Macquarie Infrastructure Debt Investment Solutions
An introduction to infrastructure debt

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Introduction

Investment into infrastructure debt provides institutional investors with the potential for long-dated high quality cashflows which can be used to match liabilities, provide a yield enhancement over corporate bonds and diversify risk exposure.

Infrastructure debt has been receiving greater attention from institutional investors over the past few years as it achieves the following key outcomes:

- **low risk** – infrastructure debt has experienced low historical losses on default compared with similarly rated corporate bonds
- **duration** – due to the strong lender protections associated with infrastructure debt, lenders can confidently lend to infrastructure projects for a period of 30 – 50 years which can provide certainty of cashflows to meet the very long liabilities pension funds and insurance companies may have
- **diversification** – infrastructure offers important portfolio diversification benefits within a balanced portfolio
- **returns** – private infrastructure debt generally yields returns in excess of more liquid corporate bonds

In particular, pension funds and insurance companies have a competitive advantage in this space as their long-dated liabilities provide a natural match for the long-dated nature of infrastructure debt. Macquarie sees a strong pipeline of opportunities in this space and believes there is a clear opportunity for pension funds and insurance companies to utilise this competitive advantage to access long-dated contractual cashflows backed by secure infrastructure assets.

Historically, pension funds and insurance companies have not widely invested in infrastructure debt which is considered to be a reflection of the relatively recent emergence of the opportunity (e.g. renewable energy technology) and the fact that commercial banks were previously dominating the market. In addition, the expertise and resources required to underwrite and execute complex infrastructure investments has historically excluded all but the largest investors.

The introduction of Basel III regulations for banks (and the outlook for Basel IV) has reduced their competitive advantage in this space and opened up an opportunity for sophisticated pension funds and insurance companies to partner with institutional fund managers to invest on their behalf.

Infrastructure debt explained

Throughout this paper, we define infrastructure assets as physical structures and networks which provide essential services.

This definition includes assets such as transport (airports, railways, motorways), regulated utilities (water, waste water, electricity and gas transmission and distribution) and renewable energy projects (wind, solar photovoltaic). These assets, along with the organisations which run them, are viewed as essential drivers of any economy as basic infrastructure is a precondition for sustainable economic development. Investors in infrastructure are attracted to the fact that the underlying assets generally generate robust revenue streams. For example:

- regulated revenues for essential services (eg water) – based on an Regulatory Asset Value (RAV)
- proven legislative backgrounds providing guaranteed tariffs (eg high quality renewables)
- revenues received directly from users of infrastructure which have a natural monopoly position (eg airports)

**Capital structure: debt versus equity**

Infrastructure assets tend to have simple capital structures and are typically financed by between 65% and 90% of senior ranking debt and the balance as equity (and in some cases subordinated debt):

- debt investors receive a pre-defined schedule of interest and principal repayments
- equity investors receive any residual net income after meeting the payments due to debt investors

Consequently, there is higher risk for equity investors who take the first loss arising from any unanticipated fall in revenue and/or cost overrun. The low volatility of infrastructure asset revenue streams and other lender protections mean that a relatively high proportion of borrowing can be safely sustained.
Protection for debt investors – low defaults and high recoveries

Infrastructure debt is designed with the aim of providing a range of protections to minimise the risk of default and maximise the recovery in the unlikely event of default. Key protections within project finance can include the following:

- **cash flow covenants:** in the event that the infrastructure asset is underperforming, the covenant would ensure that cash is prevented from being distributed and remains with the project special purpose vehicle (SPV) giving debt investors certain protections over equity investors if there is further deterioration in performance. This provides an additional buffer which could be available to support repayments to debt investors if there is further deterioration in performance.

- **restrictions on business activities:** the project SPV may be restricted to perform the activity for which it was established. This contrasts with corporate bonds where there is less certainty about the future risk profile of the business to which debt investors are lending.

- **ability to replace counterparties:** underperforming subcontractors may be replaced. A level of bonding may also be available to mitigate potential increased costs incurred in replacing a counterparty.

- **default/enforcement triggers:** if the project is significantly underperforming, the lenders may either exercise greater control of the day-to-day running or look to achieve an exit by exercising their security and taking ownership of the project SPV.

- **insurance:** key risks are insured.

This range of protections has proven effective in practice, translating into historic losses arising on European infrastructure loans which have been lower than A rated senior secured corporate bonds. This is observed by:

- default rates similar to investment grade (Baa-rated) corporate bonds (Chart 1)

- recovery on default which has shown to be almost double the level achieved on senior secured corporate bonds. 100% recovery has been achieved in 65% of defaults (Chart 2).

Note – for the following charts the Study Data Set is based on unrated project finance transactions compiled by Moody’s from a consortium of leading project finance lenders and investors which represents 62% of all project finance transactions originated globally during a 32 year period from 1 January 1983 to 31 December 2014.

Combining the default and recovery rates, we obtain an indication of expected losses on the debt. The chart below highlights that for periods of 10 or more years, infrastructure project finance debt covering all sectors and geographies has performed well compared with A rated corporate bonds.

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Diversification benefits

Because of their nature, infrastructure assets are relatively demand insensitive and therefore are not impacted by broad economic events in the same manner as equities and corporate bonds.

Moody’s analysis states that “default rates for corporate bank loans are negatively correlated with recovery rates” — i.e. in times of economic stress when default rates are high, recovery rates are lower, meaning a greater expected loss in times of economic stress.

By contrast, they state that “the Study Data Set, appear[s] to be substantially independent of both the economic cycle at default and the economic cycle at emergence.” This can be seen via the below chart which shows infrastructure debt doesn’t follow the same trend as corporate bond recoveries, which clearly fall during both the dot com bust and the Global Financial Crisis.

This analysis suggests infrastructure debt can provide important diversification benefits when considered as part of an overall portfolio.

Attractive yields

A higher yield can be earned on infrastructure debt by comparison with corporate bonds of similar credit quality. This represents compensation to the investor for a number of factors:

- **complexity premium:** barriers to entry are substantial, such that only a subset of investors can access opportunities:
  - considerable expert resources and a strong network of borrowers is required in order to source, structure and analyse lending opportunities, which must then be closely monitored on an ongoing basis
  - origination of each loan can require investment of resources over extended periods, often subject to the contingency of a bidding process
  - only individual investors who can put £50m or more into a single transaction can gain access to a wide range of opportunities and have the ability to act as lead debt investor, which provides greater control in structuring the deal and in the ability to control decisions in enforcement scenarios
- **illiquidity premium:** infrastructure debt is less frequently traded than corporate bonds. This reduces the attractiveness of the asset to investors who speculate on short-term price movements and/or need to be able to sell at very short notice. As a result, investors who can follow a longer-term buy and hold strategy are able to earn an illiquidity premium in the yield

In current conditions, a yield premium in the region of 80-100 basis points is achievable for infrastructure debt relative to liquid corporate bonds of similar quality. This assumes that genuinely private transactions are targeted which seek to replace the previous bank lending market, i.e. where the borrower would not otherwise have easy access to public bond markets.

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An introduction to infrastructure debt

Macquarie Group (Macquarie) is a global provider of banking, financial, advisory, investment and funds management services. Macquarie is globally recognised for its deep infrastructure expertise including taking a leading and innovative role in private market financing of infrastructure assets. It has deep relationships with the majority of infrastructure market stakeholders, including sponsors, lending banks, advisers and construction companies.

In early 2012 Macquarie established the Macquarie Infrastructure Debt Investment Solutions (MIDIS) platform to leverage the infrastructure expertise within Macquarie into an investor-aligned global infrastructure debt investment management business. MIDIS’s strategy is to focus on the investment needs of pension funds and insurers seeking a highly engaged, client service driven manager. A core pillar of MIDIS’s strategy is to deliver customised solutions to its investors.

Macquarie has been deliberate in its dedication of resources to MIDIS in order to create an institutional-grade funds management business which caters for the specific needs of long term investors:

• senior management with extensive experience across the global infrastructure sector as members of the Investment Committee

• an Investment Team with a comprehensive lending track record across multiple infrastructure subsectors in international markets

• a dedicated and independent risk function with deep infrastructure credit experience

• an Investor Solutions Team with specific pensions and insurance regulatory, capital and liability management experience

• access to infrastructure specialists within Macquarie providing market insights and intelligence and an avenue into Macquarie’s unrivalled sector coverage

• a full-service Account Management Team to ensure institutional-grade asset management, reporting and servicing
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