

# Making sense of infrastructure debt

The capital expenditure required to support anticipated growth in power demand while also reducing carbon emissions will necessitate significant amounts of debt financing. Don Dimitrievich explains the evolving landscape of opportunities in infrastructure debt.



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## The wealth of opportunity

After a decade of effectively zero growth, U.S. power demand is predicted to expand at a rate not seen since the 1970s. Based on the needs of data centres for cloud services and generative AI, and the electrification of transportation, approximately 500 GW of new generation capacity is expected to be connected to the grid over the next 10 years.<sup>1</sup> This is over twice the amount added in the past two decades.

The development platforms building said generation have also become increasingly capital intensive. This is driven by the race to grow project pipelines and the increased complexity of installations – interconnection queues averaging over six years and the pairing of storage with new solar installations becoming the norm, being two such examples.

Inflation is also a factor, leading to higher supply chain costs and increased labor costs due to shortages of specialized labour. These platforms face higher costs of capital because they fall outside the bounds of conventional project finance. In these instances, lenders must be able to appropriately assess merchant risk, feasibility of project budgets and completion timelines, in addition to leveraging financial and operational covenants to construct a robust investment with adequate downside protection.

This is just one example among many that illustrates the breadth of opportunity and the depth of knowledge an experienced credit manager can use to help investors meet their objectives.

Credit managers who can target specific investment themes will be able to leverage their networks, deepen their knowledge and enhance their ability to select appropriate projects for their clients.

## The mismatch in funding

Infrastructure projects are heavily reliant on credit financing. In 2022, 81% of private investment infrastructure project funding was in the form of debt (figure 1).<sup>2</sup> However, there is a significant mismatch when compared to private infrastructure fund dry powder, with only 9% being held by private infrastructure credit funds as of May 2024 (figure 2).<sup>3</sup>

In the wake of the global financial crisis, regulations have led to an increase in the share of infrastructure debt provided by non-bank lenders. In particular, the introduction of Basel III in 2017 has further diminished the appeal of infrastructure investments for banks. The risk weights assigned to project finance loans are considerably higher compared to the risk profiles historically observed for infrastructure projects.

## The resiliency of infrastructure

Providing debt financing for infrastructure projects has the potential to be a stable source of income while diversifying institutional portfolios. The resiliency of the asset class comes from a variety of investment characteristics:

**Consistent demand for infrastructure services:** Infrastructure assets typically provide essential services or goods required for basic economic activities and societal functions. This equates to relatively stable, long-standing and inelastic demand.

**Inflation protection:** A consequence of this steady demand is the ability to pass most or all input cost increases to consumers. This provides coverage from inflationary pressures.

**Stable revenues:** The combination of consistent demand and pricing power means infrastructure revenues are typically very stable and predictable. The long-term nature of the assets also allows for long-term, often multi-decade, revenue agreements with customers seeking supply and/or cost certainty.

**Asset durability:** Often the primary challenge for these assets is sourcing the large amount of capital for the initial build. But this creates a barrier to entry and limits competitor risk. Furthermore, most infrastructure assets

are long-lived and use vetted technology to minimize operational complexity.

**Highly cash generative:** After the initial substantial capital expenditure of the build, infrastructure assets generate substantial cash flows over the life of the asset enabling the borrower's ability to repay the debt.

And due to these characteristics, the loss given default for infrastructure debt is exceptionally low. Based on data from 1983 to 2022, Moody's discovered that, on average, infrastructure debt securities experienced credit losses amounting to 0.3% of face value over five years and 0.5% over 10 years. This is in comparison to 6.0% and 8.9%, respectively, for non-financial corporate issuances.<sup>4</sup>

## The key to success

Accessing the benefits and investing in infrastructure debt requires a disciplined approach honed by years of experience, in our view. For the Nuveen Energy Infrastructure Credit team, this is encapsulated in our four pillars of investing.

**The first pillar is a thematic investment approach.** We focus on sustainable infrastructure and energy security. We are sourcing opportunities that range from decarbonization and infrastructure supply chains to energy storage solutions, power demand associated with digitalization, and energy-as-a-service.

**Second, as credit specialists investing through multiple cycles, we employ a conservative approach to structuring our investments with downside protection and hands-on risk management through the life of the investment alongside financial and operational covenants.**

**Third is our focus on lending to projects which possess infrastructure attributes such as hard asset collateral, cash flow certainty from offtake contracts with high quality counterparties and inflation protection through duration. We also utilize floating rate structures with SOFR floors to ensure attractive returns in different rate environments.**

**Fourth is deal origination.** Our experienced team's network and that of TIAA, Nuveen's parent company, provides exposure to deal flow from leading GPs.

With electricity demand in the U.S. only set to increase, we believe experienced credit managers who can successfully navigate platform and project complexity, and structure investments with sufficient downside protection will be well-positioned to ultimately deliver attractive risk-adjusted returns.

Figure 1

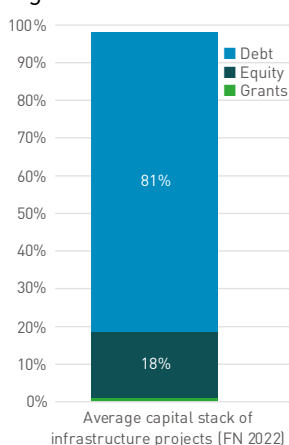
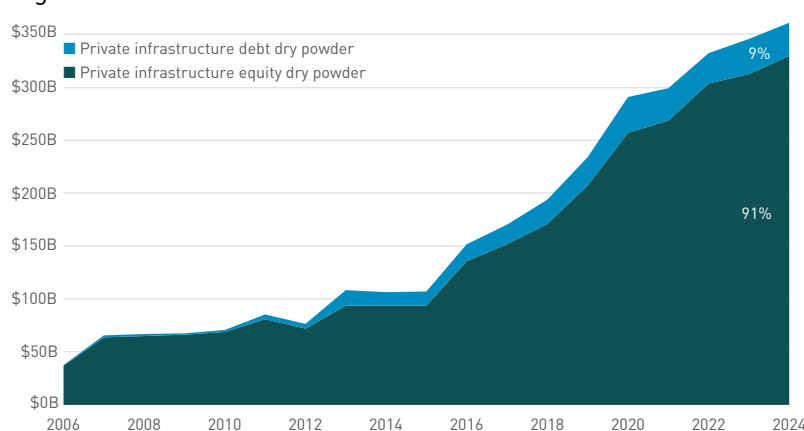


Figure 2



Discover the role energy infrastructure credit can play in portfolios. Visit [nuveen.com/EIC](https://nuveen.com/EIC).

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<sup>1</sup>U.S. Energy Information Administration. <sup>2</sup>Global Infrastructure Hub – Infrastructure Monitor 2023 <sup>3</sup>Preqin <sup>4</sup>Moody's Investor Services. Infrastructure default and recovery rates, 1983-2022 (12 Dec 2023).