

TIFIA at 25:

A Retrospective of USDOT's Largest Credit Program

August 2023



Notice

This document is disseminated under the sponsorship of the U.S. Department of Transportation (USDOT) in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in this document.

The U.S. Government does not endorse products or manufacturers. Trademarks or manufacturers' names appear in this report only because they are considered essential to the objective of the document.

Technical Report Documentation Page

1. Report No.		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle TIFIA at 25: A Retrospective of USDOT's Largest Credit Program				5. Report Date August 3, 2023	
				6. Performing Organization Code: V327	
7. Author(s) David Seltzer and Bryan Grote from Mercator Advisors, LLC, under the Volpe Center's contract with Changeis, Inc.				8. Performing Organization Report No.	
9. Performing Organization Names(s) and Address(es) Volpe National Transportation Systems Center (Volpe) U.S. Department of Transportation 55 Broadway Cambridge MA 02142				10. Work Unit No.	
				11. Contract or Grant No. SCOAR Contract # 6913G621F400048	
12. Sponsoring Agency Name(s) and Address(es) Build America Bureau Office of the Secretary U.S. Department of Transportation 1200 New Jersey Avenue, S.E. Washington, DC 20590				13. Type of Report and Period Covered Retrospective; Program enactment in 1998 through FFY 2022	
				14. Sponsoring Agency Code	
15. Supplementary Notes Contracting Officer's Technical Representative: Rosalyn Millman, Build America Bureau (OST)					
16. Abstract This study provides a retrospective review and assessment of the implementation and impact of the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program since its enactment in 1998 through Federal fiscal year 2022 and identifies challenges and opportunities for the future of the TIFIA Program.					
17. Key Words Build America Bureau, credit, Federal highway administration, Federal transit administration, IIJA, public-private partnerships, TIFIA.				18. Distribution Statement No restrictions	
19. Security Classification of Report Unclassified		18. Security Classification of This Page Unclassified	19. No. of Pages 79	20. Price N/A	

TABLE OF CONTENTS

- Executive Summary 1
- 1 Introduction 5
- 2 TIFIA in Context..... 7
 - 2.1 Impediments to Raising Capital for Project Financings 8
 - 2.2 Original Objectives of the TIFIA Program 10
- 3 Budgetary Treatment and Program Funding 12
 - 3.1 Assessing Creditworthiness of TIFIA Borrowers 15
 - 3.2 Comparing TIFIA to Other Federal Credit Programs 16
- 4 Market Conditions 18
 - 4.1 TIFIA Loans vs. Tax-Exempt Bonds 19
 - 4.2 TIFIA as Construction Financing 20
- 5 Analysis of the TIFIA Loan Portfolio 22
 - 5.1 Overall Program Lending Activity 22
 - 5.2 Loan Retirements and Refinancings 23
 - 5.2.1 Loan Retirements 23
 - 5.2.2 Loan Refinancings (Rate Modifications)..... 25
 - 5.2.3 Current TIFIA Portfolio Status 27
 - 5.3 Portfolio Profile 28
 - 5.3.1 Geographic Distribution 28
 - 5.3.2 Modal Distribution..... 29
 - 5.3.3 Types of Borrowers 30
 - 5.4 Funding Sources 31
 - 5.4.1 Sources of Project Capital 31
 - 5.4.2 Sources of TIFIA Security 32
 - 5.5 Portfolio Credit Review 33

5.5.1	Credit Ratings.....	33
5.5.2	Loan Concentration	34
5.5.3	BBB Rated Loans.....	35
5.5.4	Non-Performing Loans	36
5.6	P3 Project Loans	38
5.7	Capital Structure of P3 Concessions.....	42
6	Legislative Evolution	45
7	Program Administration	47
8	Summary of Findings.....	49
9	Opportunities and Challenges	52
9.1	Applying the TIFIA Template to New Project Types.....	52
9.1.1	Transit-Oriented Development Projects	52
9.1.2	Airport-Related Projects	53
9.2	TIFIA Program Risk Tolerance and Funding Level	54
9.2.1	Considering New Projects with More Risk.....	54
9.2.2	Considering More Projects with 49 Percent Loans and Subsidized Interest.....	54
9.2.3	Considering Project Development Grants	55
9.3	Bureau Resources and Internal Capacity.....	55
9.3.1	Managing a Growing Pipeline	55
9.3.2	Providing Technical Assistance.....	56
Appendix I: Project Summary Table		57
Appendix II: Glossary of Key Terms		66

LIST OF FIGURES

Figure 1. Bond Buyer Revenue Bond Index Compared to 30-Year Treasury Yields	20
Figure 2. Annual Loan Volume and Project Count.....	23
Figure 3. Geographic Distribution of TIFIA Assistance	29
Figure 4. Loan Volume by Project Mode.....	30
Figure 5. Total Project Capital Sources	32
Figure 6. TIFIA Portfolio by Source of Security.....	32
Figure 7. TIFIA Loan Portfolio Ratings - All Loans vs. Active Loans at FYE 2022.....	33
Figure 8. Sources of Security for Lower-Rated Active Loans	35
Figure 9. P3 Project Ratings and Sources of Security	39
Figure 10. P3 Capital Stack Comparison.....	42

LIST OF TABLES

Table 1. TIFIA Program Annual Funding	12
Table 2. TIFIA Annual Cohort Scoring and Loan Funding	14
Table 4. TIFIA Program Summary Statistics.....	22
Table 5. Retired TIFIA Loans.....	24
Table 6. TIFIA Loan Refinancings	26
Table 7. TIFIA Portfolio Status as of 9/30/2022	28
Table 8. TIFIA Borrowers.....	31
Table 9. Ten Largest Active Obligations by Loan Security	34
Table 10. Status of Non-Performing Loans.....	37
Table 11. TIFIA-Assisted P3 Projects (Long-Term Concessions)	40
Table 12. Combining TIFIA Loans with Private Activity Bonds	43
Table 13. Key Changes in TIFIA Legislative Provisions	45
Table 14. Build America Bureau Credit Programs Pipeline (August 2023).....	48

LIST OF ACRONYMS AND ABBREVIATIONS

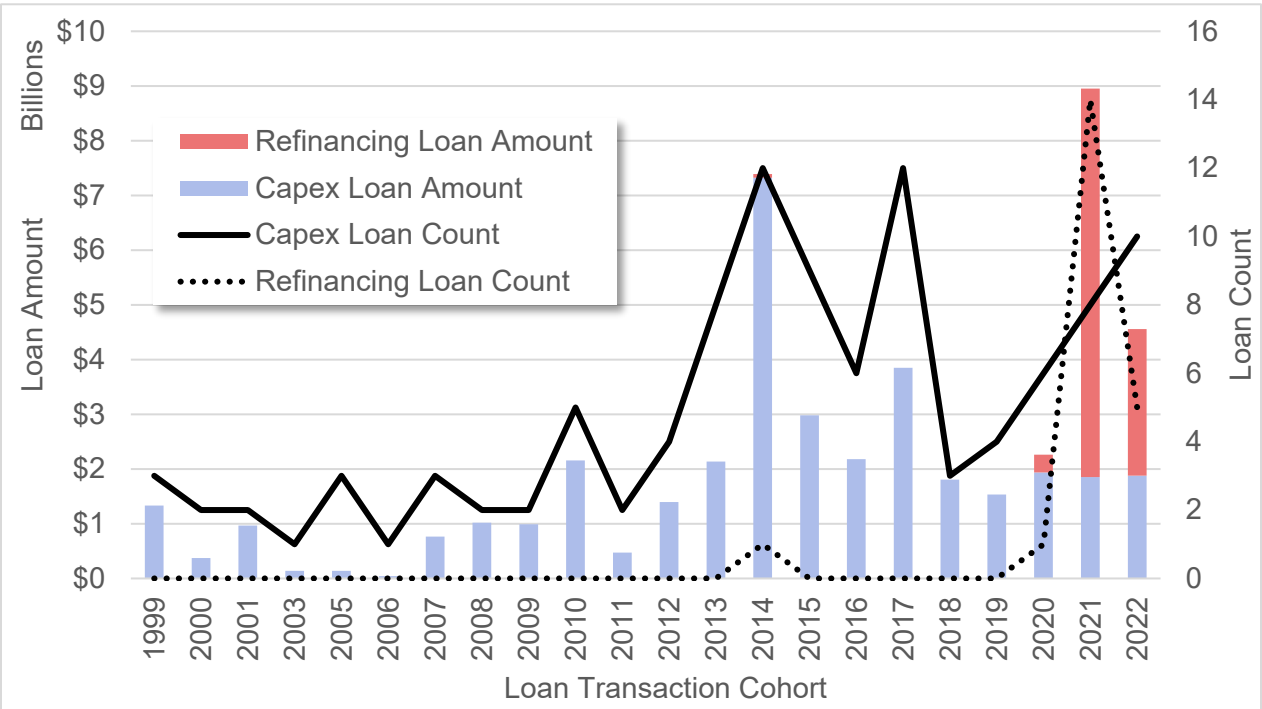
Bureau	Build America Bureau
Capex	Capital expenditures
CDFI	Community Development Financial Institution
DBFOM	Design Build Finance Operate Maintain
FAST Act	Fixing America's Surface Transportation Act
FHA	Federal Housing Administration
FCRA	Federal Credit Reform Act of 1990
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FY	Federal Fiscal Year (October 1 through September 30)
FYE	Federal Fiscal Year End (September 30 of a given year)
IIJA	Infrastructure Investment and Jobs Act
INFRA	Nationally Significant Multimodal Freight & Highway Projects discretionary grants program
ITS	Intelligent Transportation Systems
JPO	Joint Program Office
LOI	Letter of Interest
MAP-21	Moving Ahead for Progress in the 21st Century Act
MARAD	Maritime Administration
OMB	Office of Management and Budget
OST	Office of the Secretary of Transportation
P3	Public-Private Partnership (concession agreement)
PAB	Private Activity Bond
RRIF	Railroad Rehabilitation and Improvement Financing
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SIB	State Infrastructure Bank
TCA	Transportation Corridor Agencies
TEA-21	Transportation Equity Act for the 21st Century
TIFIA	Transportation Infrastructure Finance and Innovation Act
TOD	Transit-Oriented Development
USC	United States Code
USDOT	U.S. Department of Transportation
VA	Veterans Administration or U.S. Department of Veterans Affairs
WIFIA	Water Infrastructure Finance and Innovation Act

EXECUTIVE SUMMARY

The United States Department of Transportation’s (USDOT’s) Transportation Infrastructure Finance and Innovation Act (TIFIA) credit program, enacted 25 years ago, has become a significant source of financing for surface transportation projects in the United States. Since the first loans were made in FY 1999 through FY 2022, the TIFIA program has committed \$37.3 billion of loans for 98 distinct projects in connection with \$132.2 billion of total capital expenditures.¹

Over the last decade, TIFIA financing has totaled approximately 11 percent of the “capex” municipal debt issuance for surface transportation projects, and about 2 percent of total capital funding for such purposes from all sources, including Federal, State, and local grants. In addition to financing new projects, borrowers over the past three years have refinanced \$9.2 billion of prior TIFIA commitments through new TIFIA loans at lower interest rates. This has enabled obligors to reduce their debt service requirements and improve financial resiliency in the face of pandemic-induced declines in toll and tax revenues.

TIFIA Program: Annual Loan Volume and Project Count

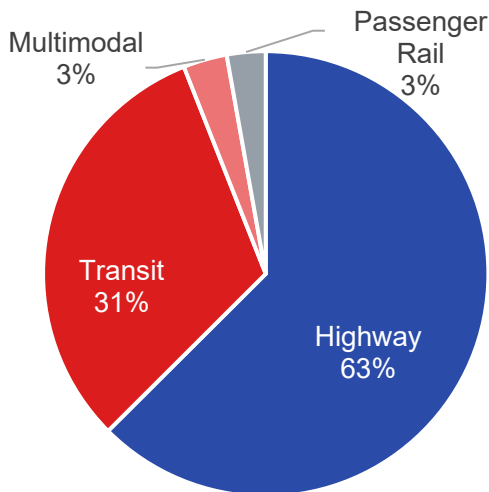


Approximately 63 percent of the loan commitments have been for highway, street, bridge, and tunnel projects (collectively “highway” projects) and 31 percent have assisted public transit projects, with the balance applied to multimodal and passenger rail facilities. Loan commitments

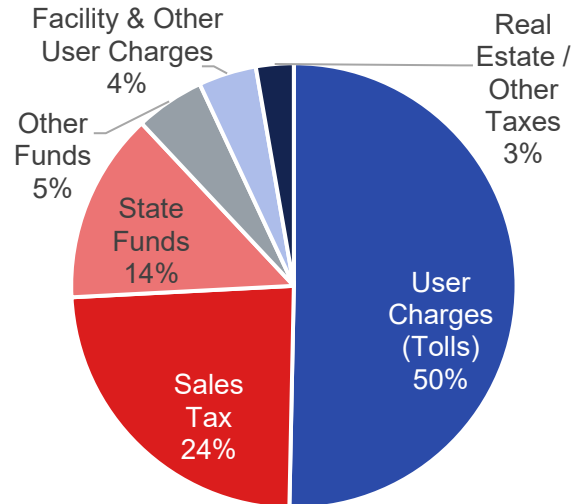
¹ Unless otherwise specified, the loan statistics presented in this report reflect both *funded* loans that borrowers have drawn down from USDOT and *committed* loans for which USDOT has obligated budget authority, but borrowers have not yet accessed. All amounts are expressed in nominal (not inflation-adjusted) dollars.

have ranged in size from \$8.4 million to \$1.76 billion, with an average assistance level of \$380 million, reflecting the focus on larger projects of regional and national significance (the eligible capital costs of TIFIA-assisted projects have averaged \$1.35 billion). Nearly a third of the total loan volume has been allocated for 25 public-private partnership (P3) projects developed, operated, and typically financed by private entities. Of which, 15 were “revenue risk” projects dependent on user fees and 10 were secured using availability payments from State or local government resources.

TIFIA Portfolio by Project Mode



TIFIA Portfolio by Source of Security



A central objective of the TIFIA program has been to help project sponsors overcome market impediments that might hinder transportation project delivery. Initially, the TIFIA program was oriented toward assisting start-up projects subject to revenue risk gain access to the capital markets through sculpted and/or subordinate repayment terms. However, TIFIA’s ability to make long-term loans at U.S. Treasury bond yields has proven attractive to even established, highly rated, tax-exempt issuers. In more recent years, with short-term reinvestment rates at record low levels, the program has enabled borrowers to reduce their use of capital markets debt, thereby lowering “negative carry” costs associated with the reinvestment of loan proceeds at low interest rates pending disbursement. TIFIA’s staged drawdown feature, deferred interest payments, longer maturities, and competitive borrowing rates together have reduced the transactional friction associated with debt financing for transportation projects.

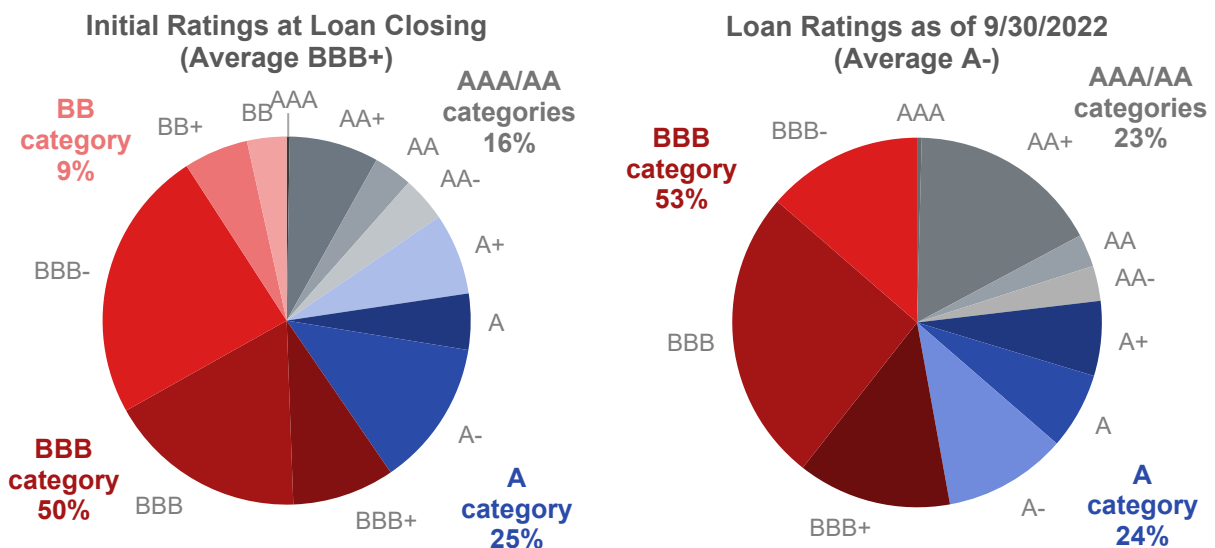
TIFIA loans are backed by a variety of repayment sources, as illustrated in the chart above. Over half of the committed dollar volume of loans is secured by user charges (principally highway tolls), and approximately one-quarter of the portfolio is secured by local or regional sales tax pledges.

TIFIA was a pioneer among Federal credit programs in drawing upon bond ratings to help determine the appropriate level of risk scoring of its loan activity. When TIFIA was first enacted, the legislation required only that a project’s senior debt be rated “investment grade” by at least one bond rating agency (“BBB- “or higher). In more recent years, because of the evolution in both rating agency methodologies and USDOT credit policies, the TIFIA loan itself has been

required to be investment-grade, a prerequisite formalized in statute in 2021 with the passage of the Infrastructure Investment and Jobs Act (IIJA).

The credit quality of the portfolio has improved over time. Of the 68 “active” borrowers (defined as those borrowers with loan principal outstanding or with future USDOT commitments) as of fiscal year end (FYE) 2022, 26 have received a rating upgrade (generally one notch) from their initial rating, compared to only a handful of rating downgrades. This trend can be attributed in part to the general de-risking of projects as construction is completed and projects become operational. The average dollar-weighted rating of the portfolio based on each loan’s *initial* rating has been BBB+, compared to A- for the *current* portfolio of active loans.

Comparison of Portfolio Ratings: All Loans Since Inception vs. Active Loans



Financially, the program has performed well to date in relation to the original risk scoring of the loans. The USDOT identified only four loans as nonperforming, representing about 2.25 percent of the total \$37.3 billion loan volume. Realized losses after recoveries from defaulted loans are 1.2 percent (\$433 million), compared to 5.5 percent (\$2.059 billion) of budgetary resources set aside (obligated) to cover expected losses.

The Conference report for the original TIFIA legislation sought to encourage borrowers to prepay their credit assistance as soon as practicable, and 32 credit instruments totaling \$12.6 billion have been fully prepaid or extinguished thus far. Together with net repayments of outstanding loans, the portfolio balance has been reduced by approximately one-third from the face amount of all loans obligated. As of FYE 2022, the TIFIA program credit exposure stood at \$25.1 billion, consisting of outstanding principal balances of \$14.5 billion and committed but undrawn funds of \$10.6 billion.

The TIFIA program is currently managed through the Build America Bureau (Bureau), an entity established by Congress in 2015 under the Office of the Secretary of Transportation (OST). The Bureau’s TIFIA responsibilities have increased over time because of the enactment of successive surface transportation reauthorization bills that have expanded the types of projects eligible for program assistance. Among the more recent changes are authorizing loans for

airports and Transit-Oriented Development (TOD) projects, reducing the threshold size for eligible project costs for rural and local projects, and allowing substantially longer maturities.

In addition to managing TIFIA, the Bureau is responsible for administering a companion Federal credit program designed specifically for rail projects: the Railroad Rehabilitation and Improvement Financing (RRIF) program. Through RRIF, the Bureau can provide up to \$35 billion of credit assistance (direct loans and loan guarantees) to finance up to 100 percent of eligible railroad project costs. RRIF is relevant to an analysis of TIFIA because certain projects are potentially eligible for both programs, and in fact two projects to date have utilized both programs. Approximately \$7.1 billion of RRIF loans had been made through FYE 2022.

Looking ahead, the Bureau has identified (as of August 2023) 38 “pipeline” projects potentially eligible for funding under its TIFIA and RRIF credit programs, with tentative loan amounts totaling \$21 billion associated with approximately \$52 billion of total project investment.

Build America Bureau Credit Programs Pipeline (August 2023)

Type	Number of Projects	Loan Amount (\$ Millions)	Project Cost (\$ Millions)
Highway	10	\$ 4,427	\$ 13,538
Transit	12	\$ 10,530	\$ 26,855
Transit-Oriented Development (TOD)	7	\$ 3,945	\$ 5,432
Rail	3	\$ 121	\$ 136
Seaport	3	\$ 1,038	\$ 3,144
State Infrastructure Bank	1	\$ 75	\$ 150
Airport	2	\$ 979	\$ 2,795
Total	38	\$ 21,114	\$ 52,050

As a central repository of financial expertise within USDOT, the Bureau has facilitated borrowers combining different forms of Federal grants, credit assistance, and tax incentives. Beyond its two large credit programs, the Bureau administers the allocation of a tax-exempt Private Activity Bond (PAB) program first authorized with a \$15 billion volume cap under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and subsequently expanded to \$30 billion under IIJA.

The Bureau also supports a variety of other initiatives and programs that require collaboration and coordination across USDOT modal administrations. The Bureau’s wide range of responsibilities includes outreach and communication with project sponsors and other stakeholders, project development / underwriting / delivery for credit program applicants, professional education, and technical assistance. These expanded and new programs will require the Bureau to build its organizational capacity further to manage what is expected to be a substantially increased level of demand for its services in the years to come. The Bureau has recently commissioned a comprehensive organizational assessment to address these and related program management issues.

1 INTRODUCTION

The Transportation Infrastructure Finance and Innovation Act of 1998 established a Federal credit program (the TIFIA Program) for eligible transportation projects under which the United States Department of Transportation (USDOT) may provide three forms of credit assistance—secured (direct) loans, loan guarantees, and standby lines of credit. Unlike traditional grant programs, the TIFIA program aims to leverage Federal funds by attracting substantial private and other non-Federal co-investment in transportation projects, through providing long-term supplemental or subordinate financing on flexible repayment terms.

The USDOT awards TIFIA credit assistance to eligible applicants, which include State departments of transportation, transit operators, toll road authorities, special purpose entities, local governments, and private entities.

Credit assistance can cover up to 49 percent of eligible project costs, with the balance of funding coming from other lending sources, equity investors, user charges, tax revenues, and Federal, State, and local grants.

TIFIA eligibility extends to the following types of projects: highways, bridges, and tunnels; transit facilities and vehicles; intercity bus and passenger rail vehicles and stations; intermodal freight facilities; intelligent transportation systems (ITS); port access and transfer facilities; rural infrastructure projects; State Infrastructure Banks (SIB); rural projects funds; natural habitats that mitigate the impact of transport projects; TOD; and most airport-related projects.

TIFIA credit assistance is secured by a wide range of pledged revenue streams, including new project-based revenues generated by large greenfield investments. The program relies on investment-grade ratings, with credit review undertaken by the Build America Bureau (the Bureau) and supplemented by outside financial and legal expertise. TIFIA offers flexibility with sculpting of loan amortization schedules around other debt, including back-ending TIFIA loan repayment. Rating agencies consider the TIFIA loan's deferrable features and "springing lien" provision (described later in this report) in evaluating project creditworthiness. Public-private partnerships (P3s) constitute a significant part of the portfolio loan volume. Project sponsors often combine TIFIA loans with other capital markets debt, including the Bureau's Private Activity Bond (PAB) program.

The Build America Bureau is an administrative unit within USDOT's Office of the Secretary responsible for managing the TIFIA program and several other programs offering project sponsors credit support, access to private activity tax-exempt bonds, targeted grant funding and technical assistance. With the 25th anniversary of the enactment of the TIFIA program in June 2023, the Bureau determined that a programmatic retrospective describing the history and evolution of the program would be of benefit to Federal policymakers, transportation project sponsors, and the public. *TIFIA at 25: A Retrospective of USDOT's Largest Credit Program* presents an independent analysis of the program covering the period from the first loan commitments in 1999 through September 30, 2022 (FYE 2022).² The views expressed in this report do not necessarily reflect the views of the Build America Bureau or USDOT.

² The report was managed by Changeis Inc. based on research undertaken by Mercator Advisors LLC.

The report begins with an Executive Summary of the principal findings.

Chapter 1 (Introduction) provides a brief overview of the TIFIA program and report structure.

Chapter 2 (TIFIA in Context) describes the market environment and financial mechanisms being used at the time that the TIFIA program was conceived by USDOT, summarizes the impediments to capital formation for surface transportation, and cites the initial objectives of the TIFIA program.

Chapter 3 (Budgetary Treatment and Program Funding) provides an overview of the Congressional funding of the TIFIA program, describes how credit risk is measured under TIFIA, and compares TIFIA to other infrastructure-related Federal credit programs.

Chapter 4 (Market Conditions) summarizes the changes in the capital markets since program inception affecting both Federal credit assistance and the primary financing tool used by State and local governments (tax-exempt municipal bonds).

Chapter 5 (Analysis of the TIFIA Loan Portfolio) provides a detailed description of the amount, purpose, geographic distribution, creditworthiness, and sources of security backing the TIFIA loan portfolio, with special attention given to loans to public-private partnerships, which represent one-third of the TIFIA portfolio.

Chapter 6 (Legislative Evolution) contains a capsule summary of key legislative changes to the terms of the TIFIA program over four successive reauthorization bills from SAFETEA-LU through the Infrastructure Investment and Jobs Act (IIJA) enacted in 2021.

Chapter 7 (Program Administration) provides a brief organizational overview of the Bureau and its pipeline of potential future projects over the next several years.

Chapter 8 (Summary of Findings) discusses how the actual performance of the TIFIA program over the last quarter-century has compared to the initial legislative objectives.

Chapter 9 (Opportunities and Challenges) canvasses various policy and programmatic issues relating to types of loans, risk tolerance, and administrative capacity within the Bureau.

2 TIFIA IN CONTEXT

The TIFIA program was conceived during planning for the reauthorization of USDOT surface transportation programs in 1998 as a new, cost-effective tool the Department could use to expand capital investment in surface transportation facilities. Federal policymakers expressed interest in identifying non-grant forms of Federal assistance that could leverage limited budgetary resources more effectively than traditional grants that typically fund up to 80 percent of project costs.

The mid-1990s had seen the emergence of “project financing” in several States as a means of funding, delivering, and operating major transportation projects. The term project financing in a technical sense refers to projects where the debt (and, if applicable, equity) funding capital expenditures is repaid using the cash flows generated from a single project, without recourse to a larger system or governmental or corporate sponsor’s balance sheet (also known as “non-recourse” financing). These projects are typically developed and operated on a standalone basis through single-purpose entities. Although the owner/operator may be governmental or private sector, the private sector typically plays a prominent role in the delivery, financing, and/or management, especially during the construction phase. This approach had been employed extensively in America’s corporate sector beginning in the 1970s to develop large natural resource, energy, and manufacturing plants off-balance sheet, both domestically and abroad.

During the 1980s, project financings were utilized overseas in the transportation sector to deliver complex, capital-intensive projects like the Channel Tunnel. Various forms of “Private Finance Initiatives” were launched in several European countries as well as in Canada and Australia, providing an alternative method for resource-constrained central governments to advance projects. In the U.S., however, a well-developed tax-exempt market existed where infrastructure sponsors could access long-term, low-cost debt capital, leading to widespread use of non-recourse financing through tax-exempt revenue bonds. The United States also differed from many European nations, because most projects are initiated at the State, regional, or municipal level rather than through central governments.³

By the early 1990s, pioneering toll road projects like the Dulles Greenway in Northern Virginia and the State Route (SR) 91 Express Lanes in Orange County, California demonstrated to policymakers that the private sector—for certain types of projects—could offer a cost-effective and expeditious alternative project delivery mechanism involving little or no taxpayer contribution or risk.⁴ These facilities were financed with a combination of taxable debt and private equity investment, without reliance on governmental grants, guarantees, or backstops. Concurrently, a public sector project financing model became more common that utilized design-build

³ In the 1950s and 1960s, dozens of new toll road and toll bridge projects throughout the U.S. were financed with non-recourse tax-exempt debt, with the larger State turnpikes developing into statewide “system” financings rather than standalone “project” financings. Some of the discrete facilities that were financed through municipal revenue bonds did encounter financial difficulty, such as the original bonds issued for the Chesapeake Bay Bridge-Tunnel and the Chicago Skyway.

⁴ The risk transfer benefit of private sector participation can be seen on the Dulles Greenway, a 12-mile privately operated toll road which has faced significant financial challenges but was constructed without public funds and has remained operational since its opening in 1995. The 10-mile SR 91 Express Lanes were developed in 1995 and operated by a private consortium; the project was acquired by the Orange County Transportation Authority in 2002.

procurement through a private development team, in tandem with public or nonprofit financing conduits to deliver, finance, and operate new mega-projects, funded largely through the issuance of tax-exempt revenue bonds.⁵

The most prominent surface transportation examples costing over a billion dollars—delivered under then-innovative design-build contracts with private sector construction-engineering project delivery teams—were in Southern California. The \$1.5 billion San Joaquin Hills toll road and the \$1.8 billion Foothill/Eastern toll road in Orange County, CA were sponsored by two newly created public authorities, both of which are part of the Transportation Corridor Agencies (TCA). Just to the north, the Alameda Corridor—a \$2.4 billion express freight rail project connecting the Ports of Los Angeles and Long Beach with the major rail marshaling yards in eastern Los Angeles—was financed, developed, and operated by a special purpose public agency, the Alameda Corridor Transportation Authority.

2.1 Impediments to Raising Capital for Project Financings

User fee-backed start-up projects like new toll roads face special challenges in demonstrating to lenders and investors that they can cover operating costs as well as pay market rates of return on invested capital. Large capital outlays may require several decades to fully amortize their initial costs, and the payback period can exceed the investment time horizon of many individual and institutional investors. Further, there may not be an active secondary (or after-) market, should the initial investor wish to sell its holdings prior to maturity, particularly for underperforming projects.

Prospective lenders and other potential capital providers require project sponsors to hire experts to prepare detailed traffic, cost, and revenue forecasts to evaluate a project's financial feasibility. Major institutional lenders themselves may hire expert consultants to do an independent assessment.

Yet even if a project is proceeding under a guaranteed maximum price construction contract, unforeseen conditions or events outside the contract terms can result in cost overruns and delays affecting project delivery and financial feasibility. On the revenue side, traffic forecasting of demand for using new facilities is a notoriously inexact science. Rating agencies and lenders require that financial projections demonstrate substantial coverage, or margin of net operating revenues over annual debt service, to mitigate the risk of underutilization. In fact, greenfield or start-up projects, which are subject to construction risk, demand risk, and in some cases, technology/performance risk, typically face a “glass ceiling” of at best obtaining a BBB category rating—the lowest investment grade rating. There is a substantial yield premium associated with sub-investment grade or non-rated offerings.

The higher the required debt service coverage ratio, which is indicative of project risk, the lower the amount of initial debt that can be raised against a given stream of forecasted net revenues.

⁵ Until Congress established a new class of surface transportation private activity bonds in 2005 under SAFETEA-LU, tax-exempt debt was not eligible for financing highway facilities where private firms had a long-term concession for operations and maintenance. However, a public agency owner/operator could enter into a design-build contract with a private entity to deliver a publicly managed project and still retain the ability to access the municipal bond market.

This can result in an initial shortfall in funding the construction budget, which project sponsors have only a limited number of means of addressing. They can seek to:

1. Purchase credit enhancement from a high-rated third-party financial institution to reassure the lenders (although the guarantors will share the same concerns about creditworthiness as the lenders);
2. Obtain additional governmental grants to reduce the amount that must be debt-financed;
3. Substitute subordinate (junior lien) debt or capital appreciation bonds in place of a portion of the senior lien current interest debt, which has the effect of augmenting the annual debt service coverage on the senior bonds that have a first claim on revenues, but can be difficult to place; or
4. For privately funded projects, invest more initial equity investment and correspondingly reduce the amount of senior debt, recognizing that the higher cost of equity relative to debt makes this an expensive solution.

Another issue in sourcing debt financing from commercial banks or the capital markets is the limitation lenders put on loan prepayments. Most impose restrictions (e.g., 5–10 years of call protection and/or prepayment penalties for retiring debt early or canceling interest rate swaps). These provisions hinder the flexibility of project sponsors to restructure their indebtedness in the early years if needed to better match available revenues.

Finally, most capital market financing requires the project sponsor to raise 100 percent of its project funding needs at the outset, to demonstrate to lenders that they have sufficient funds to construct the project and are not dependent on favorable market conditions to complete the project. Obtaining all the funds upfront often entails “transactional friction,” since it adds costs to the project. Specifically, project sponsors issue long-dated debt at long-term interest rates, but must keep funds invested in short-term, low-risk investments to pay contractors and capitalize interest during construction to make semi-annual interest payments prior to when the project begins generating revenues. In the market environment prevalent until recently, short-term investments typically paid a negligible return. This “negative carry” is a financial burden on the project, as the project sponsor must borrow more to make up for the low earnings on invested funds waiting to be disbursed for project expenses.

To address investor concerns, the sponsors of the three Southern California governmental project financings each sought and received partial assistance from Congress. Separate special legislation was enacted authorizing USDOT to provide standby lines of credit of \$120 million and \$145 million for the San Joaquin Hills and Foothill-Eastern toll roads, respectively, and a \$400 million direct loan for a portion of the Alameda Corridor project costs.

The successful delivery of these major investments in Southern California generated interest among State and local transportation officials nationwide, as well as from design-build constructors, private sector toll operators, and financial firms. Federal policymakers, concerned about additional one-off legislative proposals to assist other projects around the country, decided to seek approval for a more systematic nationwide credit assistance program. It was with these considerations in mind that USDOT policymakers conceived what became known as the TIFIA program.

2.2 Original Objectives of the TIFIA Program

In 1997, USDOT, through the Federal Highway Administration (FHWA), engaged a consulting team to draft a discussion paper outlining the policy implications of establishing a Federal credit program for surface transportation infrastructure.⁶ The report assessed the sector's need for credit assistance, defined proposed program principles, outlined a program administrative structure, and canvassed the budget, tax, and policy issues associated with standing up a new Federal credit program for major surface transportation projects.

The original precepts for the program (*italics added for emphasis*) presented in the report were:

1. **Target Capital Market Gaps.** "...Large, complex start-up projects frequently encounter market resistance because of investor concerns about investment horizon, liquidity, predictability, and risk. This is particularly the case for subordinate and secondary sources of capital...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."
3. **Encourage New Revenue Streams.** "A credit program should be designed to assist those projects capable of generating their own revenue streams...from direct user charges, such as tolls or fares, or indirect beneficiary fees, such as special benefit district assessments or local dedicated tax revenues."
4. **Limit Federal Exposure by Relying on Market Discipline.** "A credit program should seek to minimize the risk to the Federal government. 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 selection of only those projects that are financially feasible and have acceptable risk profiles...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... [The program should] establish uniform, objective, and transparent criteria... and an orderly process for evaluating, selecting, and funding projects."
6. **Enlist State and Local Participation.** "A Federal credit program...should draw on the active involvement of state and local governmental units throughout the entire process,

⁶ FHWA, *Federal Credit for Surface Transportation: Exploring Concepts and Issues*, November 1997, https://www.fhwa.dot.gov/ipd/finance/resources/general/federal_credit_policy_paper/default.aspx

from the initial identification of suitable candidates to the ongoing monitoring and servicing of the credit products.”

Although a Federal credit program was not included in the Administration’s 1997 reauthorization proposal to Congress, the conceptual proposal was championed by the Senate Environment and Public Works Committee and ultimately took the form of the TIFIA subtitle in the Transportation Equity Act for the 21st Century (TEA-21) that Congress enacted in June 1998 (codified as chapter 6 of title 23 of the U.S. Code). Nearly all of the major guidelines listed above were incorporated into the final TIFIA statutory language and initial Program Guide, effectively defining the program’s mission statement.⁷

⁷ Among the few exceptions to the report’s suggested program features incorporated in the ultimate legislative language in TEA-21 was that State and local participation be confined to the project approval process, rather than ongoing servicing and credit monitoring as proposed in the concept paper. Congress determined that centralized and consistent portfolio management by USDOT would be an essential element in managing the risk of the program.

3 BUDGETARY TREATMENT AND PROGRAM FUNDING

Federal credit (loan and guarantee) programs like TIFIA follow the budgetary treatment set forth in the Federal Credit Reform Act of 1990 (FCRA).⁸ The “scored” (budgetary accounting) cost of a loan or guarantee is not the face amount of the credit extended. Rather, it is the present value of cash flows associated with each loan, considering the funds lent and the repayment streams, adjusted for expected losses (resulting from defaults net of recoveries) plus any interest rate subsidy (cost) or surcharge (benefit). This amount is called the “subsidy cost” and it must be paid for by the borrower or from credit program funds provided by Congress.⁹ A line agency like USDOT borrows from the Department of the Treasury the amount needed to fund the loan, and then loans these proceeds to the borrower. Loan repayments that the borrower makes to USDOT are transferred back to the Treasury.¹⁰

The USDOT receives TIFIA funding from Congress through multi-year authorizations of budget authority (contract authority from the Highway Trust Fund) subject to obligation limitations contained in annual appropriations acts. Table 1 summarizes the annual program funding from inception, starting with TEA-21 and projected through the final year of the IJA. (All financial data presented throughout this report are expressed in nominal dollars, not inflation adjusted.)

Table 1. TIFIA Program Annual Funding

Fiscal Year	Authorization Act	Budget Authority (a) (\$ Millions)	Year End Balance (b) (\$ Millions)
1999	TEA-21	\$ 80	\$ 30
2000	TEA-21	\$ 90	\$ 90
2001	TEA-21	\$ 110	\$ 50
2002	TEA-21	\$ 120	\$ 140
2003	TEA-21	\$ 122	\$ 220
2004	Extension	\$ 122	\$ 310
2005	SAFETEA-LU	\$ 122	\$ 390
2006	SAFETEA-LU	\$ 122	\$ 480
2007	SAFETEA-LU	\$ 122	\$ 540
2008	SAFETEA-LU	\$ 122	\$ 350
2009	SAFETEA-LU	\$ 122	\$ 340
2010	Extension	\$ 122	\$ 130
2011	Extension	\$ 122	\$ 220
2012	Extension	\$ 122	\$ 250
2013	MAP-21	\$ 750	\$ 820
2014	MAP-21	\$ 1,000	\$ 1,320

⁸ Section 661 of title 2 of the U.S. Code.

⁹ Budget authority has funded almost all of TIFIA’s loan subsidy costs, but in a few cases the borrowers have contributed to fund a portion of the loan loss reserve: Triangle Expressway (NC), Port of Miami Tunnel (FL), and IH 635 Managed Lanes (TX).

¹⁰ The balance of moneys needed to fund a loan above the credit subsidy contribution is provided by the Treasury Department as a “means of financing” without a budgetary charge, financed through Treasury borrowing.

Fiscal Year	Authorization Act	Budget Authority (a) (\$ Millions)	Year End Balance (b) (\$ Millions)
2015	Extension	\$ 1,000	\$ 1,380
2016	FAST	\$ 275	\$ 1,530
2017	FAST	\$ 275	\$ 1,570
2018	FAST	\$ 285	\$ 1,650
2019	FAST	\$ 300	\$ 1,881
2020	FAST	\$ 300	\$ 2,137
2021	Extension	\$ 300	\$ 1,900
2022	IIJA	\$ 250	\$ 1,751
2023	IIJA	\$ 250	TBD
2024	IIJA	\$ 250	TBD
2025	IIJA	\$ 250	TBD
2026	IIJA	\$ 250	TBD
Total		\$ 7,355	

(a) Budget (contract) authority amounts from USDOT Fact Sheets. Figures represent gross amounts of budget authority before deductions attributable to administrative expenses and obligation limitations.

(b) Unobligated (carryover) fund balances derived from: Build America Bureau, U.S. Department of Transportation; Congressional Research Service, The TIFIA Program (2/15/2019); Balances of Budget Authority, Budget of the U.S. Government; and various industry sources.

Effectively, the credit risk portion of the subsidy cost serves as a “loan loss reserve.” If the program operates according to expectations, the expected losses (the present value difference between the loan proceeds disbursed and the borrowers’ loan repayment streams) are offset by the upfront budgetary resources obligated (set aside) to cover the credit risk.

There is no statutory ceiling on the aggregate loan volume of the TIFIA program. Instead, the limitation applies to USDOT’s annual capacity to obligate funds from authorized amounts of budget authority, including prior-year unobligated balances.

The ratio of the subsidy cost to the face amount (original principal) of a loan is referred to as the subsidy rate. Loans that are committed (obligated) within the same fiscal year belong to that year’s cohort. The program funding that is obligated within a fiscal year to cover that cohort’s estimated subsidy costs is tracked in the Federal budget.

Table 2 shows how the subsidy rates and loan obligations have varied over the years depending on the number, size, and credit scores of the project loans in each year’s cohort. The substantial reduction in the cohort scoring from 2018 to 2019 (7.90% to 2.48%) is not attributable to a major shift in credit quality of the participating borrowers. Rather, the Bureau adjusted its subsidy scoring methodology consistent with historical portfolio performance.

The column entitled Original Cohort Subsidy Rate substantially reflects the default risk at the time Federal funds are obligated to support the loans. Most TIFIA loans are made at a rate close

to or equal to the comparable-term Treasury yield.¹¹ While the initial subsidy cost must be funded by the Federal agency from its available budget, the annual re-estimates prepared by the Office of Management and Budget (OMB) to reflect changes in credit risk assessments or interest rate movements *do not* require further appropriations of budget authority. Under FCRA, those subsequent loan cost adjustments, both upward and downward, are authorized using permanent indefinite budget authority and do not affect the line agency's operating budget resources.

Table 2. TIFIA Annual Cohort Scoring and Loan Funding

FY Cohort	Original Cohort Subsidy Rate (a) (Percentage)	Capex Loan (Face Amount) Obligations (b) (\$ Millions)	Program Subsidy Obligations (c) (\$ Millions)
1999	1.49	\$ 1,333	\$ 20
2000	1.67	\$ 374	\$ 6
2001	11.05	\$ 967	\$ 107
2002	---	---	---
2003	7.10	\$ 140	\$ 10
2004	---	---	---
2005	13.81	\$ 138	\$ 18
2006	8.50	\$ 42	\$ 4
2007	3.49	\$ 766	\$ 27
2008	15.16	\$ 1,019	\$ 155
2009	8.69	\$ 990	\$ 86
2010	7.74	\$ 2,158	\$ 167
2011	2.63	\$ 472	\$ 12
2012	3.76	\$ 1,398	\$ 53
2013	8.53	\$ 2,138	\$ 182
2014	6.05	\$ 7,325	\$ 447
2015	7.48	\$ 2,982	\$ 236
2016	4.98	\$ 2,180	\$ 109
2017	5.28	\$ 3,851	\$ 203
2018	7.90	\$ 1,807	\$ 143
2019	2.48	\$ 1,535	\$ 38
2020	1.02	\$ 1,938	\$ 23
2021	-0.71	\$ 1,854	\$ 8
2022	-2.21	\$ 1,878	\$ 6
Total		\$ 37,287	\$ 2,059

(a) The subsidy rate reflects an estimate of both losses resulting from defaults and any interest rate subsidy. Although the interest rate on a TIFIA loan typically is set at the long-term Treasury yield (the exception being

¹¹ Under normal market conditions (upward sloping Treasury yield curve), there is a small interest rate surcharge to the borrower that produces a slightly lower overall subsidy cost than would result solely from the credit risk component. This is attributable to how USDOT sets the TIFIA loan rate at the Treasury yield comparable to the *final* maturity date, whereas OMB discounts the annual cash flows from expected loan repayments at the (generally lower) series of Treasury yields corresponding to each *periodic* loan repayment date.

discounted rates for rural projects), the total subsidy rate can be negative if the discounted present value of expected annual cash flows along the yield curve produces a surplus that exceeds the credit risk subsidy component (e.g., in 2021 and 2022). However, within any cohort, subsidy funding must be obligated for each loan having a positive total subsidy cost estimate.

(b) These loan obligations are for "capex" commitments and do not include another \$10.2 billion obligated for loan refinancings.

(c) These subsidy funding obligations do not include the assessed costs of interest rate modifications (reductions) that occurred with loan refinancings.

Source: Mercator analysis of data provided by the Build America Bureau.

3.1 Assessing Creditworthiness of TIFIA Borrowers

TIFIA was conceived as a targeted gap-filler program, with an initial maximum share of 33 percent—lower than other Federal credit programs (many of which funded 80 percent or more of project costs). Conceptually, TIFIA was designed to lend against a portion of the forecasted cash flows that senior lenders/bondholders would expect the project to generate as the required senior debt "coverage" component. This is a role the Federal government is qualified to play—a long time-horizon investor (patient lender) that is not as concerned as most private creditors are with receiving predictable semi-annual interest payments or having access to a secondary market for liquidity.

When TIFIA was enacted, the Federal government had more than \$1 trillion of loans and loan guarantees outstanding—principally in the housing, student loan, and small business sectors.¹² Most of these credit programs involve large portfolios of small, homogeneous loans, where the Federal government funds most or all the borrower's "project." The largest segment of the government's Federal credit portfolio is Federal Housing Administration (FHA) and Veterans Administration (VA) backed mortgage loans, where small, individual loans are collateralized by real estate. In contrast, major transportation projects might each cost hundreds of millions or billions of dollars, and the debt they incur typically is secured by project-generated cash flow rather than collateral. Because of infrastructure's large scale and project-specific risks, it is impossible to achieve a statistically reliable projection of performance of a portfolio of surface transportation projects based on the "law of large numbers" applicable to a diverse portfolio with many thousands of small loans.

Based on these considerations, USDOT staff recommended using a risk-scoring framework applying established bond rating agency criteria, where each project's unique features and credit profile would be considered. Once a rating has been assigned to a borrower, one could look at market yields of similarly rated debt and discount the borrower's loan repayment stream at that yield to arrive at an upfront loan loss reserve. This was the methodology used (pre-TIFIA) to score the budgetary cost of the Alameda Corridor loan. However, using prevailing capital market yields on like-rated projects captures other *non-credit* factors such as illiquidity and prepayment risk that are not meaningful concerns to the Federal government.

Instead of market yields, USDOT staff proposed drawing upon the capital reserve requirements that rating agencies apply to evaluate the claims-paying ability of monoline municipal bond insurance portfolios. If a rating agency assigned a bond insurer a high (AAA) rating on its guarantee, it suggested an adequate reserve capacity to meet foreseeable claims in the future to

¹² Source: *Analytical Perspectives, Budget of the United States Government FY 1999*.

pay scheduled principal and interest in the event of a borrower default. These models are based on decades of default and recovery data relating to thousands of State and local bond issues, further refined by subsector (toll facilities, special dedicated taxes, general obligation pledges, etc.).¹³ The Bureau and its predecessor office have been using this general framework, with certain modifications by OMB, to risk-score TIFIA's Federal credit assistance.

3.2 Comparing TIFIA to Other Federal Credit Programs¹⁴

When the TIFIA program launched in 1999 following the development of implementing regulations and policy guidance, the Federal government had 116 other loan and guarantee programs operated by 20 different departments and agencies. The average program had an individual loan size of under \$5 million. Approximately 80 percent of the loan volume was housing and student loans to individual borrowers averaging under \$100,000. The other credit programs consisted mostly of loans to smaller businesses, often under \$10 million. The only credit program making sizable whole-loan credit commitments at the time was USDOT's Maritime Administration (MARAD) ship loan guarantee program (average size around \$40 million). TIFIA, envisaged as serving a small number of large projects costing \$100 million or more, was an outlier. The scale and complexity required designing a rigorous loan underwriting, servicing, and monitoring process to assure prudent financial management.

By FY 2022, the volume of Federal credit outstanding across all programs had expanded five-fold, from \$1.1 trillion to \$5.0 trillion and 129 programs, three-quarters of which were for housing and student loans. TIFIA's outstanding principal loan balance as of FYE 2022 was \$14.5 billion; and there was an additional \$10.6 billion of loans that had been approved but had not yet been drawn down. Collectively, this \$25.1 billion of existing and potential credit exposure represents one-half of 1 percent (0.5%) of the government's entire Federal credit portfolio.¹⁵ The TIFIA program's average credit assistance per project during the period between FY 1999 through FY 2022 is approximately \$380 million.¹⁶

Since TIFIA's enactment, Congress has increased the number of credit programs serving large corporate and governmental borrowers. Through FYE 2022, TIFIA has funded or provided

¹³ The rating agency models have remained reasonably predictive for the infrastructure sector. However, these models proved inadequate for the housing and consumer loan portfolios that many of the bond insurance companies expanded into during the first decade of the 21st century, when they failed to accurately assess and withstand the calamitous impact of the 2008 credit crunch on household borrowers. The monoline bond insurers turned out to be multiline insurers, with all the bond insurers incurring huge losses and being downgraded to sub-investment grade. Today, there are just two active bond insurers rated AA that guaranteed only 7 percent of the new issue market in 2022, as contrasted with the four major AAA insurers that guaranteed 57 percent of the new issue market in 2005.

¹⁴ Information in this section is derived from: *Analytical Perspectives—Budget of the U.S. Government*, FY 2001 and 2023; *Credit Supplement—Budget of the U.S. Government*, FY 2000 and 2023. Figures are for loans and loan guarantees, and do not include Federal programs for depository institutions, pension benefits, natural disasters, crop insurance, etc.

¹⁵ Not all undrawn amounts are utilized. In certain cases (such as the \$215 million TIFIA loan commitment for the Cooper River Bridge replacement in South Carolina) market conditions are such that borrowers have elected to arrange permanent financing through the capital markets instead of drawing down committed TIFIA funds. Interest and principal payments are due only on drawn amounts of a TIFIA loan.

¹⁶ The average loan commitment is based on 98 discrete projects (excluding multiple tranches for a single project, refinancings, and loan modifications) and \$37.3 billion face amount of TIFIA loans.

project loan commitments of \$37.3 billion of capital investment (referred to as “capex loans” in this report to differentiate these transactions from loan refinancings and modifications). By way of comparison, the Bureau’s companion Railroad Rehabilitation and Improvement Financing (RRIF) credit program, also enacted under the TEA-21 reauthorization bill, has made 41 loans totaling \$7.3 billion, with an average size of \$179 million.¹⁷ Among other infrastructure programs, the Environmental Protection Agency’s (EPA) Water Infrastructure Finance and Innovation Act (WIFIA) credit program, enacted in 2014 as a water resources version of TIFIA, has originated \$17 billion of loans to water resource management, drinking water, and wastewater systems with an average size of \$177 million. The Department of Energy and several international programs also now manage direct loan and loan guarantee programs with an average loan amount of more than \$100 million. The relatively small number of large, “one-off” loans continues to differentiate TIFIA and some of the other infrastructure-related programs from many of the longstanding Federal credit programs that provide large numbers of small, homogeneous loans.

The table below shows the estimated volume and subsidy rate for several infrastructure-related Federal credit programs for FY 2022. TIFIA’s cohort subsidy rate of -1.21 percent is at about the midpoint between the highest and lowest of these infrastructure credit programs.

Table 3. Risk Scoring of FY 2022 Cohorts for Infrastructure-Related Programs

Federal Agency - Credit Program	Annual Loan Level (estimated) (\$ Millions)	Cohort Subsidy Rate (estimated)
Agriculture - Rural Community Facilities Loans	\$ 1,684	-5.81%
Agriculture - Rural Electrification and Telecomm. Loans	\$ 4,800	-7.20%
Agriculture - Rural Wastewater Loans	\$ 1,400	-5.16%
Energy - Title 17 Innovative Technology Loans	\$ 6,025	2.67%
Energy - Advanced Technology Vehicles Manufacturing Loans	\$ 4,890	4.83%
Transportation - RRIF Loans	\$ 600	-1.71%
Transportation - TIFIA Loans	\$ 10,987	-1.21%
EPA - Water Infra. Finance and Innovation Act (WIFIA) Loans	\$ 5,550	1.07%

Source: Credit Supplement, Budget of the U.S. Government, Fiscal Year 2023, Office of Management and Budget, Table 1.

¹⁷ Under RRIF, the 11 loans to governmental borrowers represent 90 percent of the total loan volume (nearly half of which is for Amtrak) and have a vastly larger average size (\$598 million) than the 31 loans made to private (mostly short line) railroads (\$26 million).

4 MARKET CONDITIONS

The use of TIFIA by transportation project sponsors is driven to a considerable extent by how the program compares to and aligns with other available borrowing options. The municipal bond market represents the principal source of external financing for State and local infrastructure projects. Annual issuance volume for new surface transportation projects (exclusive of refinancings) has averaged about \$25 billion per year. Historically, approximately 95 percent of the transportation bond issues were tax-exempt, although since 2019 taxable municipal debt has accounted for over 15 percent of transportation issuances.¹⁸ In 1998, when TIFIA was enacted, over 72 percent of outstanding tax-exempt bonds were held by individual investors or their institutional proxies (mutual funds, unit investment trusts, and trust departments). Banks and insurance companies constituted 26 percent of bondholders.¹⁹

Most larger bond issues sold into the municipal bond market have been rated investment grade (BBB category or higher).²⁰ However, as noted above, start-up user-charge backed facilities, like toll roads, face significant uncertainty both in terms of project delivery and the ramp-up in users in the early years following completion, as traffic patterns become established. The USDOT identified Federal credit as a cost-effective way to help advance these types of projects.

Federal credit support can take various forms; for example, the TIFIA program technically offers three different product lines: direct loans, loan guarantees, and standby lines of credit. For project sponsors seeking long-term financing, the lowest-cost form of Federal credit assistance is direct borrowing from the government (called “secured loans” under the statute). Capital markets debt or loans from banks and insurance companies that are secured by a Federal guarantee—even covering 100 percent of a loan—are not as cost-effective as direct loans from USDOT at the Treasury rate, because private investors/lenders expect a higher yield to compensate them for factors such as interest rate risk on their long-dated loan, limited liquidity (secondary market), and prepayment risk. From a bondholder’s perspective, lines of credit partially securing larger debt financings are even less cost-effective than loan guarantees because of their limited duration (first 10 years of operations) and the fact that drawdowns can be used for operating expenses as well as debt service. Because of these factors, all but one of the TIFIA credit assistance instruments executed through FYE 2022 have taken the form of direct loans.²¹

¹⁸ Source: The Bond Buyer, *Year in Statistics Annual Review*, 2013 - 2022. This reported volume is derived from municipal taxable and tax-exempt debt listed as financing toll roads, highways, streets, bridges, tunnels, and mass transportation. Combined refinancing and new construction issues are equally allocated to each category. The amounts do not take into account any surface transportation projects that were financed with issues identified as general-purpose bonds.

¹⁹ Source: *Flow of Funds—Accounts of the United States 1991-1998*, Federal Reserve System, September 15, 1999.

²⁰ Since 1998, approximately 86 percent of all municipal bond issues have been rated investment grade. Source: Moody’s Investors Service, *US Municipal Bond Defaults and Recoveries, 1970-2021*, p. 28; and Matthew Peppe and Haluk Unal, *Do Municipalities Pay More to Issue Unrated Bonds*, Federal Deposit Insurance Corporation Center for Financial Research, September 2022, page 36.

²¹ The single loan guarantee was obligated in 1999 for the Washington Metropolitan Area Transit Authority. Its organizational compact required that it demonstrate it had sufficient resources to fully fund its multi-year capital program, and the TIFIA loan guarantee served that purpose. It was never drawn upon.

4.1 TIFIA Loans vs. Tax-Exempt Bonds

The USDOT is authorized to provide direct loans at the U.S. Treasury's own cost of funds.²² At the inception of the TIFIA program in the mid-1990s, tax-exempt bonds—the primary financial instrument for U.S. infrastructure—were available as a source of capital for investment-grade issuers at lower yields than comparable term U.S. Treasury bonds. Even though the Federal government was seen as a riskless AAA borrower, the tax-exempt status of municipal bond interest for a single-A issuer typically resulted in a lower borrowing rate.

This historic relationship between municipal and Treasury yields functioned as an inherent “governor” on the demand for direct loans under the TIFIA program, since for most mid-investment grade issuers, the yields in the tax-exempt bond market rate would be lower. Figure 1 shows that long-term tax-exempt yields, as measured by the Revenue Bond Index, were essentially the same as Treasury yields for the first decade of the TIFIA program.²³

Because of lower prevailing interest rates (which compressed yield differentials between taxable and tax-exempt bonds), reduced marginal Federal tax rates, and a “flight to quality” following the 2008 credit crunch by fixed-income investors shifting more into Treasury bonds, prices for U.S. Treasury obligations rose and yields fell. This resulted in the corresponding TIFIA borrowing rate declining, as well. Whereas TIFIA in its early years provided a clear rate advantage only to lower-rated issuers, the chart below shows that by 2009 the TIFIA program could offer significant interest savings even for mid-investment grade municipal bond issuers. The “governor” on demand for TIFIA credit among stronger, more established issuers with market access no longer applied.

²² The TIFIA statute requires the loan rate to “be not less than the yield on United States Treasury securities of a similar maturity,” except for rural infrastructure projects where the interest rate “shall be at ½ of the Treasury Rate.” The non-rural loans, therefore, have been priced at 1 basis point (0.01 percent) above the yield on the Treasury State and Local Government Series obligations coming due closest to the TIFIA loan's final maturity date.

²³ The tax-exempt yields reflect the *Bond Buyer* trade newspaper's Revenue Bond Index, which is a group of 21 actively traded revenue bonds maturing in 30 years. The pool has an average rating equivalent to Moody's A1 and Standard & Poor's A+. Note that it reflects 30-year “spot” yields on the bonds in the index. Most tax-exempt bonds are sold with a combination of serial maturities and multiple term bonds. In a typical yield environment, the “weighted coupon” (overall borrowing costs) will be somewhat lower than the 30-year rate—perhaps 25-35 basis points depending upon market conditions. As a result, the true interest rate for a Single-A issuer would be slightly lower than the blue line depicted in the chart.

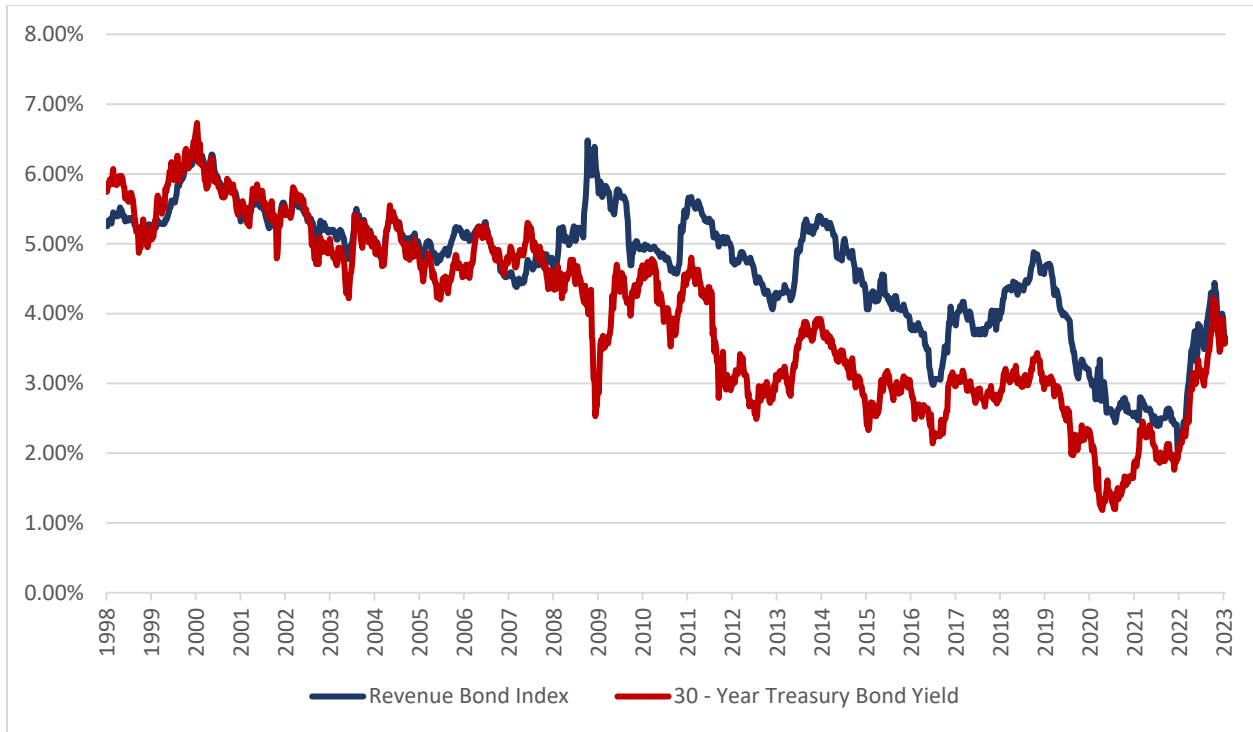


Figure 1. Bond Buyer Revenue Bond Index Compared to 30-Year Treasury Yields

Many of the project financings for start-up transportation facilities will be lower rated (and higher yielding) than the Revenue Bond Index depicted above. It is estimated that, in recent years, the rate benefit to BBB-rated issuers using TIFIA rather than the municipal bond market has equaled 17 to 22 percent of the loan amount in present value terms, depending upon prevailing market conditions.²⁴

While the comparative yield level between tax-exempt bonds and Treasuries is an important element driving demand for the TIFIA program, other factors play a role as well. The ability under TIFIA to defer a portion of debt service payments and “sculpt” the repayment schedule to meet a project’s cash flow profile can be an important advantage in helping the senior debt obtain an investment grade rating. This is particularly the case for toll road issuers.

Project sponsors will weigh potential rate savings and flexible repayment schedules against the longer execution time, greater administrative effort, impact of Federal requirements, and 33 or 49 percent cap (as applicable) on TIFIA financing in deciding how best to source debt capital. In a low-interest rate environment such as 2020–2022, the TIFIA rate benefit and repayment schedule flexibility may not prove determinative.

4.2 TIFIA as Construction Financing

Beyond long-term borrowing costs, the differential between short-term rates and long-term rates can make TIFIA an attractive source of interim financing during construction. Historically, projects financed through the tax-exempt market obtained combined construction and permanent

²⁴ Source: Internal analysis by Mercator Advisors, LLC using market data from 2019-2022.

financing. Borrowers would issue long-term debt with a final maturity of 30 or more years without arranging separate interim financing, as is done in the real estate sector. Sponsors of large, complex projects, especially revenue-generating projects like toll roads, need to raise the full amount of debt capital upfront to allay concerns about funding risk to complete the project.

The issue facing project sponsors in recent years—especially standalone user-charge facilities—is how to minimize or eliminate interest payments during construction. In the tax-exempt market, deferred interest debt instruments such as capital appreciation bonds can accrete (compound) interest during construction, but the market for them is limited and the costs are high. Less than 1 percent of the new municipal issues from 2019–2022 were structured as deferred interest, capital appreciation or zero-coupon bonds, reflecting the limited demand for such instruments in a low-rate environment.

The more common approach for funding interest during construction has been to borrow an amount sufficient to make semi-annual interest payments during construction. However, this mechanism has become very inefficient in recent years because short-term reinvestment rates have remained historically low. This has forced borrowers to pre-fund a larger amount for capitalized interest, increasing the debt burden on project revenues.

TIFIA has proven to be a cost-effective alternative. Borrowers can draw down funds for construction only as needed, rather than borrowing the full amount upfront and reinvesting proceeds inefficiently at a lower yield than their own cost of funds. It is estimated that using TIFIA to avoid the negative carry associated with capitalized interest and construction funds in the low-reinvestment rate environment of the last several years has saved borrowers upwards of 4 percent of the loan amount, in present value terms.²⁵

Some issuers have used TIFIA for construction period financing only and repaid it with the proceeds of long-term tax-exempt bonds—effectively using TIFIA as interim financing during the period from loan approval to one year following construction—the statutory time limit for drawing down on TIFIA commitments. If interest rates have declined over the construction period, the borrower can issue tax-exempt bonds at a lower rate than the TIFIA rate and use the bond proceeds to prepay its TIFIA loan without penalty.

Others have issued tax-exempt bond anticipation notes for construction financing with the TIFIA loan obligation serving as a standby source of permanent takeout financing, if cost-effective when construction nears completion. In this way, TIFIA becomes an interest rate hedge with no “breakage fee” for not ultimately drawing upon it. There have been instances where a project sponsor has issued bond anticipation notes, repaid them after construction with TIFIA, and several years later retired the TIFIA loan with the proceeds of long-term tax-exempt debt at a lower rate. This interim financing feature was not contemplated when the TIFIA program was originally designed but has provided borrowers with a flexible and cost-effective tool for reducing financing costs.

²⁵ Source: Internal analysis by Mercator Advisors, LLC using pro-forma sculpted TIFIA debt service schedules and market yields at various points from 2019 to 2022.

5 ANALYSIS OF THE TIFIA LOAN PORTFOLIO

The following detailed review of the composition of TIFIA's loan portfolio is drawn from the extensive database maintained by the Build America Bureau, supplemented by market data. Each year's new capex loan volume is expressed in nominal dollars of the initial amount obligated and does not include any accretion (compounding of principal due to deferred interest during or after construction). However, if a TIFIA loan has been refinanced, the accretion would be reflected in an increase in the principal amount of the refinanced loan.

5.1 Overall Program Lending Activity

Table 4 below summarizes TIFIA loan activity over the years, differentiating between proceeds used for capex vs. refinancing activity. A total of \$37.3 billion of TIFIA loans (net of refinancings) has supported \$132.2 billion of eligible project costs for new capital investment. Over the last decade, TIFIA capex loan volume has averaged \$2.75 billion per year. To put this in context, an average of \$25 billion per year of long-term municipal bonds has been issued over the same period to fund surface transportation projects. TIFIA lending therefore represents approximately 11 percent of the long-term transportation bonds issued since 2013, and about 2 percent of capital funding for surface transportation projects from all sources, including grants and current revenues.²⁶

Table 4. TIFIA Program Summary Statistics

(\$ Millions)	1999-2003	2004-2008	2009-2013	2014-2018	2019-2022	Aggregate
Project Loans (#)	8	9	21	43	48	129
Capex Loans	8	9	21	42	28	108
Refinancing Loans	–	–	–	1	20	21
Loan Volume	\$ 2,814	\$ 1,965	\$ 7,156	\$ 18,212	\$ 17,307	\$ 47,455
Capex Loans	\$ 2,814	\$ 1,965	\$ 7,156	\$ 18,146	\$ 7,206	\$ 37,287
Refinancing Loans	–	–	–	\$ 66	\$ 10,102	\$ 10,168
Maximum Capex Loan Amount (a)	\$ 917	\$ 589	\$ 850	\$ 1,600	\$ 1,163	\$ 1,760
Average Capex Loan Amount	\$ 314	\$ 218	\$ 356	\$ 446	\$ 290	\$ 380
Minimum Capex Loan Amount	\$ 51	\$ 42	\$ 54	\$ 56	\$ 8	\$ 8

(a) The maximum capex loan is for the Purple Line Light Rail project (MD), which received an initial loan of \$875 million in 2016 followed by an incremental loan of \$885 million as part of the 2022 restructuring.

²⁶ Sources: *Status of the Nation's Highways, Bridges & Transit: Conditions and Performance Report to Congress, 24th Edition*, October 2021, USDOT (Federal Highway Administration and Federal Transit Administration). *The Bond Buyer Year in Statistics Annual Review*, 2013 through 2022. Total over the decade of \$250 billion is for bond issues whose stated purpose is Toll Roads, Highways, Streets, Bridges, Tunnels and Mass Transportation, excluding refunding bonds (refinancings). This figure likely understates the volume of proceeds used for street and highway improvements that are part of a broader general obligation bond issue. From 2013-2022, TIFIA has obligated \$27.5 billion of capex loans.

Figure 2 below shows annual loan volume (bar chart/left scale) and the number of loans (line chart/right scale). The spike in loan volume in FY 2014 is attributable to the increased funding level and simplification of selection criteria for creditworthy projects authorized under MAP-21 to help address a large backlog of TIFIA applications. Also notable is the high proportion of loan activity in recent years attributable to refinancings (shown in red). For example, in FY 2021, 79 percent of the dollar volume (and 16 of 22 loans made) represented refinancings of outstanding loans as opposed to new construction. In FY 2022, the refinancings constituted 59 percent of the loan volume (7 of 15 loans).

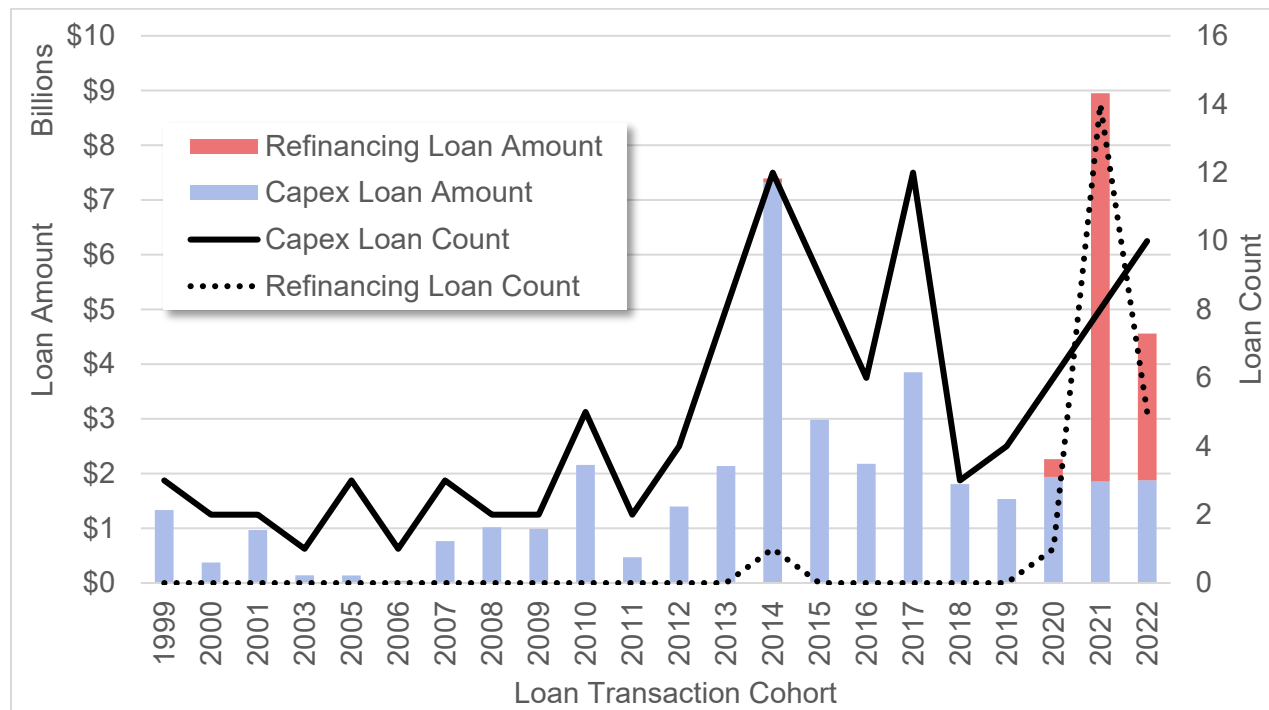


Figure 2. Annual Loan Volume and Project Count

5.2 Loan Retirements and Refinancings

In a market environment of generally declining interest rates, such as that experienced over much of the life of the TIFIA program, borrowers have two options available to take advantage of lower rates after locking in their TIFIA loan rates at financial close:

- (a) Prepay (retire) the loan by borrowing from another source of lower-cost capital; or (more recently)
- (b) Seek approval from USDOT to reduce the rate on its existing loan commitment through a refinancing or modified loan.

5.2.1 Loan Retirements

Loan retirements reduce Federal financial exposure but do not provide any budgetary benefit to USDOT in terms of its lending capacity or available funds, since all prepayments must be remitted to the Treasury (which funded the TIFIA loan at the outset). *Loan refinancings* through

TIFIA may lower the borrower’s credit risk somewhat by reducing the interest burden but can entail a substantial Federal budgetary charge equal to the present value of the reduced interest payments. As shown in Table 5, through FYE 2022, 32 TIFIA loans (including the very first credit commitment for the Washington Metro capital program that technically was structured as a loan guarantee) totaling \$12.6 billion have been retired, mostly using the proceeds of tax-exempt refunding bonds.

Table 5. Retired TIFIA Loans

FY Cohort	Project	TIFIA Capex Loan Amount (\$ Millions)
1999	Washington Metro Capital Improvement Program	\$ 600
1999	Miami Intermodal Center (FDOT Program Elements)	\$ 269
1999	Tren Urbano (PR)	\$ 300
2000	Cooper River Bridge Replacement	\$ 215
2000	Staten Island Ferries and Terminals	\$ 159
2001	Reno Transportation Rail Access Corridor (ReTRAC)	\$ 51
2001	Central Texas Turnpike System (Austin)	\$ 917
2003	South Bay Expressway (formerly SR 125 South)	\$ 140
2005	183-A Turnpike (Austin)	\$ 66
2007	Pocahontas Parkway (Route 895) / Richmond Airport Connector	\$ 150
2007	Intercounty Connector (MD)	\$ 516
2009	Triangle Expressway (Raleigh-Durham)	\$ 387
2010	North Tarrant Express 1 & 2 (I-820 and SH121/183)	\$ 650
2010	Transbay Transit Center (San Francisco)	\$ 171
2010	Denver Union Station	\$ 146
2011	Pres. George Bush Turnpike - W. Ext. (SH 161 Dallas)	\$ 418
2012	Eagle Commuter Rail (Denver RTD)	\$ 280
2012	Crenshaw / LAX Transit Corridor Project	\$ 546
2013	DART Orange Line Extension	\$ 120
2013	Chicago Riverwalk / Wacker Drive	\$ 99
2013	SR-91 Corridor Improvement Program (Express Lanes)	\$ 421
2014	Northwest Corridor (Atlanta)	\$ 275
2014	Gov. Mario Cuomo Bridge (Tappan Zee Bridge Replacement)	\$ 1,600
2014	Grand Parkway (SH 99) Segments D-G	\$ 841
2014	Regional Connector Transit Corridor Project	\$ 160
2014	Westside Purple Line Extension- Section 1	\$ 856
2014	Dulles Corridor Metrorail (MWAA)	\$ 1,277
2015	Dulles Corridor Metrorail (Loudoun)	\$ 195
2015	Ohio River Bridges - East End Crossing	\$ 162
2015	CATS Blue Line Extension (Charlotte)	\$ 180
2017	Westside Purple Line Extension - Section 2	\$ 307
2018	MBTA Positive Train Control	\$ 162 (a)
Total		\$ 12,635

(a) The MBTA TIFIA Loan was refinanced with the proceeds of a FY2020 RRIF loan that remains outstanding.

TIFIA’s prepayment-without-penalty feature enables borrowers to reduce interest cost in improved bond markets by arranging replacement financing at a lower interest rate from bank or capital market sources to retire the TIFIA loan. These prepayments (which included several large

BBB-rated toll facilities) have reduced the size of the TIFIA portfolio by approximately one-third, with a corresponding reduction in USDOT's credit exposure.²⁷ P3 concessionaires in particular may be incentivized to “graduate” from TIFIA financing to other sources of debt capital as soon as practicable once revenue stabilization has been attained, to remove the sometimes-restrictive USDOT loan covenants on distributing project net cash flows to investors.

5.2.2 Loan Refinancings (Rate Modifications)

The other method of reducing interest cost in a lower rate environment is through a loan refinancing, where a new TIFIA loan with a lower interest rate replaces the initial TIFIA loan, or a loan modification (amendment/restatement) that adjusts the interest rate and possibly other loan terms (collectively referred to in this report as “refinancings”). The TIFIA statute authorizes new loans to refinance existing loans for rural infrastructure projects. Additionally, the statute authorizes new loans to refinance existing loans for other types of projects if such refinancing provides additional funding capacity for the completion, enhancement, or expansion of a project.²⁸

Historically, USDOT had not approved refinancings of existing TIFIA loans without additional capital projects being added to conserve its budget authority for new capital formation. But with the Covid-19 pandemic dramatically reducing both user charges and dedicated tax revenues for transportation agencies, USDOT as a matter of policy commenced approving refinancings (both replacement loans and modified loans) in FY 2020 to provide cash flow relief to borrowers.

When a TIFIA loan is refinanced, the undrawn balance is canceled and de-obligated and the principal amount of the refinancing (replacement/modified) loan, including accreted interest if applicable, is obligated. That is why TIFIA's cumulative loan obligations through FYE 2022 (\$47.5 billion) exceed the total amount of Federal credit that has been obligated to fund eligible project capital costs (\$37.3 billion).

Table 6 below lists 21 TIFIA refinancings totaling nearly \$10.2 billion accounting for the difference between capex loan obligations and total loan obligations. Two of the refinancings, for the LA 1 Toll Road Improvements project and the Purple Line Light Rail Transit project, occurred as part of broader loan restructurings. The other 19 refinancings were undertaken to provide cash flow relief through the updated refinancing policy. These refinancings reduced TIFIA loan interest rates by 0.39 percent to 2.17 percent, representing an average of about 100 basis points.

²⁷ In terms of the dollar volume of prepayments to actual loan draws, the ratio is closer to 50 percent.

²⁸ TIFIA statute, Section 603(a)(1).

Table 6. TIFIA Loan Refinancings

Project	Refinancing Loan Amount (\$ Millions)	Initial Close Date	Initial Interest Rate	Refi Close Date	Refi Interest Rate	
LA 1 Toll Road Improvements	\$ 66	5/12/2005	4.45%	11/6/2013	1.89%	(a)
Capital Beltway HOT Lanes (I-495)	\$ 841	12/20/2007	4.45%	2/28/2022	2.28%	
Gerald Desmond Bridge	\$ 325	5/21/2014	3.42%	5/1/2020	1.26%	
East Link Extension (Sound Transit-Seattle)	\$ 1,330	1/16/2015	2.38%	9/10/2021	1.91%	
US 183-S / Bergstrom Expressway (Austin)	\$ 303	11/18/2015	3.08%	2/26/2021	2.19%	
Purple Line Light Rail Transit (MD)	\$ 875	6/14/2016	2.41%	4/12/2022	2.79%	(a)
Parallel Thimble Shoal (Chesapeake Bay Bridge Tunnel)	\$ 339	11/23/2016	2.88%	11/23/2021	2.01%	
Northgate Link Extension (Sound Transit-Seattle)	\$ 615	12/22/2016	3.13%	9/10/2021	1.91%	
BelRed Street Network Project	\$ 100	6/9/2017	2.86%	12/23/2021	1.86%	
Sound Transit O&M Facility East (OMFE)	\$ 88	6/22/2017	2.73%	9/10/2021	1.91%	
Mid-Coast Corridor Transit (San Diego)	\$ 537	6/27/2017	2.72%	1/14/2021	1.75%	
Moynihan Train Hall Project (New York City)	\$ 526	7/21/2017	2.81%	11/18/2021	1.99%	
I-405 Improvement Project	\$ 629	7/26/2017	2.91%	9/9/2021	1.95%	
Central 70 (Denver I-70 East Reconstruction)	\$ 438	12/19/2017	2.77%	9/14/2021	1.93%	
Lynnwood Link Extension (Sound Transit-Seattle)	\$ 658	12/19/2018	3.06%	9/10/2021	1.91%	
Grand Parkway (SH 99) Segments H&I (Houston)	\$ 605	2/26/2019	3.03%	8/19/2021	1.88%	
290E Phase III - Manor Expressway (Austin)	\$ 39	3/21/2019	2.96%	2/26/2021	2.20%	
San Bernardino I-10 Corridor 1	\$ 225	4/26/2019	2.93%	6/17/2021	2.17%	
Hampton Roads Regional Priority Projects	\$ 501	12/10/2019	2.25%	9/21/2021	1.86%	
Complete 540 - Phase 1 (Raleigh)	\$ 499	12/17/2019	2.27%	8/5/2021	1.83%	
Federal Way Link Extension (Sound Transit-Seattle)	\$ 629	12/19/2019	2.36%	9/10/2021	1.91%	
	\$ 10,168		2.95%	avg	1.97%	avg

(a) Refinancing occurred as part of a broader loan restructuring.

Under FCRA, any substantial discretionary change in the terms and conditions of an outstanding Federal credit instrument requires calculating the financial impact to the Federal government. A reduction in the interest rate on the Federal loan reduces the stream of interest payments to the government, and the present value of that foregone revenue must be funded through a supplemental interest subsidy cost charge.

It is estimated that the refinancings listed above reduced the debt service costs of issuers by approximately \$2 billion in present value terms.²⁹ The interest expense reduction freed up cash flow to allow borrowers to better meet their debt service coverage requirements and increased borrowing capacity for the project sponsors to undertake additional capital expenditures. These modifications consumed just over \$1.0 billion of USDOT's available budget authority for the TIFIA program, compared to \$37 million of budget authority being obligated to fund the credit subsidy costs of capex loans over the same FY 2020–2022 period.

5.2.3 Current TIFIA Portfolio Status

Table 7 summarizes the TIFIA loan portfolio activity and status through FYE 2022. Total loan obligations of \$47.5 billion include \$37.3 billion for capex loan commitments and \$10.2 billion for the refinancings. Of the capex loan commitments, \$25.0 billion has been disbursed to borrowers and \$1.7 billion has been de-obligated (never disbursed and retired), leaving \$10.6 billion remaining available for disbursement. The outstanding balance of disbursed loans is \$14.5 billion. Therefore, the aggregate of outstanding loans plus approved but undrawn loans (“active loans”) totals just over \$25.0 billion, representing about two-thirds of the capex loans that have been obligated to date (excluding refinancings). The balance of the loan volume has been retired or partially amortized.

The \$10.6 billion of available/undisbursed funds on active loans shown in the table are predominantly associated with loan agreements for which no funds have been drawn down (rather than remaining draw capacity of obligated funds allocated for projects nearing construction completion). While some of the projects represent recently concluded loan agreements, others date back as far as 2015. Approximately half of the undrawn volume represents transit projects that may have been paused during the pandemic to assess the impact of Covid-19 on long-term ridership trends.

²⁹ This estimate is based on an analysis of Build America Bureau data representing half of the loans refinanced.

Table 7. TIFIA Portfolio Status as of 9/30/2022

	Amount (\$ Millions)	
Total Project Investment (TIFIA Eligible Costs)	\$	132,165
TIFIA Capex Loan Commitments	\$	37,287
TIFIA Refinancings (Original Principal + Accretion) (a)	\$	10,168
Total TIFIA Financing Activity (Capex + Refinancings)	\$	47,455
TIFIA Capex Loan Commitments	\$	37,287
minus: Loan Disbursements	\$	(25,000)
minus: Loan De-obligations	\$	(1,709)
Amount Remaining Available for Disbursement	\$	10,579
Outstanding Loans Balance (b)	\$	14,462
Amount Remaining Available for Disbursement	\$	10,579
Total Potential Portfolio Exposure	\$	25,041

Source: Mercator analysis of data provided by the Build America Bureau.

(a) Refinancings include replacement loans as well as loan amendments and modifications that changed the interest rates on initial TIFIA loans.

(b) Outstanding Loans Balance reflects original loan amounts plus accretion, minus scheduled amortization, and minus prepayments.

5.3 Portfolio Profile

5.3.1 Geographic Distribution

Figure 3 below shows the distribution of TIFIA loan activity nationwide from 1999–2022. The USDOT has assisted 98 separate projects located in 22 States, the District of Columbia, and the Commonwealth of Puerto Rico. The States that have used the program most intensively are California (17), Texas (16), Virginia (10), Washington (8), and Colorado (6). The beige-shaded States without any number by them have a single TIFIA loan, and the States that are shaded gray have not had any projects utilizing TIFIA loans. Seven of the loans totaling \$147 million were for “rural projects,” defined as loans of \$10 million to \$100 million for projects in non-urbanized areas with a population of under 150,000 residents (3 in CA, 3 in LA, and 1 in OK). Projects in Federally defined rural areas can obtain loans at one-half the applicable Treasury yield.

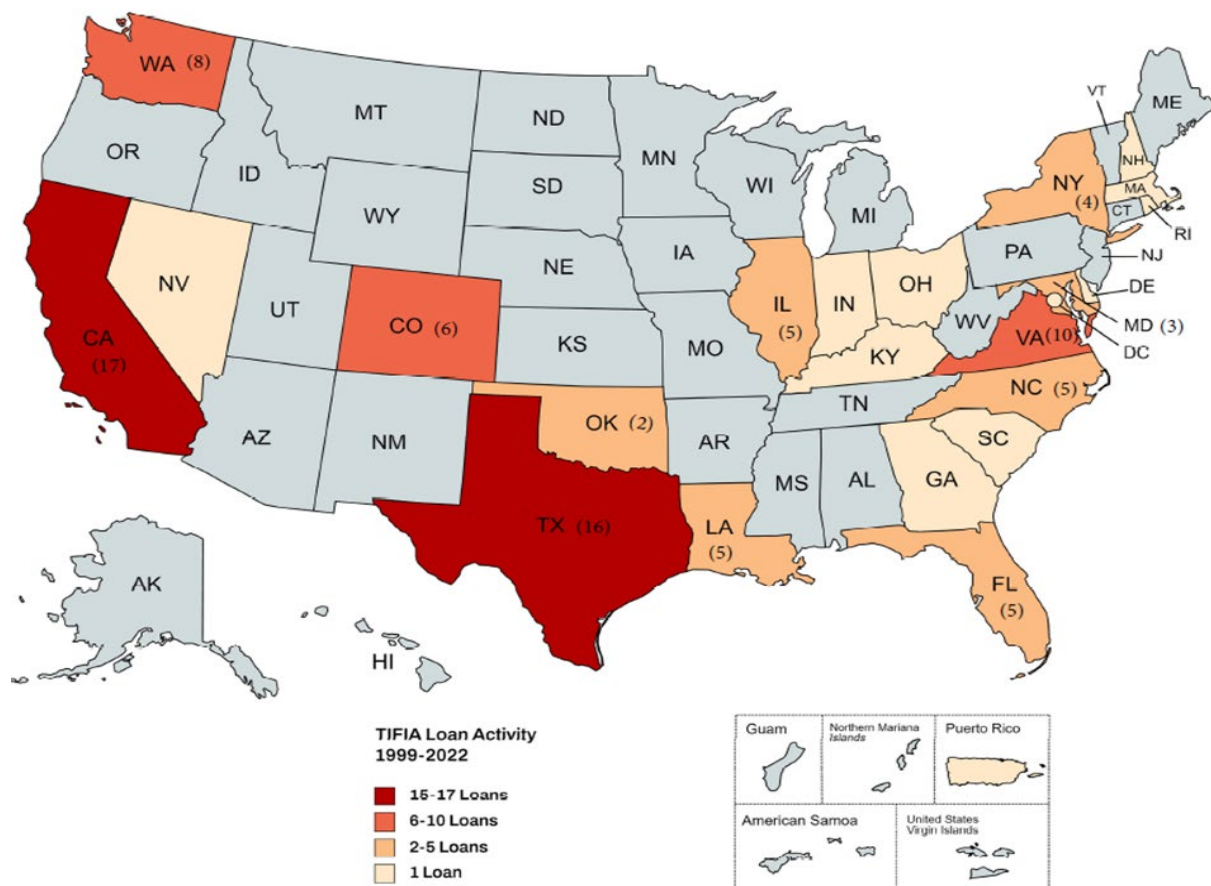


Figure 3. Geographic Distribution of TIFIA Assistance

5.3.2 Modal Distribution

Figure 4 shows that, since inception, 63 percent of the loan volume has funded highway projects and 31 percent has funded transit projects. The remaining 6 percent of the loan volume is split between multimodal and passenger rail facilities.³⁰ Of the highway projects, approximately 75 percent represented toll roads and 25 percent were for non-tolled facilities.

³⁰ There have been eight TIFIA projects in these two categories. Multimodal projects are Miami Intermodal Center, FL; Interlink (Warwick Intermodal Station), RI; Transbay Transit Center, CA; Denver Union Station, CO; and Chicago O'Hare Consolidated Joint Use Facility, IL. Passenger Rail projects are Eagle Commuter Rail, CO; Moynihan Train Hall, NY; and MBTA Positive Train Control, MA.

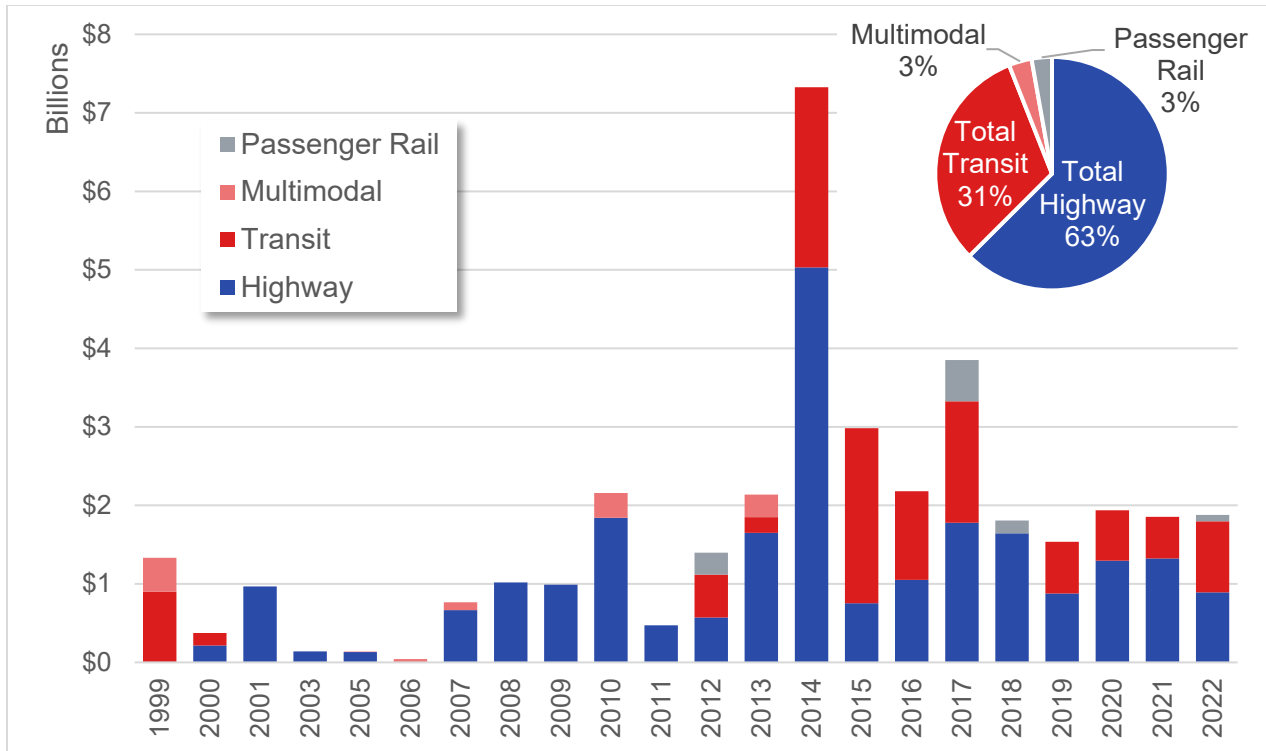


Figure 4. Loan Volume by Project Mode

5.3.3 Types of Borrowers

The TIFIA statute provides that an eligible borrower (obligor) “may be a corporation, partnership, joint venture, trust, or governmental entity, agency, or instrumentality.”³¹ In most cases, the borrower submits the loan application and executes the loan agreement. However, for projects being delivered, financed, and operated through a private concession agreement, the public sponsoring agency (such as a State DOT) negotiates preliminary terms with the Bureau, securing a conditional approval to make TIFIA assistance available to the selected bidder that is awarded the contract. The winning concessionaire then must negotiate the final terms of the loan agreement. The table below summarizes the distribution of applicants for approved TIFIA projects.

³¹ TIFIA statute, Section 601(a)(11)(B).

Table 8. TIFIA Borrowers

Type of Borrower	Number of Projects	Total TIFIA Capex Loans (\$ Millions)
Concessionaire	23	\$ 11,201
Multimodal Transportation Authority	11	\$ 7,066
Municipality	6	\$ 1,196
Other Special Purpose Authority	4	\$ 965
Public Toll Authority	15	\$ 5,083
State DOT	20	\$ 5,715
Transit Agency	19	\$ 6,061
Total	98	\$ 37,287

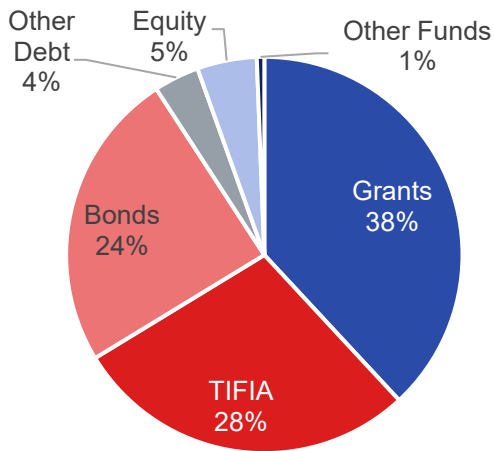
5.4 Funding Sources

5.4.1 Sources of Project Capital

TIFIA originally was limited to funding 33 percent of eligible project costs. MAP-21 increased the limit to 49 percent, but until recently, USDOT as a policy matter did not exceed the 33 percent level. More recently, program guidance has explicitly authorized credit assistance for up to 49 percent of eligible costs for rural projects, transit projects, TOD, and certain other purposes.³² In FY 2021 and FY2022, five projects received TIFIA loans in amounts approaching the higher 49 percent limit. The combined amount of a project's TIFIA loan and any Federal grant assistance may not exceed 80 percent of eligible project costs.

For the portfolio as a whole, Figure 5 shows that TIFIA represents 28 percent of project funding sources. Governmental grants have comprised 38 percent, and the municipal bond market has provided 25 percent, with the remaining 9 percent being sourced from commercial banks, private equity, and other miscellaneous sources.

³² Highly rated applicants for the discretionary Infra, Mega, and Rural Grant Extra programs that were not awarded grants are eligible for 49 percent TIFIA financing. The TIFIA statute requires any TIFIA loan that receives a waiver from the non-subordination (springing lien) provision be capped at 33 percent of eligible project costs.

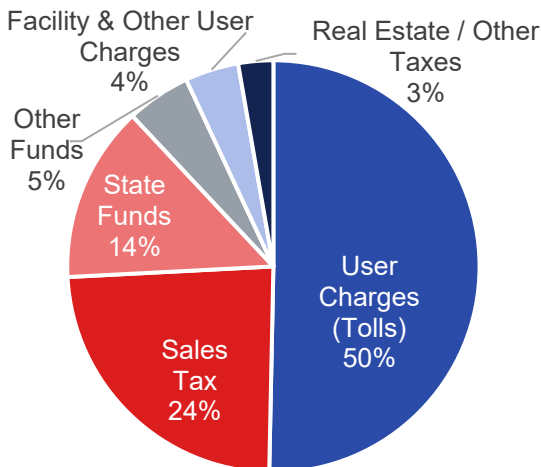


Capital Source	(\$ Billions)
Grants	\$ 50.34
TIFIA	\$ 37.27
Bonds	\$ 32.42
Other Debt	\$ 4.89
Equity	\$ 6.43
Other Funds	\$ 0.81
Total	\$ 132.17

Figure 5. Total Project Capital Sources

5.4.2 Sources of TIFIA Security

For the TIFIA loan component of funding sources, Figure 6 below shows that half of the loan volume has been secured by toll revenues and 24 percent has been secured by sales tax, which is a common funding source for public transit authorities. General revenues of State DOTs comprise 14 percent of the balance, which is mostly attributable to State funding of availability payments on public-private partnership (P3) transactions. The revenue streams that are project-generated include toll revenues, facility charges, and certain other charges in the “Other” category, together constituting 59 percent of the loan portfolio security.



Loan Security	(\$ Billions)
User Charges (Tolls)	\$ 18.76
Sales Tax	\$ 8.90
State Funds	\$ 5.16
Other Funds	\$ 1.88
Facility & Other User Charges	\$ 1.57
Real Estate / Other Taxes	\$ 1.02
Total	\$ 37.29

Figure 6. TIFIA Portfolio by Source of Security

5.5 Portfolio Credit Review

5.5.1 Credit Ratings

As the TIFIA portfolio has expanded, its credit profile has changed. After projects complete construction and mature operationally, credit ratings tend to improve. With a more seasoned portfolio, the average rating of the portfolio can rise. In addition, if loans backed by dedicated revenue streams (which typically have higher bond ratings than project financings) constitute an increasing share of the portfolio, the average rating on the portfolio can be expected to be higher.

The left-hand pie chart shows the dollar-weighted rating distribution for the entire TIFIA portfolio as of the date when each of the loans was obligated, based on the initial ratings and par (face) amounts at loan closing. (Where two rating agencies assigned ratings in different categories, we have selected the lower rating.) Approximately 59 percent of the originated volume was initially rated in the “BBB” and “BB” categories.³³ Note that the left pie chart shows the cumulative rating distribution; not all the loans were outstanding concurrently, and approximately one-third had been fully retired by FYE 2022.

The right-hand pie chart shows a snapshot of the portfolio exposure as of FYE 2022, based on outstanding loans as well as committed but undrawn loans. About 53 percent of these current active loans are rated in the BBB category.

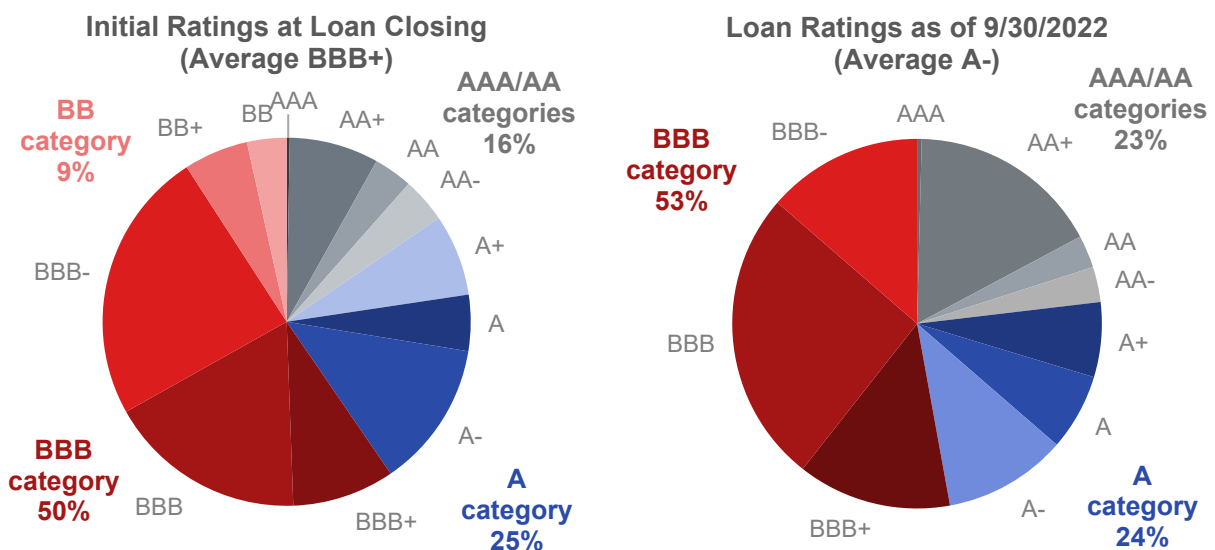


Figure 7. TIFIA Loan Portfolio Ratings - All Loans vs. Active Loans at FYE 2022

³³ The original statutory language allowed the TIFIA loan to bear a sub-investment grade rating, and eight pre-2010 loans were rated in the BB category. Since then, the rating agencies’ position on how they view the “springing lien” provision has evolved and they now effectively treat TIFIA as legally on parity with the senior debt, which by statute must be investment grade. As a result, all TIFIA loans in recent years have been rated investment-grade, and a provision in the Infrastructure Investment and Jobs Act of 2021 codified that practice.

Of the 53 different borrowers with active loans³⁴, 27 have experienced rating upgrades since financial close, three have been downgraded, and the balance have retained their original credit ratings.³⁵ In most cases, the rating changes are one notch up or down. The “average weighted” rating for the entire portfolio has increased slightly, from BBB+ to A-, indicating a stable to improving credit profile overall, as many projects reached substantial completion and commenced operations.³⁶ Projects financed with debt backed by user charges, in particular, may be candidates for rating upgrades once construction has been completed and the facility is operational.

5.5.2 Loan Concentration

By definition, a program oriented toward assisting a limited number of large-scale projects will have a greater degree of loan concentration than a portfolio consisting of hundreds of smaller, homogeneous loans. Table 9 below shows the 10 largest active borrowers as of FYE 2022. Their TIFIA loan commitments total \$12.6 billion, representing half of the \$25.1 billion total active TIFIA commitments. The single largest obligor is Sound Transit, an AA+ rated credit with \$3.8 billion of regional tax-backed loans, comprising 15 percent of the current portfolio.

Table 9. Ten Largest Active Obligations by Loan Security

Project	State	Security	Current Rating	Outstanding or Committed Balance (\$ Millions)	Percent Current Portfolio Volume
Central Puget Sound Transit (multiple projects) (a)	WA	Sales Tax	AA+	\$ 3,841	15.3%
Purple Line Light Rail Transit	MD	P3- MDOT Availability Payments	Baa3	\$ 1,760	7.0%
Transform 66 (Outside the Beltway)	VA	P3 - Toll Revenues	Baa3	\$ 1,331	5.3%
Capital Beltway HOT Lanes / Project NEXT	VA	P3 - Toll Revenues	Baa1	\$ 1,053	4.2%
I-4 Ultimate Improvements	FL	P3 – FDOT Availability Payments	Baa1	\$ 953	3.8%
LBJ Express / IH 635 Managed Lanes	TX	P3 - Toll Revenues	BBB	\$ 836	3.3%
Hampton Roads Bridge Tunnel Expansion	VA	Sales Tax	A-	\$ 818	3.3%

³⁴ Several TIFIA borrowers have taken out multiple loans funding different projects that are secured by the same pledged revenues; their loans are identically rated and are only counted once in this rating trend description.

³⁵ These figures exclude two non-performing loans that have been retired and include two others that have been restructured and now are rated investment grade.

³⁶ The “average” rating for the portfolio was calculated by assigning a score from 0 to 10 for loans based on each loan’s lowest rating (ranging from BB to AA+/AAA) and dollar-weighting the scores.

Project	State	Security	Current Rating	Outstanding or Committed Balance (\$ Millions)	Percent Current Portfolio Volume
Central Texas Reg. Mobility Auth. (multiple projects) (b)	TX	Toll Revenues	A3	\$ 708	2.8%
North Tarrant Express 35W (3A & 3B)	TX	P3 - Toll Revenues	BBB	\$ 654	2.6%
I-405 Improvement Project	CA	Toll Revenues	Baa2	\$ 629	2.5%
Total				\$ 12,583	50.3%

(a) Sound Transit projects are: East Link (\$1,330); Lynnwood Link (\$658); Federal Way Link (\$629); Northgate Link (\$615); Downtown Redmond Link (\$521); and Operations & Maintenance Facility East (\$88).

(b) CTRMA projects are US 183-S (\$312); US 183 North (\$250); US 183-A Phase III (\$107); and 290E Phase III (\$39).

5.5.3 BBB Rated Loans

Figure 8 shows the sources of security for the \$13.0 billion outstanding TIFIA loans rated in the BBB category, which is the lowest investment grade level of bond ratings, and riskiest element of the portfolio.³⁷ There are 30 such project loans. The tax-backed loans include some P3 transactions backed by availability payments. Both user charge-backed projects and availability payment projects can potentially receive rating upgrades once construction has been completed and the project becomes operational.

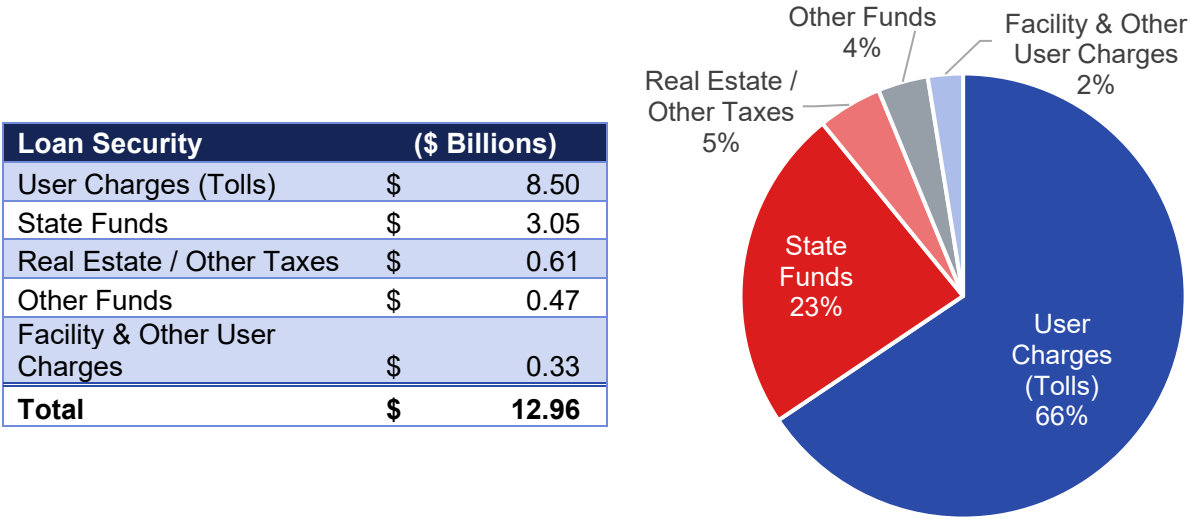


Figure 8. Sources of Security for Lower-Rated Active Loans

³⁷ Ten earlier projects initially rated in the BB category have been either liquidated, restructured, or retired.

5.5.4 Non-Performing Loans

In their early years of development, large infrastructure projects—especially start-up toll facilities—face construction completion risk, demand risk, and technology/performance risk (e.g., electronic toll collections), as well as other material risks such as *force majeure*. Of the 98 separate projects that the TIFIA program has assisted through FY 2022, four to date have encountered financial distress and borrower default on their loans.³⁸ The original principal amount of these four toll-backed loans was \$786 million, representing about 2.1 percent of the \$37.3 billion cumulative TIFIA lending activity (excluding refinancings). One of the loans was liquidated at a loss, and a second was restructured and several years later repaid with a full recovery of principal and accrued interest. A third loan was restructured with additional pledged security, obtained an “A” bond rating, and is meeting its repayment obligations. The fourth loan has been downsized and USDOT retains an ownership stake in the toll road, and its final outcome is unknown as of FYE 2022.

Each of the facilities has remained operational and open to traffic, conferring public benefits, notwithstanding default, bankruptcy, and/or restructuring. In this respect, transportation infrastructure differs from commercial enterprises receiving Federal credit assistance, which may cease operations and be liquidated in the event of financial distress.

The recognized losses are \$433 million, representing 1.2 percent of the capex loans made. Over the life of the program, the total credit subsidies set aside equal \$2.1 billion to cover the loans and commitments made thus far. The most recent OMB re-estimates of credit risk (changes in technical assumptions) forecast no increase in credit exposure from the original estimates.³⁹ Most transportation projects that encounter financial stress do so in the early years of operations. A recent rating agency report indicates that the default risk for municipal debt rated low-investment grade (Baa) is 1.06 percent, and virtually zero for higher-rated debt.⁴⁰

³⁸ One other project, Transbay Transit Center in San Francisco, restructured its \$171 million TIFIA loan in 2014 to accommodate a bridge financing covering additional project costs and delayed receipt of revenues from the sale of formerly State-owned parcels. It was retired with the proceeds of a tax-exempt bond issue in 2020.

³⁹ Source: *Credit Supplement FY 2023, Budget of the U.S. Government, Office of Management and Budget, Table 7*. The scored cost referenced above reflects creditworthiness and other technical assumptions. Under FCRA, the cost of any post-financial close re-estimates for both credit risk changes and interest rate changes not caused by discretionary loan modifications is funded out of permanent indefinite budget authority by the Treasury.

⁴⁰ Source: *US Municipal Bond Defaults and Recoveries, 1970-2021*, Moody's Investors Service, April 21, 2022. Recoveries following defaults vary widely; Moody's analysis of defaulted transportation bonds reported recoveries ranging from 2 percent to 100 percent of unpaid interest and principal.

Table 10. Status of Non-Performing Loans

Project	Year of Default	Initial Loan Amount	Revised Loan / Sale Proceeds	Recognized Loss	Status
		(\$ Millions)	(\$ Millions)	(\$ Millions)	
South Bay Expressway (formerly SR 125 South)	2010	\$ 140	\$ 168	\$ ---	Original concessionaire filed for bankruptcy in 2010. In 2011, the toll road was purchased by the San Diego Assoc. of Governments with the TIFIA loan being restructured. In 2017, the toll road repaid 100 percent of outstanding balance plus accrued interest. As a result, USDOT recognized no financial loss.
Pocahontas Parkway / Richmond Airport Connector	2014	\$ 150	\$ 60	\$ (90)	Following bankruptcy, the TIFIA loan was sold to lender for \$60 million.
LA 1 Toll Road Improvements	2013	\$ 66	\$ 122	\$ -	Initial subordinate TIFIA toll-backed loan was used to take out Bond Anticipation Notes. The TIFIA loan was later refinanced by a larger TIFIA loan that also refinanced other debt, with the new loan backed by State credit support. Currently, the TIFIA loan is rated Moody's A-1 / Fitch A.
SH130 (Segments 5-6)	2016	\$ 430	\$ 87	\$ (343)	Following bankruptcy, the TIFIA loan was written down to \$87 million and USDOT retains a 32% ownership interest in the new concession company.
Total		\$ 786		\$ (433)	

Source: Data on defaulted loan status and disposition provided by the Build America Bureau.

5.6 P3 Project Loans

Public-private partnerships—specifically, Design-Build-Finance-Operate-Maintain (DBFOM) contracts under long-term concessions from a State or other governmental entity—have been active users of Bureau financial assistance products. A trade publication that inventories P3 transactions documented 28 DBFOM concessions for new surface transportation projects nationwide that reached financial close since the implementation of the TIFIA program. Twenty-three of them (82 percent) used TIFIA loans and 16 of them (57 percent) used PABs.⁴¹

As shown in the right-hand pie chart in Figure 9, over half of the TIFIA-assisted P3 dollar volume involved “revenue risk” projects like toll roads (mostly express lanes) dependent on user charges. The remaining P3 projects were backed by availability payments, often with State DOTs (or other public transportation authorities) serving as the ultimate source of payment.

Because of the combined construction completion risk, performance risk, and (for toll roads) demand risk, these P3 projects often receive a low investment grade rating at the outset. Only 7 percent of the loan volume was associated with P3 projects which obtained initial ratings above BBB+. The left-hand pie charts summarize the rating classification of revenue risk vs. availability payment projects, with 100 percent and 84 percent, respectively, of the TIFIA loan volume for these two types of P3s being rated in the BBB or BB categories.

⁴¹ “U.S. Transportation PPP/Leases,” *Public Works Financing*, July 2022. Two more TIFIA-assisted projects have significant elements of private participation but do not involve long-term loans to a private sector concessionaire and therefore are not classified as P3s in this report. Northwest Corridor (\$275 million loan) in Georgia and Gilcrease Expressway (\$120 million loan) in Oklahoma are governmentally owned and operated facilities that utilized TIFIA for partial developer financing of construction costs. The developer financing was taken out at or shortly after the construction completion.

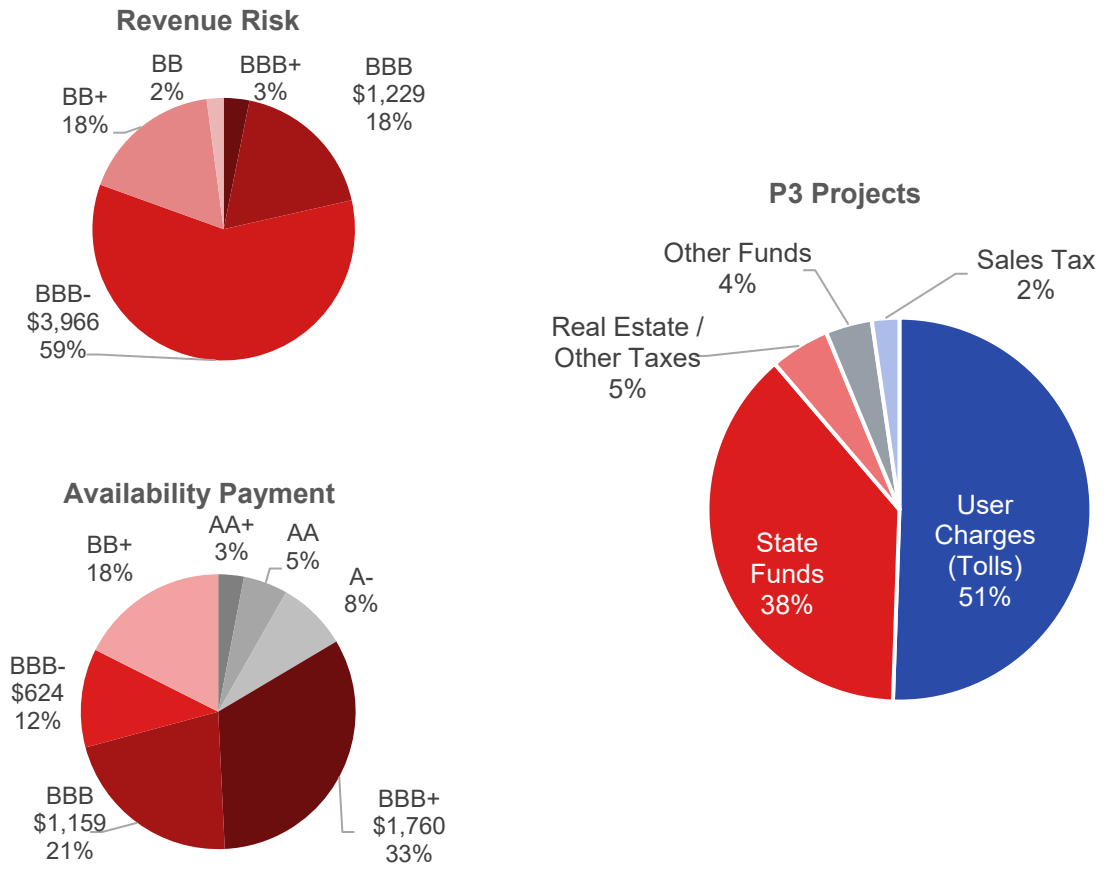


Figure 9. P3 Project Ratings and Sources of Security

Table 11. TIFIA-Assisted P3 Projects (Long-Term Concessions)

Initial Loan Cohort FY	Status	Project Name	Original Concessionaire / Public Sponsor (a)	Security	Total TIFIA Assistance (b) (\$ Millions)
2003	Retired	South Bay Expressway (formerly SR 125 South)	South Bay Expressway, L.P. (Macquarie)	Revenue Risk	\$ 140
2007	Retired	Pocahontas Parkway / Richmond Airport Connector	Transurban USA / VDOT	Revenue Risk	\$ 150
2008		Capital Beltway HOT Lanes (I-495)	Capital Beltway Express LLC (Transurban, Fluor) / VDOT	Revenue Risk	\$ 589
2008		SH130 (Segments 5-6)	SH130 Concession Company LLC (Cintra, Zachry) / TxDOT	Revenue Risk	\$ 430
2009		I-595 Corridor Improvements	I-595 Express LLC (ACS, TIAA) / FDOT	Availability Payment	\$ 603
2010		Port of Miami Tunnel	Miami Access Tunnel LLC (Meridiam, Bouygues) / FDOT	Availability Payment	\$ 341
2010	Retired	North Tarrant Express 1 & 2 (I-820 and SH121/183)	NTE Mobility Partners (Cintra, Meridiam, APG) / TxDOT	Revenue Risk	\$ 650
2010		LBJ Express / IH 635 Managed Lanes	LBJ Infrastructure Group LLC (Cintra, Meridiam, Dallas Police & Fire Funds, APG) / TxDOT	Revenue Risk	\$ 850
2012	Retired	Eagle Commuter Rail	Denver Transit Partners (Fluor, John Laing, Uberior) / Denver RTD	Availability Payment	\$ 280
2012		Elizabeth River Crossings (Downtown/Midtown Tunnels, MLK Ext.)	Elizabeth River Crossings LLC (Skanska, Macquarie) / VDOT	Revenue Risk	\$ 422
2012		Presidio Parkway (Phase II)	Golden Link Partners LLC (Hochtief, Meridiam) / Caltrans	Availability Payment	\$ 150
2013		I-95 HOV/HOT Lanes	I-95 Express Lanes LLC (Transurban, Fluor) / VDOT	Revenue Risk	\$ 300
2013		North Tarrant Express 35W Segments 3A & 3B	NTE Mobility Partners Segment 3 (Cintra, Meridiam, APG) / TxDOT	Revenue Risk	\$ 531
2014		Goethals Bridge Replacement	NYNJ Link Partnership (Macquarie, Kiewit) / PANYNJ	Availability Payment	\$ 474
2014		U.S. 36 Express Lane / BRT Phase 2	Plenary Roads Denver, Ltd. / CDOT	Revenue Risk	\$ 60
2014		I-4 Ultimate Improvements	I-4 Mobility Partners (Skanska, John Laing) / FDOT	Availability Payment	\$ 949

Initial Loan Cohort FY	Status	Project Name	Original Concessionaire / Public Sponsor (a)	Security	Total TIFIA Assistance (b) (\$ Millions)
2015		Southern Ohio Veterans Memorial Highway - Portsmouth Bypass	Portsmouth Gateway Group (ACS, Infrared Capital, Star America) / ODOT	Availability Payment	\$ 209
2015	Retired	Ohio River Bridges - East End Crossing	WVB East End Partners (Walsh, Vinci, Bilfinger) / INDOT through Indiana Finance Authority	Availability Payment	\$ 162
2015		I-77 Express Lanes	I-77 Mobility Partners LLC (Cintra, Aberdeen, John Laing) / NCDOT	Revenue Risk	\$ 189
2016		SH-288 Toll Lanes	Blueridge Transportation Group LLC (ACS, InfraRed Capital, Star America) / TxDOT	Revenue Risk	\$ 357
2016		Purple Line Light Rail Transit	Purple Line Transit Partners LLC (Meridiam, Fluor, Star America) / MDOT	Availability Payment	\$ 1,760
2017		Moynihan Train Hall Project	Joint Venture of Related / Vornado / NYUDC	Revenue Risk	\$ 607
2018		Transform 66 - Outside the Beltway	I-66 Express Mobility Partners (Meridiam, Cintra, APG, John Laing) / VDOT	Revenue Risk	\$ 1,229
2018		Central 70 (Denver I-70 East Reconstruction)	Kiewit Meridiam Partners LLC	Availability Payment	\$ 443
2022		Capital Beltway Express - Northern Extension (Project NEXT)	Capital Beltway Express LLC (Fluor, Transurban) / VDOT	Revenue Risk	\$ 212
Total	25				\$ 12,088

(a) The direct obligor on the Eagle Commuter Rail loan is Denver RTD, not Denver Transit Partners (the concessionaire).

(b) TIFIA Assistance represents the face amount of the capex loan, excluding any accreted interest capitalized in a refinancing.

5.7 Capital Structure of P3 Concessions

To better illustrate how P3 concessionaires have assembled their plans of finance, the following bar charts weigh each project equally (regardless of dollar amount) and indicate the percentage of funding derived from each capital source. As shown in Figure 10, the capital structure of P3 project financings varies significantly depending upon whether a project has revenue risk—user fees from tolls or other sources—versus an availability payment structure, where revenue is not dependent on utilization levels. The two major differences in the funding stack of TIFIA-assisted revenue risk vs. availability payment projects are in the percentage of public grants and the extent of private equity invested. The availability payment projects typically have received twice the level of public funding contributions as the revenue risk projects—41 percent compared to 21 percent. The availability payment projects have had lesser amounts of equity, ranging from 3 percent to 11 percent (with an average of 6 percent of sources) compared to the toll-backed projects that have required three to four times more equity, ranging from 13 percent to 45 percent (with an average of 24 percent of sources).

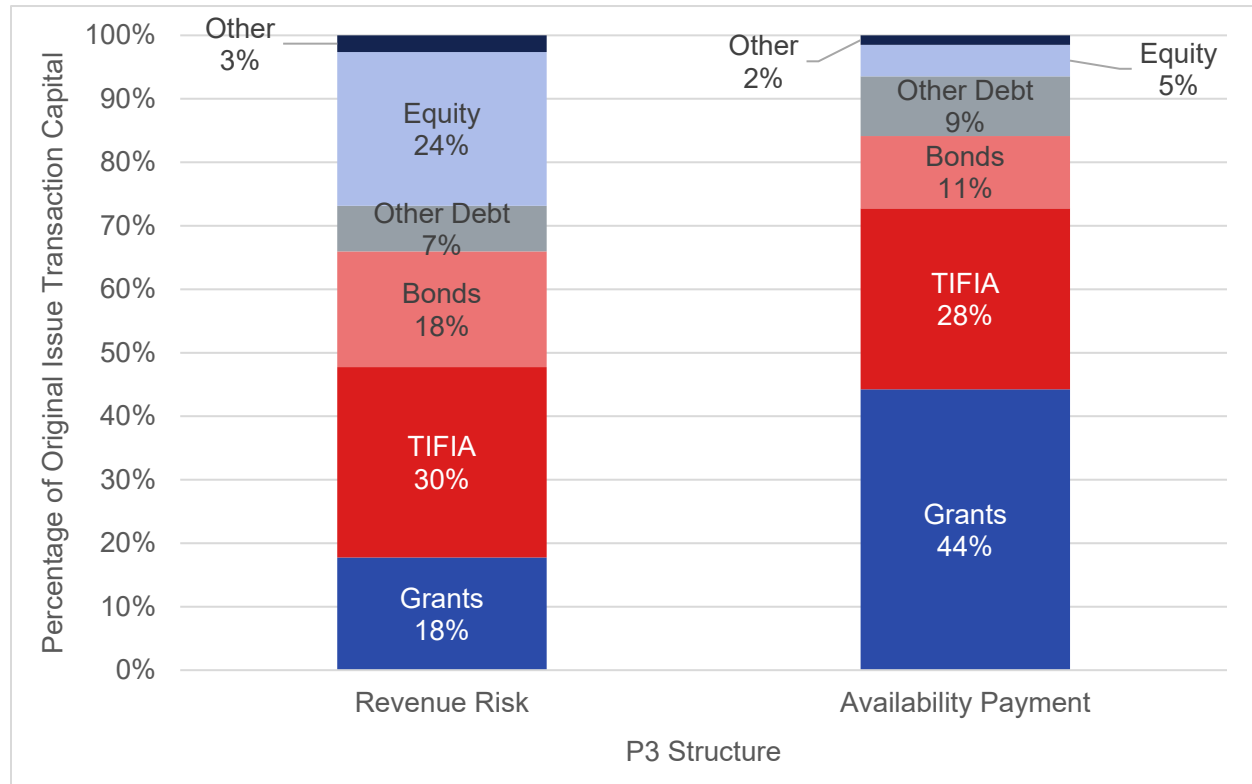


Figure 10. P3 Capital Stack Comparison

The greater degree of uncertainty for revenue risk projects necessitates a larger equity contribution to reassure lenders reliant upon project-generated revenues for debt repayment. For projects where a governmental entity like a State DOT is willing to remove the revenue risk from the equity sponsor (as well as much of the upside potential returns), the amount of equity can be reduced to a level that lowers the weighted average cost of capital but still incentivizes

the private operator to optimize performance while achieving a lower cost of capital. The contrast in the composition of the capital stack between revenue risk and availability payment transactions results from the governmental project sponsors' differing strategic objectives.⁴²

Many P3 projects rely on another important source of capital accessed through the Bureau—Private Activity Bonds (PABs). The Bureau administers the allocation of a PAB program first authorized with a \$15 billion volume cap under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) that was expanded to \$30 billion under IIJA. This tax incentive is codified in section 142(a)(15) of the Internal Revenue Code for “qualified highway or surface freight transfer facilities.”

This section 142(a)(15) PAB provision applies to a much wider array of projects than its title implies, since any project that receives Federal assistance under title 23 (highways) or chapter 53 of title 49 (transit capital) may be eligible. Thus, a transit project receiving TIFIA assistance can also utilize section 142(a)(15) PABs and—unlike the “mass commuting facilities” PAB provisions under section 142(a)(3)—rolling stock can be financed as well as facilities.⁴³

To date, 18 project sponsors (including one Design-Build-Finance project) have combined \$8.8 billion of TIFIA loans with \$7.0 billion (face amount) of PABs allocated by USDOT.⁴⁴

Table 12. Combining TIFIA Loans with Private Activity Bonds

FY Cohort	Project	Total TIFIA Assistance (\$ Millions)	Total PABs (a) (\$ Millions)
2008	Capital Beltway HOT Lanes (I-495)	\$ 589	\$ 589
2010	North Tarrant Express 1 & 2 (I-820 and SH121/183)	\$ 650	\$ 400
2010	LBJ Express / IH 635 Managed Lanes	\$ 850	\$ 615
2012	Eagle Commuter Rail	\$ 280	\$ 398
2012	Elizabeth River Crossings (Downtown/Midtown Tunnels, MLK)	\$ 422	\$ 675
2013	I-95 HOV/HOT Lanes	\$ 300	\$ 242
2013	North Tarrant Express 35W Segments 3A & 3B	\$ 531	\$ 274
2014	Goethals Bridge Replacement	\$ 474	\$ 461
2014	US 36 Express Lane / BRT Phase 2	\$ 60	\$ 20
2015	Southern Ohio Veterans Mem. Highway - Portsmouth Bypass	\$ 209	\$ 227

⁴² The Bureau provides a comprehensive summary of these capital structure issues on its website under “Financial Structuring and Assessment for Public-Private Partnerships: A Primer” https://www.fhwa.dot.gov/ipd/p3/toolkit/publications/primers/financial_structuring_and_assessment/ch_5.a.spx

⁴³ The Eagle Commuter Rail project in Denver is an example of TIFIA assistance broadening the access to tax-exempt financing for a transit P-3 project.

⁴⁴ Approximately \$16.9 billion of the \$30 billion PAB volume cap has been utilized as of June 2023, with another \$2.8 billion provisionally allocated.

FY Cohort	Project	Total TIFIA Assistance (\$ Millions)	Total PABs (a) (\$ Millions)
2015	Ohio River Bridges - East End Crossing	\$ 162	\$ 677
2015	I-77 Express Lanes	\$ 189	\$ 100
2016	SH-288 Toll Lanes	\$ 357	\$ 273
2016, 2022	Purple Line Light Rail Transit	\$ 1,760	\$ 956
2018	Transform 66 - Outside the Beltway	\$ 1,229	\$ 737
2018, 2021	Central 70 (Denver I-70 East Reconstruction)	\$ 443	\$ 120
2020	Gilcrease Expressway - West	\$ 120	\$ 125
2022	Capital Beltway Express - Northern Extension (Project NEXT)	\$ 212	\$ 112
Total		\$ 8,837	\$ 7,001

(a) The face amount of PABs does not reflect additional proceeds that were generated by selling the bonds at a premium with an above-market coupon, an approach used by some P3 issuers.

6 LEGISLATIVE EVOLUTION

Under the four successive multi-year reauthorizations following TEA-21 (SAFETEA-LU, MAP-21, FAST, and IJJA), Congress has made various modifications to the TIFIA program. These changes generally relax some of the program parameters and requirements, resulting in broader eligibility and more flexible terms. Some of the more significant changes are summarized in the table below.

Table 13. Key Changes in TIFIA Legislative Provisions

Program Feature	Initial TIFIA Legislation	TIFIA Today
Maximum Loan Share:	33% of eligible project costs	49% of eligible project costs. Recent Departmental policy has limited this maximum to certain types of projects: <ul style="list-style-type: none"> • Transit projects • Rural projects • Transit-Oriented Development • INFRA Extra grant candidates <p>All other project types have been limited to 33% by DOT policy.</p> <p>SIBs can obtain a TIFIA loan and relend the proceeds to local borrowers for rural projects for up to 80% of eligible project costs.</p>
Maximum Maturity:	<ul style="list-style-type: none"> • 35 years after substantial completion 	<ul style="list-style-type: none"> • Extended to up to the lesser of 75 years after substantial completion or 75% of useful life of project (for eligible projects)
Credit Quality:	<ul style="list-style-type: none"> • Senior Project Debt must be rated BBB- or higher • 2 ratings required for projects greater than \$75 million • No requirement for a rating on a subordinate TIFIA loan 	<ul style="list-style-type: none"> • Only 1 rating required for projects under \$150 million • Both Senior Project Debt and TIFIA Loan must be rated BBB- or higher
Project Size:	<ul style="list-style-type: none"> • \$100 million minimum eligible project cost (generally) • \$30 million minimum for Intelligent Transportation System (ITS) projects 	<ul style="list-style-type: none"> • General threshold minimum reduced to \$50 million • \$15 million for ITS • \$10 million for rural projects • \$10 million for Local Infrastructure Projects • \$10 million for Transit-Oriented Development
Types of Projects:	<ul style="list-style-type: none"> • Highway (title 23) and Transit (chapter 53 of title 49); intercity bus and passenger rail vehicles and facilities; various other surface transportation 	<p>Previous list of eligible projects plus:</p> <ul style="list-style-type: none"> • State Infrastructure Banks • Surface access and intermodal transfer projects within port terminals

Program Feature	Initial TIFIA Legislation	TIFIA Today
		<ul style="list-style-type: none"> Natural habitats that mitigate impact of transport projects Most types of airport projects through FY2025 Transit-oriented development projects through FY 2026
Selection Criteria	<ul style="list-style-type: none"> Listed 8 selection criteria (economic significance, private participation, creditworthiness, etc.) with specific weighting factors to evaluate projects 	<ul style="list-style-type: none"> Removed discretionary criteria from project selection, allowing applicants meeting threshold eligibility and credit standards to access assistance within funding availability
Expedited Processing:	<ul style="list-style-type: none"> No provision 	<ul style="list-style-type: none"> USDOT commitment to try to complete application processing within 150 days of receipt of a letter of interest. Master credit agreement (for projects under a common plan of finance with dedicated tax revenue pledge) TIFIA Lite (loans of up to \$100 million backed by general obligation or dedicated tax streams with standard loan terms)
Excess Revenues:	<ul style="list-style-type: none"> A portion of excess revenues must be used to prepay the TIFIA loan 	<ul style="list-style-type: none"> No requirement to apply excess revenues to prepay TIFIA loan
Subordination:	<ul style="list-style-type: none"> Any junior TIFIA loan reverts to parity in the event of bankruptcy following default. 	<ul style="list-style-type: none"> TIFIA may remain truly subordinate for TIFIA loans of up to 33 percent of eligible costs made under an existing indenture with outstanding debt for TIFIA loans rated A or higher and secured by a dedicated tax or system-backed revenue pledge not affected by project performance.

7 PROGRAM ADMINISTRATION

TIFIA's enabling legislation directed the U.S. Secretary of Transportation to implement the program. Since then, multiple offices have administered TIFIA and its changing authorities. After enactment in 1998, USDOT established the TIFIA Joint Program Office (JPO) in the Federal Highway Administration (FHWA). The Secretary also established the multi-agency TIFIA Credit Council, with representatives from the Office of the Secretary and key operating administrations (OAs). In 2015, the FAST Act authorized the Secretary to establish the National Surface Transportation and Innovative Finance Bureau, doing business as the Build America Bureau (Bureau).⁴⁵ Staff from the FHWA's JPO and the Federal Railroad Administration's Railroad Rehabilitation and Improvement Financing (RRIF) credit program team became staff of the newly created Bureau.

The Bureau draws on expertise and resources throughout the Department to serve as the point of coordination for States, municipalities, and project sponsors interested in Federal transportation credit assistance, access to private capital, or PABs. The Bureau offers technical assistance and grant programs to support project planning, development, and financing strategies to deliver transformative infrastructure in the United States. As a repository of financial expertise within USDOT, the Bureau helps borrowers combine Federal grants, credit assistance, and tax incentives. The Bureau also develops DOT-wide policies to improve transportation infrastructure financing and project delivery and leads initiatives to facilitate public and private financing approaches across transportation modes and asset types. Its portfolio now includes: the TIFIA and RRIF credit assistance programs; four technical assistance grant programs—Asset Concessions and Innovative Finance, Rural and Tribal Assistance, Thriving Communities (with the Office of the Secretary), and Regional Infrastructure Accelerators (with FHWA); and allocations of PABs authority.

The Bureau (like its predecessor JPO) partners with the OAs to help project sponsors deliver infrastructure projects. Through the lifecycle of a USDOT-financed project, the Bureau and its customers rely on the OAs to interpret, apply, and administer compliance with such Federal requirements as the National Environmental Policy Act (NEPA), Civil Rights Act, and Uniform Relocation and Assistance Act. Before the Bureau completes a financial close, the lead OA confirms that the borrower and the project comply with all applicable Federal requirements. During project delivery, the lead OA (typically through its field staff) monitors technical progress, budget, schedule, and compliance with continuing Federal requirements, such as prevailing wages and domestic content. When borrowers seek to draw funds from their loans, the lead OA determines whether their requests reflect eligible and reasonable costs. As borrowers repay their loans, the lead OA helps the Bureau ensure the projects meet operation and maintenance commitments.

A brief discussion of the RRIF credit program is relevant to an analysis of TIFIA because certain projects are eligible for both programs, and in fact two projects to date have utilized both programs.⁴⁶ Through the RRIF credit program, USDOT can provide up to \$35 billion of Federal credit assistance for up to 100 percent of railroad project costs. Approximately \$7.1 billion of

⁴⁵ In addition, the TIFIA Credit Council became the Council on Credit and Finance.

⁴⁶ The Denver Union Station redevelopment project received loans under both the TIFIA and RRIF programs, and the Massachusetts Bay Transportation Authority refinanced its FY2018 TIFIA loan with a RRIF loan in FY2020.

RRIF loans had been made, as of January 2023. For the two decades of the RRIF program, Congress did not appropriate funds to pay the subsidy costs (required capital reserves) of RRIF loans, so borrowers or others had to fund that upfront cost. In 2018, Congress appropriated \$25 million to cover such costs for risk premiums. The IIJA authorized an additional \$50 million per year through FY 2026 for RRIF subsidy costs, but Congress has not appropriated those funds.

The Bureau also administers the allocation of the \$30 billion volume-capped PAB program, as described in Section 5.7 of this report. State and local officials, construction companies and other industry stakeholders are actively exploring how the expanded and extended capacity of the PAB, RRIF and TIFIA programs can assist them in advancing their projects.

In any given month, the Bureau has initial consultations and workshops with dozens of project sponsors about tens of billions of dollars in loans and infrastructure spending. As project sponsors continue discussions with the Bureau and submit draft LOIs, the Bureau adds these projects to its tracking pipeline, which also includes projects in creditworthiness review. As of August 2023, the Bureau’s pipeline comprised 38 projects and \$21 billion of loans for \$52 billion of total project investments (Table 14). Whether, and when, individual loans reach financial close depends on each project’s technical, financial, and political circumstances; the project sponsors’ commitments on other projects; and various legal, regulatory, and policy determinations.

Table 14. Build America Bureau Credit Programs Pipeline (August 2023)

Type	Number of Projects	Loan Amount	Project Cost
Highway	10	\$ 4,427	\$ 13,538
Transit	12	\$ 10,530	\$ 26,855
Transit-Oriented Development (TOD)	7	\$ 3,945	\$ 5,432
Rail	3	\$ 121	\$ 136
Seaport	3	\$ 1,038	\$ 3,144
State Infrastructure Bank	1	\$ 75	\$ 150
Airport	2	\$ 979	\$ 2,795
Total	38	\$ 21,114	\$ 52,050

8 SUMMARY OF FINDINGS

The TIFIA program, enacted 25 years ago as part of TEA-21, has become a key component of USDOT's strategy to induce additional capital investment in the transportation sector. Through FY 2022, the Build America Bureau and its predecessor, the Joint Program Office, have made 129 loans to 98 unique projects totaling \$47.5 billion of loan volume (\$37.3 billion of "capex" loans and \$10.2 billion of refinancings) associated with \$132.2 billion of total capital investment.

The loans range in size from \$8.4 million (for a \$17 million bus garage for the Monterey-Salinas Transit District in California) to \$1.76 billion (to Purple Line Transit Partners to help finance construction of a \$5.4 billion light-rail line in the Maryland suburbs of Washington, DC). The average level of credit assistance per project is \$380 million (\$250 million median size). About 63 percent of the loans have been for highway projects and 31 percent have been for transit projects. Over half of the dollar volume of loans has been secured by user fees such as tolls and facility charges. TIFIA has assisted 25 P3 long-term concession (DBFOM) projects with \$12.1 billion of loans; 15 of the P3 project loans had "revenue risk" and 10 were backed by availability payments from State DOTs and other public agencies.

The TIFIA program has performed very well financially compared to OMB's official assessments of the program's credit risk. One-third of the portfolio (\$12.6 billion) has been prepaid in full or otherwise retired, and the Bureau has set aside sufficient budgetary resources (obligations of subsidy funding totaling nearly \$2.1 billion) to cover the recognized losses incurred to date (\$433 million).

Over four successive reauthorization bills, Congress has broadened the program beyond its initially contemplated role of a niche financing tool to help start-up mega projects gain market access. The minimum threshold size has been reduced from \$100 million to \$50 million (and as low as \$10 million for certain types of projects). The range of eligible projects has been expanded from large surface transportation projects of national and regional significance to include smaller local projects, SIBs, airports, natural habitats, and TOD projects. The TIFIA funded share of eligible costs has been increased from 33 percent to 49 percent, although under current USDOT policy this is limited to rural projects, transit projects, TOD projects, and certain INFRA grant applicants. The number of required ratings has been reduced from two to one for projects under \$150 million, up from \$75 million in the original TIFIA statute.

A key feature of the program that has evolved relates to the "springing lien" provision, under which the TIFIA loan, if structured with a junior claim on borrower revenues, elevates to parity status in a bankruptcy-related event. Congress later amended the original statutory non-subordination provision to direct the Secretary to waive the springing lien for certain less risky projects with public agency borrowers (specifically, for loans under preexisting indentures backed by dedicated taxes or system revenues and rated A- or higher). This has allowed TIFIA to serve as a source of subordinate capital. For other projects—especially start-up toll roads with revenue risk—the Bureau has sought to achieve "functional subordination" by sculpting the TIFIA loan amortization schedule to be back-end loaded and allowing a portion of debt service to be deferrable to later years, if required (scheduled debt service vs. mandatory debt service).

Congress has modified the TIFIA statute to require a streamlined application process, and major strides have been made to speed up the loan processing time and provide applicants with more communication and better transparency about their status. Yet many stakeholders believe the process is still too cumbersome and time-consuming, further delaying projects that already face a lengthy development period in obtaining governmental approvals. Managing expectations of

potential borrowers and achieving the right balance between facilitating projects in the pipeline and performing due diligence with respect to both creditworthiness and the usual Federal requirements remain major challenges for the Bureau.

Looking back at the six original precepts reflected in both the statute and the initial Program Guide that effectively became TIFIA's mission statement, one can compare where the program is today to what was initially contemplated:

- **Assisting Projects of National Significance.** TIFIA has helped 50 projects with capital costs of over \$1 billion each obtain financing on affordable and flexible terms, enhancing the capital stock of the Nation's surface transportation sector. Over the last decade TIFIA financing has totaled approximately 11 percent of the "capex" issuance of municipal obligations for surface transportation projects. TIFIA has been used in tandem with the Bureau's PAB program, assisting 18 different projects. At the same time, legislative provisions expanding access to smaller projects in rural areas or sponsored by local governments have broadened the program's mandate. Since FY 2020, the Bureau has closed 7 loans for projects costing less than \$100 million, including 4 loans to projects under \$50 million.
- **Encouraging New Revenues.** The TIFIA program can point to 50 revenue-generating projects it has assisted (both governmental and P3) where the new facilities generate incremental revenues through tolls and other charges that add to the resources funding capital investment. In addition, TIFIA has assisted 2 value capture projects—Denver Union Station and Transbay Terminal (CA)—that generated new tax-based revenue streams. The balance of the portfolio (slightly over half) is associated with projects drawing upon existing revenue streams.
- **Limit Federal Exposure.** The TIFIA portfolio's realized losses to date have been about 1.2 percent of loan commitments, and the budget authority scored against those loan commitments (about 5.5 percent on average through FY 2022) appears to adequately cover expected losses. The combination of co-investment by the capital markets or institutional lenders and ratings-based capital charges to cover credit risk has helped the TIFIA program maintain financial discipline.

The overall credit quality of the portfolio has improved over time from a weighted average of BBB+ to A- due to both loan prepayments and de-risking of many projects once construction has been completed and revenues have stabilized. P3 project sponsors have a particular incentive to "graduate" from Federal credit as quickly as practicable to give borrowers greater flexibility with respect to TIFIA loan agreement financial covenants, such as dividend distribution tests. For the toll-backed projects that have experienced financial stress, bankruptcy is not necessarily the "end of the road." Downsizing debt and taking an equity position provides an opportunity for recovering at least a portion of the defaulted loan. Regardless of the final resolution of a non-performing loan, the transportation asset that was financed gets built and remains available to the public. This distinguishes TIFIA from other Federal credit programs oriented to commercial enterprises, where the long-term recovery prospects and residual public benefits are limited once a borrower defaults.

- **Make Credit Available on Equitable and Uniform Terms.** TIFIA has been employed by 70 different obligors located in 22 States along with the District of Columbia and the Commonwealth of Puerto Rico, making it a truly nationwide resource. The Bureau regularly markets its financial products to State, local, and private sector project sponsors at industry

conferences and through other outreach measures. Some stakeholders have opined that the elimination of the discretionary criteria for project selection has made the application process appear more transparent and less subjective, with a primary focus on borrower creditworthiness. However, some also note that USDOT policy allows only certain projects (rural, transit, TOD and INFRA) to receive the maximum loan size permitted by statute (49 percent of project costs).

- **Target Capital Market Gaps.** Initially, TIFIA was conceived as addressing a perceived market gap of access to capital, helping start-ups attain investment-grade status through providing supplemental and subordinate capital. More recently, TIFIA has evolved to address a different type of market impediment: inefficiencies that have created transactional friction for project sponsors. Especially during times of low short-term reinvestment rates, TIFIA has become a valuable construction financing mechanism. The program has enabled issuers to lock in long-term financing at attractive rates without having to draw down the entire amount of TIFIA proceeds upfront (as they would in the municipal bond market). This structural element has reduced the substantial “negative carry” on borrowed funds that sponsors otherwise would incur (estimated in present value terms at about 4 percent of the amount borrowed in recent years). The combined features of the program (staged drawdown only as funds are needed for construction, a competitive borrowing rate, repayment schedules sculpted to meet forecasted cash flows, and prepayment ability without penalty at any time) have given project sponsors much greater flexibility—and cost-effectiveness—in meeting their capital needs.

And, during the pandemic, the expanded use of the program to refinance over \$9 billion of existing TIFIA obligations at lower interest rates provided relief to transportation agencies facing diminished revenue streams from user charges and dedicated taxes. The net effect of the TIFIA program’s evolution has been to allow its Federal credit assistance to financially benefit not just start-up user-charge financings but a wider array of governmental and private sector project sponsors. The initial focus on facilitating market access has evolved to improving market efficiency.

- **Enlist State and Local Participation.** State and local governments continue to be actively engaged in the pre-development identification, vetting, and approval of projects, whether they are delivered and operated by governmental or P3 entities. They still have a leading role in making sure projects go through the public planning and approval processes and satisfy applicable requirements. Each project sponsor is required to provide regular updates on the construction, operation, and financial status of the project.

In summary, the TIFIA program has been actively utilized and prudently managed and has met many of its original objectives. Over several reauthorization cycles, Congress has broadened its initial focus on major surface transportation projects of national significance by adding a wide array of other transportation-related purposes.

9 OPPORTUNITIES AND CHALLENGES

Over the past two decades, Congress has extended the TIFIA program, increased its funding, expanded the types of projects eligible for credit assistance, and modified other terms under which such assistance can be provided. The resulting program activity has led many stakeholder groups—including prior and potential borrowers as well as various industry participants—to comment on program policies and practices. This section briefly summarizes some of the stakeholder views about the opportunities and challenges facing the program.

The authors compiled this distillation of stakeholder views based on testimony, reports, and other documents from recent years, as well as interviews during the first quarter of 2023 with individuals and groups involved in infrastructure finance and development. The views expressed herein are intended to prompt constructive dialogue about the current position and future path of the TIFIA program and do not necessarily reflect the views of the Build America Bureau or USDOT. The Bureau does not endorse or reject the views presented below. It should be noted that some of the ideas presented would require legislative changes for implementation.

9.1 Applying the TIFIA Template to New Project Types

The FAST Act authorized TIFIA to finance TOD projects, capitalize rural project funds, and assist local infrastructure projects with a minimum size threshold of \$10 million (the original TIFIA statute had set a minimum size for most projects of \$100 million). The IIJA modified the TOD authorization and extended the availability period through FY 2026. The IIJA also expanded TIFIA eligibility to include most types of airport projects through FY 2025. Each of these provisions is briefly addressed below.

9.1.1 Transit-Oriented Development Projects

The Secretary may use up to 15 percent of the annual program funding to provide TIFIA assistance to TOD projects, which are economic development projects defined as “public infrastructure” improvements generally within ½ mile (walking distance) of a passenger rail station or similar transit facility. The minimum project size is \$10 million, and a candidate project must have an approved letter of interest (LOI) confirming eligibility by the end of FY 2026. The Bureau interprets the TIFIA statutory language defining TOD as a “project to improve or construct public infrastructure” to mean civil infrastructure or governmentally owned buildings, or other infrastructure and activities that prepare a site for development (e.g., demolition of existing structures or construction of building foundations or utility connections). The TIFIA share of eligible costs under current policy is the statutory maximum of 49 percent. The Bureau expects that, under the current framework, those projects most likely to receive TOD assistance under TIFIA will be joint development projects of public structures at or near transit stations, such as public office buildings, educational facilities or parking garages.

The RRIF program has a TOD provision that is broader, encompassing both commercial and residential development beyond public infrastructure. A TOD loan through RRIF can fund up to 75 percent of eligible project costs. And RRIF does not require loans to have an investment-grade rating, which likely would be a barrier to many real estate-oriented developments.

Stakeholder groups that the authors interviewed in assessing TOD opportunities noted the programmatic disconnect between TIFIA, which is well-funded but has relatively narrow eligibility, and RRIF, which under IIJA has more limited authorized funding (\$50 million per year vs. \$250 million for TIFIA) but broader eligibility. A large TOD project determined to be outside

the “public infrastructure” scope of TIFIA might be left with RRIF as a Bureau financing option. While RRIF does not have an investment-grade rating requirement and can finance a larger share of project costs, those features might cause the borrower to have to pay a sizable credit risk premium for its loan if RRIF’s budget authority is unavailable, thereby making RRIF cost-prohibitive.⁴⁷

Some industry participants are focused on the economics of residential developments—including affordable housing—near rail stations and transit facilities. If such projects should be deemed eligible for TIFIA, one possible workaround for the rating requirement would be to seek amendatory legislation authorizing a “loans to lenders” structure similar to the potential capitalization of a rural projects fund by a SIB (as authorized by the FAST Act). It would involve the Bureau lending not directly to projects but to a financial institution intermediary with an investment-grade rating that would on-lend the funds to a TOD project sponsor. The financial institution would assume the responsibility for repaying the TIFIA loan regardless of the status of the underlying TOD loan, so its credit, not the project credit, would secure the TIFIA loan.

To further promote affordable housing being developed near rail or transit stations, another option might entail allowing the U.S. Department of the Treasury to stand in for the rating agencies to assess the creditworthiness of the borrower. For example, the Treasury currently supervises hundreds of community development financial institutions (CDFIs), including many that are active in the low-income and affordable housing sectors. Most of the CDFIs lack investment-grade bond ratings. The Treasury could opine on the creditworthiness of the CDFI lenders to help the Bureau determine the degree of risk involved in extending credit assistance through them to assist such TOD projects.

9.1.2 Airport-Related Projects

The IIJA authorized TIFIA to make loans for airport-related projects (as defined in the passenger facility charges section of title 49), including airport development and planning, terminal improvements, and construction of gates and other facilities enhancing passenger-handling capacity. The Secretary may use up to 15 percent of the annual program funding (and up to 15 percent of the unobligated carryover balance as of the beginning of FY 2022) to help advance such projects, and a candidate project must have an approved LOI confirming eligibility by the end of FY 2025. Until the passage of IIJA, airports had not had access to Federal credit support for airside facilities.⁴⁸

The Bureau has met with both airport operator industry groups and project sponsors to gauge their interest in utilizing TIFIA to help finance airport capital programs. In general, the response has been positive—TIFIA financing is seen as a viable, cost-effective way to leverage general

⁴⁷ To the extent there is insufficient Federal funding available to cover the subsidy cost of a RRIF loan, the borrower must overcollateralize its loan and/or pay an upfront “credit risk premium” to secure its loan. TOD sponsors and stakeholders the authors spoke with are not optimistic that RRIF assistance would be viable in such a situation.

⁴⁸ Prior to IIJA, airport surface access and onsite intermodal projects such as consolidated rental car facilities were deemed eligible and have obtained credit assistance (e.g., in Chicago, Miami, and Warwick, RI).

airport revenues and augment other debt financing tools. Many of the potential projects involve terminal improvements at airports.

Some stakeholders have expressed concern about the length of time that might be required to navigate the loan process as compared to issuing General Airport Revenue Bonds (GARBs). Most parties assume that confirming program eligibility and satisfying Federal requirements will be achievable, especially for airports that already receive FAA grants. One technical issue that needs to be addressed is the TIFIA requirement that a project be included in a State's adopted Statewide Transportation Improvement Program and therefore be approved by a metropolitan or regional planning organization in its multi-year program. While this is standard practice for highway, transit and other surface transportation projects, airport projects have a different public planning process and typically are not included in such plans. As a legal matter, it might be possible for the Secretary to waive this requirement for potential airport projects if the airport operator has followed the appropriate planning process and the project is contained in the airport layout plan approved by the FAA.

The Bureau continues to evaluate options to augment internal expertise in surface transportation with modal and other expertise in these new sectors such as airport-related projects and residential TOD projects. According to some stakeholders interviewed by the authors, the underwriting of broader-purpose TIFIA loans will require the active engagement of experienced staff from the modal agencies who have the requisite sector expertise.

9.2 TIFIA Program Risk Tolerance and Funding Level

Given the investment-grade requirement for TIFIA loans and the very low credit risk scores associated with them (currently averaging 1 to 2 percent of the loan face value, excluding interest rate effects), the potential loan volume in coming years is exceptionally large. The IJA authorized \$250 million per year of funding through FY 2026 and the TIFIA program is maintaining a large carryover balance (\$1.75 billion at the start of FY 2023). These budgetary resources could support a future program many times the size of the current program, which over the last decade has averaged \$140 million of subsidy cost annually in support of an average \$2.75 billion per year of capex loans. The large amount of budgetary resources currently available to the program offers opportunities to consider expanded and alternative assistance to project sponsors.

9.2.1 Considering New Projects with More Risk

The Bureau to date has not made loans for any ITS or TOD projects, which are subject to greater long-term exposure to technology risk and real estate development risk, respectively. Some stakeholders suggested a willingness to take on an increased shared risk with the Bureau in financing these types of projects. They recommend that policymakers reconsider the investment-grade requirement for certain non-traditional projects that require a more substantial subsidy to get financed. This concept suggests creating separate program tranches with different risk expectations and subsidy costs.

9.2.2 Considering More Projects with 49 Percent Loans and Subsidized Interest

Some stakeholder groups perceive an uneven playing field with respect to which types of projects are eligible to receive the maximum 49 percent loan share of project costs (currently rural, transit, TOD and INFRA projects) compared with all other borrowers whose loans are capped at 33 percent of project costs as a matter of USDOT policy. They argue that providing

more (or even all) borrowers with the maximum 49 percent loans would be fair and easily affordable in the current situation. They also argue that interest rates could be further subsidized for more than just rural projects, though perhaps not necessarily to the extent of the rural projects' 50 percent discount off the Treasury rate. The Bureau's special initiative to refinance TIFIA loans (lowering their interest rates) to help borrowers deal with reduced pledged revenues caused by the pandemic illustrated the financial benefit of subsidized interest rates.

9.2.3 Considering Project Development Grants

Some stakeholders expressed the need for greater assistance to assess the need, purpose, and viability of potential projects. This perspective focuses on the many challenges—including legal, procedural, and public involvement—that infrastructure projects face before examination of funding and financing options. For example, the National Surface Transportation Infrastructure Financing Commission recommended the creation of a Pre-Construction Feasibility Assessment Grant Program to help State and local sponsors “undertake early planning, feasibility studies, environmental clearance, procurement, and other development activities.”⁴⁹ That recommendation was for the authorization of a \$100 million per year grant program alongside a \$300 million per year TIFIA credit authorization. Other stakeholders were skeptical of providing major feasibility grants to individual projects as being too speculative. These stakeholders suggested any such “pipeline seeding” should be provided to State, regional or local governments that are advancing long-term multi-faceted capital programs with more likelihood for successfully advancing viable projects that could then be considered for TIFIA financing.

9.3 Bureau Resources and Internal Capacity

The expanded project portfolio and future pipeline generated stakeholder discussion about the Bureau's capacity and resources to manage the TIFIA program. The increases in project eligibility and scope have led to a much larger and more diverse stakeholder community for the TIFIA program. The Bureau's activities within USDOT that are associated with its core credit program management role continue to expand. While various stakeholders acknowledge the growing breadth and depth of the Bureau's responsibilities, they nonetheless believe they require more attention and focus from the Bureau particularly for their respective active and future loans.

9.3.1 Managing a Growing Pipeline

This report analyzes the TIFIA program activity from implementation in FY 1999 through FY 2022, a span of 24 years that included over \$47 billion of financing commitments through 129 loans to 98 distinct projects. As noted previously, the Bureau has identified (as of August 2023) another 38 potential projects in its credit programs pipeline with tentative loan amounts totaling \$21 billion associated with approximately \$52 billion of total project investment (with many more prospective project sponsors engaging in pre-pipeline discussions). Effective management of this volume of loan activity—including satisfying the requirements of borrowers, applicants, sponsors and other stakeholders—will require significant resources. Those include resources

⁴⁹ Report of the National Surface Transportation Infrastructure Financing Commission, *Paying Our Way: A New Framework for Transportation Finance*, 2009.

internal to the Bureau, other resources within USDOT that are essential to effective program delivery, and continued reliance on external financial and legal advisors.

Stakeholders the authors interviewed frequently brought up Bureau staffing with respect to outreach and communication, project development, and underwriting because those are the stages of the TIFIA process leading up to loan execution that many find too unpredictable. Some groups, especially those representing nontraditional projects like mixed-use TOD and nontraditional borrowers like local governments, have identified technical assistance as an area that holds promise for their project development and financing efforts.

While stakeholders tended to focus on external-facing resources on the front end of the application process, the Bureau also must ensure that internal-facing processes and resources are adequate. These include essential loan underwriting and portfolio risk management activities that are out of sight of most applicants. The Bureau assigns a Portfolio Manager to manage each project from execution through financial maturity. The structure and size of the portfolio and risk teams need to increase to be commensurate with the larger scale of the program.

The Bureau also must work closely with USDOT modal experts in other agencies to assess and confirm project eligibility (including environmental approvals) at the front end of the process and monitor project construction, eligible cost reimbursements, and compliance with Federal requirements after loan execution. The interface between the Bureau and other modes / units within USDOT has become much more complex and critical as the program has grown. The lead modal agency housing the necessary expertise (e.g., FAA, FHWA, FRA, or FTA) assigns a senior staff liaison to monitor the progress of the projects assigned to that mode, from discussions about eligibility and readiness to assessments of credit risk. The modal agencies need to identify technical staff (often in field offices) for project implementation and oversight.

9.3.2 Providing Technical Assistance

As previously noted, certain stakeholders are very interested in how the Bureau can provide additional technical assistance to help them develop their projects and obtain TIFIA loan approval. Some may take advantage of assistance geared towards smaller sponsors, such as the services that will be provided through the Thriving Communities Program. Larger entities and experienced borrowers are looking for faster service or greater clarity about the likelihood of receiving financial commitments earlier in the process. Some have expressed interest in an Emerging Projects Agreement as an effective mechanism for establishing good communications and mutual expectations about project readiness and future commitments.

Many of the policy questions and management challenges mentioned above may be addressed in a forthcoming organizational assessment recently announced by USDOT in which outside experts will be retained to examine the Bureau's operating model, governance structure, and loan processing and oversight procedures.

APPENDIX I: PROJECT SUMMARY TABLE

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
1999	Washington Metro Capital Improvement Program	Washington Metropolitan Area Transit Authority	DC	Transit	\$ 600	\$ 2,324	Other Funds
1999	Miami Intermodal Center (FDOT Elements + RCF)	Florida Department of Transportation	FL	Multimodal	\$ 539	\$ 2,043	Facility & Other User Charges
1999	Tren Urbano (PR)	Puerto Rico Highway and Transportation Authority	PR	Transit	\$ 300	\$ 2,250	State Funds
2000	Cooper River Bridge Replacement	South Carolina Transportation Infrastructure Bank	SC	Highway	\$ 215	\$ 675	Other Funds
2000	Staten Island Ferries and Terminals	TSASC, Inc. (nonprofit corp.) / City of New York	NY	Transit	\$ 159	\$ 482	Other Funds
2001	Reno Transportation Rail Access Corridor (ReTRAC)	City of Reno	NV	Highway	\$ 51	\$ 280	Sales Tax
2001	Central Texas Turnpike System (Austin)	Texas Department of Transportation	TX	Highway	\$ 917	\$ 3,250	User Charges (Tolls)
2003	South Bay Expressway (formerly SR 125 South)	San Diego Expressway, L.P.	CA	Highway	\$ 140	\$ 658	User Charges (Tolls)
2005	183-A Turnpike (Austin)	Central Texas Regional Mobility Authority	TX	Highway	\$ 66	\$ 305	User Charges (Tolls)
2005	LA 1 Toll Road Improvements	Louisiana Transportation Authority	LA	Highway	\$ 122	\$ 377	User Charges (Tolls)
2006	Interlink (formerly Warwick Intermodal Station)	Rhode Island Airport Corporation	RI	Multimodal	\$ 42	\$ 222	Facility & Other User Charges

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
2007	Pocahontas Pkwy (Rte. 895) / Richmond Airport Conn.	DBi Services and Macquarie/VDOT	VA	Highway	\$ 150	\$ 766	User Charges (Tolls)
2007	Intercounty Connector (MD)	Maryland Transportation Authority	MD	Highway	\$ 516	\$ 2,569	User Charges (Tolls)
2008	Capital Beltway HOT Lanes (I-495)	Capital Beltway Funding Corp; Capital Beltway Express LLC	VA	Highway	\$ 589	\$ 2,022	User Charges (Tolls)
2008	SH130 (Segments 5-6) (Austin-San Antonio)	SH130 Concession Co. LLC (orig. Cintra, Zachry, now creditors)	TX	Highway	\$ 430	\$ 1,328	User Charges (Tolls)
2009	I-595 Corridor Improvements (Broward Co, FL)	I-595 Express LLC (ACS, TIAA)/FDOT	FL	Highway	\$ 603	\$ 1,834	State Funds
2009	Triangle Expressway (Raleigh-Durham)	North Carolina Turnpike Authority	NC	Highway	\$ 387	\$ 1,171	User Charges (Tolls)
2010	Port of Miami Tunnel	Miami Access Tunnel LLC (Meridiam, Bouygues)/FDOT	FL	Highway	\$ 341	\$ 1,073	State Funds
2010	North Tarrant Express 1 & 2 (I-820 and SH121/183)	NTE Mobility Partners (Cintra, Meridiam, APG)/TxDOT	TX	Highway	\$ 650	\$ 2,047	User Charges (Tolls)
2010	Transbay Transit Center (San Francisco)	Transbay Joint Powers Authority	CA	Multimodal	\$ 171	\$ 1,189	Real Estate / Other Taxes
2010	LBJ Express / IH 635 Managed Lanes (Dallas)	LBJ Infra. Group LLC (Cintra, Meridiam, et al)/TxDOT	TX	Highway	\$ 850	\$ 2,615	User Charges (Tolls)
2010	Denver Union Station	Denver Union Station Project Authority, Regional Transportation District	CO	Multimodal	\$ 146	\$ 519	Real Estate / Other Taxes
2011	Pres. George Bush Turnpike - W. Ext. (SH 161 Dallas)	North Texas Tollway Authority	TX	Highway	\$ 418	\$ 1,268	User Charges (Tolls)

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
2011	U.S. 36 Express Lane / BRT Phase 1	CO Transportation Investment Office (formerly HPTE)/CDOT	CO	Highway	\$ 54	\$ 307	User Charges (Tolls)
2012	Eagle Commuter Rail (Denver RTD)	Regional Transportation District	CO	Passenger Rail	\$ 280	\$ 2,047	Sales Tax
2012	Elizabeth Riv. Crossings (Downtown/Midtown Tun/MLK Ext.)	Elizabeth River Crossings LLC (Abertis-John Hancock)/VDOT	VA	Highway	\$ 422	\$ 2,089	User Charges (Tolls)
2012	Presidio Parkway (Phase II)	Golden Link Concessionaire LLC (Hochtief, Meridiam) / Caltrans	CA	Highway	\$ 150	\$ 852	State Funds
2012	Crenshaw / LAX Transit Corridor Project	Crenshaw Project Corp. / LA Co. Metro. Transp. Authority	CA	Transit	\$ 546	\$ 1,749	Sales Tax
2013	SR 520 Bridge Replacement and HOV	State of Washington Dept. of Transportation	WA	Highway	\$ 300	\$ 2,736	User Charges (Tolls)
2013	I-95 HOV/HOT Lanes (Northern Virginia)	I-95 Express Lanes LLC (Fluor, Transurban)/VDOT	VA	Highway	\$ 300	\$ 923	User Charges (Tolls)
2013	DART Orange Line Extension	Dallas Area Rapid Transit	TX	Transit	\$ 120	\$ 397	Sales Tax
2013	Chicago Riverwalk / Wacker Drive	City of Chicago	IL	Highway	\$ 99	\$ 419	Other Funds
2013	SR-91 Corridor Improvement Program (Express Lanes)	Riverside County Transportation Commission	CA	Highway	\$ 421	\$ 1,309	User Charges (Tolls)
2013	Chicago O'Hare Int'l Airport ConRac (Joint Use Facility)	City of Chicago	IL	Multimodal	\$ 288	\$ 876	Facility & Other User Charges
2013	North Tarrant Express 35W Segments 3A & 3B	NTE Mobility Partners (Cintra, Meridiam, APG)/TxDOT	TX	Highway	\$ 531	\$ 1,696	User Charges (Tolls)

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
2013	CTA 95th Street Terminal	Chicago Transit Authority	IL	Transit	\$ 79	\$ 240	Facility & Other User Charges
2014	Goethals Bridge Replacement	NYNJ Link Partnership (Macquarie-Kiewit)/ PANYNJ	NY	Highway	\$ 474	\$ 1,436	Other Funds
2014	Northwest Corridor (Atlanta)	Georgia State Road and Tollway Authority	GA	Highway	\$ 275	\$ 834	User Charges (Tolls)
2014	Ohio River Bridges - Downtown Crossing	Kentucky Public Transportation Infra. Authority / KYTC	KY	Highway	\$ 452	\$ 1,452	User Charges (Tolls)
2014	Gov. Mario Cuomo Bridge (new Tappan Zee Bridge)	New York Thruway Authority	NY	Highway	\$ 1,600	\$ 4,959	User Charges (Tolls)
2014	Grand Parkway (SH 99) Segments D-G	Grand Parkway Transportation Corporation	TX	Highway	\$ 841	\$ 2,941	User Charges (Tolls)
2014	Regional Connector Transit Corridor Project	Los Angeles County Metropolitan Transportation Authority	CA	Transit	\$ 160	\$ 1,399	Sales Tax
2014	U.S. 36 Express Lane / BRT Phase 2	Plenary Roads Denver, Ltd/CDOT	CO	Highway	\$ 60	\$ 213	User Charges (Tolls)
2014	Westside Purple Line Extension- Section 1	Los Angeles County Metropolitan Transportation Authority	CA	Transit	\$ 856	\$ 2,648	Sales Tax
2014	Gerald Desmond Bridge	City of Long Beach (Port Commissioners)	CA	Highway	\$ 500	\$ 1,561	Facility & Other User Charges
2014	Dulles Corridor Metrorail (MWAA/Fairfax/Loudoun)	Fairfax Co. EDA; Loudoun Co. EDA; Metro. Wash. Airports Auth.	VA	Transit	\$ 1,876	\$ 5,684	User Charges (Tolls)

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
2014	I-4 Ultimate Improvements	I-4 Mobility Partners (Laing, Skanska)/FDOT	FL	Highway	\$ 949	\$ 2,877	State Funds
2015	East Link Extension (Sound Transit-Seattle)	Central Puget Sound Regional Transit Authority	WA	Transit	\$ 1,330	\$ 4,031	Sales Tax
2015	CTA New Blue Line	Chicago Transit Authority	IL	Transit	\$ 120	\$ 409	Facility & Other User Charges
2015	Wekiva Parkway (Orlando)	Central Florida Expressway Authority (CFX)	FL	Highway	\$ 194	\$ 587	User Charges (Tolls)
2015	So. Ohio Veterans Mem. Highway - Portsmouth Bypass	Portsmouth Gateway Group (ACS et al)/ODOT	OH	Highway	\$ 209	\$ 634	State Funds
2015	Ohio River Bridges - East End Crossing	WVB East End Partners (Walsh/INDOT through IN Finance Auth.	IN	Highway	\$ 162	\$ 1,319	State Funds
2015	I-77 Express Lanes	I-77 Mobility Partners LLC (Cintra, Aberdeen, John Laing)/NCDOT	NC	Highway	\$ 189	\$ 648	User Charges (Tolls)
2015	CATS Blue Line Extension (Charlotte)	City of Charlotte, Charlotte Area Transit System	NC	Transit	\$ 180	\$ 1,160	Other Funds
2016	US 183-S / Bergstrom Expressway (Austin)	Central Texas Regional Mobility Authority	TX	Highway	\$ 282	\$ 856	User Charges (Tolls)
2016	US 301 (DE)	Delaware Transportation Authority	DE	Highway	\$ 211	\$ 636	User Charges (Tolls)
2016	CTA Rail Cars (Chicago)	Chicago Transit Authority	IL	Transit	\$ 255	\$ 773	Sales Tax
2016	SH-288 Toll Lanes (Houston)	Blue Ridge Transp. Group LLC (ACS et al)/TxDOT	TX	Highway	\$ 357	\$ 1,082	User Charges (Tolls)

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
2016	I-93 Reconstruction (Salem to Manchester Project)	State of New Hampshire	NH	Highway	\$ 200	\$ 812	State Funds
2016	Purple Line Light Rail Transit (MD)	Purple Line Transit Partners (Meridiam & Star America)/MDOT	MD	Transit	\$ 1,760	\$ 5,366	State Funds
2017	35 Express (I-35E TEXPress)	Texas Transportation Commission	TX	Highway	\$ 285	\$ 1,303	User Charges (Tolls)
2017	Parallel Thimble Shoal (Chesapeake Bay Bridge Tunnel)	Chesapeake Bay Bridge and Tunnel District	VA	Highway	\$ 339	\$ 1,074	User Charges (Tolls)
2017	Northgate Link Extension (Sound Transit-Seattle)	Central Puget Sound Regional Transit Authority	WA	Transit	\$ 615	\$ 1,864	Sales Tax
2017	Westside Purple Line Extension - Section 2	Los Angeles County Metropolitan Transportation Authority	CA	Transit	\$ 307	\$ 2,411	Sales Tax
2017	Monroe Expressway (Mecklenburg & Union Counties)	North Carolina Turnpike Authority	NC	Highway	\$ 167	\$ 800	User Charges (Tolls)
2017	C-470 Express Lanes (Denver)	CO Transportation Investment Office (formerly HPTE)/CDOT	CO	Highway	\$ 107	\$ 325	User Charges (Tolls)
2017	BelRed Street Network Project	City of Bellevue, WA	WA	Highway	\$ 100	\$ 323	Real Estate / Other Taxes
2017	Sound Transit O&M Facility East (OMFE)	Central Puget Sound Regional Transit Authority	WA	Transit	\$ 88	\$ 266	Sales Tax
2017	Mid-Coast Corridor Transit (San Diego)	San Diego Regional Transportation Commission	CA	Transit	\$ 537	\$ 2,022	Sales Tax
2017	I-15 Express Lanes Project	Riverside County Transportation Commission	CA	Highway	\$ 152	\$ 461	User Charges (Tolls)

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
2017	Moynihan Train Hall Project (New York City)	New York State Urban Dev. Corp. d/b/a Empire State Dev.	NY	Passenger Rail	\$ 607	\$ 1,850	Real Estate / Other Taxes
2017	I-405 Improvement Project	Orange County Transportation Authority	CA	Highway	\$ 629	\$ 1,908	User Charges (Tolls)
2018	Transform 66 - Outside the Beltway (Northern Virginia)	I-66 Express Mobility Partners (Cintra-Meridiam)/VDOT	VA	Highway	\$ 1,229	\$ 3,687	User Charges (Tolls)
2018	MBTA Positive Train Control	Massachusetts Bay Transportation Authority	MA	Passenger Rail	\$ 162	\$ 490	Sales Tax
2018	Central 70 (Denver I-70 East Reconstruction)	Kiewit Meridian Partners LLC	CO	Highway	\$ 443	\$ 1,409	State Funds
2019	Lynnwood Link Extension (Sound Transit-Seattle)	Central Puget Sound Regional Transit Authority	WA	Transit	\$ 658	\$ 2,188	Sales Tax
2019	Grand Parkway (SH 99) Segments H&I (Houston)	Grand Parkway Transportation Corporation / TxDOT	TX	Highway	\$ 605	\$ 1,996	User Charges (Tolls)
2019	290E Phase III - Manor Expressway (Austin)	Central Texas Regional Mobility Authority	TX	Highway	\$ 39	\$ 148	User Charges (Tolls)
2019	San Bernardino I-10 Corridor 1	San Bernardino County Transportation Authority	CA	Highway	\$ 225	\$ 889	User Charges (Tolls)
2020	Hampton Roads Regional Priority Projects	Hampton Roads Transportation Accountability Comm.	VA	Highway	\$ 501	\$ 1,518	Sales Tax
2020	Complete 540 - Phase 1 (Raleigh)	North Carolina Turnpike Authority	NC	Highway	\$ 499	\$ 1,357	User Charges (Tolls)
2020	Federal Way Link Extension (Sound Transit-Seattle)	Central Puget Sound Regional Transit Authority	WA	Transit	\$ 629	\$ 3,008	Sales Tax

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
2020	Gilcrease Expressway West	Oklahoma Turnpike Authority	OK	Highway	\$ 120	\$ 364	User Charges (Tolls)
2020	San Luis Obispo Bus O&M Facility	San Luis Obispo Regional Transit Authority	CA	Transit	\$ 13	\$ 27	Sales Tax
2021	Monterey-Salinas South County O&M Facility	Monterey-Salinas Transit District	CA	Transit	\$ 8	\$ 17	Sales Tax
2021	US 183A Phase III (Austin)	Central Texas Regional Mobility Authority	TX	Highway	\$ 107	\$ 323	User Charges (Tolls)
2021	Downtown Redmond Link Ext./DRLE (Sound Transit)	Central Puget Sound Regional Transit Authority	WA	Transit	\$ 521	\$ 1,579	Sales Tax
2021	Hampton Roads Bridge Tunnel (HRBT) Expansion Project	Hampton Roads Transportation Accountability Comm.	VA	Highway	\$ 1,163	\$ 4,079	Sales Tax
2021	Union Pacific Railroad Bridge (LADOTD)	Louisiana DOTD / State Bond Commission	LA	Highway	\$ 16	\$ 33	Other Funds
2021	LA 3241 Seg 3: LA 435 to LA 40 / LA 41	Louisiana DOTD / State Bond Commission	LA	Highway	\$ 21	\$ 68	Other Funds
2022	Vine Transit Bus Maintenance Facility Project	Napa Valley Transportation Authority	CA	Transit	\$ 20	\$ 41	Sales Tax
2022	LA 3241 Seg 2: LA 36 to LA 435	Louisiana DOTD / State Bond Commission	LA	Highway	\$ 27	\$ 89	Other Funds
2022	US 183 North Mobility Project (Austin)	Central Texas Regional Mobility Authority	TX	Highway	\$ 250	\$ 770	User Charges (Tolls)
2022	Capital Beltway Express - Northern Ext. (Project NEXT)	Capital Beltway Express LLC (Fluor-Transurban)/VDOT	VA	Highway	\$ 212	\$ 784	User Charges (Tolls)
2022	Governor Nice Mem./Sen. Middleton Bridge Repl.	Maryland Transportation Authority	MD	Highway	\$ 200	\$ 673	User Charges (Tolls)

Initial Loan Cohort FY	Project Name	TIFIA Borrower / Public Sponsor	State	Mode Type	Total TIFIA Assistance	Total Project Cost	TIFIA Loan Security
					(\$ Millions)	(\$ Millions)	
2022	Rural 2-Ln Advancement and Mgmt. Plan (RAAMP) Pkg 1	Oklahoma Department of Transportation	OK	Highway	\$ 42	\$ 84	State Funds
2022	I-49 S: Ambassador Cafferey Bridge / US 90 Interchange	Louisiana DOTD / State Bond Commission	LA	Highway	\$ 87	\$ 263	Other Funds
2022	Highway 101: Carpinteria to Santa Barbara (CA)	Santa Barbara County Local Transportation Authority	CA	Highway	\$ 75	\$ 454	Sales Tax
	Totals				\$ 37,287	\$ 132,165	
	Shaded rows indicate fully retired loans						
	Public-Private Partnership (P3) loans are in bold						

APPENDIX II: GLOSSARY OF KEY TERMS

(Note: The statutory definitions of certain terms may be more detailed.)

Term	Definition
Accretion	Addition of accrued (earned but unpaid) interest to the outstanding principal balance of a loan.
Amortize	The process of paying off the principal of debt outstanding through scheduled, pre-determined payments.
Availability Payments	A payment for a project's performance, irrespective of demand or usage level. Under a P3 with an availability payment structure, the project sponsor compensates the private sector partner when the asset is available for public use and meets performance, safety, and quality criteria specified in the P3 concession agreement. Payment can be reduced if the asset is not available or does not meet specified requirements.
Basis Point	0.01 or 1/100 of 1 percent of yield and the smallest measure used in quoting yields on bonds or notes. For example, if a yield increases from 3.00 percent to 3.01 percent, the difference is one basis point.
Borrower	An eligible entity that enters into a credit agreement with the Bureau; referred to in the TIFIA statute as an Obligor.
Capital Stack	The description or display of the sources of capital used to finance the project. The capital stack for an infrastructure project might be comprised of grants, debt (senior/subordinate loans and bonds), and equity.
Capitalized Interest	A portion of the proceeds of a bond issue that is set aside to pay interest on the bonds for a specified period (typically during construction.)
Concession Agreement	Long-term contract between a public sponsor and private entity (e.g., concessionaire or developer) for the design, construction, financing, operation and maintenance of a project, signed after a preferred bidder is selected or contract price is agreed upon. Other names for such agreements include P3 agreement, project agreement, project development agreement, and comprehensive project agreement. The Bipartisan Infrastructure Law section 70701(a) uses the term "Project Development Agreement," which the Bureau interprets as a concession agreement.
Cost of Capital	The rate of return expected by providers of capital (i.e., debt or equity) to finance a project.

Term	Definition																																																								
Covenants	<p>Contractual obligations set forth in a financing contract.</p> <p>A covenant that obligates a party to undertake a duty to protect the interests of bondholders (e.g., to maintain insurance) is an affirmative or protective covenant.</p> <p>A covenant that obligates the issuer not to perform certain actions (e.g., not to sell the project) is a negative covenant.</p>																																																								
Credit Rating	<p>Opinion of the likelihood that a borrower will make principal and interest payments on a full and timely basis as per the terms of its obligation. Credit quality is typically presented along a rating scale, denoted by letters. The table below shows the scales three U.S. credit rating agencies use.</p> <table border="1"> <thead> <tr> <th>Quality</th> <th>Moody's</th> <th>S&P</th> <th>Fitch</th> </tr> </thead> <tbody> <tr> <td colspan="4">Investment Grade:</td> </tr> <tr> <td rowspan="3">Highest credit quality</td> <td>Aaa</td> <td>AAA</td> <td>AAA</td> </tr> <tr> <td>Aa1</td> <td>AA+</td> <td>AA+</td> </tr> <tr> <td>Aa2</td> <td>AA</td> <td>AA</td> </tr> <tr> <td rowspan="2">High quality</td> <td>Aa3</td> <td>AA-</td> <td>AA-</td> </tr> <tr> <td>A1</td> <td>A+</td> <td>A+</td> </tr> <tr> <td rowspan="3">Upper medium</td> <td>A2</td> <td>A</td> <td>A</td> </tr> <tr> <td>A3</td> <td>A-</td> <td>A-</td> </tr> <tr> <td>Baa1</td> <td>BBB+</td> <td>BBB+</td> </tr> <tr> <td rowspan="3">Medium quality</td> <td>Baa2</td> <td>BBB</td> <td>BBB</td> </tr> <tr> <td>Baa3</td> <td>BBB-</td> <td>BBB-</td> </tr> <tr> <td colspan="4">Non-Investment Grade:</td> </tr> <tr> <td rowspan="3">Low quality, high credit risk</td> <td>Ba1</td> <td>BB+</td> <td>BB+</td> </tr> <tr> <td>Ba2</td> <td>BB</td> <td>BB</td> </tr> <tr> <td>Ba3</td> <td>BB-</td> <td>BB-</td> </tr> </tbody> </table> <p>Also see Investment Grade Rating.</p>	Quality	Moody's	S&P	Fitch	Investment Grade:				Highest credit quality	Aaa	AAA	AAA	Aa1	AA+	AA+	Aa2	AA	AA	High quality	Aa3	AA-	AA-	A1	A+	A+	Upper medium	A2	A	A	A3	A-	A-	Baa1	BBB+	BBB+	Medium quality	Baa2	BBB	BBB	Baa3	BBB-	BBB-	Non-Investment Grade:				Low quality, high credit risk	Ba1	BB+	BB+	Ba2	BB	BB	Ba3	BB-	BB-
Quality	Moody's	S&P	Fitch																																																						
Investment Grade:																																																									
Highest credit quality	Aaa	AAA	AAA																																																						
	Aa1	AA+	AA+																																																						
	Aa2	AA	AA																																																						
High quality	Aa3	AA-	AA-																																																						
	A1	A+	A+																																																						
Upper medium	A2	A	A																																																						
	A3	A-	A-																																																						
	Baa1	BBB+	BBB+																																																						
Medium quality	Baa2	BBB	BBB																																																						
	Baa3	BBB-	BBB-																																																						
	Non-Investment Grade:																																																								
Low quality, high credit risk	Ba1	BB+	BB+																																																						
	Ba2	BB	BB																																																						
	Ba3	BB-	BB-																																																						
Creditworthiness	The extent to which a borrower is suitable to receive financing, considering such factors as how likely the borrower is to repay its loan and accrued interest.																																																								
Direct Loan	See "secured loan."																																																								

Term	Definition
Eligible Project Costs 23 U.S.C. §601(2)	Development phase activities, such as planning, feasibility analysis, revenue forecasting, environmental review, permitting, preliminary engineering and design work, and other preconstruction activities; Construction, reconstruction, rehabilitation, replacement, acquisition of real property (including land relating to the project and improvements to land), environmental mitigation, construction contingencies, and acquisition of equipment; Capitalized interest necessary to meet market requirements, reasonably required reserve funds, capital issuance expenses, and other carrying costs during construction; and Capitalizing a rural project fund.
Express Lanes	Also referred to as managed lanes, or value pricing lanes, these are projects involving the construction of new, tolled lanes (typically alongside or within the right-of-way of an existing freeway) where variable-rate electronic pricing is used to manage demand so that traffic flows at speeds greater than the non-tolled adjacent lanes.
Federal Credit Instrument 23 U.S.C. §601(a)(3)	A secured loan, loan guarantee, or line of credit authorized to be made available under the TIFIA statute, with respect to a project.
Financing Conduit	A governmental authority, nonprofit entity, or special purpose corporation that serves as the issuer of debt on behalf of an obligor, remitting the proceeds to the obligor to construct or acquire the project, and receiving periodic payments from the obligor to service its debt.
Greenfield Project	Project that involves construction of new infrastructure (as opposed to renovation, expansion, or improvement of existing facilities, sometimes referred to as “brownfield” projects).
Indenture	A contract between an issuer of municipal securities and a trustee for the bondholders. The indenture, which is generally part of a bond contract, establishes the rights, duties, responsibilities, and remedies of the issuer and trustee and determines the security for the bonds. The trustee administers the terms of the indenture on behalf of the bondholders.
Intermodal Transportation 49 U.S.C. §22401(5)	Of or relating to the connection between rail service and other modes of transportation, including all parts of facilities at which such connection is made.
Investment Grade Rating 23 U.S.C. §601(4) 49 U.S.C. §22401(6)	A rating of BBB minus, Baa3, or higher assigned by a rating agency to project obligations.

Term	Definition
Line of Credit 23 U.S.C. §601(a)(7)	An agreement between the U.S. Secretary of Transportation and an obligor to provide a direct loan at a future date upon the occurrence of certain events.
Loan Modification	Any change in the terms of a secured loan that affects its budgetary cost, arising from alterations to the amount, repayment schedule, pledged security, financial covenants, interest rate, etc.
Loan Refinancing	A subset of loan modification, referencing the change (typically, reduction) in the interest rate on a secured loan, with most of the other loan features remaining unchanged. Also referred to as a refunding in municipal bond parlance.
Loan Guarantee 23 U.S.C. §601(a)(9)	Any guarantee or other pledge by the U.S. Secretary of Transportation to pay all or part of the principal of and interest on a loan or other debt obligation issued by an obligor and funded by a lender.
Mode of Transportation	A way of moving people or goods via air, highway, transit, rail, or maritime. Highway, transit, and rail are often referred to as surface transportation modes. A pipeline is also a mode of transportation but is not currently eligible for Bureau financing.
Operating Administration	A unit with its own management and organizational structure within USDOT generally focused on a mode of transportation. The Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Federal Aviation Administration (FAA), and Maritime Administration (MARAD) partner with the Bureau and its customers to deliver infrastructure projects. Other USDOT operating administrations are the National Highway Traffic Safety Administration (NHTSA), Federal Motor Carrier Safety Administration (FMCSA), Pipeline and Hazardous Materials Safety Administration (PHMSA), and Great Lakes St. Lawrence Seaway Development Corporation (GLS).
Capex Loan	Loan or bond proceeds funding a project's capital expenditures, as opposed to refinancing existing debt obligations.
Obligor 23 U.S.C. §601(a)(11)	A party that is primarily liable for payment of the principal of or interest on a Federal credit instrument. (The entity could be a corporation, partnership, joint venture, trust, or governmental entity, agency, or instrumentality.

Term	Definition
Public-Private Partnership (P3)	A long-term arrangement between a public sponsor and a private entity for delivery of a project that includes the following elements: construction, financing, operations, and/or maintenance of the project over a term specified in a concession agreement (as defined above). In this report, P3 does not include a short-term “turnkey” arrangement limited to delivering or financing a project during the construction phase only.
Private Activity Bond	A bond where the proceeds are used in connection with a private business and are secured by revenues of that business. While generally not eligible for tax-exempt interest, Congress has enumerated exempt-facility exceptions for certain purposes, including USDOT’s \$30 billion program applicable to intermodal freight transfer, highway, and other title 23 eligible projects.
Project Financing	A financial structure where debt is secured by project-generated net cash flows, without governmental or corporate backing, but would encompass “availability payment”-backed transactions where the payments are derived from a governmental entity like a State department of transportation. Project financings typically refer to large standalone projects, as opposed to a system or network of multiple facilities,
Project Sponsor	The entity initiating, establishing, and executing a project. The project sponsor might be the applicant for or borrower of Bureau financing. In the context of a P3 project, the project sponsor typically is the governmental unit authorizing the project and selecting a private entity to finance, deliver, and operate or maintain it.
Rating Agency 23 U.S.C. §601(14) 49 U.S.C. §22401(13)	An entity registered with the U.S. Securities and Exchange Commission as a nationally recognized statistical rating organization (section 3(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78c(a))).
Reserve	A fund into which a borrower makes a one-time or periodic deposits to ensure funds are available to pay debt service if pledged revenues are insufficient or to pay the cost of unexpected outlays for operations or maintenance.
Revenue Risk	When a project’s revenue stream is dependent upon demand or utilization of the facility, such as a toll road. The term applies to both P3 projects and governmental projects financed with user-charge secured revenues.
Secured Loan 23 U.S.C. §601(a)(17)	A direct loan or other debt obligation issued by an obligor and funded by the U.S. Secretary of Transportation in connection with the financing of a TIFIA-eligible project.

Term	Definition
Senior Debt	Bonds or debt having a superior priority claim against pledged revenues compared to the claims of other obligations against such pledged revenues or security.
Springing Lien 23 U.S.C. §603(b)(6)	The non-subordination provision for secured loans under which a TIFIA loan, if structured with a junior claim on borrower revenues, elevates to parity status in a bankruptcy-related event.
Subordinate (Junior) Lien	A legal claim on annual pledged revenues paid only after senior lien claims are satisfied.
Subsidy Cost 2 U.S.C. §661a(5)	The budgetary cost associated with the government making a loan or guarantee (or any subsequent modifications) under the Federal Credit Reform Act of 1990. The subsidy cost reflects the present value of: (a) expected losses arising from borrower defaults, net of recoveries; and (b) any interest rate subsidization below the U.S. Treasury's cost of funds at the time the credit instrument is committed. The subsidy cost associated with each direct loan or loan guarantee may be funded by Federal appropriations, direct payment of a credit risk premium by the applicant or a non-Federal infrastructure partner on behalf of the applicant, or any combination thereof.
Substantial Completion 23 U.S.C. §601(a)(21) 49 U.S.C. §22401(15)	(A) The opening of a project to vehicular, passenger, or freight traffic; or (B) A comparable event, as determined by the U.S. Secretary of Transportation and specified in the credit agreement.
Tax-Exempt Bond	A municipal security on which interest is excluded from gross income for Federal tax purposes.
Title 23	The enacted laws of the United States related to highways and other surface transportation programs and includes the authorizing provisions for TIFIA.
Title 49	The enacted laws of the United States related to intermodal programs, rail, aviation, and multimodal freight transportation and includes the authorizing provision for RRIF.
Transit-Oriented Development (TOD) §601(a)(12)(E)	Public infrastructure improvements generally within ½ mile (walking distance) of a passenger rail station or similar facility.

Sources: Build America Bureau Financing Programs Guide (under development), Authors.