Draft Policy Discussion Paper

U.S. Department
of Transportation
Federal Highway Administration
November 1997

Federal Credit for Surface Transportation: Exploring Concepts and Issues

prepared by
Cambridge Systematics, Inc.
Apogee Research, Inc.
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NOTICE

This draft policy discussion paper was commissioned by the Federal Highway Administration (FHWA) and researched by Cambridge Systematics, Inc., Apogee Research, Inc., and Fitch Investors Service, L.P., under the direction of David Seltzer and Bryan Grote of FHWA. Fitch Investors Service developed the credit risk assessment model presented in Appendix A. Apogee Research undertook much of the preliminary work and summarized the credit risk assessment factors and information checklist contained in Appendix C. Patrick Balducci of Cambridge Systematics drafted the paper. Cambridge Systematics assembled the illustrative project list presented in Appendix E. Ben Porter and Miriam Roskin, of Porter & Associates, Inc., assisted in reviewing and editing the paper.

Last updated May 20, 1998

FHWA

United States Department of Transportation - **Federal Highway Administration**

Executive Summary

Introduction

The continued growth of the U.S. economy depends, in large part, on a comprehensive and interconnected nationwide surface transportation system. The nation's growing population and increased shipping demands are straining the capacity of existing facilities. The federal-aid grant program has enabled the construction of an extensive transportation system; however, the program's financial limitations are becoming evident in the face of growing investment needs and the lack of available public funding to meet those needs. This funding shortfall is particularly acute for large new investments and major expansions of existing highways and other transportation facilities, the costs of which can amount to hundreds of millions of dollars each.

Federal assistance in the form of credit (direct loans, loan guarantees, and other lending arrangements) rather than outright grants is currently being used to stimulate investment in such sectors as housing, education, and agriculture. Federal credit has achieved important social and economic goals in these areas (e.g., affordable housing, universal access to higher education, and a stable food production system). A federal credit program oriented toward large surface transportation projects of national significance could be an important tool in helping close the current funding gap and supporting the national economy in an era of constrained public resources.

Budgetary Pressures Constrain Capital Investment

Although receipts from transportation-related excise taxes have been growing at a steady rate, federal budgetary constraints limit the amount of grant assistance that can be distributed to the states. The primary form of federal assistance – the federal-aid program – reimburses state capital expenditures on transportation infrastructure at prescribed rates (historically, up to 80 or 90 percent); the remainder of project costs is covered by the states. Sole reliance on a grant-based reimbursement program may no longer be the most productive approach for funding certain large infrastructure projects. This approach is limited in range, slow to accommodate change, and unable to leverage sufficient private and non-federal capital to meet growing investment needs.

Federal Credit Complements Existing Programs

A federal credit program for surface transportation projects could complement existing federal-aid grants by directing resources to transportation investments of critical national importance that otherwise might be delayed or not constructed at all because of risk, complexity, or scope. Federal credit could encourage more private sector and non-federal participation, address important public needs in a more budget-effective way, and take advantage of the public's willingness to pay user fees in order to receive the benefits and services of transportation infrastructure sooner than would be possible under traditional, grant-based financing.

Credit Program Objectives

The overarching goal of a surface transportation credit program should be to leverage limited federal funding in a prudent, budget-effective way in order to help advance major projects of national significance. In addressing the needs of large transportation investments, such a program should be designed to achieve six key objectives.

1. Target Capital Market Gaps

A key objective of any federal credit program should be to facilitate the borrower's access to the private capital markets by overcoming market imperfections. Large, complex start-up projects frequently encounter market resistance as a result of investor concerns about investment horizon, liquidity, predictability, and risk. This is particularly the case for subordinate and secondary sources of capital. The federal government is uniquely qualified to fill the role of a patient investor, willing to accept a long-term return in order to help advance

projects providing substantial benefits to the nation's economy. There may be an appropriate federal role for a carefully defined credit program to fill these gaps until the capital markets develop greater capacity to absorb these risks. Addressing these risks would reduce the transactional friction associated with large and complex project financings which is reflected in unnecessarily large reserve requirements, coverage margins, capital costs, and transaction fees.

2. Assist Projects of National Significance

A credit program should be designed to assist transportation projects that are large-scale capital investments generating major economic benefits, such as trade corridors, intermodal facilities, international border crossings, and Intelligent Transportation Systems (ITS). The sum of public and private benefits would be expected to substantially exceed project costs. Given their size, many of these projects cannot be readily funded through existing government assistance programs, including state infrastructure banks. A surface transportation credit program could offer a cost-effective mechanism for financing these important national investments.

3. Encourage New Revenue Streams

A credit program should be designed to assist those projects capable of generating their own revenue streams. The revenues may come from direct user charges, such as tolls or fares, or indirect beneficiary fees, such as special benefit district assessments or local dedicated tax revenues. Using revenues from beneficiaries to support part or all of the capital costs is recognized as a more equitable and efficient way of funding such projects. By assisting state and local government sponsors in identifying new project-related revenue streams, a federal credit program would allow existing state and federal grant resources to be directed toward other, more traditional projects that lack the potential to become self-sustaining.

4. Limit Federal Exposure by Relying on Market Discipline

A credit program should seek to minimize the risk to the federal government of borrowers defaulting on their repayment obligations. A key element in reducing risk involves limiting the federal role to that of a minority investor (financing not greater than 33 percent of project costs). The majority investment of private capital would instill market discipline by forcing the selection of only those projects that are financially feasible and have acceptable risk profiles. Program rules should be established to ensure that project risks are assessed and scored against the federal budget in a realistic and conservative manner. The risk assessment should be based on credit analysis techniques used by the capital markets in assessing the default risk of similar infrastructure loans.

5. Make Credit Available on Equitable and Uniform Terms

To date, federal credit activities in the surface transport sector have been characterized by ad hoc efforts. For example, Congress in recent years has passed several pieces of special legislation assisting three major projects in California. However, the success of these transactions has stimulated considerable interest and created demand for a program structure accessible to a broader range of projects. An important objective of a surface transportation credit program, therefore, should be to establish uniform, objective, and transparent criteria for states, local governments, and other sponsors to submit applications for credit assistance, and to set forth an orderly process for evaluating, selecting, and funding projects.

6. Enlist State and Local Participation

More than other types of federal credit activities, large infrastructure projects depend on state and local government approval and support. A federal credit program for surface transportation projects should draw on the active involvement of state and local governmental units throughout the entire process, from the initial identification of suitable candidates to the ongoing monitoring and servicing of the credit products.

Credit Program Products

A surface transportation credit program could offer four distinct types of assistance to manage the different financial needs of projects at various points in their life cycles.

1. Flexible Payment Loans

Given the uncertainty of projected revenue streams and operating costs for start-up transportation projects, investors may require an unusually high coverage margin for debt service. The excess coverage constrains the permitted level of annual project debt service, which limits the amount of debt that can be issued.

Flexible payment loans would be direct loans from the United States Department of Transportation (DOT) to project sponsors to provide long-term, fixed-rate financing of a portion of construction costs. The flexible payment loan could be in an amount up to 33 percent of the cost of a project and have a final maturity date as long as 35 years after construction is complete. The interest rate on the flexible payment loan would be set at a level equal to comparable-term U.S. Treasury bonds.

The loan would be repayable from project-related revenues. The terms and conditions of each loan would be negotiated between the federal government and the borrower, but would enable the federal government to accept a claim on revenues junior to the project's other senior indebtedness. In the event of default, the loan would have a parity or co-equal claim on project assets with other investors. If project revenues were insufficient to meet current debt service on the loan, interest and principal payments could be deferred.

The flexible payment loan would enable the senior debt to demonstrate higher coverage margins and attain investment-grade bond ratings. This, in turn, would facilitate project access to private capital.

2. Loan Guarantees

Loan guarantees by the federal government to private lenders would be designed to attract private capital on similar terms to direct loans. The guarantees could be limited to loans from large institutional investors who would be better-equipped to absorb the timing uncertainty of loan repayments.

A loan guarantee could apply to subordinate debt and be capped at 33 percent of total project costs. In the event net revenues were insufficient to meet scheduled debt service on the guaranteed loan, repayments could be deferred for a pre-determined period of time, as with the flexible payment loan. Because the federal government would fully guarantee debt service repayments over the life of the loan, interest payments would be taxable, consistent with federal tax law. A full faith and credit guarantee of the United States should command a "AAA" rating, making such loans attractive to large purchasers of taxable debt securities. Potential investors would include public, private, and union pension plans, which to date have not been active in financing domestic infrastructure projects.

Loan guarantees of this nature would help meet the need for patient capital for revenue-backed project financing by encouraging junior-lien, flexible payment loans that enhance the coverage and creditworthiness of the senior capital market debt. As investors in guaranteed loans become more familiar with the repayment characteristics of junior start-up debt, it may ultimately be possible for them to take on the role of providing junior-lien credit for surface transportation projects without a federal back-up. This would support the program's principle of developing private credit sources to supplant the federal role.

3. Standby Lines of Credit

In certain cases, investors may recognize that a project is likely to experience growth in its revenue stream over time, but they may be uncertain about the timing of the growth, especially during the ramp-up period in the years following project completion. The standby line of credit would fill a gap by providing a secondary source of capital during this critical phase of initial project utilization.

The line of credit would take the form of a government commitment to make one or more flexible payment loans in the future, if needed. The total line could not exceed 33 percent of project costs, and would be

available for draws only during the ten-year ramp-up period following project completion. Up to 20 percent of the line could be loaned in any given year, and any draws would need to be repaid from project-related revenues within 35 years from project completion. These contingent loans would be structured in a similar manner to the direct flexible payment loans.

The standby line of credit is intended to assist marginally-ratable projects in attaining investment-grade bond ratings and securing bond insurance.

4. Development Cost Insurance

The pre-construction phase of project development is the most speculative stage. During this stage, the project sponsor must complete environmental reviews, secure permits, perform feasibility studies, and carry out various other preliminary tasks required for constructing the facility.

For traditional public projects, these costs routinely are borne by state or local governmental sponsors. For public/private partnerships, these costs often are required to be advanced largely by private developers. However, developers are becoming increasingly reluctant to finance pre-construction costs because of the large exposure, long lead times, and political risks involved.

Development cost insurance would provide federal reimbursement to a project sponsor for a portion of the pre-construction development costs in the event the project failed to proceed to construction. The federal amount of the insured development expenses could be capped at some pre-determined level (e.g., $4 million per project). Additionally, the federal share should be limited to 40 percent of covered costs, and the government sponsor should be required to insure at least 20 percent in order to instill significant financial and political discipline. Up-front insurance premiums would be collected upon execution of the policy, thus offsetting a portion of the budgetary cost of the program. A claim on the insurance could be made at the end of five years if the project had not proceeded to construction; however, if the project did advance at a later date, the federal insurance payment would be reimbursable. A relatively small portion of a credit program's budgetary resources – perhaps no more than ten percent – could fund a pilot program that would effectively demonstrate the potential of development cost insurance.

Project Selection Based on Quantitative and Qualitative Criteria

To be considered for federal credit assistance, project sponsors would submit applications to DOT and undergo a review and selection process. The first step in the evaluation process would be to determine whether a project meets certain objectively measurable criteria. These initial threshold criteria would include project purpose, project size, whether benefits exceed costs, evidence of state and local support, and the potential for user charges or non-federal revenues. Qualified projects meeting the threshold eligibility criteria then could be evaluated and selected based on the extent to which they meet various qualitative criteria, such as promoting innovative technologies, demonstrating creditworthiness, solving special transportation needs, and fostering public/private partnerships.

Contract Authority to Fund Credit Costs

In recognizing the need for a stable and predictable source of funds for multi-year surface transportation projects, Congress has legislated the use of contract authority for the federal-aid highway program since 1921. Under contract authority, sums authorized are available for obligation in advance of annual appropriations.

To facilitate the planning and structuring of large project financing arrangements involving federal credit assistance, program funding levels should be known in advance. Providing specified amounts of contract authority, rather than annual appropriations of budget authority, would ease market concerns about the availability of future funds and enable DOT to better allocate resources and avoid costly delays in committing federal credit assistance.

The commitment of federal credit assistance would require stable funding levels known in advance even more than the commitment of traditional grant reimbursements. Project candidates for federal credit assistance

would tend to be larger, their financial structures would be more complex, and the majority of their funding would come from private capital predicated on the timely and assured receipt of federal credit.

A further refinement could allow states to utilize their unobligated balances of prior-year federal-aid apportionments as a source of contract authority to pay the subsidy costs of credit assistance.

Federal Credit to Leverage Limited Resources

The traditional federal-aid grant program, which typically allows federal contributions of up to 80 percent of total project costs, has an implicit leveraging ratio of 1.25 to 1. A surface transportation credit program could provide meaningful assistance to certain large infrastructure projects with federal participation of no more than 33 percent of project costs. And the budgetary cost of the credit assistance, based on rating agency risk assessment models and prevailing averages for existing credit programs in other sectors, might be less than ten percent of an equivalent amount of grant assistance.

Under the federal credit program structure outlined in this paper, annual capital investment of more than $3.5 billion could be generated by $1.2 billion of federal credit assistance at a budgetary cost of only $100 million. Those amounts represent a leveraging ratio of 35 to 1 in terms of total capital investment to budgetary resources consumed.

Federal Credit and Tax Policy Issues

A surface transportation credit program would need to address certain federal credit and tax policy issues, especially as they relate to subordination and tax-exempt debt, since many of the recipient projects would be eligible for municipal bond financing.

1. Flexible Payment Loans

Under the Internal Revenue Code, there is no provision that prohibits the use of tax-exempt debt simply because a portion of project costs is financed with federal funds (including direct loans). In fact, it is quite common for state and local project sponsors to finance surface transportation facilities with a combination of federal grant assistance and proceeds of tax-exempt debt.

The federal credit program structure outlined in this paper is consistent with most OMB directives on credit assistance, including the requirement of a parity claim on assets in the event of borrower default. Implementation of such a program, however, would require waiving a policy against the subordination of direct loans to the claim of tax-exempt obligations on annual project revenues. Subordination in the form of a junior lending position would be essential if the credit program were to meaningfully assist project sponsors in accessing the capital markets for the preponderance of their financing needs. Moreover, in the opinion of a major rating agency, a junior position does not increase the effective long-term risk associated with extending credit to transportation facilities.

The flexible payment loan in many cases would involve the side-by-side coexistence of direct loans with tax-exempt obligations of state and local governments, but would not involve direct or indirect federal guarantees of those tax-exempt obligations.

2. Loan Guarantees

Tax-exempt debt is prohibited from being supported by federal loan guarantees. Section 149 of the Internal Revenue Code provides that any obligation that benefits from a direct or indirect federal guarantee, either in whole or in part, is deemed taxable; the interest payments to investors would not be exempt from federal income taxation.

Federal loan guarantees under a surface transportation credit program would not be used to guarantee tax-exempt senior bonds. However, they could be used to secure taxable junior-lien financing where other project

debt was issued on a tax-exempt basis. As taxable instruments, the guaranteed loans themselves would comply fully with Section 149. But as with the direct loan program, the loan guarantee program would require a waiver from OMB policy prohibiting the subordination of federal credit to tax-exempt obligations, since in many cases the senior project debt would be municipal bonds.

3. Standby Lines of Credit

The language in Section 149 of the Internal Revenue Code is so absolute (any direct or indirect guarantee in whole or in part) that the standby lines of credit could be viewed as indirect federal guarantees under current tax law. Consequently, bond counsel might not be able to render an unqualified opinion as to the tax status of bonds secured by a federal line of credit.

One way to ensure that a standby line of credit does not undermine the tax status of tax-exempt debt is to revise the Internal Revenue Code to state that a standby line of credit does not constitute a federal guarantee.

Alternatively, if the purpose for which a standby line of credit can be used is broadened to include other costs, such as extraordinary repair and replacement and operation and maintenance, in addition to debt service, the implication of a federal guarantee may be sufficiently diluted to allow bond counsel to render an unqualified legal opinion. The Transportation Corridor Agencies used this approach in conjunction with the standby lines of credit for their two toll road projects in southern California which were financed with tax-exempt debt.

4. Development Cost Insurance

Federal credit and tax policies pertaining to subordination and tax-exempt debt should not be applicable to any federal payments under a development cost insurance program, since these pre-construction expenses generally are funded with developer equity.

Conclusion

In a fiscal environment of constrained public resources, it has become increasingly difficult to fund major transportation projects. Yet in many cases, these are precisely the types of infrastructure investments which produce the greatest economic benefits to the nation. These facilities also tend to have the potential to generate their own revenue streams, allowing them to be funded with project-based debt.

A surface transportation credit program could address the need for supplemental and subordinate capital in a highly budget-effective manner. It could enable large projects of national significance to gain significant market access with only a limited federal investment, thus leveraging substantial multiples of capital from private and other non-federal sources. Such a credit program could also help states conserve their customary federal-aid grants for smaller, but more numerous, traditional state and local projects that cannot be supported through user charges or other dedicated revenue streams.

Last updated April 7, 1998

1. Assessing the Need for Federal Credit

Introduction

The continued growth of the U.S. economy depends, in large part, on a comprehensive and interconnected nationwide surface transportation system. The nation's growing population and increased shipping demands are straining the capacity of existing facilities.

The federal-aid grant program has enabled the construction of an extensive national transportation system. However, the program's financial limitations are becoming evident in the face of growing investment needs and the lack of available public funding to meet those needs. This funding shortfall is particularly acute for large new investments and major expansions of existing highways and other transportation facilities, the costs of which can amount to hundreds of millions of dollars each.

Federal assistance in the form of credit (direct loans, loan guarantees, and other lending arrangements) rather than outright grants is currently being used to stimulate investment in other sectors such as housing, education, and agriculture. Federal credit has achieved important social and economic goals in these areas (e.g., affordable housing, universal access to higher education, and a stable food production system). A federal credit program oriented toward large surface transportation projects of national significance could be an important step in closing the current funding gap and supporting the national economy in an era of constrained public resources. It could provide significant new financial flexibility for the states and substantial leverage to attract non-federal investment.

The Economic Value of Transportation Investment

Technological advancements, the globalization of business, and the emergence of just-in-time delivery methods have changed the nature of economic activity. Today's transportation consumers demand more from the transport system than the simple movement of goods and people. They want greater speed, flexibility, and reliability; enhanced safety; improved national and regional access; easier intermodal connections; and smoother passage across the nations borders with Canada and Mexico.

The globalization of business and corresponding reduction in technological, economic, and political barriers have created an economic climate in which the U.S. relies increasingly on foreign trade. Between 1970 and 1995, foreign trade (total exports and imports) as a share of gross domestic product more than doubled from eight percent to 18 percent.[1] The new global economy requires improved access to airports and seaports, greater investment in intermodal facilities, and increased development of trade corridors.

New, more demand-responsive delivery systems are also placing greater demands on the performance of the nation's transportation network. Just-in-time delivery service (which usually takes one to three days) allows for rapid turnover of inventory, thus reducing the costs associated with storing raw materials and manufactured goods. The cost savings of just-in-time delivery methods provide economic benefits to manufacturers, distributors, consumers, and ultimately the national economy.

The economic productivity gains from transportation investment are significant. A recent study estimated that in the four-decade period from 1950 to 1989, U.S. firms realized annual production cost savings of 18 percent from general highway investment (18 cents per dollar invested in all roads) and 24 percent from investment in non-local roads.[2]

Increased Demands and Constrained Resources

Growth in both passenger and freight travel is straining the capacity of the nation's roads and bridges, border crossings, and intermodal transfer facilities. From 1980 to 1995, the nation's population increased by 15.5 percent, gross domestic product was up 46 percent, and total imports and exports expanded from $466 billion to $1.327 trillion.[3] Since 1980, total ton-miles and intercity passenger-miles have grown by 30 percent and 60

percent, respectively.[4] This comes at a time when limited resources and the normal deterioration of the nation's roads and bridges are contributing to a shift in public investment from capacity expansion to operation and maintenance of existing facilities. Although this shift towards preservation has slowed the decline in roadway conditions that occurred during the 1970s, it has contributed to a steady increase in the extent and duration of congestion.

In 1975, only 41 percent of peak-hour travel on the urban Interstate system occurred under congested conditions. In 1993, 66 percent occurred under congested conditions.[5] The growth of congestion has significant long-term environmental, safety, and economic effects on the nation. A recent study estimated that the time lost and fuel wasted due to congestion cost the average U.S. citizen $370 annually.[6] These costs are expected to rise as growing investment needs and stagnant public funding contribute to declining performance.

Total public spending on capital improvements to highways and bridges was approximately $39 billion in 1993. The U.S. Department of Transportation (DOT) estimated that $49.9 billion in highway and bridge capital investment was needed in 1994 just to maintain 1993 conditions and performance of the nation's highways, and that $68.2 billion in highway investment was needed to provide a higher quality of service justified by direct benefits to highway users.[7] Postponing investment can be costly. DOT estimates that deferring one dollar in highway resurfacing for just two years can result in spending four dollars in highway reconstruction to repair damages.

The funding gap for transit is smaller in nominal amount, but similar in relative magnitude to current spending. Total public spending on capital improvements to the nation's public transit systems was $5.7 billion in 1993. DOT estimated that in 1994, $7.3 billion in capital investment was needed just to maintain 1993 conditions and performance, while $11.8 billion was needed to provide a higher quality of transit service.[8]

The economic drag created by a deteriorating transportation network can be substantial, as shippers and motorists incur higher vehicle maintenance and fuel costs, safety hazards, and time delays associated with congestion and poorly maintained roads. The unfunded costs of maintaining current (1993) conditions and performance – $10.9 billion per year for highways and $1.6 billion per year for transit – total only $50 per person, much less than the $370 per person now lost to poor performance.

Spill-Over Benefits

Many nationally significant projects that might be undertaken would produce large benefits in terms of avoidable user costs (reductions in travel time, accidents, and vehicle operating costs), savings in federal and state agency costs (e.g., more processing of commercial vehicles at border crossings), and reductions in pollution and other environmental side effects. Yet these projects are difficult to build, because the benefits spill-over to many jurisdictions in different levels of government and large numbers of people and firms. The economic, institutional, political, and other challenges associated with developing such projects often exceed the resources of any single beneficiary or group.

A classic justification for a federal funding role occurs when large benefit spill-overs are present. Current transportation funding sources at the federal level, however, are not sufficient to advance many of these large-scale projects. Federal credit assistance targeted at such projects could make them more feasible and produce widespread benefits that could not otherwise be possible.

Public/Private Partnerships

A growing number of large, capital-intensive projects are being developed under public/private partnerships. Such arrangements allow governmental units to draw upon private sector development techniques, management skills, and financial resources to help build new infrastructure facilities.

A variety of approaches have evolved in advancing public/private partnerships. California solicited proposals for toll roads and awarded franchises for their development and operation. Minnesota and Washington have developed open solicitation processes. These are procurement procedures incorporating innovative ideas for projects that might be partly or completely financed by the private sector and typically involve some type of

public/private partnership. Public/private partnerships have become routine with Intelligent Transportation System (ITS) projects. State and local agencies commonly barter access to public rights-of-way to telecommunication companies desiring to install fiber optic cables in return for receiving a certain amount of bandwidth. Recently Minnesota issued a request for partnership proposals for a project involving deployment of a Roadway Weather Information System, an Advanced Traveler Information System, plus the generation of data useful for maintenance and construction operations.

Public/private partnerships now cover the entire spectrum between pure public and pure private provision of transportation facilities and services. They pertain to all modes and frequently involve the application of advanced technology. A federal credit program targeted at nationally significant projects could foster additional public/private partnerships; leverage scarce federal, state, and local dollars with private capital; and encourage the equitable and efficient sharing of risks between the public and private sectors.

Capital Market Gaps

In some cases, private capital investment is discouraged by the size, complexity, uncertainty, and long-term time horizon associated with start-up transportation infrastructure projects. Generally, such projects are one-of-a-kind investments and require substantial analysis to evaluate.

Typically, these one-of-a-kind projects lack the up-front capital needed to finance debt service because project revenues tend to be weak in the early years, but are forecast to grow over time. Given the uncertainty of the projected revenue stream and operating costs, investors and rating agencies may require that the project revenue bonds, the proceeds of which fund construction, show a relatively high coverage margin. Coverage margin is the margin of safety for payment of debt service on revenue bonds, reflecting the number of times by which annual net revenues after operations and maintenance costs exceed annual debt service. A high coverage margin (such as 1.75 times) gives investors a substantial safety cushion if it can be achieved, but constrains the level of annual debt service permitted. This reduces the amount of up-front capital that can be raised through debt issuance. In the case of capital-intensive projects, a funding gap may result.

Currently, there are three principal options for addressing this gap in the market:

Project sponsors could seek to utilize a thinner coverage margin (such as 1.10 times) for their debt financing. However, such debt likely would be rated sub-investment grade (i.e., speculative). The major capital market funding source for debt financing of infrastructure – the municipal bond market – is generally risk-averse, and there is only a limited market for non-investment-grade obligations.

A second possibility is to close the funding gap with contributed capital (public or private equity). Frequently, however, the public and private partners in a project have already pledged the maximum amount they are willing or able to contribute to the project by the time the financing is arranged.

The third option is to issue junior-lien or subordinate debt, with a secondary claim on project revenues to the higher coverage margin debt. However, junior-lien debt can be difficult to market. Fixed income (bond) investors strongly prefer predictable, periodic payments (such as semiannual). They are generally reluctant to accept the initial uncertainty of an uneven or irregular cash flow, which is more likely for obligations that only have access to residual cash flows after senior debt payments are met. The possibility of a payment default on the junior bonds, which would trigger a cross-default on the senior debt, undermines the marketability of both series of bonds.

This situation defines the need for a new source of secondary or supplemental capital in the credit market. An investor with a long-term time horizon and fewer liquidity requirements. An investor willing to accept a subordinate claim on project revenues, a slimmer coverage margin, and a flexible repayment schedule in view of the substantial spill-over benefits.

A carefully structured credit program could draw on the federal government's unique position as a patient investor to fill these market gaps until the capital markets develop the capacity to absorb the risks associated with large, start-up transportation facilities. Addressing these risks would reduce the transactional friction associated with financing large and complex projects. This transactional friction is reflected in unnecessarily

large reserve requirements, coverage margins, capital costs, and transaction fees.

The Evolution of Federal Assistance

Since 1916, the federal government has supported surface transportation investment through a grant-based funding strategy known as the "federal-aid" program. Since 1957, revenues derived from the federal gas tax and other excise taxes have been credited to the federal Highway Trust Fund (HTF) and allocated among the states pursuant to various formulas for reimbursement of eligible costs. Under this approach, DOT reimburses state capital expenditures on transportation infrastructure at prescribed federal matching rates (historically, 80 or 90 percent); the remainder of project costs is covered by the states.

The conventional federal-aid program has enabled the construction of an extensive transportation system, including the nation's 46,000-mile Interstate system. However, exclusive reliance on a grant-based reimbursement program may no longer be the most productive approach for funding certain large infrastructure projects.

Mindful of current fiscal limitations, the federal government in recent years has attempted to provide new funding techniques that complement and enhance the existing grant-reimbursement approach to leverage additional capital investment in transportation infrastructure. Through the enactment of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the issuance of Executive Order 12893 in 1994 (which directed federal agencies to promote infrastructure investment by improving program management and increasing private participation in funding strategies), federal policy has sought to encourage innovative financing initiatives. In response to that directive, the Federal Highway Administration implemented in 1994 a test and evaluation research program which allows states with innovative proposals to utilize alternate federal-aid funding techniques. The National Highway System Designation Act of 1995 codified several of the new funding techniques and introduced some new innovations, including reimbursement of debt service costs and capitalization of State Infrastructure Banks (SIBs).

SIBs are intended to complement traditional transportation programs by allowing states to offer many types of assistance (e.g., low-interest loans, loan guarantees, and standby lines of credit) to revenue-backed projects through revolving funds. However, federal capitalization grants for SIBs currently are limited to ten percent of most categories of state's annual highway and transit apportionments for fiscal years 1996 and 1997 plus $150 million of "new money" to be shared among the participating states. Moreover, the authorizing legislation limits the annual disbursement of these funds, thus reducing the capacity of SIBs to provide large amounts of credit assistance in the near term. SIBs will require a number of years to build-up sufficient financial resources to gain access to external funding beyond their own contributed capital. Consequently, SIBs, like other start-up credit intermediaries, are best suited to assist portfolios of smaller, relatively homogenous, shorter-term projects that are regional or local in scope. There is a gap in terms of larger projects of national significance.

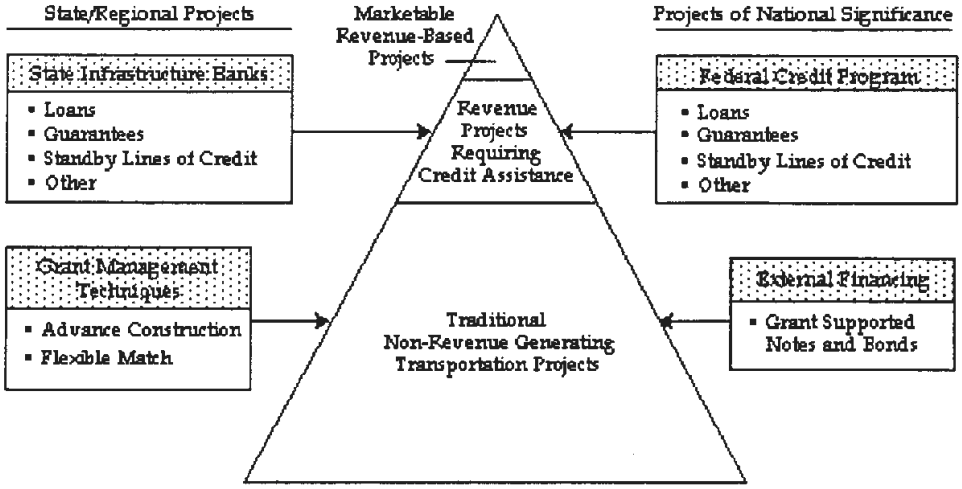
Figure 1.1 summarizes the various types of projects requiring assistance, the potential financing mechanisms, and the typical scope (state, regional, or national) of such projects. The pyramid's shape reflects the relative number of projects in each funding category.

The base of the pyramid represents the vast majority of projects that cannot generate revenues and therefore will continue to rely upon funding primarily through grants. The federal government has adopted enhanced grant management techniques such as advance construction and grant-supported debt service to move these projects to construction more quickly.

The peak of the pyramid represents the small number of projects that can arrange private capital financing without any governmental assistance.

The middle layer of the pyramid – perhaps five to ten percent of total capital investment – represents those projects that can be at least partially financed with debt payable from project-related revenues, but also require some form of public credit assistance to gain market access.

Figure 1.1 Federal Assistance for Transportation Infrastructure



A federal credit program could complement existing financing techniques by directing resources to projects of national importance – such as intermodal facilities, border infrastructure, trade corridors, and other investments with national benefits – that otherwise might be delayed or not constructed at all because of perceived risk or scope. Federal credit could encourage more private sector and non-federal participation, address important public needs in a more budget-effective way, fill market gaps, and take advantage of the public's willingness to pay user fees to receive the benefits and services of transportation infrastructure sooner than would be possible under traditional, grant-based financing.

[1] *Statistical Abstract of the U.S., The National Data Book,* U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1996.

[2] *Contribution of Highway Capital to Industry and National Productivity Growth – Executive Summary,* Ishaq Nadiri, New York University, 1996.

[3] *Statistical Abstract of the U.S., The National Data Book,* U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1996.

[4] *The Bottom Line: Transportation Investments* , AASHTO, 1996.

[5] *Our Nation's Highways: Selected Facts and Figures* , FHWA, May 1995.

[6] *Measuring and Monitoring Urban Mobility,* Texas Transportation Institute, November 1996.

[7] *1995 Status of the Nation's Surface Transportation System: Condition & Performance* , Report to Congress, U.S. Department of Transportation, October 27, 1995.

[8] *1995 Status of the Nation's Surface Transportation System: Condition & Performance* , Report to Congress, U.S. Department of Transportation, October 27, 1995.

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FHWA

United States Department of Transportation - Federal Highway Administration

2. Defining Program Principles and Credit Products

Introduction

The strategic goal of a federal transportation credit program should be to leverage limited federal funding in a prudent, budget-effective way in order to help advance major projects of national significance.

Under the current federal-aid grant reimbursement program, the federal contribution generally may not exceed 80 percent of project costs. If one assumes that the remaining 20 percent of project costs covered by state, local, and private contributions is really induced by the federal contribution (as opposed to simply substitute for the federal contribution), then the maximum potential leveraging ratio in terms of total investment to federal contribution is 1.25 to 1.

By offering a mixture of different types of credit designed to strengthen the creditworthiness of the balance of a project's debt, the federal government could induce substantial additional infrastructure investment from private capital sources. As a "patient investor" willing to take a long-term perspective for projects with substantial public benefits, the federal government can play a crucial role by lending key portions of project capital on flexible terms. The federal government could accomplish this by becoming a minority investor whose loans would either represent a supplemental source of capital or have a secondary claim on project revenues. Project sponsors would repay the principal and interest on federal loans from project revenues after meeting their annual payment obligations on senior debt. If no interest rate subsidy were involved, the federal government would have no long-term costs other than the risk of default.

Over the long term, it has been demonstrated that a junior-lien infrastructure loan has the same effective long-term risk profile as senior indebtedness.[1] Although there frequently is a "ramp-up" period of revenue uncertainty, start-up toll roads and other infrastructure projects almost invariably do generate sufficient revenues in the long run to effectually repay both senior and junior indebtedness. If projects with acceptably low risk were provided credit assistance, the expected loss to the federal government from default would be relatively low, and so would the corresponding budgetary costs. A low budgetary cost of credit implies a large leverage ratio, since the leverage ratio of federal funds is equal to total project costs divided by the budgetary costs of providing federal assistance.[2]

This chapter outlines the key design principles of a credit program and describes four specific credit products that could be offered by the federal government to sponsors of transportation projects: direct, flexible payment loans; loan guarantees; standby lines of credit; and development cost insurance.

Program Principles

If a federal credit program for surface transportation is undertaken, it should be designed based upon the following six key principles:

1. *Target Capital Market Gaps* – A federal credit program should be designed to facilitate the borrower's access to the private capital markets by overcoming market imperfections. The marketplace may fail to fund worthy surface transportation infrastructure projects because of investor concerns pertaining to such factors as investment horizon, liquidity, predictability, and risk. Lenders with limited investment horizons may prefer to be repaid within too short a time frame for the project to earn enough revenue to amortize the loan. Liquidity may be an issue if a lender desires to sell its loan prior to maturity to obtain liquid funds but cannot readily do so because of the unique characteristics of the project. Predictability usually is an important feature of fixed income investments because lenders prefer regular, periodic payments to match their own cash flow requirements. In general, the various aspects of risk and uncertainty discourage private investors from making loans given alternative investment options. A well designed program of federal credit could address each of these market gaps.

2. *Assist Projects of National Significance* – A federal credit program should be designed to assist transportation projects that are large-scale investments generating major economic benefits, such as

trade corridors, intermodal facilities, bi-state connectors, and Intelligent Transportation Systems (ITS). The sum of anticipated public and private benefits should be required to exceed total costs. However, in many cases, these projects are stand-alone facilities with no historical financial performance record. In some cases, projects may consist of substantial reconstruction of existing facilities backed by new revenue streams. Given their size, these projects cannot be readily funded through existing government assistance programs, including SIBs. A well designed credit program could offer a cost-effective mechanism for financing these important national investments.

3. *Encourage New Revenue Streams* – The program should be designed to assist those projects capable of generating their own revenue streams. The revenue may come from direct user charges, such as tolls or fares, or indirect beneficiary fees, such as special benefit district assessments or local dedicated tax revenues. Using revenues from beneficiaries to support part or all of the capital costs is recognized as a more equitable and efficient way of funding such projects. By encouraging sponsors to identify new project-related revenue streams, a federal credit program could allow existing public grant resources to be directed toward smaller, more traditional projects that lack the potential to become self-sustaining.

4. *Limit Federal Exposure by Relying on Market Discipline* – A federal credit program should be designed to limit the risk to the federal government of borrowers defaulting on their repayment obligations. This can be accomplished by restricting the federal share to a minority investment position and relying upon substantial co-investment from other sources. The majority participation of private capital would instill market discipline by forcing the selection of only those projects that are financially feasible and have acceptable risk profiles. Program rules should be designed and followed to ensure that project risks are assessed and scored against the federal budget in a realistic and conservative manner. The risk assessment should be based on credit analysis techniques used by the capital markets in assessing the default risk of similar infrastructure loans.

5. *Make Credit Available on Equitable and Uniform Terms* –To date federal credit activities in the surface transport sector have been characterized by ad hoc efforts.[3] However, the success of these transactions has stimulated considerable interest among public and private project sponsors and created demand for a program accessible to a broader range of projects. It would be important, therefore, to establish uniform, objective, and transparent criteria for states, local governments, and other sponsors seeking federal credit assistance, and to set forth an orderly process for evaluating, selecting and funding projects.

6. *Enlist State and Local Participation* – More than other types of federal credit activities, large infrastructure projects depend on state and local government approval and support. A federal credit program for surface transportation projects should be designed to draw on the active involvement of state and local governmental units throughout the entire process, from the initial identification of suitable candidates to the ongoing monitoring and servicing of the credit products.

Credit Products

Infrastructure projects have different financing requirements at different stages of their development and operation. The credit products should address the specific financing needs of projects during these different stages. There are four distinct stages in the typical life cycle of a major transport facility. These stages are defined as follows:

- The *development phase* is the most speculative stage of any project. In this phase, engineering, financial, and environmental feasibility analyses are conducted and necessary government approvals are secured as pre-conditions to construction.

- The *construction phase* relies on the performance of the developer to complete the project on time and within budget, but is also subject to non-commercial risks, such as litigation and force majeure.

- When the project is complete, there is typically a *ramp-up phase* , during which the revenue stream is

established. Transportation projects are often subject to competing alternatives, and it is difficult to forecast demand accurately in the early years of operation.

- During the final phase, *project maturity* , the project must generate sufficient revenues over the long-term to cover its operating expenses and to amortize its capital costs. For large, capital-intensive projects, a period of 30 years or longer is often required to fully recover the initial investment.

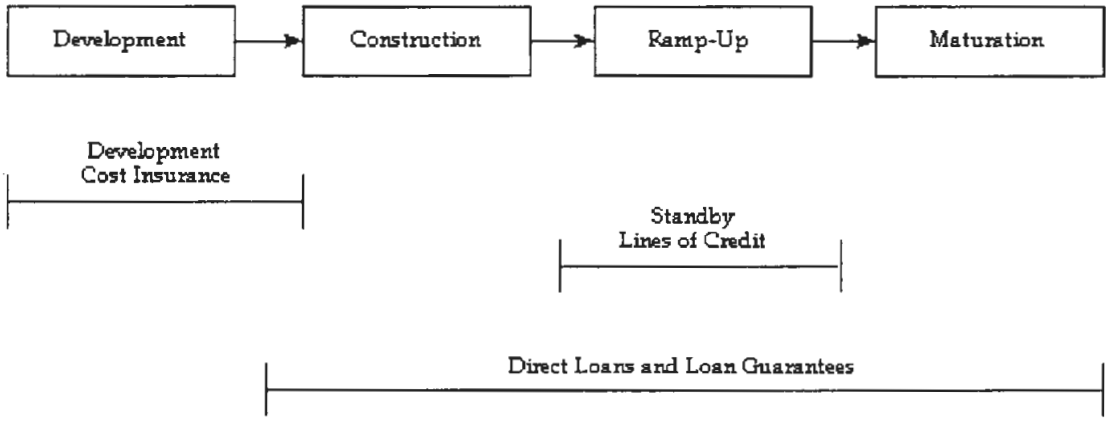
As shown in Figure 2.1, a federal credit program could offer several different types of financial assistance (i.e., product lines), designed to address a project's varying requirements throughout its life cycle.

Direct, flexible payment loans from the federal government would provide sponsors with permanent financing of construction costs in a manner that enables loan repayments to coincide with the receipt of revenues, rather than according to inflexible repayment schedules.

Loan guarantees by the federal government would be designed to attract private capital on similar terms to direct, flexible payment loans, but the loans would be funded from private capital sources.

Standby lines of credit represent secondary sources of funding in the form of contingent federal loans that may be drawn on to supplement project revenues if needed during the ramp-up period.

Figure 2.1 Potential Forms of Federal Credit Assistance over a Project's Life Cycle



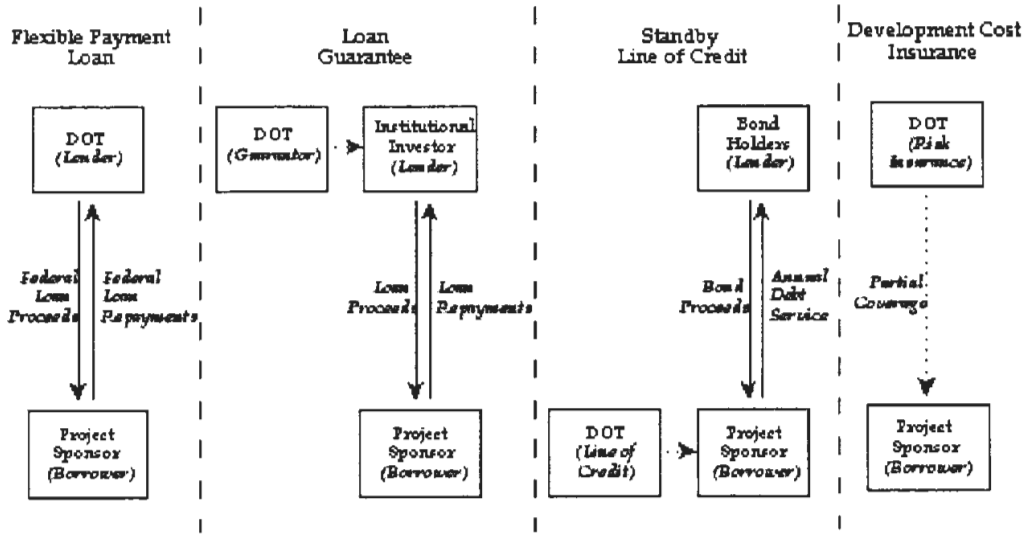
Development cost insurance would provide federal reimbursement to a project sponsor for a portion of the pre-construction costs incurred in the development phase in the event the project fails to proceed to construction.[4]

Figure 2.2 illustrates the flow of funds between DOT, private lenders, and project sponsors for each of the potential credit products described above.

In absolute terms, the funding needs are greatest for direct loans, loan guarantees, and standby lines of credit, and the major thrust of a federal credit program should be oriented to these products. Due to the uncertainty associated with projects during the development stage, development cost insurance is best offered through an experimental pilot program of limited scope, perhaps not more than ten percent of the program's budget authority.

It is contemplated that a project would be eligible for only one of the three major credit products (direct loan, loan guarantee, or standby line of credit) to avoid risk redundancy. However, it should be permissible for a project which benefits from development cost insurance in its initial phase to seek federal credit assistance for permanent financing if it proceeds to construction and therefore does not require any insurance payments.

Figure 2.2 Flow of Funds for Credit Products



The program would draw on the unique ability of the federal government to be a patient investor, with longer-term time horizons, lower liquidity requirements, and greater flexibility than private investors. Even in the role of a minority investor, the federal government's involvement could help instill investor confidence while addressing market gaps, thereby inducing substantial levels of private co-investment.

Table 2.1 summarizes specific features of the credit products, including maximum term and amount, repayment provisions, and interest rates. The remainder of this chapter describes the individual credit products in detail.

Flexible Payment Loans

Flexible payment loans would be direct loans from the federal government to project sponsors to provide long-term, fixed-rate financing of a portion of construction costs.

Such a loan might be for an amount up to 33 percent of the cost of a project and could have a final maturity date as long as 35 years after completion of construction.

The interest rate would be established at the time the loan agreement was executed, and would be set at the prevailing yield on U.S. Treasury bonds issued for a comparable term, thus precluding any significant interest subsidy cost.

The terms and conditions of each loan would be negotiated between the federal government and the borrower but would enable the government to accept a claim on project revenues junior to the project's other senior indebtedness. In essence, the federal loan could be viewed as being payable from the excess coverage on the project's senior debt.

In its role as a patient minority investor, the federal government could also provide flexible repayment terms on its junior-lien loan. If, at any time during the project's first ten years of operation, annual project revenues, after paying operation and maintenance costs and senior debt service requirements, were insufficient to meet current debt service on the loan, the federal government could defer interest and principal payments. Any deferred payment could be added to the outstanding loan balance and would continue to accrue interest. The loan agreement would require the borrower to take certain actions to modify its rates and charges or reduce operating expenses to catch-up to the original loan repayment schedule. In the event of default the flexible payment loan could have a parity or co-equal claim on project assets with other investors.

The loan could be prepaid at any time from excess revenues. As operations stabilize after ramp-up, the project's coverage margin may improve to the point at which it would be in the borrower's interest to refinance

the flexible payment loan with lower-cost debt sold in the municipal bond market.

The federal government could charge an origination fee to offset a portion of the budgetary cost of funding the loan.

The two central features of the loan (junior-lien on annual revenues and flexible payment schedule) should assist projects in obtaining investment-grade bond ratings on their senior indebtedness. This will facilitate a project's access to capital and reduce its cost of funding by elevating the rating on a significant portion of the project's debt.

Project Example

The Alameda Corridor Project

The Alameda Corridor Project will be a 20-mile, high speed, high capacity and fully grade-separated freight transportation corridor linking the Ports of Los Angeles and Long Beach with the region's rail hub near downtown Los Angeles. Once completed, the project will reduce local congestion and expedite the nationwide delivery of freight.

The high cost of the project and its unusual revenue sources hindered its ability to obtain private financing without federal assistance, thus presenting a substantial barrier to completion. To address the complex financial needs of this nationally significant project, a $400 million federal loan is being used to support a financial package that includes funding from private, local, state, and federal sources. The provision of the loan on a junior-lien basis should enable lower-cost financing and instill greater investor confidence. The loan will be repaid from project revenues. The loan was "scored" at a $59 million budgetary cost to the federal government, based primarily on estimated default risk. This represents a leveraging ratio of more than 35 to 1, based on total transportation investment per dollar of federal budgetary cost of credit assistance. (See Appendix D for a more complete case study.)

Loan Guarantees

Loans guaranteed by the federal government under a credit program should have the same basic features as the direct, flexible payment loans:

- A loan guarantee would be capped at 33 percent of total project costs, and would apply for the term of the loan.
- The final maturity of the loan would be 35 years after completion of construction.
- The interest rates on the guaranteed loan would be negotiated between the borrower and the lender, and interest payments would be taxable, consistent with federal tax law.
- The guaranteed loan could have a junior-lien claim on project revenues.
- In the event net revenues were insufficient to meet scheduled debt service on the guaranteed loan, repayments could be deferred, with interest, for a predetermined period of time (e.g., during the ten-year ramp-up phase).
- Prepayments could be made from excess project revenues.
- The federal government could establish fees to offset a portion of the budgetary cost of providing the loan guarantee.

Loan guarantees would help meet the needs of revenue-backed project financing by encouraging junior-lien,

flexible payment loans which enhance the coverage margin and creditworthiness of the senior capital markets debt. Just as the federal government directly funded the junior loan for the Alameda Corridor Project and enhanced the project's ability to issue senior debt, loan guarantees on junior obligations could also help facilitate the placement of the balance of the project's debt financing.

By providing a AAA caliber investment at taxable yield levels, loan guarantees should help attract participation by investors such as pension funds, which are well-capitalized enough to absorb the liquidity and time horizon risks, but which historically have not been active in funding domestic infrastructure.

In order to encourage the development of a junior-lien private market over time, the credit program might give preference to loan guarantees over flexible payment loans, all other things being equal. For the same reason, it might also make sense to limit guaranteed lenders to large, institutional investors, who are more likely to develop the expertise to some day assume the role of junior-lien lender without federal participation.

Standby Lines of Credit

A standby line of credit represents an agreement by the federal government to make one or more direct loans to a project in future years, if needed to fund revenue shortfalls. It is a standby line in that it represents a contingent secondary source of capital in the event of certain deficiencies.

In contrast to the flexible payment loan or loan guarantee, the standby line of credit would not be used to fund construction costs as part of the project's initial capitalization. Rather, the line is a supplemental source of reserves that could be drawn on if needed to pay debt service during the project's ramp-up phase. The line should facilitate a project's access to private capital by enhancing coverage, thereby assisting the borrower in obtaining investment-grade ratings on its senior bonds.

The standby lines would differ from loan guarantees in several respects. They would run to the borrower, not the lender; they would cover only a portion of the bond issue; and they would be available for only a limited period of the issue's outstanding life. As such, the standby lines would not in themselves allow an issue to achieve a AAA rating (as in the case of the loan guarantee), but they should elevate a marginally-ratable issue to lower investment-grade status.

Draws on standby lines of credit might have various limitations, including:

- The line could only be accessed after the project is substantially complete (i.e., open to commercial operation) and would remain available for draws up to ten years thereafter.
- The line could only be drawn on after the borrower uses up other available revenues and reserves.
- The total amount of draws could not exceed 33 percent of project costs, as is the case with the flexible payment loan and the loan guarantee.
- The borrower could draw down up to 20 percent of the line each year (i.e., the entire amount could be drawn down during the first five years of a ten-year credit line). This should represent a substantial portion of debt service in the early years, which affords a comfortable cushion should revenues lag behind projected levels.
- Repayment of any draw should commence not later than five years after the ten-year availability period of the line and be completed within 25 years after such period.
- To preclude significant interest subsidy costs, the interest rate on any draw would be established at the time the line of credit was initially arranged, at a rate equal to the then-prevailing yield on 30-year U.S. Treasury bonds.

- As with the flexible payment loan, the standby line would have a junior claim on revenues, and a missed semiannual payment would not automatically trigger an event of default. The unpaid balance would be added to the outstanding line and would continue to accrue interest until repaid.

- As with the flexible payment loan and the loan guarantee, the federal government could establish fees to offset a portion of the budgetary cost of providing standby line of credit.

Although a contingent federal loan in the form of a standby line of credit might not be construed as a federal guarantee of any other project debt for purposes of the Internal Revenue Code, separate corrective tax legislation could required in order to enable bond counsel to render an unqualified legal opinion as to the tax-exempt status of debt obligations benefiting from such assistance. (See Appendix B: Proposed Tax Code Modification for Standby Lines of Credit.)

Project Example

The Transportation Corridor Agencies Toll Roads

Orange County, California is one of the most populous and auto-dependent areas in the nation, with transportation corridors supporting substantial domestic and international trade. The Transportation Corridor Agencies (TCA) are multi-jurisdictional authorities charged with the planning, construction, and operation of new toll road facilities in Orange County. To date, TCA has financed two new toll roads: San Joaquin Hills Corridor, a 14.5-mile, limited access highway in southwestern Orange County and Foothill/Eastern Transportation Corridor, a 51.7-mile highway providing direct access between Riverside County's residential areas, Orange County's southeastern suburbs, and I-5 near the San Diego County border.

To finance the construction of the TCA toll roads, two bond issues have been sold, each raising in excess of $1.1 billion. To support the complex financial needs of the TCA toll roads, Congress authorized DOT to provide a $120 million line of credit for the San Joaquin Hills Corridor and a $145 million line of credit for the Foothill/Eastern Transportation Corridor. The standby lines of credit assisted the two projects in obtaining BBB ratings on their initial bond issues, and helped the San Joaquin Hills Corridor secure bond insurance on its recent refunding in September 1997.

These standby lines of credit are available for up to ten years following the completion of each project and may be drawn down at the rate of ten percent of the line per year. Draws may be used to service debt, pay operations and maintenance costs, or fund capital repairs. If the contingent federal funds are drawn upon, full repayment is anticipated from project revenues. The standby lines of credit have been "scored" at a total of $17.6 million budgetary cost to the federal government, based on default risk. This represents a leveraging ratio of more than 150 to 1 in terms of total transportation investment per dollar impact on the federal budget. (See Appendix D for a more complete case study.)

Development Cost Insurance

Under a development cost insurance program, the federal government could insure a portion of the pre-construction costs incurred by a development team and require substantial risk-sharing by other parties. The program could offer the following features:

Development cost insurance could be available only for a development team that had received a mandate from a government project sponsor to build a project that satisfied the defined criteria for projects of national significance. (Only costs incurred after selection of the development team by the government sponsor would be covered.)

The federal share could be limited to 40 percent of pre-construction costs and could be further capped at some predetermined amount (e.g., $4 million per project).

To ensure shared risk-taking and establish significant financial and political discipline the government sponsor could be required to insure at least 20 percent with the balance being borne by the development team.

The coverage could be claimed at the end of five years if the project had not proceeded to construction; however, if the project did advance at a later date, the federal insurance payment would be reimbursable.

The federal government could collect up-front insurance premiums upon execution of the policy to offset a portion of the budgetary cost of the program.

In most cases, development cost insurance would be available for projects incurring pre-construction costs that would otherwise be eligible for outright federal grants if they were being developed under conventionally funded public procurements. The projects typically are developed as public/private partnerships precisely because there are funding constraints to traditional approaches. It is appropriate, therefore, that these developmental costs be eligible for partial insurance coverage under the program.

In essence, the concept represents a domestic version of the Overseas Private Investment Corporation (OPIC). OPIC insures American companies against the political risks associated with investing in foreign countries. The development cost insurance program would insure selected development teams against domestic political or policy change risk as well as other pre-construction risks.

Selection of the Appropriate Credit Instrument

The flexible payment loan, loan guarantee, and standby line of credit are likely to be used by projects with different financial profiles. The flexible payment loan and loan guarantee will be most useful to those projects that must demonstrate to senior debt investors that there is adequate coverage on maximum annual debt service at the outset of the project. Project sponsors will find the flexible payment features attractive if the Treasury lending rate compares favorably to their own cost of capital on a junior-lien basis.

A standby line of credit is more likely to be used by projects that are able to demonstrate to investors that their revenue streams and resulting coverage margins are likely to grow substantially over time. It should prove particularly attractive to projects that are able to raise most of their debt financing on a tax-exempt investment-grade basis. It will allow such projects to issue senior debt on favorable terms with an ascending debt service pattern, but still have access to contingent or secondary sources of capital in the event revenues do not grow as quickly as annual payments of principal and interest during the ramp-up period.

Development cost insurance could be used by a variety of projects during the pre-construction phase to insure a portion of the expenses incurred by the project developer.

A project sponsor seeking federal credit will determine which of the credit products best meets its needs based on the project's financial structure and cost of capital. As noted above, a credit program might give preference to loan guarantees over direct loans, all other things being equal, in order to encourage the active participation of private investors in junior-lien financing. This may help familiarize them with the payment features of such obligations and help develop a non-guaranteed marketplace.

[1] See Appendix A: A Risk Assessment Model for Federal Credit.

[2] Suppose under a federal credit program, that a direct federal loan could not exceed 33 percent of total project costs and that the expected loss due to default was ten percent of the loan. For a $100 million project the federal loan would be $33 million, and the expected loss would be $3.3 million. The federal leverage ratio of total capital investment to the face value of the loan would be 3 to 1, and the federal leverage ratio of total capital investment to the budgetary cost of the loan (to account for the default risk) would be 30 to 1.

[3] Through special federal appropriations in fiscal years 1993, 1995, and 1997, the San Joaquin Hills and Foothills/Eastern toll roads of the Transportation Corridor Agencies (TCA) in Orange County, California, obtained two ten-year standby lines of credit totaling $265 million, and the Alameda Corridor Project of the

Alameda Corridor Transportation Authority (ACTA) in Los Angeles/ Long Beach received a direct federal loan of $400 million repayable over 34 years.

[4] Although this type of financial assistance may not be considered a true credit product, it has similar characteristics and achieves similar goals and, therefore, is included in this study.

Last updated May 20, 1998

3. Developing a Process for Program Administration and Project Evaluation

Introduction

This chapter describes key decision points, criteria, and information flows associated with the provision of federal credit and illustrates how a project sponsor could secure credit assistance from the federal government. The administrative structure of a federal credit program should be designed to maximize the likelihood of successful projects, satisfy various federal budgetary requirements, minimize administrative costs, and ensure a timely and transparent application and selection process to encourage private sector participation.

The credit application and review process should result in a formal agreement among DOT, the project sponsor, and the state (or state-designated agent) in which the project is located. Project sponsors eligible to receive federal credit may include state and local governments; government authorities; Metropolitan Planning Organizations (MPOs); private parties, such as corporations, joint ventures, and trusts; and public/private partnerships.

Utilization of Local Loan Servicers

The credit program should be designed to operate through the states or local organizations to which the states delegate authority. As with other transportation programs, there should be state and local flexibility in allocating and managing transportation resources. Although DOT would be responsible for credit review and oversight activities, many of the credit origination and servicing activities could and very well should be undertaken by local servicers. Such activities may include:

- receiving and screening applications;
- counseling and corresponding with borrowers; and
- collecting, monitoring, and reporting payments.

Using local servicers would facilitate transportation planning and coordination and help ensure ongoing state and local involve-ment and support.

A local servicer may reside in a state government agency, such as the Department of Transportation, Department of Revenue, or State Financing Authority. If the state delegates its authority, the role of the local servicer could be filled by a private organization or a public agency (e.g., a SIB, a non-profit organization, or a private contractor which provides the service on an out-sourcing basis).

Some organizations would make better local servicers than others. The best local servicers of federal credit would be organizations with experience in performing financial transactions involving loans, assessing the financial feasibility of complex public/private partnerships, and dealing with different types of project sponsors – state and local governments, transportation authorities, MPOs, and private firms.

State Infrastructure Banks

Under the National Highway System Designation Act, Congress authorized DOT to create a pilot program of up to ten State Infrastructure Banks. Under the SIB pilot program, states may transfer up to ten percent of most categories of federal surface transportation funding into their SIBs for capitalization purposes.

The 1997 DOT Appropriations Act allowed DOT to expand the SIB pilot program and provided an additional $150 million to be disbursed among the initial ten SIBs and any additional states selected for pilot SIBs. In

response to that legislation, 28 more states plus Puerto Rico submitted SIB applications and were accepted into the program.

Though SIBs are hindered in directly assisting large projects by their own capacity limitations resulting from limited capitalization, small portfolios, and a lack of credit history, they could play an important role as local servicers for the credit program. Providing a meaningful role for SIBs would have several strategic advantages:

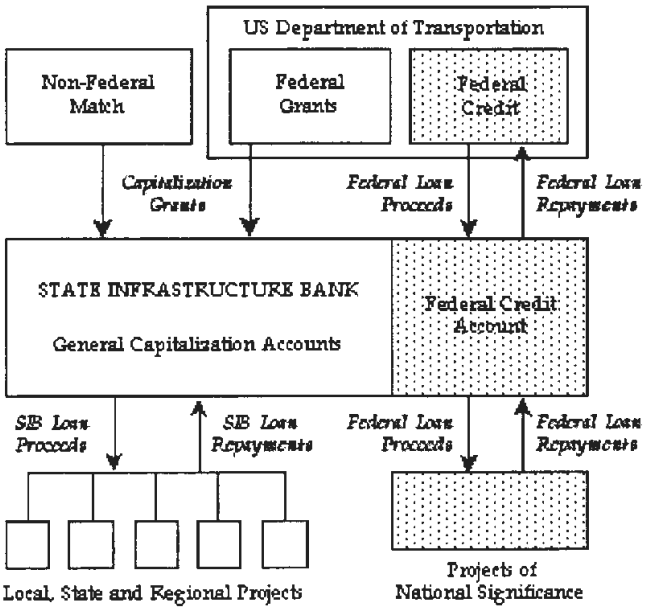
SIBs would develop in-house financial expertise by participating in the development and financing of projects receiving federal credit assistance, thereby gaining valuable experience in project financing.

SIBs are uniquely positioned to coordinate transportation planning and financing to help ensure that federal credit assistance is effectively used and incorporated into existing state plans and programs.

SIBs could be allowed to collect fees from project sponsors for their servicing activities, which would provide an ancillary source of cash flow to support their own credit activities.

Federal credit would pass through the SIB to the recipient project sponsor, but would not be commingled or cross-collateralized with other SIB resources. Each participating local servicer would need to create a separate account to insulate the federal credit from defaults or other risks associated with its other financial activities (and vice-versa). This would ensure that the budget scoring of the subsidy cost of federal credit is not affected by the local servicer's own portfolio. Figure 3.1 illustrates the potential SIB role.

Figure 3.1 Potential "Pass-through" Role of SIBs in Federal Credit Program



Assistance for Specific Projects

A federal credit program should be designed to assist projects directly rather than fund intermediaries, such as SIBs or other local servicers. It would be undesirable for SIBs to incur long-term liabilities under a credit program because that would inhibit their ability to provide financial assistance on favorable terms to other projects. Moreover, it would complicate the budget scoring process if loan repayments were affected by the SIB's other credit activities. As discussed earlier, the primary purpose of federal credit is to help advance specific projects where assistance is warranted based on national needs. It is not intended to directly assist SIBs, which focus on smaller state and local projects. Over time, SIBs should develop sufficient resources to gain access to markets and ultimately may be in a position to arrange external financing for larger projects.

Federal Credit Application Process

To receive federal credit assistance, a project sponsor would first submit a preliminary application to a state-authorized local servicer describing the project and providing information to support its designation as a project of national significance. A key element of the application would be a financial plan that identifies the specific type and amount of federal credit applied for; demonstrates the need for and describes the benefits of such assistance; and proposes a timetable for receiving the credit assistance.

The local servicer would then review the preliminary application – working with the sponsor to revise and complete it as necessary – for compliance with federal eligibility guidelines. If the local servicer finds that the project satisfies these guidelines, it would notify DOT and instruct the sponsor to obtain a preliminary credit assessment from a nationally recognized rating agency. This assessment should take the form of a preliminary rating based on the financial plan, including the proposed federal assistance. The credit opinion would provide an expert, independent analysis of the extent and nature of project risk.

Once the local servicer has received the preliminary credit assessment and any other relevant information in the applicant checklist (see Appendix C for a description of the types of information used in evaluating projects), it would forward the completed application to DOT. This completed application would include a written summary of the project, the financial plan, the form and amount of requested federal credit, the rating agency credit opinion, and the expected time frame in which the credit assistance would be needed.

After the application is received, DOT would request that the local servicer and project sponsor schedule a formal lender's briefing to summarize the project, present the financial plan in detail (including the rating agency's credit analysis), and discuss any other relevant issues. The briefing should help the parties to fully understand the project and the federal role and to identify any outstanding issues that need to be addressed. After the lender's briefing, DOT would formally evaluate the project and notify the local servicer and project sponsor of its selection decision.

Evaluation of Project Applicants

The first step in the evaluation process would be to determine whether the project meets certain objectively measurable criteria. These initial threshold criteria would cover eligibility for authorized transportation purposes, project size, whether benefits exceed costs, evidence of state and local support, and the potential for user charges or non-federal revenues.

Threshold Eligibility Criteria

To qualify for federal credit assistance, a project would have to meet the following minimum criteria:

- *Federal Eligibility* – Any project that is eligible for federal assistance through regular surface transportation programs (under Title 23 or Chapter 53 of Title 49, U.S.C.) should be eligible for federal credit. Under certain reauthorization proposals, this could include highway facilities, mass transit facilities and vehicles, commuter and intercity passenger rail facilities and vehicles (including Amtrak), certain publicly-owned freight rail facilities (excluding privately owned rolling stock), and various intermodal facilities. Eligible costs would include pre-construction design and development costs, construction costs, and other project-related costs such as interest during construction, reasonably required reserve funds, and issuance expenses.

- *Project Size* – The program would be designed to assist complex, large-scale projects too big for a SIB or a state's regular transportation program. A project might be required to cost at least $100 million or 50 percent of the state's most recent annual apportionment of federal-aid highway funds, whichever is less.[1] Intelligent Transportation Systems (ITS) projects could have a lower cost threshold, perhaps $20 to $30 million, reflecting the smaller investment level required to significantly increase capacity and generate benefits.

- *Public Benefits* – A project must substantially reduce costs or improve productivity in connection with transporting passengers or freight associated with the promotion of metropolitan, regional, interstate, or

international commerce to be considered a project of national significance.

A project's public and private benefits would be required to exceed the sum of its public and private costs. Standard benefit-cost analysis, which converts the stream of monetary benefits and costs to present dollars, would be used to make this determination. Benefits would be expected to come largely from savings in travel time, reductions in accidents and vehicle operating costs, and gains in economic productivity. Demonstrable environmental benefits should also be included in the calculation of total benefits.

- *Public Acceptance* – The project must have the support of the public and state and local authorities. Sponsors of the proposed project would need to demonstrate that the project concept has been or will be (in the case of a project in an early stage) developed through a process that achieves a fair hearing of all the key issues, fosters buy-in, and results in sufficient community and political support to warrant a high probability of securing all necessary public approvals. The project would need to be included in the state transportation plan (required under Section 135 of Title 23) at the time of application and in the approved state transportation improvement program (required under Section 134 of Title 23) at the time any loan agreement or other commitment is entered into under the program. If multiple states or MPOs are involved, the project would need to be included in all relevant transportation improvement programs. The project application would be submitted by a state or a local servicer (such as a SIB).

- *User Charges* – Project financing must be payable in whole or in part by user charges or other non-federal dedicated revenue sources. This provision is designed to encourage states and project sponsors to identify new project-related revenue streams that will augment existing funding sources and leverage infusions of private capital.

Project Selection Criteria

Qualified projects meeting the initial threshold eligibility requirements would then be evaluated and selected according to additional quantitative and qualitative criteria. The factors would be determined by the DOT through program guidelines, but might include the following:

- *National Significance* – The extent to which a project generates national economic and social benefits that exceed costs.

- *Creditworthiness and Budgetary Cost* – The likelihood of the credit instrument being supportable by project revenues. The creditworthiness and associated budgetary cost of the credit instrument are important, given the need to allocate limited federal resources among project applicants.

- *Project Advancement* – The degree to which credit assistance enables the project to move forward at an earlier date and with lower financing costs than would otherwise be possible. Also, such assistance might be required to help meet a national infrastructure goal under a strict timetable, such as to be ready for the Olympics or to satisfy a provision of an international trade agreement.

- *Special Needs* – The project's contribution to critical transportation needs, such as intermodal connectors, border facilities, and high priority corridors.

- *Private Participation* – The project's ability to create opportunities for public/private partnerships and induce substantial private co-investment.

- *Innovative Technologies* – The extent to which the project uses or promotes innovative technologies in enhancing access, mobility, productivity, and safety.

Budgetary Costs

Once a project is selected, DOT would make an initial estimate of the budgetary cost of the requested credit based on its type, amount, and preliminary rating agency opinion letter. (See Chapter 4 for a complete description of how the budgetary cost would be determined.) DOT would then notify the local servicer and project sponsor that it has either reserved an appropriate amount of budget authority – to the extent available – or created a placeholder for future resources. Sponsors of eligible projects not selected would be notified of the status of their applications and the likelihood of future consideration, which would depend significantly on the amount of budget authority available for the federal credit program. Allocation of a limited amount of budget authority among selected projects should be based on the degree to which competing project proposals meet or exceed eligibility and selection criteria. Projects might be selected and allocated funding on a rolling basis throughout the year or at specified times within the year. The allocation method would be the subject of DOT guidance or other public notice.

Credit Agreements

After a project has been selected and its budgetary cost has been estimated, the local servicer and project sponsor would need to enter into a formal credit agreement with DOT. It is anticipated that a single joint agreement would be negotiated and signed by all three parties. DOT would prepare a generic agreement for the SIB or other local servicer and project sponsor. The preliminary subsidy cost estimate would be revised when the agreement is finalized and the credit is committed, based on prevailing market rates and final loan terms. If a negotiated agreement cannot be reached in a timely manner, then DOT may wish to withdraw its reservation of budget authority and move on to other candidate projects.

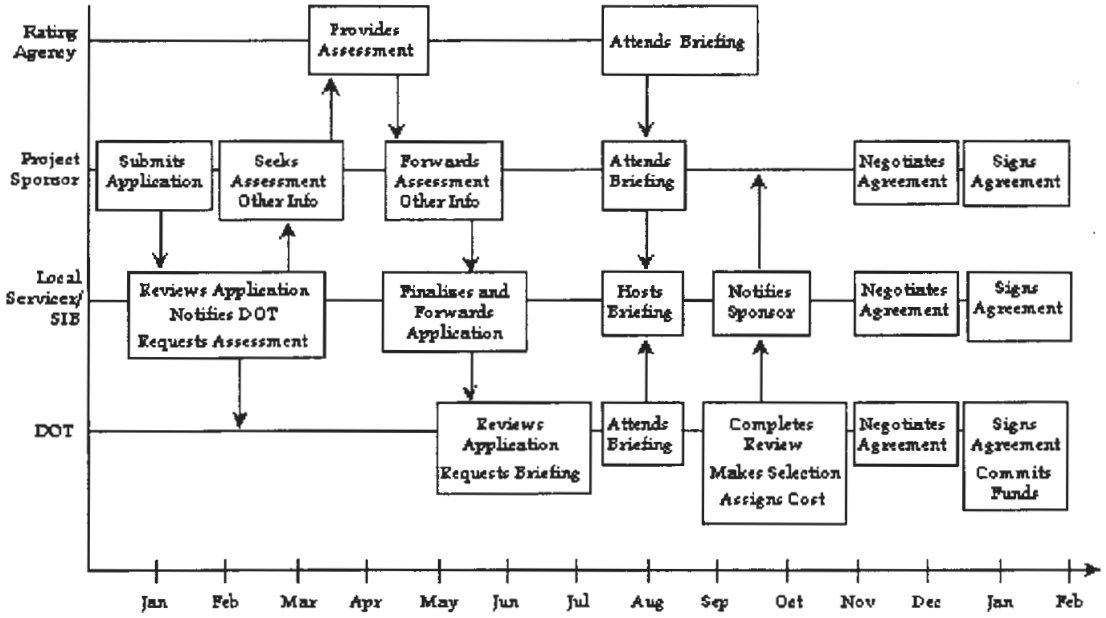
Congress recognized the need for a predictable source of funds for multi-year surface transportation projects, and has legislated the use of contract authority for the federal-aid highway program since 1921. Under contract authority, sums authorized are available for obligation without annual appropriation actions. To facilitate the planning and structuring of large project financing arrangements involving federal credit assistance, program funding levels should be known in advance. Providing specified amounts of contract authority, rather than annual appropriations of budget authority, would ease market concerns about the availability of future funding to support federal assistance. DOT would be better able to allocate limited funding and avoid costly delays as selected projects awaited future appropriation actions to determine whether the negotiated federal assistance could be committed. The commitment of federal credit assistance requires stable funding levels known in advance even more than traditional grant reimbursements; the projects would tend to be larger, the financing would be more complex, the federal assistance frequently would be the initial capital component, and the majority of the financing – much of it private capital – would hinge on the timely and assured provision of federal funds.

Federal Budget Process Requirements

The credit application and review process must generate the information needed to provide accurate and timely input for the annual federal budget process. DOT must have an early indication of the type of credit support envisioned, the amount of support needed, and the timeframe in which that support could be provided. More precise subsidy cost estimates must await finalization of the terms in each project's credit agreement, but an early indication of credit amounts and associated costs is needed for DOT to gauge the overall level of budgetary resources required. This would allow DOT to prepare estimates of the expected demand, compare them with available resources, and help manage expectations of potential sponsors and states.

Timely submission of applications, evaluation of projects, and estimation of subsidy costs would be essential for allocating a limited amount of budget authority among alternative projects. The time needed to complete the process described in this Chapter – from the initial submission of an application to the finalization of an agreement – may take well over a year for a typical project, as shown in Figure 3.2. The size, complexity, and heterogeneity of these infrastructure investments cause the necessary credit transactions to vary greatly. Given the long lead times needed to thoroughly plan, structure, review, and score these project financing arrangements, any budget authority provided to cover the subsidy costs of credit assistance must be "no-year" funding (available until expended). This approach would allow DOT to reserve budget authority for a selected project and still have sufficient time to negotiate a suitable agreement, revise the subsidy estimate, and obligate the necessary funds.

Figure 3.2 Illustrative Timeline for Project Application, Review, Selection and Agreement



[1] Based on fiscal year 1997 apportionments, 18 states would have project - size thresholds below $100 million – with Puerto Rico having the smallest at approximately $41 million.

Last updated May 14, 1998

4. Funding a Surface Transportation Credit Program

Introduction

This chapter discusses the federal budgetary resources needed to fund the various credit products – flexible payment loans, loan guarantees, standby lines of credit, and development cost insurance. It reviews the budget scoring of federal credit, summarizes a methodology for estimating the cost of credit for surface transportation, illustrates the amount of investment that could be leveraged through a federal credit program, and outlines how to provide budget authority to fund such a program. It includes a discussion of how paying for the costs of federal credit assistance could be accomplished through either the provision of separate contract authority or the use of unobligated balances of federal-aid highway funds previously apportioned to the states.

Background on Federal Assistance under Credit Reform

Federal credit encompasses financial assistance other than grants provided by the federal government, such as direct loans and loan guarantees. The Federal Credit Reform Act of 1990 (FCRA) governs the provision of federal credit assistance. The stated purposes of FCRA are to:

1. Measure more accurately the costs of federal credit programs;
2. Place the costs of credit programs on a budgetary basis equivalent to other federal spending;
3. Encourage the delivery of benefits in the form most appropriate to the needs of the beneficiaries; and
4. Improve the allocation of resources among various credit programs and between credit and other spending programs.

Before credit reform (through fiscal year 1991), the costs of federal credit programs were based on the cash flows associated with loans and guarantees. Thus, the budgeted cost of a direct loan was recorded as the amount of cash disbursed to the borrower at the time of disbursement, regardless of subsequent repayments. The budgeted cost of a loan guarantee was recorded when fees were collected or when cash outlays were made to pay for defaults, regardless of when the federal commitment was made. This cash-based budgeting overstated the costs of direct loans and understated the costs of loan guarantees at the time of federal commitment, compared with grant expenditures.

Under FCRA (beginning in fiscal year 1992), the true budgetary or "subsidy" costs of providing federal credit depend on the estimated default risks and interest subsidies (the extent to which interest rates charged are less than the rates on comparable Treasury securities) and are recognized or "cored" up front, when the federal commitment is made. Together, these credit subsidy costs provide a more accurate economic indicator of the federal resources consumed in offering assistance. Therefore, unlike other federal spending, the budgeting for credit assistance is based on estimated subsidy costs rather than actual cash flows.

While the subsidy costs of loans and guarantees are included in the budget totals when those commitments are made, the net cash flows associated with various credit transactions (such as loan disbursements and receipts) are recorded outside the budget totals as a means of financing. This budgetary treatment allows the costs of credit to be compared directly with those of grants. For example, the disbursement of a $100 loan has the same cash effect as the disbursement of a $100 grant; however, if $90 of the loan eventually will be repaid with interest, the true cost of the loan is only ten dollars, or ten percent of the cost of the grant. Regardless of the face value of credit provided, the true cost to the government is the net present value of amounts not reimbursed due to either defaults or subsidized interest.

The federal government currently provides credit assistance through a variety of national programs that collectively address numerous policy goals such as access to higher education, affordable housing, disaster assistance, farm credit, and rural electrification. The face value of the credit assistance outstanding through

these programs totaled $970 billion ($165 billion in direct loans and $805 billion in loan guarantees) in 1996. This number excludes more than $1.7 trillion in credit assistance offered through Government Sponsored Enterprises. In 1996, $198.8 billion in new federal commitments ($23.4 billion in direct loans and $175.4 billion in loan guarantees) was supported with $5.8 billion in subsidy budget authority; thus, the budget authority needed to protect against default averaged just 2.9 percent of the face value of credit.[1]

In providing transportation credit assistance, the federal government shares the financial risks associated with advancing large, revenue-generating infrastructure projects. By and large, the federal government has not applied credit assistance to surface transportation investments. Currently, DOT's only significant involvement in credit programs is through the Maritime Administration providing loan guarantees to support shipbuilding. To date, nearly all federal highway and transit funds have been provided as grants either to reimburse costs incurred or, more recently, to capitalize pilot SIBs. The decision to offer credit assistance fundamentally is about whether, how, and to what extent the federal government should broaden the forms of assistance it offers to states to include credit in support of major transportation infrastructure investment.

The Cost of Credit for Surface Transportation

A key issue for the federal government in extending credit is accurately estimating the budgetary impact of such assistance. As described above, estimating or "scoring" the budgetary cost of federal credit depends on the associated default risks and interest subsidies (if any). These factors determine the amount of budgetary resources that must be provided in either appropriations or authorizing legislation before the federal government can offer credit assistance. In accordance with budget scoring conventions, only the direct budgetary effects of credit assistance contained in proposed legislation should be scored. The various indirect budgetary effects – whether potential benefits generated by increased infrastructure investment and the resulting economic activity, or potential costs resulting from increased issuance of tax-exempt debt and the resulting revenue loss ("tax expenditure") – should not be assessed, as they are difficult, if not impossible, to agree upon and accurately quantify.[2]

The techniques currently used by the federal government to assess the budgetary costs of federal credit offered by other agencies are not well-suited to evaluate transportation project financing. The budget scoring methods used for many programs (e.g., agriculture, business, housing, or student loans) are based on large volumes of historical data on small, individual credits that are essentially similar. In contrast, transport investments tend to be large one-of-a-kind transactions uniquely structured to meet each project's specific financial profile.

Except for toll roads, the financial community has relatively little experience with surface transportation projects that might be eligible to receive federal credit, including nationally significant intermodal facilities, high priority corridors, international border crossings, and projects involving the application of advanced technology and innovative public/private partnerships.

Rating agencies have decades of experience with toll roads, however, dating back before the Interstate construction era. Unlike consumer and small business loans, toll roads tend to be improving credits over time. Normally, long-term debt for toll roads is sold at the outset as combined construction and permanent financing; therefore, for project-related debt, the initial rating reflects construction risk (including delays arising from environmental and litigation risk) as well as traffic and operating performance risk. After construction is completed and traffic patterns have stabilized, the ratings tend to improve. Even toll roads that have initial traffic shortfalls ultimately should be self-supporting, as evidenced by the few defaulted toll roads that eventually became investment-grade as traffic grew to meet forecast capacity (e.g., the Chesapeake Bay Bridge-Tunnel, the Chicago Calumet Skyway, and the West Virginia Turnpike).

As an industry sector, toll revenue bonds have had an extremely low default rate compared to other borrower groups. Since 1961, defaults of debt issued to finance toll roads, bridges, and tunnels have totaled about one percent of the new issue volume in this field. Of the bonds that went into default, many were eventually refinanced and paid off in full so that actual unrecovered losses totaled only three-tenths of one percent of total new debt issued.[3] It is worth noting, however, that any estimated default rate for a specific project would vary according to numerous factors including the complexity of the project and the security of its revenue sources.

The best market-derived information on actuarial default risk for infrastructure loans is in the financial models used by rating agencies to evaluate the financial strength of municipal bond insurance companies. Agencies such as Fitch Investors Service, Moody's Investors Service, and Standard & Poor's use capital reserves criteria (which are much more stringent than the state-by-state insurance commissioner statutory reserve requirements) to determine the claims-paying ability of bond insurance companies (e.g., MBIA, AMBAC, and FGIC). It would be appropriate for a federal credit program to use the standards that capital market investors have accepted as being virtually risk-free – those imposed by the rating agencies to assign AAA ratings on the bond insurers' creditworthiness.

The proposed scoring approach would use a rating agency's preliminary risk assessment (which would take into account the project cash flows including the federal assistance) to estimate the budgetary cost of the credit. Based on the findings of the rating agency's credit analysis, the project would be assigned a capital reserve charge similar to the reserve requirements for bond insurers on like-rated bonds they guarantee. The capital reserve charge would cover default risk and would be expressed as a series of annual anticipated cash flows that would be discounted at the relevant baseline Treasury rates to derive a present value amount representing the expected budget cost. (For a more complete discussion of the scoring process, please review the analysis by Fitch Investors Service in Appendix A.)

This approach has the advantages of being market-based, calculated by independent third-party experts, and predicated on transparent and objective criteria. It would offer an accurate, conceptually sound approach for estimating the risk of large, complex, heterogeneous capital investments in transportation infrastructure.

The Leveraging Potential of a Credit Program

Table 4.1 illustrates the significant amount of capital investment that could be generated with a modest level of federal assistance. It shows that $100 million of budget authority, for example, could support the annual provision of nearly $1.2 billion of federal credit and more than $3.5 billion of total investment, given certain assumptions. This represents a potent leveraging ratio of 35 to 1 in terms of capital investment induced to budgetary resources consumed.

The following bullets explain in detail how the column amounts in Table 4.1 are derived:

- *Column A – Cost of Typical Project:* For the loan products (flexible payment loans, loan guarantees, and standby lines of credit), major projects of national significance are assumed to cost an average of $500 million each. Although recent projects authorized to receive credit assistance have been significantly larger (both Orange County TCA toll roads cost well over $1 billion and the Alameda Corridor costs over $2 billion), such projects more commonly may be in the $100 to $500 million range. Pre-construction costs of large infrastructure projects eligible for development cost insurance are assumed to average $5 million.

- *Column B – Federal Participation Ratio:* As described in Chapter 2, credit assistance in the form of direct loans, loan guarantees, and lines of credit would be limited to no more than 33 percent of total project costs. This limitation would ensure market discipline, leverage scarce federal resources with significant private capital, and minimize costs and risks to the government. The federal insurance ratio is limited to 40 percent of pre-construction costs if an eligible project fails to advance to construction. The state would cover 20 percent of costs eligible for reimbursement, and if it wished, could also assume all or part of the 40 percent developer share.

- *Column C – Amount of Credit per Project:* The nominal or face value of credit assistance provided to a project sponsor is simply the product of project cost and participation ratio.

- *Column D – Average Subsidy Rate per Project:* The subsidy rate represents the portion of credit assistance estimated to be unrecovered because of defaults.[4] The eight percent rate assigned to flexible payment loans, loan guarantees, and standby lines of credit is a weighted average of the estimated capital charges that would be required for recipient projects. This rate was derived from a

scoring methodology similar to that used by rating agencies to assess reserve requirements for bond insurance companies.[5] Federal credit assistance is assumed to enable at least 80 percent of recipients to attain the investment-grade rating of BBB, which has a capital charge or subsidy rate of five percent. The remaining 20 percent of recipients are assumed to achieve at least the sub-investment-grade rating of BB, which has a capital charge or subsidy rate of 20 percent. It is worth noting, however, that the model used to assign capital charges is based on historical default rates for start-up toll road projects. Therefore, the capital charges used in this report are merely a proxy for other types of surface transportation infrastructure projects. The actual capital charges for projects other than start-up toll facilities may be higher or lower depending on those projects' financial structures and risk profiles. Additional research will be required to ascertain those charges. The 50 percent estimated subsidy rate for development cost insurance illustrates the assumption that half of participating projects would not proceed to construction and would require partial reimbursement of eligible pre-construction costs.

- *Column E – Average Subsidy Cost per Project:* The subsidy cost of a project equals the product of the credit amount and the subsidy rate. It measures the true cost to the government of providing credit assistance and is the basis for calculating budget totals.

- *Column F – Number of Projects per Year:* Table 4.1 assumes that, on average, seven major projects of national significance would be eligible for and funded with flexible payment loans, loan guarantees, or standby lines of credit each year. A development cost insurance pilot program could be funded at $8 million per year, which under the assumptions in Table 4.1 would support eight major projects each year.

- *Column G – Budget Authority (Subsidy Cost) per Year:* The annual budget authority required to fund the credit program – excluding the funding needed to cover administrative costs – is the product of the subsidy cost per project and the number of projects. Under the assumptions in Table 4.1, this amount is $100 million. (It is estimated that federal costs associated with credit policy, oversight, origination, extension, and other administrative activities might total $1 to $2 million per year for a $100 million annual program.)

- *Column H – Face Value of Credit per Year:* The annual face value of credit assistance is the product of the amount of credit per project and the number of projects per year. Under the assumptions in Table 4.1, the credit program would extend nearly $1.2 billion of nominal assistance each year at a budgetary cost of $100 million. Comparing the totals for Column G (subsidy cost) and Column H (face value of credit), the federal credit program results in an eight percent budgetary impact compared with 100 percent for an equivalent amount of grant assistance.

- *Column I – Non-Federal Investment per Year:* Assuming that recipients receive the maximum level of assistance possible (33 percent for loan products and 40 percent for development insurance), Table 4.1 shows that the $1.2 billion of federal credit would be leveraged with nearly $2.4 billion of private and other non-federal capital.

- *Column J – Total Capital Investment per Year:* The total amount of capital invested each year represents total project costs and is the sum of federal credit and non-federal capital. Note that for loan guarantees and standby lines of credit, total project capital would equal non-federal investment, since these instruments are contingent or secondary sources of funding. Table 4.1 shows that annual capital investment of more than $3.5 billion could be generated by $1.2 billion of credit assistance at a budget cost of $100 million. Those amounts lead to leveraging ratios of 3 to 1 for total capital investment to face value of credit assistance and 35 to 1 for total capital investment to subsidy cost of credit assistance.

Budget Authority to Fund Credit Assistance

Before federal credit of any type can be extended, budget authority to fund the subsidy costs of that credit must be provided. There are several ways to provide budget authority, but those funding options are independent of credit program features. In other words, regardless of its specific components, a credit program requires budget authority that is sufficient to cover the subsidy costs of the credit assistance provided.

The analysis in Table 4.1 indicates that annual budget authority of $100 million would support annual federal credit assistance of $1.2 billion for major projects of national significance. Over a six-year period, an aggregate funding level of $600 million could support over $7 billion of credit for some 42 projects receiving flexible payment loans, loan guarantees, or standby lines of credit and another 48 projects participating in a development cost insurance pilot program under the assumptions in Table 4.1.

The Provision of Separate Contract Authority

A straightforward funding approach would be to provide new contract authority for a credit program to cover its subsidy costs. As discussed in Chapter 3, contract authority funded from the HTF is the ideal way to finance credit assistance for transportation infrastructure. It would provide a stable source of budget authority, known in advance, that would facilitate the planning, development, evaluation, and selection of candidate projects. Such contract authority would also allow the timely disbursement of credit assistance that is critical to the successful financing of these large, complex public/private ventures. Using the HTF to pay for transportation investments would also be consistent with the intended purpose of federal user fees dedicated to that fund.

The Use of Existing Unobligated Balances

An alternative funding approach would be to utilize existing contract authority in the form of states' "unobligated balances." These balances of unobligated contract authority are the result of annual controls (obligation limitations) imposed by the federal government to constrain spending and reduce the deficit. Congress generally authorizes highway funding, in the form of multi-year contract authority, based on tax revenues estimated to be credited to the HTF. Then DOT annually apportions (distributes by statutory formulas) most of that contract authority to the states. But the annual spending controls, which typically apply to about 90 percent of highway funding, usually prohibit the states from obligating the entire amounts apportioned to them for a given year.

Over the course of the ISTEA authorization period (fiscal years 1992-1997), the states received apportionments of federal-aid highway funds totaling $103.4 billion. Of that amount, $97.4 billion was subject to annual obligation limitations. As a result of those spending controls, the states were able to obligate $93.6 billion (96 percent) of their apportionments by the end of fiscal year 1997. Therefore, after accounting for the $5.9 billion unobligated balance that existed at the start of the ISTEA period (end of fiscal year 1991), the states had a total unobligated balance of apportionments subject to annual obligation limitations of $9.7 billion at the end of the ISTEA period (end of fiscal year 1997).

The states have grown increasingly frustrated with their inability to spend down or access that growing balance because of annual spending controls. It would be possible to structure the credit program funding mechanism to enable states to use their unobligated apportionments to fund the budgetary costs of credit assistance. Key aspects of this funding approach would include:

- *Budget Authority* – Legislation would authorize the obligation of prior-year apportionments (current unobligated balances) of federal-aid highway funds for paying the subsidy costs of credit assistance. Use of this existing contract authority would be limited to $100 million per year. This amount would represent "new" obligation authority in addition to the "regular" obligation authority provided annually in appropriations acts for the federal-aid highway program.

- *Funding Source* – As with other contract authority programs, the credit program would be funded from the HTF. Sufficient resources (tax revenues and interest income) would be provided through authorizing legislation to liquidate any contract authority that would be obligated for the subsidy costs of federal credit.

- *Spending Category* – If the use of unobligated balances to pay credit program subsidy costs were exempt from annual limitations, the resulting outlays (cash expenditures) would be considered mandatory spending subject to pay-as-you-go budget rules.[6] This would be similar to the current treatment of FHWA's Minimum Allocation, Emergency Relief, and Demonstration Project spending. On

the other hand, if the use of unobligated balances were made subject to annual limitations, the resulting outlays would be considered discretionary spending subject to annual discretionary caps.[7] In this case, the credit program would compete directly with most other federal transportation programs – which are categorized as discretionary – for limited resources within the discretionary caps.

- *Cost Allocation* – The budgetary or subsidy cost of credit provided to a selected project would be charged to the appropriate state's unobligated balance of previous apportionments. New apportionments of federal-aid funds would not be affected.

- *Deficit Impact* – Additional outlays (to pay the subsidy costs of credit assistance) would occur under this approach, even though existing budget authority would be used. Any funding mechanism that provides for additional outlays that are not offset by reductions elsewhere would have a deficit impact, regardless of the source of budget authority. It is worth noting again, however, that credit assistance has a fractional budget impact (eight percent in Table 4.1) compared with an equivalent amount of grant assistance.

Because this funding approach leverages existing budget authority with significant private capital, it might be viewed favorably by the states as allowing additional spending that otherwise would not occur. In allocating limited resources among competing needs, the federal government can justify additional spending on transportation infrastructure only if it generates greater returns. Extending federal credit that enables private capital to make strategic transportation investments would be a much more effective use of unobligated balances than simply providing additional grants.

In addition, due to ongoing efforts to rein in federal spending and reduce budget deficits, it appears unlikely that annual spending limitations will be removed and states will be allowed to spend down their unobligated balances for regular grant reimbursements. Although some states harbor hopes that transportation spending will not be subject to certain budgetary constraints in the future (perhaps by taking the HTF off-budget), those prospects are uncertain. This approach would respond to states' long-standing concerns about growing unobligated balances and would operate within the existing budget framework to address critical investment needs – all at a relatively modest cost to the federal government.

Furthermore, charging states' unobligated balances for federal credit costs would be an equitable way of providing budget authority because states that benefited most directly from federal credit assistance would pay for those benefits with their own apportionments. States would submit applications for major infrastructure projects and signal their willingness to pay for the associated credit costs through reductions in their existing fund balances. Allowing the use of unobligated balances to pay for credit assistance would encourage states to seek out new resources in financing revenue-generating facilities. Also, it would not penalize states that chose not to participate; new federal-aid apportionments would not be affected.

[1] Budget of the United States Government, Fiscal Year 1998, Analytical Perspectives, U.S. Government Printing Office, Washington, 1997.

[2] Some might argue that a legislative provision containing federal credit for surface transportation should be assessed a tax expenditure budget score. This position contends that federal credit, to the extent it facilitates projects that issue tax-exempt debt for the balance of their costs, increases the overall volume of tax-exempt debt at the expense of taxable debt and consequently produces revenue losses for the U.S. Treasury. Others, however, could argue that this position appears to be inappropriate for several reasons: 1) Since credit program spending provisions do not contemplate any tax code changes, assessing a tax expenditure for federal credit would be an indirect cost scoring; 2) if indirect costs, such as revenue losses resulting from tax expenditures, are scored, then for consistency indirect benefits, such as revenue gains resulting from greater economic activity and additional taxable income, should be scored as well; and 3) to the extent that direct federal loans or federally-guaranteed loans fund a portion of projects that otherwise would be funded with tax-exempt debt proceeds, federal credit assistance would reduce the overall volume of tax-exempt debt and actually produce revenue gains for the U.S. Treasury.

[3] According to data derived from the Bond Investors Association in 1997, there have been documented payment defaults on toll revenue bonds for only a half-dozen projects over the last 40 years. These defaults

involved $412 million of bonds, or just over one percent of the $39 billion of "new money" (non-refunding) bonds issued to finance toll roads, bridges, and tunnels since 1961. Of the bonds that went into default, $297 million eventually were paid in full, with interest.

[4] In the case of a standby line of credit, the subsidy rate represents the probability of any draws on the line not being recovered, rather than the probability of a draw, per se.

[5] See the analysis by Fitch Investors Services presented in Appendix A for the derivation of this result.

[6] Pay-as-you-go rules under the Budget Enforcement Act (BEA) require that all mandatory spending (not provided through annual appropriation acts) and tax receipts legislation enacted for a fiscal year be deficit-neutral in the aggregate. If Congress enacts mandatory spending or tax receipts legislation that is estimated to cause a net increase in the deficit, it must offset that increase by either increasing revenues or decreasing mandatory spending elsewhere in the budget in the same fiscal year.

[7] Under the BEA, maximum amounts of new budget authority and outlays for discretionary spending (enacted through annual appropriation acts) are established each fiscal year. If Congress enacts appropriations that exceed those caps, a sequestration (cancellation of budgetary resources) is triggered to eliminate the excess.

Last updated May 15, 1998

5. Addressing Federal Credit and Tax Policy Issues

Introduction

A credit program for surface transportation should be consistent not only with federal transportation policy objectives but also with federal credit and tax policy objectives. The Office of Management and Budget (OMB) is responsible for administering federal policy on credit matters, and the Department of the Treasury is responsible for administering federal policy on tax-related matters. This chapter examines key features of a potential surface transportation credit program in light of OMB and Treasury policy guidelines and describes how such a program could be structured to address those policy issues while offering meaningful assistance to project sponsors.

Summary of OMB Circular A-129

Federal policy for credit programs is outlined in OMB Circular No. A-129. The circular specifies that credit assistance should be provided "only when it is necessary and the best means to achieve clearly specified federal objectives."[1] When credit assistance is deemed necessary for meeting federal objectives, it should adhere to the policy guidelines set forth by OMB. While not legally binding, these guidelines are designed to protect the government's interests and minimize costs to the taxpayers.

The circular sets forth four central principles for the justification, design, management, and implementation of federal credit programs:

1. *Program Justification* . Credit programs should have clearly defined objectives that specify why private sources of capital are inadequate to meet investment needs. The objectives should specify whether the purpose of the program is to correct imperfections in the capital markets or to subsidize borrowers. The program should: explain why a credit subsidy is the most efficient way of providing assistance; estimate the benefits to be received; and describe any features of the program which encourage and supplement private lending activity with minimal federal intrusion. The program should provide an explicit estimate of the subsidy costs pursuant to the Federal Credit Reform Act of 1990 (FCRA), including administrative costs.

2. *Forms of Assistance* . Loan guarantees should be favored over direct loans because they are viewed as more likely to reflect commercial credit terms. However, direct loans may be justified if the programmatic objectives cannot be readily achieved through reliance on guarantees.

   Federal guarantees of tax-exempt obligations are specifically prohibited. Such guarantees are deemed economically inefficient because they confer greater costs to the government than interest savings to the borrower. The circular treats as "federally guaranteed" any tax-exempt obligations secured or collateralized by federal guarantees, as well as direct or guaranteed loans that are subordinate to tax-exempt obligations.

3. *Financial Standards* . As required by FCRA, agencies must control the risks and costs associated with their credit programs. Default risk should be estimated using recognized statistical models. Lenders and borrowers should have a substantial stake in the transaction of at least 20 percent of total exposure. Interest rates on direct loans should reflect the federal government's own cost of funds, as determined by comparable-term Treasury borrowing yields. Fees and charges on direct or guaranteed loans should be set sufficiently high to cover the subsidy and administrative costs of the program, unless the agency considers such practice inconsistent with its programmatic objectives. In such case, the agency should obtain budget authority in accordance with FCRA to cover that portion of the subsidy cost not offset by interest and fees. The credit instrument should contain contractual terms and conditions necessary to protect the federal interest. The maturity of the loan or guarantee should not exceed the estimated useful economic life of the asset being financed, and the federal government's claim on assets should not be subordinated to the claims of other lenders in the event of a default by the borrower. There should be specific ceilings on the maximum nominal amount of credit that may be supported by the

subsidy costs.

4. *Program Implementation.* Proposed legislation should be submitted for review by OMB. To the extent the proposed terms of the credit program do not adhere to the guidelines, agencies may request waivers or modifications from OMB. The agency should provide periodic evaluations of the effectiveness of the credit program to determine the extent to which it is achieving the intended objectives.

Analysis of Compliance with A-129

The federal credit program structure described in this report would comply in most respects with the key policy guidelines set forth by OMB. The program objectives as stated would constrain the federal role so as not to displace conventional funding sources. The credit program would be targeted specifically to fill market gaps not being filled by private sources of credit, and the substantial co-investment from non-federal sources would be required to ensure market discipline in project selection.

The maximum federal share as outlined in this report would be 33 percent of project costs, significantly lower than the 80 percent recommended maximum which is utilized by other federal credit programs. The scoring of the subsidy costs would be based on statistical models from independent third-party experts, such as rating agencies (as described more fully in Appendix A), and budget authority would be provided to cover the subsidy costs of credit instruments not offset by fees or charges.

All direct loans would be required to be made at rates not less than prevailing yields on comparable-term Treasury obligations. The credit agreements would be required to contain customary security features (rate covenants, additional bonds tests, etc.) designed to minimize the risk to the federal government, and the government's claim on assets would not be subordinated to that of other lenders in the event of liquidation of assets following a default.

Items Requiring Policy Waivers

There remain two items in OMB's guidelines, as well as one Treasury policy, which would require a waiver or modification if a surface transportation credit program were to serve as an effective tool in advancing infrastructure projects. These are discussed below:

Credit Policy: Agencies shall not subordinate direct loans or guaranteed loans to tax-exempt obligations.

Recommendation: *Transportation credit should be permitted to be subordinate in its claim on project revenues to other, privately-financed debt, which may be tax-exempt.*

Rationale:

1. A federal loan with a claim on annual project revenues junior to that of other lenders should not be viewed as a direct or indirect guarantee of the senior-lien obligations. As envisioned under a surface transportation credit program, in no event would the federal government ever be obligated to make any payments to the senior lenders. Rather, the federal government's junior position would facilitate the borrower's ability to obtain financing on its privately-funded debt by allowing those bondholders to have a first claim on annual project revenues. The same argument should apply on a junior-lien guaranteed loan. The federal guarantee clearly would extend to the lenders of the guaranteed loan, not to the lenders or investors for the non-guaranteed senior obligations.

2. As described in this report, the federal government would possess a parity or equal claim on project assets with other lenders in the event of default and liquidation, and thus would be in compliance with OMB guidelines.

3. Based on current and projected project activity, it appears that most transportation projects requiring assistance under a credit program would be eligible to issue tax-exempt debt under current tax law,

whether by state and local instrumentalities or by other nonprofit entities. (See the illustrative project list in Appendix E.) Barring such issuers from gaining access to the municipal market for the majority of their financing would offset the intended funding benefit of the federal credit assistance and defeat the fundamental program goal of stimulating capital investment.

4. Taxable interest levels place a greater burden on the long-term economic viability of capital-intensive infrastructure projects. Allowing project sponsors that are otherwise eligible to issue tax-exempt debt to do so in conjunction with a separate federal loan or guaranteed loan would improve the creditworthiness of the government's investment by reducing the project's senior debt service burden.

5. There is no prohibition against state or local governments receiving outright federal grants for a project, and financing the non-federal share with tax-exempt debt. In fact, this is the prevailing practice for financing surface transportation infrastructure. Such grants are not deemed a federal guarantee of the bonds. Therefore, from a federal budgetary perspective, it would be counterproductive to impose a policy that prohibits federal participation from taking the form of federal credit in favor of more costly outright federal grants that will never be recovered.

6. As a practical matter, there are many current examples where federal credit is subordinate to or exists side-by-side with tax-exempt debt (e.g., Transportation Corridor Agencies, Alameda Corridor Transportation Authority, Washington Metropolitan Area Transit Authority, and Farmer's Home Administration).

Credit Policy: Loan guarantees should be favored over direct loans.

Recommendation: *Provide a mix of credit tools that includes both loan guarantees and direct loans.*

Rationale:

1. Project sponsors would benefit most from a variety of credit instruments that provide the flexibility to match a particular type of credit assistance to each project's unique characteristics and financial needs. This would be consistent with other major federal credit programs, in areas such as housing, agriculture, and small business, which offer both direct loans and loan guarantees.

2. A surface transportation credit program could be designed to give preference to project applicants seeking loan guarantees over direct loans, in full compliance with OMB policy. Over time, private investors might gain greater familiarity with the payment features of junior loans based on federal credit experience, thus supplanting the need for direct loan assistance.

3. However, a direct loan option might be an important component of a credit program, especially in its early years. Even a guaranteed loan backed by the federal government would probably require a yield somewhat above comparable-term Treasury securities, due to its lesser liquidity and greater uncertainty as to the timing of repayments. This would cause project sponsors to favor direct loans over loan guarantees, all other things being equal.

Tax Clarification Required for Standby Line of Credit

Tax Policy: Any obligation whose principal or interest is directly or indirectly guaranteed, in whole or in part, by the United States, shall not be tax-exempt.

Recommendation: *Broaden the purposes for which a standby line of credit can be used, or alternatively revise the Internal Revenue Code to clarify that a standby line of credit provided by DOT under a surface transportation credit program does not constitute a federal guarantee.*

Rationale:

1. The statutory prohibition against federal guarantees of tax-exempt debt in Section 149(b) of the Internal

Revenue Code is extremely broad. An obligation's tax-exempt status is called into question if there is any implication that the bond holder can rely upon the federal government directly or indirectly, in whole or in part, for repayment of the bond's interest or principal. A standby line of credit which can be drawn upon to support debt service if project revenues prove insufficient during the ramp-up phase could be construed as an indirect guarantee under this broad language, precluding its use in connection with tax-exempt debt.

2. A line of credit differs from a guarantee in a number of important respects, including the degree to which an investor relies on the presence of the line in making an investment decision. Unlike a guarantee, a line of credit represents only fractional and temporary assistance. It may succeed in elevating the rating of a sub-investment-grade issue to BBB, but that issue clearly would not be viewed by investors as being federally backed or of AAA caliber.

3. Section 149 provides exceptions for certain areas deemed important for achieving national objectives, such as federal guarantees and insurance programs for housing, student loans, and certain power facilities. Currently, however, there is no exception for standby lines of credit for surface transportation facilities.

4. The tax-exempt status of transportation project debt could be preserved by providing that the purpose of the line not be limited solely to making debt service payments. Recent experience with standby lines of credit for two toll road projects in southern California has shown that broadening the lines permitted purpose can be sufficient to enable bond counsel to render an unqualified opinion that the tax-exempt status of the bonds would not be jeopardized should the line be drawn upon.

5. Another way to ensure that a standby line of credit does not undermine the status of tax-exempt debt would be to revise the Internal Revenue Code to clarify that a standby line of credit under a surface transportation credit program does not constitute a federal guarantee. (See Appendix B for a more complete discussion of this option.)

[1] *Circular No. A-129, Policies for Federal Credit Programs and Non-tax Receivables,* Executive Office of the President, Office of Management and Budget, January 1993.

Last updated May 15, 1998

6. Conclusions: Developing Solutions through Federal Credit

National Projects Require Special Assistance

Major transportation infrastructure facilities that address critical national needs typically face enormous financing challenges. In many cases, the scale and complexity of these projects exceed the financial resources of existing government programs. Because these facilities generate substantial economic benefits in terms of accessibility and mobility of goods and people, they often are capable of generating user charges and other project-related revenue streams. If project sponsors can draw upon these new revenue streams to back a substantial portion of capital costs with private capital, they can free-up traditional public resources for smaller, non-revenue-generating projects. To gain market access, however, these major projects frequently require supplemental or secondary sources of capital.

Federal Encouragement of Private Capital

A surface transportation credit program could facilitate the borrower's access to the private capital markets by overcoming market imperfections. Large, complex start-up projects may encounter market resistance due to investor concerns about investment horizon, liquidity, predictability, and risk. This is particularly true for subordinate and secondary sources of capital. The federal government is uniquely qualified to fill the role of a patient investor, willing to accept a long-term return in order to help advance projects providing substantial benefits to the nation's economy. There may be an appropriate federal role for a carefully defined credit program to fill these gaps until the capital markets develop greater capacity to absorb these risks. Addressing these gaps would reduce the transactional friction associated with large and complex project financing, which is reflected in unnecessarily large reserve requirements, coverage margins, capital costs, and transaction fees.

Budget-Effective Leveraging of Federal Funds

Traditional federal-aid grant programs, which are commonly based on federal contributions of up to 80 percent of total project costs, have an implicit leveraging ratio of 1.25 to 1. A surface transportation credit program could provide meaningful assistance to certain large infrastructure projects with federal participation of no more than 33 percent of project costs. And the budgetary cost of the credit assistance, based on rating agency risk assessment models and prevailing averages for existing credit programs in other sectors, might be less than ten percent of an equivalent amount of grant assistance.

Under the federal credit structure outlined in this study, annual capital investment of more than $3.5 billion could be generated by $1.2 billion of federal credit assistance at a budgetary cost of only $100 million. Those amounts represent a leveraging ratio of 35 to 1 in terms of total capital investment to budgetary resources consumed.

Uniform Structure for Credit Assistance

To date, federal credit activities in the surface transport sector have been characterized by ad hoc efforts. For example, Congress in recent years has passed several pieces of special legislation assisting three major projects in California. The success of these transactions has stimulated considerable interest and created demand for a programmatic structure to a broader range of projects. An important objective of federal assistance, therefore, could be to establish uniform, objective, and transparent criteria for states, local governments, and other sponsors to obtain federal credit, and to set forth an orderly process for evaluating, selecting, and funding projects.

Temporary Role in Credit Market

A surface transportation credit program should be designed to overcome current market gaps by familiarizing

investors with the risks and financial profiles associated with subordinate and supplemental capital for transportation projects. Federal direct and guaranteed loans would be offered at or near Treasury rates, which generally will be higher than the rates available for investment-grade tax-exempt obligations. Over time, as the financial performance of these projects allows them to obtain improved ratings, borrowers should be in a position to graduate to 100 percent private debt, by refinancing their federal loans in the capital markets. As private investors become more familiar with the repayment characteristics of junior-lien and standby debt, it may be possible for them to ultimately take on the role of providing such credit for surface transportation projects without a federal back-up. By demonstrating the financial feasibility of this class of transportation investment, a federal credit program could help develop a market which would no longer require federal participation. This outcome would be the ultimate test of the credit program's effectiveness.

Last updated May 15, 1998

Appendix A: A Risk Assessment Model for Federal Credit

[This analysis was prepared by David Litvack and Brady Tournillon of Fitch Investors Service, L.P.]

Introduction

As part of this study, Fitch Investors Service L.P. (Fitch) was asked to develop a model for evaluating the default risk for a federal credit program involving direct loans, loan guarantees, and standby lines of credit for surface transportation projects. This Appendix reviews the current approach for scoring transportation loans and proposes a new approach adapted from Fitch's model for evaluating the capital adequacy of private, for-profit bond insurance companies. Fitch also recommends specific scores or capital charges for projects that are rated differently.

Review of Current Methodology for Scoring Transportation Loans

The Alameda Corridor loan was scored using a yield premium approach to assess potential default cost. The loan was assumed to be made at an interest rate equal to the U.S. Treasury bond yield. The net present value of loan repayments on the project was then calculated, discounted at both the Treasury yield and the assumed market yield, based on the project's preliminary rating (105 basis points above the Treasury yield). The difference in net present values was deemed to represent the cost of the default risk. In our opinion, the yield spread approach is not a valid measure of the expected default risk. The yield spread takes into account other factors beside default risk, such as liquidity risk and call risk. Since liquidity risk and call risk are not relevant factors in the cost of the program to the federal government, the yield premium results in a cost estimate that is too high.

The fact that market yield spreads overestimate default risk is evidenced by the existence of a private, for-profit bond insurance industry that guarantees the principal and interest on municipal bonds, as well as asset-backed and mortgage-backed securities. Bond insurers guarantee municipal bonds that have mostly A and BBB underlying ratings; the insurance raises the bonds' public ratings to AAA. The premiums on these policies, which are usually paid by the issuer, amount to about half of the issuer's interest cost savings as a result of the higher credit rating.

The yield spread between the insured AAA and the uninsured bonds is sufficient to support premiums that cover the bond insurers' default risk plus an adequate profit margin. From January 1, 1992, through June 30, 1996, the bond insurers guaranteed a total of $544.4 billion in par. Premiums written over this period totaled $4.5 billion, or 0.8 percent of par insured. Losses from bond defaults over this period totaled $129.9 million, or 5.7 percent of premiums earned and 0.03 percent of average par outstanding (premiums for municipal bonds are typically written in the form of a one-time, up-front payment, but income is earned over the outstanding life of the bond). Bond insurers incur other costs besides losses, such as underwriting, surveillance, and administration; however, during the period from 1992 to mid-year 1996, bond insurers averaged 13.1 percent return on equity (income after expenses and taxes, divided by average shareholder's equity).

Bond insurers do not currently insure start-up toll roads because they tend to avoid stand-alone projects with construction risk and ramp-up risk. In our opinion, however, the shortcomings of the yield premium approach also apply to these risks as well. In other words, it should be possible for the federal government to provide credit for start-up toll road projects at a lower cost than the yield premium would imply.

The fact that the yield premium method overestimates the expected default cost means a different methodology is required. We propose a method derived from that used by the rating agencies to determine how much capital bond insurers need to allocate for their insurance policies. This will result in a more direct measure of the default risk on the projects.

Fitch's Bond Insurance Capital Adequacy Model

Fitch rates the claims-paying ability of the bond insurers. A large part of this analysis focuses on the insurers' capital adequacy. To measure capital adequacy, Fitch uses a stress test model that subjects a bond insurer's portfolio to an economic downturn that produces an extraordinary level of bond defaults. For an insurer to receive a AAA claims-paying ability rating, it must be able to pay all projected claims through the peak years of the stress period and be left with sufficient resources to write new business when more stable economic conditions resume.

Claims during the stress period are forecast using capital charges that Fitch developed based on bond defaults experienced during the Great Depression of the 1930's. Fitch has adjusted the capital charges to reflect regulatory changes and the relative probability and severity of defaults for the types of insured risks in today's market. For example, current banking laws enacted after the Great Depression reduce the potential severity of another depression. However, in the 1930's all municipal bonds were backed by a general obligation pledge; most municipals today are revenue bonds which have potentially greater risk. For this reason, Fitch has developed different benchmark capital charges for various types of insured bonds. For example, transportation bonds on existing facilities are more risky and, therefore, have higher benchmark capital charges than tax-backed and water and sewer bonds. They are, however, less risky and have lower benchmark capital charges than private higher education and hospital bonds. These benchmark capital charges are then adjusted further based on Fitch's evaluation of the actual credit quality and diversity of the bonds within each sector of the individual insurer's portfolio.

Capital Charges for Start-up Toll Roads

Bond insurers do not currently insure start-up toll roads. Fitch developed capital charges for this category specifically for this report. Our methodology for developing these charges is described in the following paragraphs.

Based on historical evidence, while some start-up toll road projects experience late payment delinquencies in years one through five, and less frequently in years six through ten, almost all do get built, begin operations, and eventually pay off their debt, including interest on interest. Subordinate lenders to projects of investment-grade quality should get paid as well, although perhaps over a somewhat longer time frame than the senior bondholders. It is estimated that only about one percent of the loans rated BBB will not be recovered within a reasonable time frame, which for discussion purposes is defined as 30 years.

A project is rated below investment grade (lower than BBB-) if there is a foreseeable risk that it will not be successfully completed on time or generate sufficient revenues to fully pay creditors. Indeed, default rates are much higher for unrated and below investment-grade municipal bonds than they are for investment-grade bonds. Because start-up toll roads have only recently received ratings, there is little empirical data on default rates specifically for this sector. Based on the default experience in other sectors of the municipal market, Fitch estimates that a portfolio of loans on start-up toll road projects rated BB will experience a four percent loss rate and start-up toll road projects rated B an eight percent loss rate (net of recoveries).

Highly rated financial institutions not only require enough capital for an expected level of losses, but for a multiple of such losses. Fitch has concluded that for start-up infrastructure projects, a multiple of four to five times expected losses is needed to provide our highest credit standard of AAA. Multiplying the expected losses by five produces the capital charges that should be used on loans to start-up toll road projects; these charges (expressed as a percentage of original principal) are shown in Table A.1.

Table A.1 Capital Charges for Start-up Toll Roads

Project Rating	Expected Loss (%)	Multiplier	Capital Charge AAA Scenario (%)
BBB	1.0	5	5.0
BBB-	1.6	5	8.0
BB+	2.6	5	13.0
BB	4.0	5	20.0
BB-	5.0	5	25.0
B+	6.4	5	32.0
B	8.0	5	40.0

Fitch recognizes that, in many cases, the federal loan will be junior to the senior debt, but believes the same capital charges are applicable for subordinate, flexible payment debt. The flexibility in the federal credit program reduces the demands on a project to make timely payments; however, full repayment is still required. An important element in Fitch's capital charge calculation is that most loan defaults that occur during the initial ten-year period will be recovered. Fitch assumes that interest on delinquent loan payments is equal to the U.S. Treasury rate, so timing defaults will not affect the net present value cost of the loan credit program. The same analysis should hold true whether the federal credit takes the form of a direct loan, a guaranteed loan, or a contingent standby line of credit.

It should also be noted that the capital charge methodology for private, for-profit bond insurers applies to a large and diversified portfolio of loans. If an insurer were to guarantee loans to only a handful of projects, and one of these projects defaulted, then the overall cost could conceivably be higher than the weighted average capital charge. Fitch would require considerably more capital to assign a rating of AAA to a private company insuring only a small, non-diversified portfolio of loans. Considering the fact that the federal government has no liquidity constraints and these transportation loans would be only one piece of an existing diversified portfolio of approximately $1 trillion of federal government loans and guarantees in a wide range of industry sectors, this capital charge method is considered appropriate.

Suggested Rating Category for the Federal Credit Program Portfolio

The capital charges Fitch recommends are consistent with AAA security. For an ongoing federal credit program that encompasses a portfolio of loans and guarantees, the likelihood of underestimating default cost is remote. In other words, the capital reserves should absorb all anticipated default risk, in essence representing a proxy for federal subsidy cost. This makes it a useful and conservative tool for budgeting purposes.

Last updated April 7, 1998

Appendix B: Proposed Tax Code Modification for Standby Lines of Credit

Introduction

Federal tax law generally prohibits the use of federal guarantees in connection with tax-exempt obligations on the grounds that the dual subsidy is inefficient and creates a security with superior investment attributes to direct Treasury obligations. One of the potential instruments in a federal credit program is a standby line of credit, which represents a contingent commitment by the federal government to make a junior-lien loan to a project sponsor to cover shortfalls, including debt service on tax-exempt project bonds.

Under the Internal Revenue Code, a standby line of credit may be construed as a federal guarantee, thus precluding its use in connection with tax-exempt obligations. As a significant portion of the projects seeking to utilize federal lines of credit may be eligible for tax-exempt financing based on the purpose and security of the bonds, this provision could hinder these effectiveness of the federal credit instruments.

This appendix suggests a revision to Section 149 of the Internal Revenue Code to provide that a standby line of credit would not be deemed a federal guarantee for tax purposes. The tax code would need to be amended directly in order to effectuate this change. It would not be sufficient to place a provision in the transportation authorization legislation dealing with the tax treatment of standby line.

Explicit Exemption under Section 149(b)

Section 149(b) of the Internal Revenue Code provides that tax-exempt status shall not apply to any bond for which principal or interest payments are guaranteed directly or indirectly (in whole or in part) by the United States. Congress has recognized that important public policy goals merit a waiver from the blanket prohibition contained in Section 149. It has provided specific carve-outs for more explicit federal guarantees, such as bonds that fund mortgage loans guaranteed by government-sponsored enterprises and federal agencies including the Federal Housing Administration, Veterans Administration, Federal National Mortgage Administration, Federal Home Loan Mortgage Corporation, and Government National Mortgage Association. It has also exempted bonds funding student loans guaranteed by the Student Loan Marketing Association, certain bond-funded small business and multi-family loans, and guarantees of electric power bonds by the Bonneville Power Authority.

The tax code change would address the federal guarantee issue by adding to the enumerated list of exceptions any lines of credit provided by DOT for surface transportation facilities pursuant to a new federal credit program.

Revenue Impact to the Federal Government

The Treasury Department and Joint Committee on Taxation each perform a fiscal impact analysis of all proposed tax code changes to determine their effect on the federal deficit. Tax-exempt bonds have a tax expenditure associated with them because the Treasury foregoes the receipt of income taxes on the interest received by bondholders. To the extent a tax code provision stimulates the issuance of additional tax-exempt debt compared to a baseline case, the Treasury calculates a revenue loss.

Allowing projects to use federal standby lines of credit should make it easier to finance large start-up transportation investments. Under current tax law, most of these facilities are eligible to be financed with tax-free governmental purpose bonds in any case, so there should not be a large induced volume of new tax-exempt debt issued.

However, by facilitating the financing of such projects, the measure could expedite the issuance date of tax-exempt bonds, which would result in earlier tax expenditures to the Treasury. On the other hand, a bond issue

benefiting from a federal line of credit may not need to capitalize interest for as long a period as otherwise would be the case, and may be able to reduce bond-funded reserves. Reduced capitalized interest and reserve requirements would result in smaller tax-exempt debt issues than is presently the case. To the extent that standby lines of credit succeeded in reducing tax-exempt financing requirements versus the baseline, the Treasury would benefit. The difference is assumed to be invested in like-rated taxable bonds. The Treasury would receive tax receipts from the interest paid on those bonds.

On balance, the effects of a somewhat accelerated issuance should be offset by somewhat smaller tax-exempt issuance requirements, and the proposal is likely to be largely revenue neutral to the Treasury.

Legislative Text

Purpose: To amend the Internal Revenue Code of 1986 to clarify that standby lines of credit provided by the Department of Transportation do not constitute federal guarantees.

SECTION __. FEDERAL GUARANTEES. Section 149(b)(3) of the Internal Revenue Code of 1986 (relating to certain exceptions to federally guaranteed bonds not being tax-exempt) is hereby amended by striking the word "or" at the end of subsection (b)(3)(ii), and by striking the period at the end of subsection (b)(3)(iii) and inserting

> " , or (iv) lines of credit provided by the Department of Transportation pursuant to (insert legislative reference to federal credit program)."

Last updated May 14, 1998

Appendix C: Risk Assessment Factors and Information Required to Obtain Credit

Assessment of Project Phase Risks

From the perspective of the capital markets, project risk takes on different characteristics during three main phases of activity: 1) project development and pre-construction; 2) construction; and 3) operation. These activity phases are briefly described below, and then information required to analyze credit risk is presented.

Development/Pre-Construction Risks

Inherent in the development and pre-construction period is a varied group of risks with probabilities that are quite difficult to estimate. These risks can significantly alter the timeline for a project. Typical pre-construction risks include acquiring the right-of-way or obtaining access to public property; securing state, local, and federal permits (environmental and construction); achieving requisite institutional coordination, and obtaining significant support from the various stakeholder groups or communities affected by the project. If stakeholder support is not forthcoming, then the project is unlikely to proceed, and costs invested up to that point are usually not recoverable.

For highway, transit, and high-speed rail projects, perhaps the biggest unknowns during development are environmental approvals (including legal and regulatory changes) and right-of-way acquisition. These two factors can delay the scheduled start and completion of the project and have the potential to cause significant cost overruns and impede the project's ability to procure financing. For other projects, such as ITS, institutional barriers are usually more problematic than technical barriers.

Construction Risks

The construction period brings different risks, including the question of whether the project will be completed on schedule and at the indicated cost. The risk of completion delays and other cost overruns influences the financial structure of the project because financing is much more accessible after completion of construction. The construction team's experience on similar projects and ability to meet financial obligations is critical to executing the contract and delivering a project as guaranteed.

The contract format is an important factor in dealing with and assigning risk, particularly since the projects tend to use a turnkey development approach, such as design-build or build-operate-transfer. If franchise or license agreements are involved, the degree of market exclusivity is important. When construction risk is shouldered by the contractor through a design-build or design-build-operate contract structure, risks borne by the debtor are minimized and thus support a better credit rating.

Various contractual arrangements among the parties involved have been developed to deal with the substantial risks posed by the construction phase. One usual way to mitigate construction risk is through a fixed-price fixed-completion date construction contract, including carefully drawn provisions related to change orders and completion delays. In addition, even with a fixed-price or not-to-exceed contract, the availability of contingency funds to cover cost overruns, project delays, or other risks, adds protection for the lenders and benefits the overall credit rating of the project. For toll roads, a general rule of thumb is that contingency funds should equal five to ten percent of the construction contract. Contingencies for the San Joaquin and the Foothill/ Eastern TCAs were sized to cover two years of capitalized interest.

Operational Risks

The ability of a project to service its debt depends on the uninterrupted, cost-effective operation of the facility or mechanism for delivering the product or service, and, therefore, the revenue stream. The operational phase includes risks related to traffic forecasts, revenue projections, and operating costs. Provisions for routine

maintenance and major maintenance or overhaul of the facilities are an important part of the operational phase. Credit analysts examine who is responsible for operations, terms of operation and maintenance contracts, and the experience of the operator with similar facilities.

Operations and maintenance of facilities involving advanced technologies is a particular concern. Historically, state and local agencies have had difficulty maintaining many traffic control systems because of a lack of adequately trained staff or lack of resources. Lenders and rating agencies need assurance that new systems will be properly maintained and operated whether by the public sector, private sector, or both.

Recent toll road projects that have been debt-financed have all gone through a ramp-up phase in the early years of operation. For some projects, traffic volumes and the resulting toll revenues have been 30 percent below projected levels during this period. The market responds to this risk profile by using a break-even analysis coupled with a review of the underlying assumptions that form the basis for the estimated cash flows. The break-even scenario (typically run assuming adverse economic conditions), in conjunction with an evaluation of the revenue forecast, will provide investors with the information needed to make a reasoned determination of the likelihood of meeting scheduled debt service.

Table C.1 summarizes the relevant risks of each project phase.

Table C.1: Risk Factors Associated with Project Phases

	Phase of Project Life Cycle		
Risk Category	Development	Construction	Operation
Economic Feasibility	X		X
Political	X	X	X
Construction		X	
Traffic and Revenue			X
Management			X

Information Requirements to Support an Investment-Grade Rating

Bond rating agencies become involved during a project's development phase or once the project is fully developed and ready to go to market. By getting involved early on, rating agencies can better evaluate the project's supporting data and agreements as they evolve. This involvement provides an opportunity to review the project's credit strengths and weaknesses and to inform project sponsors about what steps or changes would be beneficial to improve the credit quality of the project before formally soliciting the rating on the debt issue. With a preliminary review, rating agencies may be asked to provide a preliminary opinion on the rating that the project might receive either as currently structured or assuming the project incorporates the rating agency's advice on how to strengthen the credit.

A federal credit program would rely on existing marketplace assessment mechanisms to gauge the investment quality of debt-financed projects. Nationally recognized rating agencies typically require extensive information for their assessment of the credit quality of a project. This information falls into four categories:

1. Contractual documents for the construction and operation of the project (including all environmental and construction permits needed);

2. Financing documents (e.g., trust indenture, bond insurance, or letters of credit);

3. Regional and local economic trends and data pertinent to the project, such as employment levels, economic diversity, income levels, and assessment of the public support (general and local/state levels); and

4. Independent reports and analyses that support the project economics such as traffic and revenue

forecasts and an independent engineer's feasibility report.

The availability of all the information required enables the analysts to conduct a thorough review and assign an appropriate credit rating. To the extent that key information is not available, analysts may not be able to assign a rating or may assign a conditional rating subject to the project meeting certain thresholds. It is not unusual for the rating agencies to undertake an initial review of a project and assign a preliminary rating opinion letter at the request of the project sponsors. The preliminary rating is often requested to assist a project sponsor in identifying what further steps must be taken or what revisions in the various contractual elements are required to secure an investment-grade rating (i.e., BBB or higher). As envisioned, the federal credit program would use the preliminary opinion to assess project applications.

The rating analysts evaluate all the available information to determine: 1) the reasonableness of assumptions made in the forecasts of traffic and revenue; 2) the external political and economic factors that could affect the outcome of the project; 3) existing or planned competition for the roadway, product or service and its interrelationship with regional economic conditions; 4) how the bondholder's interests are protected under the covenants in the financing documents; 5) the downside risks; and 6) the project's break-even point for servicing debt.

Contractual Documents

The contractual documents outline the scope of the project and the terms of the agreement between the project sponsor and contractor (for construction and/or operations). The contracts outline all the legal obligations of the contractor for the technical work; terms of any franchise involved; performance guarantees and warranties; schedules, workmanship, and financial commitments; default and performance bond provisions, including any cure periods; remedies and liquidated damage payments; insurance coverage; and bonding capabilities and requirements. Included in this category are all the necessary permits to construct the project (government approvals, environmental permits, and construction and operating permits) or an anticipated schedule for obtaining them. Financial statements showing the ability of the contractor to meet its own financial commitments should be included. Supporting information is required to show the experience and ability of the contractor to build and operate the project as guaranteed.

Information outlining who will control the facility and who is responsible for operations and maintenance is also needed to ensure that revenues generated by the facility products or services will be dedicated to support the required debt service payments and will not be diverted to support other transportation initiatives.

Financing Documents

The financing documents include all the documents drafted by bond counsel governing the issuance of revenue bonds (tax exempt or taxable) to finance the project, including the trust indenture, letters of credit (if applicable), bond insurance, and resolutions of issuing authority. Depending on the financing structure, evidence of any third-party capital investments (such as equity) or contractor deferred-payment agreements would also be reviewed.

Regional and Local Economic Data

Understanding the regional and local economy is a key component underlying customer acceptance and demand for the proposed facility, product, or service. Population and housing trends, employment levels, economic diversity, and income levels of the local population are all indicators of the willingness and ability of users to pay. If, for example, the need for a project is based on future growth assumptions (that is, if traffic and revenue projections assume significant growth in local population, commercial activity, or other demand factors), then the revenue base is not considered as secure as would be the case for a facility providing relief to a highly congested corridor.

Equally important to the project is government (federal, state, and local) and public support for the project. Any available documentation that demonstrates strong support for the project, or at least indicates that there is no significant opposition, strengthens the market's perception of the project's success. Many projects do not

succeed (or are not as successful as projected) because of opposition from various public groups or local governments.

Independent Reports

Generally, an independent engineer is retained by the project sponsor or on behalf of the financing institutions to review the feasibility of the proposed project from both technical and financial perspectives. The independent engineer will review all the preliminary design and construction documents, permits, project capital costs, traffic and revenue forecasts, and projected cash flows and assumptions. In addition, the engineer will assess the technical and financial ability of the contractor and the entire project team to undertake the project to ensure completion.

All revenue-bond-financed projects require a traffic and revenue forecast to support their cash flow projections. The traffic and revenue forecast must be prepared by a reputable, experienced firm to be considered valid. The traffic and revenue projections are critical to the ability of the project to meet its debt service obligations. Significant deviations from the projected demand levels or revenues will directly affect the long-term viability of the project.

Checklist of Information Requirements for a Federal Credit Program

In structuring a federal credit program to assist large-scale infrastructure investments, it would be desirable to direct the majority of assistance to projects receiving at least a minimum investment-grade rating (Baa/BBB). The investment-grade rating demonstrates market acceptance, which is an important step in protecting the government's interest. To obtain a credit assessment from a bond rating agency, project sponsors would already have been required to submit extensive information. Project sponsors would submit similar information to DOT, to be followed by the rating agency's preliminary credit assessment, to be considered for federal credit assistance. The remainder of this section lists the information requirements for projects seeking federal credit assistance.

Required Development and Construction Information:

- Evidence of right-of-way acquisition (completed or schedule of acquisitions), power of eminent domain, or access to rights-of-way or other public property;
- Status of environmental permits and/or government approvals secured;
- Information on any outstanding litigation in process;
- Evidence of an experienced and successful contractor/project team (on similar projects);
- Construction contract details and status (preferably fixed-price, design-build-operate or design-build-transfer), including:
- Liquidated damage provisions (to cover the daily financial carrying cost) if the project is delayed beyond the scheduled completion date through the fault of the contractor;
- Performance and payment bonds equal to a substantial portion of the cost of the construction contract to ensure completion of the project should the contractor default (which would enable use of a replacement contractor);
- Performance and workmanship warranties for at least one year from the date of commercial operation of the facility;
- Remedies for performance failures;

- Contractor default provisions that outline what constitutes a default (both technical and financial), what is the cure period, and what are the remedies;
- Force majeure events and how triggered. Force majeure events include events that are beyond the control of the contractor, such as earthquakes, epidemics, blockades, wars, acts of sabotage, and archaeological site discoveries; and
- Insurance provisions, such as builder's risk, business interruption, worker's compensation, and general liability.
- Feasible financial plan (including debt structure and terms) and evidence of ability of contractor to secure financing (e.g., commitment letters from financial institutions), including:
- Amount of capitalized interest to cover unforeseen delays (particularly force majeure events); and
- Adequate level of reserves and contingency funds.
- Contractor's ability to meet its financial commitment (e.g., three years of audited financial statements for all parties involved, particularly the project guarantor);
- Independent engineer's report assessing the feasibility and financial viability of the project; and
- Evidence of local and state government and community groups support for the project (political will).

Required Operational Information:

- Solid traffic and revenue analysis from experienced forecasting consultant;
- Adequate operation and maintenance budget for the facility (experience of operator with similar facilities);
- Reserve fund for major maintenance or rehabilitation;
- Business interruption insurance and debt service reserve fund (usually one year of debt service payments) to cover debt service in the event of interruption in operation;
- Adequate insurance to cover costs to repair unexpected damage;
- Reliability of advanced technology and systems including, if relevant, electronic toll collection/revenue collection;
- Identified unmitigated risks and possible solutions;
- Sources, form, and terms of backup support (if any) to meet debt service requirements if revenue shortfalls occur (including cost, duration, and annual support available and repayment conditions);
- Identified party who controls facility and sale of products and service and directs any mid-course corrections;
- Identified successor in event of financial default; and

- Detailed cash flow projections and underlying assumptions (inflation, increases in user charges (tolls or fares) or prices of products and services, start-up costs, and debt service schedule) for the term of the financing (e.g., 20 to 30 years).

Required Financing Documents:

- Proposed sources and uses of funds;
- Role of federal credit support;
- Bond purchase agreements;
- Interest rate assumptions, terms, conditions for draw, and repayment schedules;
- Provisions covering investment of reserves;
- Rate covenants;
- Default provisions, cure periods, and remedies; and
- Bond counsel preliminary opinion regarding the legality and tax status of debt.

Required Support Information:

- Type of federal credit assistance proposed (e.g., direct loans, loan guarantees, standby line of credit, or development cost insurance);
- Terms of support, including amounts available, draw schedule and conditions, cost, duration, and repayment terms and conditions;
- Project eligibility for federal assistance, pursuant to credit program criteria; and
- Identification of any federal-aid funds (e.g., unobligated balances) expected to be used to underwrite federal credit support requested.

Last updated May 14, 1998

Appendix D: Case Studies of Transportation Projects Using Federal Credit

Introduction

This appendix presents case studies of the three instances in recent years where federal credit has been utilized on major surface transportation projects pursuant to special legislation: San Joaquin Hills Toll Road, Foothill/Eastern Toll Road, and the Alameda Corridor.

Transportation Corridor Agencies (TCA) Toll Roads in Orange County, California

The Transportation Corridor Agencies (TCA) are multi-jurisdictional authorities charged with construction of new toll road facilities in Orange County, California. TCA has funded the pre-construction costs of these facilities largely with development impact fees; little (or no) direct state and federal financial assistance has been required for this project phase. To finance construction of its corridor toll roads, TCA has sold two separate bond issues, each raising well in excess of $1 billion, for the San Joaquin Hills Corridor in 1993 and the Foothill/Eastern Transportation Corridor in 1995.

In each case, project financing was supported with federal credit enhancement provided in the form of a standby line of credit. This pioneering and novel credit enhancement mechanism provided important assistance in attracting private capital to the project bond issues. In the underlying legislative provisions, DOT was authorized to provide a credit line of up to $120 million to the San Joaquin Hills Corridor and another line of up to $120 million (subsequently increased to $145 million) to the Foothill/Eastern Transportation Corridor as partial security underpinning each bond issue. These federal lines of credit, available for a ten-year period upon completion of each facility, are intended to provide limited supplemental capital in the event that traffic shortfalls arise with an adverse impact on revenues (impairing debt service coverage) during the ramp-up phase.

San Joaquin Hills Corridor

Project Description

The San Joaquin Hills Corridor (SJC) toll road is the first new public toll facility being developed by TCA. The SJC is a 15-mile, six-lane, limited access highway in southwestern Orange County (see Figure D.1). The new toll road is designed to relieve congestion on the heavily trafficked I-405, I-5, and Pacific Coast Highway, as well as other major arterial roads in the county. The toll road's initial design includes six travel lanes (three in each direction) and associated facilities with a median to allow for the future construction of proposed exclusive high occupancy vehicle (HOV) lanes as well as possible transit options.

The project was constructed pursuant to a design-build contract with a guaranteed maximum price and guaranteed completion date. The six-lane highway will operate as a toll facility until the bonds are retired. The State of California assumed ownership of the SJC with the opening of the toll road to commercial traffic in November 1996 and its formal acceptance by the California Department of Transportation (Caltrans). Caltrans will be responsible for traffic operations, maintenance, and liability, pursuant to a cooperative agreement between TCA and Caltrans. The toll collection facilities and equipment have been provided by Lockheed Information Management Services Company, Inc. Lockheed is responsible for system design, installation, operations, and maintenance of the toll facilities under a purchase agreement and operations contract with TCA. TCA will continue to own or lease the toll collection facilities.

Project Financing

Total costs for the project are approximately $1.45 billion. Financing sources included a combination of senior- and junior-lien tax-exempt toll revenue bonds, vendor financing, development impact fees, and federal and state funding as outlined in Table D.1.

Nearly $1.1 billion of senior-lien toll revenue bonds were issued in 1993, consisting of $766 million in Current Interest Bonds, $150 million in Convertible Capital Appreciation Bonds, and $163 million in Capital Appreciation Bonds. The senior bonds were rated BBB by Fitch. An additional $91 million of non-rated bonds were issued on a junior-lien basis and sold to institutional investors.

Figure D.1 Foothill/Eastern and San Joaquin Hills Transportation Corridors

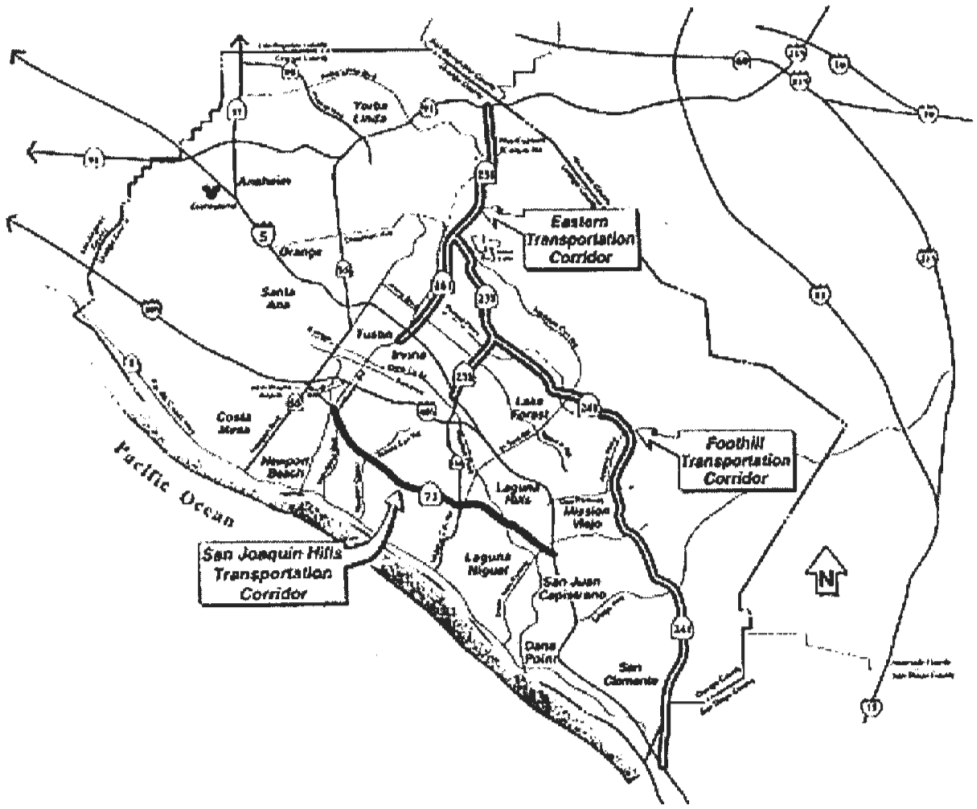


Table D.1 San Joaquin Hills Corridor Sources of Funds (In Millions)

Senior-lien Revenue Bonds	$1,079
Junior-lien Revenue Bonds	91
Project Revenue Certificates	38
Advance-funded Development Impact Fees	31
California Transportation Commission Grant	40
State and Local Transportation Partnership Program	71
Interest Earnings	106
Total	**$1,456**

Almost $38 million of third-lien vendor financing notes were purchased by the project's developers as part of their compensation under the design-build contract in lieu of cash. This served to align the interests of the developers with those of the senior and junior bond holders in seeking a commercially successful project.

State and local funding support for the project was provided through the 1992 State Transportation Improvement Program (STIP) and the California State and Local Transportation Partnership Program (SLTPP). Approximately $40 million was allocated under the STIP for the purpose of funding a portion of the construction costs of connecting the SJC to I-5. The SLTPP is expected to contribute approximately $71 million.

On September 25, 1997, TCA sold $1.45 billion of Toll Road Refunding Revenue Bonds, which will refund all but $220 million of the outstanding 1993 Toll Road Revenue Bonds. The 1997 issue consists of $605 million in Current Interest Bonds, $404 million in Convertible Capital Appreciation Bonds, and $439 million in Capital Appreciation Bonds. Of the bonds issued, 51 percent are insured by MBIA and carry ratings of AAA, Aaa, and AAA from Fitch, Moody's, and Standard & Poor's, respectively. The uninsured bonds were issued with ratings of BBB, Baa3, and BBB- from Fitch, Moody's, and Standard & Poor's, respectively. The refinancing lowered the debt interest rate by 1.8 percent and will generate $270 million in cash flow savings between 2000 and 2012.

Federal Line of Credit

The SJC was able to secure federal support for the project in the form of a standby line of credit. In the 1987 Surface Transportation Act, Congress designated this toll road as one of a limited number of projects eligible for up to 35 percent federal funding. In fiscal year 1993, acting on that designation, Congress appropriated $9.6 million to fund (pay the subsidy costs of a $120 million federal line of credit available to TCA to help cover debt service, if necessary, during the first five years of the toll road's operation. This represents a budgetary cost of only eight percent of the face amount of credit assistance. Because of uncertainty as to whether the line would be deemed a "federal guarantee," TCA informed bond holders it would not utilize the line unless it obtained an unqualified legal opinion from bond counsel. A provision in the fiscal year 1996 DOT appropriations act subsequently extended the availability of the credit line to ten years and broadened the purposes for which the line could be used. The federal line of credit is available in the event toll operations revenues and standard reserves (including the Use and Occupancy Fund) are not sufficient to cover debt service, costs of extraordinary repair and replacement, costs of complying with unexpected federal or state environmental restrictions, operating and maintenance expenses, and capital expenditures. The broadened purposes enabled bond counsel to render an approving opinion.

Only ten percent of the line ($12 million) is available in any one year. Any draws for capital expenditures, debt service, or other expenses (excluding operations and maintenance) must be repaid within 30 years at the rate on the 30-year Treasury bond at the time the draw is made. Draws for operations and maintenance expenses must be repaid within three years at the corresponding three-year Treasury rate at the time the draw is made.

At a budgetary cost of only $9.6 million, therefore, the federal government is providing a $120 million line of credit that is helping advance a $1.4 billion transportation facility. This represents a leveraging ratio of 150 to 1 in terms of capital investment induced to budgetary resources consumed.

Foothill/Eastern Transportation Corridor

Project Description

The Foothill/Eastern Transportation Corridor (FETC) is the second new public toll facility being constructed by TCA. FETC is comprised of two principal segments, the Eastern Transportation Corridor and the Foothill Transportation Corridor. The Eastern Transportation Corridor is a 24-mile limited access toll road consisting of three segments connecting with the northern segment of the Foothill Transportation Corridor (see Figure D.1).

Upon its completion, the Foothill Transportation Corridor will be a 27.7-mile toll road, consisting of northern and southern segments connecting the Eastern Transportation Corridor with I-5 near the San Diego County line.

The Foothill Transportation Corridor's 12.1-mile northern segment is made up of two completed and operating portions (of 7.5-miles) plus two extensions (of 4.6-miles) which are currently under construction and known as "Foothill North." A separate 15.6-mile southern segment known as "Foothill South" will be financed by a future bond issue and is currently expected to begin construction in 2000 and be completed by 2003.

The 36.1-mile Foothill North/Eastern Transportation Corridor system will provide direct access between Riverside County's residential areas and Orange County's southeastern suburbs. The toll system is designed for two to three lanes initially in each direction, depending upon the segment, with future expansion capacity in the median available for general purposes, HOV lanes, or transit use.

As with the SJC, the FETC is being developed by a design-build consortium pursuant to a guaranteed maximum price and guaranteed completion date. Upon substantial completion of the project and acceptance by Caltrans, the toll road will become part of the existing state highway system. The road will, however, operate as a toll facility until the bonds are retired. As with the SJC, Caltrans will be responsible for traffic operations, maintenance, and liability, pursuant to a Cooperative Agreement between TCA and Caltrans. Pursuant to the terms of an agreement between Lockheed Management Information Services Company, Inc. and TCA, Lockheed will design, construct, operate, and maintain the integrated toll collection and management system. Upon completion of both SJC and FETC, the operations of the two corridors will be integrated into one and managed under the terms of a Multiple Use Agreement. TCA will retain ownership of the toll collection system and equipment for the FETC.

Project Financing

Total project costs of $1.8 billion were financed in 1995 through a variety of sources, including a combination of fixed and variable rate revenue bonds, state and federal funds, vendor financing, and a contribution from TCA. The sources of funds are outlined in Table D.2.

A total of $1.26 billion of tax-exempt fixed rate toll revenue bonds were issued in 1995, consisting of $907 million in Current Interest Bonds, $152 million in Convertible Capital Appreciation Bonds, and $205 million in Capital Appreciation Bonds. The fixed rate bonds were rated BBB, Baa3, and BBB- by Fitch, Moody's, and Standard & Poor's, respectively. The variable rate bonds were secured by development impact fees and further backed by direct pay letters of credit provided by a consortium of banks.

Table D.2 Foothill/Eastern Transportation Corridor Sources of Funds (In Millions)

Fixed Rate Bond Proceeds	$1,263
Variable Rate Bond Proceeds	246
State & Local Transportation Partnership Program	35
Project Revenue Certificates	24
1993 Bond Funds	36
TCA Contribution	6
Interest Earnings	198
Total	**$1,808**

The California State and Local Transportation Partnership Program provides state matching funds for certain locally funded and constructed highway and mass transit projects. Funding for the SLTPP is provided from the State Highway Account and is made available on a pro rata basis among all the projects which satisfy specific programmatic requirements. Approximately $35 million was allocated under the SLTPP for the purpose of funding a portion of the construction costs.

The Project Revenue Certificates are bonds issued by TCA to the contractor for a portion of the design-build contract price (up to $16 million) and for potential design-build contract price increases ($8 million) as deferred compensation. These certificates issued for the design-build contract will be repaid from the project contingency fund, to the extent funds are available, or from net toll revenues subordinate to any payments made with respect to the revenue bonds. Certain change order provisions in the design-build contract may increase the amount of certificates issued to the contractor.

Federal Line of Credit

As in the case of the SJC, the FETC was able to secure federal support for the project in the form of a standby line of credit . In the 1987 Surface Transportation Act, Congress also designated this toll road as one of a limited number of projects eligible for federal funding. In the fiscal year 1995 DOT appropriations act, Congress appropriated $8 million to fund (pay the subsidy costs of) a $120 million federal line of credit available to TCA for the FETC. A provision in the fiscal year 1997 DOT appropriations act subsequently allowed DOT to increase the FETC line to $145 million. This represents a budgetary cost of only 5.5 percent of the face value of credit assistance.

Similar to the amended SJC line, the FETC line of credit can be used to help pay debt service, the costs of extraordinary repair and replacement, costs of complying with unexpected federal or state environmental restrictions, operating and maintenance expenses, and capital expenditures in the event that toll operations revenues, capitalized interest, and reserve funds are not sufficient to cover such costs during the first ten years of the toll road's operation.

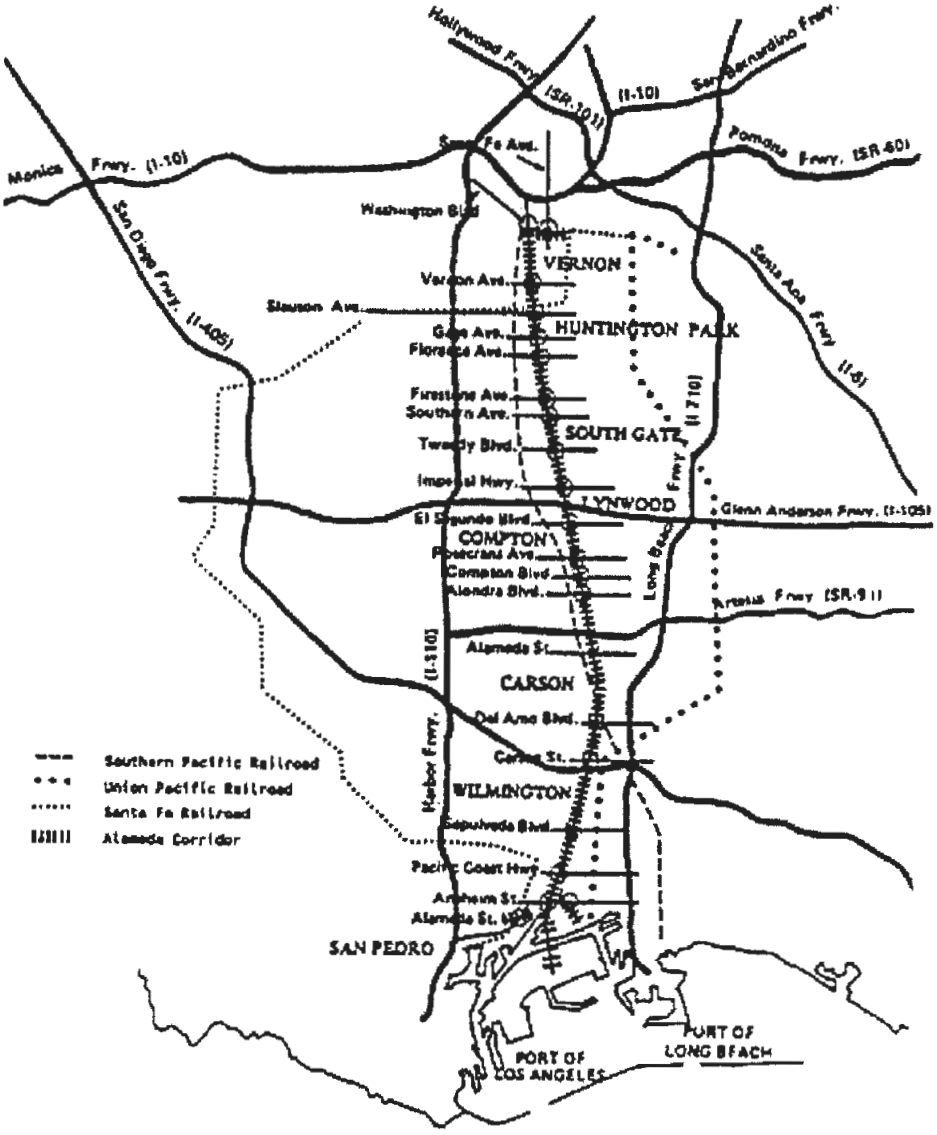
Only ten percent of the line is available in any one year. Any draws for capital expenditures, debt service, or other expenses (excluding operations and maintenance) must be repaid within 30 years at the rate on the 30-year Treasury bond plus 53.5 basis points at the time the draw is made. Draws for operations and maintenance expenses must be repaid within three years at the rate on the three-year Treasury bond plus 53.5 basis points at the time the draw is made.

In this case, at a budgetary cost of only $8 million, the federal government is providing a $145 million line of credit that is helping advance the $1.8 billion FETC. This represents an even larger leveraging ratio of 225 to 1 in terms of capital investment induced to budgetary resources consumed.

Alameda Corridor Project

In January 1997, DOT and the Alameda Corridor Transportation Authority (ACTA) entered into a loan agreement that will provide $400 million in project financing for the Alameda Corridor Project. The project is comprised of rail and road improvements that, once completed, will consolidate port-related freight traffic onto a 20-mile high speed, high capacity, and fully grade-separated transportation corridor linking the San Pedro Bay Ports with key transcontinental rail yards near downtown Los Angeles (see Figure D.2).

Figure D.2 Alameda Transportation Corridor



The San Pedro Bay port complex consists of the adjacent Ports of Los Angeles and Long Beach. Together, they represent the nation's largest port facility, handling about 25 percent of the nation's international waterborne trade valued at $120 billion per year. The ports are a key gateway to the burgeoning Pacific Rim, handling cargo for numerous industries that is shipped to virtually every region of the country. In addition to relieving local congestion and creating 10,000 construction-related jobs, the project will expedite the nationwide delivery of freight and generate far-reaching economic benefits.

Project Background and Description

As the San Pedro Bay seaports have grown as centers of international commerce, the current transportation infrastructure has become increasingly unable to accommodate approximately 108 million tons of freight cargo passing through the ports on an annual basis. That is why, after 20 years of discussion and analysis, city leaders and port officials, with the help of the federal government, are beginning construction on rail and road facilities that will vastly improve the connection between the two ports and the region's rail hub near downtown Los Angeles. Once completed, the $2 billion Alameda Corridor will include the following features:

- A 30-foot-deep trench running alongside Alameda Street accommodating two parallel rail lines;
- An additional rail line at ground level accommodating local traffic;
- A bridge spanning the Los Angeles River;
- Improvements to street access across the corridor;
- The expansion of portions of Alameda Street from four to six lanes; and
- Grade-separations to Amtrak and MetroLink passenger lines.

Financial Obstacles to Project Development

The high cost of the Alameda Corridor ($2.04 billion) and the project's unusual revenue sources (container fees and port charges) presented a substantial barrier to ACTA's ability to advance the project in a timely manner. Though the Alameda Corridor was designated as a High Priority Corridor on the National Highway System, the size and scope of the project made it difficult for ACTA to attract sufficient capital from traditional sources. Thus, the need to find a supplementary means of financing the project became a priority. Initially, ACTA sought federal assistance in the form of a special $700 million grant. Due to federal budgetary constraints, however, the grant was not deemed to be a fiscally or politically viable option.

Direct Federal Loan

The fiscal year 1997 Omnibus Consolidated Appropriations Act (Public Law 104-208) provided $58.7 million for DOT to pay the capital charges (subsidy costs) associated with making a direct loan of up to $400 million to ACTA for the Alameda Corridor Project. This represents a budgetary cost of only 14.7 percent subsidy cost of the face value of credit assistance. The legislation also provided that the loan be repaid within 30 years from the date of project completion and that the interest rate on the loan not exceed the 30-year Treasury rate.

The federal loan represents permanent financing for approximately 20 percent of project costs. The first $140 million of loan proceeds were drawn down in September 1997. The loan is secured by a rate covenant, but is structured to include flexible repayment provisions that allow scheduled principal and interest payments to be deferred (with interest), in the event of insufficient project revenues. The federal loan's claim on revenues is junior to that of ACTA's senior bonds, which are expected to be issued in 1998. The combination of the flexible payment structure and the subordinate-lien will enhance the coverage ratio on ACTA's senior bonds. This will facilitate ACTA's ability to obtain a favorable rating on its senior debt, and substantially reduce its interest expenses and transaction costs.

At a budgetary cost of $59 million, the federal government is providing a $400 million loan that will help advance a $2 billion project with significant local, regional, and national benefits. With regard to the federal credit assistance, this represents a leveraging ratio of 35 to 1 in terms of capital investment induced to budgetary resources consumed.

As shown in Table D.3, the federal loan is but one piece of a complex financial package. The Los Angeles and Long Beach port commissions have already paid $400 million in right-of-way costs for the property located along the corridor route. Additionally, ACTA plans to issue approximately $735 million of senior revenue bonds in 1998, a portion of which will be tax-exempt and a portion of which will be taxable. The Los Angeles County Metropolitan Transportation Authority is supplying another $347 million from its allocation of the state's regular federal-aid funds.

Table D.3 Alameda Corridor Sources of Funds (In Millions)

Federal Loan	$400

ISTEA Demonstration Funds	45
State of California	68
Los Angeles County MTA	347
Port of Los Angeles	200
Port of Long Beach	200
ACTA Revenue Bonds	735
Interest and Other Income	42
Total	**$2,037**

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Appendix E: Illustrative Projects for Federal Credit

Introduction

This appendix provides a list of surface transportation projects whose scale, financial structure, and economic importance are indicative of the types of projects a federal credit program would be designed to serve. *No credit analysis of these projects has been performed, nor has any specific research been undertaken to determine the forms of federal credit that would be most appropriate for individual projects. This list is not intended to be exhaustive.*

Project names, descriptions, locations, and total cost estimates were obtained from state agencies, industry sources, and transportation publications. All states were contacted and given an opportunity to submit projects for inclusion in this report. Industry sources included financial management and engineering firms in various locations throughout the nation. The search process was designed to be inclusive, thus project information is not final or definitive.

States were asked to provide information on projects that would:

- be eligible for federal assistance under surface transportation programs (Title 23 or Chapter 53 of Title 49 of the U.S.C.);
- cost at least $100 million ($20 million for ITS projects) or 50 percent of the state's most recent apportionment of federal-aid highway funds, whichever is less; and
- be supported in whole or in part by user charges or other non-federal dedicated revenue sources.

These 31 indicative projects represent a total capital investment of nearly $50 billion. This list is for illustrative purposes only. No project sponsors have formally requested credit assistance.

Table E.1 Illustrative Projects for Federal Credit (dollars in millions)

PROJECT	DESCRIPTION	LOCATION	COST
Dalton Highway	The Dalton Highway is a 414-mile highway on the National Highway System running between the nation's largest oil field at Prudhoe Bay and Fairbanks, Alaska. The current highway is the only unpaved highway on the National Highway System. The project would consist of paving the existing 414-mile highway.	Alaska	$165
Hoover Bridge	Construction of a bridge crossing over the Colorado River between the states of Nevada and Arizona, near the Hoover Dam. The project would remove a structural bottleneck on US 93 at the Hoover Dam. Currently, US 93 is the only two-lane portion of the CANAMEX Corridor, a heavily used trade route between Canada and Mexico.	Arizona-Nevada	120
South Mountain Toll Road	Four lane toll road on one of three alignments 23 to 26 miles in length connecting I-10 south of Chandler Boulevard to I-10 near 55th Avenue in Phoenix. The proposed toll road would reduce local traffic congestion, improve air quality, and support economic development in Phoenix.	Phoenix, Arizona	380

Shreveport to Kansas City High Priority Corridor	Construction of an Interstate-designed corridor paralleling US 71. This project is part of a multi-state effort to improve transportation between Shreveport, Louisiana and Kansas City, Missouri. The Shreveport to Kansas City Corridor has been designated a High Priority Corridor by Congress, and would connect major employment centers in the region, 13 major commercial areas, and 13 Department of Defense installations. The project would greatly improve highway capacity and safety.	Arkansas, Louisiana, Missouri	2,380
California High Speed Rail	A 412-mile line with 14 stations between Los Angeles and San Francisco using either high speed rail or magnetic levitation. High speed rail would reduce vehicular congestion between Los Angeles and San Francisco, reduce air traffic at both LAX and SFO, and develop the Central Valley located between Los Angeles and San Francisco.	Los Angeles to San Francisco, California	16,800
Foothill-South Transportation Corridor	Implementation of planned Foothill/South extension of TCA's network of congestion-relieving toll roads in Orange County, California. The 15.1-mile southern segment will relieve congestion, improve safety, and speed the movement of people and goods traveling to and through the region.	Orange County, California	1,500
Port of Oakland Intermodal Terminal	Design and construction of a new terminal, including a deep water port and massive rail yard, providing intermodal connections. The new facility will absorb the nearby 541-acre Naval Supply Center and create a 340-acre terminal for trains and trucks near the replacement section of I-880 that collapsed in the Loma Prieta earthquake.	Oakland, California	750
SR 125 Toll Road	Construction of a planned 11-mile new highway alignment from Route 905 near the Inernational Border to Route 54 near the Sweetwater Reservoir. The 8-lane highway will complete a missing gap in the San Diego highway, while alleviating congestion on I-5, I-805, and the local street system, and increasing north/south capacity for travel between the U.S. and Mexico via the International Port of Entry at Otay Mesa. The project will be constructed and funded through a public/private agreement with SANDAG, Caltrans and California Transportation Ventures (CTV), a private consortium. A portion of the facility will be constructed as a tollroad and funded through private financing by CTV. The remaining section will be funded by SANDAG with public funds.	San Diego, California	400
E-470 Public Highway Phase IV	Phase IV of E-470 is the final link in a 30-mile circumferential toll betray under construction around the eastern half of metropolitan Denver, connecting the new airport to I-25, a key north-south Interstate.	Denver, Colorado	230
Quinnipiac River Bridge	Rebuild the bridge carrying I-95 over the Quinnipiac River. The existing bridge is structurally and functionally deficient. The new bridge will reduce congestion and improve safety at the functionally obsolete I-91/I-95/SR 34 junction.	New Haven, Connecticut	375
Florida Overland	The construction of a 320-mile, high speed rail system	Miami-	5,300

Express	linking Miami on Florida's East Coast to Tampa on the Gulf of Mexico, with stations at West Browards, West Palm Beach, Orlando Airport, Orlando Attractions and Lakeland. The electrified trains will operate at speeds of up to 200 mph. The state of Florida will invest at least $70 million in public funds over the next 25 years, in return for the right of ownership of the land and tracks. The rolling stock will be purchased and owned by private investors, through lease arrangements. Private equity from FOX, a private consortium, is estimated at $350 million.	Orlando-Tampa, Florida	
Miami Intermodal Center	Coordinated intermodal development and improvements to Miami's airport, parking, highway, transit, commuter rail, and high speed rail facilities via private concessions. Miami is a major gateway to Latin America.	Miami, Florida	1,700
Atlanta Multi-Modal Passenger Terminal	Construction of a multi-modal terminal for intercity rail and AMTRAK to provide intermodal connections between MARTA, AMTRAK, interstate bus carriers, commuter rail, and landside commercial aviation. The terminal will consist of a plaza/street level with pedestrian concourse, 18,000 square feet of offices for transportation companies and service providers, a bus terminal level, and a track level with platforms for AMTRAK and commuter rail. Project also includes track improvements.	Atlanta, Georgia	183
High Priority Corridor 18 (I-69 Extension)	Extension of I-69 from Indianapolis, Indiana south to Brownsville, Texas at the Mexican border. Congress has designated Corridor 18 a High Priority Corridor. Corridor 18 is also a NAFTA Corridor. The 1,430-mile project will facilitate international trade between the United States, Canada, and Mexico.	Indiana, Kentucky, Tennessee, Mississippi, Arkansas, Louisiana, and Texas	7,250
Louisville Bridges	The construction of two bridges spanning the Ohio River in Louisville, Kentucky. The East End Bridge would connect I-265 in Jefferson County, Kentucky to I-265 in Clark County, Indiana. The second bridge would span the Ohio River near downtown Louisville. Construction of the downtown bridge would include a full rebuild of the I-65/I-64/I-71 interchange. The project would also improve cross-river transit service, provide new interstate cross-river access, and improve traffic flow at the most congested interchange in the region, subsequently providing significant congestion and safety improvements.	Louisville, Kentucky	507
I-75 at Ambassador Bridge	The I-75 at Ambassador Bridge project is a gateway project involving an international trade corridor and border crossing. The rehabilitation of the existing facilities will address long-term congestion and improve access between the Ambassador Bridge, I-75, and I-96.	Detroit, Michigan	107
US 82 Mississippi River Bridge	Construct a new four-lane bridge across the Mississippi River at Greenville. The new facility would improve the capacity of the existing crossing from two- to four-lanes, thus keeping pace with future capacity expansions on US 82. The project would also remove a barrier to barges experiencing high accident rates at the current facility.	Greenville, Mississippi	166
Meadowlands Rail	A public-private partnership to build and operate a rail	East	374

Transfer Station	transfer station at the Meadowlands Sports Complex, linking four New Jersey commuter lines to AMTRAK's Northeast Corridor. This project is the final link to the New Jersey Urban Core project and will complete the project's integration of all commuter rail lines in New Jersey.	Rutherford, New Jersey	
Farley/Penn Station Project	Relocation and improvement of the AMTRAK rail passenger terminal from Penn Station to a renovated New York City post office building. Penn Station is the nation's busiest rail passenger facility in the United States.	New York, New York	315
Midtown-Kennedy Airport Rail Link	Long-awaited rail/subway extension to JFK Airport from midtown Manhattan, using design-build-operate-maintain concession approach.	New York, New York	800
Maumee River Crossing	Replacement of the existing bridge spanning the Maumee River in Toledo, Ohio. The Maumee River Crossing carries I-280 traffic into downtown Toledo. The bridge provides direct access to the Port of Toledo. The current bridge is a bascule lift and represents a structural bottleneck as it is raised 800 to 1,000 times a year. The existing bridge is also accommodating more-than-capacity traffic volumes, including high volumes of heavy vehicles traveling into and out of the Port of Toledo.	Toledo, Ohio	220
South-North Light Rail Transit Project	The South-North Light Rail Transit (LRT) project is a proposed 21-mile light rail transit system starting in the Clackamas Regional Center south of Portland and ending near the Veteran Medical Center in Clark County, Washington to the north. The project is an expansion of the current Metropolitan Area Express (MAX) LRT System. The proposed alignment passes through the Portland Central Business District where it would connect to the existing MAX East-West Line. The project is designed to reduce congestion, support development, enhance the vitality of the downtown area, and manage growth in a region experiencing a sharp increase in population.	Portland, Oregon	1,300
Freight Rail Improvement/Access Road Project	Modernization and expansion of existing rail lines and creation of a third freight-dedicated line within a 22-mile section of the Northeast Corridor. The project also includes a proposed 4.5-mile access highway to the Quonset Point-Davisville Industrial Intermodal Center.	Rhode Island	247
Grace Bridge Project	Replacement of the existing Grace and Pearlman Bridges spanning the Cooper River and connecting the East Cooper area of Charleston County with the peninsula area of the City of Charleston. Located on US Route 17, the facility will serve as a link between Charleston and coastal South Carolina for military movements and interstate commerce. The new structure will provide access to US 52 and I-26, improve safety, and reduce regional congestion. The existing bridges are on the National Highway System and have been recognized by Congress as part of a High Priority Corridor.	Charleston, South Carolina	400
Camino Columbia Toll	Construction of a toll road linking the Solidarity Columbia	Laredo, Texas	100

Road	International Bridge with I-35. Located near the Mexican border, the project would facilitate trade between United States and Mexico.		
ITS Deployment: Weber, Davis, Salt Lake, Summit, and Utah Counties	A Freeway and Arterial Management System that would include CCTV cameras for live full-motion color video, vehicle detection and data recorders for real-time data information, and Central and Satellite Control Centers for traffic management. This project would reduce congestion; improve air quality; and allow media, spectators, and participants to travel more easily to and from Olympic events.	Utah	220
I-15 Reconstruction	Reconstruction of more than 125 bridges, 18 miles of Interstate, seven urban interchanges, and three major junctions with other Interstates including I-80 and I-215. The project will also involve the modification of three interchanges and construction of a new general purpose and HOV lane in each direction. The reconstruction will affect intra- and interstate travel to all cities and counties of the Wasach Front, including Salt Lake City. The project will also be primarily responsible for carrying Olympic spectators and athletes between the various Olympic venues in Salt Lake City as well as those north and south of the city.	Salt Lake City, Utah	1,600
Hampton Roads Bridge-Tunnel	A new toll bridge-tunnel connecting the peninsula cities of Newport News and Hampton with Portsmouth, Norfolk, and Virginia Beach, a vital national defense center and growing corridor in southeastern Virginia. The project will address growing congestion along the existing I-64 Hampton Roads bridge-tunnel.	Virginia	2,000
Woodrow Wilson Bridge	Replacement of the deteriorating I-95/495 drawbridge across the Potomac River with an expanded-capacity facility consisting of twin six-lane drawbridges spanning 70 feet above the Potomac. The current facility, which is located on the Capital Beltway surrounding Washington D.C., is a structural bottleneck and a major factor contributing to regional congestion.	Virginia-Maryland	1,750
North Duwamish Intermodal Facility	This intermodal project improves accessibility to a number of major regional and national/international transportation facilities including King Street Station (existing AMTRAK service and the site of a proposed multi-modal center), the Washington State Ferry Terminal, the Victoria Ferry, various rail yards, the Port of Seattle, and the mainline tracks of both the Burlington Northern/Santa Fe and Union Pacific Railroads.	Seattle, Washington	1,000
Tacoma Narrows Bridge	Implementation of the approved public-private initiative to make staged improvements to the congested, 50-year-old Tacoma Narrows Bridge. Ultimately, the project will involve reconstructing the facility into a double-deck toll bridge.	Seattle-Tacoma, Washington	800

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Appendix F: Glossary

Basis Point – A shorthand financial reference to one-hundredth of one percent (.01 percent) used in connection with yield and interest rates.

Bond Counsel – A lawyer or law firm, with expertise in bond law, retained by the issuer to render an opinion upon the closing of a municipal bond issue regarding the legality of issuance and other matters including the description of security pledged and an opinion as to the tax-exempt status of the bond.

Bond Insurance – A financial guarantee provided by a major insurance company (usually AAA rated) as to the timely repayment of interest and principal of a bond issue.

Budget Authority – Authority provided by law to enter into financial obligations that will result in immediate or future outlays of federal government funds. Budget authority includes the credit subsidy costs for direct loan and loan guarantee programs. Basic forms of budget authority include appropriations, borrowing authority, contract authority, and authority to obligate and expend offsetting receipts and collections.

Budget Scoring – Estimating the budgetary effects of pending and enacted legislation and comparing them to limits set in the budget resolution or legislation. With regard to federal credit assistance, budget authority and outlays are scored on a present-value basis, according to estimated default risks and interest subsidies, rather than a cash-flow basis.

Call Risk – Risk to the investor associated with prepayments by the issuer of the principal amount of the bonds prior to the stated maturity date, in accordance with the bonds' redemption provisions.

Capital Appreciation Bonds – Long-term bonds which pay no current interest, but accrete or compound in value from the date of issuance to the date of maturity. CABs differ from zero coupon bonds in that they are issued at an initial amount and compound in value, in contrast to zeroes, which are issued at a deep-discount and compound to par.

Capitalized Interest – A specified portion of the original bond proceeds which will be used to pay interest on the bonds until revenue from planned sources becomes available upon completion of construction.

Contract Authority – A form of budget authority that permits obligations to be made in advance of appropriations or receipts. Contract authority therefore is unfunded and requires a subsequent appropriation or offsetting collection to liquidate (pay) the obligations. The federal-aid highway program has operated under contract authority since 1921.

Coverage Margin – The margin of safety for payment of debt service on a revenue bond, reflecting the number of times (e.g., 1.2) by which annual revenues after operations and maintenance costs exceed annual debt service.

Credit Enhancement – Financial guarantees or other types of assistance that improve the credit of underlying debt obligations. Credit enhancement has the effect of lowering interest costs and improving the marketability of bond issues.

Discretionary Spending – Outlays controllable through the congressional appropriation process. Such outlays result from the provision of budgetary resources (including appropriations and obligation limitations but excluding mandatory spending authority) in appropriation acts. The Budget Enforcement Act establishes annual spending limitations or caps on discretionary appropriations and resulting outlays.

Executive Order 12893 – An executive order issued by President Clinton in January 1994, establishing infrastructure investment as a priority for the Administration and directing federal agencies to establish programs for more effective capital investment from current federal funds.

Face Amount – The par value (i.e., principal or maturity value) of a security.

Force Majeure – Events that are beyond the control of a contractor, such as earthquakes, epidemics, blockades, wars, acts of sabotage, and archeological site discoveries.

Government Sponsored Enterprise – A shareholder owned and operated financial institution, chartered by the federal government, that facilitates the flow of investment funds to specific economic sectors, thereby providing access to national capital markets. The activities of these private entities are not included in federal budget totals. But because of their special relationship to the government, GSEs provide detailed statements as supplementary information for budget presentation. Examples of GSEs include the Federal National Mortgage Association (Fannie Mae), the Student Loan Marketing Association (Sallie Mae), and the Federal Home Loan Mortgage Corporation (Freddie Mac).

Governmental Purpose Bond – A term in the Internal Revenue Code for a tax-exempt bond which is secured by governmental revenues or whose proceeds are used for a general governmental purpose (as opposed to a private activity bond).

Institutional Investor – A financial institution such as a mutual fund, insurance company, or pension fund that purchases securities in large quantities.

Intelligent Transportation Systems – The application of advanced electronics and communication technologies to enhance the capacity and efficiency of surface transportation systems, including traveler information, public transportation, and commercial vehicle operations.

Interest Subsidy – The net present value cost to the federal government of providing credit assistance (e.g., direct loans or loan guarantees) at a rate below the rate of U.S. Treasury securities issued for a comparable term.

Investment Grade – Describes the top four rating categories of relatively secure bonds suitable for a conservative investor. Standard & Poor's rating service looks upon all bonds between the AAA and BBB ratings as investment grade. Generally speaking, any bonds rated below BBB are considered to have speculative features and are deemed sub-investment grade or junk bonds.

Junior Debt – Debt having a subordinate or secondary claim on an underlying security or source of payment for debt service, relative to another issue with a higher priority claim. (See Subordinate Claim.)

Letter of Credit – An instrument or document issued by a bank guaranteeing bondholder payment by enabling the bond trustee to draw from the bank the full amount of principal and interest due on each bond payment date.

Leveraging Ratio – Measures the extent to which a given investment attracts additional capital. In the context of this report, the leveraging ratio of federal funds is equal to the total project costs divided by the budgetary cost of providing federal credit assistance.

Liquidity – Refers to an investor's ability to sell an investment as a means of payment or easily convert it to cash without risk of loss of nominal value.

Loan Servicer – A public or private entity that is responsible for collecting, monitoring, and reporting loan payments. In the context of this report, a loan servicer would also assist in originating the loan.

Mandatory Spending – Outlays generally not controllable through the congressional appropriation process. Mandatory amounts are budget authority or outlays that cannot be increased or decreased in a given year without a change in substantive law. Entitlement programs (e.g., food stamps, Medicare, veterans' pensions) are chief examples of mandatory programs, whereby Congress controls spending indirectly, by defining eligibility and setting benefit payment rules, rather than directly through the appropriation process. With regard

to the federal-aid highway program, mandatory spending refers to outlays resulting from obligations of contract authority programs not subject to annual obligation limitations, such as Minimum Allocation, Emergency Relief, and Demonstration Project spending.

Obligation Authority – The amount of budgetary resources (including new budget authority, balances of unobligated budget authority carried over from prior years, and obligation limitations) available for obligation in a given fiscal year. With regard to the federal-aid highway program, obligation authority often refers to the amount of federal-aid obligation limitation, established annually by Congress in appropriation acts, that is allocated to the states and controls the amount of apportioned contract authority that can be obligated by the states in a given fiscal year.

Parity Debt – Debt obligations issued or to be issued with an equal claim to other debt obligations on the source of payment for debt service.

Pay-As-You-Go Financing – Describes government financing of capital outlays from current revenues or grants rather than by borrowing.

Preliminary Rating – A credit opinion from a rating agency based on a preliminary assessment assigned to a proposed bond issue.

Ramp-up Phase – The phase in a project's life cycle immediately following construction. It is during this phase, the early years of operation, that a project's revenue stream is established.

Rate Covenant – A contractual agreement in the legal documentation of a bond issue requiring the issuer to charge rates or fees for the use of specified facilities or operations at least sufficient to achieve a stated minimum debt service coverage level.

Rating Agency – An organization that assesses and issues opinions regarding the relative credit quality of bond issues. The three major municipal bond rating agencies are Fitch Investors Service, Moody's Investors Service, and Standard and Poor's.

Senior Debt – Debt obligations having a priority claim on the source of payment for debt service.

Start-up Project – A separate, free-standing and new facility dependent on its own revenue stream to generate earnings to cover operating and capital costs.

State Infrastructure Bank – A state or multi-state revolving fund that provides loans, credit enhancement, and other forms of financial assistance to surface transportation projects.

State Transportation Improvement Program – A short-term transportation planning document covering at least a three-year period and updated at least every two years. The STIP includes a priority list of projects to be carried out in each of the three years. Projects included in the STIP must be consistent with the long-term transportation plan, must conform to regional air quality implementation plans, and must be financially constrained (achievable within existing or reasonably anticipated funding sources).

State Transportation Plan – The transportation plan covers a 20-year period and includes both short- and long-term actions that develop and maintain an integrated, intermodal transportation system. The plan must conform to regional air quality implementation plans and be financially constrained.

Stress Test – A financial test applied by rating agencies to assess the claims-paying ability of municipal bond insurers. The stress test subjects a bond insurer's portfolio to a severe and prolonged economic downturn that produces an extraordinary level of bond defaults. In order to receive a AAA rating on its claims-paying ability, a bond insurer must be able to pay all projected claims through the peak years of the stress period and be left with sufficient resources to write new business when more stable economic conditions resume.

Subordinate Claim – A claim on an underlying source of payment for debt service which is junior or

secondary to that securing another debt obligation. (See Junior Debt.)

Subsidy Cost – The estimated long-term cost to the federal government of providing credit assistance (e.g., direct loans or loan guarantees), calculated on a net present value basis at the time of disbursement and excluding administrative costs.

TE-045 Innovative Finance Initiative – A research program begun by the Federal Highway Administration in 1994 in response to Executive Order 12893. This finance initiative is designed to increase investment, accelerate projects, promote the use of existing innovative finance provisions, and establish the basis for future initiatives by waiving selected federal policies and procedures, thus allowing specific transportation projects to be advanced through the use of non-traditional finance mechanisms.

Title 23 of the United States Code – Highway title that includes many of the laws governing the federal-aid highway program. The title embodies substantive provisions of law that Congress considers permanent and need not be reenacted in each new highway authorization act.

Title 49 of the United States Code – Transportation title that includes laws governing various transportation-related programs and agencies, including the Department of Transportation, general and intermodal programs, interstate commerce, rail and motor vehicle programs, aviation programs, pipelines, and commercial space transportation.

Turnkey – A generic term for a variety of public/private partnership arrangements whereby a public sector entity awards a contract to one or more private firms to undertake the development, construction, and/or operation of an infrastructure project for a predetermined period of time before turning the project back over to the public entity. Turnkeys may take various forms, including design-build-transfer and build-operate-transfer.

Unobligated Balance – The portion of obligation authority (including new budget authority and balances of unobligated budget authority carried over from prior years) that has not yet been obligated. With regard to the federal-aid highway program, the term generally refers to balances of apportioned contract authority that the states have been unable to obligate due to annual obligation limitations imposed by Congress.

Zero Coupon Bond – A bond that is originally issued at a deep discount from its par or face amount and which bears no current interest. The bond is bought at a discount price which implies a stated rate of return calculated on the basis of the bond being payable at par at maturity. (See Capital Appreciation Bond.)

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