TIAA

Building roads to the future

Policy opportunities for infrastructure investment by life insurers

BUILT TO PERFORM.

CREATED TO SERVE.

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Executive summary

Life insurance companies have long been key institutional investors. And many insurers—like TIAA—increasingly view infrastructure as an attractive investment opportunity that can offer stability, portfolio diversity, and competitive returns over a long timeline.

With the pressing national need for major infrastructure project financing, the public-private partnership (P3) model—alongside more traditional mechanisms like private funding and municipal bonds—has emerged as a more common structure. In P3s, state and local governments partner with private-sector investors and managers on both new construction and redevelopment projects.

But structural complexity, inconsistent regulations and valuation methodologies, and an array of procedural hurdles can deter would-be P3 investors—especially insurers. Due to the relatively recent adoption of P3s in the United States, many government and decision-making bodies have not yet developed regulatory guidance or industry-wide standards.

Structural complexity, inconsistent regulations and valuation methodologies, and an array of procedural hurdles can deter would-be P3 investors.

To remove these roadblocks and incentivize the use of P3s in financing infrastructure projects, TIAA recommends:

Achieving consistent rules and methodologies across geographies

Forming an industry working group at the National Association of Insurance Commissioners (NAIC)

Preserving key tax tools

Expediting approval processes

Introduction

As of 2017, life insurance companies had collectively invested over $1 trillion in infrastructure projects.

Across asset classes, sizes, and geographies, life insurance companies are significant institutional investors. Key to an insurer's strength is its General Account: the pool of funds into which customers pay premiums, which insurers, in turn, invest with a goal to provide stable solid growth and satisfy obligations. General Account investments take many forms, and infrastructure has emerged as a particularly appealing investment class. As of 2017, life insurance companies had collectively invested over $1 trillion in infrastructure projects.[1]

Our country has a proud history of transformative infrastructure projects—from the Works Progress Administration to the Interstate Highway System to the birth of the Internet. Today, however, massive infrastructure needs often go unmet. Simply updating and maintaining existing transportation networks, communications systems, and social- and public-service facilities would currently require more than $1 trillion.

Over the next 10 years, the United States faces as much as a $2.1 trillion investment shortfall. At the same time, infrastructure spending will need to increase to 3.5 percent of GDP to keep current systems working smoothly.[2,3] Even then, additional funds will be needed to implement new technologies and provide services to a growing population.

Investment gap

2016–2025 (10 years). $ in billions.

Infrastructure Systems	Total needs	Estimated funding	Funding gap
Surface transportation	$2,042	$941	$1,101
Water/wastewater infrastructure	$150	$45	$105
Electricity	$934	$757	$177
Airports	$157	$115	$42
Inland waterways & marine ports	$37	$22	$15
Dams	$45	$5.6	$39.4
Hazardous & solid waste	$7	$4	$3
Levees	$80	$10	$70
Public parks & recreation	$114.4	$12.1	$102.3
Rail	$154.1	$124.7	$29.4
Schools	$870	$490	$380
Totals	**$4,590**	**$2,526**	**$2,064**

Source: American Society of Civil Engineers. **infrastructurereportcard.org**

$2.1 trillion in funding needed

■ Current funding

□ Funding gap
$200 billion a year

White House Infrastructure Plan

$200 billion federal government funding
+ state and local government funding
+ private sector investment
= $1.5 trillion

Policymakers increasingly recognize that public funding alone will be insufficient to address this shortfall.[4] Notably, the recently proposed White House Infrastructure Plan would leverage a relatively small federal investment with much greater outside investment from state and local governments, private investors, or both. In fact, the amount of nonfederal money involved is a key metric in the plan's proposed scoring of infrastructure projects.[5]

The long timeline and stability of infrastructure projects make them well-suited to life insurance companies.[6] And reciprocally, policymakers have long taken an interest in the role insurers—and the retirement assets they manage—can play in financing infrastructure.[7] The need for insurance capital is as important as ever; as banks reduce their exposure to infrastructure investing, life insurance companies are poised to assume a more central role.[8]

But despite both the demand for funding and insurers' interest and ready capital, life insurance companies often remain sidelined; regulatory issues, inconsistent guidance, and a lack of industry standardization prevent insurers from leveraging their experience, expertise, and assets for the public good. Some of these public policy challenges impact all private investors in infrastructure projects; other challenges are particular to the life insurance sector.

The path forward

As policymakers address national infrastructure challenges—including by attracting private capital—we recommend reforms to help catalyze greater insurer investment in meeting those challenges. Key among these:

- Achieving consistent rules and methodologies across geographies;
- Forming an NAIC industry working group;
- Preserving key tax tools; and
- Expediting approval processes.

We begin this paper by laying out the need for increased infrastructure investment in the United States and describe why infrastructure investments are attractive to TIAA and fellow life insurance companies.

We then explore the concept of the public-private partnership (P3) model as an important form of infrastructure investment, explain why this financing structure is well-suited to address today's challenges, and consider the potential complications of these partnerships.

We conclude by recommending policy reforms to address procedural and industry challenges in order to further incentivize the financing of infrastructure projects.

A growing need for infrastructure investment

Infrastructure projects are reliable, low-volatility investments and generally produce strong results.

Infrastructure remains an opportune asset class with distinct advantages for institutional investors, including insurers. A recent U.S. Treasury Department report summarizes the key draws: "Infrastructure projects present an appealing opportunity to insurers given the benefits of higher yields and longer durations that may improve profitability and asset-liability management, particularly for life insurers."[9]

These projects generally produce not only strong results for insurers—they are also generally reliable, low-volatility investments. In addition, the inherent geographic specificity of infrastructure work allows investors to develop long-term expertise and familiarity with a region's needs, operations, and relevant actors.[10]

What is infrastructure?

When we refer to "infrastructure," we mean any network that connects people and operationalizes a business, state, or economic entity. This includes not only the more common connotation of physical infrastructure—roads, railways, airports, ports, telecommunications, and power generation or transmission—but also social infrastructure like healthcare, housing, and educational facilities.

Infrastructure

Any network that connects people and operationalizes a business, state, or economic entity, including physical infrastructure (e.g., roads, railways, etc.) and social infrastructure (e.g., healthcare, housing, and educational facilities).

Infrastructure is more than an asset class; it is essential to societal function, growth, and connection. Though it offers many benefits as an investment, TIAA's engagement in this space is also motivated by a social objective: without continued investment,

American infrastructure may fail to meet increased need—or even fail entirely.[11] As an experienced investor with long-term objectives, TIAA is eager to do its part to address this societal challenge.

How can an infrastructure deal be structured?

Some infrastructure projects are financed and managed by government bodies; others by nongovernmental entities, such as utility companies and cooperatives, toll-road operators, and airport authorities. Often, both the private and public sectors are involved.

Municipal bonds and private activity bonds (PABs) have long served as the primary means of financing infrastructure. Recently, concession structures, such as P3s, which are financed through debt secured by physical or contractual assets, have become an increasingly popular means of backing infrastructure projects.[12] Such structures are particularly attractive to insurers. Given insurers' focus, projects requiring foresight and years-long commitments can be very well-suited to the General Account.

P3s, which are financed through debt secured by physical or contractual assets, have become an increasingly popular means of funding infrastructure projects.

What are public-private partnerships?

Public-private partnerships are contractual agreements between public and private entities that leverage the advantages of each sector. Though other models like debt financing may be available, P3s have proven especially valuable in building and rebuilding infrastructure. By bringing private-sector resources to public projects, P3s can save taxpayers money and achieve shorter timelines compared to infrastructure projects that rely exclusively on public dollars. And by transferring public financing risk to the private sector, P3s are especially appealing to public and private entities alike.[13] Of course, not all public infrastructure projects are natural candidates for P3s. While projects that are financed through municipal revenue bonds and provide cash flows work for P3s, those that are wholly dependent upon general taxes and do not generate revenue are not suitable P3 candidates.

Widespread P3 benefits

>$52 billion

Amount generated in U.S. economic activity over the last decade.

$300 billion+

Estimated amount in private capital ready for investment in public infrastructure projects under the right conditions.

P3s already deliver widespread benefits—collectively, they generated more than $52 billion in U.S. economic activity over the last decade—and their potential is even greater. It is estimated that upwards of $300 billion in private capital is ready for investment in public infrastructure projects under the right conditions.[14] Life insurance companies are a potential source of that private capital. The U.S. Treasury Department, too, is eager to enable this vision for the future; a recent report said:

> *Infrastructure is a top priority for the Trump administration, and investments by insurers can play a role in stimulating infrastructure spending. To promote robust investment in American infrastructure, Treasury recommends a reevaluation of state insurance capital requirements and how those requirements may be better calibrated to encourage insurer infrastructure investment*.[15]

This attraction to the potential role for insurers is not limited to U.S. policymakers. With new regulations constraining traditional European banks' involvement in infrastructure investment, several European countries have turned to insurers.[16] The European Commission has actively sought to facilitate insurer investment. It recently proposed a new asset class for high-quality infrastructure investments that recognizes the lower risk of infrastructure project debt compared to corporate project debt.[17] But in the U.S., regulators generally do not treat infrastructure projects in a similar manner when calculating the insurer's Risk-Based Capital.

How are infrastructure projects funded?

Opportunities to invest in infrastructure span four categories: public and private equity and public and private debt. Typically comprising between 80 and 90 percent of a project's needed capital, *debt* is a common and reliable means of ensuring that cash flows remain stable and secure. Though it brings the potential for more volatile cash flows and asset valuations, *equity* offers investors leveraged exposure and makes up about 10 to 20 percent of capital requirements.[18] This diversity enables private investors to customize an infrastructure portfolio that maximizes impact, choice, and returns while minimizing risk.[19]

Insurers' capital comes largely from their General Accounts; real assets such as infrastructure help to diversify the General Account and hedge against inflation, benefitting customers. Infrastructure is a real asset offering institutional investors distinct advantages over traditional and alternative asset classes: potential for higher yield, lower volatility, and low correlations. Benefits reflect infrastructure's unique characteristics: location-specific natural monopolies generating predictable high income through long-term contracts for essential services.[20] But insurers who want to invest in P3s remain encumbered, both by state regulations that advantage shorter-dated private equity funds and by the treatment of these investments. This, in turn, discourages life insurance General Accounts from considering equity positions.

European countries have turned to insurers for infrastructure investment, creating a new asset class for high-quality investments.

TIAA has the capital to invest

- $253 billion in assets to invest
- $18.2 billion invested (less than 8%)

Based on 2017 data

Insurers are eager to grow their support and have the capital to do so. For example, in 2017, TIAA's General Account held $253 billion in total assets. Yet we invested only $18.2 billion—less than 8 percent—in private real assets. We are eager to expand investments in infrastructure through P3s—and we are not alone. But this will be possible only with the right policy support.

An evolving opportunity

Our nation's infrastructure needs momentum and vision—but it also needs capital and commitment.

National needs

As the U.S. population continues to grow, the imperative to expand and upgrade our infrastructure rises correspondingly. American roads and bridges have increasingly fallen into disrepair, but general awareness of the problem has thus far done little to reverse decades of neglect.[21]

Tragedies such as the 2007 Interstate 35 bridge collapse in Minneapolis have sparked limited action. Today, nearly one in ten bridges nationwide—nearly 56,000 bridges—are considered structurally deficient. Conservative estimates for repairing these bridges extend over multiple decades and cost in the billions, if not trillions, of dollars.[22]

Lawmakers at the federal, state, and local levels have recognized the need to tackle this national problem. Despite bipartisan consensus that there is an imminent need, the scope of the challenge remains daunting. Critical projects remain unfunded, and public awareness of their necessity and benefits is lacking.[23]

The infrastructure sector needs momentum and vision—but it also needs capital and commitment. Aging infrastructure results in an ever-growing list of needs; only with a practical, bipartisan push can we restore, upgrade, and further develop our national infrastructure.

America's aging infrastructure

43 years

Average age of a bridge

56,000

of the nation's bridges (9.1%) were structurally deficient In 2016

188 million

Trips are taken on structurally deficient bridges

Source: American Society of Civil Engineers. "Bridges." 2017 Infrastructure Report Card. **infrastructurereportcard.org/cat-item/bridges/**

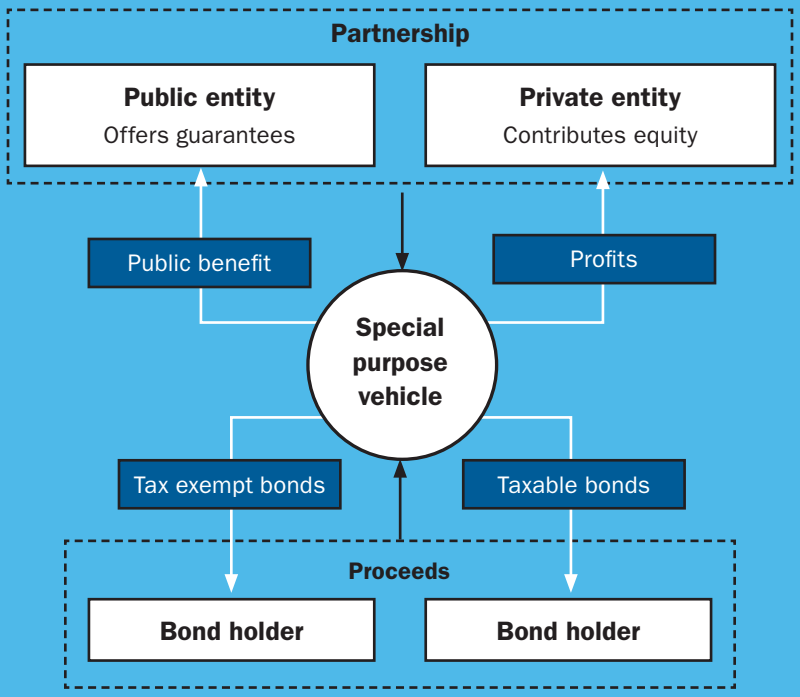
Successful cases

As need continues to rise, P3s have proven pivotal in creating, financing, and completing major infrastructure projects that likely would have languished without private capital.[24] Though specifics vary from project to project, the P3 model exemplifies a compelling vision for future projects: effective, efficient partnerships that create long-lasting public goods and attractive returns.

P3s typically consist of a public partner—a regional transportation or utility authority, which often will raise capital by issuing bonds—and a private partner, in the form of a single investor or a joint venture of multiple companies. Both the public and private partners contribute capital to fund a given construction project. The private-sector partner, either directly or through an operator, manages much of the project's planning and execution; after completion, the private investor sees returns through usage tolling, availability payments, or other revenues. The public, in turn, enjoys the benefits of the infrastructure that may not otherwise have been built, redeveloped, or completed.

Continued success will inspire more progress—and we are eager to spur that virtuous cycle.

Public-private partnerships



Case study

I-595 Express LLC

Every day, more than 180,000 vehicles use I-595, a major east-west highway in southeast Florida. By 2034, that figure is projected to exceed 300,000. Drivers on this modernized highway benefit from a P3.

The project was spurred by the Florida Department of Transportation's (FDOT) decision to seek a private partner to serve as the concessionaire to design, build, finance, operate, and maintain the I-595 corridor project for a commitment of 35 years.[25] Seeking to become that partner, TIAA in October 2011 entered into a joint venture with ACS Infrastructure Development (ACSID), the North American subsidiary of Grupo ACS (Madrid), the original concessionaire awarded in 2009.

The project's express lanes are toll roads, which generate predictable cash flows for investors. The state retained the toll-revenue risk, a choice that allowed I-595 Express LLC (as concessionaire) to focus on throughput and quality, rather than intensive revenue generation. As the nation's first availability-payment financing arrangement, this deal allowed FDOT to begin making regular payments to I-595 Express LLC based on the concessionaire's level of service, operations, and maintenance, rather than depending on traffic volume.[26]

The $1.6 billion construction project reached substantial completion in March 2014 and financial acceptance by FDOT in June 2014. The senior bonds and subordinate secured loan currently carry an unpublished A3 rating by Moody's. Today, Floridians enjoy the benefits of the improved and expanded highway system—while TIAA has a high-quality investment providing competitive returns to support policyholder long-term benefit streams.

The I-595 Express project is a telling example of how an insurance company's investment can successfully meet a public need while also providing a high-quality, long-term asset to support obligations to the insurer's policyholders.[27] This innovative agreement has also inspired others, and the availability-payment model has become increasingly popular for major U.S. transit projects.

An attractive investment for insurers

Given insurers' unique capital structures, several aspects of infrastructure investments appeal particularly to insurers, including most prominently these projects' long, stable terms and generally predictable, safe returns. As investors, life insurance companies look for diverse means of meeting obligations to policyholders—many of which do not come due until far into the future. Infrastructure projects are generally lower-risk and longer-term investments that offer greater rates of return than other investments like corporate debt—particularly given today's low interest rates.

Like other life insurers, TIAA seeks to generate competitive yet stable returns for those to who we make promises—our five million participants—to support our ability to provide the best crediting rates possible to grow their retirement savings and receive lifetime income benefits.[28] For TIAA and our peers, infrastructure investing affords distinct opportunities to secure solid returns for our participants while supporting a public good.

Stability and security

Markets place a premium on liquidity—that is, all other factors being equal, an investor will need to pay a higher incremental price for the right to liquidate an investment on short notice. Because their promises to policyholders tend to occur further out into the future, insurers prefer to forego this premium and instead opt for *illiquid* assets, which are stable and non-callable. Generally, infrastructure projects possess these qualities.[29] And because regulators or other governmental authorities often stipulate these projects' returns, structural certainty is built into the robust and predictable cash flows they tend to generate.[30]

Infrastructure projects offer stable, low-risk, long-term returns that may remain largely unaffected even during an economic downturn.

TIAA's infrastructure strategy

With a global footprint and nearly $1 trillion in assets under management, TIAA's commitment to a comprehensive, thoughtful, and responsible infrastructure investment strategy for the life insurance industry, and its public partners, builds on over 20 years of experience in direct equity and debt infrastructure investments.

To date, our primary infrastructure focus has been on toll roads, utilities, transmission, and energy pipelines.

These experiences have fostered a deeper understanding of both the substantial challenges in and the benefits from infrastructure investment—and an eagerness to explore new opportunities. Looking ahead, TIAA hopes to expand investments in the infrastructure arena to power-generating assets (such as solar, wind, hydroelectric, and geothermal energy) and to ports and other transportation assets, telecommunications, and social infrastructure.[31]

Our four-pronged infrastructure investment strategy

Diversification

within the infrastructure space and as a distinct asset group on our balance sheet

Disciplined

and long-term horizon to match our long-term pension, annuity, and insurance liabilities

Development

of a robust and exclusive deal pipeline

Deeply experienced

professional, engaged, and synergetic team

Diversity

In a low-interest environment, infrastructure projects offer especially attractive funding opportunities. Like other insurers, TIAA seeks out investments that can produce better-than-average yields in a macroeconomic environment characterized by low interest rates.[32] Life insurance companies also need to diversify investments portfolios—which infrastructure projects afford through distinct risk drivers and low observed correlation with other asset classes.[33] These low correlations can be particularly attractive: when an economic downturn impacts other assets, infrastructure may remain largely unaffected.

Risk and returns

Because infrastructure projects often generate returns over decades, not every investor is willing or able to take them on. With an average life of 15 years or more, and with maturities sometimes exceeding 35 years, these investments are an excellent match for insurers' long-dated liabilities.[A] The risk-adjusted returns of these investments remain attractive: insurers should expect competitive spreads with similar default rates, higher recovery rates, and volatility lower than similar assets.[34] Equity investments can also offer significant upsides (including a 7 to 12 percent internal rate of return) with greater cash-flow certainty and stronger asset security than traditional private equity.[35]

[A] Generally, institutional investors tend to prefer "core" infrastructure projects, which tend to have higher barriers to entry and well-known regulatory regimes. Typically, these investors seek "bond plus" returns, rather than higher private-equity-like returns, and receive inflation protection through explicit revenue contracts or through ongoing capital improvements.

The challenges ahead

Though a highly attractive investment class, infrastructure presents challenges for investors in general—and insurers in particular. Because every transaction is unique to a locality with its own needs and political dynamics, projects require careful, individual attention from potential investors. There is no single correct approach, and a given opportunity's complexity, expansiveness, and idiosyncrasies can deter even the most motivated investors. Beyond the challenges that all investors face, insurance companies face added hurdles stemming from structural and regulatory constraints.

With vastly different policies and requirements across the states, the current patchwork of P3 rules can make infrastructure projects challenging and unpredictable.

Unpredictability and inconsistency

The "public" side of a P3 can significantly slow a project. The current patchwork of P3 rules can also make these projects unpredictable. Regardless of size, infrastructure changes generally require coordination among, and approvals from, multiple agencies, potentially across federal, state, and local levels of government. Approval processes can prove inefficient and repetitive, especially when multiple partners in a project must also coordinate among themselves—and any semblance of controversy might significantly lengthen an already cumbersome process. Consequently, even successful proposals often face long waits before breaking ground.[36]

Certain aspects of the current regulatory landscape fail to adequately account for infrastructure projects' long terms, in addition to the need for consistency. The changing of a state's executive administration may bring new views on infrastructure projects. If those views translate into policy changes or contract interpretations, ongoing projects may face new delays or outright roadblocks. Accordingly, state P3 offices need a degree of independence. Furthermore, state requisition processes typically consider construction-services companies—and are generally ill-prepared to account for the diverse assets of a life insurance company, such as the unique limitations of a General Account balance sheet. As such, an official Request for Proposal will often include requirements that fail to account for how life insurance companies invest.

Moreover, among states that have developed rules governing P3s, there are significant differences creating a regulatory patchwork that requires interested parties to learn and re-learn new sets of rules with each project. In fact, 14 states have no legislation enabling the use of P3s to finance infrastructure projects. The other 37 states' laws have vastly different requirements for the implementation of P3s. For example, some states require that the state legislature vote to approve the P3 before any contract can be signed; others do not.[37]

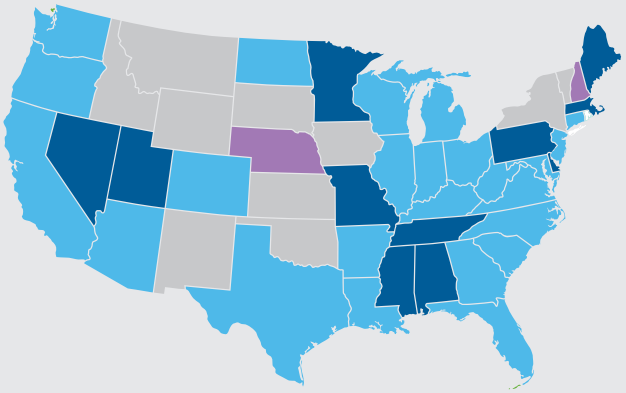
The need to understand and comply with each state's different rules, along with political uncertainty, can often outweigh the potential benefits that such projects might provide.

Assessing risk and return

Whether financed through a P3 or another vehicle like municipal bonds, the structure of an infrastructure project for any investor might, on the surface, seem simple. An investor, such as a life insurance company, could provide capital up front in exchange for equity in the finished project (e.g., the investor might receive a percentage of tolls collected on a road they helped finance). Alternatively, the investor could also participate by purchasing the debt that funds the project, essentially providing a loan to be paid off over time, with interest. Yet, unique features of infrastructure projects tend to complicate these otherwise straightforward investment structures.

For potential debt investors in infrastructure projects, credit *ratings* rarely prevent a deal from proceeding. But the more pressing question is whether credit can be accurately assessed. Currently, there is no uniform assessment methodology that both private-sector parties and governments accept as credible and accurate. This creates particular challenges for insurers, for whom

37 States enable P3s



- Enabling vertical and horizontal P3s to some degree (24 states and DC)
- Enabling only vertical P3s to some degree (2 states)
- Enabling only horizontal P3s to some degree (11 states)

Note: 36 states and DC authorize P3s by statute/regulations or limited partnerships. In these states, P3s may be authorized on a specific project(s) or project type. Horizontal P3s are typically toll roads, vertical P3s are buildings.

Source: National Council for Public-Private Partnerships. State Legislation: 37 States Enable P3s As of January 2017. Retrieved from: **ncppp.org/resources/research-information/state-legislation/**

credit ratings are particularly essential, given that ratings agencies assess insurers' overall strength by examining all underlying assets in the General Account.[38]

Even when credit can be properly assessed, the project's public nature makes it challenging to ensure adequate security for the debt. In most infrastructure deals, the government is a nonparticipant sponsor or guardian of public trust against whom there is no direct recourse. Consequently, if the project were to go bankrupt, the public is shielded from the obligation—and the private partners shoulder any loss. For potential debt investors, this can significantly reduce a deal's attractiveness.[39] If left unaddressed early in the process, this challenge can become a deal-stopper.

Similarly, equity participation in an infrastructure deal presents its own important challenges. As with the assessment of credit, collateral valuation can be difficult and inconsistent, owing to the difficulty in classifying infrastructure projects as an asset class.[40] These features introduce risks that detract from the positive aspects of the long-range nature of these projects. Additionally, if the asset developed by a particular project fails to meet expectations (e.g., if a road is underused and does not collect the expected toll revenue), political and other factors can make adjusting revenue generation difficult.[41]

Finally, risk assessment often presents hurdles not present in other deals. In addition to the normal credit and performance risks, there are also associated project risks—which can include risks from new technologies and permitting risks arising from local opposition—that can skew the normal risk-reward calculation. Without new methodologies for calculating appropriate risk-reward metrics, many investors often determine that it is too difficult to properly assess an infrastructure project's potential.

"The current state requirements regarding the amount and type of capital insurers must hold do not reflect the special features of infrastructure investments and, in some cases, may actually penalize insurers to the point that such investments are not economically viable."
—U.S. Treasury Department

State regulatory hurdles

Perhaps because of the challenges presented by the public nature of infrastructure projects and the difficulties in assessing risk and return, a third barrier to increased life insurance-sector participation stems from the way state regulators—the primary prudential regulators of insurance companies—treat infrastructure investment. As the U.S. Treasury Department recently explained, "the current state requirements regarding the amount and type of capital insurers must hold do not reflect the special features of infrastructure investments and, in some cases, may actually penalize insurers to the point that such investments are not economically viable."[42]

The process state regulators use to assess a life insurance company's infrastructure investments against that company's Risk-Based Capital, established by the National Association of Insurance Commissioners (NAIC), does not adequately account for the long-term nature and risk profile of such investments.[43] As the process tends to be convoluted, it can send the wrong signals to potential co-investors and future investors, as well as to public partners, many of whom may not have expertise in these kinds of investment projects or in the necessary regulatory hurdles.[44]

The solutions

State solutions

- Define P3 Rules and Methodologies
- Establish a P3 Working Group at the NAIC

Federal solutions

- Preserve and Enhance Tax Tools
- Expedite Review and Valuation Processes

Through our experience with these issues, we've learned what solutions are needed to smooth the path forward and to facilitate greater insurer capital investment in infrastructure. We are eager to work with policymakers to share these solutions and to play a role in ensuring more critical infrastructure projects come to fruition.

To ease other insurers' entry into infrastructure projects and enhance this investment area, *we urge policymakers and regulators to consider the following policy reforms*:

State solutions

The immaturity of the U.S. P3 market introduces unnecessary hurdles to the creation and functioning of P3 concessions, in part because state and local governments are still learning to navigate these projects.

Officials often misunderstand how P3s, with their shorter construction timelines and overall project costs, ultimately benefit stakeholders. This misunderstanding stems from the fact that initial procurement and construction costs can run high, even though lower long-term maintenance and lifecycle costs justify this frontloading. In contrast to states with more mature P3 models, many states also lack centralized expertise and experience, such as through a distinct P3 official or office, which often leads to a lack of coordination.[45] The overall result is a domestic P3 market that requires better information-sharing and consistent regulatory guidance to encourage wider adoption.

Agreement on universal standards and procedures allows partners in a P3 to move forward—and inspires confidence that the interests of those involved in the project are protected. Reducing politicization or burdensome regulation will lead investors to embrace these partnerships.

More consistent standards and procedures will lead to greater investor confidence and wider use of P3s.

Define P3 rules and methodologies

Shifting political forces and regulations that vary across states (and across localities within a state) can make defining best practices difficult and make implementation complicated—if not outright impossible. Furthermore, if political administrations change during the course of a negotiation or project, no participant wants to be exposed to new risk.

Addressing these challenges begins with strong, clear rules and accepted methods across geographies. Because infrastructure projects generally span substantial distances and impact multiple regions, *there must be an established framework that every partnership can build upon*—and which every subsequent partnership can learn from and improve upon.

Success in this area benefits *all* P3 participants, including insurers. Without such changes, P3s will remain too difficult for many would-be partners to consider, and their current limited scope in the United States will remain unchanged without participation by insurers and other investors. With a more mature and better-defined P3 market, more projects will move forward.

Establish a P3 working group at the NAIC

The NAIC coordinates state regulation of insurers and plays a powerful role in the infrastructure project approval process—and, in turn, defines how the life insurance industry engages in P3s more broadly.[46] In recent years, the NAIC has begun to focus on infrastructure investment as a distinct topical area, including by guiding discussion within the Valuation of Securities (E) Task Force.

Fortunately, the NAIC has expressed interest in further developing its infrastructure investment resources, standardized valuation and other methodologies, and regulatory advice. This is a strong first step, and it should be bolstered by *the formation of an express NAIC working group* to receive and consider recommendations for creating incentives, removing regulatory impediments, and expediting approvals (or disapprovals) of life insurance companies' infrastructure investments.[B]

This group would enable the nation's insurance commissioners to grow more familiar with P3s, while fostering the establishment of state-level best practices. This will guide the optimal structures for individual P3s, help remove roadblocks, and encourage the success of these projects.

The Trump administration has also called for state regulators and the NAIC to "consider revising Risk-Based Capital charges to reflect the stable cash flows of high-quality infrastructure investments as compared to general equity investments with more volatile returns." We agree that this approach would encourage better-calibrated regulatory treatment of high-quality infrastructure investments and would safeguard financial stability.[47]

[B] It should be noted that the Long-term Infrastructure Investors Association (**ltiia.org/**) serves a similar function and has many life insurance company members.

Federal solutions

Stronger regulation and collaboration at the state level will make P3s more attractive to insurers. But state-based regulators do not operate in a vacuum, and life insurance companies must be mindful of their federal obligations. Because the American P3 market is less mature than its international counterparts, many federal regulations do not yet account for these projects' unique aspects, including lengthy timelines.

At the federal level, legislators and regulators alike have the opportunity to encourage insurer investment in infrastructure projects through strategic adjustments that allow would-be investors to engage fully in the long-running work of building roads, enhancing utilities, and more.

Preserve and enhance tax tools

Federal tax tools have long played a key role in both incentivizing and deterring would-be infrastructure investors. The tax exemption for municipal bond interest, for example, attracts institutional investors while helping Americans secure retirement income. Historically, municipal bonds have been the main vehicle for funding infrastructure projects in the U.S., and American life insurance companies currently account for about 10 percent of holdings in the $3.8 trillion municipal bond market.[48] The recent tax reform bill (H.R. 1) maintained the tax attributes that make municipal bonds an attractive financing tool and a key source of public infrastructure capital. But in any future examination of tax expenditures, *we urge policymakers to preserve the tax-exempt treatment of municipal bond interest*.

Infrastructure investment deals often involve decades-long partnerships. Therefore, certain time-based regulations should be eased to allow these partnerships to succeed. The tax reform bill made significant changes to net operating loss (NOL) provisions, subjecting the NOL deduction to an income-based limitation and imposing restrictions on certain contractual timeframes. While some of these changes will help investors finance infrastructure partnerships before a project generates revenue, policymakers should continue to ensure that infrastructure funders can achieve their goals regardless of contract length.

Looking ahead, we are encouraged by President Trump's recent proposal to "create flexibility and broaden eligibility to facilitate use of PABs," including expanding the categories of public purpose infrastructure to incorporate reconstruction projects, environmental management and remediation, and additional surface transportation facilities and hydroelectric power-generating facilities.[49, 50] Revised parameters would also allow longer-term private leases and concession arrangements, in part by eliminating volume caps on PAB issuance.[51] The proposal would further allow tax exemptions on certain governmental bonds and change how insurance companies handle the tax-exempt interest earned through municipal bonds, making infrastructure investments even more attractive to life insurance companies.[52]

Expedite review and valuation processes

The federal government can play a key role in removing barriers to increased infrastructure investment by insurers. In 2012, then-President Barack Obama noted in Executive Order 13604 that the federal permitting and review process for infrastructure projects may be stymied by any number of factors. Among them, he declared, "our Federal permitting and review processes must…allow for concurrent rather than sequential reviews," which streamline approvals or disapprovals, resulting in a more efficient and coordinated process.[53] *Preserving that Executive*

Order—and the enhanced efficiency such an approach brings—will help to ensure projects can proceed with both appropriate oversight and necessary responsiveness, without the duplication of regulatory efforts.[54]

Streamlining regulatory review is a consistent theme in the Trump administration's recently released infrastructure plan. It calls for expanding passenger facility charges to more categories of airports, reducing the approval thresholds for airlines on airport projects, eliminating federal oversight and approval of road projects where federal investment in projects are de minimis and repaid, eliminating Federal Aviation Authority (FAA) approval of airport projects unrelated to aviation, and more.[55] If enacted, all of these changes could speed the development of potential P3 projects.

We also encourage federal regulators to collaborate with industry leaders to develop guidelines for prudent plan investment in infrastructure projects based on standardized valuations. With the establishment of more and better means of evaluating the quality of infrastructure investments, the federal government can help provide better tools and guidance for investors.

Conclusion

Today's infrastructure realities demand a new age of investment, improvement, and expansion to bring American infrastructure into the 21st century. TIAA is optimistic about the role insurers can play in making this possible.

Given our not-for-profit heritage and our desire to spur activity within the infrastructure investment class, TIAA is ready to partner with policymakers, regulators, fellow insurers, and other stakeholders to improve industry and governmental review processes, incentivize long-term commitments, and foster success.

Together, we can improve our industry, our partnerships, and our country. Let's get to work.

Endnotes

1. Dimitris Karapiperis, Ctr. for Ins. Pol'y & Research, *Infrastructure Investment and the Insurance Industry*, CIPR NEWSLETTER (Aug. 2017), http://www.naic.org/cipr_newsletter_archive/vol22_infrastructure.pdf.
2. John Parkinson, *Private Sector Ready to Rebuild the Country's Aging Infrastructure*, THE HILL (July 22, 2017), http://thehill.com/blogs/pundits-blog/transportation/343299-private-sector-ready-to-rebuild-the-countrys-aging.
3. Tom Ichniowski, *ASCE Rates U.S. Infrastructure at D+, Same as in 2013*, ENGINEERING NEWS-RECORD (Mar. 9, 2017), https://www.enr.com/articles/41628-asce-rates-us-infrastructure-at-d-same-as-in-2013.
4. Karapiperis, *supra* note 1.
5. The White House, *Building a Stronger America: President Donald J. Trump's American Infrastructure Initiative*, February 2018 at https://www.whitehouse.gov/briefings-statements/building-stronger-america-president-donald-j-trumps-american-infrastructure-initiative/.
6. Karapiperis, *supra* note 1.
7. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO/HEHS-95-173, PRIVATE PENSION PLANS: EFFORTS TO ENCOURAGE INFRASTRUCTURE INVESTMENT (1995).
8. Ctr. for Ins. Pol'y & Research, *Infrastructure Investments*, NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS, http://www.naic.org/cipr_topics/topic_infrastructure_investments.htm (last updated Dec. 12, 2017).
9. STEVEN T. MNUCHIN & CRAIG S. PHILLIPS, U.S. DEP'T OF THE TREASURY, A FINANCIAL SYSTEM THAT CREATES ECONOMIC OPPORTUNITIES: ASSET MANAGEMENT AND INFRASTRUCTURE (2017), https://www.treasury.gov/press-center/press-releases/Documents/A-Financial-System-That-Creates-Economic-Opportunities-Asset_Management-Insurance.pdf.
10. HEATHER L. DAVIS ET AL., TIAA, INFRASTRUCTURE: OPPORTUNITY FOR YIELD AND DIVERSIFICATION (2017).
11. Sam Fleming, *US Infrastructure Decay Forecast to Cost Trillions*, FIN. TIMES (May 10, 2016), https://www.ft.com/content/6aa759f8-16c0-11e6-b197-a4af20d5575e.
12. RYAN ALLISON & SAM TUFTS, EY, INFRASTRUCTURE INVESTMENTS: AN ATTRACTIVE OPTION TO HELP DELIVER A PROSPEROUS AND SUSTAINABLE ECONOMY (2015).
13. Christopher H. Lee & Sean A. Medcalf, *Case for Private-Public Partnerships*, POLITICO (Mar. 22, 2013), http://www.politico.com/story/2013/03/the-case-for-private-public-partnerships-089196.
14. Parkinson, *supra* note 2.
15. MNUCHIN & PHILLIPS, *supra* note 9.
16. BEARINGPOINT INSTITUTE, ARE INSURERS THE NEW BANKS FOR INFRASTRUCTURE INVESTMENTS? (2013), https://www.bearingpoint.com/files/BEI003-09-Are-insurers-the-new-banks.pdf&download=0&itemId=388774.
17. Press Release, Eur. Comm'n, *New EU Rules to Promote Investments in Infrastructure Projects* (Sept. 30, 2015), http://europa.eu/rapid/press-release_MEMO-15-5734_en.htm.
18. ALLISON & TUFTS, *supra* note 12.
19. DAVIS ET AL., *supra* note 10.
20. DAVIS ET AL., supra note 10.
21. Parkinson, *supra* note 2.
22. E.g., American Society of Civil Engineers: "2017 Infrastructure Report Card".
23. David Kinkade, *Public-Private Partnerships Bridge the Gap in Infrastructure Projects*, ABOVE THE FOLD, U.S. CHAMBER OF COMMERCE (June 27, 2014), https://www.uschamber.com/above-the-fold/public-private-partnerships-bridge-the-gap-infrastructure-projects.
24. Travis Pearl, 5 *Examples of Public-Private Partnerships (P3) in Action*, ONVIA (Oct. 23, 2013), https://www.onvia.com/company/blog/5-examples-public-private-partnerships-p3-action.

25. DAVIS ET AL., *supra* note 10.
26. ALLISON & TUFTS, *supra* note 12.
27. FEDERAL HIGHWAY ADMIN., U.S. DEP'T OF TRANSP., PUBLIC-PRIVATE PARTNERSHIP CONCESSIONS FOR HIGHWAY PROJECTS: A PRIMER (2010).
28. TIAA pays a guaranteed interest rate on its annuity products, backed by the claims paying ability of TIAA, plus has a long history of also crediting discretionary excess interest as declared by its Board of Directors.
29. DAVIS ET AL., *supra* note 10.
30. ALLISON & TUFTS, *supra* note 12.
31. TIAA-CREF ASSET MANAGEMENT, TIAA-CREF GLOBAL NATURAL RESOURCES AND INFRASTRUCTURE INVESTMENTS: AN INTEGRATED APPROACH TO NATURAL RESOURCE AND INFRASTRUCTURE INVESTING (2012), https://www.tiaa.org/public/pdf/C6872_GNRICapabilities.pdf.
32. Karapiperis, *supra* note 1.
33. DAVIS ET AL., *supra* note 10.
34. DAVIS ET AL., *supra* note 10.
35. *ID.*
36. See BIPARTISAN POLICY CENTER, BRIDGING THE GAP TOGETHER: A NEW MODEL TO MODERNIZE U.S. INFRASTRUCTURE (2016), http://bipartisanpolicy.org/wp-content/uploads/2016/05/BPC-New-Infrastructure-Model.pdf.
37. *ID.*
38. Karapiperis, *supra* note 1.
39. *ID.*
40. *ID.*
41. BIPARTISAN POLICY CENTER, *supra* note 39.
42. MNUCHIN & PHILLIPS, *supra* note 9.
43. Karapiperis, *supra* note 1.
44. Matthew Goldstein & Patricia Cohen, *Public-Private Projects Where the Public Pays and Pays*, N.Y. TIMES (June 6, 2017), https://www.nytimes.com/2017/06/06/business/dealbook/trump-infrastructure-plan-privatized-taxpayers.html.
45. PWC, PUBLIC-PRIVATE PARTNERSHIPS IN THE US: THE STATE OF THE MARKET AND THE ROAD AHEAD (2016), https://www.pwc.com/us/en/capital-projects-infrastructure/publications/assets/pwc-us-public-private-partnerships.pdf.
46. MNUCHIN & PHILLIPS, *supra* note 9.
47. *ID.*
48. See Id. at 74.
49. *Supra* note *3.*
50. *Supra* note *3 PP.13-15.*
51. See IRC section 142 for current requirements.
52. See IRC section 57(a)(5). Public Law 115-77 repealed the corporate AMT.
53. Exec. Order No. 13,604, 77 Fed. Reg. 18885 (Mar. 28, 2012) (emphasis added).
54. President Trump has not repealed this Executive Order; his Executive Orders 13766 and 13807 both address *environmental* review and permitting processes for infrastructure projects, though both emphasize expedition and efficiency. See Exec. Order 13,807, 82 Fed. Reg. 40463 (Aug. 24, 2017); Exec. Order 13,766, 82 Fed. Reg. 8657 (Jan. 30, 2017).
55. *Supra* note *3.*

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