

## SECTOR IN-DEPTH

10 March 2016

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## Public-Private Partnerships – US

# US P3 Market Slowly Builds on Four Fronts

The US public-private partnership (P3) market has been slow to develop and remains a small part of the large US municipal infrastructure market. However, the market is slowly building on four fronts.

- » **Progress on the learning curve.** In 2015, some states and the federal government enacted policy changes aimed at improving the P3 procurement process or creating opportunities for the sharing of P3 best practices. Several P3 projects also opened early or on time in 2014 and 2015.
- » **Starts and stops on the legislative front.** In 2015, Georgia passed authorizing P3 legislation for social infrastructure projects and Virginia passed a law increasing oversight and clarifying the procurement process for P3 projects. Even so, P3 legislation did not pass in other states and some new P3s have faced legal challenges. The FAST Act increases state transportation funding and has supportive policy changes for P3s but also reduces funding from the Transportation Infrastructure Finance and Innovation Act (TIFIA), a historically important and low cost funding source for transportation P3s.
- » **On the pipeline front, more diversification.** The US P3 project pipeline is starting to diversify away from traditional transportation projects to more social infrastructure projects. Universities are also expanding their use of P3s beyond privatized student housing to include other university facilities.
- » **Innovation and strong demand on the funding front.** US P3s use innovative financing structures to lower capital costs while expanding the investor base. Investor demand is expected to remain strong, especially in the private placement market, despite the low number of investable projects. TIFIA cuts are unlikely to affect the limited P3 project pipeline.

### All About Public-Private Partnerships

Below are definitions of important terms used in the P3 market.

**Availability-payment P3s.** Once construction is completed, the private developer is entitled to payments from the government, as long as contract conditions are fulfilled. Availability payments are sized to cover operating and maintenance costs, debt service costs and equity returns as the private entity operates the project. Availability payments are not subject to swings in demand, such as traffic levels, and are adjusted typically only for lack of performance or lack of availability of the asset to the public. The availability- payment P3 is prevalent in the UK (Aa1 stable), for example, where they are also called private finance initiatives, or PFIs; in Canada (Aaa stable); in Australia (Aaa stable); in France (Aa2 stable); in the Netherlands (Aaa stable); and in Portugal.

**Demand risk P3s, or concessions.** Demand risk PPPs, or concessions, have a long history of public-private financing and have been used in a number of European countries and in Latin America, particularly for toll roads. Under a concession or demand risk P3, the project is largely financed by user fees, and the government takes on no or only limited demand risk. This model is often applied for toll roads, public transport, or water, gas and electricity P3s.

**Hybrid forms.** P3 arrangements can have characteristics of both an availability-payment and a demand risk P3, exposing the government to a variety of potential liabilities: (1) explicit obligations such as availability payments; (2) contingent obligations such as financial guarantees, termination payments, subsidies if demand falls under certain thresholds; and (3) more remote contingent obligations, such as the risk of contract renegotiations or takeover of the project in case of default of the special purpose entity.

### US P3 Market Slowly Builds on Four Fronts

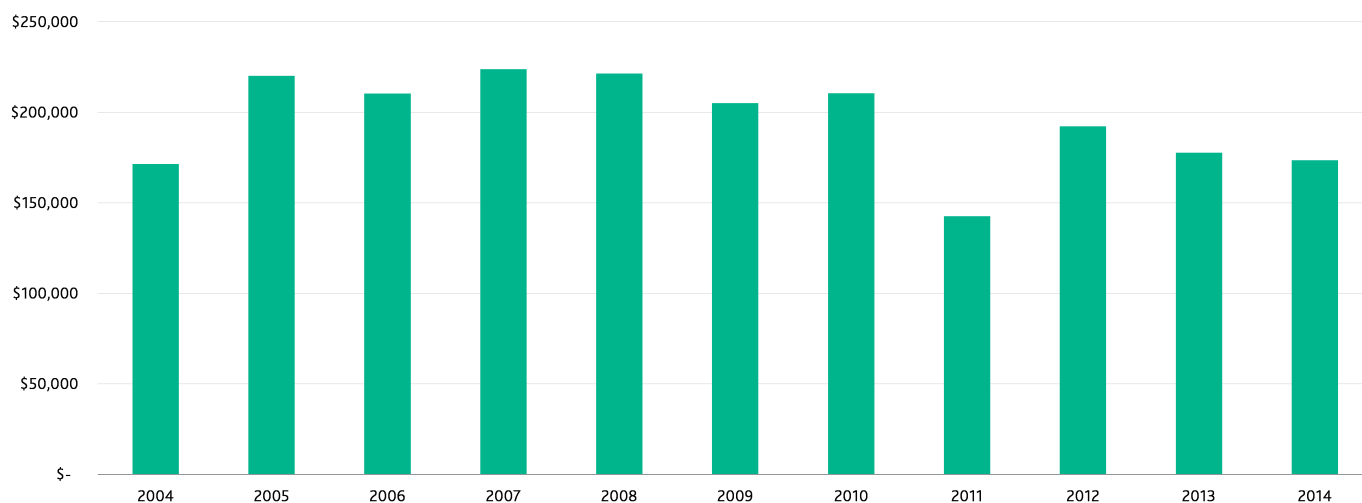
There have been many P3 project starts and stops over the years, but the US P3 market is slowly building on four fronts.

To be sure, the US P3 market is a fraction of the US municipal infrastructure market. The 15 availability-payment P3 projects funded over the past seven years (including two refinancings) have a value of about \$10 billion, a number dwarfed by the annual debt issuance in the US municipal infrastructure market (exhibit 1) that funds hundreds of billions of dollars of public infrastructure projects annually.

Exhibit 1

#### The US Municipal Infrastructure market dwarfs the US P3 market, even in a down year like 2011

Debt issuance figures are in millions of USD

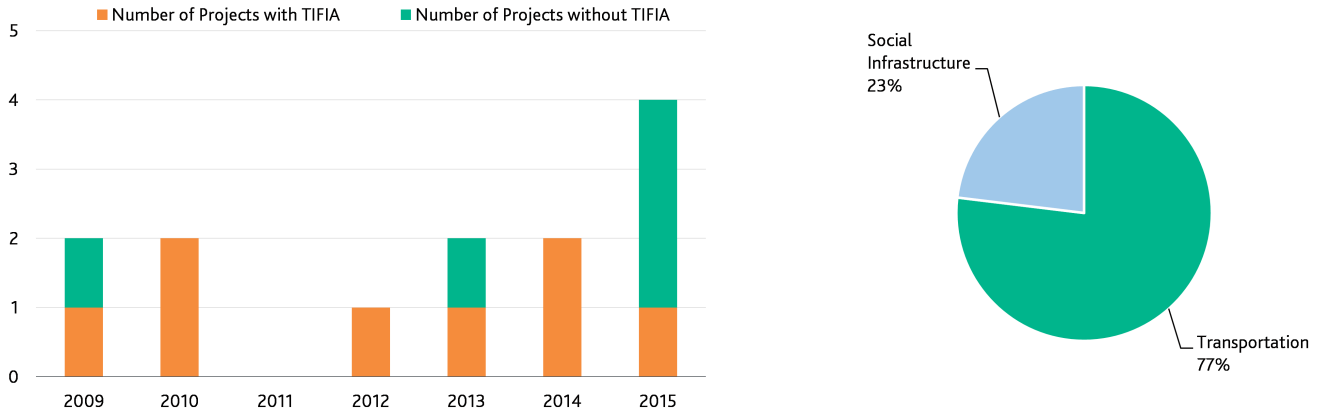


Source: Thompson Reuters

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Still, four availability-payment P3 projects reached financial close in 2015, more than in any other year since the first availability-payment P3 project reached financial close in the US in 2009 (exhibit 2). Each of these four P3 projects was the first of its kind in its state (exhibit 5), which can increase project execution risk and uncertainties about contract interpretation and long-term public and political support, especially as the first US P3 projects transition into operations. Even so, these first-time projects offer lessons that can be applied to future projects.

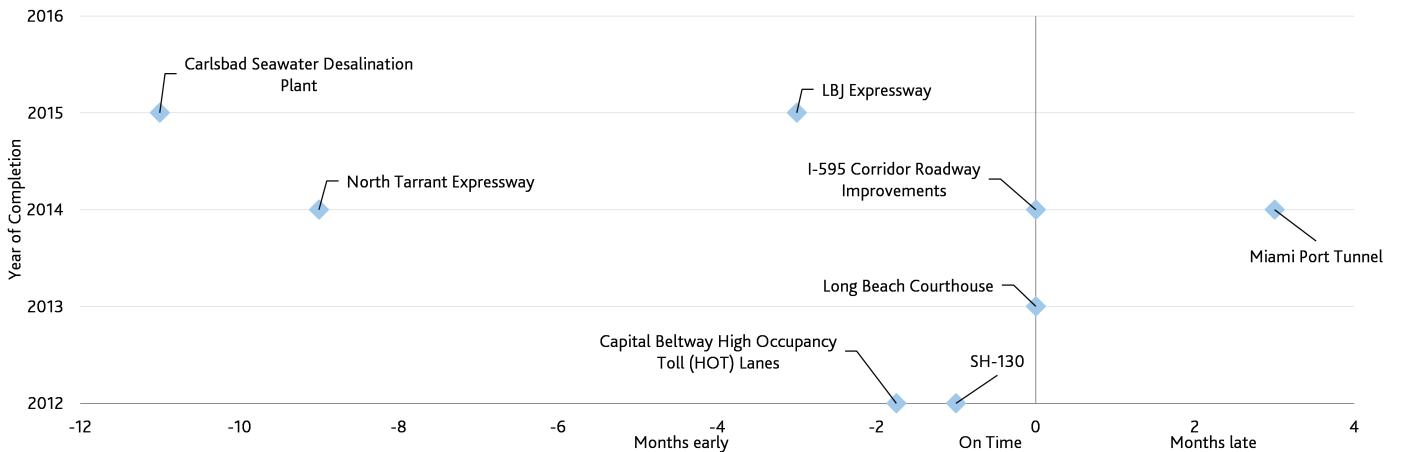
Exhibit 2  
**Four availability-payment P3s reached financial close in 2015, a record, and most were in the transportation sector**



Notes: Projects in orange include either a direct TIFIA loan (6 projects) or a TIFIA loan to the offtaker to fund milestone or substantial completion (2 projects). TIFIA stands for the Transportation Infrastructure Finance and Innovation Act.  
 Source: *InfraDeals*

Additionally, many US P3 projects were completed early or on time in 2014 and 2015 (exhibit 3), a positive development for the US P3 market as more governments gain experience with the P3 procurement process and share lessons learned.

Exhibit 3  
**Nearly all P3 projects completed in 2014-15 were early or on time**



Note: Includes both availability-payment and demand risk P3s  
 Source: *InfraAmericas and Moody's Investors Service*

## Progress on the Learning Curve

The US P3 market's development has been fragmented given the decentralized nature of government infrastructure procurement in the US. In 2014 and 2015, some states and the federal government enacted policy changes aimed at improving the P3 procurement process or creating opportunities to share P3 best practices.

Two states with relatively more established transportation P3 programs, [Texas \(Aaa stable\)](#) and [Virginia \(Aaa stable\)](#), passed P3-related legislation in 2015 that either refined the P3 procurement process or created a new government department to promote the effective use of P3s when warranted. One drawback to these central P3 offices is that they lack funding authority, which differs from P3 Canada, a crown corporation created in 2009, that can provide Canadian local governments with grants for some P3 projects.

In March 2015, Virginia created the Transportation Public-Private Partnership Advisory Committee, a body tasked with determining whether a proposal for the operation and development of a transportation facility serves a public purpose. The committee was involved in the early stages of the I-66 procurement, when a value-for-money analysis was used to determine whether a P3 approach was in the best interest of taxpayers. The Virginia Office of Public-Private Partnerships (VAP3) also publishes annually its P3 project pipeline and activity, which is unique in the US.

In June 2015, Texas passed legislation to create a P3 Center of Excellence to provide technical expertise and best practices for new deals, but the center has yet to receive significant funding. The center is being created to support regional and local governments' use P3s for infrastructure development for all asset classes.

On the federal level, the newly created Build America Transportation Investment Center (BATIC) under the FAST Act (the Fixing America's Surface Transportation Act) will be a national P3 resource for states, municipalities and project sponsors. BATIC was created to leverage federal transportation expertise and offer a single point of contact and coordination for states, local governments and project sponsors. The center contains a specially dedicated knowledge and training group, the BATIC Institute, which will help state departments of transportation learn about, analyze and use various available financing instruments. BATIC has long-term potential to expand on existing Federal Highway Administration (FHWA) resources and to help new states use P3s when appropriate.

**The US P3 market also experienced some notable setbacks.** Among them, the Indianapolis City Council voted against moving forward with the Indianapolis Courthouse availability-payment P3 project after a preferred proponent (aka the winning bidder) had been selected and was working toward commercial and financial close. The Virginia Route 460 demand risk project was terminated in 2015 after reaching financial close and the bond funds were disbursed. Other P3 project pursuits were also canceled over the past 18 months, including the Houston Justice Complex and both Illiana Expressway projects in [Indiana \(Aaa stable\)](#) and [Illinois \(Baa1 negative\)](#).

While project cancellations are negative for the market's momentum in the short term, they might help the market over the long-term as other jurisdictions learn from the reasons these P3 projects were canceled and can adjust accordingly. The 460 termination resulted in the aforementioned legislative refinement of the P3 procurement process in Virginia, for example, and the Indianapolis Courthouse cancellation highlighted the importance of local political support for initial projects that might face opposition.

Another area where US P3 sponsoring governments continue to learn relates to construction company performance security. US sponsoring governments have required a certain level of performance security for the construction contractor in nearly half of all the availability-payment P3 projects that have reached financial close to date, rather than allowing them to bid what they deem is appropriate. This performance security is available in case a contractor defaults during construction and must be replaced. This worst case scenario is rare for P3s given the significant amount of upfront risk mitigation efforts, though P3 project completion delays are not uncommon. By including this security requirement, sponsoring governments are signaling that they may not be fully comfortable with moving away from the traditional procurement model, which generally includes a higher level of required performance bonding that increases total construction costs. The transition to allow the private consortiums to bid the amount of security they deem adequate for each project may help lower total project costs, but will take time for some sponsoring governments to become comfortable with.

## Starts and Stops on the Legislative Front

Political support is a catalyst for P3 growth. There was a peak in 2015 in the number of US state Governors that mentioned P3s in their State of the State addresses, with about 20% mentioning P3s. President Obama also mentioned P3s in his 2016 State of the Union address.

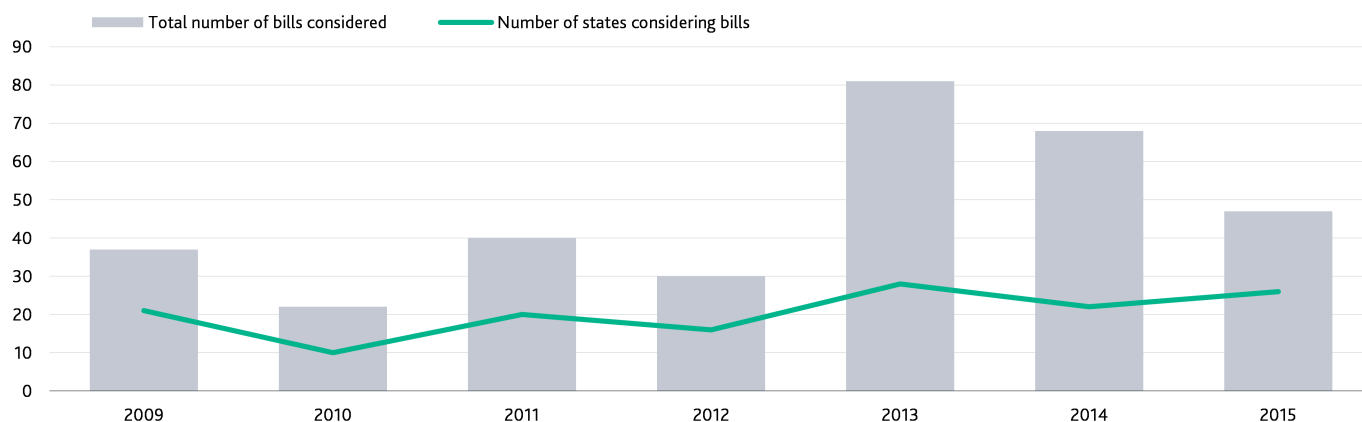
On the legislative front, there has been an increase in P3-related legislation in the past few years, coinciding with three years of elevated, albeit declining, P3 bill activity at the state level (exhibit 4). Some states also clarified or expanded their existing P3 legislation in the past two years, while others procured their first P3 project under existing P3 legislation. However, P3 legislation did not pass in states like [New Jersey \(A2 negative\)](#) and [Kentucky \(Aa2 stable\)](#) and some new P3 projects have faced legal and political challenges.

In 2015, [Georgia \(Aaa stable\)](#) passed authorizing P3 legislation for social infrastructure projects, and Virginia passed a law increasing oversight and clarifying the procurement process for P3 projects. The [District of Columbia \(Aa1 stable\)](#) passed broad P3 legislation for transportation and social infrastructure in 2014, while [Maryland \(Aaa stable\)](#) passed similar broad legislation in 2013.

We expect P3 legislative activity to continue as more P3-related bills are considered in new states each year (exhibit 4). For example, currently there are pending P3-related legislative bills in Kentucky, [New York \(Aa1 stable\)](#), New Jersey, [Florida \(Aa1 stable\)](#), [Tennessee \(Aaa stable\)](#) and Illinois. A committee in [New Hampshire \(Aa1 stable\)](#) has also recommended that the state enact P3 legislation.

Exhibit 4

Despite recent declines, more P3 bills have been considered over the last couple of years in more states than in the past



Source: National Conference of State Legislature

### Legislation varies widely from state to state

Key differences in P3 legislation across states include the kinds of P3 contracts governments can enter into – design-build, availability-payment or demand risk contracts – and the type of asset that can be procured using the P3 model. These can vary from transportation-related to a wide range of social infrastructure assets, or both. In addition, some states or municipalities might have final approval of a P3 project late in the procurement process, which might delay a project or result in a project cancellation at an advanced stage of procurement.

**Five states with existing P3 legislation reached financial close on their first P3 project and additional states are now procuring their first P3.** In 2015, four states reached financial close on their first availability-payment P3: Kentucky, [Michigan \(Aa1 stable\)](#), [Ohio \(Aa1 stable\)](#) and [Pennsylvania \(Aa3 negative\)](#) and one state, [North Carolina \(Aaa stable\)](#), closed its first P3, which was a demand risk toll lane project. North Carolina took over five years to close their first P3 project since the state passed its initial P3 legislation, while Pennsylvania and Ohio took three and four years, respectively. In addition, Georgia and Maryland have reached the preferred proponent stage of their initial P3 procurements (exhibit 5).

Exhibit 5

**States take years to reach financial close on their first P3 despite having P3 authorizing legislation**

State	Transportation Legislation?	Year Passed	Social		First P3 (Demand or Availability)	Financial Close Date	Stage of Procurement
			Infrastructure Legislature?	Year Passed			
Pennsylvania	Yes	2012	No	-	Pennsylvania Bridges	March 19, 2015	Under construction
Ohio	Yes	2011	No	-	Portsmouth Bypass	April 9, 2015	Under construction
North Carolina	Yes	2009, 2013	No	-	I-77 HOT Lanes	May 20, 2015	Under construction
Michigan	No	-	No	-	Michigan Freeway Lighting	August 24, 2015	Under construction
Kentucky	No	-	Yes	2015	Kentucky Wired	September 3, 2015	Under construction
Georgia	Yes	2009, 2015	Yes	2015	I-285/SR 400 Improvements	N/A	Preferred proponent
Maryland	Yes	2013	Yes	2013	Stormwater Project	N/A	Preferred proponent
Maryland	Yes	2013	Yes	2013	Purple Line	N/A	Preferred proponent

Source: National Conference of State Legislatures, State legislation, InfraAmericas, Moody's Investors Service

**Local governments.** The Long Beach Civic Center project was developed in 2015 and is expected to reach financial close in 2016, becoming the first local government availability-payment P3 to reach financial close in the US. Other local governments are in the early development stages of their first P3 (exhibit 6). The Los Angeles City Council approved a proposal by the City Administrative Officer to move forward with a convention center expansion project by initiating the environmental review process in March 2016 while continuing to evaluate over a 90-day period whether the business case for procuring the project using a P3 versus the proposed traditional approach could be more cost-effective for the city. This is a first in the market; city councils in other jurisdictions have been skeptical of P3s and have canceled some projects at very advanced procurement stages.

### FAST Act will Increase Transportation Funding in General, but TIFIA Cuts May Limit P3 Projects

State departments of transportation have more certainty about their federal highway funding given the passage of the five-year FAST Act. FAST will increase transportation funding by 15% over the next 15 years and includes an 18% increase in transit funding and an initial \$70 billion transfer to the highway trust fund to help fund future shortfalls. FAST is the first long-term federal highway funding spending bill since 2009, the year the first availability-payment P3 closed in the US. This improved funding outlook supports new infrastructure investment, some of which may use be procured using the P3 model.

Apart from the creation of BATIC (see page 4) some key provisions of the act that might support P3s include the following:

- » Streamlining of environmental permitting process for large infrastructure projects, which is important because the permitting process can take years and can delay project procurements, which can raise total project costs.
- » Removing a restriction on Water Infrastructure Finance and Innovation (WIFIA) loans that had previously prevented the loans from being used with tax-exempt financing. However, the WIFIA program remains unfunded, so there is no real impact until the program has funds to lend.
- » Creating new programs for rail financing, which could be available for P3 projects.

An important caveat is that the FAST act also cut TIFIA funding by nearly 70% from a previously high funding level established under the MAP 21 legislation. However, FAST also allowed for uncommitted funds to be retained by TIFIA rather than redistributed to the states, which was required in the past couple of years. While the TIFIA cuts may seem significant on the surface, the impact may be less than expected given TIFIA has historically reached financial close on only a handful of P3 projects annually. That being said, TIFIA loans are an integral part of the US P3 market (see Appendix A) and any cuts have a direct effect on the number of P3 projects that can be funded with low interest TIFIA loans.

**P3 successes in one state do not necessarily translate to P3 successes in another state.** P3 legislation was vetoed in Kentucky in 2014 and in New Jersey in 2015. While new bills have been proposed in both states, future passage remains uncertain, despite the Kentucky Governor's expressed support for a potential P3 bill.

Legal challenges to the North Carolina I-77 Managed Lane demand risk P3 and to parts of the [KentuckyWired Infrastructure Company, Inc. \(Baa2 stable\)](#) broadband availability-payment P3 procurement process emerged, but the projects have continued to move forward. The North Carolina Department of Transportation also announced its reevaluation of its contract with the private developer of the I-77 Managed Lane project due to the announcement of a Chapter 11 filing of [SH130 Concession Company LLC](#) in Texas on March 2, 2016, that was developed by the same company that is developing the new I-77 project. The risk of project cancellation might diminish private sector interest in bidding on projects in the region or with certain government counterparties, if there is a history of political interference.

### Diversification on the Pipeline Front

The majority of P3 projects that have reached financial close in the US have been in the transportation sector. Of the 13 availability-payment P3s that have reached financial close, 10 were in transportation and three were in social infrastructure (exhibit 2).

But the US P3 project pipeline is starting to diversify away from traditional transportation projects. According to InfraDeals, of the five availability payment P3s in the preferred or shortlist proponent stage, three are social infrastructure-related and one is a light rail line.

There are also more social infrastructure P3 projects in earlier project stages (i.e., request for proposals, qualifications or interest). If demand risk P3s are included, this figure is higher and the project diversity is broader, including projects for water, wastewater, stormwater and universities (exhibit 6). This diversity is notable compared with just 18 months ago, when nearly all projects in the advanced stages of procurement were in the transportation sector.

Universities are also expanding their use of different types of P3s beyond privatized student housing to include other university facilities, as seen with the current UC Merced P3 project, the Purdue partnership with the City of West Lafayette for the State Street Redevelopment Project, and the [University of Kansas \(Aa2 negative\)](#) central district project that used a design, build, operate, maintain model.

Exhibit 6

#### More local governments and higher education institutions are exploring different types of P3s with more hybrid P3s and DBF (design, build, finance) structures

Project	State	Sector	Sub-Sector	Stage	Type
Long Beach Civic Center	California	Social	Accommodation	Preferred	Availability
Purple Line	Maryland	Transport	Light Rail	Preferred	Availability
Maryland Stormwater P3	Maryland	Environment	Water	Preferred	Demand Risk
SH 288	Texas	Transport	Roads	Preferred	Demand Risk
University of Kansas Campus	Kansas	Social	Education	Preferred	DBF
I-285/SR 400 Improvements	Georgia	Transport	Roads	Preferred	DBF
Corridor H	West Virginia	Transport	Roads	Preferred	DBF
LaGuardia Airport Terminal Building	New York	Transport	Airports	Preferred	Other
Port of Ponce	Peurto Rico	Transport	Ports	Preferred	Other
UTOPIA Broadband (Utah)	Utah	Social	Broadband	Preferred	Mixed
LSU Nicholson Gateway Project	Louisiana	Social	Education/Mixed Use	Preferred	Other
University of California, Merced Campus Expansion	California	Social	Education	Shortlisted	Availability
I-70 East	Colorado	Transport	Roads	Shortlisted	Availability
State Street Redevelopment Project	Indiana	Transport	Roads	Shortlisted	Availability
I-66 (Transform 66)	Virginia	Transport	Roads	Shortlisted	Demand Risk
Emerald Coast Utilities Authority	Florida	Environment	Waste	Shortlisted	DBFO
Pennsylvania Compressed Natural Gas (CNG) Fueling Station	Pennsylvania	Energy	Energy	Shortlisted	Other
Wireless Telecom Partnerships	Pennsylvania	Social	Wireless Transmission	Shortlisted	Other
Denver Airport	Colorado	Transport	Airports	Shortlisted	Other

Source: InfraDeals and Moody's

## Innovative Funding Approaches and Expanding Investor Demand

P3 projects access multiple funding sources beyond the tax-exempt bond market, expanding the investor base and bringing in more capital that can help reduce capital costs for new projects (exhibit 8). These lenders do not always have the same continuing disclosure requirements as a public bond, making them attractive to private sponsors that are eager to keep their proprietary development practices out of the public eye in order to retain a competitive edge on future P3 bids.

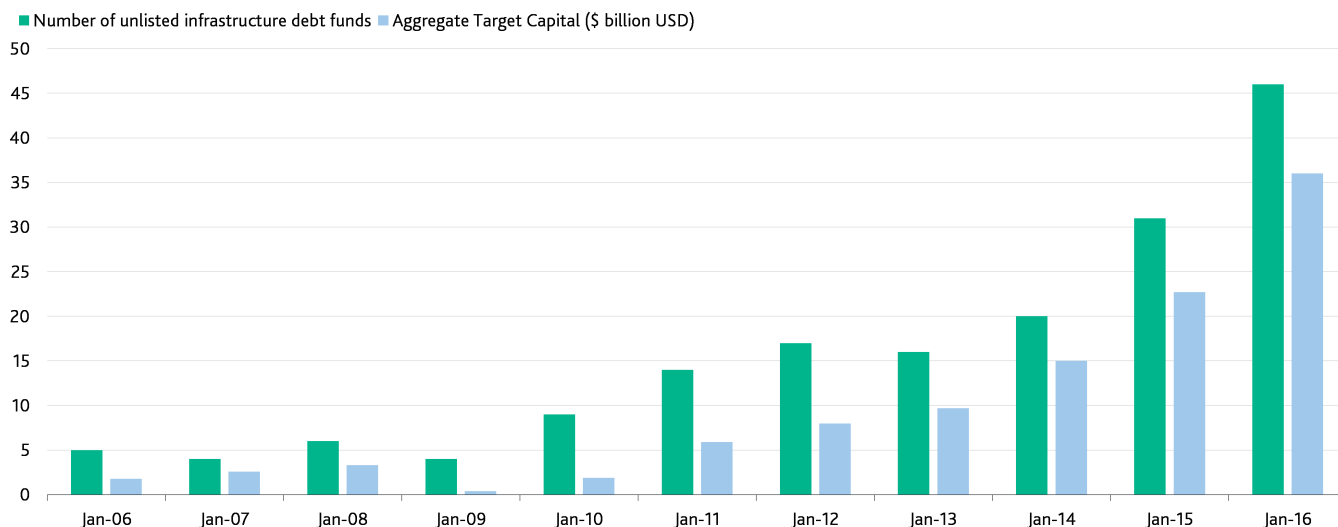
In addition, the range of bidders and the ultimate purchaser of two recent and sizeable demand risk P3 asset sales, the Indiana Toll Road and the Chicago Skyway, included international pension and infrastructure funds that were able to commit a large amount of equity to materially improve the debt-to-equity ratio for each project compared to their original financings in the mid-2000's. The broad investor appeal of these assets demonstrated the global demand for US infrastructure assets despite the limited amount of investable projects available outside of the US municipal tax-exempt market.

Several P3 transactions have accessed the private placement market given attractive rates. The private placement market will remain a key funding source for future US P3 projects, as more money is put to work in global private infrastructure funds (exhibit 7). This heightened demand, coupled with a limited number of investable projects, should help keep project capital costs competitive, especially as market interest rates and credit spreads fluctuate over time.

The Michigan Freeway Lighting project was initially financed in the private placement market, while Florida's I-595 Express Lane and Long Beach Courthouse projects were both refinanced into the private placement market after entering operations. We expect the debt for the State Street Redevelopment Project and the Long Beach Civic Center availability-payment P3 projects to be privately placed this year. The [I-4 Ultimate Project \(Baa1 stable\)](#) was partially funded in the bank loan market, which was more prevalent in the years following the global financial crisis post 2008 (exhibit 8).

Exhibit 7

### Infrastructure debt funds have more capital to deploy, which should help keep rates competitive for P3 projects



Source: Preqin Infrastructure Online

Given the numerous funding sources in a P3, the financing approach tends to be complex with innovative financing structures developed in order to lower capital costs. These innovative, yet complex, structures serve as a model for future projects. For example, the KentuckyWired broadband project financing had a unique and complex financing structure.

The KentuckyWired broadband project included the use of a state-created, not-for-profit special purpose entity that issued tax-exempt and taxable bonds to help finance the development of the new statewide, government-owned broadband network. The complexity of the financing heightened the execution risk, given the multiple funding sources, including a privately placed defer draw taxable bond. This is the first defer draw bond that we have publicly rated in the US, although this funding approach was used in a handful



of Moody's-rated P3s and project financings in Europe. The defer draw bond structure reduces interest costs during construction as the funds are distributed over time, similar to a defer draw bank loan. The combined use of tax-exempt and taxable financing along with direct contributions from the sponsors and the government at different times during construction created a complex financing solution, yet lowered the project's total cost of capital.

Learnings from these more complex and document heavy transactions for one asset class may also apply to future P3s in other sectors like water, especially given the recent policy change to allow WIFIA loans to be used along with tax-exempt bonds. This change in policy is key over the long-term given the successful combination in the transportation sector of federal TIFIA loans and tax-exempt Private Activity Bonds (PABs), which could be replicated with WIFIA loans and PABs, but only if WIFIA receives federal funding so it can start making loans.

Exhibit 8

**Most US availability-payment P3s have used tax-exempt financing and the majority receive large government payments during construction or at substantial completion, lowering the project's total cost of funds and reducing the amount of debt outstanding post project completion**

Project	Financial close	Total Capital Market Financing (\$m)	TIFIA	Tax-exempt bonds	Bank loan	Private placement	Substantial completion payment	Payments during construction
I-595 Corridor Roadway Improvements - Refinancing	2015	827				X	N/A	N/A
Kentucky Broadband P3	2015	290		X		X		X
Michigan Freeway Lighting (1)	2015	44				X	X	X
Portsmouth Bypass	2015	436	X	X			X	X
Pennsylvania Bridges Project (2)	2015	722		X			X	X
I-4 Ultimate P3 (3)	2014	1,431	X		X		X	X
I-69 P3	2014	244		X			X	X
Goethals Bridge P3	2013	936	X	X			X	X
Ohio River Bridges Project - East End Crossing (3)	2013	677	X	X			X	X
Long Beach Courthouse - refinancing	2013	519				X	N/A	N/A
Presidio Parkway Doyle Drive Concession (3)	2012	317	X		X		X	
Long Beach Courthouse	2010	442			X			
Denver FasTracks Eagle P3 Light Rail Project	2010	404	X	X				X
Miami Port Tunnel	2009	680	X		X		X	X
I-595 Corridor Roadway Improvements	2009	1,458	X		X		X	

(1) Michigan Freeway Lighting has a milestone payment scheduled for either the Substantial Completion Date or October 31, 2015, whichever is later

(2) Pennsylvania Bridges has a milestone payment scheduled for either the Substantial Completion Date or the date on which Notice to Proceed 1 occurs plus 42 months, whichever is earlier

(3) I-4 Ultimate P3 and Presidio Parkway projects both used short-term and long-term TIFIA loans

(4) TIFIA Loan for Ohio River Bridges and Denver FastTracks was provided to the government offtaker to make the payment due to the project during construction or at substantial completion

Sources: Moody's, Project Agreements, and InfraDeals

**While private funding appears to be readily available for projects, public funding has been reduced with the FAST Act cutting TIFIA annual funding authority** by over 70%, to \$275 million per year for 2016 and 2017, \$285 million in 2018 and \$300 million in 2019 and 2020, from the higher funding levels authorized under MAP 21 of \$1 billion in 2015 and 2014 and \$750 million in 2013. Of note, MAP 21 was a notable increase from prior funding levels of \$122 million per year.

Although FAST reduced TIFIA's annual contract funding authority, FAST also removed a MAP 21 restriction requiring TIFIA to redistribute a portion of uncommitted funds to the states annually. This retention of unused funds helps balance the cuts as TIFIA has historically been unable to lend out all of its available capacity. For example, in April 2015 TIFIA made a one-time redistribution of

nearly \$640 million of uncommitted funds. Given this history, the reduced funding authority may not have an immediate impact given uncommitted funds are available from prior years and can accumulate moving forward.

While total TIFIA funding has been reduced, the amount allocated to P3s is likely to remain the same. Currently, about one-third or \$6.7 billion of TIFIA's \$20 billion active outstanding loan portfolio are for loans provided to private sponsors to construct new government-owned transportation assets using either the availability-payment or demand risk P3 model. This equates to about two privately financed projects with a TIFIA loan reaching financial close per year on average for the six years from 2009 to 2015, or about 31% of TIFIA's active loans. As such, we do not expect this level of activity to be materially affected by TIFIA's reduced funding level. The majority of TIFIA's active loans, or 69%, were lent to a government sponsor that publicly finances the balance of the project costs on its own credit. We would expect this TIFIA funding allocation ratio to remain about the same moving forward, although this will depend on the application pipeline.

Per TIFIA, every \$1 of contract funding authority can leverage about \$10 in lending capacity. So if TIFIA's annual allocation is about \$300 million, this equates to about \$3 billion in annual lending capacity per year, which is \$15 billion of lending capacity over the next five years. With TIFIA's historical loan portfolio comprised of about two-thirds of public sector loans and one-third P3 loans, this would provide about \$5 billion of TIFIA lending capacity for P3 projects over the next five years, which is about the \$5.7 billion lent to P3 projects over the last seven years (exhibit 9).

## Appendix I

### TIFIA loans will continue to be an integral part of the US P3 market

Nearly two-thirds (8 of 13) of the new availability-payment P3 projects that have reached financial close in the US to date included TIFIA funding (exhibit 9). TIFIA loans were part of the direct financing package for six privately financed availability-payment P3s and TIFIA loans were also provided to the government offtaker of two additional availability-payment P3s (exhibit 9). The government offtaker used the TIFIA loan proceeds to fund the government's required construction milestone or substantial completion payments. Two-thirds (10 of 15) of the privately financed projects that included TIFIA loans also included tax-exempt private activity bonds (PABs), which were primarily for seven demand risk managed lane toll road P3 projects. The remaining five were funded with bank loans, including four availability-payment P3s and one operating demand risk toll road (exhibit 9).

TIFIA loans have lowered the funding costs for these P3 projects while also strengthening the overall credit quality of the projects they are a part of given TIFIA loans generally included flexible repayment terms and stronger financial covenants, like change in control limitations, higher financial covenant thresholds for equity distributions and additional debt issuance, and higher credit quality requirements for counterparty providers of liquidity instruments used in lieu of cash.

Exhibit 9

#### TIFIA active loans to privately financed transportation projects are an important funding source for US P3s

Project Name	State	Project Cost	TIFIA Assistance	Financial Close	PABs or Bank Loan	Primary Revenue Pledge
Portsmouth Bypass	OH	\$ 634	\$ 209	2015	PABs	Availability Payments
I-77 HOT Lanes Project	NC	\$ 636	\$ 189	2015	PABs	Toll Revenues - Managed Lane
I-4 Ultimate Project	FL	\$ 2,877	\$ 949	2014	Bank Loan	Availability Payments
North Tarrant Express (Segments 3A and 3B)	TX	\$ 1,638	\$ 531	2014	PABs	Toll Revenues - Managed Lane
Goethals Bridge Replacement	NY/Nj	\$ 1,436	\$ 474	2014	PABs	Availability Payments
I-95 HOV / Hot Lanes	VA	\$ 923	\$ 300	2013	PABs	Toll Revenues - Managed Lane
U.S. 36 Managed Lane / Bus Rapid Transit Project: Phase 2	CO	\$ 170	\$ 60	2012	PABs	Toll Revenues - Managed Lane
Downtown / Midtown Tunnel	VA	\$ 2,089	\$ 422	2012	PABs	Toll Revenues
Presidio Parkway	CA	\$ 852	\$ 150	2012	Bank Loan	Availability Payments
IH 635 Managed Lanes	TX	\$ 2,615	\$ 850	2010	PABs	Toll Revenues - Managed Lane
Port of Miami Tunnel	FL	\$ 1,073	\$ 342	2009	Bank Loan	Availability Payments
North Tarrant Express Segments 1 and 2A	TX	\$ 2,047	\$ 650	2009	PABs	Toll Revenues - Managed Lane
I-595 Corridor Roadway Improvements	FL	\$ 1,834	\$ 603	2009	Bank Loan	Availability Payments
Capital Beltway High Occupancy Toll (HOT) Lanes	VA	\$ 1,938	\$ 589	2008	PABs	Toll Revenues - Managed Lane
SH 130 (Segments 5 and 6)	TX	\$ 1,328	\$ 430	2007	Bank Loan	Toll Revenues

Source: FHWA and Moody's

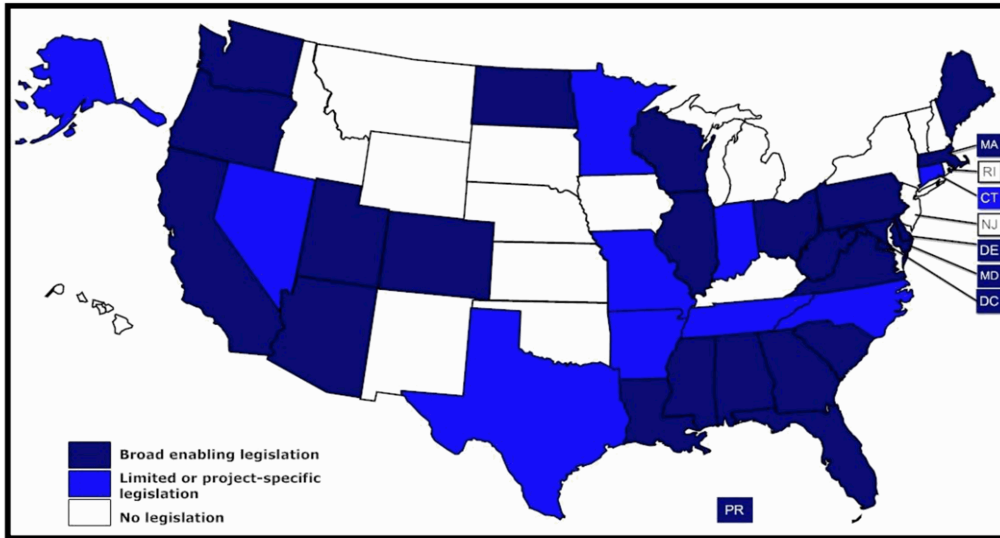
## Appendix II

### Currently, 33 states, Washington D.C. and Puerto Rico have enabling legislation for transportation P3s

At least eight states, the District of Columbia, and [Puerto Rico \(Caa3 negative\)](#) have some form of specific enabling legislation for social infrastructure P3s. In some cases, social infrastructure P3s can be completed without specific public-private partnership legislation. For example, Michigan was able to complete its \$49 million availability-payment P3 Freeway Lighting project through the use of the state's "home rule" powers.

Exhibit 10

**States with authorizing P3 legislation for transportation has risen over the years and is likely to continue as NY, KY, and NJ consistently have proposed P3 bills**



Source: National Conference of State Legislatures

## Moody's Related Research

- » [Certain US P3 Obligations Will Be Treated as Government Debt, February 2015 \(1001963\)](#)
- » [Public-Private Partnerships: Frequently Asked Questions, September 2015 \(1004733\)](#)
- » [Public Private Partnerships: Global P3 Landscape, September 2014 \(174672\)](#)
- » [EMEA Public-Private Partnerships: 2016 Outlook - Stable Outlook Reflects Resilient Project Cash Flows \(1009909\)](#)
- » [Public-Private Partnerships in Peru, November 2015 \(1006732\)](#)
- » [Operational Privately Financed Public Infrastructure \(PFI/PPP/P3\) Projects, March 2015 \(176194\)](#)
- » [Construction Risk in Privately-Financed Public Infrastructure \(PFI/PPP/P3\) Projects, April 2014 \(165887\)](#)

## Presales

- » [KentuckyWired Infrastructure Company, Inc.](#)
- » [I-4 Mobility Partners](#)
- » [Portsmouth Gateway Group, LLC](#)
- » [Denver Transit Partners, LLC](#)
- » [University of Kansas](#)
- » [NTE Mobility Partners LLC](#)
- » [NTE Mobility Partner Segments 3 LLC](#)
- » [LBJ Infrastructure Group](#)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

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REPORT NUMBER 1018221