that governments cannot or will not. That contention holds only in the context of the legal constraints that states and localities face and in the context of their budgetary practices. For example, many states and localities have statutory or constitutional limits on borrowing, and budgetary practices used to assess borrowing generally include standard debt instruments but may not include other types of future obligations, such as those made through public–private partnerships. Although some limits are informal or easily bypassed, many limits cannot be raised without voter approval or a legislative supermajority. When limits cannot be raised, states may turn to private debt or equity to finance roads. Traditional financing is therefore restricted not only by constituent aversion to taxes, which provide the stream of revenues that make bond issuance possible, but also by statutory or constitutional limits on borrowing.

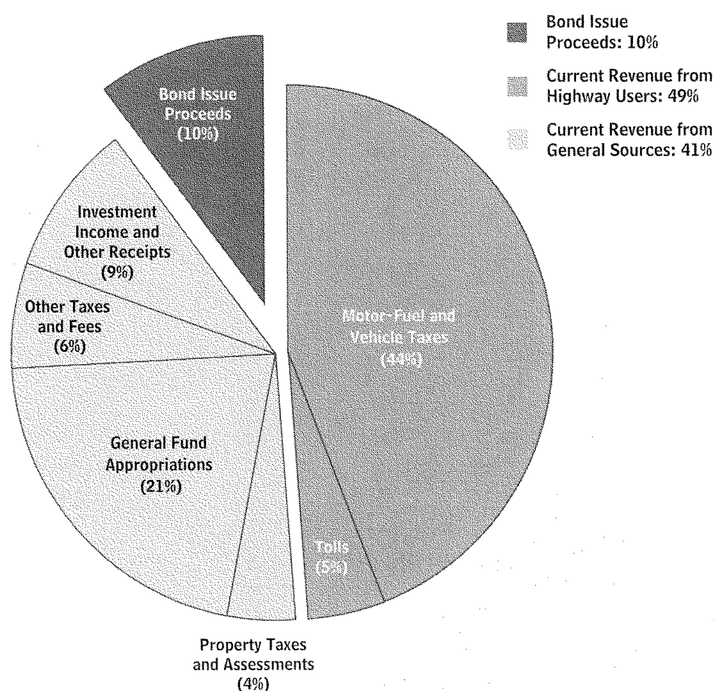
Several privately financed highway projects that relied on toll revenues have struggled financially, beset by inaccurate revenue projections and encumbered with high debt service payments. As a result, subsequent projects that are still under construction have been put together differently, reducing the private partner's exposure to the uncertainty of demand for driving on the highway and keeping down debt service payments, which have amounted to the largest continuing cost for past projects with private financing. States more commonly offer private partners state revenues—so-called availability payments—instead of, or in addition to, tolls; in doing so, they assume a part of the risk that tolls will fall short of expectations. Project debt service payments are being reduced by increasing the amount of public financing through state and federal programs, such as the use of private activity bonds and the federal TIFIA program. Those changes have brought public–private partnerships with private financing more in line with the traditional methods of financing highway construction.

How Should the Federal Government Raise Funds for Highways?

About 10 percent of all funding for highways, by all levels of government, comes from issuing bonds (see Figure 5). The remaining 90 percent comes from the combination of current revenue collected from highway users and, to a slightly lesser extent, current revenue collected from general sources. Of course, all of the costs of building and

Figure 5.

Sources of Funding for Highways, All Levels of Government, 2008



Source: Congressional Budget Office based on Department of Transportation, Federal Highway Administration, *Highway Statistics 2008* (December 2009), Table HF-10.

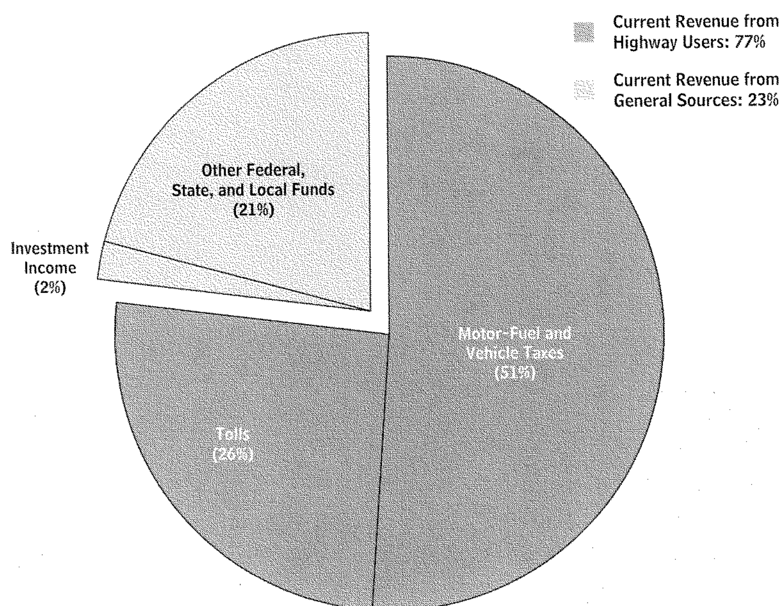
maintaining highways are ultimately borne by users and taxpayers, regardless of whether governments or private entities pay for highways now or borrow funds and repay them over time. About three-quarters of the amount paid for debt service on bonds comes from taxes and tolls imposed on highway users; the balance comes from general revenues and interest income (see Figure 6).

Approaches to funding highways can be evaluated in terms of equity and economic efficiency. Equity is a subjective attribute that can be assessed in several ways. Observers of highway funding often gauge equity by considering the share of funding that is obtained from taxes paid by highway users (rather than from general taxpayer funds), from people in households that fall into various income categories, or from people in rural versus urban households.

The economic efficiency of a funding approach depends partly on its effects on users' travel behavior and partly on what it costs to implement. Charging users for the costs

Figure 6.

Sources of Funding for Paying Debt Service on Bond Issues, All Levels of Government, 2008



Source: Congressional Budget Office based on Department of Transportation, Federal Highway Administration, *Highway Statistics 2008* (December 2009), Table SB-3.

Note: Excludes proceeds from sales of other bonds.

that their travel imposes on society would create incentives for people to limit highway use to trips for which the benefits exceed the costs, thus reducing or eliminating overuse of highways and helping identify the economic value of investments in highways. However, the costs of collecting and enforcing such user charges also influence the efficiency of that approach.

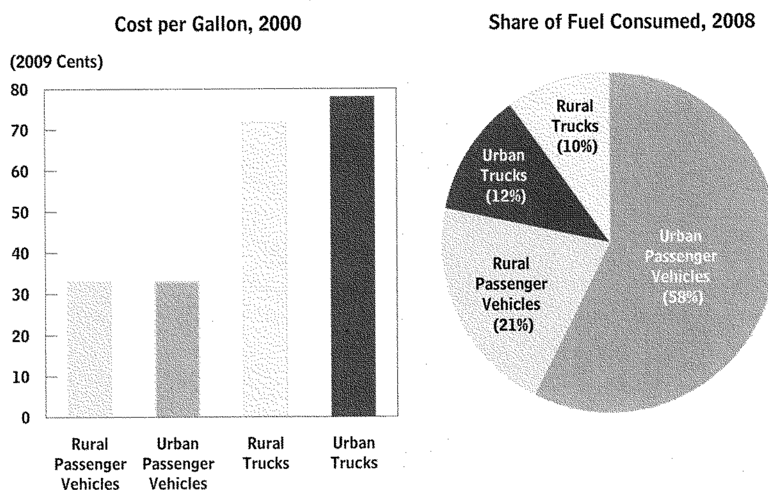
User Charges

Economic efficiency is promoted when highway users are charged according to the marginal (or incremental) costs of their use, including external costs that are imposed on society. A combination of a fuel tax and a mileage-based tax (a VMT tax) that accounts for the type and weight of a vehicle and the location and time of its use could provide incentives for reducing the full range of driving's social costs and could generate funds for federal spending on highways.

The external costs of highway use vary widely depending on the characteristics of a vehicle and where it is driven. Some external costs are associated directly with the use

Figure 7.

Estimated Fuel-Related Costs and Fuel Consumed in Various Years



Sources: Congressional Budget Office based on Ian W.H. Parry, "How Should Heavy-Duty Trucks Be Taxed?" *Journal of Urban Economics,* vol. 63, no. 2 (March 2008), p. 660; and Department of Transportation, Federal Highway Administration, *Highway Statistics 2008* (December 2009), Table VM-1.

Notes: Passenger vehicles have two axles and four tires and include automobiles and light trucks (pickup trucks, minivans, and sport-utility vehicles).

Fuel use shares exclude motorcycles and buses.

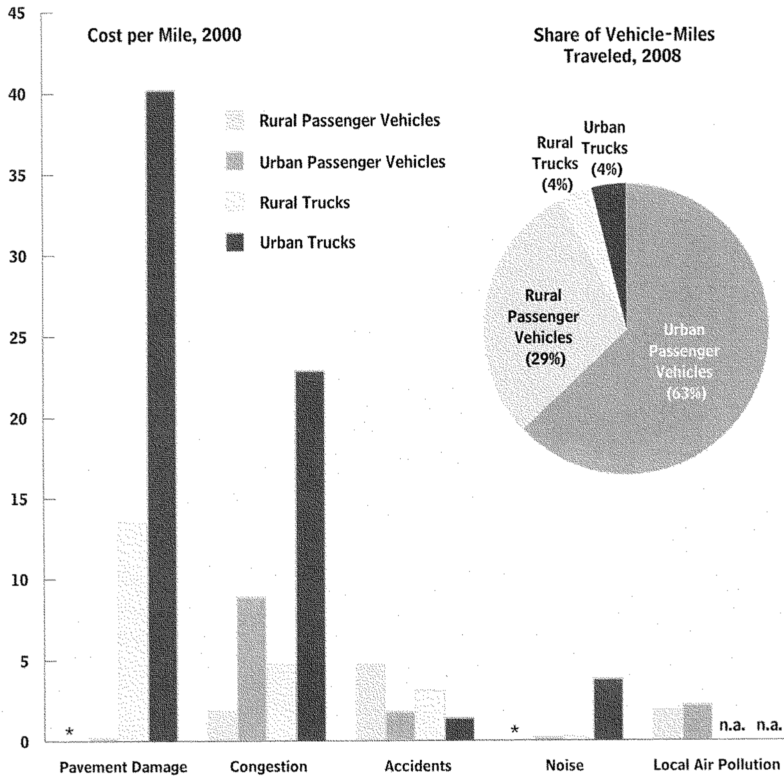
Local air pollution costs are classified as mileage related for passenger vehicles and fuel related for trucks.

of motor fuel, such as the costs of local air pollution from trucks, climate change, and dependence on foreign oil. Those costs are estimated to average more than 30 cents per gallon for passenger vehicles and more than 70 cents per gallon for trucks (see Figure 7). Other external costs are related to the miles traveled by vehicles, such as the costs of road congestion, pavement damage, and accidents. Although the external costs imposed on society by trucks are greater than those imposed by passenger vehicles on a per-mile basis, the much higher volume of passenger vehicle travel means that those vehicles also contribute substantially to external costs from vehicle-miles traveled (see Figure 8). Specifically, passenger vehicles account for more than 90 percent of vehicle-miles traveled, with passenger vehicles in urban areas alone accounting for more than 60 percent. Passenger vehicles' contribution to traffic congestion in urban areas imposes estimated costs of about 10 cents per mile, on average,

Figure 8.

Estimated Mileage-Related Costs and Vehicle-Miles Traveled in Various Years

(2009 cents per mile)



Sources: Congressional Budget Office based on Department of Transportation, Federal Highway Administration, *1997 Federal Highway Cost Allocation Study Final Report* (1997), Tables V-22 (noise), V-23 (congestion), V-24 (accidents), and V-26 (pavement damage); *Addendum to the 1997 Federal Highway Cost Allocation Study Final Report* (May 2000), Table 13; and *Highway Statistics 2008* (December 2009), Table VM-1.

Notes: Passenger vehicles have two axles and four tires and include automobiles and light trucks (pickup trucks, minivans, and sport-utility vehicles).

Mileage shares exclude motorcycles and buses.

Local air pollution costs are classified as mileage related for passenger vehicles and fuel related for trucks.

* = less than 0.5 cents per mile; n.a. = not applicable.

constituting one of the largest sources of total external costs of motor vehicle use. Estimates of pavement damage by trucks, the largest per-mile external cost of truck use, average roughly 15 cents and 40 cents per mile in rural and urban areas—making those vehicles another significant source of external costs, even though truck travel represents less than 10 percent of all miles traveled. For different trucks, pavement damage costs vary widely, depending on the weight of the truck and the number of axles over which the weight is distributed. Accidents, noise, air pollution, and other fuel-related costs from passenger vehicles and trucks represent smaller shares of external costs.

Just as the external costs of highway use are related to fuel use and miles traveled, user charges can take the form of fuel taxes and mileage-based fees. Those charges differ in the administrative costs they entail, how efficiently they match the external costs that users impose, and in the extent to which they are borne by people in different income groups or different locations.

Fuel Taxes. Viewed according to different conceptions of equity, fuel taxes offer a mix of positive and negative characteristics. They satisfy a "user-pays" criterion, but they also can impose a larger burden relative to income on people who live in low-income or rural households. Fuel taxes impose a burden even on households that do not own passenger vehicles by raising transportation costs, which are reflected in the prices of purchased goods.

Fuel taxes have two desirable characteristics for efficiency: They cost relatively little to implement (the government collects taxes from fuel distributors, and users pay the taxes when they purchase fuel), and they offer users some incentive to curtail fuel use, thus reducing some of the social costs of travel. At best, however, a fuel tax discourages some travel too much and other travel too little, because it does not reflect the large differences in cost for use of crowded roads compared with uncrowded roads or for travel by trucks that have similar fuel efficiency but cause different amounts of pavement damage. Moreover, for a given tax rate on fuels, the incentive to reduce mileage-related costs diminishes over time as more driving is done in vehicles that are more fuel efficient.

VMT Taxes. VMT taxes and fuel taxes have qualitatively similar implications for equity. Like fuel taxes, VMT charges satisfy the user-pays principle, but they impose larger burdens relative to income on people in low-income or rural households. To the extent that members of such households tend to drive vehicles that are less fuel efficient, such as pickup trucks or older automobiles, however, those highway users would pay a smaller share of VMT taxes than of fuel taxes.

VMT taxes would provide stronger incentives than fuel taxes could for efficient use of highways if VMT taxes were aligned with the costs imposed by users, because most of those costs are related to the number of miles driven. Appropriately aligned, VMT taxes could meet various goals, including paying for pavement damage, reducing

congestion (and thus curtailing the need to spend money on highway expansion and highway maintenance), or fostering efficient use with regard to all social costs.

If VMT taxes were intended to maximize or even significantly improve the efficiency of highway use, they would need to vary greatly by vehicle type, by time and place of travel, or both. For example, because pavement damage increases sharply with vehicle weight but decreases with the number of axles on a vehicle, the portion of VMT taxes assessed to maintain pavement could be small or nonexistent for passenger vehicles but substantial for heavy-duty trucks, particularly those with high weight per axle. Similarly, every vehicle would be assessed more to travel on crowded urban roads during peak hours than in off-peak hours or to travel on less congested roads at any time. The rates charged for peak-hour travel would be set in keeping with specific local or regional conditions, including the duration and severity of daily congestion, rather than on the basis of national averages.

VMT taxes' effect on efficiency also would depend on how much it costs to put the taxes in place and to collect the money. Estimates of what it would cost to establish and operate a nationwide program are rough. One source of uncertainty is the cost to install metering equipment in the nation's cars and trucks. Having the devices installed as original equipment under a mandate to vehicle manufacturers would be relatively inexpensive but could lead to a long transition; requiring all vehicles to be retrofitted with devices could be faster but much more costly, and the equipment could be more susceptible to tampering than factory-installed equipment might be. Despite the various uncertainties and impediments, some transportation experts have identified VMT taxes as a preferred option.

The idea of imposing VMT taxes that vary by time and place has raised concerns about privacy because the process of assessing such taxes could give the government access to specific information about how individual vehicles are used. Various approaches have been suggested to allay those concerns, including restricting the amount of travel-related information that could be used for billing or restricting the kind of information conveyed to the government; making devices appealing to the public by allowing businesses to use them to provide other services, such as real-time traffic reports or electronic payment for parking; and allowing users to choose not to pay per-mile charges but to pay higher fuel taxes instead. (Under such proposals, the optional fuel taxes would be set at rates high enough to appeal only to users with the greatest privacy concerns.)

A system of VMT taxes need not apply to all vehicles on every road. Indeed, there are already less comprehensive systems of direct charges for road use: Toll roads, lanes, and bridges are common in the United States, and several states and foreign countries place weight-and-distance taxes on trucks. Expansion of existing systems could focus on highly congested roads or on entry points into congested areas; that targeted approach could cost less to implement if it required relatively simple in-vehicle equipment. Alternatively, the focus could be on specific vehicle types, such as trucks.

Although only 4 percent of the nation's fleet is made up of trucks (excluding light-duty trucks), they account for roughly 25 percent of all costs that highway users impose on others, including almost all of the costs associated with pavement damage.

General Revenues from Taxpayers

Two arguments can be made in support of funding highways with broad-based taxes, such as income taxes: First, the incremental costs of collection would be negligible, and second, large amounts could be raised through small changes in tax rates. The staff of the Joint Committee on Taxation has estimated that raising all tax rates on ordinary individual income by 1 percentage point would yield an average of $48 billion per year from 2012 to 2021—more than all of the current Highway Trust Fund taxes combined.[28] Moreover, funding highways through broad-based taxes meets at least one standard of equity: Such taxes do not impose a larger burden relative to income on rural or low-income users.

In other respects, however, the use of general revenues poses significant disadvantages. In particular, the approach gives users no incentive to reduce the mileage- or fuel-related costs of their highway use, and it does not satisfy the user-pays standard of equity. Moreover, even small increases in existing rates would hamper efficiency by exacerbating existing deviations from efficient prices, thus further distorting many individual decisions. The distorted decisions would include reductions in work and saving, shifting of income from taxable to nontaxable forms, and shifting of spending from ordinary to tax-deductible goods and services.

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28. See Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* (March 2011), p. 139.

Senate Finance Committee Hearing
"Financing 21st Century Infrastructure"
May 17, 2011
Question for Dr. Joseph Kile

Question from Senator Hatch

Question: In your testimony you mention that JCT has estimated that raising all tax rates on ordinary individual income by 1% point would yield an average of $48 billion per year over the next ten years. Recently JCT estimated that in 2009, 51% of taxpayers either had no income tax liability or actually received a check from the federal government in the form of a refundable credit. Are you concerned that using the general fund, which is paid for in large part through federal income taxes, to fund spending on highways will exempt a substantial number of drivers from paying for their use of federal transportation infrastructure? Do you have any concerns that increased reliance on the general fund might promote the illusion that highways are free for many people, at least from a federal standpoint?

Answer: Funding for highway infrastructure ultimately comes from either highway users or the broader population of taxpayers. Whether those funds are raised from taxes imposed on highway users or other taxes affects how efficiently highways are used and the distribution of highway costs among households.

Raising revenues from sources unrelated to transportation, such as from taxes on different types of income that accrue to the Treasury's general fund, does not promote economic efficiency because those sources do not provide incentives for highway users to consider the costs that they impose when they use the highway system.

Economic efficiency is promoted when highway users are charged according to the marginal (or incremental) costs of their use, including external costs that are imposed on society. Most of the costs of using a highway—including pavement damage, congestion, accidents, and noise—depend on the number of miles traveled; the costs of using a highway also include other costs, such as the cost of pollution, which depends on the amount of fuel consumed. Charging users for the costs of their travel creates incentives for people to limit their highway use to those trips for which the benefits exceed the costs. In this way, charging users for the costs of their travel can reduce or eliminate overuse of highways.

Raising revenues from sources unrelated to transportation also affects subjective notions of equity about who bears the cost of paying for highways. One way to gauge equity is by considering the share of funding that is obtained from taxes paid by highway users rather than from general taxpayer funds. (Other ways to evaluate equity are to consider the share of funding obtained from people in households that fall into various income categories or from people in rural versus urban households.) Taxes on transportation-related activities are judged by some analysts to be more equitable because they impose the cost of the highway system on those who benefit from using that system.

MMA The Power of Independence

UNITED STATES SENATE COMMITTEE ON FINANCE

MMA's PERSPECTIVE

FINANCING OF INFRASTRUCTURE AND THE ROLE THE MUNICIPAL MARKET PLAYS

MUNICIPAL MARKET ADVISORS

MATT POSNER
Director

2014 North Milwaukee Avenue, Suite 305,
Chicago, IL 60647

Tel: 773-661-2688
mposner@mma-research.com

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May 17, 2011

INTRODUCTION:

Chairman Baucus, Senator Hatch and Committee members: It is a distinct pleasure that I come before you today to share my perspective on the financing of U.S. infrastructure and the role the municipal market plays. I am Matt Posner, director at Municipal Market Advisors (MMA) that for the past 15-years has been the leading independent research and data provider to the industry.

Founded in 1995, MMA is the leading independent strategy, research and advisory firm in the municipal bond industry. MMA's intelligent approach to timely issues and analysis of market events has proven invaluable to a wide range of clients. As conditions have become more complex and difficult, MMA's recognized ability to concisely comment on the key issues of the market is of critical importance and value. The firm's independent research, data, market coverage and insight educate and inform without bias or product agenda.

Discussions regarding the condition of the United States' infrastructure needs have tended to focus on items consistent with those of 100 years ago – bridges, dams, highways, railroads, water & sewer, transportation hubs and clean water. U.S. infrastructure has generally been the responsibility and in the domain of states and local governments and therefore much has been financed through municipal bonds. Studies by the Society of Civil Engineers have provided staggering estimates of a U.S. in great disrepair and in need of additional funding. The $3 trillion price tag to fix the U.S. is daunting. While today's focus is on traditional infrastructure—the needs of the 19th and 20th century—I would be remiss not to encourage you to also think more broadly of infrastructure in an information, global economy where highways are the internet, clouds are the warehouses, and public wireless connections level the playing field.

The municipal market is not high profile and rarely in the public eye but the role it plays in infrastructure cannot be understated. Over $300 billion bonds last year were issued into the municipal market that went towards financing and maintaining our nation's infrastructure—a large portion of the nation's overall infrastructure spending. Transportation bonds alone last year alone totaled just under $70 billion. While some of the explanation of the market in the last 5-years may be overly technical, a general understanding of it is integral and I look forward to working with any interested parties in aiding this process. MMA believes that working with what we have in place is the proper road to take but there are currently limitations within the current construct that should be rectified. Maintaining a healthy tax-exempt market along with providing issuers new tools is the best and most cost efficient way to support the next generation's infrastructure needs. The situation as it now stands is not dire, but if Congress does not act to support the market, future needs will cost the Federal Government more.

There are currently several existing proposals before Congress that would assist infrastructure finance. MMA supports many of them as we believe that providing issuers a variety of tools to finance projects is a positive. However, we want to remind this Committee that the tax-exempt municipal market remains the most important vehicle to finance infrastructure. We must operate under the assumption that the tax-exempt status of the municipal market exists because it is considered good policy for the Federal government to offer state and local governments favorable borrowing rates. At the same time, there is a limit to just how favorable interest rates should be. After a certain point, it becomes a drain on the taxpayer and over the long-term is a disadvan-

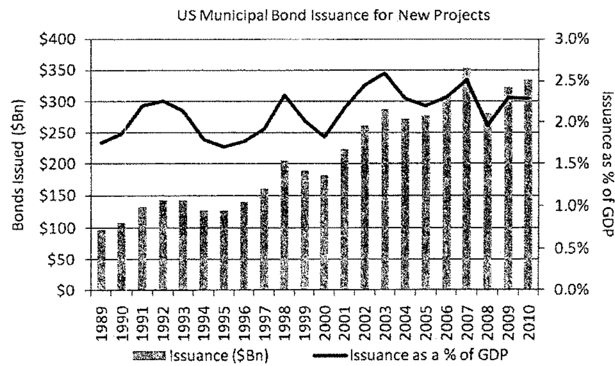
tage to our country. Of recent proposals, there have emerged three general concepts to aid infrastructure finance through capital markets. They have come in the form of a subsidy to the issuer, tax-exemption to the investor or a tax-credit to the investor. All three have upsides and downsides but the central question that is left to policy makers is what the best manner is for money to leave Washington in a fair and equitable way. Step one in order to understand this question better is to understand how the cost of the most used option – tax-exemption – is calculated by the Federal Government. The Joint Committee on Taxation calculates the cost of tax-exemption to the taxpayer but the public does not see the assumptions behind this calculation. If we are to decide the best way to finance infrastructure in the future, we must understand how this number is derived.

The remainder of my testimony will focus on the role of the municipal bond market plays in financing infrastructure and a review of existing programs under current law. I will then explain how the market evolved in recent years beginning with the market collapse concurrent with the worldwide credit crisis that began in 2007. This testimony then turns to current market conditions and how they impacting financing. I will conclude with a series of recommendations that I believe the 112th Congress should seriously consider if this Committee decides to support the municipal bond market in sustaining and advancing infrastructure.

THE ROLE OF THE MARKET & EXISTING PROGRAMS TO SPONSOR INFRASTRUCTURE

There are nearly 65,000 issuers in the municipal market that are predominantly states and local governments. Recent figures identify an estimated $2.8 trillion in outstanding municipal debt. This is debt that aids our communities in meeting budgets and financing society's essential needs. In addition, the average municipal issue size is approximately $30 million, a size unattractive to institutional investors and better suited to individual purchase.

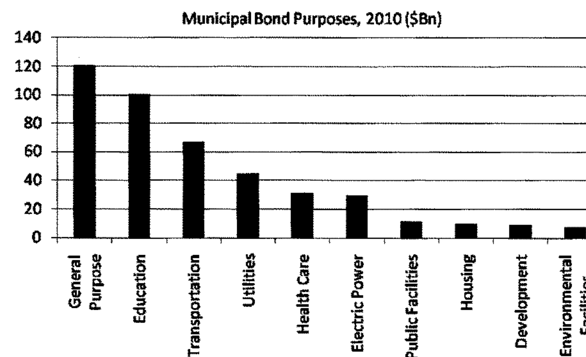
The exact scope in terms of volume that the municipal market plays in financing our nation's infrastructure is difficult to break down into an exact science because of the flexibility associated with the use of the bond pro-



ceeds. A starting place is to look at a combination of new-money bond issues combined with new-money/ refunding finances. The amount has grown in overall volume since 1988 (from just under $250 billion to just over $300 billion) but the percentage of the United States' Gross Domestic Product has remained generally between 2.0% and 2.3%. From this, it appears that the municipal market has provided a relatively consistent share of new infrastructure, regardless of business cycles. If Congress wants to maintain total projects being financed, alternative channels may be needed. In the next few years, issuer's prudent fiscal management may curtail new municipal issuance, amplifying the need for new tools for new projects.

Next, the general obligation (GO) bond is one of the most commonly issued tax-exempt municipal securities and generally used to finance infrastructure projects. From January through April of 2011, GO bonds totaled $26.2 billion of the total $62 billion issued – or 42%. In 2010, GO bonds totaled $147.5 billion of the $433.3 billion issued – 34%. A GO bond is secured by the full faith, credit and taxing power of the issuer.

We do have statistics on bonds issued specifically for development, electric power, transportation and utility projects, separate from GO issuances. In January through April of this year, these categories made up $15.5 billion, or roughly 25% of all bonds issued during this time. From 2006 through 2010, these four categories represent 26.5% of all bonds issued each year, averaging $109.46 billion annually. Again, these figures do not



include GO bonds issued for infrastructure projects, but combining the two begins to offers another way to look at how large a role the market plays in building and maintaining the country.

There are also a number of Federal and state-sponsored debt financing programs that benefit from the tax-exemption and encourage investment in infrastructure. GARVEEs, PABs and SRFs are among these programs.

GARVEEs (Grant Anticipation Revenue Vehicles): GARVEEs are tax-exempt debt financing instruments that enable an issuer to monetize future Federal-aid receivables to accelerate the construction of approved projects under Section 122 of Title 23, U.S. Code and spread the costs over the project's useful life. Issuers of GARVEEs can receive Federal-aid reimbursements for interest, principal and costs of issuance for an approved

project. The debt is repaid from these future Federal-aid reimbursements ,which take place when debt service is due versus when construction costs are incurred. GARVEEs are typically used to finance large projects that would not be feasible to finance on a pay-go basis where the benefits, such as those related to quicker project construction, outweigh the financing costs associated with GARVEEs.

PABs (Private Activity Bonds): Specific legislation, Section 11143 of Title XI of SAFETEA-LU, amended Section 142(a) of the Internal Revenue Code to enable issuance of up to $15Bn of tax-exempt debt to finance highway and freight-transfer facilities involving private developers and operators. The debt is issued by a state or local government as a conduit for the private entity and is repaid by the private entity. The legislation was an effort to increase private sector involvement in transportation infrastructure by providing access to the tax-exempt capital markets. The amount authorized under this legislation is outside of the allocation cap for other types of PABs.

SRFs (State Revolving Funds): Established by amendments to the Clean Water Act in 1987 and the Safe Drinking Water Act, as amended in 1996, SRFs are financing vehicles administered by state agencies. Funds to establish or capitalize the SRFs are provided by federal grants that are matched by a state contribution of 20%. The funds have an array of assistance options they can provide for eligible projects, including making below market rate loans. Eligible projects include infrastructure improvements for drinking water systems and a wide variety of water quality projects. Loan repayments are recycled back into the SRF to provide a continued source of financing for these types of projects. Many of the programs have leveraged their funding by issuing bonds that are payable from loan repayments and other financial resources of the SRF.

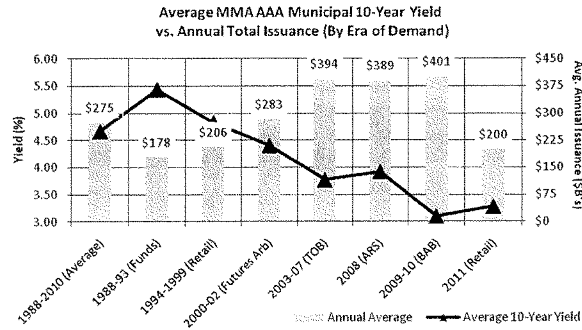
MARKET EVOLUTION OVER PAST 5-YEARS:

Understanding what has happened in the last 5-years to the municipal market sets the stage for the current environment. The market has suffered repeated shocks from the credit crisis since August 2007. In a very primary sense, our sector was exposed to the same systemic risks that collapsed the housing and securitization markets and undermined our nation's banks. The deep interconnectedness of the municipal market with the global financial and interest rate markets was unforeseen by most municipal regulators, issuers, investors, advisors, lawyers, and dealer banks; their surprise at, and misunderstanding of, the systemic risks at work has consistently exacerbated problems over the last few years.

The initiation of the credit crisis in municipals, as it was elsewhere, began in 2001 and 2002, with the integration of leverage into municipal bond buying strategies. Leveraged investment vehicles, called Tender Option Bond (TOB) programs, borrowed low interest (floating-rate) cash from the tax-exempt money market funds to invest in higher yielding (fixed-rate) municipals. These programs were largest among banking institutions.

Because of TOB's use of leverage, they could purchase municipal bonds at substantially higher prices than other investors were willing to pay, so the primary market rapidly adjusted to their needs. This entailed the pervasive use of AAA-rated bond insurance (creating the appearance of safe homogeneity). For the period between 2002 and 2007, these adjustments permitted the near doubling of annual bond issuance (from about $200Bn to about $400Bn), and the amount of par volume municipal bonds outstanding swelled 77% from $1.5T in 2001 to $2.8T today. In additional, municipal bond evaluations were amplified, prices higher/yields

lower, saving issuers hundreds of millions in borrowing costs. The following chart demonstrates how even with record issuance in the TOB era, interest rates remained low. This chart can also be used to reference other time periods I will discuss shortly.

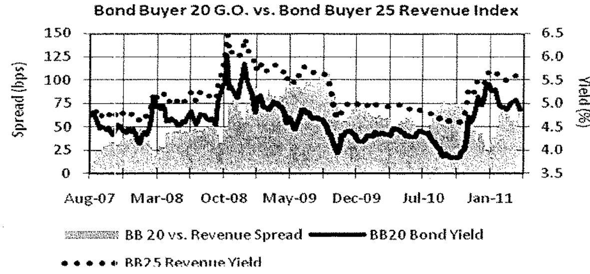


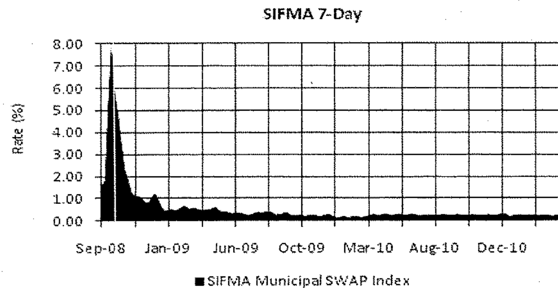
Problems were exposed in August 2007 with the first surge of flight-to-safety buying of Treasury securities on news of worsening damage to the housing sector. Stronger Treasury prices created losses in TOB hedges, forcing margin calls that rapidly consumed available cash. In addition, sharp increases in overnight lending rates pushed floating-rate product credit spreads wider: the source of TOB leverage, loans from the money funds, grew much more expensive, to the point where the money funds were demanding almost as much interest than the TOBs were receiving from their long-term, fixed-rate municipal position. Some TOBs thus began to liquidate their positions, forcing sales of their fixed-rate bonds into a municipal secondary market that quickly became oversupplied and illiquid.

Market participants had by this time also become increasingly concerned about the future of the bond insurers, which had guaranteed subprime residential mortgage securitizations along with municipal credits. In particular, more cautious corporate cash managers began selling auction-rate securities that had been marketed to them, in part, based on the apparent safety of AAA-rated bond insurance. Once again, dealer banks managing auction-rate programs provided liquidity in the absence of incremental investor demand, but in December 2007, the rating agencies sounded formal warnings about the bond insurers. This precipitated vast selling pressure among auction-rate investors that, in January, overwhelmed dealers' risk tolerances for buying back additional auction paper, and auctions began to fail.

Once again, high yields galvanized demand in March, and from that point until December 2008, the municipal market continued to face boom and bust pricing cycles of sometimes extraordinary depth. In general, these entailed yield-fueled, or media-driven demand bubbles that were ultimately pricked by yet another bond insurer downgrade that renewed fears and sometimes forced selling by leveraged bondholders. The worst of these cycles began in September, when the collapse of Lehman Brothers plus concerns over other broker-dealer counterparties were realized in investor redemptions from municipal money markets, which put large

numbers of variable rate obligations back to dealers. The next two charts demonstrate the volatility during this period along with the spike in variable-rates (SIFMA 7-Day) during the Lehman crisis.





The excess supply created by forced TOB selling in September to November of 2008, along with downgrades to the bond insurers, pushed municipal yields sharply higher, prices lower. Spread widening and price declines hurt tax-exempt mutual fund net asset values, giving the appearance of undue credit risk to their investors and initiating perhaps the second largest sequence of mutual fund investor outflows on record. And, as was well covered by the media, with fixed-rate yields having risen to extraordinary heights, *many state and local issuers chose to table the majority of their planned primary market loans*, waiting for conditions to improve. Indeed, smaller, lower-rated, and riskier credits may have at least temporarily been unable to access capital at all and many large states and cities postponed issues due to the cost of borrowing. **MMA estimates that, in 2008, more than $100Bn of planned new-money infrastructure projects were delayed, the majority of that occurring in the fourth quarter.**

In response to the worldwide financial crisis, President Obama signed into law the America Recovery and Reinvestment Act of 2009 that included a set of provisions aimed at stabilizing the municipal market, stimulating infrastructure spending and promoting job growth. The most effective provision was the creation of the Build America Bond (BAB) program.

Build America Bonds are a taxable municipal security that the Federal government pays a 35% subsidy of the coupon to either the issuer or a tax-credit to the investor. The purpose of the program was to reduce borrowing costs for state and local governments and to expand the investor base of the municipal market to the larger spectrum of taxable investors. From the first issue in April 2009 to the expiration of the program in 2010, roughly $186 billion BABs were issued. Borrowing rates decreased significantly for issuers because of the 35% subsidy and issuers utilized the program to a higher degree than many expected. As shown in the chart below, MMA estimates the cost of the BAB program to be $98 billion over the life of the bonds assuming no taxes collected. The extent to which the Federal Government will recover the $98 billion in interest subsidies is dependent on the ownership of the bonds of which there is no public data. Using the industry consensus range of estimates of an effective tax rate (actual taxes collected from owners of the BABs) between 7% and 15%, the actual lifetime coast to the Federal Government of the BABs is between $79 and $57 billion.

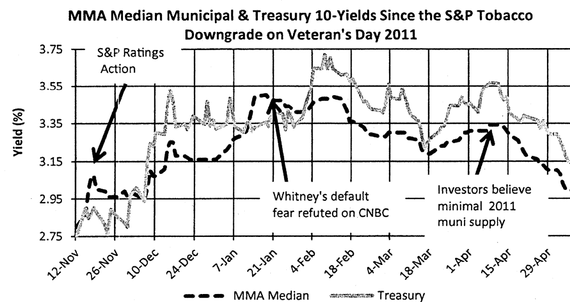
Lifetime Fed Government Cost for $187Bn BABs ($Bn)	
Total Lifetime Coupon Payments, All Issuers	$278
Lifetime Federal Subsidy Payments to All Issuers	$98
Subsidy Payments as % of Par Financed	53%
Est. Gov't Cost, Net of Taxes Collected (@15% Tax Rate)	$57
Est. Gov't Cost as % of Par Financed	36%
Est. Gov't Cost, Net of Taxes Collected (@7% Tax Rate)	$79
Est. Gov't Cost as % of Par Financed	42%

With the 35% subsidy, many infrastructure deals that were scheduled to come as tax-exempt issues instead came as BABs. An unintended consequence of the program was that with so many deals being moved into the taxable realm, the supply of tax-exempt issues decreased enough to shift the supply/demand balance for tax-exempts. As a result, we also saw tax-exempt borrowing rates decrease, which aided many issuers that decided not to utilize the BAB option. This phenomenon is similar to today's current market environment where the speculation of the elimination of the tax-exempt and reduced issuance has contributed 10-year benchmark municipal yields falling nearly 1.00% in 2011.

The expiration of the BABs program was one of two central themes as we entered this year. The fourth quarter of 2010 saw a surge of BABs issuance as issuers took advantage of the program before it expired. This led to a dearth of issuance in January and February of 2011. As we've entered the second quarter of 2011, issuance has remained very low compared to the last 10-years. In fact, through April of 2011, roughly $62 billion bonds have been sold. In 2010 we saw $131 billion (of which $33.9 billion were BABs) during these first four months of the year, a drop of over 50%.

We must re-examine why issuers are not utilizing the tax-exempt market. Borrowing rates for issuers stand at the lows of the year and have remained relatively low to historical standards. With borrowing rates at or near the year lows, many market participants expect an uptick in issuance as issuers normally look to capture advantageous borrowing rates when they can – but thus far it has not happened. MMA attributes the lack of issuance to the pervasive anti-borrowing climate that has entered the current political arena across the country. Aside from issuer austerity, borrowing is down because of the end of bond insurance, the lack of VRDO derivatives and to an extent limited leveraged demand that persisted during the TOB era mentioned above. These three influences will not so forcibly impact the market as they did in the mid 2000's and are affecting issuer's access to the market.

The following chart demonstrates interest rates moves through the fall of last year into this year's rally of April. The impact of credit risk is apparent with the S&P ratings action on tobacco bonds, which is then refuted on CNBC by MMA. As supply continues to dwindle, the market has rallied since April:



The second major theme this year has been credit. In November of last year, a string of high-profile analysts and major news publications predicted waves of municipal defaults in the coming year. The news created a sell-off in the municipal market as retail investors – the central buyer of tax-exempt debt – fled the market. A principal way smaller individuals invest in municipals is through mutual funds. Municipal bond mutual fund outflows began in November of 2010 as a result of negative headlines. As of early May 2011, the tax-exempt sector has yet to see a single week of inflows into mutual funds. This has made for 24 consecutive weeks of outflows totaling roughly $47 billion a record since this information has been tallied since 1980. Starting in January of this year, the weekly outflows have generally diminished as investors have become better educated as to the actual credit and default risk of the bonds they hold. As of July 2010 through May 9th of this year, MMA's credit impairment database shows there are mere $28 million safe sector bonds that have gone into default and not rectified the situation, or 0.18% of all outstanding debt. In this same time period, there are $1.488 billion transit or toll road bonds that have gone into default. (see table on next page).

Par (and #) of Outstanding Muni Bonds With an Uncured Default, Reserve Draw, or Other Impairment ($MM)						Support Detail:
Sector	APRIL	All Notices	DEFAULT	Support	Other	Insurer/LOC Pay
ALL	$7,658 (87)	$31,141 (647)	$8,979 (284)	$9,650 (220)	$12,512 (143)	$5,511 (41)
Land Secured	$356 (22)	$4,715 (256)	$2,264 (127)	$1,733 (104)	$717 (25)	$71 (5)
Toll Road/Transit	$3,038 (1)	$4,798 (6)	$1,488 (3)	$143 (1)	$3,167 (2)	none
Tribal	none	$1,202 (7)	$1,187 (6)	none	$15 (1)	none
Housing	$38 (7)	$945 (71)	$771 (53)	$136 (12)	$38 (6)	$43 (6)
Retirement	$907 (14)	$2,300 (68)	$896 (31)	$437 (10)	$967 (27)	$242 (5)
Hotel	$148 (4)	$696 (12)	$379 (6)	$219 (5)	$98 (1)	none
Hospital	$177 (4)	$1,968 (38)	$288 (7)	$760 (8)	$920 (23)	$698 (4)
Other Risky Sectors	$1,975 (32)	$7,001 (139)	$1,678 (49)	$2,059 (60)	$3,264 (30)	$367 (12)
Safe Sectors (GO,Wtr/Swr,SalesTx)	$1,020 (3)	$7,517 (50)	$28 (2)	$4,164 (20)	$3,325 (28)	$4,091 (9)
Initially Non-Rated Bonds	$2,239 (64)	$10,636 (453)	$5,315 (235)	$3,113 (142)	$2,208 (76)	
Initially Insured/LOC Bonds	$4,413 (13)	$12,942 (94)	$828 (6)	$5,691 (49)	$6,423 (39)	
Initially Rated, Uninsured Bonds	$963 (7)	$6,349 (53)	$2,076 (17)	$515 (20)	$3,758 (16)	

In the past, these types of outflows would create significant pressure on the tax-exempt sector. In fact, it did in January and March of this year, but since the start of April, tax-exempts have entered a month-long rally. The lack of issuance has created a scarcity bid in the municipal sector and it is outweighing the impact of mutual funds selling bonds to raise cash as investors exit these investment vehicles. Still, issuance remains extremely low and projects continue to be postponed, pushing the need for new ideas.

The decline in new-issuance this year is reflective of the prudent fiscal strategist adopted by issuers. This does not necessarily mean that infrastructure projects have been tabled forever, but clearly many are getting postponed because of the current dynamic. It is hard to conceive a $3 billion Municipal Electric Authority of Georgia nuclear deal getting financed in the current tax-exempt market while it was so easily facilitated in the BAB market in 2010. Large issues over $1 billion are having difficulty coming to market in the current environment. In fact we have only seen 5 tax-exempt deals come to market over this threshold in 2011. This creates a problem for financing new projects or maintaining major infrastructure.

The dearth of new issuance this year has created a lack of secondary liquidity and less price transparency for tax-exempts. If we were to see a surge in issuance in this current environment, we expect the tax-exempt market to experience a sharp rise in yields until investors recognized the value in the opportunity. This lack of secondary activity also makes the market much more prone to headline risk, such as a major credit event of a large state or city. <u>This type of volatility would be harmful to both investors and issuers.</u>

MMA forecasts 2011 issuance of tax-exempt debt to be $217 billion, a large step down from the $433 billion issued last year or the $409 billion issued in 2009. We do expect the market to continue to struggle with price discovery and as a result volatility should remain high. Individual investors are likely to remain fluid in shifting their investments between fixed-income, commodities, equities and cash. The ongoing ambiguity regarding the health of the U.S. and global economy remains the dominant theme for the balance of the year. Specific to the municipal bond market, individual investors are migrating from the mutual funds to individual managers in order to have more direct access to information regarding the credits that they own, which is so difficult to access given current disclosure standards. <u>Macro economic uncertainty, municipally-specific credit concern, a lack of price transparency and the lack of bond financing tools should lead to continued difficulty in access-</u>

ing the municipal market to finance infrastructure. Because states have to balance their budgets annually, the planning of infrastructure projects is contingent on future revenues and states are more apt to be more receptive to Federal assistance for critical projects that are not line items expenditures of their annual budgets.

RECOMMENDATIONS:

The following five recommendations would protect state and local governments current means of raising capital for infrastructure as well as offer additional tools to obtain the best cost of financing at the lowest cost to the tax payer while maintaining investor confidence to continue to lend for tomorrow's needs.

First and foremost, the tax-exempt market as it now stands should continue to exist.

The current US municipal bond market exists largely because of the tax exemption of interest on qualified municipal bonds. This exemption has come under fire recently, with an eye toward helping close Federal budget gaps and improving the "efficiency" of infrastructure subsidy distribution. Some have noted that the amount of subsidy actually delivered is, on average, greater than the subsidy needed for bonds to clear the primary market. We don't entirely disagree; however, there are important reasons for this disparity that many have overlooked and why we believe a mix of both tax-exempt and taxable bond options are ideal to move our country's infrastructure forward:

A) The tax exemption makes the U.S. municipal bond market the most politically efficient financing vehicle in the world. Any local government or park district, so long as they keep their financial house in order (49 out of 50 states are legally required to balance their budget every year), can sell bonds and finance capital projects. The exemption is, in effect, an inducement for investors to lend in a seller-oriented market that features 65,000 different issuers. By contrast, the corporate bond and equity markets are built to be investor friendly and are easier to navigate. Correspondingly, corporate and structured finance bond yields are relatively lower than their tax-exempt counterparts, adjusting for relative credit quality. Municipal efficiency could be improved, but then at the cost to political autonomy. Pushing a taxable structure on the current tax-exempt model would simply leave out the majority of current issuers into the municipal market. If tax-exemption were removed, smaller governments would have a dramatic loss of market access leading to a tapering of infrastructure finance. The average size of a municipal bond issue is $30 million while the average size of taxable corporate deals that JPMorgan Securities underwrote last year was $1.3 billion. It is simply not in the taxable buyer's interest to purchase small deals because of the size of their needs. Also, the credit research to be done on so many different issuers is not in the taxable buyer's interest.

B) The other, maybe even more vital point about the tax exemption is its linking of borrowers and creditors: local people supporting local bonds. This idea reflects assumptions that 1) local buyers are better able to discipline local issuers leveraging their tax base for potentially speculative reasons. And 2) there is some sense of shared responsibility to see the transactions work out normally. The example of an opposite transaction is the average subprime RMBS, where lenders were deeply dissociated from underwriters and further from borrowers. When the system hit turbulence, homeowner vacated and aggressive foreclosures followed.

Second, a direct-pay subsidy to issuers should be re-enacted at a revenue neutral rate and made permanent. Discovering a true revenue-neutral rate is dependent on the disclosure of Congress's methodology of determining the cost of the current tax-exemption. If the Federal Government believes that the municipal borrower should have a favorable interest rate in accessing the marketplace then this bond finance option is a very efficient one. The size and structure of direct-pay bonds will fill a the need to finance larger infrastructure projects and would work hand-in-hand with a tax-exempt market that is better suited for smaller, more local projects. However, the 35% rate that was offered in 2009 and 2010 was too excessive**.** It was as teaser rate to kick start the program but now that it has existed for two years, it is time to make it permanent at a lower rate. Direct-pay bonds will still be utilized if subsidized correctly and by making it permanent, a larger market could be created that would see spreads shrink over time meaning a reduced cost to the Federal government.

Third, a federal and state tax-exempt, tax-credit bond program is an excellent idea in theory; however current proposals in draft form need to be altered in order for them to function properly. We support tax-credit bonds but so far they have been unable to catch on in the market. The primary reasons for failures in the past has been that they have either not been made permanent and hence give investors concern about having an orphan product down the road, but also that they were not large enough to really attract broad support. Larger deals tend to have greater liquidity and will fare better as a result. The $50 billion with $5 billion allocated for the first two years and $10 billion for the remaining 4-years that we have heard discussed in the media is amenable. We also suggest that those in support of this concept have a better dialogue with the market. In the past, there have been certain issues where a lack of clarity from the policy side has created problems in the market.

Fourth, a bi-partisan bill to launch an "American Infrastructure Financing Authority" would create yet another tool for issuers to access in order to finance their infrastructure needs. This Authority would, in theory, capitalize projects that have been unable to get financed in the current construct of the capital markets. We support the mix of funding from the sale of Treasury bonds and private capital. The Authority's managers would also be given flexibility to determine how to structure individual loans or funding lines to maximize efficiency under different market conditions. The AIFA would also steer funding for infrastructure where it is needed as decided by a team of infrastructure and policy experts. It would also mitigate Federal and state lawmakers influence over these decisions, which we see as a positive.

The program would concentrate on transactions not easily completed by muni bonds because of our market's single-issuer orientation. For example, regional power transmission lines, rail programs, or interstate aqueducts are politically and economically difficult to fund by individual states. By relying on private capital for a substantial portion of its funding, the AIFA would broaden knowledge and understanding of the US municipal market, to the benefit of net demand. And its encouragement of private capital lending could advance broader privatization trends among states and cities looking to restructure long-term asset-liability mismatches in the coming decade.

One market consequence if this Authority is created in its current form, is that it could exacerbate some of the problems we've noted with the current municipal market, namely that issuance is likely to remain lacklus-

ter going forward as issuers decide to utilize the tax-exempt market less. New deals make for secondary activity in the municipal market and we would see less trading as a result.

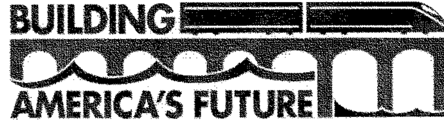
One other area of note, it appears this Authority would be focused on financing new projects specifically but it may be a good idea to dedicate a certain amount of its spending to maintenance of existing infrastructure. The bond markets also tend to focus on new projects and one area that needs to be addressed is maintaining an area where that is needed. If the Authority were directed to spend a certain amount towards maintenance that might help bridge a gap in the current system.

Fifth, improve municipal disclosure. Better disclosure in the municipal market would lower borrowing costs, protect investors and continue the trend of broadening the investor base of the market. The current regime does not enforce a lack of disclosure compliance . As unregistered securities, regulators have limited abilities to enforce issuer compliance even with the limited demands set out by rule 15c2-12. As a result, issuers who enter fiscal distress, or those with limited administrative resources, can sometimes stop disclosing information altogether.

MMA believes the following would be a solution to current problems with municipal disclosure:

1) We believe Congress should require that the Municipal Securities Rulemaking Board or a new, independent body (the entity) act as arbiter to determine whether each issuer is in compliance with stated disclosure requirements.
2) Bonds found to be not in compliance would be flagged. We are reluctant to advise that the relevant entity be able to compel disclosure directly from the issuers for fear of abridging state autonomy.
3) The entity would keep a database to track, for every Cusip and borrower, the number and percent of days it has been out of compliance on all of its outstanding bond issues. This statistic would be vitally important for potential buyers evaluating new purchases of the borrower's securities.
4) Additionally, all firms trading municipal bonds, regardless of their status, would need to track how many trades, and the volume of par traded, that firm had made with disclosure-flagged municipals Cusips. Again, this could be very important data for investors evaluating with which firm to invest their money.

This proposal would not force disclosure but instead allow the market to decide how to penalize issuers not in compliance.



Co-Chairs

Michael R. Bloomberg, Mayor, New York City
Edward G. Rendell, Former Governor, Pennsylvania
Arnold Schwarzenegger, Former Governor, California

Testimony of the Honorable Edward G. Rendell
Co-Chair, Building America's Future
Before the
United States Senate
Finance Committee

May 17, 2011
10:00 a.m.

Good morning Chairman Baucus, Senator Hatch and members of the Committee. Thank you for the invitation to appear before you today and for the opportunity to discuss why the creation of a National Infrastructure Bank is so important to help finance critical investments in our nation's infrastructure.

I am here both in my capacity as the former Governor of Pennsylvania and as Co-Chair of Building America's Future, which I am honored to lead along with former Governor Arnold Schwarzenegger of California and Mayor Mike Bloomberg of New York City. Building America's Future is a bipartisan, non-profit coalition of state and local elected officials from across the United States who believe that we must reform how we pay for infrastructure and that additional resources must be invested more wisely.

Infrastructure is all around us. We rely on it every day whether it's to take a bus or train to work, cross a bridge, move goods from our manufacturing plans to markets, or drive our kids to a soccer game. But some of our infrastructure is not as visible as our roads and bridges. Although we don't see the massive water pipes under our streets or the electricity flowing through the electric grid it's there providing us with the lifeblood of our economy. Visible or not, properly functioning infrastructure provides us with the reliability and predictability that we as Americans have come to expect from modern daily life.

Yet, for far too long, our nation has under invested in its infrastructure. When our bridges, levees, dams and electric grids fail the consequences can be catastrophic and impact millions of individuals and cost billions of dollars – costs that could be avoided with an upfront investment in prevention. The images from two gas pipe explosions in Allentown, Pennsylvania and Hanoverton, Ohio in February reminded us of the gas pipe explosion in San Bruno, California in September that killed eight people and destroyed 38 homes. And who could forget the devastation when the levees were breached in New Orleans and the I-35W Bridge collapsed in Minneapolis? Indeed, life came to a standstill for millions in the Northeast and parts of the Midwest and Canada due to the massive blackout in 2003.

And yet there is little sense of urgency among policymakers here in Washington, D.C. and at all levels of government that smart new investments are needed. As a result, our infrastructure investment levels have not kept pace with our national growth over the past several decades. We've got millions of Americans putting a strain on infrastructure in the

21st Century that in many cases was built to meet the needs of the 19th and 20th Centuries. So it's not surprising that the American Society of Civil Engineers has graded the condition of our infrastructure a D. But what continues to surprise me is our refusal to make infrastructure investment and modernization a national priority. We keep going from disaster to disaster and yet it seems we are ignoring the warning signs all around us.

We must reverse decades of failing and worsening infrastructure by employing new and different strategies today, not tomorrow. Lessons can be learned from the innovations that have been employed in many of our states and cities. When it comes to transportation funding, governors, myself included, realized several years ago that we were not going to meet our infrastructure needs by just relying on federal funds. So by and large, we have made the hard choices. Whether it was raising the state gas tax, entering into public-private partnerships, or increasing bonding capabilities, governors buckled down and got creative. But there have been some instances where our efforts to get creative ran into the brick wall of federal restrictions.

A perfect case in point is my experience as governor in trying to obtain federal permission to toll Interstate 80 in Pennsylvania. Due to federal restrictions on tolling previously un-tolled interstate highways I was twice denied the ability to raise revenue to help with maintenance of this major artery that is critical to the nation's commerce and to efficient movement of goods.

And while I was ultimately unsuccessful in convincing my State Legislature to approve authority for the State to enter into public-private partnerships I believe I did the right thing in seeking that authority. And so do many of my fellow governors as over 30 states and Puerto Rico currently have the authority to partner with the private sector. It is important that the federal government not impose restrictions on the states' ability to pursue partnerships for projects that meet public needs while protecting the public interest.

We must get serious about addressing our infrastructure needs if the United States is to remain economically competitive with the rest of the world. We cannot continue to bury our heads in the sand until the next infrastructure failure. However, there are those who believe that in a time of soaring budget deficits we can continue to defer investing in critical infrastructure needs. Those who ignore these needs could not be more mistaken as there are consequences of failing to make infrastructure investments to America's future economic stability.

We also must find ways to regain the trust and confidence of the public. Recent polls commissioned by Building America's Future and the Rockefeller Foundation have consistently found that while the public believes smart infrastructure investments should be a priority, they are skeptical that the funds are being directed to wasteful and unnecessary projects. Americans are clamoring for greater accountability and transparency to ensure that scarce resources are being invested on the right projects that will bring long term economic benefits.

As it is obvious that existing revenue sources and methods are inadequate to address our vast infrastructure needs, Building America's Future believes that a National Infrastructure Bank can be part of the solution. A properly constructed Bank will take the politics out of the equation and invest in projects based on merit and help to finance critical projects of regional or national significance.

Right now, if multiple states wanted to complete a project crossing multiple jurisdictions or infrastructure sectors, there is no singular place to which they can apply for financial assistance. A National Infrastructure Bank can fill that void by leveraging dollars from states and local governments as well as the private sector, focusing on projects of regional or national significance, and subjecting all requests to a benefit-cost analysis. Clear accountability and transparency requirements would be part of the process.

Senators Kerry and Hutchinson are to be commended for working together on a bipartisan basis to propose legislation – the BUILD Act - to do just that. There is related legislation pending in the House and President Obama has proposed the creation of a similar entity in his FY 2010, 2011 and 2012 budgets. Previously, Senators Dodd and Hagel introduced bipartisan legislation that established a National Infrastructure Bank.

But we are far past the time for proposals. We need to sit down in a room and hash out a bill and get moving. We have wasted too much time already.

Building America's Future supports Congress moving forward to create a National Infrastructure Bank this year. We do not need to wait for a new surface transportation bill for there to be action on a Bank.

But I would like to talk briefly about the reauthorization of the surface transportation bill since it will be the Senate Finance Committee that is charged with finding additional revenues to fund a robust, reformed bill which Building America's Future supports. We cannot fail to make difficult choices even in this era of deficit reduction. So, as you move forward, I would encourage you to redouble your efforts to find additional resources for the Highway Trust Fund – including bringing back to life Build America Bonds - to ensure that our highway and transit needs across the nation do not continue to mount and that we provide Americans with a safe and reliable transportation system.

From our point of view, we believe that a properly constituted Bank should finance more than just transportation needs. We believe that a true Infrastructure Bank would provide assistance to water systems, ports, smart grid and broadband.

We at Building America's Future believe that a National Infrastructure Bank should be created with the following basic concepts:

- Establish the Bank as an independent entity with the greatest flexibility to finance and fund only projects of regional and national significance.
- Allow the Bank to fund projects beyond just transportation such as ports, drinking and waste water, electrical grid, and broadband.
- Enable merit-based selection of projects by experts so that the most critical and feasible projects proceed by employing benefit-cost analysis methods.
- Ensure federal assistance at a significant enough scale to make these major projects financially viable.
- Ensure that the Bank has the authority to employ a range of finance and funding tools including, but not limited to: grants, credit assistance, low interest loans, tax incentives, Build America Bonds, Private Activity Bonds, enhanced TIFIA authority, and others to be determined.
- Create a method for leveraging public investments with private capital.

- Establish clear performance measurement standards such as completing projects on time and within budget, reducing traffic delays for passengers and goods movement, reducing carbon emissions, and improving safety.
- Provide project expediting capability by eliminating redundancies to speed completion of projects while still ensuring the environment remains protected.

President Obama's fiscal year 2010 budget proposed $5 billion per year for five years for a total initial capitalization of $25 billion for the National Infrastructure Bank. In fiscal years 2011 and 2012 that proposal was modified to be an infrastructure fund administered by the Department of Transportation. However, Congress has not appropriated these dollars primarily because the Bank has not been authorized. I give the President credit for supporting this concept with real dollars as it is a sign of his commitment to the long-term vision of rebuilding this country through smart, targeted investments.

It is incumbent upon this Congress to pass a National Infrastructure Bank authorization bill this year so that it can be stood up properly next year. And I believe that the Obama Administration must engage with the House and Senate in the details of this legislation in the coming weeks.

Another reason not to delay any further is that our economic competitors in the European Union have been reaping the benefits of the European Investment Bank (EIB) for decades. The EIB was created in 1958 and has nearly $300 billion in subscribed capital by all 27 European Union member countries. In 2009 alone, the EIB disbursed over $70 billion mainly on transportation, energy and global loans. The Bank raises funds from capital markets and lends them at higher rates keeping its operations financially sustainable. It offers debt instruments such as loans and debt guarantees as well as technical assistance. The EIB is financially independent and operates on a broadly self-financing basis raising resources through bond issues and other debt instruments mostly publicly quoted on exchanges around the world. Typically the EIB supports construction and upgrading of roads, bridges, rail, air, waste water projects, telecommunications infrastructure, schools, hospitals, and energy.

And as I previously mentioned, the states are the incubators of innovation. They understand that creativity can reap benefits and many of them have stood up their own infrastructure banks. Just this March, Virginia Governor Bob McDonnell proposed and signed into law legislation to create a more robust State Infrastructure Bank that will be capitalized with $32.7 million in State funds. And going back even further, the Californian State Legislature created the California Infrastructure Bank in 1994 with overwhelming bipartisan majorities. The Bank was capitalized by a one-time state appropriation of $180 million in 1999 and its operations since then have been solely funded from fees, interest earnings and loan repayments. Over the last decade, the Bank has grown to $30 billion in debt financings and has extremely broad statutory powers to issue revenue bonds, make loans and provide credit enhancements for a wide variety of infrastructure and economic development projects.

Is a National Infrastructure Bank a panacea? No, it is not. However, since we as a nation fail to produce a capital budget like our cities and states are required to do, this is one way to plan for the future and attract and leverage additional private dollars while ensuring that the American people's tax dollars are spent wisely and efficiently.

So what are we waiting for at the national level?

We have heard some concerns about whether or not a National Infrastructure Bank means rural states will be ignored to the benefit of urban areas. I do not think that is true at all. The Bank will look at projects on a regional and national basis. That may mean investments in areas that expand beyond any major city because of the long-term vision. For example, we need to expand our exports and by investing in our ports now we can ensure that agriculture products that come from our rural areas can get to those foreign markets more efficiently and quickly. This would mean a benefit not only to the port in the city in which it is located but to the farmers and ranchers who depend upon proper delivery to earn their wages.

One other way that rural areas will benefit is if existing grant programs that fund large-scale projects would concentrate on smaller projects. For example, the Highway Trust Fund has recently been under threat of depletion and insolvency. Transfers of funds from the general fund into the Highway Trust Fund have kept the program alive. I believe that if the National Infrastructure Bank stands up it could ease the current strain on the Highway Trust Fund by funding and financing the larger-scale projects through the Bank. Therefore, allowing more Highway Trust Fund dollars to remain available for smaller projects in rural areas. I think that is a benefit that must be studied and explored.

Ultimately this is about what we are going to do for the American people. The average American loses 34 hours a year stuck in traffic. That is time that people can never get back and it is time that they cannot spend with their families and friends. And it's costing us $115 billion in lost productivity and 3.9 billion gallons in wasted fuel each year.

We must stop this cycle.

We can do this. But we must do so on a good-faith, bipartisan basis and with the goal of assuring the Bank's success. If the Bank is successful then our cities, states, and regions will be more successful and more of our citizens will be employed. Infrastructure investments will create millions of more jobs not only on the construction sites but back in the factories that produce the concrete, asphalt, aggregate, steel, wood, and other materials that go into these projects. We are used to building things in this country and we can do so again by standing up the National Infrastructure Bank now.

Our hope is that if the National Infrastructure Bank is capitalized at the right level the Bank will make significant progress towards addressing some of the larger projects and outstanding needs in the country while Congress moves forward with significant reforms of existing funding silos, policy decisions, and the creation of a national vision.

Thank you and I look forward to answering your questions.

Response to Questions for the Record from the
Senate Finance Committee Hearing on "Financing 21st Century Infrastructure"
By The Honorable Edward G. Rendell

Senator Coburn's Questions:

1) *You mention some federal restrictions that limited your ability to manage Pennsylvania's infrastructure in some ways. What other federal restrictions currently exist that hamper states' ability to improve state transportation infrastructure?*

Answer:
Improving the project delivery process will go a long way in getting critical projects built faster and help to keep overall project costs down. Currently it takes approximately 13 years for a major highway project to go from project initiation to completion. That is absurd. A large part of this time is associated with the environmental review process. Many of the recommendations included in the National Surface Transportation Policy and Revenue Study Commission should be included in the new surface transportation bill to help speed up project delivery. Some of these recommendations include:

- Provide for a simplified NEPA process that offers the equivalent of a 1040EZ tax return for projects with few significant impacts;
- Require greater coordination among federal agencies reviewing project permits by setting time limits for review; and establishing a Cabinet-level appeal process where USDOT can seek redress for adverse decisions.

Currently are no federal restrictions on states' ability to enter into public-private partnerships (P3s) and it is important that this remain to be the case. In 2009, there were proposals in the House to create an Office of Public Benefit which would have had veto authority over P3s proposed at the state level. This would have had a chilling effect on an innovation that currently exist in 30 states and Puerto Rico. Building America's Future urges Congress not to impose restrictions on states' ability to enter P3s. If states choose to enter into such agreements it is incumbent upon them to ensure that taxpayers are protected.

2) *Do you believe it is appropriate for states to have to spend 10 percent of their Surface Transportation Funds on transportation enhancements such as bike paths? Do we have a critical infrastructure shortfall of bike paths in our country? Did you know that more than $1 billion in enhancement funding was appropriated in FY10?*

Answer:
From the perspective of a former governor and mayor of a big city, maximum flexibility on how to spend scarce transportation dollars is always preferable to prescriptive approaches. At Building America's

Future we are focused on the big picture and that is passing a robust and reformed transportation bill that provides not only more accountability and transparency but more resources to repairing, maintaining, and building projects that merit taxpayer investments.

3) *What are your thoughts on the Highway State Flexibility Act (HR 1585)? Would you endorse this measure? If not, how would you improve this measure?*

Answer:
Building America's Future does not endorse specific pieces of legislation and we do not have a position on that legislation specifically.

Question from Senator Hatch:

1) *In writing about proposals for a Federal Infrastructure Bank, Dr. Kile notes in his written testimony that "One limitation is that few surface transportation projects are good candidates for bank funding because they mostly do not involve toll collections or other mechanisms for charging users directly to repay construction costs." To what degree would an infrastructure bank address the shortfalls now projected for the Highway Trust Fund? How much of the activity of a national infrastructure bank would result in diminished demands upon any federal trust fund, as those demands are currently projected?*

Answer:
In order to maximize the dollars in the Highway Trust Fund, we must get creative and expand the number of available tools to address our vast infrastructure needs. It is clear that existing revenue sources and methods are no longer adequate in part because they have been stagnant since the 1990's. Building America's Future believes that a National Infrastructure Bank can be part of the solution. It is not the silver bullet that we are all looking for, but it can play a significant role in providing assistance to large-scale projects of regional or national significance. Currently, if multiple states wanted to complete a project crossing multiple jurisdictions or infrastructure sectors, there is no singular place to which they can apply for financial assistance. A National Infrastructure Bank can fill that void by leveraging dollars from states and local governments as well as the private sector. Additionally, a properly constructed Bank would bring greater accountability and transparency to the project selection process and only assist projects that could meet strict cost-benefit standards. This would dramatically enhance public confidence in transportation infrastructure spending. By providing financial assistance to these special large-scale projects, formula dollars are freed up to be directed to other smaller-scale projects .

Our economic competitors in the European Union have been reaping the benefits of the European Investment Bank (EIB) for decades. Since its creation in 1958, the EIB has nearly $300 billion in subscribed capital by all 27 EU member countries. Contrary to the misperception that a NIB could only

provide assistance to toll road projects, the EIB supports construction and upgrading of roads, bridges, rail, air, waste water projects, telecommunications infrastructure, schools, hospitals and energy.

Yes, Dr. Kile is correct in saying that a National Infrastructure Bank would not be able to financially assist every needed road, bridge or transit project. But that is not a valid reason to avoid moving forward with its creation. In these challenging economic times, we must expand our available options – not limit them and the infrastructure bank would help leverage private funding as well as adding to the pool of dollars available to meet our transportation infrastructure goals.

Questions from Senator Carper:

1) *There has been a lot of talk recently about spending cuts at the federal level. Dealing with the deficit will require an adult conversation about federal spending. There are certainly wasteful transportation programs that can be consolidated or eliminated. However, I am concerned that discussions about reducing spending have not included a debate on which investments are necessary to maintain our country's long-term prosperity – such as having an efficient transportation system. Are you concerned that reducing federal investment in transportation could hurt our country in the long run?*

Answer:
Yes I am. Our infrastructure is a key reason that America became an economic superpower. However, in the 21st Century globalization has radically changed the economy and the world's trade patterns while shifting and intensifying the demands we place on our transportation network. Economic growth now depends on American business' ability to participate in this growing global trade and moving freight cheaply, easily and reliably around this country. In recent years the U.S. has been falling behind many other countries when it comes to infrastructure investment. Right now we are investing 2.5 percent of our GDP in infrastructure. That is miniscule compared with the 9 percent being invested by China and the 8 percent being invested in India.

Our lack of investment and resulting inefficiencies in our transportation system are two main reasons why traffic congestion has tripled between 1982 and 2005; why the average urban American spends an extra 34 hours of travel time sitting on congested roads; and it is the reason why freight congestion in Chicago has railroads allotting longer times for a freight train to pass through Chicago than to get from Los Angeles to Chicago.

But the answer isn't just spending more money. It's about investing more wisely and strategically in programs and policies that offer the tangible returns to our economic growth and competitiveness, enhanced safety and security, and an improved quality of life. In order for this to happen there must be wholesale reform to our current transportation programs and policies. This can be done by establishing clear national goals that set priorities for funding such as maintaining our existing network of roads, bridges and mass transit systems and reducing the time people and good spend stuck in traffic. Bringing greater accountability and transparency to the program must also occur to ensure that dollars are being invested wisely in the best projects that will achieve real results.

2) *You have expressed frustration with the existing restrictions on tolling federal roads. What suggestions do you have for providing greater flexibility for states?*

Answer:
SAFETEA-LU created several tolling programs which were capped at specific levels thereby limiting participation. For example, the Interstate System Reconstruction and Rehabilitation Program only permits three pilot projects and the Value Pricing Pilot Program is capped at 15 slots. Congress should lift the current federal tolling restrictions on interstates so that states and localities have greater flexibility in addressing their infrastructure needs. We built many of the interstates over 50 years ago; many are now in need of major repair and refurbishment and in some areas charging tolls will be an essential funding component and encourage more economically efficient use of the roadways. If the interstate tolling ban had not been in place, I would have been able to move forward in implementing PA State Act 44 and tolling I-80, which would have generated needed revenue without turning to Washington.

Currently are no federal restrictions on states' ability to enter into public-private partnerships (P3s) and it is important that this remain to be the case. In 2009, there was a proposal in the House of Representatives proposing the creation of an Office of Public Benefit which would have had veto authority over P3s proposed at the state level. And while P3s will require some government spending they may work better in some places and not in others. But a proposal such as the one in the House would have had a chilling effect on an innovation that currently exist in 30 states and Puerto Rico. Building America's Future urges Congress not to impose restrictions on states' ability to enter P3s. And if states choose to enter into such agreements it is incumbent upon them to ensure that taxpayers are protected.

Statement for the Record
Senator Jay Rockefeller
Financing 21st-Century Infrastructure
May 17, 2011

Our nation's transportation infrastructure is the backbone of our economic success and global competitiveness. American businesses rely on world-class railways, highways, airways, and waterways to efficiently move goods to market and get them safely to their destinations.

Unfortunately, our transportation infrastructure is showing signs of wear and tear and, frankly, much of it is in disrepair. Across the nation, we are driving on more than 90,000 miles of crumbling highways and more than 70,000 structurally deficient bridges. My own state of West Virginia ranks 8th from the bottom in the number of bridges rated "poor," according to Transportation for America, with an average age of 44 years.

Traffic and congestion keep getting worse and worse. This is all too obvious to anyone who drove here today. Overall, our country's infrastructure receives a D-minus grade from a national rating group – even though mileage travelled by cars has increased by 94 percent in the last 25 years. Our passenger rail network is too slow, too limited, and not useful for many Americans who'd rather take their chances on a crowded highway than risk unreliable train service.

Add this up and you get a transportation system that is inadequate and on the verge of holding us back economically, if it isn't already today. Too many Americans waste too much time and money each year on clogged highways and congested roads. In 2009, congestion cost us well over $115 billion in wasted time and fuel. What is absolutely clear is that we must rebuild and invest in our infrastructure if we want to continue to be a global economic leader.

The needs are huge. The National Surface Transportation Policy and Revenue Commission found that it will take up to $340 billion in annual investment to provide the maintenance and improvement our transportation infrastructure requires to keep our economy and people moving. These numbers are staggering, but what is even more staggering is that some in the House and this body are adamant that transportation investment must be slashed.

In addition to its draconian cuts to Medicare and Medicaid, the Paul Ryan House budget plan would cut $14 billion from transportation next year alone. It is inconceivable to me how, on one hand, people can call for the need to create jobs and get our economy going, and then on the other hand, reject the need to invest in the very infrastructure that supports our economy.

All of this comes at a time when the Highway Trust Fund is quickly running out of money. Frankly, it would have gone broke already if Congress hadn't transferred several billion in general funds into the Trust Fund. We only have one real option, the way I see it. We must rebuild our economy and our infrastructure with a plan that combines smart, targeted spending cuts with smart, targeted revenue increases.

First, we must look at new transportation financing options. I recently introduced legislation to create a transportation infrastructure financing fund that would leverage federal dollars to encourage private investment into our transportation network. This is a start, but we also need to figure out a way to fully fund the Highway Trust Fund. Some have proposed moving from a gas tax to a vehicle miles traveled tax. Others have proposed congestion pricing schemes that charge motorists fees on highways based on level of congestion and time of day traveled. All of these are ideas worth discussing. The key point is that we need to be open-minded about new ideas. We also need to be sure that rural communities are not penalized unfairly by whatever financing mechanism is ultimately put in place.

Second, general revenue must be increased, including for use in transportation projects, and we can do that by asking the wealthiest Americans to pay more and by ending foolish oil and gas subsidies. Big oil companies continually remind us that these subsidies are a waste of time, since they show record profits year after year while prices at the pump continue to empty Americans' wallets.

Third, we must step up efforts to root out waste, fraud, and abuse in government spending. We can start with the estimated $50 billion in waste at the Pentagon, but should also scrub our transportation programs for redundancy and inefficient use of funds.

Finally, we need to expand and improve Amtrak, and build a more efficient rail network. Right now, our freight rail network is built for imports. We need to realign our system to be built to facilitate the export of American goods, while more efficiently moving goods for domestic consumption.

I really hope we can get some good ideas today for how to tackle this enormous challenge that faces us. We have ignored these critical investments for too long, and the time has come to rededicate ourselves to building our country and reestablishing our transportation infrastructure as the global leader.

I thank the Chair.

SENATE FINANCE COMMITTEE

Testimony on Financing Infrastructure

by

Gabriel Roth

Civil Engineer and Transport Economist

May 17th, 2011

Executive Summary

This testimony is designed to show that, for two principal reasons, the federal government should fund no transportation infrastructure at all.

> The first reason is that, in these times of financial stringency, government should not finance facilities for which users themselves could pay if they wished to cover the costs. For example, those wanting railroads should cover the costs themselves, and those wanting roads should pay more into the dedicated funds that support them. The US air, railroad, and road sectors have a long "user pays" tradition, and the current financial deficits require that this tradition be restored. Government funding for inter-urban travel can be eliminated for this reason alone.
>
> The second reason is that federal payments currently support local services, such as mass transit, and other projects, to promote an undefined concept of "liveability". Such payments do not seem appropriate for federal funding. Why should farmers in Montana be forced to pay for the travel of wealthier people in New York and Washington DC? If local services are to be subsidized, would it not be better for the funds to be raised from the localities that demand them?

These considerations do not apply to appropriations from the federal Highway Trust Fund, which receives dedicated revenues from road users, and has no claims on general revenues. Highway Trust Fund revenues could be increased by raising the dedicated federal fuel taxes but, because conditions vary from state to state, and because of the waste involved in the federal financing of state roads, it would be preferable to meet road funding shortages by raising state charges.

For the longer term, for reasons given in my testimony, consideration should be given to phasing out the federal Highway Trust Fund, and for turning back highway and transit funding to the states.

States are in a better position than the federal government to reform the current systems of owning, funding and managing highways. For example, they could introduce road-use charges based on distances travelled (rather than on fuel consumed), and give private

providers opportunities to maintain existing roads and provide new ones on a commercial basis, eliminating the need for government financing, even by "Infrastructure Banks".

Abolition of federal financing is likely to encourage state and private sector funding, and successful reforms pioneered by some states could quickly be replicated in others.

SENATE FINANCE COMMITTEE

Testimony on Financing Infrastructure

by

Gabriel Roth

Civil Engineer and Transport Economist

May 17th, 2011

Introduction: Arrangement of my testimony

I would like to start by thanking Chairman Baucus for his flattering invitation to testify before the Senate Finance Committee, to explain why federal taxpayers should not be required to finance road infrastructure. My testimony covers four issues:

First, whether the federal government should have a role in financing transportation infrastructure;

Second, a description of private sector roles in the provision of roads;

Third, a description of a plausible alternative to relying on fuel taxes for highway finance; and

Fourth, a sketch of how a privately owned and financed road system might function.

Federal financing of state roads

Modern federal involvement in US highway finance was the result of the 1956 Highway Revenue Act that created the federal Highway Trust Fund to finance the construction of the Interstate Highway System. The federal Highway Trust Fund is funded by dedicated taxes on fuel. Accumulated revenues can be used to pay for up to 90 per cent of the project construction costs without having to borrow or to draw on general funds. The powers under this legislation were designed to expire three years after completion of the Interstate Highway System. However, although the system was deemed complete in 1996, the financing powers are renewed periodically and are still in force. They are now due to expire on September 30, 2011.

There are few advantages and big drawbacks to the federal financing of state roads[i]:

First, the fact that up to 90 per cent of highway costs are paid from federal funds gives states incentives to pay for low-priority projects. For example, the Boston "Big Dig" project, which grew in cost from $2.8 billion to $8.1 billion (both figures in 1982 dollars), would never have been funded by Massachusetts alone.

Second, over a third of revenues paid by road users are spent for purposes not directly related to their travel and safety. For starters, 20 per cent of revenues are put into a "Mass Transit Account". Calculations made by Ronald Utt[ii] show that, in the latest highway reauthorization bill passed in 2005 (popularly known as SAFETEA-LU), road users receive for general-purpose roads and safety programs only about 62 percent of what they pay into the federal Highway Trust Fund.

Third, federal involvement raises road costs considerably:

- Federal construction specifications can be higher, which increases costs;
- The duplication involved by sending money to Washington DC, and back to the states, can increase costs by 10 percent of construction costs;
- The application of federal regulations, such as "Buy America" provisions and Davis-Bacon laws also increase project costs. Davis-Bacon alone can increase construction costs by over 35 percent.

Fourth, the federal congress uses its powers to favour some states at the expense of others. Alaska, for example gets over five times the amount it pays in to the federal Highway Trust Fund, while Arizona gets 95 per cent. In general, the northwest states tend to get more than they pay into the fund, while southern states get less.

Fifth, the federal congress often imposes conditions on the use of the funds it appropriates from the federal Highway Trust Fund. For example, it has in the past forced states to impose 55 miles/hour speed limits. More recently, representatives from California objected a local authority's decision to allow single-occupant vehicles to use high-occupancy lanes on payment of tolls.

In theory, the simplest way to abolish the federal financing of roads would be to stop renewing the 1956 legislation. Then, following a transition period, both the fuel taxes and the congressional powers expire, and the funding of state roads reverts (gets "turned back") to the states. Many state officials resist this change, possibly because it would force states to incur the odium of raising charges for road use but, for this reason, members of the federal congress should welcome the change.

A less drastic and more politically acceptable reform would be to give states the ability to manage their own highway funding free of federal interference. For example, Senator Coburn, a Member of this Committee, and Representatives Lankford and Flake, have developed legislation, the *State Highway Flexibility Act*, that would effectively and straightforwardly accomplish this goal. Including this measure as part of a surface transportation reauthorization measure would give states the option to manage highway trust fund monies if they believe they can do a better job than the federal government. And it would also enable states to maintain the current funding system overseen by Congress and DOT.

Adoption of this measure would bring some improvement to the current highway financing arrangements, and would not require additional expenditures from general funds.

Federal financing by means of an "Infrastructure Bank"

The objectives of the "Infrastructure Bank" proposed in the BUILD bill are attractive, but it is not clear that its financing has to be federal. Why could not private banks put up $10 billion to achieve the same objectives?

Government financing — which would be subsidized by taxpayers — could well discourage private financing. The offer of cheap finance could lead to slower spending on infrastructure, because potential borrowers would line up for the bank's loans and put their own decisions on hold while waiting for the bank's action. Borrowers are likely to be public institutions that would face criticism from their political supervisors if they do not seek loans at lower rates from the government's infrastructure bank. Once they apply, a government-managed bank would worry about whether its decisions satisfy the politicians: Government rules will invoke "fairness" as a criterion and loans will have to be distributed "properly" among political jurisdictions. The regulations governing the proposed bank already require that 5 percent of the funds be spent in rural areas, and disputes about what is "rural" would be a small foretaste of what could follow.

Those of us who are risk-averse may also be concerned about the proposition that "After the initial years, the American Infrastructure Financing Authority is set up to be a self-sustaining entity". Was not Amtrak "set up to be a self-financing entity after the initial years"? Why should the Federal Government take risks by investing money it does not even have?

Opportunities for private sector involvement in roads

Private concerns have been contracted to provide public services at least since 1782, when the Perrier brothers were granted a 15-year license to provide water in Paris. Subsequently, private contractors have been providing water to many cities in France and elsewhere[iii]. In many cases the municipalities prepare detailed specifications for the required services, and private companies bid the rate per cubic meter for meeting these specifications. The provision of new roads on such a basis is less common, but can be increased in at least two ways:

- Private providers being paid real tolls;
- Private providers being paid "Shadow" tolls.

Private providers being paid real tolls

Toll roads are provided in France, Spain, Italy and many other countries in areas in which free high-quality long-distance roads do not exist, or do not provide significant competi-

tion. Some of these toll roads are provided by governments, some by private providers. Toll roads are far less common in the USA because of competition from "Freeways" that are "free" at the point of use, such as segments of the 46,726-mile Interstate Highway System.

However, even in the US there are situations where the "Freeways" are congested and where many road users prefer to use less-congested, tolled, alternatives. One such example is a ten-mile stretch of California's State Route 91, some 30 miles east of Los Angeles[iv]. In the 1990s the California Private Transportation Company conceived, financed, designed and provided, tolled lanes in the median of this ten-mile stretch. These tolled lanes can be made available to buses, specific types of high-occupancy vehicles (such as van-pools), and to other vehicles for which tolls are paid. Payments are collected electronically from customers' pre-paid accounts, the payment levels being set to ensure congestion-free travel at all times. Tolls for the 10-mile stretch now vary from $1.30 for much of the night to $9.45 at 4:00 PM on Thursday afternoons[v]. All income classes use the tolled lanes, with 10 per cent more women than men switching to them. Those who choose not to pay stay on the non-toll lanes.

The SR-91 express lanes proved popular and have been replicated in the areas of Denver, Houston, Miami, Minneapolis and San Diego. Contracts have been let to add such lanes to the Washington Capital Beltway. Robert Poole and Ted Balaker have dubbed them "Virtual Exclusive Busways[vi]

These electronically tolled lanes, which can be privately provided, have many advantages:

- They offer buses speedy congestion-free travel;
- Single-occupant vehicles get premium service and save time;
- Those who choose not use the express lanes enjoy reduced congestion in other lanes; and
- The fees collected can cover the lane costs.

Cities wanting more than tolled lanes could adopt the proposal by Robert Poole and Kenneth Orski for tolled *networks*[vii]: Sets of interconnected premium lanes, to be added to congested freeway systems in urban areas by converting selected lanes to tolled lanes, and using toll revenue bonds to finance the missing links and flyover connectors.

Poole and Orski sketched out such networks for Miami, Atlanta, Dallas/Fort-Worth, Houston, Seattle, DC, San Francisco and Los Angeles. They estimated the costs at $40 billion, possibly equivalent to $60 billion today. The networks would be financed by electronically collected tolls, varied to ensure congestion-free travel at all times.

Private providers being paid "shadow" tolls

In the 1980s, government funding for roads was scarce in the UK, and much of the construction industry idled. Private consortia then offered to finance new roads and to be paid by the government an agreed amount for each vehicle-mile using the new road. The principal advantages of this arrangement were:

- Private capital would relieve the pressure on public funds;
- Payment tied to road use would reduce the risk of "roads to nowhere" being financed;
- There would be no tolls to divert traffic to "free" roads; and
- Private involvement would reduce costs.

Eventually, thirty-year concessions for ten highway schemes were offered in the UK in the period 1994-97 under the Thatcher government's "Private Finance Initiative". The UK Department of Highways invited bids from consortia to Design-Build-Finance-and-Operate these roads that, after the end of the concession, were to be returned to the government in good condition[viii]. Payments to the successful bidders were based on agreed rates per vehicle-mile, based on traffic counts, the rates being determined by bidding.

The agreement for these Design-Build-Finance-and-Operate projects included a clear division of risks, and two risks in particular were borne by the private concessionaires:

- First, all construction, operating and maintenance costs, and
- Second, all traffic forecast risks.

Total investment on these contracts exceeded £1.5 billion, and financial savings in reduced construction costs were of the order of 20 per cent. Similar contracts were also made in Belgium and Spain.

Private provision of highway maintenance

This is already done in many countries, including the US (In the District of Columbia, Virginia and elsewhere), where governments specify the required end results and private maintenance contractors choose the means of achieving these results[ix].

Improving charging methods for road use

Dedicated trust funds enabling roads to be financed by taxes on fuel were first introduced, in the UK, by Chancellor of the Exchequer Lloyd George in 1909, and subsequently in the US (in Oregon) in 1919. Although the word "taxes" is used in connection with these surcharges, Sir Edgar Harper, economist and Chief Valuer to the Inland Revenue (the UK equivalent of the US Internal Revenue Service), pointed out that a dedicated road fund

"is not fed by taxation in the strict sense of that term. It provides machinery by which the owners of motor vehicles, in combination and under State guidance, are enabled to expend money on roads for their mutual benefit[x]"

Surcharges on fuel are used to pay for roads because of their convenience and low collection costs. But this method has its disadvantages, a major one being that economies in fuel use reduce the revenues for road improvement. The US Congress responded to this challenge by establishing the *National Surface Transportation Infrastructure Financing Commission* to explore the issue. Its report was published in February 2009 under the title "Paying our Way: A New Framework for Transportation Finance"[xi]. One of the key recommendations was for

> "the transition to a new, more direct user charge system as soon as possible and commit to deploying a comprehensive system by 2020. Because of the complexity inherent in transitioning to a new revenue system and the urgency of the need, the Commission recommends that Congress embark immediately on an aggressive research, development, and demonstration (RD&D) program ...
>
> Establish VMT [Vehicle-Miles Travelled] technology standards and require original equipment vehicle manufacturers to install standardized technology by a date certain that will accommodate the desired 2020 comprehensive implementation. Any technology deployed should be designed to accommodate the full range of potential charge systems in anticipation of the potential for state, local, and private toll roads to piggyback on the national system. These state, local, or private systems should be required to be interoperable with the national VMT standard. Ideally such systems also should incorporate in-vehicle or after-market Global Positioning System (GPS) devices.

This recommendation by an expert commission can encourage states and local authorities to explore the technical and administrative possibilities of such charges. Because considerable work on VMT charging has already been done in Europe, including the establishment of ISO (International Organization for Standardization) standards to cover members of the European Union[xii], research in the US need not start from blank sheets. On the contrary, the ISO standards recommended for Europe, which include strong privacy protections, could be taken as starting points.

Such charging systems have not yet been applied to US roads, except during successful pilot tests in Oregon[xiii] and Puget Sound[xiv]. What can be done to develop such improved charging systems for roads?

One way to introduce these new methods would be on a voluntary basis, i.e. to allow VMT-based charging to be used by those who choose to do so. This would require the

new systems to incorporate features attractive to road users, for example access to convenient street parking; to Pay-As-You-Drive insurance (attractive to low-mileage drivers).[xv]; and even to behavioural rewards and discounts[xvi]. Such voluntary systems would allow equipment manufacturers to try out new products, and even allow billing companies (such as those serving telephone and credit card providers) to apply their experience to bill for road use.

VMT-based charging systems for road use have the potential not only to stabilize — and even increase — revenues for road improvement. They might also enable road-use charges to vary from road to road and by time of day. This sort of flexibility, which already exists for other public services such as telecommunications, could enable roads to be provided commercially, without the need for any government financing. To illustrate the possibilities, one such system — and there could be many others — is sketched out below.

How a commercialized road system, with GPS-based charging, could work

The following framework is based on the current operation of mobile phones. The technology, which was described in greater detail in a paper presented two years ago to the 2009 Annual Meeting of the Transportation Research Board[xvii], has not been tested on a large scale in the US. But over 900,000 vehicles have been operating it successfully in Germany and Slovakia since 2005 and 2010 respectively.

Every road segment would have a clear and accessible owner. Road owners would be responsible for the upkeep of their roads and receive all payments made for their use.

Every vehicle would carry an "In-Vehicle Unit" (IVU) to record details of the vehicle's travel on different road segments, including details of location and time. The IVU could be built into vehicles, or be a separate electronic unit. The IVU would download information obtained by means of the Global Positioning System (GPS) system. The downloaded information would belong to the vehicle's owner who could keep or destroy it. Precise travel information may be needed by vehicle owners for commercial applications (such as fleet management), and to enable charges to be challenged, but there would be no need to send trip information to billing locations.

Totals of distances travelled — but not details of individual trips — would be sent to a billing agency selected by the vehicle owner. The billers would debit the accounts of vehicle owners and credit the accounts of road providers, as is done with the billing of telephone calls today. All specifications for this kind of billing require that information about individual trips not be revealed, except to vehicle owners.

Privacy would have to be guaranteed. A frequent objection to GPS-based road-use metering is that GPS-based systems allow vehicles to be "tracked". This is fiction. The satellites making up the GPS enable road users to pinpoint *their own* locations, in the way that sextants were used at sea to enable ships to ascertain their whereabouts. But the sextants did not enable the ships to be "tracked", and neither does GPS enable road users to be followed. If a vehicle equipped with a GPS navigation system is lost, the navigation system on its own does not enable it to be found. For this, an additional unit has to be fixed to the vehicle, to broadcast its position.

Payments could be made in the manner of paying for mobile phone use today: Either by pre-payment or in arrears. The task of collecting payments from road users and distributing revenues to road providers would require expertise in handling large quantities of data, and could be undertaken by companies currently handling phone or credit card billing. More than one company should be involved, with road users being given the choice of selecting those to their liking. Entities currently engaged in high-volume billing (e.g. for telephone use) could profitably also bill for road use.

Travel on local roads: Use of all roads would have to be covered by the charging system, otherwise road users could be tempted to use local roads to avoid payment. However, to avoid double charging, provision could be made for exempting from road use-charges travel on local roads paid for by owners' property taxes. GPS-based charging systems can be programmed to exempt such local roads from charges.

Provision of new roads: New roads, or major improvements, would be privately provided where justified by the prospect of private profit.

Determination of road use charges. In a competitive road market, competitive road owners would determine charges. Where competition among road owners is not practicable, concessions could be awarded to competing road providers on the basis of bidding processes. For a transition period, provision could be made for charges to be regulated.

Enforcement. Mobile inspectors could ensure that vehicles using the new charging systems carry the right electronic equipment and that it was working properly. The use of cameras on fixed gantries could be minimized.

In summary: Existing technologies can enable vehicle travel information to be downloaded to vehicle owners, who can send summaries to billers who, in their turn, can simultaneously debit the accounts of road users and credit the accounts of the appropriate road providers, all without invading the privacy of road users. Payments could be made

directly to road providers (in the public or private sectors) with no need to send them to the federal government.

Conclusion

It may be concluded that the federal financing of state roads, other than by means of the existing federal Highway Trust Fund, is unnecessary now, and is likely to become even less necessary with the development of modern charging methods that, like E-ZPass systems, enable payment for road use to be made directly from road users to road providers. The federal government should, therefore not fund highway infrastructure, nor other transportation infrastructure that can be commercially provided to those wishing to pay the full costs.

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COMMUNICATIONS

Washington Office
101 Constitution Ave., N.W.
Suite 375 East
Washington, D.C. 20001
(202) 789-7850
Fax: (202) 789-7859

Statement of

The American Society of Civil Engineers

Financing 21st Century Infrastructure

United States Senate

Committee on Finance

May 17, 2011

The American Society of Civil Engineers (ASCE)[1] would like to thank the Finance Committee for holding a hearing on how to improve financing for job creating infrastructure investments. The Society is pleased to present to the Committee our views on investing in the nation's transportation infrastructure.

ASCE is concerned with the increasing deterioration of America's infrastructure, reduced investment for the preservation and enhancement of our quality of life, and with the threatened decline of U.S. competitiveness in the global marketplace. In response, ASCE has issued multiple *Report Cards* on the condition of the nation's infrastructure that have helped inform the national discussion. More recently, ASCE has sought to advance solutions to the problems highlighted in the *Report Card* that provide for an improved quality of life, as well as stimulate the economy. Passing a transformative, multi-year surface transportation bill, with significantly increased funding levels will go a long way to creating a surface transportation system worthy of the Twenty-First Century.

It is important to note that, as Congress begins the process of developing a comprehensive multi-year surface transportation authorization, and as President Obama discusses the administration's proposal to invest $556 billion on the nation's transportation infrastructure, our roads, bridges, and transit systems continue to suffer from underinvestment.

Infrastructure Receives a Grade of "D"

ASCE's *2009 Report Card for America's Infrastructure* graded the nation's infrastructure a "D" based on 15 categories (the same overall grade as ASCE's *2005 Report Card*), and estimated that the nation needs to invest approximately $2.2 trillion from 2009 – 2014 to maintain infrastructure in a state of good repair. This number, adjusted for a 3 percent rate of inflation, represents capital spending at all levels of government and includes what is already being spent. Even with the current and planned investments from federal, state and local governments from 2009 - 2014, the "gap" between the actual spending and overall need will exceed $1 trillion by the end of the five year period.

In the *2009 Report Card,* the nation's roads received a grade of "D-", bridges a grade of "C", and transit a grade of "D". With nearly one-third of roads in poor or mediocre condition, a quarter of the nation's bridges either structurally deficient or functionally obsolete, and use of our long neglected transit system increasing to its highest levels in

[1] ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents more than 140,000 civil engineers individually in private practice, government, industry, and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a non-profit educational and professional society organized under Part 1.501(c) (3) of the Internal Revenue Code.

50 years, it is not hard to see why the nation's surface transportation system is in a state of decline. To bring just these three surface transportation categories up to an acceptable condition would require a five year investment of $1.2 trillion from all levels of government, according to ASCE estimates. The results of years of under investment can be seen in unsafe bridges and dams, deteriorating roads and transit systems, and increased congestion. If the nation continues to under invest in infrastructure and ignores this backlog until systems fail, we will incur even greater costs.

5 Key Solutions

In 2010, ASCE brought together engineers and infrastructure policy experts to further focus on the 5 Key Solutions that were identified in the 2009 Report Card for America's Infrastructure. These solutions include:

- *Increase federal leadership in infrastructure;*
- *Promote sustainability and resilience;*
- *Develop federal, regional, and state infrastructure plans;*
- *Addressing life cycle costs and ongoing maintenance; and*
- *Increase and improve infrastructure investment from all stakeholders.*

During infrastructure roundtables in both Washington, DC and throughout the country, several themes were identified as common problems or needs including the need for a clear national infrastructure vision, a better informed public, and the need for performance-based data that can target investments which reward good performance. By addressing these issues intelligently with smart infrastructure investments, we can develop a safer and more economically competitive nation.

Benefits of Multi-Year Surface Transportation Legislation

Money invested in essential public works can create jobs, provide for economic growth, and ensure public safety through a modern, well-engineered transportation system. By improving the nation's deteriorating surface transportation system both economic and job creation opportunities will be provided, while creating a multi-modal transportation system for the Twenty-First Century. The nation's transportation infrastructure system has an annual output of $120 billion in construction work and contributes $244 billion in total economic activity to the nation's gross domestic product. In addition to the significant economic benefits for the entire nation, the Federal Highway Administration estimates that every $1 billion invested in the nation's highways supports 27,823 jobs, including 9,537 on-site construction jobs, 4,324 jobs in supplier industries, and 13,962 jobs throughout the rest of the economy.

Expanding Infrastructure Investment

Despite significant funding levels in TEA-21 and SAFETEA-LU, the nation's surface transportation system requires increased investment to meet the documented needs.

For this reason, ASCE supports a variety of revenue streams for infrastructure investments, including an increase in the motor fuels tax, indexing the motor fuels tax to the Consumer Price Index, and eventually transitioning to a vehicle miles traveled system. ASCE supports a reliable, sustained user fee approach to building and maintaining the nation's highway and transit systems. Establishing a sound financial foundation for future surface transportation expansion and preservation is an essential part of any authorization.

Since the motor fuels tax was last increased in 1993, the purchasing power has been reduced by nearly 55 percent, between 1998 and 2015, according to the American Association of State Highway and Transportation Officials. Raising the motor fuels tax to meet the documented system needs will ensure the near term viability of the Highway Trust Fund. Additionally, the National Commission on Fiscal Responsibility concluded that an increase in the motor fuels tax of 15 cents would reduce the deficit, because the Highway Trust Fund would not need another infusion of revenue from the General Fund.

In the long term, with the affects of increased fuel efficiency and alternate fuel technologies, other methods must be explored outside of an increased motor fuels tax in order to sustain a viable Highway Trust Fund in the long term. A mileage-based system for funding surface transportation programs needs to be further studied, and the recommendation of the National Surface Transportation Infrastructure Financing Commission, calling for a transition to a vehicle miles traveled (VMT) fee system, must be fully explored. A large scale demonstration project, to follow up on the work done in Oregon, should be undertaken to determine the practicality of such a program.

ASCE supports innovative financing programs, such as the use of Public-Private Partnerships, Build America Bonds, the expansion of TIFIA, increased flexibility of GARVEE bond repayment methods, the establishment of a federal capital budget, and the creation of a national infrastructure bank, for transportation projects. Furthermore, the federal government should make every effort to develop new programs and additional flexibility in innovative financing approaches. Innovative financing techniques can greatly accelerate infrastructure development and can have a powerful economic stimulus effect compared to conventional methods. This has been the approach in many states where expanded and accelerated transportation investment programs have been successful.

Strained state and local government budgets, combined with increasing demand, have led to the implementation of public-private partnerships (PPPs) in several states and localities. The injection of private capital into public works, however, has drawn some criticism from stakeholder groups and raised the need for a set of guiding principles for these projects as they are planned, implemented, and maintained. While PPPs are a method of project financing, they do not replace direct public funding of infrastructure projects and they should only be used when the public interest is protected.

The creation of a National Infrastructure Bank could play a significant role in improving the nation's infrastructure by leveraging public funds with private dollars. ASCE supports The Building and Upgrading Infrastructure for Long-Term Development or BUILD Act, S. 652, that was introduced by Finance committee member, Senator John Kerry (D-MA). Due to the fact that the BUILD Act would be capitalized initially by general fund appropriations, but self sustaining after the start up period, the financing mechanism would provide long term benefits and another financing tool for projects of regional or national significance. ASCE hopes to see legislation related to the creation of an infrastructure bank move forward in the current Congress.

Finally, ASCE supports the establishment of a federal multi-year capital budget, separated from non-capital federal expenditures, for public works infrastructure construction and major rehabilitation, similar to those used by state and local governments. The current federal budget process does not differentiate between expenditures for current consumption and long-term investment, even though infrastructure, by its very nature, is a long term investment. This current system causes major inefficiencies in the planning, design, and construction process for long term projects. A federal capital budget could create a mechanism to help reduce the constant conflict between short term and long term needs, while providing the financial assurance that federal, state, and local governments require in order to move forward with infrastructure investments. Lastly, a federal capital budget also would help increase public awareness of the problems and needs facing the nation's physical infrastructure and help Congress focus on programs devoted to long term growth and productivity.

The innovative programs in SAFETEA-LU have been a good start, but more needs to be done to expand their scope, and new programs or approaches must be introduced. We must find new and innovative ways to finance the critical transportation infrastructure needs of the nation, because relying solely on the traditional sources of funding no longer works. However, financing alternatives cannot replace a public commitment to funding. Financing by any technique does not supplant the need for adequate user fees or other funding sources to eventually pay for projects.

Conclusion

Surface transportation infrastructure is a critical engine of the nation's economy. It is the thread which knits the nation together. To compete in the global economy, improve our quality of life and raise our standard of living, we must successfully rebuild America's public infrastructure. Faced with that task, the nation must begin with a significantly improved and expanded surface transportation system, which can only be accomplished through solving the funding and financing question.

ASCE looks forward to working with the Congress as it develops robust surface transportation authorization legislation which is founded on a strong national vision, adequate funding and new technology, and creates an integrated, multi-modal national transportation system.

U.S. Senate Committee on Finance – Hearing on "Financing the 21st Century Infrastructure"
Tuesday, May 17, 2011 – 10:00 AM – 215 Dirksen Senate Office Building

Statement for the Record Submitted by Karl Watson, Jr., President, CEMEX USA
May 18, 2011

Senate Committee on Finance
Attn. Editorial and Document Section
Rm. SD-219
Dirksen Senate Office Bldg.
Washington, DC 20510-6200

During the Committee hearing on May 17, 2011 entitled, "Financing the 21st Century Infrastructure," the Senate Finance Committee discussed innovative financing tools which would enable us to meet the funding challenges facing our nation's infrastructure network. As President of CEMEX USA, the largest and most efficient producer of cement in the country and one of the country's largest employers in the construction and building materials sectors, I want to commend the Committee – in particular Chairman Baucus and Ranking Member Hatch – for your willingness to seek out creative, innovative ways to ensure that we are able to fund our infrastructure network in an effective, sustainable manner. Furthermore, I would like to draw your attention to one such innovative financing tool that can be particularly impactful – Senator Ron Wyden's Transportation and Regional Infrastructure Project (TRIP) bonds.

As you know, the effects of the economic downturn have been felt by American workers and business owners across all economic sectors. Yet as sections of the economy begin to reemerge, the construction industry is still suffering. Some of this stagnation is due to economic cycles, notably the housing boom and bust cycle, which has sharply curtailed the number of new building construction projects. Demand represents the root cause of our industry's problems on the building front, and we are convinced that as the economy rebounds, and Americans resume pursuit of the timeless dream of homeownership, that sector will rebound. When it comes to new transportation construction, however, demand is not the issue. As this Committee understands, the problem is systemic – under the current funding mechanisms, we are not able to fund badly needed new surface transportation projects.

To that end, I ask the Committee to consider the TRIP bonds program which is being developed by Senator Wyden of Oregon. TRIP bonds build upon the successes of the Build America Bonds initiative, which according to the U.S. Treasury "realized considerable savings as compared to the cost of issuing tax-exempt bonds." The new TRIP bond program would enable up to $50 billion worth of tax credit bonds to be issued over a six year period, generating up to 1.5 million new jobs while leveraging existing Highway Trust Fund revenues to finance critical infrastructure projects without necessitating any additional user fees.

Additionally, the newly proposed TRIP bonds address some of the issues raised regarding the Recovery Act Build America Bonds program while continuing to generate savings, create jobs, and allow our nation to meet its infrastructure needs.

United States Operations
920 Memorial City Way, Suite 100, Houston, TX 77024. USA, (713) 650-6200

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Under the most recent proposal, the tax credit bonds would be capped. This would limit the total number of bonds issued over the life of the program and would create a more fiscally sustainable program. In addition to the cap, funding obtained through this credit bonding process would be used exclusively for the construction of new projects, which would help ensure that we are investing only in projects which have the potential to contribute to substantial economic growth. Lastly, the new TRIP bonds program would ensure that funding is divided among states of all sizes, allowing residents in all states – including Montana and Utah – the opportunity to add to their existing infrastructure capacity and reap the economic benefits of quality construction jobs.

I share your conviction that we need to seek out and pursue economically sound ways to fund these projects so that our nation's network of roads and highways – a prerequisite for remaining a leader in the global economy – is not left to crumble. The new TRIP bonds program will allow us to build more projects with the funding that becomes available in a fiscally responsible manner with bonds that are capped, focused on new projects, and open to all states.

This program represents an innovative solution that makes sense for industry, for taxpayers, for our economy, and for the future of the American infrastructure network.

Karl Watson, Jr.
President, CEMEX USA

United States Operations
920 Memorial City Way, Suite 100. Houston, TX 77024. USA. (713) 650-6200