IFM Investors

The Fundamentals of Infrastructure Debt

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We believe infrastructure debt is a specialised class of private debt that can present attractive risk adjusted returns for investors. The resilient fundamentals of infrastructure make it diversifying to other forms of private credit.

Debt is an important source of financing for infrastructure businesses, and the need for capital to support the evolving infrastructure landscape is presenting a rich opportunity in debt for institutional investors.

Below we explore the fundamental drivers of this flexible asset class and explore what can make it such a resilient market to generate attractive risk-adjusted returns.

What is critical infrastructure?

We focus on lending to critical infrastructure assets, which we define as exhibiting several key characteristics.

For us, critical infrastructure refers to essential assets that underpin the functioning of the economies in which they operate:

Essential assets - The essential nature of infrastructure services means the pattern of usage is stable and well understood. We look for businesses with proven technologies, in strategic locations, that have long lives and a low risk of obsolescence. Strong underlying assets can give more security when lending, making it easier to refinance good assets, and promoting a higher recovery value in the event of default.

Stable cashflows/revenues – The stability of revenue cashflows to the business is an important factor in understanding how easily a company can repay its debt. The stability of revenues is an important factor in how much leverage (debt) a business can take on. Infrastructure businesses tend to have inelastic demand for their services which contributes to more stability in cashflows than corporate private credit. However, the revenue profiles of infrastructure businesses can still look very different and include a range of sources including:

- **Merchant revenues:** earned from selling goods and services (like power) at a market price
- **Volume based revenues:** linked to the amount of a good/service stored or processed at a contracted price (like gas through a pipeline, or stored at a terminal)
- **Contracted revenues:** often governments and large institutions want certainty on their costs and will negotiate fixed prices for the goods/services produced by infrastructure businesses. The high-quality nature of these contractual counterparties makes these revenues resilient

Inflation resilience – Often infrastructure projects have contracts or regulatory provisions that allow for inflation adjusted pricing, which means that the creditworthiness of a business is resilient against inflation. The availability of floating rate debt can further insulate investors against the forces of inflation as it becomes reflected in rate markets.

Competitive advantage - Infrastructure assets tend to exhibit monopolistic features with high barriers to entry given the asset-heavy nature of the business. We also aim to look for assets where the location may provide a strategic advantage.

Sustainability – Infrastructure is inherently a long-term asset class, so understanding the threats and opportunities posed by climate change, institutional commitments to transitioning to a low carbon economy, and evolving economic needs and technologies is an important consideration as an investor.

FIGURE 1

INVESTMENT SECTORS WITHIN INFRASTRUCTURE DEBT





Transportation	Utilities	Power and energy	Digital infrastructure	Social infrastructure
Roads, bridges, tunnels	Water & sewerage	Wind, solar and hydro	Fibre networks	Healthcare
Rail	Transmission	Biomass/bioenergy	Towers	Education services
Buses	Distribution networks	Energy from waste	Data centres	Student accommodation
Airports	District heating	Battery storage	Other telecoms	Government offices & courts
Port facilities	Smart meters	Storage terminals (gas, oil, chemicals)		Private finance initiatives & public private partnerships (PPPs)
Shipping & ferries	Demand response	Gas-fired generation, gas gathering, pipelines		
		Gas liquefaction		

What are the typical sectors we look at?

We focus predominantly on core infrastructure businesses which benefit from the aforementioned characteristics over long-term horizons. These assets are typically in one of five sectors: transportation, utilities, power and energy, social and digital infrastructure. Across these five major sectors, investors can gain exposure to a broad range of asset types, supporting portfolio diversification.

Exposure to crucial trends

As would be expected from a sector providing essential services, we believe an allocation to infrastructure debt can allow investors to build exposure to a number of crucial economic trends – from digitisation to the energy transition, or the provision and improvement of social infrastructure.

We believe the nexus of increasing energy demand, technological innovation and climate change is creating a growing potential investment opportunity as new infrastructure needs to be built and existing infrastructure enhanced. We expect to see outsized opportunities in the coming years in the following three sectors.

Digital: The necessity for connectivity, the digitisation of our economy, and the rapid growth of artificial intelligence have positioned the digital sector as the fastest-growing infrastructure sub-sector over the past five years[1], and it is showing no signs of deceleration. We expect this to drive issuance relating to the transition from copper to fibre networks, and the provision of data centres.

Transportation: The transport sector accounts for approximately one-quarter of greenhouse gas emissions, and for many countries, it remains the largest source of energy-related emissions[2]. Globally, governments and corporations are making efforts to reduce these emissions. Consequently, over the rest of this decade, electrified transport is set to account for a large share of energy transition spending, estimated at $1.81 trillion per year[3]. For infrastructure debt markets, we expect to see a range of investment opportunities across the risk spectrum. We see national transport providers electrifying train and bus fleets, and the provision of electric vehicle charging points for businesses and consumers.

Power and energy: To meet the rising demand for electricity in the economy we expect to see significant investment opportunities in both conventional power generation and renewables. We also expect investment will be needed to upgrade grid networks and transmission infrastructure to enable energy to be transported from where it is cheaply generated to where it needs to be consumed. Many countries are still focused on decarbonisation objectives which will support renewables, but the drive for energy independence, and rapidly growing demand will likely mean that conventional power remains a focus in places like the US.

Why IFM Investors?

At IFM Investors, we seek to act as flexible capital providers, which allows us to structure investments to meet a range of characteristics that investors seek out. This includes yield, income, and downside protection by investing in real asset-backed businesses. Debt can be structured as fixed and floating rate, short and long-dated, and carry a risk rating from investment grade to sub-investment grade.

How are infrastructure businesses financed?

Most infrastructure businesses will have a combination of equity and debt in the capital structure. Many can rely on debt financing (leverage) given the stability of the business through the economic cycle.

Debt typically accounts for 60-90% of the capital structure, and there can often be different levels of seniority among the debt capital that offer investors different levels of risk and return (as outlined in Figure 2). Senior debt ranks first in the capital structure. These lenders have priority access to borrower cashflows and greater ability to control decisions in downside scenarios.

We believe subordinated debt investment can also be of interest to investors who are seeking a higher yield than is traditionally available with senior debt. While subordinated lenders will still benefit from being senior to equity in a downside scenario, subordinated lenders should consider how resilient the borrower's credit profile is to ensure they are being compensated for the additional risk associated with potentially absorbing losses ahead of senior debt. Subordinated debt will often take the form of holding company (HoldCo) debt in an infrastructure business, which we describe in more detail in the credit risk section.

We see opportunities to enhance returns by investing lower in the capital structure of infrastructure businesses – e.g. by taking a subordinated or junior position – where we thoroughly understand and are comfortable with the credit fundamentals and transaction structuring.

We aim to look for infrastructure businesses that display fundamentals similar to investment grade, but where we can seek to enhance the return potential by accepting structural subordination in the way that cashflow is available for debt service.

An example of such an opportunity is providing HoldCo debt to a waste-to energy facility. The company may benefit from a long-term concession in the form of waste supply contracts. A regulated utility may have benefits from the protections afforded by the relevant regulatory framework. The stability of this business environment is then well researched to ensure the downside potential is well understood before we agree to take a structurally subordinated position. We will seek to avoid investments in mezzanine, or other junior debt which has equity-like characteristics (such as warrants, equity kickers) we feel are inconsistent with the resilient, cashflow generating profile investors look for in infrastructure debt.

Use of loan proceeds

When extending a loan, it is crucial to understand what the borrower plans to do with the proceeds. This can be for general corporate purposes, M&A, or for refinancing existing debt at prevailing market rates.

FIGURE 2

TYPICAL CAPITAL STRUCTURE AND TERMS FOR AN INFRASTRUCTURE BUSINESS

Senior debt	• Repaid first if the borrower defaults • Secured by assets and contracts or a pledge in the equity interests of the borrower • Restrictive covenants and base rate floors, upfront fees, commitment fees, and discounts • Lower interest rate than for junior or subordinated debt given priority in the capital stack

Subordinated debt	• Only repaid after senior debt is paid in full
	• Generally, there are two types of subordinated debt: contractual and structural
	• Holding company (HoldCo) financing common in sub-investment grade infrastructure debt
	  • Subordinated based on location in organisational structure
	  • Security by equity rather than tangible assets
	• Higher interest rate than senior debt given riskier profile

Mezzanine debt	• Hybrid of equity and debt financing, senior only to equity • Unsecured debt issued without collateral demanding a higher interest rate • Contains 'embedded equity options' or 'kickers' (e.g., stock call options, rights, or warrants) • Flexible interest and principal payment mechanics with potential equity conversion
Equity	• Repaid last in the capital structure and, therefore, the highest risk for shareholders • Equity has control of business operations, strategy, and potential for value creation

	Investment Grade	Sub-Investment Grade
Rating	AA to BBB-	BB+ to B-
Seniority	Senior OpCo	Senior OpCo or subordinated HoldCo
Business Risks	Established core infrastructure assets, with established operators and institutional customers	Proven technologies and infrastructure assets, with potential elements of construction, shorter operating experience and/or smaller operators
Average Spread	200 – 300 bps	400 – 600+ bps
Tenor	7 to 25 years / weighted average life 10 to 15 years	5 to 10 years / weighted average life 3 to 5 years
Fixed/Floating	Primarily fixed	Primarily floating
Loan To Value	75-90%	50-70%
Customer Contracts	10-20 year fixed price contracts	1-5 year contracts, or selling into liquid merchant markets, volume risk
Amortisation Profile	Typically fully amortising	Often not well suited to fully amortising due to the ramp up profiles associated with the business
Leverage (debt/EBITDA)	3-8x	6-12x
Debt Service Coverage	1.2-1.8x for amortising debt	1.1-1.5x for amortising debt

We may make project finance loans, which are related to the construction or completion of a specific project, secured by assets specific to that project. The yield should account for the construction being underway on a brownfield or greenfield site, although IFM Investors tends to limit itself to more de-risked brownfield opportunities. While many greenfield opportunities can present themselves, interest will vary from the level of risk associated with a loan – such as whether the lender is taking on development risk (including planning permissions, securing construction contracts), or only the risk associated with completion of any project. Many of these risks can be further ameliorated by ensuring a borrower is working with experienced contractors and developers, and that the borrower is able to monetise the project immediately upon completion. For instance, we will look to ensure a new power producer has offtake agreements for the sale of the power that will be generated by a new power plant ahead of the project's completion.

Credit risk of debt investments

Like corporate credit, infrastructure debt will have a rating to reflect the credit risk of the business or project on a consistent framework. Investment grade describes debt obligations that are rated AAA through BBB- (on an S&P scale) and are considered to have a lower probability of default. Sub-investment grade describes debt obligations with a higher probability of default on a scale of BB+ through CCC- and could also include D-rated or defaulted securities. Much of the infrastructure debt market is private and unrated by any of the major ratings organisations (e.g. Moodys, S&P, Fitch). However, investment organisations will typically apply their own ratings methodologies consistent with the frameworks used by major ratings agencies to allow for comparison. As a lender you can take more credit risk either from a business perspective or a structural perspective.

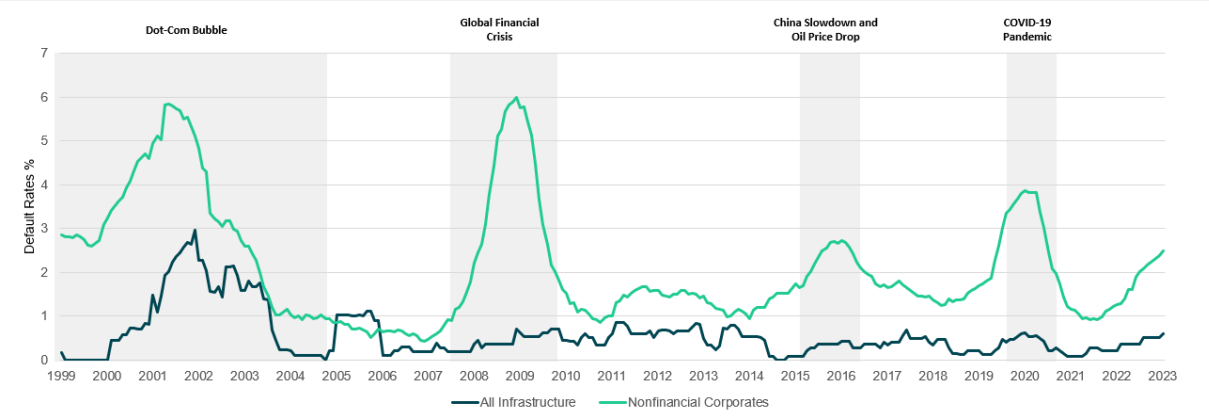
Business risks may include lending to smaller businesses, with shorter operating track records. Further risks include revenue profiles exposed to volatile power prices, commodity price risk, or construction risk.

Structural risks describe where a loan obligation sits within the capital stack of a business, and how the loan stands to benefit from revenue cashflows as they cascade through the business to pay back the various sources of financing the business has secured.

HoldCo financings are one example of this, and a HoldCo is typically an entity whose primary purpose is to hold a controlling interest in an asset. There are a variety of reasons an infrastructure business may issue debt through a HoldCo, including regulation that only permits a certain amount of leverage taken on at the Operating Company (OpCo) level. Such a regulated company may be able to gain access to additional debt financing if it is done through a HoldCo structure to optimise its overall

FIGURE 3

TRAILING 12-MONTH DEFAULT RATES, S&P GLOBAL RATINGS CREDIT RESEARCH AND INSIGHTS



Source: Standard & Poor's

cost of capital. HoldCo financing may also enable an infrastructure business to create a portfolio of assets it wishes to finance together, such as a portfolio of windfarms located around Europe. This type of HoldCo financing is an example of where there may not be OpCo financing ranking senior to the HoldCo debt and it is therefore not risk enhancing. In this scenario the HoldCo serves as an efficient structure to bring together and finance the more diversified portfolio of assets. We often find this is an effective way to invest in the renewables sector, which can help mitigate some of the risks associated with intermittent energy generation in solar and wind.

Infrastructure debt's risk-adjusted characteristics

We believe infrastructure debt's risk/return profile distinguishes it from other asset classes, including other types of private credit. The key reasons for this include:

- Cycle resilient cashflows which have led to historically lower default rates
- Higher recovery rates based on the real asset backed, and strategic nature of the businesses

As seen in Figure 3, default rates historically have remained low, even in times of heightened economic stress, such as during the Global Financial Crisis or onset of the COVID-19 pandemic.

Committing to infrastructure debt, as with any private capital allocation, requires an understanding that any investment will have less liquidity than a listed asset due to the privately negotiated and often complex nature of the loan. However, with this, investors can also reap the associated illiquidity premium and see a financial benefit from making a loan that may otherwise be too complex and bespoke for others within the financial system to execute.

The case for infrastructure debt

The need for capital to build infrastructure continues to grow. Population growth, and changing economic dynamics like digitisation, and the reshoring of manufacturing in north America and Europe create the need for more power generation and infrastructure to move goods and people around the world. Infrastructure also addresses societal needs like affordable housing and the creation of next generation industries as the world undergoes an energy transition. We believe infrastructure debt provides an opportunity to invest in these solutions and generate stable income and attractive risk adjusted returns.

We believe the asset class can serve as a resilient, diversifying part of a private debt allocation with historical evidence of reducing default risk. Debt is an important part of the capital stack for infrastructure. This means there is ample opportunity to deploy capital globally, and we expect the need for financing to grow amid a rapidly evolving global economy.

Sources:
1. Inframation, calculations by IFM
2. https://www.iea.org/energy-system/transport
3. https://assets.bbhub.io/professional/sites/24/Energy-Transition-Investment-Trends-2024.pdf

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An infrastructure debt investment is subject to certain risks including but not limited to: local, national and international economic conditions; the supply and demand for services from and access to infrastructure; the financial condition of users and suppliers of infrastructure assets; changes in interest rates and broader credit market conditions which may render the purchase, sale or refinancing of infrastructure debt assets difficult or impractical; changes in environmental and planning laws and regulations, and other governmental rules; environmental claims arising in respect of infrastructure acquired with undisclosed or unknown environmental problems or as to which inadequate reserves have been established; changes in energy prices; changes in fiscal and monetary policies; negative economic developments that depress travel; uninsured casualties; force majeure acts, terrorist events, under insured or uninsurable losses; and other factors beyond reasonable control. **IFM-03MARCH2025-4278565.**