

PRIVATE CAPITAL

Infrastructure Debt Investments: An Overview

September 21, 2020

A Core Infrastructure Focus

Private infrastructure debt investment strategies focus on core infrastructure sectors in developed countries that support the economic and social wellbeing of a region. The assets demonstrate monopolistic or quasi-monopolistic traits and benefit from high barriers to entry. Typically, the assets are supported by direct or indirect government support given their relative importance. Sub-sectors of infrastructure investment activity include economic assets such as airports, ports, roads, rail, power, energy, water and transmission. Investments can also include social infrastructure assets such as social housing, hospitals, courthouses, and universities. Infrastructure investments include projects and companies that own and/or operate assets with economic lives that span over multiple decades. Given the long-lived nature of the asset, infrastructure investments provide global insurance and pension fund investors an opportunity to invest in a stable, long-duration sector that effectively matches their long duration liabilities.

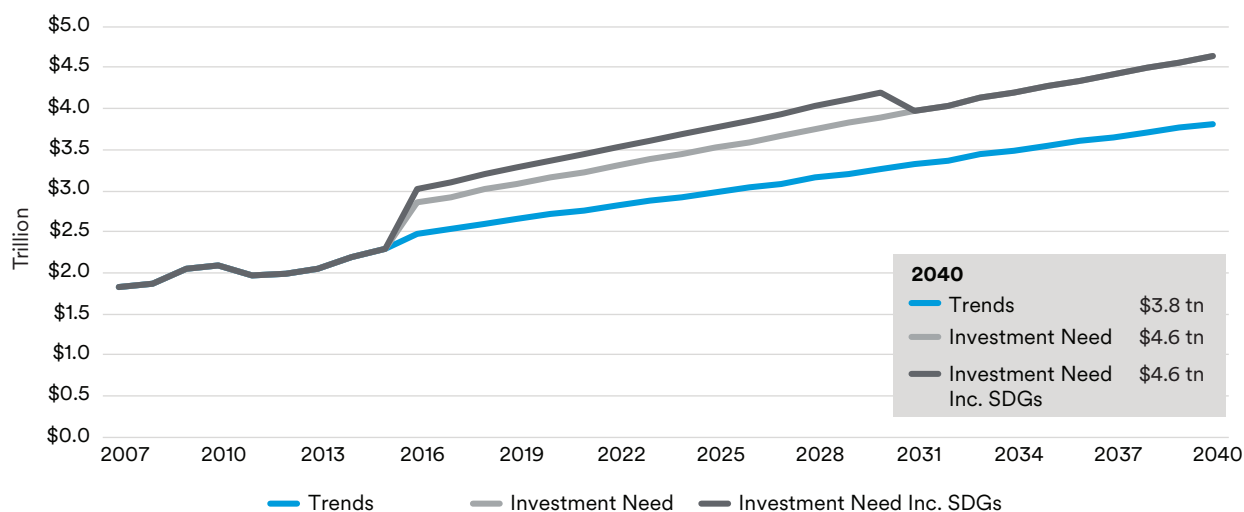
Private infrastructure debt strategies generally focus on established, brownfield investments that provide essential public services and benefit from stable and predictable cash flows. Additionally, investments can include attractive greenfield assets where construction risk is mitigated and where revenue projections are based on contracted/regulated cash flows. Infrastructure investments benefit from financial covenants and/or collateral that can help lenders with downside protections at attractive yields relative to similar public corporate peers. Lender protections, coupled with stable cash flow potential and asset essentiality, enable lenders to lend to infrastructure assets for 20, 30, 40 or possibly 50 years.

Investments are typically secured investment-grade opportunities with contracted or regulated entities that have established performance track records and stable projected trends. These assets provide portfolio diversification through investment in assets that are generally not available in the public markets and may provide yield enhancements over corporate bonds.

The Global Need for Infrastructure Investment

The need for infrastructure investments is massive. The Global Infrastructure Outlook published by Oxford Economics in 2015 had forecasted that there was a global infrastructure investment need of nearly \$98 trillion from 2016 through 2040 to keep pace with economic development and population growth. This outlook covers 50 countries and seven core sectors including energy, telecom, airports, ports, rail, road and water and is based on spending trends and the quality of global infrastructure assets.

Infrastructure Investments Trends and Needs



Source: Global Infrastructure Outlook by Oxford Economics

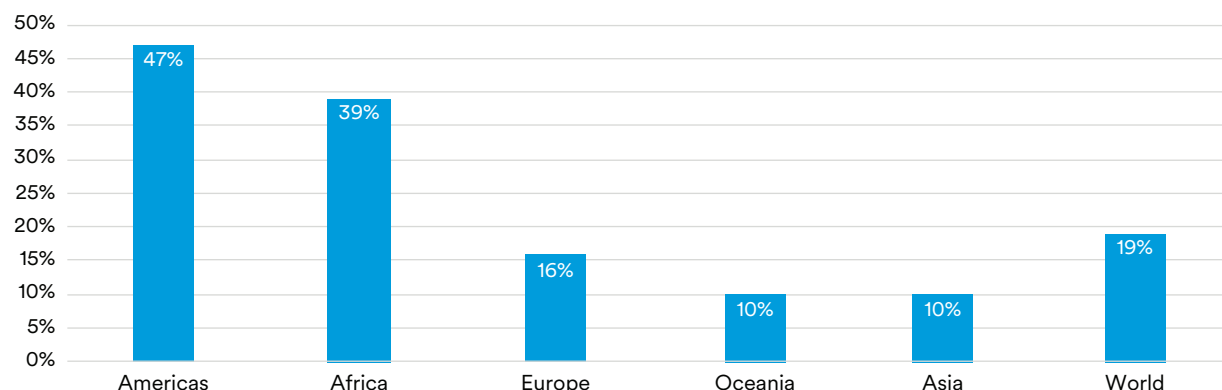
*SDGs: Sustainable Development Goals

Oxford Economics projects the deficit in infrastructure spending has the potential to grow to \$18 trillion by 2040.¹ This forecast accounts for increased investments needed to meet the United Nations Sustainable Development Goals, greenfield capital investments to integrate new technology to replace or upgrade aging infrastructure, and emerging market development. For example, the U.S. spending on infrastructure as a percentage of GDP has trended down since 2010. The U.S. is expected to have the largest funding gap of \$3.8 trillion through 2040, double the next largest deficit projected for China at \$1.9 trillion.¹ There continues to be meaningful concern

of the state and quality of aging core U.S. infrastructure assets. While there is continued support from both the Democratic and Republican political parties, the source of funding infrastructure investments continues to be debated.

Infrastructure Investment Gap by Region, 2016-2040

Extent to which estimated investment need is greater than investment expected under trends

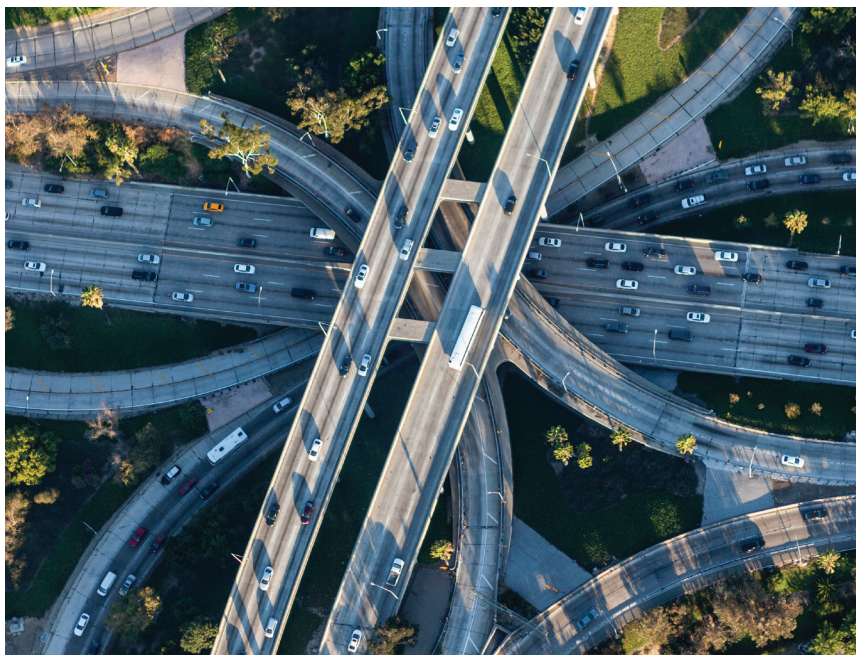


Source: Oxford Economics

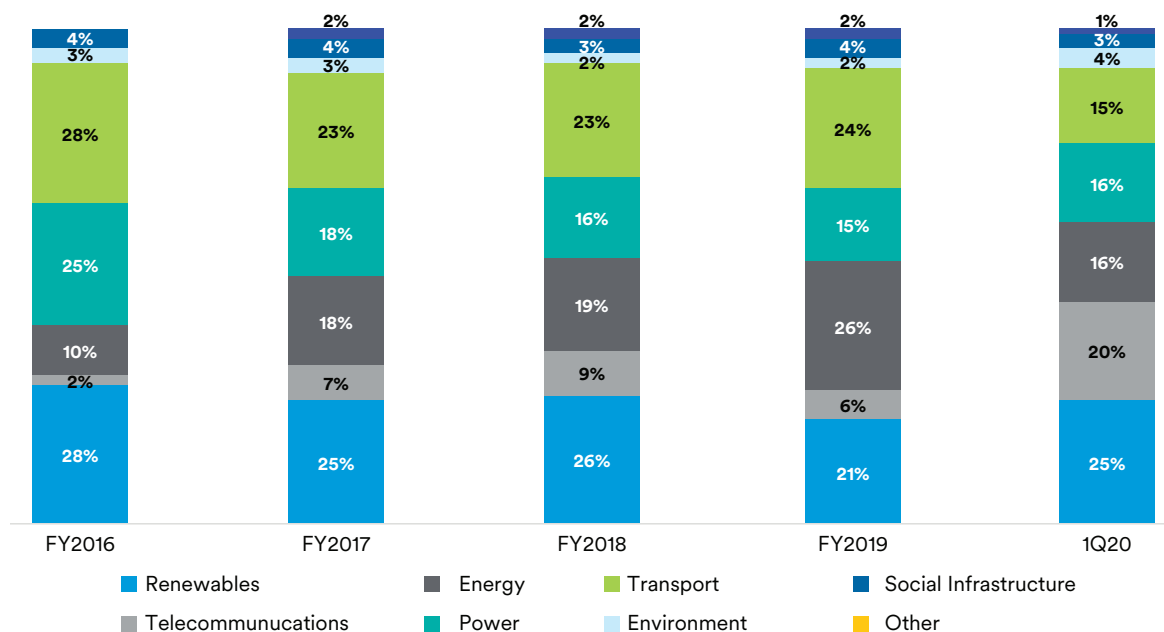
Global Infrastructure Investment Market Activity

The 2008/2009 Global Financial Crisis (GFC) had a profound impact on the infrastructure financing markets. Prior to the GFC, international banks reportedly financed over 90% of the world's private infrastructure debt. Strained balance sheets at commercial banks during the GFC enabled institutional investors to step in and support funding gaps. Additionally, the GFC highlighted the value of diversity in lending relationships to equity owners. While commercial banks remain an important player in infrastructure debt markets, institutional investors have significantly grown their presence in the market. Institutional investor participation has been supported by the ability to provide longer-term, fixed rate financing solutions that can be customized to suit individual asset needs. Equity owners continue to place value on these tailored solutions that also greatly reduce refinancing risks on their portfolio.

In 2019, the global infrastructure debt capital markets reportedly issued nearly \$75 billion, up from \$55 billion in the prior year.² Total infrastructure lending, when including bank financings, was estimated at \$657 billion, slightly higher than prior year. Within the total infrastructure market, energy was the largest sector in the market representing 26% of the overall volume, followed by transportation (24%), renewables (21%), power (15%), telecom (6%), social infrastructure (4%), and other (3%). Activity remained focused on the EMEA region (34%), followed by North America (30%), Asia Pacific (20%), and Latin America (11%).



Infrastructure Market: Total Investment % By Sector



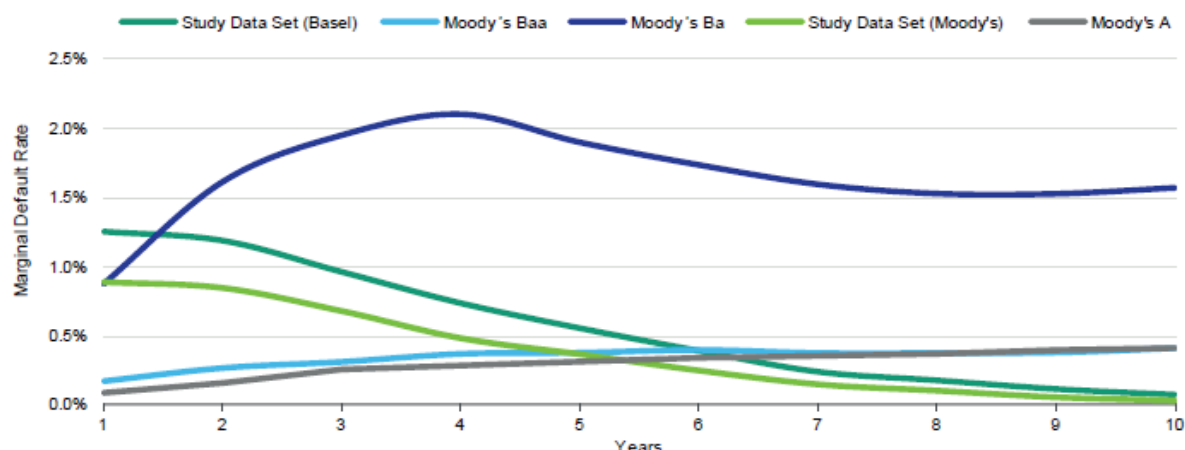
Source: Inframation

Lender Protections and Sector Performance

Infrastructure debt investments are structured and designed to help minimize the risk of default and maximize lender recovery under unforeseen stress. Key lender protections typically include financial covenants based on cash flows that ensure lenders are in voice early in an underperforming scenario. Cash flow covenants also often include limitations on equity distributions and event of default triggers. Infrastructure debt financing structures can also benefit from leverage-based covenants to monitor performance to ensure performance is in-line with the original investment thesis. Additional structural protections can include limitations on debt, limitations to material changes to key project documents, lender step-in rights to replace underperforming counterparties, limitations on equity ownership changes, insurance maintenance requirements and general restrictions on non-core business activities.

These structural protections, coupled with the stability of the cash flows on essential infrastructure assets, has translated into lower historic losses on infrastructure loans and higher recovery.³ Moody's published a March 2020 study on default and recovery rates for project finance bank loans between 1983-2018 that studied the performance of global infrastructure loans. The study reviewed performance of 8,585 projects, representing 67.1% of all project finance loan transactions originated globally during the 36-year period from 1983 to 2018. The study cites that infrastructure loans exhibited marginal annual default rates that trend toward marginal default rates consistent with single-A rated credits by year 7. This further illustrates the view that historically construction phase assets pose a higher risk of default and once they achieve completion, the risk evolves per the below chart. Ultimate recovery rates for the loans averaged 77.9% with an ultimate recovery rate of 100%—seen in 58.1% of the cases.

Marginal Annual Default Rates



Source: Moody's Analytics, Data Alliance Project Finance Data Consortium

Distribution of Recovery Rates

Recovery Rates	Basel Definition of Default		Moody's Definition of Default	
	Ultimate Recoveries	Distressed Sales	Ultimate Recoveries	Distressed Sales
100%	168		141	
75%-99%	32	8	25	4
50%-74%	26	19	26	16
25%-49%	25	21	24	15
0%-24%	38	9	36	9
Total	289	57	252	44
Average recovery rate	77.9%	49.5%	75.8%	47.5%
% of projects fully restructured without loss	58.1%	0.0%	56.0%	0.0%
Average recovery rate for projects experiencing a loss	47.1%	49.5%	45.0%	47.5%

Source: Moody's Analytics, Data Alliance Project Finance Data Consortium

Infrastructure Asset Performance Amid a Global Pandemic

As the COVID-19 pandemic continued to spread globally at the end of the first quarter 2020, infrastructure issuance in the capital market meaningfully paused. Investors, sponsors, governments and market participants all shifted focus to portfolio management and liquidity analysis in response to the global shutdowns that were swiftly implemented. The current impact of the pandemic on infrastructure portfolios is continuously evolving and varies in severity amongst subsectors. Assets that were exposed to meaningful volume risks were the first to see an impact from the shutdowns while assets that benefit from contracted or regulated revenues fared better.

Transportation assets such as airports, ports and roads were the first to see an immediate and historically unprecedented drop in utilization. As governments enforced stay-at-home orders and closures of non-essential business across the globe, airports saw nearly 95% declines in passenger traffic. Many roads also experienced nearly 50% declines in passenger volumes and 33% declines in truck volumes.⁴ Ports were more resilient as demand for cargo continued to remain strong. As economies are starting to slowly reopen, volumes are starting to rebound, though recovery to pre-pandemic levels is not expected to occur immediately.

Social infrastructure assets that are structured as availability-based public-private-partnerships saw less impact due to the nature of their highly contracted revenues. Sub-sectors that are linked to volumes such as stadiums and student housing also saw stress similar to transportation. Energy assets such as pipelines and liquefied natural gas terminals that focus on fully contracted revenues are well insulated from volume and price risks. Similarly, renewables, power and utilities assets that rely on highly regulated and/or fixed price contracts with high-quality counterparties are generally insulated from demand shifts and commodity pricing. The key credit analysis on these assets involves contract and counterparty analysis.



While infrastructure assets generally benefit from enhanced liquidity in the form of debt service reserve accounts, the severe stress in revenues on some assets resulted in breaches of covenants. The covenants are designed to provide early warning signals of deteriorating credit situations. The breaches precipitated quickly given the severity of impact from government ordered shutdowns across the world. Lenders were able to work with sponsors to amend and/or waive covenant breaches with the goal of allowing flexibility to operate the business as appropriate through the pandemic while providing enhanced structural protections to lenders. Lender protections often included a combination of increased liquidity, protections on potential ratings downgrades, and higher reporting standards.

These assets remain core, and essential to a functioning economy. The length of the shutdown and pace of recovery will continue to remain a key factor on performance. In the meanwhile, companies are actively shoring up liquidity, seeking operational efficiencies and delaying capital expenditures as primary mitigation measures to support the unprecedented situation.

Focus on Supporting Positive Environmental, Social and Governance (“ESG”) Policies

Infrastructure investments tend to be highly compatible with institutional ESG initiatives and objectives. For example, investments in renewables are viewed to be a natural way to support environmental goals that reduce reliance on coal and other fossil fuels. Critical assets such as airports, ports, roads and rail can also further support positive environmental goals by focusing on an intentional reduction of carbon emissions throughout their operations supply chain. Social infrastructure assets such as hospitals, schools, courthouses and social housing support local economic initiatives to serve critical social needs in the community.

Due to the long-term nature of investments, sustainability from an ESG perspective is crucial to analyzing credit risk. A focus on ESG can minimize financial risks such as controversy-triggered loss of customers and clients, regulatory fines or penalties, unexpected capital spending related to environmental regulatory compliance or longer-term technological obsolescence. Below are two examples of infrastructure investments by MIM that further its’ ESG initiatives and corporate goals.

Private Credit—Ohio State Energy Partners: Seeking Energy Efficiencies

Overview

Ohio State Energy Partners is the energy management provider for The Ohio State University's Columbus Campus utility system under a 50-year concession and lease agreement. The Columbus Campus is one of the nation's largest individual campuses covering 1,592 acres and 411 buildings equivalent to 24 million square feet. MIM has been lead debt investor since Project inception in 2017 with US\$325 million invested to date.

ESG Initiatives

Ohio State Energy Partners is focused on optimizing energy usage across the OSU campus for the existing system while implementing new capital improvements. They are obligated to achieve energy conservation targets by supporting the University's sustainability goals which aim for the reduction of resource consumption, neutralizing carbon emissions, and minimizing waste. Per Ohio State Energy Partners, this includes achieving carbon neutrality by 2050 per American College and University Presidents Climate Commitment. The Project is on track to exceed the targeted reduction in energy use intensity of 25% by 2027.

The Project developed detailed operating procedures covering safety, training, emergency procedures, environmental/emissions control, and general guidelines on operation and maintenance of the Utility system. The protocols in place meet Prudent Industry Practices. There is an established Members Committee that has dedicated boards to approve various budget and project expansion plans with the University on an annual basis to meet the needs of the Utility system. Ultimately, the Project supports the University campus which provides an education platform for over 66,000 students. MIM continues to support projects with a focus on optimizing existing large-scale district energy systems with positive green initiatives.



Private Credit—GreenSquare: Building Affordable Homes in the U.K.

Overview

GreenSquare Group Ltd. is a major provider of housing, regeneration, support and commercial services across Wiltshire, Oxfordshire and Gloucestershire in the United Kingdom. From 2019 to 2020, MIM directed a £110 million investment in GreenSquare Group Ltd.

Social Initiative

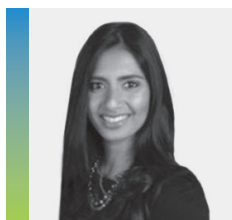
MIM's financing helped GreenSquare to complete 290 new homes in Oxfordshire, Wiltshire and Gloucestershire. For MIM, helping underserved, low- and moderate-income people and communities achieve financial independence through affordable homes is an important element of responsible investing.



Endnotes

- ¹ Global Infrastructure Outlook, Oxford Economics, 2017.
- ² Inframation News, Analytics, 2019.
- ³ Default and Recovery Rates for Project Finance Bank Loans 1983-2018, Moody's, 2020.
- ⁴ Changes in transport behavior during the Covid-19 crisis, IEA, 2020.

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