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Setting Priorities, Meeting Needs:

The Case for a National Infrastructure Bank

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INTRODUCTION



William A. Galston holds the Ezra Zilkha Chair in the Brookings Institution's Governance Studies Program, where he serves as a senior fellow.

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The American Society of Civil Engineers (ASCE) gave America's infrastructure a cumulative grade of D, a result of "delayed maintenance and chronic underfunding." ASCE's most recent quadrennial report card for America's infrastructure found that more than a quarter of the nation's bridges are either "structurally deficient or functionally obsolete," with the number of such bridges in urban areas on the rise. Roads fare no better. It is estimated that Americans spend 4.2 billion hours a year stuck in traffic, costing the economy \$78.2 billion annually. The poor condition of our roads costs motorists another \$67 billion a year in repairs and operating expenses.¹ Additional costs are incurred as a result of delays and inefficiencies at our nation's airports. In 2007, airline delays cost passengers \$16.7 billion and airlines \$8.3 billion. Inefficiency in air transportation also had indirect effects on the U.S. economy, "decreasing productivity in other business sectors and reducing the 2007 U.S. gross domestic product (GDP) by \$4 billion."²

Inadequacies in infrastructure don't just hurt us at home; they also hamper us in the global market and render us less competitive. Everyone who travels abroad knows that the U.S. no longer meets world-class infrastructure standards. The World Economic Forum's 2011-2012 Global Competitiveness Report ranks the U.S.'s infrastructure at 16, down from our seventh place ranking just four years ago. And we have slipped in every category: roads, ports, railroads, and—most precipitously—in air transport and the quality of the electricity supply. Indeed, the reliability of the U.S. electric grid is now ranked 32nd, seven spots behind China.

Despite these costs to taxpayers and the national economy, not to mention the potential public safety hazards deficient infrastructure poses, real federal spending on infrastructure declined 4.7 percent annually between 2003 and 2007, the most recent year for which data is available.³ ASCE has stated that "current spending amounts to only about half of the needed investment."⁴ Total public spending (which includes federal as well as state and local spending) has fallen steadily since the 1960s and is now at around 2.4 percent of GDP.⁵ Europe, on the other hand, invests 5 percent of GDP in its infrastructure, and China invests 9 percent.⁶

The potential economic benefits of investment in infrastructure are considerable. Not only do such investments create jobs (particularly in manufacturing and construction, which are especially important to a strong middle class), but also, efficiently transporting people, goods, and ideas increases productivity, decreases overhead, and spurs regional economic growth.⁷

To stay competitive and encourage economic growth, the United States must begin investing more in our national infrastructure. Our current fiscal situation, however, gives us limited options. Appropriators are loathe to increase spending without simultaneously generating new revenue, yet increasing taxes when the economic recovery is still precarious is also not a popular option. And this is not to mention the general stalemate in which the opposing parties seem to be permanently stuck. One need only look to the painful process of enacting a desperately needed transportation bill, once a heralded example of bipartisanship, to see how slim the chances are for meaningful increases in infrastructure spending to pass.

Moreover, our current financing framework is ill-equipped to respond. State and local budgets are strained; the highway trust fund, fueled by the federal gas tax, does not yield the revenues needed to maintain existing roads, let alone fund much-needed expansions; project selection is based more on political logrolling than on calculations of economic and social benefits; and there is no good means for planning and financing projects that span state or even municipal borders.

Our inability to find better ways to invest in infrastructure represents a wasted opportunity ... and a failure of imagination. Not only is the need great, but also the conditions are propitious. Millions of Americans remain unemployed or underemployed—especially in the construction sector⁸—and a healthy labor market remains far off. Trillions of dollars of private capital are sitting on the sidelines, and interest rates are at record lows. Investors are looking for reliable alternatives to low-yielding Treasury securities, and they are willing to accept more modest yields than they sought even five years ago.

This is where innovative institutions can open a new path. As Brookings scholars Emilia Istrate and Robert Puentes have pointed out, governments at every level have turned to contractual relations with the private sector for a range of infrastructure activities, from design and finance to operation and repair. Often, however, state and local governments lack the technical capacity to ensure project quality and to protect the public interest.⁹ For that reason, Puentes has recommended the creation of a national-level Public/Private Partnership Unit, housed within the Office and Management and Budget, to provide states, cities, and metropolitran entities with support and technical assistance, create an environment that encourages private infranstructure investment, and begin the process of forging an integrated national infrastructure agenda.¹⁰

A national PPP Unit would be an important and cost-effective first step. But to boost aggregate investment in infrastructure to the level our country needs while channeling it in economically productive directions, we must go farther. The creation of a National Infrastructure Bank (NIB)—the focus of this report—would allow us to attract private investment for public purposes, and it would ensure that projects are funded on the basis of economic and social benefit, not political gain. The issue is not just how much we invest, but *how* we invest it. We must invest in the right projects, and we must make every dollar count.

Our emphasis on the importance of private capital does not mean that we can do without public investment. The United States' economic success and the high living standard its citizens enjoy can be attributed, in large measure, to successive

The creation of a National Infrastructure Bank (NIB) would allow us to attract private investment for public purposes, and it would ensure that projects are funded on the basis of economic and social benefit, not political gain. waves of new technology: the steam engine, light bulb, internal combustion engine, turbine, mechanized factory, electrified city, and, finally, the computer and the internet. Without publicly funded research and development, these advances would have spread much more slowly.

Taking energy as a case study, Brookings scholars Michael Greenstone and Adam Looney explain why government involvement is essential:

[T]here is little incentive for the private sector to undertake either basic research or technology demonstration projects that are good for society because they may not offer the promise of a profitable private return. One impediment is the lack of a clear price signal that provides the right incentive for innovation. A second impediment is the fact that the fruits of basic research and demonstration investments -- ideas and methods, as well as information about the commercial viability of these innovations -- are hard to capture as they are easily shared among competitors. ... This creates a critical role for government research to provide funding and support for the types of basic research that could help facilitate the creation of low-cost, clean energy sources.¹¹

Our argument is not that government should retreat from the infrastructure sector, but rather that it should use scarce public resources strategically. First, to perform functions for which the private sector lacks adequate incentives. Second, to leverage private sector participation. Third, to close gaps between the rate of return the private sector requires and the revenues that private users of infrastructure projects are willing to provide.

THE CURRENT SYSTEM OF U.S. INFRASTRUCTURE FUNDING

The current system for funding infrastructure projects in the United States places the majority of the burden on states and localities. According to a 2010 analysis by the Congressional Budget Office (CBO), states and localities cover 75 percent of public spending on "surface transportation (highways, mass transit, rail, and waterways), aviation, water resources (such as dams and levees), and water distribution and wastewater treatment." Such projects represent by far the greatest public investment in infrastructure. (In coming up with this breakdown, CBO subtracted from states' gross spending the value of grants and loan subsidies the federal government provides, which has remained consistent over the past two decades.)

In addition to the discrepancy between aggregate federal and state funding, there is further disparity between investing in new infrastructure and operating and maintaining existing infrastructure. Here the gap between federal and state spending is even greater. While the federal government supports 40 percent of capital investment, it covers only 10 percent of the costs of operating and maintaining transportation and water infrastructure. Aviation is the only significant exception: federal outlays for operating and maintaining the nation's air traffic control system represent one third of total public spending in that area.¹²

Overall federal investment in infrastructure is modest at best. An analysis by the Center for American Progress estimated that total federal appropriations for infrastructure in 2010 represented a mere 2.6 percent of all federal expenditures.¹³ By several measures, moreover, federal spending on infrastructure has declined over the past 50 years. "In a growing economy," a Congressional Research Service paper notes, "infrastructure should hold its own, but other data show that that has not been the case. While total government spending on infrastructure adjusted for inflation increased from \$92 billion in 1960 to \$161 billion in 2007, it actually declined from \$1.17 per capita in 1960 to \$0.85 per capita in 2007.¹⁴ According to one expert, "From 1950 to 1970 we devoted 3 percent of GDP to spending on infrastructure. ... Since 1980 we have been spending well less than 2 percent, resulting in a huge accumulated shortfall of needed investment."¹⁵

Yet exact measurements of how much the federal government is spending on infrastructure are hard to calculate. As Puentes and Istrate explain, some of the difficulty arises from the fact that while the Office of Management and Budget's (OMB) annual analysis of the federal budget has long included a chapter on investments in public physical capital, research and development, and education and training, the programs and spending included in this analysis differ from one administration to the next, depending on the White House's current political and policy priorities. Nonetheless, they point out that as a share of GDP, "federal investment has been on a general downward trend since 1962 ... partly due to the expansion of mandatory programs such as Medicare and Social Security."¹⁶ Changing demographics and the rising costs of health care will only strengthen the hold large entitlement programs have on the federal budget, making it all the more necessary that we find new and creative ways to fund the maintenance and improvement of our physical infrastructure.

The sluggishness in federal spending puts more pressure on state and local governments to fund the maintenance and operation of existing infrastructure and pay for much needed expansions. In recent years this problem has been exacerbated by the effects of the financial crisis. Not only have state and local receipts gone down, but also turmoil in the markets has made it harder to raise money for infrastructure projects. Cities and states typically rely on the bond market to finance long-term projects, but because most have balanced budget requirements, they must establish their ability to repay before borrowing. Combined, these circumstances constrain their ability to self-finance projects, leading officials to scale back, delay or cancel projects altogether.¹⁷

Yet there is one area where federal spending has increased dramatically in recent years: energy. According to the U.S. Energy Information Administration, an

In short, not only is the amount we are currently investing in our nation's infrastructure below what is needed, but also the way we are allocating those sparse funds is below the standard of many of our competitors. independent agency of the U.S. Department of Energy, federal energy subsidies increased from \$17.9 billion in FY 2007 to \$37.2 billion in FY 2010, an increase of 108 percent. Most of the increase was a result of stimulus spending, and a large portion of it went to renewable energy sources. In addition to job creation, this spending was also intended to change the incentive structure, shifting subsidies away from sources like refined coal and toward renewable energy sources such as wind and solar. A lot of this increased spending, however, is temporary and is set to phase out over the next few years.¹⁸

The challenge goes well beyond the overall level of spending. Economists use the term "bottleneck-releasing" projects to describe those projects which will maximize economic impact. Japan's lost decade offers an example of how *not* to use infrastructure investment to spur economic growth. The Japanese government put money into building new roads and bridges, "but due to the near saturation of many types of infrastructure in Japan," these programs did not produce large economic returns.¹⁹ One would hope, then, that appropriators or officials at the executive agencies that disperse infrastructure funding would at least assess the potential economic impact of large infrastructure projects, even if they do not take into consideration the possible social benefits of such projects.

Sadly, that is not how most funding is allocated. There are three main financing tools the federal government employs for infrastructure projects: direct grants; loans and loan guarantees; and tax expenditures. The overwhelming majority of federal infrastructure spending — almost 90 percent by one estimate²⁰ — comes in the form of grants. Since the mid-1950s, the largest portion of public funding for infrastructure has gone to highways.²¹ In 1956, President Dwight D. Eisenhower signed the Federal-Aid Highway Act, which established the federal fuel tax. Ever since, the fuel tax has been used to generate resources for the Highway Trust Fund, whose monies are distributed via grants to the states to support the interstate system and other highway projects. These grants, however, are not subject to scrutiny, competition, or even basic calculations to assess need. Instead, they are allocated based on formulas.

This results not only in inefficiencies, but also in perverse incentives. As an article in the *Economist* points out, revenues from the gas tax "are returned to the states according to the miles of highway they contain, the distances their residents drive, and the fuel they burn. "... A state using road-pricing to limit travel and congestion would be punished for its efforts with reduced funding, whereas one that built highways it could not afford to maintain would receive a larger allocation."²²

What's more, the gas tax, which stands at 18.4 cents per gallon, has not been increased since 1993—despite the fact that project costs have gone up significantly. As cars and trucks become more efficient and infrastructure ages, revenues cannot keep up with demand.²³ A growing economy and population puts added strain on an aging system. Miles traveled increased 48 percent between 1988 and 2006. Taking that increase into account, real highway spending has declined by 7 percent

since 1988 and has fallen by nearly 50 percent since the beginning of the Highway Trust Fund.²⁴

After much wrangling and up against a July 1 deadline, Congress finally managed to pass legislation providing long-term funding for transportation, the first time such a bill has been passed since 2005. The bill did not, however, address the biggest problem facing the nation's transportation system—the fact that spending is outpacing revenues. The gas tax yields about \$36 billion a year, but the transportation bill will spend more than \$50 billion each year.²⁵ The gap is covered through the use of general funds, the transfer of which is offset by changes to pension law and other provisions.²⁶ This is not a sustainable spending plan.

In short, not only is the amount we are currently investing in our nation's infrastructure below what is needed, but also the way we are allocating those sparse funds is below the standard of many of our competitors. Nonetheless, there are a few bright spots. Some federal programs that employ innovative financing methods have been established. The majority of these are transportation related, as transportation consumes by far the largest portion of federal spending on infrastructure, though, as we note, some go beyond transportation or at least help finance the development of multi-modal projects.

Build America Bonds

Included in the American Recovery and Reinvestment Act of 2009 (Recovery Act) was the Build America Bonds (BABs) program, which altered the traditional tax-exempt bond in a way that deepened the federal subsidy to states and also made the bonds more attractive to a broader group of investors. Tax-exempt bonds are not generally considered to be a cost-effective way to transfer revenue from the federal government to states and localities. This is because the interest investors earn on such bonds is exempt from federal taxes, and while that allows states to borrow at lower interest rates, it also means that the federal government is foregoing that tax revenue. Unfortunately, the savings in interest that states and localities gain is less than what the federal government would collect were it not for the tax exemption.

To correct for this, over the past decade, Congress has authorized tax-*credit* bonds. BABs are an example of how such bonds can be used successfully to help states and localities raise money for much needed infrastructure projects. BABs differ from tax-exempt bonds in that they offer the issuer of the bond — in this case, states or localities — a tax credit of 35 percent of total borrowing costs. Such bonds are a more cost-effective means of subsidizing borrowing because every dollar of federal revenue forgone by the tax credit is transferred directly to the borrower (states or localities) rather than the investors (purchasers of the bonds). They also offer a more generous subsidy of interest costs and have the added benefit of broadening the pool of investors to include those that do not normally hold tax-exempt debt, such as pension funds (which are already exempt from taxes) and sovereign wealth funds (which also have no U.S. tax liability). By

attracting new investors, BABs eased the supply pressure in the municipal bond market and brought down borrowing costs.²⁷ And finally, BABs could be used to support a wide array of infrastructure investments, among them transportation, water and sewer projects, environmental and energy projects, public utilities, and the renovation of schools and hospitals.

BABs expired at the end of 2010, but their popularity has prompted the president and many members of Congress to propose initiatives that would extend and/or expand the program. In his budget for fiscal year 2011, the President proposed making the bonds permanent and allowing them to be issued by nonprofits such as schools and hospitals. A handful of bills were introduced in both the 111th and 112th Congresses which would temporarily extend BABs and allow for the refunding of currently issued bonds.

TIFIA

In 1998, Congress passed the Transportation Infrastructure Finance and Innovation Act (TIFIA), which was reauthorized in 2005 and again in July 2012 as part of legislation authorizing long-term transportation funding. TIFIA was created to help state and local governments, whose revenue stream is unpredictable, close funding gaps for large transportation projects. It does so by leveraging federal funds with local and private investment by providing credit assistant through direct loans, loan guarantees or lines of credit. While TIFIA assistance must be repaid through a dedicated revenue source (such as tolls, sales tax or transit sales), the terms are very favorable: interest is pegged at the Treasury rate; interest and principal payments can be deferred while a project matures; repayment terms are flexible; and final maturity dates are as long as 35 years from completion of construction.

TIFIA has been very successful and has allowed major transportation projects to go forward. In Congressional testimony, Assistant Secretary for Transportation Policy Polly Trottenberg gave this example:

The \$1.1 billion Port of Miami Tunnel Project provides a good example of how TIFIA supports private investment through PPPs. The project, which is currently under construction, will improve access to and from the Port of Miami by providing a dedicated roadway connector linking the Port, located on an island in Biscayne Bay, with the MacArthur Causeway and I-395 on the mainland. A private company is responsible for design, construction, financing, operation and maintenance of the project for 30 years. A relatively small amount of budget authority, \$21.5 million, supported a \$341 million TIFIA loan and facilitated a \$1.1 billion investment in a nationally-significant transportation project.²⁸

The success of TIFIA led to its expansion under the 2012 transportation bill, Moving Ahead for Progress in the 21st Century, or MAP-21. Under the new legislation, funding for the popular program was increased significantly from \$122 million annually to \$750 million in FY 2013 and \$1 billion in FY 2014. In addition, the maximum share of eligible project costs that can be supported through TIFIA was raised from 33 percent to 49 percent. It is estimated that the \$1.75 billion available for TIFIA loans can be leveraged into \$34 billion in private sector and other investments for transportation projects.²⁹

Unfortunately, arguably the greatest strength of TIFIA—the competitive nature of the process and strong selection criteria—has been eliminated under MAP-21. Previously, loans were given only to projects of regional or national significance; localities requesting the loans had to demonstrate a dedicated revenue stream capable of repaying the loan, and senior debt had to have an investment-grade rating. Now, the loans will be given on a first-come, first-served basis.³⁰ This is particularly distressing given that even an expanded TIFIA program will not be able to accommodate all the applications it receives. "Infrastructure is expensive," economists Timo Henckel and Warwick McKibbin explain. "Small inefficiencies can put to waste billions of dollars. Given the sums of money involved, the nonchalance and arbitrariness of some infrastructure investment decisions is baffling."³¹

Other innovative federal funding programs

There are a handful of other federal programs for funding transportation infrastructure that have expanded the type of funding available and encouraged private sector participation in major infrastructure projects, among them: the Transportation Investment Generating Economic Recovery grants (TIGER); Railroad Rehabilitation and Improvement Financing (RRIF); and Private Activity Bonds (PAB). One benefit of each of these programs is that they can be combined with TIFIA loans as well as local and private investments to further leverage federal dollars. They also each take an innovative approach to funding and do not rely on the classic formula-based grant distribution that defines the majority of federal investments in this area. We will briefly review each program and its benefits.

TIGER Grants

TIGER is a competitive national grant program for innovative, multi-modal and multi-jurisdictional transportation projects—the types of projects that are usually the hardest to fund through more traditional means. The projects must have significant economic and environmental benefits to an entire metropolitan area, region or the nation and applications are subject to rigorous assessment by the U.S. Department of Transportation (USDOT), which is charged with awarding the grants. The program is very popular among state and local transportation officials because it can fund a diverse set of projects (such as highway, transit, freight, port, and bicycle/pedestrian), as opposed to only particular modes of transportation or types of infrastructure. Although it is a grant program, the competitive nature of the selection process, as well as the program's ability to fund multi-modal, multi-jurisdictional projects has made it very popular and led to its repeated reauthorization, though appropriations have decreased each time. It is now in its fourth round, having been reauthorized by the FY 2012 appropriations act—signed into law in November, 2011—which appropriates \$500 million to be made available through September 30, 2013. (Initial funding was \$1.5 billion, and in subsequent years it was \$600 million and \$527 million.) In total, the four rounds have provided \$3.1 billion in funding to 218 projects, yet USDOT received more than 4,000 applications, far exceeding the program's funding capacity.³²

RRIF

The Railroad Rehabilitation and Improvement Financing program was established in 1998. While it was modified by both the 2005 and 2012 transportation bills, it was initially created as a permanent program and therefore does not need to be reauthorized. Administered by the Federal Railroad Administration, RRIF makes direct loans and loan guarantees for up to 100 percent of project costs and up to a total of \$35 billion per year. The terms of the loans make them especially attractive, with interest rates set at the Treasury level and repayment periods of up to 35 years. While loans can only be used for railroadspecific projects—such as the purchase or improvement of rail equipment or facilities, including track, bridges, yards and buildings, or to develop new intermodal facilities—recipients are not restricted to state or local governments. Rather, private railroad companies are eligible to apply for the loans, as are state and local governments and government-sponsored authorities and corporations.

As with TIGER grants, RRIF loans can be combined with TIFIA funding and other federal grants, such as one of the panoply offered by the Federal Highway Administration. One problem with this, however, is that projects that receive combined funding need to approach every program independently and meet the separate requirements and timetables of each.

Private Activity Bonds

Private Activity Bonds were established with the intent of encouraging private investment in transportation infrastructure. Interest on bonds is tax-exempt, which lowers the interest rate and the cost of capital. The bonds are issued by a public sector conduit and purchased by private investors, but the private entity developing the infrastructure project is solely responsible for repaying the bonds. PABs are available to any surface transportation or freight transfer project that receives federal assistance, such as TIFIA, thus encouraging the involvement of private investors in highway and freight projects, generating new sources of money. The programs just sketched are helpful, but they are not enough, for two reasons. First, the public funds available for appropriation fall far short of the needs, and the federal government's dire fiscal situation all but rules out significant increases for years to come. Second, all of the innovative funding strategies reviewed in this section (save for Build America Bonds, which have expired) deal primarily with surface transportation. Yet our aviation system is woefully obsolete, depending on radar technology developed in the 1940s. While GPS technology could save 2.9 million gallons of fuel a year and drastically reduce delays and congestion, the cost of installing and maintaining it system-wide is estimated to reach a staggering \$42 billion by 2025.³³ And that is not to mention needed investments in renewable energy, maintenance and upgrades to schools, improvements to the electric grid, new technology, broadband, dams, levees, wastewater, and drinking water.

How much are our competitors investing and what types of infrastructure are they investing in? How are they coming up with the funds? How do our efforts compare with theirs? We take up these topics in the next section of this report.

COMPETING IN THE GLOBAL MARKET

s a report from the Urban Land Institute succinctly put it: "to be competitive in today's world it is imperative to invest in infrastructure."³⁴ Yet every country is facing financial constraints caused by the recent economic downturn, making it difficult to keep funding for infrastructure at current levels, let alone increase them to implement planned or hoped-for projects, or make up for a lack of funding in years past. The Urban Land Institute points out in a subsequent report, however, that "countries that continue to invest through this challenging economic period are likely to gain global competitive advantage in the long term."³⁵

Long-term planning and funding

Following the economic crisis that began in late 2007, many countries, including the U.S., turned to public spending on infrastructure to boost their economies and stem job losses. China, for example, has targeted more than \$9 trillion for projects over ten years.³⁶ Yet most stimulus funds have now been spent (CBO estimates that 90 percent of stimulus funding for transportation and water infrastructure in the U.S. will be depleted by 2013), and many countries have drastically curtailed public spending overall. Continued investment in key infrastructure can "drive competitiveness, boost trade and promote economic growth,"³⁷ but only if investment decisions are strategic. As a paper from the World Bank states, it's important to invest "in the *right* infrastructure projects," such as those with a significant positive impact on economic growth.³⁸

Some countries have begun to coordinate strategic infrastructure planning and long-term, dedicated infrastructure funding. In January 2009, Denmark passed "A

Green Transport Policy" that the OECD called historic in its economic scope and broad political support. The policy created an Infrastructure Fund with approximately \notin 12 billion, allocated an additional \notin 22 billion for individual transport projects, identified infrastructure projects through 2020, and overhauled the approval, development and funding process for Denmark's infrastructure investments.³⁹

An efficient, integrated transport system can attract international trade, create jobs, increase opportunity, and make businesses and the country more competitive globally.

Similarly, in 2007 Canada released a long-term infrastructure funding plan, "Building Canada," and dedicated CAD \$2.1 billion in funding. To help guide investment decisions, the government also released two strategic policy frameworks, in 2007 and again in 2009, to develop a strategic, integrated and globally competitive transport system. The 2009 strategy noted that "international trade requires an efficient, adaptable and integrated transport system for the flow of goods ... and infrastructure investments need to be based on their contribution to Canada's trade competitiveness, to supporting opportunities and to increasing international trade." Although "Building Canada" expires in 2014, the government has already established "Infrastructure Canada" to begin development of a longterm plan that will extend beyond 2014.

The U.S. has no such long-term plan, strategic set of priorities, or dedicated long-term funding stream. The recent transportation bill that was passed extends funding for only two years (similar bills in the past covered five year spans). While the official bill summary observes that "[o]ur nation's economic health depends on a transportation system that provides for reliable and timely goods movements," it concedes that "the condition and capacity of the highway system has failed to keep up with the growth in freight movement and is hampering the ability of businesses to efficiently transport goods due to congestion." Despite this, the National Freight Network Program, a new "core program" established under MAP-21, continues to provide funding to states for freight movement and intermodal connectors based on formulas. In fact, the overall percentage of money distributed via formulas rose from 83 percent to almost 93 percent.⁴⁰ And while a new "Projects of National and Regional Significance Program" was established, which would fund major projects meeting rigorous criteria and eligibility requirements, the program was funded for only one year.⁴¹

The United States needs a more strategic approach to investing the limited federal funds that go toward infrastructure. To look at just one example where an enhanced system would be helpful, one can turn to ports. An efficient, integrated transport system can attract international trade, create jobs, increase opportunity, and make businesses and the country more competitive globally. One upcoming boon to U.S. ports is the expansion of the Panama Canal, set to be completed in 2014, which will open more all-water routes between Asia and North American East Coast and Gulf Coast ports. The expanded canal will be able to accommodate more and larger ships, but the only U.S. port currently capable of accepting the "post-Panamax" vessels—ships that carry two or three times the load of standard freighters—is Norfolk, VA. Miami, FL, and Savannah, GA, have dredging plans in

the works and the port in New York, NY, while deep enough, would have to raise the Bayonne Bridge to allow the container ships to pass—a job that will take more than five years to complete. At the moment, it looks unlikely that any ports will join Norfolk in welcoming the post-Panamax ships and the economic activity they will bring come 2014.

Moving beyond the traditional model of public financing for infrastructure

As noted earlier, public spending is being curtailed worldwide in reaction to the global recession. Even before the financial crisis, however, many countries were developing new ways to fund infrastructure projects, mainly through the lease or sale of public assets, or via public-private partnerships (PPPs) in which a government partners with the private sector to complete a project. Privatizations and PPPs are on the rise, both within the U.S. and globally, and it is generally accepted that the number of such transactions will continue to rise.⁴² The success and efficiency of such endeavors are far from accepted, however. Like most things, there is a right and a wrong way to leverage private funds for public good. To illustrate this, we will briefly review a few examples of how government has successfully and unsuccessfully used the private sector to support public infrastructure.

Wrong Way

Chicago has been hailed as an innovator when it comes to partnering with private sector firms. Indeed, Mayor Rahm Emanuel proposed and, in April 2012, the City Council approved the establishment of the Chicago Infrastructure Trust, an entity that would leverage private capital in the manner we are suggesting to pay for infrastructure projects.⁴³ But the city has pursued another, less successful strategy in the past: leasing public assets. Many view the leasing of public assets as a short-term gain, long-term loss, and that is certainly the outlook for Chicago's leasing of the city's parking meters to a private company for 75 years. The deal reaped \$1.16 billion for the city during the 2007-2009 recession, when it was facing a budget deficit of about \$500 million and the prospect of deep cuts. The lease agreement had the added benefit of sheltering elected officials from citizen discontent if parking rates were raised. Unfortunately, though, increased revenue generated by rate hikes (just weeks after completion of the deal meter rates in some areas quadrupled) go to the private company leasing the meters-Morgan Stanley—not the city. Analyses show that over the life of the lease, the city could have brought in between \$3 and \$5 billion in revenue from the operation of the city's parking meters, revenue that is now going to Morgan Stanley instead of roads, parks, schools or libraries. On top of the fact that the deal is, in the end, a big monetary loss for Chicago, aldermen complain that they have been forced to concede control of parking policy, a core function of city government, to a private entity.44

Another attempt to harness private investment to build public infrastructure that is currently under fire is the United Kingdom's Private Finance Initiative (PFI).

Established in 1992, it was intended to increase the involvement of the private sector in the provision of public services. The argument was that the private sector would assume the bulk of the risk, complete projects in a speedier and more economical manner, and more efficiently provide services. Ultimately, proponents argued, the PFI would allow for more overall investment in capital projects.

The reality is not so rosy. For starters, the bulk of PFI costs are "offbalance sheet," meaning the debt owed to private sector operators is not recognized on the public sector budget. The reality is not so rosy. For starters, the bulk of PFI costs are "off-balance sheet," meaning the debt owed to private sector operators is not recognized on the public sector budget. A *Financial Times* article back in 1996 pointed out the obvious effect: "reduce spending now and replace it with a stream of future liabilities... Today's capital investment thus becomes tomorrow's current spending."⁴⁵ The government only recently began publishing a full assessment of PFI liabilities and a report by the Treasury Select Committee set up to investigate the PFI recommended that those liabilities be brought on balance sheet—a move that would increase Britain's national debt by £35 billion, or 2.5 percent of GDP.⁴⁶ Furthermore, PFI liabilities are crippling public sector budgets. Several hospital trusts struggling to pay their PFI debts had to receive emergency funds to avoid cutting patient services.⁴⁷

The real kicker, however, is the Treasury Select Committee's finding that despite higher financing costs (on average the cost of capital for a PFI project is over 8 percent, whereas the long-term borrowing rate for the government is half that⁴⁸) there is no evidence of savings or benefits. One analysis found that the government will end up paying about £300 billion for less than £12 billion in capital outlays.⁴⁹ Not only were no efficiencies gained, but the committee also found that PFI hindered rather than encouraged design innovation and there were reports that building quality was of a lower standard in PFI buildings.⁵⁰

A Better Way to Leverage Private Investment

Understandably there is skepticism when the private sector is involved in areas generally thought of as part of the public domain—sometimes for good reason, as the above examples illustrate. Nonetheless, governments struggling to meet investment goals are turning to the private sector to help foot the bill.

India has been quite aggressive in its use of PPPs. According to a government database there are over two hundred central government projects that are at some stage of the process (bidding, construction, operating) and over one thousand projects at the state level. Projects range from airports, roads and ports to power plants, waste management facilities, schools, and bus terminals.⁵¹ A widely cited example of India's success with PPPs is the redevelopment of the Delhi and Mumbai airports. The two largest airports in India, they handle almost half of all of the country's air traffic. The government agency in charge of the airports, the Airports Authority of India (AAI), was inefficient and underfunded, leading to congestion and a lack of basic facilities, such as restrooms and connectivity between terminals.⁵² To remedy this, the government decided to establish a PPP between the AAI and a private company. Under the plan, the private sector would

be responsible for designing, building, operating and maintaining the airports, and also would assume the majority of the risk. In return, the private operator would reap the majority of the profits earned.

In 2003, the Indian government approved a proposal to redevelop the Delhi and Mumbai airports at an estimated cost of about \$50 billion through a PPP,⁵³ which has turned out to be a good investment. Traffic has surged at the airports and is expected to continue to increase, opening the door to significant revenues. Though the initial evaluation of bids was eventually deemed to be significantly flawed, the bids were reevaluated by a government-appointed group of experts and the final selection met with approval by the Supreme Court, government and media. Subsequent case studies point out the importance of a transparent and open process in achieving success. Unlike the Chicago parking meter lease deal, government ministers in India oversaw the process and carefully reviewed all the pertinent documents, which lead to the finding that the initial evaluation process was flawed and potentially manipulated to benefit a particular bidder. It also exposed the fragility of the institutions tasked with overseeing the process and the need to account, not hired consultants, which was the case with the original evaluation process.

Taking heed of these lessons, the Indian government approved guidelines for the selection of bidders in PPP projects. Scores of projects have since been awarded, including India's largest—the building and operating of a metro rail system in Hyderabad—and the transparency and clarity of the current process has met with success.⁵⁴

Probably the most robust institution charged with investing in public infrastructure in conjunction with the private sector is the European Investment Bank (EIB). Established in 1958 under the Treaty of Rome, the EIB is the European Union's long-term lending institution. One could write a lengthy paper on the EIB, and many have. For our purposes we will briefly mention some aspects of the EIB that make it a particularly attractive model.

Owned by the 27 Member States of the EU, the EIB is financially independent, raising money through bond-issuance and other debt instruments so it does not depend on cash-strapped nations for financial support. Its bonds are sold on the international capital markets and are purchased by both institutional and retail investors internationally. Attracting a wide-array of investors is a key to leveraging private investment. As discussed in the section on Build America Bonds, it is particularly helpful to open this market to long-term investors, such as pension funds. The percentage of such investors in the EIB has increased by over ten percent in 2012.⁵⁵

While the bank finances no more than 50 percent of a project's cost, EIB loans can be combined with EU funds through a blending of grants, guarantees and other financing instruments, much as TIFIA funds can be combined with other financing. And similar to TIFIA-backed projects, EIB support is often central to attracting other investors. As the bank's director stated in a presentation, EIB sees

"government as investment enabler not investment funder."⁵⁶ He noted that financing needs go beyond the means of national budgets and discussed the bank's role in broadening their PPP lending, which has been growing since the 1990s. This combination of activities allows the bank to stretch its limited capital resources and support a greater level of overall investment. In 2011, amidst government austerity and financial hardship in the EU, the EIB "provided its highest-ever contribution to the real economy, disbursing \in 60 billion."⁵⁷

EIB-funded projects must be in line with stated EU policy objectives, which allows the bank to invest strategically and for the long term. Projects must also meet economic, financial, technical and environmental criteria, which help ensure that funded projects are viable on many fronts. It is this type of vetting and competition that made TIFIA successful (although, as previously noted the competitive aspect of the program has been eliminated). To complement its financial support, the EIB offers technical advice from expert economists, engineers and sectoral specialists to assist with the preparation and implementation of projects and advise local authorities on how to best use public resources.

EIB lending is not, however, limited to the public sector, but is open to large corporations and small- and medium-sized enterprises as well as municipalities. Small- and medium-sized enterprises account for more than two thirds of private sector employment in Europe, and they were therefore a target of EIB funding in recent years, as the EU struggles with record-high unemployment.⁵⁸ And finally, projects are not limited in scope. EIB lending goes to: transportation; communications; energy; environmental protection and the fight against climate change; and human capital, through investment in schools, universities, hospitals, research centers, and laboratories.

The United States is not the EU, of course, and the EIB model may not be fully applicable to our distinctive circumstances and political arrangements. Still, the EIB's success suggests that a U.S. version of that institution could go some distance toward closing the gap between our infrastructure needs and current programs. We turn now to the structure and functions of an NIB.

THE NATIONAL INFRASTRUCTURE BANK

The Case for an NIB

One might imagine, and some have argued, that existing programs render an NIB superfluous. As we have seen, not only regular appropriations but also a number of specialized programs and subsidies pump billions of federal dollars into infrastructure. Two-thirds of the states as well as a number of municipalities have established their own development banks, and the tax code helps them issue long-term debt at lower interest rates than they would otherwise pay.

[The NIB] will increase aggregate infrastructure investment, reduce the influence of politics on project selection, enhance incentives for private capital participation, and facilitate projects that span multiple state and local jurisdictions or include different modes of transporation.

Ultimately, however, these arguments are not persuasive. Expanding TIFIA, as some have argued, would not meet pressing infrastructure needs in areas outside of transportation, such as energy, communications or water systems. Altering the mandate of the Export-Import Bank to allow it to fund domestic infrastructure projects, another argument frequently made, would fundamentally change the nature of that institution, whose purpose is to provide financing to support U.S. exports of manufactured goods. There is no reason to believe it would be successful in carrying out a completely new function with which it has no experience. And while it's true that over 30 states have established infrastructure banks, the vast majority of such entitites have very little capital, have undertaken few projects, and are housed within departments of transportation, which limits the types of infrastructure projects they can support. Experts and members of Congress have argued that we should encourage the states to expand their infrastructure banks rather than establishing a national institution. Afterall, they argue, infrastructure should be left to the states. We don't disagree that the states should do more to strengthen their infrastructure banks, but even robust state institutions would likely fall short of funding needs and remain limited in their ability to fund projects that span state borders.

Current levels of public infrastructure investment are not adequate to meet national needs and, given fiscal stringencies at every level, are unlikely to rise. The allocation of federal funds is based on grants to states rather than economic merit or demonstrated need. The vagaries of the annual appropriations process impede long-term planning, and formula-based distributions are often at odds with selecting and implementing strategic priorities. States and localities have a hard time coordinating to fund multi-jurisdictional projects, and there is little support for multi-modal projects. And current programs and institutions do not attract enough private capital to compensate for the shortage of public dollars.

The case for an NIB can be stated simply: done right, it will help the United States address the deficiencies we have just enumerated. It will increase aggregate infrastructure investment, reduce the influence of politics on project selection, enhance incentives for private capital participation, and facilitate projects that span multiple state and local jurisdictions or include different modes of transporation. In addition, it may go a long way in reducing overall project costs—both the upfront building costs and long-term maintenance costs.

As Istrate and Puentes discuss in their analysis of an NIB, until recently, the design-bid-build public finance model has been the norm and little experimentation with other delivery contracting types has been undertaken. Yet evidence from other countries shows that private delivery saves money on infrastructure projects. An NIB could also help address the maintence bias: "the bank could impose maintenance requirements to recipients including adequately funded maintenance reserve accounts and periodic inspections of asset integrity."⁵⁹

Before we proceed further, a note on terminology may ward off both misunderstandings and objections. The word "bank" suggests that the entity we

are describing would enjoy privileges, such as deposit insurance, and bear burdens, such as the laws and regulations that govern the conduct of private banks. Neither is part of our plan. While our proposed entity would be bank-like in several respects, it could also be thought of as an "authority," a "trust," or a "fund." In some respects, our proposal might be said to resemble a sector-specific mutual fund with a mixed pool of public and private resources.

We use "bank," not literally or technically, but as a familiar analogy.

Structure and mission

Several bills were introduced in recent Congresses to establish an infrastructure bank.⁶⁰ While they differ in some ways, they all aim to increase overall infrastructure investment without necessitating large increases in federal outlays, and to improve project selection by de-politicizing the process. Most proposals would establish the bank as an independent government-owned corporation (GOC), and we agree that this is the most appropriate status for such an entity. A GOC is a government agency, established by Congress to provide a market-oriented public service, whose revenues make it financially self-sustainable.⁶¹

While some proposed legislation would place the bank within an agency, such as the Department of Transportation, we recommend making it independent so as not to narrow the scope of infrastructure projects it could support. Establishing it as a GOC—as opposed to a regular government agency within a department, as is the case with TIFIA—would also provide it with greater budgetary flexibility. Regular executive branch agencies are subject to uniform rules and regulations with respect to their budgets, but as a government corporation the NIB would have more financial flexibility.

That is not to say it would have complete budgetary freedom. Under the Government Corporate Control Act, it would be required to submit a budget to the President, who in turn is required to include that budget with the executive branch budget he submits to Congress. That budget must include "estimates of the financial condition and operation of the corporation for the current and following fiscal years" as well as information on "income and expenses, sources and uses of money, an analysis of surplus and deficit," a statement on the overall financial condition of the corporation and a summary of its major activities.⁶²

In addition to having more financial flexibility, as a GOC the bank would have different legal status, allowing it to sue and be sued in its own name. This would enable a private business to contract with the bank with the assurance that if a legal dispute arises, it can go to court and, if successful, obtain a prompt settlement. Legal disputes with regular government agencies are lengthy affairs that involve the Court of Claims—and potentially the Departments of Justice and Treasury, OMB, the President, and both houses of Congress. Aggrieved contractors who prevail then must wait for appropriations.⁶³ Private firms would be likely to

find a GOC a more attractive partner than a regular government agency.

No recently proposed legislation suggests establishing an infrastructure bank as a government-sponsored enterprise (GSE). Nor do we, and here is why: the government created GSEs to improve the workings of credit markets. If there were areas of high demand underserved by capital markets, the government could and often did create a GSE to encourage the flow of funds. At first blush it seems that infrastructure funding would be one area where demand is high but—due to uncertain returns, long completion times and other factors—a market for such loans has not developed.

There are two main arguments against designing an infrastructure bank as a GSE. First, while the federal government does not explicitly guarantee GSEs against large losses, their special status implies that the government will bail them out if their financial situation requires it, as was the case with Fannie Mae and Freddie Mac. This implicit government backing not only puts taxpayers on the hook financially but also may encourage riskier lending behavior. Besides, given the controversy over the Fannie and Freddie bailouts and the magnitude of the likely net costs to taxpayers, the political climate is likely to prevent the establishment of new GSEs for the foreseeable future.

For similar reasons, we do not think that it is wise to empower the NIB to offer loan guarantees, at least not at the outset. The point of this new entity is to identify and fund projects that yield real economic returns. The NIB's public capital is designed to help close whatever gaps may exist between private and public goods these projects provide. In some cases, the fees users are willing to pay may suffice to yield private investors attractive rates of return; in others, the public goods component may be large enough to require some support from public capital. But loan guarantees would saddle the public purse with large contingent liabilities, a step that makes neither economic nor political sense.

While there is no uniform governing structure for government-owned corporations, infrastructure bank proposals build on a common model. Most provide for a CEO and board of directors, some nominated by the president, others by the leaders of the two parties, confirmed by the Senate, serving staggered terms of about six years. We recommend such a structure, which would give Congress some oversight authority but would sufficiently insulate its operations from political whims and create enough of a buffer so that elected officials would neither determine strategic and project choices nor be called on the carpet for unpopular or controversial decisions.

The board of directors would be responsible for ensuring that the bank is managed in accordance with its governing statute and for final decisions on its financial activities. Importantly, the directors would also be responsible for establishing the criteria on which potential projects would be judged. Most proposed legislation emphasizes that projects of regional or national importance as well as those that would lead to economic growth or create jobs should be prioritized. Many bills also require that environmental, social and economic costs be taken into account. And of course, considerations of leverage and value added should be central: it would make no sense for the new financial entity to support projects that existing funding streams can address. Based on these criteria, the board would be responsible for establishing, publicizing, and periodically updating long-term investment strategies.

During its early years, the NIB would have to demonstrate the soundness of the premises that led to its creation. Assuming that it clears this hurdle, the bank could supplement its capital base with equity offerings. A strong and permanent professional staff would be vital to the success of the bank. We recommend adopting the European Investment Bank's model by creating a division of the bank responsible both for analyzing the viability of proposed projects and for advising those seeking support. As is the case with the EIB, staff should be capable of providing expert advice on both the financial and technical aspects of the project. Financial advice would not have to be limited to those projects receiving bank support, but instead could help facilitate financing for projects which do not meet NIB criteria or are denied financing for other reasons. NIB advisers could help planners connect with other government programs, private investors, and state infrastructure banks. Technical advice could be given throughout the process, helping project developers with environmental and other criteria during the application process and advising them during the planning and construction phases. Providing technical advice could further improve resource allocation by creating a rigorous selection process insulated from political considerations.

To achieve its objectives, the bank would require an initial tranche of public funds. Annual appropriations of \$5 billion for the first five years would create a pool of \$25 billion. Administrative costs could be covered by application and transaction fees.

To achieve leverage, the new entity would have to attract private investordepositors as well. Brookings financial expert Douglas Elliott estimates that the upfront public capital could bring in as much as \$125 billion from private sources, generating an initial lending pool of \$150 billion.⁶⁴

During its early years, the NIB would have to demonstrate the soundness of the premises that led to its creation. Assuming that it clears this hurdle, the bank could supplement its capital base with equity offerings. Its authorizing legislation should be drafted to permit such offerings, subject to the bank's meeting specific quantitative tests.

We see three principal reasons why private parties would choose to invest in an infrastructure bank rather than—or in addition to—traditional vehicles such as municipal bonds. In the first place, the sector-specific expertise of the professional staff would far exceed that of the bond ratings agencies, generating more reliable estimates of potential risks and returns. Second, the bank would be able to fund regional and inter-jurisdictional projects that tend to fall through the seams of current public financing. Such projects may provide attractive rates of return. And finally, the bank would not be simply an in-basket operation that evaluated and selected among the funding applications it received. Rather, the analytical staff would provide policy entrepreneurship, identifying unique opportunities to leverage private capital for public needs. Once such possibilities are identified, bank executives could convene the parties whose participation would be needed and work to broker agreements among them. This would help encourage creativity in solving infrastructure needs, both in terms of how financing is procured as well as distancing the decision-making process from a purely political process and bringing it more in line with assessments of social and economic needs.

For various reasons, the legislation setting up the NIB should establish some quantitative parameters for its lending activities. As every banker knows, small loans are more expensive to administer, and excessive numbers of such loans will make it difficult for loan officers to exercise needed oversight. Besides, smaller projects are within the fiscal capacity of most local jurisdictions. The NIB should therefore restrict its lending to projects worth at least \$100 million. Most bills that have been introduced set such a threshold. For example, a bill introduced by Senators Kerry and Hutchison established \$100 million as the minimum estimated cost of individual projects, and \$25 million as the minimum cost for rural projects. We support the lower threshold for rural projects to complete and they do not promise high rates of return from user fees such as tolls. And second, several senators have expressed concern that an NIB would overlook needed investments in rural areas. Taking the unique needs of rural America into consideration may help assuage these fears.

At the same time, the bank's portfolio should be adequately diversified. No individual project should put at risk more than 10 percent of the bank's lendable funds or encumber more than 5 percent of its capital.

Some legislative proposals limit the bank's lending to specific categories of infrastructure, such as transportation and water projects. We do not see why such limits are necessary. If jurisdictions develop proposals for (e.g.) innovative IT projects that private firms are reluctant to finance, the bank should be able to consider them on all fours with other potential investments.

The structure of the bank, however, does imply other kinds of restraints on the scope of its activities. Because it would fund projects principally through loans rather than grants, fundable projects would have to generate a stream of revenues through user fees. One model would be the repayment of principal at a designated interest rate over a fixed period. Another, which in some circumstances might prove more attractive to all parties, would be returns to investors based on a designated percentage of the project's revenues for either a fixed long-term period (such as 99 years) or in perpetuity.

Because the bank's charter would limit the amount of its capital that could be devoted to any single project, each project's private goods component (fundable through user fees) would have to be substantial relative to its subsidized public goods component. Institutional design could alter this ratio, however. Take the example of a transportation project that will increase the value of nearby real estate, such as was the case with the redevelopment of the Mumbai and New Dehli airports. As part of the deal, property owners could be required to form a project district—a bounded cachement area within which owners would be required to contribute some percentage of the increase in the assessed valuation of their properties as part of the revenue stream flowing back to the bank.

CONCLUSION: THE POLITICS OF INFRASTRUCTURE FUNDING

number of influential senators and representatives have proposed versions of an infrastructure bank. President Obama has supported the idea as well, first as a candidate in 2008, and then sporadically during his presidency the bank was included in his fiscal year 2010 budget and was a component of his proposed American Jobs Act. Still, enabling legislation hasn't come close to being enacted. Why not?

The breadth of support for the concept only deepens the mystery. Even in these times of partisan polarization, Sens. John Kerry (D-MA) and Kay Bailey Hutchinson (R-TX) joined forces to cosponsor the lead Senate bill which attracted a number of additional cosponsors from both parties. Even as the clash between business and labor intensified, Rich Trumka, the head of the AFL-CIO, and Tom Donahue, his counterpart at the Chamber of Commerce, held a joint press conference to endorse the legislation. Around the country, governors and mayors across party lines have welcomed the idea, most notably New York City Mayor Michael Bloomberg and former governors Arnold Schwarzenegger (R-CA) and Ed Rendell (D-PA) who began an organization called Building America's Future, a national bipartisan coalition of elected officials dedicated to increasing U.S. investment in infrastructure.

Three factors seem principally responsible for preventing the bank from moving forward. First, congressional leaders value their ability to direct—and claim credit for—infrastructure spending in their states and districts. Because it is designed to be insulated from political considerations in choosing which projects to fund, the bank would diminish the clout of numerous congressional committees—including appropriators, who will fight to maintain control of the process, even if it means inadequate levels of infrastructure spending as far as the eye can see. Senate Environment and Public Works Committee Chairwoman Barbara Boxer (D-CA) has opposed the establishment of a bank because it could distract from "core federal transportation programs," such as the recent long-term transportation funding bill that her committee has jurisdiction over. "My experience," Boxer said, "is when the funds go back to the general Treasury, then they don't specifically get used for transportation."⁶⁵ Senators from rural states have voiced concern that an infrastructure bank would only benefit large cities and urban areas where user-fees can more easily produce profits. A spokesman for

Montana Senator Max Baucus (D-MT), chairman of the powerful Senate Finance Committee, said the Senator has "serious reservations with the idea of a national infrastructure bank. Giving politically appointed bankers the ability to determine where we invest our infrastructure dollars could seriously jeopardize the needs of rural America."⁶⁶

Despite careful institutional limits designed to prevent new risks to taxpayers, no doubt many citizens would fear a repetition of the costly bailouts for quasi-public financial entities such as Fannie Mae and Freddie Mac. Second, while the bank would help mobilize private capital, it would draw initially on public funds. So it would either increase the deficit (a hard sell in current circumstances) or come at the expense of current spending somewhere else. The infrastructure bank included in Obama's job's bill would have been partially funded by a 0.7 percent surtax on families earning more than \$1 million per year, a proposal that lead to opposition from most Republicans in the Senate. Rep. John Mica (R-FL), chair of the House Transportation and Infrastructure Committee, opposes the establishment of an NIB which he says would be "run by Washington bureaucrats requiring Washington approval and Washington red tape."⁶⁷ He said that while he supports innovative financing for infrastructure needs, the focus should be on supporting "the 33 existing state infrastructure banks which lack financial backing but are in place,"⁶⁸ though he did not specify how more financial backing should be given to the state banks.

Finally, the bank would be a new public institution at a time when public trust in government is at near-record lows. Despite careful institutional limits designed to prevent new risks to taxpayers, no doubt many citizens would fear a repetition of the costly bailouts for quasi-public financial entities such as Fannie Mae and Freddie Mac. The group Taxpayers for Common Sense made exactly that argument against Obama's 2010 proposal for an infrastructure bank. "[B]ecause a NIB would be federally chartered with directors appointed by the President and confirmed by Congress, simply stating that loan guarantees and bonds backed by the bank don't enjoy the full faith and credit of the U.S. Treasury does not make it so, and would likely leave taxpayers on the line in the event of default," the group wrote. They also warned that even though the idea may be to establish a selfsustaining entity, that may not be the case and ongoing support from taxpayers could be needed.⁶⁹ And it didn't help that at the time Obama's job's bill and its infrastructure bank component was being debated the Solyndra controversy erupted. In his criticism of an NIB, Mica used the same language his Republican counterparts had recently used to describe the Solyndra loans-the government picking "winners and losers."70

These political complexities pose a challenge for elected leaders. Increased investment in infrastructure can enhance efficiency, economic growth, and jobs—not to mention the quality of life of Americans now burdened with crumbling roads, overstressed airports, and aging water systems. The people want, and would welcome, what an infrastructure bank would provide. If leaders can persuade the people to set aside their doubts and fears, the entire country would benefit. But without a concerted effort across partisan divides and different branches of government, the gridlock is all but certain to continue.

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Endnotes

¹ American Society of Civil Engineers, "2009 Report Card for America's Infrastructure."

² The National Center of Excellence for Aviations Operations Research, "Total Delay Impact Study: A comprehensive assessment of the costs and impacts of flight delay in the United States," October 2010.

³ Congressional Budget Office, "Public Spending on Transportation and Water Infrastructure," November 2010.

⁴ ASCE 2009 report card.

⁵ CBO, "Public Spending on Transportation and Water Infrastructure."

⁶ Economist, "America's transport infrastructure: Life in the slow lane," April 28, 2011.

⁷ For a discussion of the economic impact of infrastructure spending see "Beyond Keynesianism: Global Infrastructure Investments in Times of Crisis," Justin Yifu Lin and Doerte Doemeland, The World Bank, January 2012; "The Role of Public Works Infrastructure in Economic Recovery," Claudia Copeland, Linda Levine, William J. Mallett, Congressional Research Service, September 21, 2011.

⁸ According to Labor Force Statistics released by the U.S. Bureau of Labor Statistics, unemployment in the construction industry has been extremely high since the recession. At its peak, national unemployment hit 10.0 percent in October, 2009. The same month, unemployment in the construction industry was 18.7 percent. While national unemployment has fallen since reaching 10 percent, construction unemployment went as high as 27.1 percent in February, 2010. It now stands at 11.4, three and a half points above the national unemployment rate of 7.9 percent.

⁹ Emilia Istrate and Robert Puentes, "Moving Forward on Public Private Partnerships: U.S. and International Experience with PPP Units," Brookings-Rockefeller Project on State and Metropolitan Innovation, December 2011.

¹⁰ Robert Puentes, "Strengthen Federalism: Establish a National PPP Unit to Support Bottom-Up Infrastructure Investment," The Brookings Institution, November 2012.

¹¹ Michael Greenstone and Adam Looney, "Paying Too Much for Energy? The True Costs of Our Energy Choices," *Daedalus*, Vol. 141 (2) Spring 2012, pp 10-30.

¹² CBO, "Public Spending on Transportation and Water Infrastructure."

¹³ Donna Cooper, "Meeting the Infrastructure Imperative: An Affordable Plan to Put Americans Back to Work Rebuilding Our Nation's Infrastructure," Center for American Progress, February 2012.

¹⁴ Copeland, Levine, Mallett.

Setting Priorities, Meeting Needs: The Case for a National Infrastructure Bank

¹⁵ Sherle R. Schwenninger, "A Capital Budget for Public Investment," New America Foundation, February 1, 2007.

¹⁶ Emilia Istrate and Robert Puentes, "Investing for Success: Examining a Federal Capital Budget and a National Infrastructure Bank," Metropolitan Policy Program at Brookings, December 2009.

¹⁷ Copeland, Levine, Mallett.

¹⁸ U.S. Energy Information Administration, "Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2010," July 2011.

¹⁹ Lin, Doemeland.

²⁰ Cooper, see Figure 6.

²¹ CBO, "Public Spending on Transportation and Water Infrastructure."

²² Economist.

²³ Coral Davenport, "The Case for a Gas-Tax Increase," National Journal, December 1, 2011.

²⁴ "Paying Our Way: A New Framework for Transportation Finance," Report of the National Surface Transportation Infrastructure Financing Commission, February 26, 2009.

²⁵ Keith Laing, "Highway bill negotiators like Ike," The Hill, July 2, 2012.

²⁶ Nathan Hurst, "Congress Clears Highway Legislation," CQ Weekly, July 9, 2012.

²⁷ For a discussion and comparison of tax-exempt and tax-credit bonds and the importance of those subsidies to infrastructure investment see the Congressional Budget Office and Joint Committee on Taxation, "Subsidizing Infrastructure Investment with Tax-Preferred Bonds," October 2009.

²⁸ Polly Trottenberg, Testimony before the U.S. Senate Committee on Commerce, Science and Transportation hearing on "Building American Transportation Infrastructure through Innovative Funding," July 20, 2011.

²⁹ United States Secretary of Transportation Ray LaHood, "President Obama signs bill to create jobs, restore America's transportation system," Fast Lane, the official blog of the U.S. Secretary of Transportation, July 9, 2012.

³⁰ Chrissy Mancini Nichols, "Talking Transit: TIFIA plays a critical role in funding transit," Metropolitan Planning Council, June 29, 2012.

³¹ Timo Henckel and Warwich McKibbin, "The Economics of Infrastructure in a Globalized World: Issues, Lessons and Future Challenges," Brookings, June 4, 2010.

³² Ryan Holeywell, "Feds Announce latest TIGER Grants for Transportation, Transit Projects," *Governing*, June 22, 2012.

³³ Jad Mouawad, "A Satellite System That Could End Circling Above the Airport," *New York Times,* April 3, 2012.

³⁴ Urban Land Institute/Ernst & Young, "Infrastructure 2009: Pivot Point," 2009.

³⁵ Urban Land Institute/Ernst & Young, "Infrastructure 2012: Spotlight on Leadership," 2012.

³⁶ Urban Land Institute, 2009.

³⁷ Organisation for Economic Co-operation and Development, "Strategic Transport Infrastructure Needs to 2030," 2011.

³⁸ Lin, Doemeland.

³⁹ OECD, "Strategic Transport Infrastructure Needs to 2030."

⁴⁰ Keith Miller, Kristina Costa, and Donna Cooper, "Creating a National Infrastructure Bank and Infrastructure Planning Council: How Better Planning and Financing Options Can Fix Our Infrastructure and Improve Economic Competitiveness," Center for American Progress, September 2012.

⁴¹ Summary of Moving Ahead for Progress in the 21st Century (MAP-21) available at: <u>www.epw.senate.gov</u>.

⁴² OECD, "Strategic Transport Infrastructure Needs to 2030."

⁴³ Reuters, "Chicago OKs private investment for infrastructure," April 24, 2012.

⁴⁴ The most comprehensive account of the agreement to lease Chicago's parking meters is the threepart series in the *Chicago Reader* by Ben Joravsky and Mick Dumke, "FAIL," available at <u>http://www.chicagoreader.com/chicago/features-cover-april-9-2009/Content?oid=1098561</u>.

⁴⁵ Quoted in Grahame Allen, "The Private Finance Initiative," House of Commons Library Research Paper 01/117, December 18, 2011.

⁴⁶ Louise Armitstead, "Government must count £35bn in PFI debt," *The Telegraph*, August 18, 2011.

⁴⁷ Randeep Ramesh, "NHS trusts struggling with PFI debts to get help," *The Guardian*, August 28, 2012.

⁴⁸ Armistead.

⁴⁹ Denis Campbell, James Ball and Simon Rogers, "PFI will ultimately cost £300bn," *The Guardian*, July 5, 2012.

⁵⁰ Armitstead.

⁵¹ Master List PPP Projects in India as on January 31, 2011, Department of Economic Affairs, Ministry of Finance, Government of India; available at: <u>http://www.pppindiadatabase.com/Screens/frmReportView.aspx</u>. ⁵² Ajay Pandey, Sebastian Morris, G. Raghuram, "Structuring PPPs in Aviation Sector: Case of Delhi and Mumbai Airport Privatization," Indian Institute of Management, Ahmedabad and the Planning Commission, Government of India, 2010.

⁵³ Rekha Jain, G. Raghuram, Racha Gangwar, "Airport Privatization in India: Lessons from Delhi and Mumbai," Aviation Centre of Excellence.

⁵⁴ Details of the Delhi and Mumbai redevelopment process can be found in Prateek Kuhad's case study, "Bidding Process for the Delhi and Mumbai Airports," written for the Secretariat for Infrastructure, August 2010.

⁵⁵ European Investment Bank, Funding Newsletter, August 7, 2012.

⁵⁶ Thomas C. Barrett, "EIB Response to Changing Markets: New Initiatives and Financial Instruments," EC-EIB/EPEC Private Sector Forum, June 6, 2012.

⁵⁷ EIB Group "Activity Report 2011."

⁵⁸ EIB press release, "Record EIB support for SMEs in 2011," February 16, 2012.

⁵⁹ Istrate, Puentes, "Investing for Success."

⁶⁰ H.R. 3259, "National Infrastructure Bank Act of 2011," October 25, 2011.

⁶¹ Kevin R. Kosar, "Federal Government Corporations: An Overview," Congressional Research Service, June 8, 2011.

⁶² Public Law 101-576; 104 Stat. 2854; 31 U.S.C. 9106.

⁶³ Kosar.

⁶⁴ In conversation with authors, October, 2012.

⁶⁵ Alexander Bolten, "Infrastructure Legislation on Agenda Despite Boxer's Doubts," The Hill, October 28, 2011.

⁶⁶ Kevin Bogardus, "Rendell gets behind infrastructure bank," The Hill, June 24, 2009.

⁶⁷ Keith Lang, "Mica opposes Obama's call for national infrastructure bank," The Hill, September 8, 2011.

⁶⁸ Keith Lang, "Infrastructure bank to get a House hearing," The Hill, October 6, 2011.

⁶⁹ Erik Wasson, "Taxpayer group warns on infrastructure bank," The Hill, September 8, 2011.

⁷⁰ See, for example, Rep. Darrell Issa quoted in "Solyndra loan controversy casts pall on national transportation bank proposal," The Hill, September 25, 2011, and Rep. Mica quoted in "Infrastructure bank to get a House hearing," The Hill, October 6, 2011.