



## Infrastructure Banks and Surface Transportation

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From 2008 to 2011, total government spending on surface transportation infrastructure—highways, mass transit, and passenger rail—surpassed \$200 billion a year. The federal government spent more than \$50 billion a year—mostly in the form of grants to state and local entities, which then determined what projects to fund—and state and local governments spent more than \$150 billion a year of their own funds.<sup>1</sup> The private sector also invested in such infrastructure.<sup>2</sup>

If future government spending on surface transportation infrastructure matched those recent amounts, the condition of the highway and transit systems would probably deteriorate. According to the Federal Highway Administration (FHWA), maintaining the current attributes of the highway and transit system would require at least \$13 billion per year more than has been spent in recent years. Moreover, if the country undertook all of the highway projects for which the FHWA's estimate of benefits exceeds its estimate of costs, investment in the highway system would be about \$83 billion per year more than has been spent in recent years. However, gaining the greatest net benefit from any increase in infrastructure investment would depend critically on whether that investment went to the most advantageous projects or not.

To increase the funding available for infrastructure projects and to improve the selection process for those projects, some analysts and policymakers have suggested the creation of an infrastructure bank. In this report, the Congressional Budget Office

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1. The figure for spending by state and local governments includes spending on capital expenses and operations and maintenance for roads, transit, and rail systems. Historically, about 60 percent of state and local spending on surface transportation infrastructure has been for operations and maintenance. The Congressional Budget Office estimated state and local spending from 2008 through 2011 by combining data for 2007 (the last year for which comprehensive data are available) with growth rates obtained from more recent but less complete data.

2. In 2011, the companies that own U.S. railroads spent about \$12 billion on capital expenditures.

(CBO) analyzes an illustrative federal infrastructure bank—one that is representative of those in many recent proposals.<sup>3</sup> That entity, which would be federally funded and controlled, would select new, locally proposed construction projects for funding on the basis of a number of criteria, including their costs and benefits, and would provide financing for the projects through loans and loan guarantees. To repay the loans, projects financed through the infrastructure bank would have to include tolls, taxes, or other dedicated revenue streams. Financial assistance could be made to any consortium of partners with an eligible project. For example, a group of state and local entities could apply, as could a group of private, nongovernmental partners. The bank could provide the subsidy amounts needed to compensate private-sector investors for benefits that accrue to the general public and the economy at large.<sup>4</sup>

The illustrative infrastructure bank in this analysis would focus on surface transportation projects. It would not provide financing for water or energy projects, even though some recent proposals have included them. Water and energy projects have certain characteristics that make them different from transportation projects—most notably, they have built-in ratepayers. (See [Box 1](#) for a discussion of issues related to water and energy infrastructure.)

An infrastructure bank could play a limited role in enhancing investment in surface transportation projects by doing the following:

- Providing new federal subsidies (in the form of loans or loan guarantees) to a limited number of large projects, and
- Allowing the benefits of potential projects to be more readily compared in a competitive selection process.

A potential advantage of such a bank is that it could encourage sponsors of projects to charge users for the benefits they receive, which would mean that the subsidies to such projects could be a small percentage of total costs. A second potential advantage is that the selection process could overcome certain barriers to the financing of multijurisdictional or multimodal projects.

A key limitation of providing funding through a federal infrastructure bank is that only some surface transportation projects would be good candidates for such funding, because most projects do not involve tolls or other mechanisms to collect funds directly

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3. Proposals include S. 652, the Building and Upgrading Infrastructure for Long-Term Development Act, as well as proposals by the Center for American Progress, Building America's Future, and the U.S. Chamber of Commerce. The President proposed a federal infrastructure bank in his budget for 2013.

4. For additional information on issues surrounding private financing of infrastructure projects, see the statement of Joseph Kile, Assistant Director for Microeconomic Studies, Congressional Budget Office, before the Senate Committee on Finance, *The Highway Trust Fund and Paying for Highways* (May 17, 2011).

from project users or other beneficiaries. A second drawback is that the support offered for surface transportation by most proposed infrastructure banks would not differ substantially from the loans and loan guarantees already offered by the Department of Transportation (DOT) through its Transportation Infrastructure Finance and Innovation Act (TIFIA) program. As an alternative to creating a federal infrastructure bank, that program could be expanded to meet most of the same goals.<sup>5</sup>

## **How Would a Federal Infrastructure Bank Work?**

In contrast to existing infrastructure banks, which are operated by some U.S. states and European countries and generally function as independent entities, a federal infrastructure bank would be considered part of the federal government—and would be accounted for in the federal budget. The bank would select and finance surface transportation projects nationwide (from among all proposed projects) that would provide significant national or regional economic benefits. Project sponsors (a combination of states, local governments, and private entities) would apply to the bank for loans or loan guarantees to pay for their proposed project.

### **Project Selection**

If it awarded federal assistance competitively, an infrastructure bank could target the spending of limited federal funds with the goal of putting those amounts toward their most efficient use. It could replace current federal funding—typically distributed to states on the basis of formulas outlined in law—for certain new construction and would require that such construction be able to pay for itself using various tools along with a small federal subsidy. Under current law, state and local governments have significant flexibility to choose most federally funded projects under broad federal guidelines. An infrastructure bank would use selected criteria to determine which projects received certain federal funds.<sup>6</sup> The infrastructure bank could compare the benefits of particular projects and award funds on the basis of a project's national or regional benefits.

### **Project Financing**

To facilitate the financing of projects, a federal infrastructure bank would have a number of tools available: direct loans (at or near Treasury rates), loan guarantees, and lines of credit. Current law does not permit federal agencies or entities, such as a federal infrastructure bank, to be capitalized and then indefinitely extend credit to private firms using the proceeds from repayments of previous loans. Instead, the amount and

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5. Public Law 112-141, which is the most recent authorization for surface transportation programs and was approved by the Congress in June 2012, included provisions that will expand the TIFIA program. See the last section of this report for details.

6. Rather than identifying projects on its own, the infrastructure bank would select from projects proposed by state and local entities.

costs of credit activities that federal agencies can provide is controlled by the Congress in annual appropriation acts (see [Box 2](#)).

An infrastructure bank, through loans, loan guarantees, and lines of credit with low interest rates and fees, could provide a federal subsidy commensurate with the benefits of a project that accrue to the general public rather than to individual end users. (A project whose benefits to end users exceed its costs could be completed without any government subsidies if the users could be charged appropriately.) Those public benefits might include improved air quality resulting from reductions in congestion, increased property values surrounding improved infrastructure, or improved regional economic performance.<sup>7</sup> Under current law, most federal assistance for transportation projects is in the form of grants to state and local governments that are paid for primarily from federal tax revenues. Federal grants provide a large subsidy, but because there is no repayment requirement, they may not induce state and local governments to charge user fees that align payment of the costs with the ultimate beneficiaries.

### **Comparison with Existing Infrastructure Banks**

An infrastructure bank that is substantially owned or controlled by the U.S. government would, under longstanding federal budgeting practices, be included in the federal budget and subject to its accounting rules.<sup>8</sup> According to those longstanding practices, any entity that is drawing on federal funds and subject to federal control will be part of the recorded budgetary activities of the federal government.

That treatment differs from the way in which two widely cited examples of infrastructure banks—state infrastructure banks and the European Investment Bank—operate. As infrastructure banks controlled by individual states, state infrastructure banks are primarily capitalized by state dollars, although most also have received federal grants. In addition, some state infrastructure banks operate with the goal of being self-sustaining by using only their earnings from the repayment of loans to support loans or grants to additional state projects.<sup>9</sup> State infrastructure banks are not included in state budgets because states have different budget accounting rules than the federal government.<sup>10</sup>

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7. In practice, setting the amount of the subsidy to be commensurate with the public benefits would be difficult, but the subsidy provided by an infrastructure bank would probably reflect the presence of some benefits to the public.

8. President's Commission on Budget Concepts, *Report of the President's Commission on Budget Concepts* (October 1967), p. 25.

9. See Federal Highway Administration, *Tools and Programs: Federal Credit Assistance Tools—State Infrastructure Banks* (no date), [www.fhwa.dot.gov/ipd/finance/tools\\_programs/federal\\_credit\\_assistance/sibs/index.htm](http://www.fhwa.dot.gov/ipd/finance/tools_programs/federal_credit_assistance/sibs/index.htm).

10. States generally must submit balanced operating budgets but may borrow to finance capital projects. Infrastructure banks are typically not part of that operating budget but instead are part of a capital budget. For additional information on states' capital budgets, see Congressional Budget Office, *Capital Budgeting* (May 2008), pp. 15–17.

The European Investment Bank is an independent, nonprofit entity owned by the member countries of the European Union that seeks its own funding via debt instruments and makes loans to entities throughout the member countries.<sup>11</sup> Neither its costs nor its income are reflected in the national budgets of the member countries because it is considered an independent entity.

### **Why Provide Federal Support for Infrastructure?**

A number of policymakers are looking for ways to increase the amount of investment in surface transportation infrastructure. Two frequently discussed (but not mutually exclusive) alternatives under which the federal government could increase its support for such investment are the following:

- Assist specific new projects, such as those identified by an infrastructure bank or through some other selection process; or
- Increase funding through existing mechanisms that use formulas to allocate funds to other levels of government that would in turn select projects.

The general rationale for public-sector provision of most surface transportation infrastructure in the United States is that such infrastructure displays, at least to some degree, important characteristics of being a “public good.” Public goods are usually not profitable for the private sector to produce because they are available to anyone who wants to use them; as a result, they are generally provided by the public sector.<sup>12</sup> Also, the benefits of surface transportation projects—promoting commerce or reducing congestion, for instance—may extend beyond the places where they are built and beyond the people who use them directly, making it difficult for local governments to reap the full benefits of such projects.

Increasing funding would probably lessen the deterioration of surface transportation infrastructure. According to the Federal Highway Administration, if current spending for highway investment was maintained over the coming decades (with adjustments to keep pace with inflation), the performance and quality of the highway system would decline. That agency points to data suggesting that all levels of government would need to spend a total of \$115 billion per year (in 2010 dollars) on capital expenditures to maintain the current performance of highway and transit systems and that up to

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11. For additional information on the European Investment Bank, see Congressional Budget Office, *Issues and Options in Infrastructure Investment* (May 2008), pp. 30–31.

12. The other defining characteristic of a public good is that one person’s use of it does not interfere with another’s. Highways have that characteristic when they are not congested.

\$70 billion per year more could be spent on additional capital projects for which the benefits would exceed the costs.<sup>13</sup>

## What Are the Strengths and Weaknesses of an Infrastructure Bank?

The number of projects that would be good candidates to receive a loan from a federal infrastructure bank as envisioned in recent proposals is probably limited, at least in the short term. In principle, such a bank could identify and support large-scale projects that have substantial economic benefits for which users could be charged directly, so only a little federal assistance would be needed to cover the expected costs. By encouraging such user charges, the bank would make the available federal funds go farther. In addition, a federal infrastructure bank could centralize—and, in some people's view, depoliticize—decisionmaking about which projects receive federal funds by creating a competitive application and award process for those funds. It could also overcome certain barriers to the financing of multijurisdictional or multimodal projects.

### Volume of Suitable Projects

Over time, project sponsors might develop more proposals tailored to receive support from an infrastructure bank. At least initially, however, an infrastructure bank would probably generate neither significant new revenues for surface transportation nor significant new interest from private-sector investors, when considered as a share of current investment in surface transportation infrastructure (see [Table 1](#)).

**Number of New Large-Scale Projects.** Most current highway spending is for projects too small to meet the minimum size requirements commonly proposed for an infrastructure bank. (Several proposals would set minimum costs at \$25 million for rural projects and \$100 million for other projects.) The majority of total nationwide capital spending on highways by all levels of government is not for the construction of new routes, bridges, or lanes but for road repair, safety improvements, or other, smaller projects that would typically not meet the size requirements. Among the projects involving new construction, relatively few projects (about 4 percent of those funded through the FHWA's programs, representing about 15 percent of the funding requested in 2007) are large or complex enough even to require an environmental impact statement.<sup>14</sup> And the projects considered large enough for assistance from an infrastructure bank are probably a subset of those needing such a statement.

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13. See Department of Transportation, Federal Highway Administration and Federal Transit Administration, *2010 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance* (no date), Exhibits 8-8 and 8-18. That report focuses on capital spending only. All levels of government combined spent about \$102 billion (in 2010 dollars) on capital spending in 2007, the last year for which CBO has comprehensive data.

14. See William J. Mallett and Linda Luther, *Accelerating Highway and Transit Project Delivery: Issues and Options for Congress*, CRS Report for Congress R41947 (Congressional Research Service, August 3, 2011).

An infrastructure bank might induce state and local governments to develop more proposals for large projects. However, state and local priorities for transportation infrastructure are influenced by factors besides a project's costs, so establishing an infrastructure bank might not lead to many more proposals for large projects. The Congress also could choose to reduce the required minimum project size or make eligible for funding all projects for which the benefits exceed the costs by a set amount. However, smaller projects would generally have smaller benefits for the general public.

**Ability of Projects to Repay Loans.** Even among projects that are sufficiently large, most do not involve toll collections or other mechanisms for directly charging users or other beneficiaries. Data from the FHWA show that as of July 2011, more than one-half of the tolled interstates, bridges, and tunnels nationwide were in five heavily populated states, where the dense populations are more likely to be able to support tolled facilities.<sup>15</sup> Furthermore, current law restricts the collecting of tolls on existing federally funded highways.<sup>16</sup> Lifting that restriction would probably increase the number of suitable projects and could have the added benefit, if tolls were established, of encouraging drivers to use existing road capacity more efficiently.<sup>17</sup> Project proposals submitted to an infrastructure bank could dedicate specified general revenues—rather than user or beneficiary charges—as the source of funds to repay the loans. Such proposals would probably be less appealing to project evaluators at the bank, however, unless the Congress established an infrastructure bank whose operation differed from that envisioned in current proposals by placing less emphasis on generating new funds.

**Availability of Other Funding.** Sponsors of some projects that could be funded through an infrastructure bank might choose not to apply, because bank funds loaned at Treasury rates (as commonly envisioned in current proposals) might have too little (or no) cost advantage to warrant the time and uncertainty of the application process. The federal government already subsidizes borrowing by state and local governments by excluding interest received on municipal bonds from federal income taxes. As a result, for many years, the most creditworthy municipal governments could typically borrow more cheaply than the Treasury.<sup>18</sup> Although the municipal bond market saw disruptions during the 2007–2009 financial crisis, average municipal bond yields since 2008 have

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15. Those states are California, Florida, New Jersey, New York, and Texas. See Department of Transportation, Federal Highway Administration, "Toll Facilities in the United States" (July 2011), [www.fhwa.dot.gov/policyinformation/tollpage](http://www.fhwa.dot.gov/policyinformation/tollpage).

16. Although current law generally prohibits states from installing tolls on existing toll-free interstates, certain exceptions exist. See Department of Transportation, Federal Highway Administration, "Road Pricing: Tolling & Pricing Programs," [www.fhwa.dot.gov/ipd/revenue/road\\_pricing/tolling\\_pricing/](http://www.fhwa.dot.gov/ipd/revenue/road_pricing/tolling_pricing/).

17. For more information on charging users for highways, see Congressional Budget Office, *Alternative Approaches to Funding Highways* (March 2011).

18. As authorized in Public Law 111-5, Build America Bonds also provide a federal subsidy for infrastructure spending. For more information on those bonds, see Congressional Budget Office and Joint Committee on Taxation, *Subsidizing Infrastructure Investment with Tax-Preferred Bonds* (October 2009).

varied from 25 basis points below to 75 basis points above Treasury yields (100 basis points are equal to 1 percentage point); and in January 2012, interest rates on municipal bonds reached their lowest level in 45 years.<sup>19</sup>

To the extent that projects funded by an infrastructure bank would otherwise have proceeded using more traditional financing, the result of creating such a bank might be a shift in investment sources rather than an increase in total investment. Of the projects that would not have proceeded without bank support, some might have faced higher interest rates elsewhere because of greater risks that the loans would not be repaid. Infrastructure bank loans to such projects would involve larger economic subsidies (measured as the difference between the interest rates the projects would have faced in the private bond market and the rates provided by the bank) unless the Congress authorized the bank to vary its lending rates according to each project's risk. To increase the attractiveness to a state or locality of borrowing from the bank instead of issuing municipal bonds, the Congress could allow the bank to lend at below-Treasury rates. Doing so, however, would increase the cost of the bank's assistance to federal taxpayers and could encourage proposals for projects that would not otherwise pass a cost-benefit test.

### **Funding**

Some policymakers who are looking for additional sources of money for transportation projects argue that an infrastructure bank would "leverage" federal funds to induce additional funds via private-sector investment. By lowering the cost of borrowing, an infrastructure bank might induce additional private investment, but the amount of that investment would probably be limited by the fact that private-sector investors would require a rate of return comparable to what could be earned on other investments and that transportation projects for which such a return could be earned are probably limited.<sup>20</sup>

The projects that would attract private investors would be those that were able to repay loans over time using new or current revenues from end users. Such projects would be able to assign a monetary value to the benefits that they create by implementing some sort of pricing mechanism—like a toll—or some sort of surcharge on business or property owners who benefit from the new construction, often called "value capture."

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19. See Robert Stone, "Where Will Muni Rates Go?," *The Bond Buyer* (January 25, 2012).

20. For more information on the private financing of highways, see Congressional Budget Office, *Using Public-Private Partnerships to Carry Out Highway Projects* (January 2012). Investors could be both domestic and international, although evidence from Build America Bonds suggests that international investment would probably be small. For example, data in the Federal Reserve's quarterly publication *Flow of Funds Accounts of the United States* suggest that during 2009 and 2010, foreign purchases of Build America Bonds were limited and probably did not exceed \$8 billion (of the \$181 billion in Build America Bonds purchased).



Value capture occurs when increases in the value of land generated by a new public investment are taxed to pay for that investment or for other public projects. Examples of value capture include taxes on the value of affected land, a tax increment financing district, or fees on utilities or developers.<sup>21</sup> Tolls are a direct fee on the people who use a road, not necessarily on all of the people who benefit from it; by comparison, value capture refers to collecting from the broader group of people who benefit. In particular, value-capture techniques capture the monetary value of some of the benefits that accrue to property owners as a result of building a capital asset such as a road or a fixed-route transit line.

Both tolls and value capture bring additional revenues from users or beneficiaries to the financing of infrastructure and provide a source of revenues against which state and local governments can borrow. Under current practices, though, it is difficult for private ratings agencies that assess the risk of debt instruments to rate projects that rely on value capture.<sup>22</sup> Furthermore, collecting tolls could benefit the entire transportation network if toll rates were set above what was necessary to pay back debt and maintain a new asset (although using revenues generated by one asset to pay for another might overly discourage use of the tolled road) and if the additional funds were used to operate and maintain current infrastructure that is not tolled.

Two examples of recent projects that use dedicated funding sources are the following:

- The Intercounty Connector—a new Maryland road connecting two major interstates in the Washington, D.C./Baltimore metropolitan region—is using tolls. That project received a loan from DOT and issued municipal bonds backed by the future tolls that will be paid by drivers who use the road. The tolls have the dual goals of reducing congestion through pricing that varies by time of day and of raising revenues to pay for the road.
- Transbay Transit Center—a bus and rail hub that includes housing and retail development in San Francisco, California—is using value-capture techniques. The project received a loan from DOT that was backed by an incremental tax on land sold and developed around the transit center as well as a surcharge on sales tax revenues in the surrounding county and on sales of transit tickets. The incremental tax on revenues from land sold represents value capture, and the surcharges on tickets represent a form of user fee.<sup>23</sup>

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21. Tax increment financing dedicates the money from tax increases within a certain defined district to financing the debt that is issued to pay for a project. Value capture has been used primarily to finance rail and other urban infrastructure facilities.

22. Remarks of Michael McDermott, Senior Director, Fitch Ratings, at the Transportation Research Board's 90th annual meeting, Washington, D.C., January 26, 2011.

23. Both the Transbay Center and the Intercounty Connector received TIFIA loans. Maryland is also using its authority to borrow against expected future federal payments through GARVEE (Grant Anticipation Revenue Vehicles) bonds.

In both examples, the amounts collected from end users or those who benefit from the new infrastructure represent new funds for transportation. Even without a federal infrastructure bank, both projects have already received federal support in the form of loans and grants. Whether an infrastructure bank would encourage significantly more such projects is unclear.

### **Project Selection**

Because an infrastructure bank would most likely be designed to evaluate projects on the basis of their overall benefits and costs, it could select projects for which there have typically been barriers to completion, such as projects involving multiple modes of transportation or multiple government jurisdictions.<sup>24</sup> Currently, because of choices made by the Congress regarding how to allocate funds among transportation projects, funding tends to favor projects that involve a single mode of transportation or a single jurisdiction, and more complicated projects can face substantial barriers to financing. An infrastructure bank—through a subsidy and federal involvement—could provide incentives for multiple jurisdictions to cooperate. In addition, eliminating the distinctions among transportation sectors when making funding decisions would allow funding streams to be unconstrained by the type of project being proposed (say, mass transit versus highway) and might facilitate connectivity in the transportation network.<sup>25</sup>

Another argument in favor of an infrastructure bank is that the involvement of the private sector in the projects funded by the bank might influence the behavior of the state or local governments sponsoring those projects in beneficial ways. For example, some evidence suggests that projects undertaken in partnership with the private sector can be done faster than those undertaken using conventional contracting methods, and those time savings might also contribute to small savings in projects' costs.<sup>26</sup> However, partnerships among the federal government, state and local governments, and the private sector also present challenges in determining the appropriate risks and responsibilities for each participant to be taking on.

Proponents of an infrastructure bank envision an independent federal entity that would select projects on the basis of technical rather than political factors. Although establishing an infrastructure bank outside of DOT might change some of the forces affecting its decisionmaking or its organizational efficacy, any entity created and funded by the

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24. Emilia Istrate and Robert Puentes, *Investing for Success: Examining a Federal Capital Budget and a National Infrastructure Bank*, Metropolitan Infrastructure Initiative Brief No. 7 (Washington, D.C.: Brookings Institution, December 2009).

25. Certain tax-exempt bonds also have such a goal. An example of a project that could be financed with qualified highway or surface freight transfer facility bonds is a facility for transferring freight from truck to rail or rail to truck.

26. For further information, see Congressional Budget Office, *Using Public-Private Partnerships to Carry Out Highway Projects* (January 2012).

Congress would be subject to similar political pressures and federal administrative procedures. Furthermore, the distinction is irrelevant in budgetary terms because the bank's activities would be recorded in the federal budget regardless of whether the bank was part of DOT, was part of another federal agency, or was independent.

### **What Existing Options Might Meet the Goals of an Infrastructure Bank?**

A program with many of the characteristics of an infrastructure bank already exists within DOT: the Transportation Infrastructure Finance and Innovation Act program. The TIFIA program provides loans, loan guarantees, or lines of credit to help finance complex, large-scale transportation projects deemed significant to a region or the nation. Applicants' projects are weighed against those of others to determine which receive financing. TIFIA provides flexible repayment terms and potentially more favorable interest rates than applicants could secure in private capital markets for up to one-third of a project's costs.<sup>27</sup> As an alternative to establishing a federal infrastructure bank, the Congress could broaden the TIFIA program to achieve many of the same goals.

TIFIA can offer credit assistance for projects that can achieve an investment-grade rating and that can repay a loan with project-generated funds. The scope of that assistance could be adjusted to better support applications from municipalities that include multiple projects. Nevertheless, all aspects of a project would have to meet federal requirements to proceed under TIFIA, just as they would under an infrastructure bank, and only a limited number of projects are likely to be able to generate revenues that could be used to repay a TIFIA loan.

Most projects receiving TIFIA loans have been able to leverage those loans and receive additional financing. Since its inception in 1998, TIFIA has received about \$600 million in budget authority.<sup>28</sup> That budget authority supported almost \$8 billion in initial project assistance that will be repaid over time. That assistance, in turn, supported projects costing about \$30 billion in total; for those projects, the private sector and state and local governments contributed most of the funding.

Since 2008, the TIFIA program has received more applications for funding than it has funds available, but not all of those projects have been eligible for a TIFIA loan or

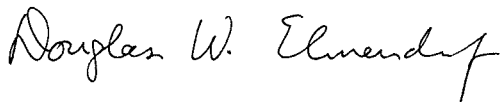
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27. Another source of funding within DOT is Transportation Investment Generating Economic Recovery (TIGER) grants, a competitive program that offers grants rather than credit assistance. For more information, see Department of Transportation, "TIGER Grants" (no date), [www.dot.gov/tiger/](http://www.dot.gov/tiger/).

28. Budget authority is the authority provided by law to incur financial obligations that will result in immediate or future outlays of federal government funds. In the case of federal credit programs, budget authority represents the expected cost of providing loan or loan guarantee subsidies, as specified in the Federal Credit Reform Act (see **Box 2**). The market value of the TIFIA subsidy is higher than the appropriated amounts (because the budget subsidy costs do not reflect the market risk of the funded projects), which contributes to the high level of demand for the program.

ready to proceed to construction.<sup>29</sup> In 2010, projects submitted letters of interest for about \$12.5 billion worth of credit assistance from TIFIA. However, a letter of interest does not ensure that a project's economics make it eligible for a TIFIA loan. If all of those projects were suitable, that volume would translate to a little less than \$1.3 billion in budget authority, assuming a subsidy rate of 10 percent. If, in contrast, only half of the projects met the eligibility requirements for TIFIA and were feasible, the Congress would need to appropriate about \$600 million to meet all of the demand. In all likelihood, the fraction of projects meeting the eligibility requirements is lower, however. On the basis of its assessment of the demand for credit assistance, the National Surface Transportation Infrastructure Financing Commission recommended that the Congress authorize \$300 million a year for credit assistance through TIFIA (see [Figure 1](#)).<sup>30</sup>

This Congressional Budget Office (CBO) report was prepared in response to interest expressed by the Congress. In keeping with CBO's mandate to provide objective, impartial analysis, the report contains no recommendations. Sarah Puro of CBO's Budget Analysis Division wrote the report under the supervision of Peter Fontaine, Theresa Gullo, and Kim Cawley. Perry Beider, Jonathan Huntley, Nathan Musick, and Alan van der Hilst provided assistance. Bryan Grote of Mercator Advisors, William J. Mallett of the Congressional Research Service, and Robert Poole of the Reason Foundation offered helpful comments. The assistance of external reviewers implies no responsibility for the final product, which rests solely with CBO. Christine Bogusz edited the report. This report is available on the agency's Web site ([www.cbo.gov](http://www.cbo.gov)).



Douglas W. Elmendorf  
Director



29. Department of Transportation, "Notice of Funding Availability for Applications for Credit Assistance Under the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program; Clarification of TIFIA Selection Criteria; and Request for Comments on Potential Implementation of Pilot Program to Accept Upfront Payments for the Entire Subsidy Cost of TIFIA Credit Assistance," *Federal Register*, vol. 74, no. 231 (December 3, 2009), p. 63500.

30. National Surface Transportation Infrastructure Financing Commission, *Paying Our Way: A New Framework for Transportation Finance* (February 2009), p. 13. The commission also recommended expanding the TIFIA program to include grants that complement the loan program, for a total authorization of \$1 billion per year.

Public Law 112-141, which is the most recent authorization for surface transportation programs and was approved by the Congress in June 2012, appropriated contract authority (a mandatory form of budget authority) for TIFIA in 2013 and 2014. Those amounts totaled \$750 million in contract authority for 2013 and \$1 billion for 2014. In that law, the Congress chose to provide relatively more funds for TIFIA and relatively fewer funds for formula grant programs than it had done in the past. The law also included provisions that would allow DOT to make contingent commitments of future federal funds to certain eligible projects and would dedicate 10 percent of the funds for loans for rural infrastructure projects at an interest rate equal to one-half of the rate paid by the Treasury on 30-year securities.

**Box 1.****Return to Reference****Financing Water or Energy Projects Through an Infrastructure Bank**

Some proposals for a federal infrastructure bank aim to make financing available not only for surface transportation projects but also for other types of infrastructure projects, such as water and energy facilities. Such facilities differ from surface transportation facilities in ways that affect some of the arguments for and against financing through an infrastructure bank.

A key difference is that unlike many transportation facilities, water and energy utilities can directly measure consumers' use of their infrastructure and can easily charge consumers for that use. Moreover, most such utilities are local or regional monopolies and have revenues that tend to be quite predictable—even more so than revenues from toll roads and mass transit systems—because consumers cannot easily substitute other things for water and energy.

Another difference is that the availability and stability of revenues generated by users make water and energy projects more attractive to lenders and investors than many transportation projects. From 1991 to 2007, government bonds accounted for 87 percent of state and local capital spending for utilities but only 35 percent of such spending for transportation infrastructure.<sup>31</sup> Over the same period, the private sector spent \$724 billion on capital goods for utilities—an average of about \$43 billion per year, much more than it spent on transportation infrastructure.

Although those attributes of water and energy projects suggest that a federal infrastructure bank could be used to finance those projects, they also raise the question of whether such a bank is needed for that purpose. On the one hand, federal subsidies through an infrastructure bank could reduce the burden on water and energy ratepayers and could help fund projects that have significant indirect benefits to nonusers (such as the public health benefits of clean water) or that serve low-income populations. On the other hand, subsidizing rates can lead to inefficient use of utility services; and typical water and energy projects do not have indirect public benefits that are as geographically broad as those of some surface transportation projects, such as those that improve the movement of goods regionally or nationwide. (Exceptions include clean water projects on major rivers and possibly improvements to multistate electricity transmission grids.) Moreover, federal support for water projects already exists in the form of grants from the Environmental Protection Agency to state revolving funds that in turn support loans and grants for wastewater and drinking water systems.

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31. See Congressional Budget Office and Joint Committee on Taxation, *Subsidizing Infrastructure Investment with Tax-Preferred Bonds* (October 2009).

**Box 2.****Return to Reference, 2****The Budgetary Cost of Credit Support**

The Federal Credit Reform Act of 1990 (FCRA) established rules for calculating the budgetary costs of direct loans and explicit loan guarantees issued by the federal government. An agency calculates the subsidy cost (that is, the cost that the government bears), and that subsidy value is treated as the budgetary cost. Those subsidy costs are recorded on an accrual basis—unlike most items in the federal budget, which are calculated on a cash basis. The subsidy cost of a direct loan or loan guarantee is calculated as the net present value of expected cash flows, including any fees paid by the borrower to the government, over the life of the loan or loan guarantee. Under FCRA, net present value is estimated by discounting cash flows back to the time a loan is disbursed or the commitment of a loan guarantee is made, using the interest rates on Treasury securities of comparable maturity. As a result, the recorded budgetary cost for any loan is usually significantly smaller than the cash flows that move into and out of the Treasury. That cost is recorded in the budget at the time the loan is disbursed. In contrast, the cash flows associated with that loan between the Treasury, an agency, and borrowers would occur over time and would not be recorded in the budget.

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.<sup>32</sup> 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 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 FCRA subsidy cost of the original loans to 100 percent (the same as for grants).

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 risk associated with uncertainty about the magnitude of those defaults. Investors require compensation—a “market risk premium”—to bear that risk. The market risk premium on a risky loan or guarantee com-

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32. In contrast, no appropriations are necessary for the periodic subsidy reestimates that agencies make to reflect actual experience with loans and guarantees. Permanent indefinite budget authority exists for reestimates, which are recorded in the budget.

pensates 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. 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.<sup>33</sup>

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33. 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. For further discussion of the economics of FCRA, see Congressional Budget Office, *Fair-Value Accounting for Federal Credit Programs* (March 2012).

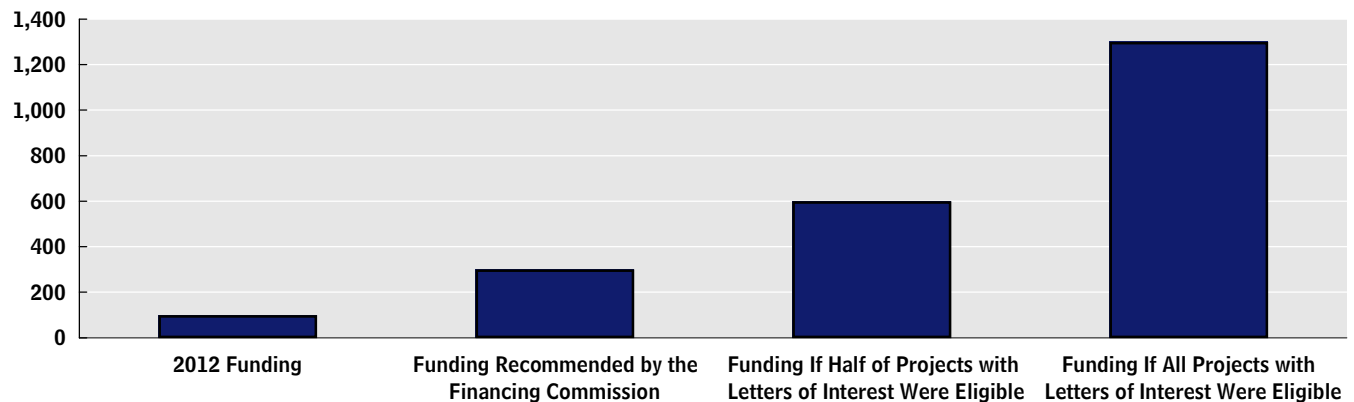
**Table 1.** **Return to Reference**  
**Comparison of the Characteristics of Infrastructure Banks and Formula Grants**

	Infrastructure Banks	Formula Grants
Volume of Suitable Projects	Probably small: Most projects do not meet minimum size requirements, do not include toll collections or availability payments (payments made by states to owners or operators of an asset), and can receive financing through other means.	Large: Projects that receive grants are broad-based and do not need a repayment stream.
Funding	Federal and private loans are repaid using direct fees from end users or other dedicated taxes.	Revenues from federal and local gasoline taxes and other general revenues support funding.
Project Selection	The federal government uses a competitive process that weighs costs and benefits to select projects that have been proposed locally.	State or local governments select projects under broad federal guidelines.

Source: Congressional Budget Office.

**Figure 1.** **Return to Reference**  
**Annual Budget Authority That Could Be Used for TIFIA Under Different Scenarios**

(Millions of dollars)



Source: Congressional Budget Office.

Note: TIFIA = Transportation Infrastructure Finance and Innovation Act; Financing Commission = National Surface Transportation Infrastructure Financing Commission.