January 2021 / Investment Insights

European Infrastructure Debt: The Case for Japanese and Korean Insurers

A unique combination of economic and market forces have driven insurers to seek higher yield offshore. These structural drivers include the sustained low interest rates environment, shallow domestic market and volatile hedging costs.

U.S. assets have been the traditional port-of-call for many Asian insurers investing offshore. However, hedging costs have been one of the key risk factors for APAC investors. At the height of the Covid-19 induced volatility in March 2020, 12-month USD hedging costs for KRW and JPY were at or close to 2%. Whilst USD hedging costs have moderated following measures by global and regional central banks, its volatility can add significant risk to Japanese and Korean insurers' offshore portfolios. In contrast, EUR hedging costs have held steady over the first half of 2020. As such, European assets may be a viable alternative for Japanese and Korean insurers to diversify their sources of yield. In particular, European infrastructure debt offers a host of features that are aligned with the needs of Japanese and Korean insurers:

Steady cash flow backed by real assets: Infrastructure businesses generally have contractual or regulated revenues and these are often inflation protected due to contracts or regulations linked to CPI, supporting long-term cash flow stability. The underlying assets serve as collateral for the loan, providing protection through security packages and financial covenants.

Illiquidity/Complexity premium: Compared to public debt instruments with similar risk profiles, private infrastructure debt may offer higher spreads, reflecting an illiquidity or underwriting complexity premium. Insurers may tap into this premium to boost yields without necessarily sacrificing the credit quality of their investments.

Attractive default and recovery rates: Infrastructure debt has consistently generated default rates lower than equally rated non-financial corporate bonds. For example, the ten year cumulative default rate for 'BBB' rated infrastructure debt is 2.0%, compared with 3.1% for equally rated corporate issues. The effect of Covid-19 is also important to look at in the context of defaults: looking at Moody's rating universe, only two infrastructure debt issuers (0.1% of the total universe) defaulted in the first three months of the crisis (Mar-May 2020). This compared to 66 defaults by non-financial corporate debt issuers (1.3% of the total universe[1]).

Infrastructure debt has also historically demonstrated on average higher recovery rates compared with non-financial corporates, for both senior secured and unsecured debt. Senior secured infrastructure debt demonstrated a recovery rate of 72%, compared with 55% for equivalent non-financial corporate debt. (Moody's, Infrastructure Default and Recovery Rates 1983-2019, October 2020).

Stable risk profile: Historically, infrastructure ratings have demonstrated higher long-term credit quality, underpinned by lower credit migration and lower default rates as compared to nonfinancial corporate issuers

Source of duration: Since banking regulation has tightened globally in the wake of the great financial crisis, banks have scaled down their infrastructure lending activities, especially at the long-dated end, increasingly moving to an originate–and-distribute model. This has created opportunities for insurance companies to fill the market gap and source duration to match their liabilities.

Potentially lower impairments: Lower default rates and higher recovery rates can result in lower impairments for expected credit loss under IFRS 9.

[1] Source: Moody's, Defaults & Recoveries: Fewer coronavirus driven downgrades than non-financial corporates. As of: June 2020

Risk charge: The favourable risk profile of infrastructure debt might be reflected in lower capital charges compared to unsecured loans. The governing body for global insurance capital standards, IAIS, has recently released a survey seeking input regarding quantitative and qualitative data to decide whether there should be differentiated capital treatment for infrastructure investments in the Insurance Capital Standards (ICS). This could potentially lead to lower risk charges for qualified infrastructure investments, as is the case in European Solvency II, which many Asian insurance regulators follow closely.

The European infrastructure debt market

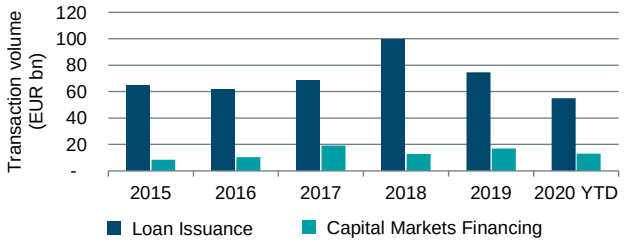
European infrastructure debt has a long track record, tracing back to the end of the 1980s, when large-scale privatisations and liberalisation in the energy, telecommunications and rail sectors opened up the market to private investment, ahead of what was observed historically across other global markets. In the early 2000s, European infrastructure debt experienced substantial growth, with banks playing an important role in providing funding. Capital markets continued to expand, representing a popular funding option for large, rated infrastructure corporates, particularly in the investment-grade space. However, with the bulk of funding needs concentrated in smaller, unrated infrastructure projects, and often in the sub-investment grade space, the private loan market has continued to play a pivotal role, and we anticipate this trend to continue.

However, over the last decade, European banks have gradually started retrenching from the infrastructure loan market due to regulatory reasons, and particularly for longer duration assets, frequently adjusting from underwriting transactions with their balance sheets to “originate-to-distribute” business models. As banks retrenched, institutional investors started to play a more pivotal role in providing funding to European infrastructure assets, and we expect this trend to accelerate in the future.

Beyond offering potential for duration and illiquidity premium, the European private infrastructure debt market is characterised by a number of unique features that make it particularly attractive to international long-term investors. European private infrastructure debt offers a wider range of investment opportunities compared with listed infrastructure debt, and it includes a large universe of issuers by structure and transaction type (including debt tranching e.g. senior and junior).

EUROPEAN INFRASTRUCTURE DEBT DEAL VOLUMES

(EUR billion, 2015-2020 YTD)



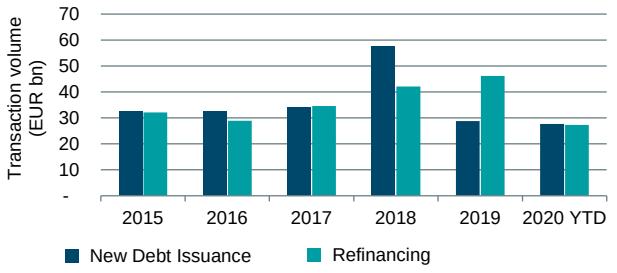
Source: Inframation Deals, as at December 2020. Past performance is not indicative of future results. For illustrative purpose only.

Compared with other global regions, European private infrastructure debt offers access to the most diversified set of infrastructure issuers by sector and country. While other markets, such as North America, tend to focus mainly on energy projects, Europe provides a diversified pipeline of transactions opportunities across energy, digital infrastructure, transportation, and importantly social infrastructure. Historically, the market for institutional investors has been concentrated in the investment-grade space, but we continue to witness a progressively growing and liquid market in the sub-investment grade space, where we see a strong flow of corporate or project finance deals.

Institutional investors have the option to provide capital to both corporate and project finance assets. On balance sheet corporate finance is the main funding channel for European infrastructure corporates, particularly when looking at water infrastructure, electric utilities or gas and power networks, but also across transportation, such as with airports or ports. In Europe, corporate assets can enjoy monopolistic or quasi-monopolistic market positioning, and regulation is predictable and supportive on a global comparison basis, providing issuers with substantial resilience to volume and price fluctuations, and investors with cash-flow visibility. This was particularly evident in 2020, when, notwithstanding the economic downturn caused by Covid-19, European regulated infrastructure, including utilities and networks has demonstrated a resilient performance, supporting leverage and debt coverage ratios and preserving their credit profile. So far Covid-19 appears to be having an impact on the average credit quality of European infrastructure assets, largely comparable with historical performance across previous economic downturns. However, we acknowledge that the passenger transportation sector has been impacted beyond what we had observed historically, and that the full impact of Covid-19 on the credit quality may take time to fully emerge.

At the same time, we continue to see supportive liquidity and financing conditions for high quality infrastructure assets impacted by the pandemic, such as airports and public transportation, with lenders generally providing waivers to existing loan agreements where necessary, and assuming a gradual convergence of earnings to original business plans over the medium term. We also noticed that with equity valuations remaining resilient across regulated utilities and net

EUROPEAN PRIVATE INFRASTRUCTURE DEBT
(EUR billion, 2015-2020 YTD)



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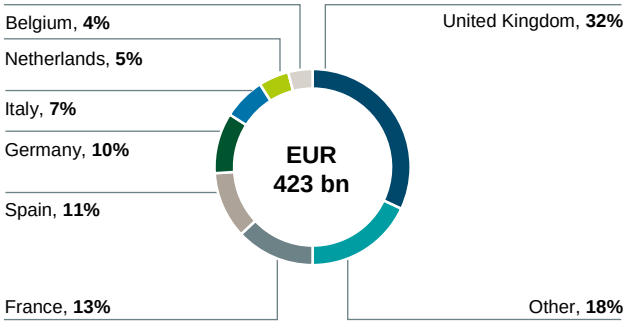
works, largely due to expectations of interest rates remaining lower for longer and resilient credit spreads, lenders continued to benefit from substantial equity cushions.

The European infrastructure corporate debt market continues to grow with private loans providing the capital required for the expansion of business plans and construction and upgrade of infrastructure projects. Moreover, historically low interest rates continue to support corporates in refinancing existing debt, as they seek to reduce cost of debt and extend debt maturities.

EUROPEAN PRIVATE INFRASTRUCTURE DEBT
(By country, 2015-2020 YTD)



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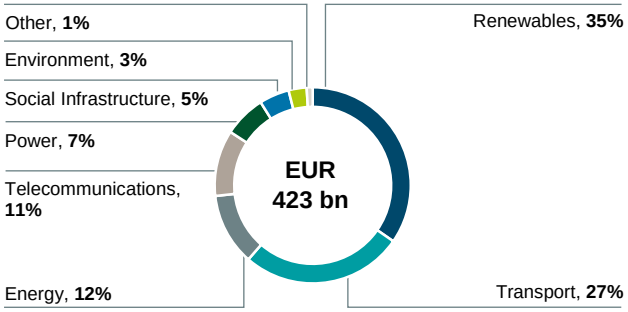
Beyond corporate financing deals, project finance is increasingly adopted in Europe for the financing of specific infrastructure projects, particularly in the energy sector, such as for renewables, where we continue to see a very deep pipeline of debt transactions across different European markets. Project finance debt generally has a long duration and is paid back only by the cash flows generated by the project.

In addition to energy deals, the European project finance market provides investors with access to a deep Public-Private Partnerships (PPPs) market with the ability to underwrite projects underpinned by long-term concessions across transportation and social infrastructure. The European PPP market has historically been materially larger than across other global regions. In Europe, with a gradual evolution of legislative frameworks supporting liberalisations and private capital involvement, PPPs have emerged as a structured way of raising private sector capital to fund infrastructure projects. PPP projects have a successful history of over two decades, across countries such as the U.K., Italy, France and Germany, and regulatory frameworks are mature and tested. Greenfield projects have represented the majority of PPP projects, and PPP frameworks have been particularly successful in supporting governments in developing projects in the early 2000s, with projects deemed essential for the economy relying on the private sector to provide the capital and skillset needed to develop complex infrastructure. In recent years we have observed a shrinking of the European PPP market, mainly driven by the fading of the U.K. PFI initiative. However, we anticipate continued growth of the PPP market across other European markets as a way to fund projects, particularly as Covid-19 may limit public resources going forward, and policymakers may increasingly tap into private capital to finance infrastructure.

In 2020, Covid-19 may lead to a slowdown of private infrastructure debt deal volumes compared with what observed in recent years. Nevertheless, the pipeline of infrastructure debt deals in Europe remains strong, and we expect an

EUROPEAN PRIVATE INFRASTRUCTURE DEBT
(By sector, 2015-2020 YTD)



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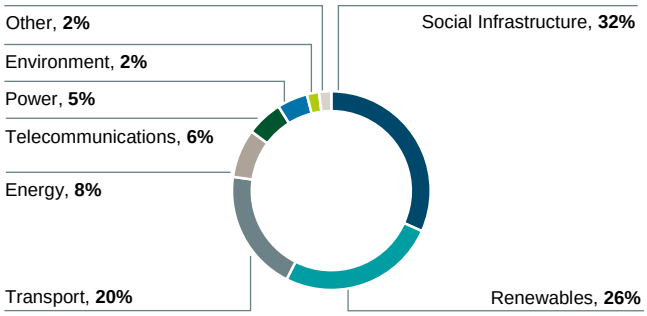
EUROPEAN PRIVATE INFRASTRUCTURE PIPELINE
(Number of projects, by sector)



Source: Inframation Deals, as at December 2020. Past performance is not indicative of future results. For illustrative purpose only.

acceleration in deal volumes in the medium term, driven by a widening infrastructure investment gap. With European governments facing an unprecedented economic downturn in 2020, infrastructure represents a key area of investment focus to support the recovery, and we expect private infrastructure investment and debt to grow in prominence over time.

The European Union aims to reach full climate-neutrality by 2050, and is supported by a wide reaching policy and regulatory framework driving decarbonisation and sustainability in the region. This creates a substantial infrastructure investment gap and presents an opportunity for infrastructure investors to match their increasingly ambitious ESG targets.

Decarbonisation and energy transition are expected to support clean energy, with CO2 regulation continuing to push coal out of the merit order, while largely preserving more efficient gas generators. Given increasing intermittent renewables power coming to the market, gas generators are increasingly required to provide grid balancing, delivering electricity at times of lower renewables electricity production. For this reason, European regulation increasingly remunerates gas generators via capacity markets - for the capacity (MW) they provide to the system, rather than only for the electricity they produce (MWh). Renewables and energy efficiency projects are expected to accelerate, supported by legally binding targets within member states driving investment to 2030. We expect over one third of the medium-term pipeline for private infrastructure debt deals to be in the European renewables sector, with regulation generally continuing to support the credit profile, alongside lower technological costs, particularly for solar photovoltaic (PV). We continue to observe subsidy schemes for renewables fading across Europe or moving from feed-in-tariffs to auction mechanisms, and although we see a growing number of renewable projects being developed under grid parity assumptions, we acknowledge that projects may increasingly be exposed to long-term power price volatility. At the same time, we note that a liquid market for Power Purchase Agreements (PPAs) is developing across Europe, and expect infrastructure investors to increasingly tap into PPAs to support long-term cash flow visibility and project credit quality.

We expect the market for small-scale renewables to accelerate over the coming decade, but large-scale renewable projects may continue to offer a solid pipeline of investment opportunities. As technology costs reduce, we continue to expect battery storage to complement greenfield projects, or to be retrofitted to brownfield projects to optimise the revenue generation profile, and expect more deals to emerge in this space in the medium-term.

European policy also supports the development of a circular economy, driving the closure of landfill sites or the introduction of landfill taxes across Europe, providing sustainable waste flows towards recycling and Energy-for-Waste projects in the long term, and requiring material investment in waste treatment facilities.

Decarbonisation represents a growing topic also for transportation within the European policy agenda, with a target of 14% renewable energy by 2030 supporting investment in transport electrification and biofuels. Liberalisations are ongoing across rail and public transportation, and we continue to anticipate a gradual shift from road to rail for freight, driven by more robust sustainability targets, and supporting investment opportunities in the space.

In 2020, we witnessed a growing market for digital infrastructure, with transaction volumes accelerating across fibre and datacentres. We anticipate the medium-term pipeline for digital infrastructure transactions to accelerate across Europe, and to offer opportunities to long-term private infrastructure debt investors across the entire credit spectrum, from investment grade to sub-investment grade.

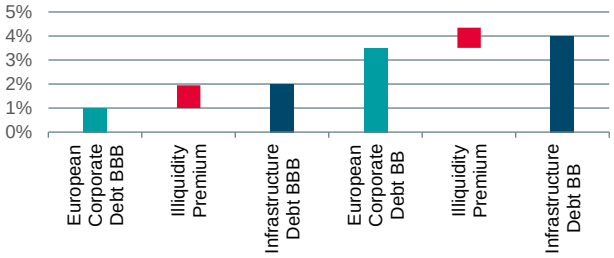
Accessing European infrastructure debt

Infrastructure debt as an asset class has developed over the years and now offers investors a variety of investment options across the risk spectrum. The decision to invest in senior or junior debt can have a large impact on yield, risk, liquidity and regulatory treatment.

Illiquidity spread premium for BBB & BB rated debt

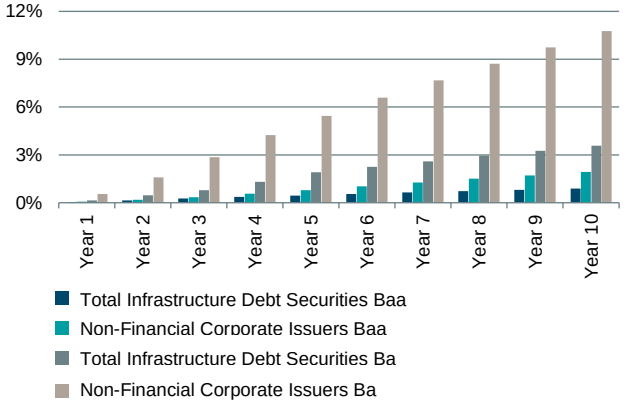
Private infrastructure debt typically carries higher credit spread compared to listed corporate infrastructure debt, as a more specialized and tailor made market. Currently, BBB rated infrastructure debt is estimated to carry an illiquidity spread premium of c.100bps. BB rated infrastructure debt

INFRASTRUCTURE DEBT ILLIQUIDITY SPREAD PREMIUM



Source: DWS and IHS Markit. Private Infrastructure Debt for BBB and BB are based on current EUR credit spreads (over Euribor) estimated by DWS Infrastructure Debt Team. European Corporate Debt BBB are based on Z spread (over Euribor) for Markit EUR iBoxx Infrastructure BBB Index and Corporate Debt BB are based on Z spread (over Euribor) for Markit EUR HY iBoxx Non-financial BB 5-7y corporate index. As at 5th October 2020.

CREDIT LOSS RATES



Sources: 'Infrastructure Default and Recovery Rates 1983-2019, Moody's, October 9, 2020.

carries an illiquidity spread premium of c.50bps, based on current market opportunities.

Historical defaults for BBB & BB rated debt

Infrastructure debt has historically displayed resilience in both the investment grade and high yield segments. It has consistently generated default rates lower than equally rated non-financial corporate bonds.

The ten year cumulative default rate for 'BBB' rated infrastructure debt is 2.0%, compared with 3.1% for equally rated corporate issues.

For BBB and BB rated debt, infrastructure debt ten year average credit loss is 0.88% and 3.59% vs.1.94% and 10.78% for similarly rated non-financial corporate bonds.

2020 Infrastructure debt transactions

Mainly due to Covid-19 related market uncertainty, the preliminary total of closed infrastructure debt transactions in Europe in Q3 2020 stood at €12 billion, down from €22 billion in Q2. This figure reflects both infrastructure project financing and non-project financing deals and includes private loans and bonds, across refinancing, greenfield and brownfield transactions. The volume of closed deals can vary significantly from one quarter to the next, and Inframation Deals' preliminary list of closed projects at the end of each quarter may rise as more complete information about recently completed deals becomes available.

Insurance regulatory treatment in Japan and Korea

At the moment, infrastructure private debt is treated as unrated debt. Unlike European Solvency II, there is no special risk charge relief on private infrastructure assets in most Asian markets. Asian regulators are increasingly taking a closer look at the benefits the asset class could bring to the unique investment requirements of insurers. This could provide additional tailwind to this asset class for insurance investors.

Insurance treatment in Korea

In Korea, credit risk charges on unrated debt sits in between that of investment grade and high yield. As such, senior private debt could potentially offer a more capital and risk efficient source of yield compared to liquid high yield corporate bonds. Junior (mezzanine) debt is explicitly classified as equity and would likely attract a higher credit risk charge compared to senior unrated bonds.

Credit risk charge for high quality senior and junior debt may potentially be reduced by obtaining credit ratings on the strategy or underlying loans. The resulting reduction in credit risk charges would be a more accurate reflection the credit risk undertaken. Moreover, offshore credit ratings are treated favourably compared to onshore ratings from a credit risk perspective. For example, an offshore-rated AA credit is treated similarly to a domestically-rated AAA credit.

In addition, qualified infrastructure assets backed by the government receives a significant risk charge relief.

Insurance treatment in Japan

In Japan, loans secured by securities and real estate may be treated similarly to liquid investment grade bonds. There is no explicit differentiation in treatment between senior and junior private debt. As such, junior private infrastructure debt could offer a potentially capital efficient avenue to boost yields. Whilst credit risk is mitigated by the features of the underlying asset class, insurers who remain concerned with credit risk of junior debt may consider a segregated mandate investing in both senior and junior European infrastructure debt. This would allow investors to customize a strategy tailored to their unique requirements in yield, credit risk and capital efficiency.

Accounting treatment

Over the next few years, many insurance companies across Asia will start to classify and measure their financial instruments according to IFRS9 (or a local adaption of IFRS9). The accounting standard does not only apply to public debt instruments but also to private loans. As outlined in Figure 1, an infrastructure loan may be subject to three different measurement models, depending on its predictability of cash flows and the intention to hold the instrument until maturity.

CLASSIFICATION & MEASUREMENT OF INFRASTRUCTURE LOANS UNDER IFRS 9	
Amortised Cost	The loan is carried at amortised cost. Unrealised gains/losses due to market movements are not recognized, except for an impairment based on the expected credit loss. Interest income is recognized in P&L. This model is typically only available for loans with predictable cash flows and which are held to maturity.
Fair Value through Other Comprehensive Income (OCI)	The loan is carried at fair value with all unrealised changes in fair values being recorded in the equity item 'Other Comprehensive Income (OCI)' without going through P&L. The changes in fair values are reclassified ('recycled') to P&L when the loan is sold. Interest income, as well as an impairment based on the expected credit loss is directly recognised in P&L. This model is available for loans with predicable cash flows characteristics but which may also be sold before maturity.
Fair Value through Profit or Loss (P&L)	The loan is carried at fair value with all (unrealised) changes in fair values being recorded in P&L. This model is available for all debt instruments but must be used for all loans which cash flows are not predictable, i.e. which payments are not only principle and interest.

As of: December 2020; source: DWS International GmbH

Direct investments are typically consolidated to the insurer's balance sheet. This usually includes segregated accounts and dedicated funds. In many cases, insurance companies prefer to measure their debt instruments at fair value through Other Comprehensive Income (even though the loans are generally held to maturity), to avoid ac-counting mismatches with liabilities and reduce P&L volatility. Under this model, infrastructure loans may be preferred due to their mark-to-model valuation, which typically exhibits lower volatility than market prices of public debt instruments. Additionally, potentially higher recovery rates and lower de-fault probabilities can result in lower impairments for expected credit losses required under IFRS 9, thus reducing P&L volatility.

Mutual funds are typically not offered look-through under IFRS9 and are considered puttable instruments, which are always valued at fair value through profit or loss, regardless of the fund holdings.

Summary

The hunt for quality yield by Asian insurers has never been more intense than in this lower-for-much-longer interest rate environment. Private infrastructure debt offers a number of features that are aligned with the needs of Asian insurers. In particular, European private infrastructure debt presents an attractive offshore investment alternative to U.S. assets that Asian insurers have traditionally favoured. Additionally, this gives Korean and Japanese insurers plagued by persistently high USD hedging cost the opportunity to harvest the FX carry from EUR hedging.

European private infrastructure debt offers access to the most diversified set of infrastructure issuers by sector and country, compared with other global regions, supporting portfolio diversification. While other markets, such as North America, tend to be focus mainly on greenfield energy projects, Europe provides a diversified pipeline of transactions opportunities across digital infrastructure, transportation, and importantly social infrastructure.

The turmoil and crises brought on by Covid-19 is unlikely to hamper demand for infrastructure debt in Europe in 2021. The European Commission's Green Deal has a goal of putting €1 trillion to work over the next ten years to achieve net zero carbon emissions by 2050, so it stands to reason that there will be significant opportunity in the space for investors.

The European infrastructure private debt market has evolved to offer a variety of investment options across the risk spectrum. By combining both senior and junior debt, insurers can take advantage of features of both segments to address their unique yield, risk and capital efficiency objectives.

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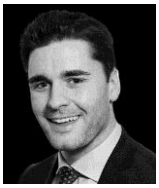

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