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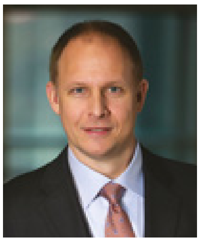
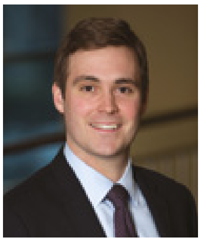
Deconstructing infrastructure debt

Risk attributes and current opportunities

MKTG1217E-320467-964034

Summary

Erik Savi
Global Head of
Infrastructure Debt

Tyler McConnell
Vice President, Real Assets
Product Strategy

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- For many investors, infrastructure allocations fall short of their targets. One way to broaden the opportunity set is by looking beyond equity.

- Infrastructure debt takes many forms. Ratings range from below investment grade to investment grade, maturities from seven years or less to 30 years or more and coupons from fixed to floating to inflation-linked.

- Infrastructure debt's potential benefits include diversification and predictable cash flows. While past performance is not necessarily a reliable indicator of current and future results, infrastructure debt has exhibited lower default and loss rates than similarly rated corporate debt.

- These benefits also come with risk, and we review the short list of risk exposures that drives return profiles and debt ratings for nearly all infrastructure projects, regardless of sector.

- In investment grade (IG) debt, we see projects in investment grade rated developing countries offering opportunities. In below-IG debt, we see significant opportunities in holding company level debt in infrastructure projects globally across sectors.

CAPITAL AT RISK. All financial investments involve an element of risk. Therefore, the value of the investment and the income from it will vary and the initial investment amount cannot be guaranteed.

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Infrastructure's need for debt capital

For many investors, infrastructure allocations fall short of their targets. Investors seek to add diversification and predictable cash flows to their portfolios via private investments in sectors such as power, energy and transportation. But rising demand without a similar increase in deal flow has led to strong competition for investments, especially in certain subsectors of infrastructure equity.

One way investors can broaden the opportunity set is by considering investments across the capital stack. Depending on the sector, debt may account for 70% or more of the financing for an infrastructure project. The majority of this debt has traditionally come from banks. Yet a secular change in the financing of infrastructure projects has been underway since the global financial crisis. Banks are holding less infrastructure debt because of higher capital charges and more restrictive regulations. (See the chart below.) Sovereign wealth funds, pension funds and other asset owners are stepping into the gap. At the same time, post-crisis insurance regulations – notably the European Union's Solvency II Directive – encourage insurers, long active in the space, to add to their holdings.

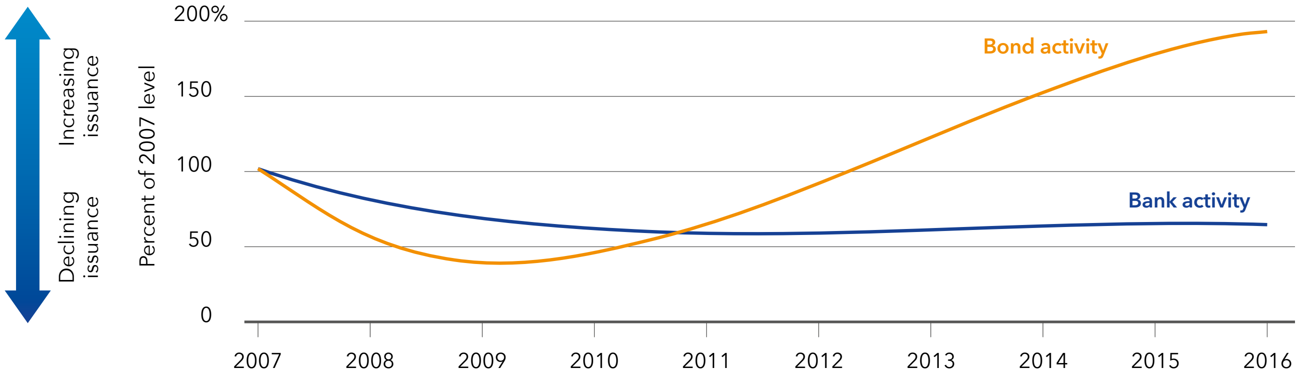
As befits an asset class that spans geographies, industry sectors and a variety of project-specific capital structures, infrastructure debt takes many forms. Ratings range from investment grade (IG) to below investment grade, maturities from seven years or less to 30 years or more, and coupons from fixed to floating to inflation-linked. For those new to the asset class, and perhaps seeking to compare it to other private debt investments, infrastructure debt may seem confusing. But as in other private markets, investors may earn a premium for navigating its complexities and accepting less liquidity.

A potential premium, moreover, is only part of the reason for considering the asset class. Increasingly, private infrastructure debt, particularly debt rated below IG, is viewed as an alternative to pricey core infrastructure equity, potentially offering higher risk-adjusted returns. Below-IG infrastructure debt can also help diversify allocations to public corporate high yield, leveraged loans and middle market debt, much as IG infrastructure debt has long been used by insurers to diversify their corporate IG fixed-income allocations.

Investors interested in these potential benefits may wish to explore how infrastructure debt is structured, sourced and managed. An overview of its basic characteristics, and a deeper dive into the varying risk exposures investors may be rewarded for bearing, help to bring the asset class into focus.

Less bank lending, more bonds

Change in volume of global infra debt financing, bank loans vs. bonds (2007 = 100%)



Source: IJ Global, 31 December 2016. Note: the charted data represents the historical volume of bank lending compared to institutional bond issuance in the US, Canada & Europe. The bond market has grown significantly since the 2008-2009 global financial crisis relative to the bank market. However, bank financing still accounts for the majority of debt financing activity.

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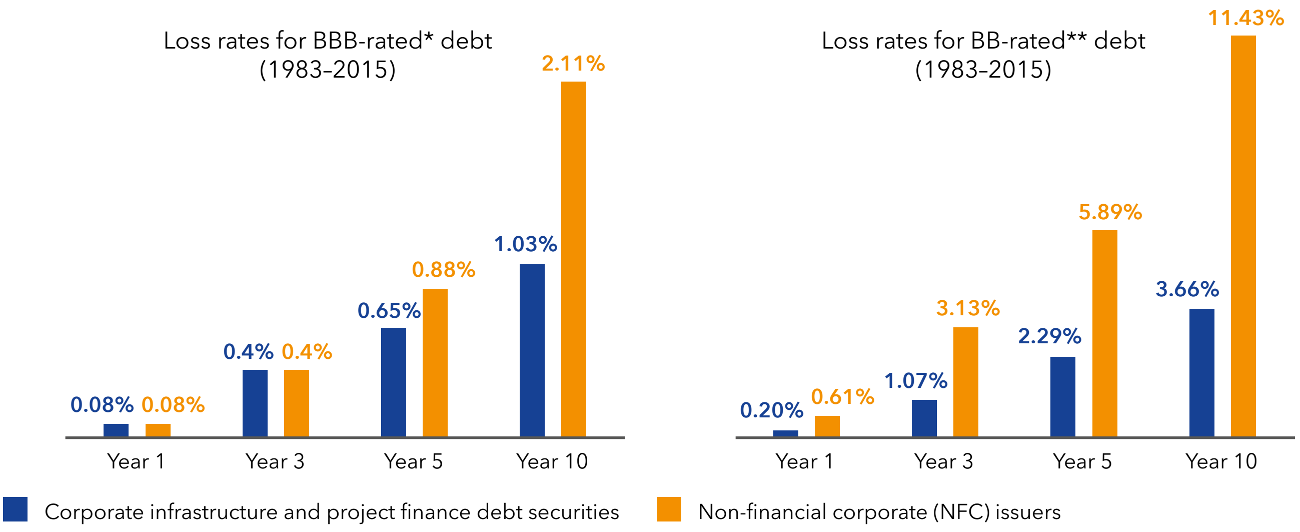
Basic characteristics and underlying risks

True infrastructure debt differs from most corporate debt (including some of the debt issued by infrastructure companies) in that it is project or asset-based. We define infrastructure – or infra – debt as an instrument in loan, note, or bond format, associated with a real asset that provides essential services to the general public. Investors can get exposure either on a project level or on a corporate level, provided the cash flows servicing the debt are primarily driven by underlying projects. These assets usually have long economic lives and predictable revenue and expense streams, achieved through regulatory conditions – many are monopolies or semi-monopolies, such as utilities or airports – or through long-term contracts where prices and volumes are fixed. Sectors with assets meeting these criteria include power, energy, transportation, social services, water and waste treatment and telecommunications.

Historically, these traits have helped infra debt to exhibit lower loss rates than comparably rated corporate debt. This is because the mission of an infrastructure asset such as a power plant or a toll road is typically far simpler than that of a corporation. The essential service it provides is its sole purpose, and multiple safeguards typically guard against any interruption. These often include covenants on how cash flows can be directed, the ability to replace counterparties, and strict limits on the entity's business activities. The government approval (or, sometimes, backing) that comes with a regulated or quasi-monopoly status brings additional stability.

Losing less

Loss rates of infra debt vs. non-financial corporate bonds, 1983–2015



Past performance is not a reliable indicator of current or future results.

Source: Moody's Investors Service, July 2016, the latest data available as at 30 November 2017. *Equivalent to Baa-rated debt assigned by Moody's. **Equivalent to Ba-rated debt assigned by Moody's. Note: NFC issuers include industrial, transportation and utility companies. Because utilities and transportation issuers are considered both part of the infrastructure universe and NFCs, there is an overlap but the magnitude of the intersection (about 15% as at year end 2015) is small and therefore does not meaningfully impact our comparison.

The result can be seen in the charts below, which compare the 10-year record of infra debt to that of comparably rated non-financial corporate debt. The divergence in losses grows over time and is especially wide in below-IG debt over the full 10 years. For BBB-rated infra debt, the 10-year loss rate is approximately 1% compared to about 2% for similarly rated non-financial corporate debt. The difference is even greater for BB-rated infra debt, which has a 3.7% loss rate over 10 years compared to 11.4% for below-IG rated non-financial corporate debt.

Breaking down the risk exposures

These basic characteristics help explain infra debt's lower loss rates, but they don't tell us much about what determines the risk-return profiles of individual projects. For that, we need to look at a short list of risk exposures that drive return profiles and debt ratings for nearly all infrastructure projects, regardless of sector. While one or two exposures will often predominate in determining an investment's profile, understanding how they interact is essential to forming a nuanced view of a given investment.

First on our short list – and of particular interest to debt investors – is **leverage risk**, which is determined by the degree of debt service coverage provided by the project's cash flows, and by where an investment falls in the capital stack. Debt service coverage is the amount of cash flow available to service debt payments, and its variability depends on the contractual protections or regulated cash flows in place. With a high level of predictable cash flow available to service its debt payments, a strong infrastructure project will often carry a higher level of debt than its corporate counterpart. Typical corporate IG loan-to-value ratios are about 40% to 60%, whereas IG infrastructure assets may be 80% or 90% levered.

Within the capital stack, there are three primary tiers for infra debt (IG, below IG and mezzanine), which can be structured as either operating company (opco) debt or holding company (holdco) debt. Opco debt is usually secured by the project itself and can be either senior and first lien, or subordinated and second lien. Holdco debt is typically subordinated to opco debt and is generally secured by a pledge of shares in the operating company. But as we'll see, where a debt financing falls in the capital stack may not entirely determine its credit quality.

The second broad risk category is **market risk**, which generally refers to the exposure to fluctuations in the market price and level of demand for whatever the project is providing: electricity in the case of a power plant, highway use in the case of a toll road, or student occupancy in the case of student housing. Contracts are a major mitigant for market risk. Higher quality projects may be completely contracted for both price and volume, while lower quality projects may be partially contracted or not contracted at all, and therefore expected to offer higher returns to compensate for the greater risk.

The importance of contracts in offloading some risks points to a third risk category: **counterparty credit risk**. A power project that has a long-term offtake contract with a utility can lock in predictable price and volume levels for the electricity it produces. Construction risk in a project that's still being built can be borne by an experienced and well-capitalised contractor. But the effectiveness of the risk mitigation depends, in turn, on the creditworthiness and experience of the underlying counterparties.

Last on our list is **sovereign risk**, which is harder to mitigate. As with other kinds of debt, an infrastructure asset can't be rated more highly than the country in which it is situated without additional support of some kind, such as sovereign risk insurance or backing from the World Bank. Sovereign risk also takes into account the protection provided by the local regulatory and legal regimes.

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Debt types and portfolio considerations

With the chief risk exposures defined, we can look at how they combine with other characteristics to determine where the debt of individual projects fall on the ratings and risk-reward scales, and what each debt type can contribute to a diversified portfolio. The chart below shows the ranges of these four risks for investment grade, below IG and mezzanine infra debt.

Investment characteristics

Comparing three types of infra debt vs. infra equity

	Investment grade debt	Below investment grade debt	Mezzanine debt	Core equity
Current segment return range	3.5 – 5.0% Current income only	5.0 – 8.0% Current income and OID*	8.0 – 12.0%** May include OID* as well as PIK and equity warrants for upside	6.0 – 10.0% Current cash flow based, may include exit assumptions for upside
Equivalent credit quality	A to BBB-	BB+ to B-	B- to CCC	Not applicable
Leverage risk	Loan to value: 50 – 95% DSCR†: 1.2 – 1.5x	Loan to value: 50 – 90% DSCR†: 1.1 – 1.3x	Loan to value: 70 – 95% DSCR†: 1.05 – 1.2x	Not applicable
Market risk (price and volume)	Typically contracted for the debt life, should take minimal market risk	Often contracted for a portion of the debt life, but may include market risk with sufficient debt service coverage	Typically uncontracted or contracted cash flows that are sufficient only to service IG debt	Typically contracted for a portion of the asset life, but often includes re-contracting risk
Counterparty credit risk	Investment grade	Investment grade or below investment grade	Typically market based risk	Often investment grade, but may be below investment grade
Sovereign risk	Investment grade equivalent countries	Developed or developing countries	Developed or developing countries	Developed or developing countries

Past performance is not a reliable indicator of current or future results.

* Original Issue Discount (OID) refers to the discount from the par value when the infra debt is issued. ** Returns greater than 10% will typically finance opportunistic or value-add infra projects rather than core infra projects. † DSCR is debt service coverage ratio. Estimates and market observations are as at 15 October 2017 and based on BlackRock Infrastructure Debt Team's analysis of transaction data over the past three years; publicly available sources do not provide this data at a meaningful specificity. The above are observable market yields but are not targets for any Fund offering. It should not be assumed that the manager will invest in assets with comparable yields or that any future Investments with comparable yields will be sourced. The actual yields may differ substantially from the above due to upon a variety of factors, including prevailing market conditions and investment availability. The terms investment grade (BBB- and above) and below investment grade (BB+ and below) are market conventions: IG categories indicate relatively low to moderate credit risk while below investment grade categories indicate a higher level of credit risk or that a default has occurred.

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Investment grade

Investment grade debt is usually issued at the operating company level, with a first lien on the project itself. However, holdco debt may also be investment grade if the quality of the opco debt is sufficiently high. For example, if a project's opco debt is rated BBB+, additional holdco debt may be rated BBB-.

Overall **leverage** may be set as low as 50% (if, for example, there is exposure to some degree of market risk) or as high as 95% if the debt service coverage ratio is 1.2 times or higher.

Market risk is often mitigated by long-term contracts that typically last the term of the debt and include **investment-grade counterparties** – for example, an electrical utility with a monopolistic or regulated market position, or a government transportation department that oversees roads. **Sovereign risk** is comparatively low, with the issuing entity located either in a developed economy or in one of a relatively few IG-rated emerging economies.

Potential portfolio benefits: diversifying IG corporate credit exposures; matching long-dated liabilities; and capturing the potential premiums for complexity and reduced liquidity relative to similarly rated corporate debt. However, this may be harder to achieve in widely syndicated deals.

Below investment grade

Historically, a below investment grade rating has usually meant that debt is junior and unsecured. In infra debt, however, debt rated below IG can be senior and secured. Typically, an issue is rated below IG because of higher risk on one or more of our scales.

Leverage risk may be higher because the debt is issued by a holding company that adds additional leverage, subordinate to the operating company debt. In these instances, consolidated debt service coverage ratios (inclusive of both opco and holdco debt) may range from 1.1 to 1.3 times available cash flow.

On the **market risk** scale, below-IG debt may be only partially contracted. If fully contracted, it may have lower credit-quality counterparties, so that senior secured financing could dip to below investment grade quality – for example, a natural gas pipeline contracted with five BB-rated gas shippers.

In yet another scenario, **sovereign risk** may be the driver, with the project's location in a developing country resulting in a below-IG rating for the project debt.

Potential portfolio benefits: higher yield than similarly rated corporate debt; diversification of HY corporate, leveraged loan and middle market debt. For holders of core infrastructure equity, infra debt adds further diversification potential with investments that rank higher in the capital structure but, under current market conditions, may provide a similar return.

Mezzanine

Mezzanine debt sits outside traditional debt structures and typically includes pay-in-kind interest or equity warrants for potential upside and may even be structured as preferred equity. It is most commonly seen in acquisitions, where sponsors may use it to fund a higher bid without diluting equity or increasing the amount of debt with a first claim on operating cash flows. In other cases, mezzanine debt also may be used in financing distributions to shareholders.

Overall **leverage** may be modest, but investors take an unsecured, subordinated position in the capital stack. Consolidated debt service coverage ratios may range from 1.05 to 1.2 times available cash flow, according to BlackRock estimates based on observable market data as at October 2017.

On the **market risk** scale, mezzanine debt is typically unprotected by contracts, or only partially protected by means of a short-term financial hedge. It may also be exposed to **sovereign** or development risk, with any guarantees or contracts focused primarily on other parts of the capital structure.

Potential portfolio benefits: higher risk-adjusted returns than core infrastructure equity under current market conditions, while retaining some of the typical diversification and downside mitigation benefits stemming from the essentiality of the underlying infrastructure asset. However, given the increased risks of mezzanine debt, we recommend only modest amounts for most investors. Too much mezzanine debt exposure can give what is meant to be a core or core-plus infrastructure portfolio the profile of a value-add or opportunistic one overly exposed to commodity prices.

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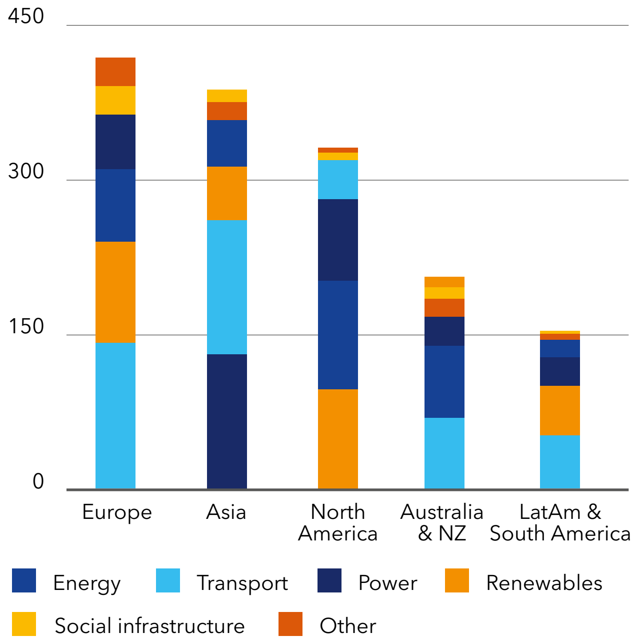
Market outlook

Investing in infrastructure, whether debt or equity, requires both a global, top-down perspective and local, bottom-up analysis. A top-down view shows the biggest portion of deals over the past five years (64% by dollar volume) coming from developed economies – Europe, the US, Canada and Australia – with developing economies in Asia and Latin America contributing 36%. The most active sectors vary somewhat from region to region, but globally, energy, power, renewables and transportation accounted for over 90% of all deals in the period. (See chart below.) We expect these trends to continue.

Where the deals are

Infrastructure project finance volume 2012–2016



Source: Dealogic, October 2017.

Bottom-up analysis of local market conditions suggests different strategies for different types of debt and different regions. In the IG realm, where opportunities span all major infrastructure sectors, competition for high quality assets in developed markets has narrowed the private debt premium, or even pushed it into negative territory. Here, we think the preferable path is to be very selective in widely syndicated transactions and partner early in the financing process with banks, financial advisors and sponsors. One way to do this is to offer committed financing support to an equity sponsor during the bidding phase of a public-private partnership or M&A process for all or a significant portion of the financing.

Investors seeking IG debt may also want to consider several developing markets with investment grade ratings, including Chile, Colombia, Peru, Mexico, Thailand and Uruguay. We see increasing opportunities in such markets to finance core infrastructure projects where debt is directly secured by the underlying operating project and risks are mitigated by long term contracts, often with government counterparties. In many cases, the contractual cash flows or government support are denominated in US dollars, making it possible for investors to mitigate developing market currency risk with exposure to dollar-denominated infra debt. Under other circumstances, deals may also include a local currency tranche that appeals to investors with domestic currency liabilities.

In below-IG debt we believe investors face a somewhat more favourable supply-demand dynamic, owing to a polarisation of market demand between investment grade assets (popular with insurance companies for the beneficial capital treatment) on the one hand and higher yielding mezzanine assets (popular for the high return, albeit at higher risk) on the other.

We think holdco structures are one good place to seek value in below-IG debt. Many core infra equity projects are already structured with opco debt limiting their ability to add further senior financing options. In these cases, projects that maintain cash flow with strong debt service coverage may be able to add below-IG debt with attractive risk-return attributes at the holdco level. The conventional and renewable power sectors in the US and Europe, notably Southern Europe, are increasingly using holdco structures for debt financing solutions.

Another popular avenue for investors to gain exposure to the below investment grade market is through senior secured, contracted (or semi-contracted) projects that have speculative grade counterparties. In particular, the midstream and downstream energy subsectors in the US and Europe provide these kinds of opportunities. To gain comfort with these assets, investors would need to assess the essentiality of the project, the probability of default, and replacement options for counterparties.

Mezzanine debt opportunities are largely available in the power and energy sectors, where fast growing developers are seeking additional capital to support their project pipelines. Although North America presents the largest share of the opportunities, we see attractive transactions in the power sector in Australia and Western Europe as well as in certain developing countries.

For all types of debt, we see the potential for higher risk-adjusted returns for investors willing to take additional risk by investing somewhat earlier in the project life cycle. In particular, we see opportunities in construction-phase wind, solar, and natural gas power projects in developed markets and transportation projects in developing markets. Construction projects typically have a higher spread than operating projects, and this margin will usually remain in place for the life of the financing (including during the operational phase after construction has been completed). Construction financing can even be rated investment grade if the core risks are properly mitigated. According to data from Moody's Investor Service, construction is one of the lowest causes of default, especially for projects with strong contractual arrangements, established construction processes and technology, and experienced construction companies.

As the shift away from bank financing continues, the universe of infra debt is likely to keep expanding. The EC's 2016 decision to reduce the Solvency II capital charge on qualifying infra debt is just one example of the steps that governments around the world are taking in recognition of the lower risk profile relative to comparable corporate credit, a step that we believe will help to stimulate private investments in infrastructure. Over time, we expect these initiatives will result in an increasing supply of institutional infra debt notes and bonds – the logical format for much of this capital. On the investor side, we expect to see larger allocations, increasingly held in an infrastructure bucket or via a private credit allocation rather than a fixed income portfolio, in recognition of infra debt's unique attributes.

But meanwhile, for investors interested in the potential benefits of infra debt, and willing to do the necessary homework, there is no need to wait.

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