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US Infrastructure Debt: The Case for Asian Insurers

Private infrastructure debt offers unique features that make this asset class particularly interesting for insurers in Asia. Besides offering attractive economic features, infrastructure debt can also serve as capital-efficient source of duration under most risk-based capital regimes across Asia.

Why are Asian insurers tapping into private debt

Low interest rates have become the new normal not just for European insurance companies but also for many insurers across Asia. While Japan has experienced low interest rates for decades, other Asian countries have seen rates drop significantly in recent years. This phenomenon, coupled with a lack of local assets, has compelled many Asian insurance companies to invest increasing proportions of their investment portfolios in overseas assets and substantial allocations to US corporate debt.

However, US interest rates have come under greater pressure more recently as a result of the Fed's response to the COVID-19 economic dislocation. Additionally, tighter regulations, as well as increased hedging costs have made it less attractive for Asian insurance companies to continue allocating to publicly traded US corporate bonds. This has driven Asian insurers to hunt for additional sources of yield, which may be found in the illiquidity/complexity premium of private assets.

Among private assets, debt investments are the natural choice for liability-driven investors. Hence, many insurance companies in Asia have started tapping into private corporate direct lending, as well as lending backed by infrastructure and real estate assets. This trend will likely continue to be supported by:

Falling interest rates: COVID-19 has derailed the hiking cycle that the market was expecting from the Fed. As the crisis persists and global central banks continue to embrace low interest rates policies, investors are mired in a lower-for-even-longer interest rate market. In addition, most Asian insurance markets suffer from negative net interest rate margin due to high legacy guaranteed rate policies, intensifying insurers' hunt for yield.

Shallow domestic fixed income market: Insurers have traditionally relied on the domestic fixed income market to match liabilities. However, the required assets for several Asian life insurance markets dwarf the size of its respective domestic corporate bond markets by several multiples. The Japanese insurance market has epitomized this phenomenon, with life insurance asset size nearly 25 times that of the domestic corporate bond market. Taiwanese and Korean life insurers face a similar challenge, with the life insurance industry assets between 10 to 15 times that of the domestic corporate bond market.¹ As a result, insurers are driven to source for quality yield and duration offshore and in private assets.

Higher USD hedging costs: Strong demand for USD has driven up hedging costs for most APAC markets. At the height of market volatility, in March 2020, USD hedging costs rose as high as 4% and 2% for offshore TWD and KRW respectively. Growing demand for USD in these markets will further fuel negative basis in the FX swap market, keeping USD hedging costs high. As such, insurers would

¹ Source: International Monetary Fund, as of Oct 2019

have a higher yield requirement to compensate for higher hedging costs when investing offshore.

Potentially high capital efficiency: Unrated debt typically attracts a credit risk charge or credit shock spread in between that of investment grade and high yield in most Asian Risk Based Capital (RBC) frameworks. As such, a private debt investment could attract lower risk charges than a high yield corporate bond of the same yield, and could therefore be potentially more capital efficient. Private debt that is backed by real assets, i.e. infrastructure or real estate, may even receive a reduced capital charge reflecting potentially lower default rates and higher recovery rates in the event of default. There is typically no additional capital charge for the illiquidity/complexity risk associated with private debt transactions.

Infrastructure debt may offer attractive features for Asian insurance companies

We have highlighted the structural trends driving Asian insurers to invest offshore and raise their yield requirement. However, the hunt for yield should not come at the expense of quality. This implicit rule is safeguarded by insurance risk based capital regulation. Poor credit quality, open FX positions, and liability gaps are highly punitive under most APAC RBC frameworks. Investments in private infrastructure debt could potentially mitigate some of these risk factors:

Steady cash flows 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 private debt has had historically lower default rates and higher recovery rates than non-financial corporate bonds of equivalent credit quality. The average 10 year cumulative default rate for Infrastructure BBB rated debt is 2.0% vs 3.1% for non-financial corporates with equivalent credit rating. Recovery rates for infrastructure debt instruments are also higher at 72% vs 55% for non-financial corporate debt.² The comparative benefits of infrastructure debt increase further

down the rating scale. For example, spreads for BB-rated infrastructure debt tend to widen in line with that of BB-rated non-financial corporates. However, as infrastructure debt has a lower loss-given-default (LGD), BB infrastructure debt will be more attractive than BB non-financial corporate debt from a LGD-adjusted spread perspective.

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.³

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.

Risk charge: The favourable risk profile of infrastructure debt might also be reflected in lower capital charges compared to unsecured loans. Unlike in European Solvency II, there is no risk charge relief for investments in qualified infrastructure assets under the global Insurance Capital Standards (ICS), which may serve as a blue print for the RBC regimes in Japan, Taiwan and Korea. However, in September 2020, the International Association of Insurance Supervisors (IAIS) has released a survey seeking input regarding quantitative and qualitative data to decide whether there should be a differentiated capital treatment for infrastructure investments (both equity and debt) in the ICS. Some Asian insurance regulators, like Singapore MAS, are reviewing this option as well, while others have already introduced lower capital charges for infrastructure assets, like Korea FSC/FSS.

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

The U.S. infrastructure debt market

Rising funding gap: With infrastructure funding needs rising globally, private infrastructure debt increasingly plays a critical role in closing the funding gap, with governments and corporations turning to private capital, as traditional bank lending continues to retrench. As a result, private infrastructure debt issuance has become more prominent over the last years for both project and corporate finance transactions, and we expect the market to continue expanding.

² Source: Moody's. Data source from 1983-2018

³ Source: Moody's. Data source from 1983-2018

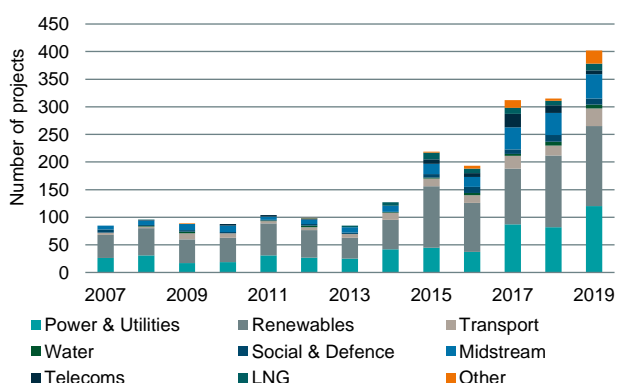
Today, private infrastructure debt increasingly offers opportunities across different geographies and sectors to investors with a long-term buy and hold strategy, looking to capture a premium, at a time of historically low bond yields.

A widening investment gap in the U.S.: A key factor driving infrastructure debt financing needs in the U.S. is the need for investment to maintain existing infrastructure and build new assets required to support economic growth. In its latest report, published in 2017, the American Society of Civil Engineers (ASCE) described the conditions of U.S. infrastructure as “mostly below standard,” and “exhibiting significant deterioration”, and estimated a ten-year investment gap of over USD 2 trillion.⁴

A leading global infrastructure market: The U.S. infrastructure market is already one of the largest in the world, and the transaction volume in the private infrastructure debt space has grown steadily over recent years. In 2019, over 400 projects reached financial close, exceeding a transaction volume of USD 180 billion. The transaction flow in 2020 continues to remain supportive, notwithstanding the uncertainty caused by the COVID-19 pandemic.

Historically, the U.S. infrastructure debt market has offered a wide range of investment opportunities across various geographies. The diversified energy sector represented historically the largest share of the market, with transaction opportunities across midstream, Liquefied natural gas (LNG), power, utilities and renewables offering varying degrees of exposure to macroeconomic fundamentals, and a range of different business and regulatory profiles supporting portfolio diversification.

FIGURE 1. HISTORICAL INFRASTRUCTURE DEBT TRANSACTIONS IN THE UNITED STATES BY SECTOR



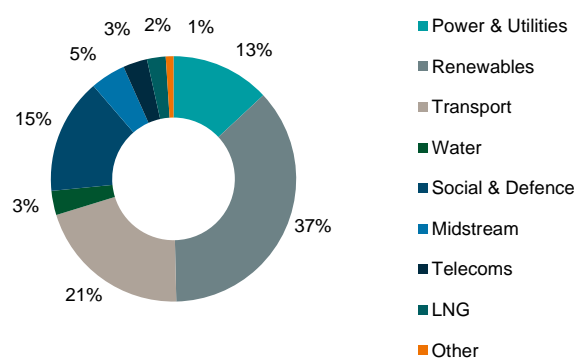
As of: 27 August 2020; source: Infrastructure Journal database, DWS International GmbH.

A strong pipeline: We expect the pipeline of private infrastructure debt transactions to remain healthy, as data indicate that the flow of greenfield projects, particularly for renewables should continue to grow. Moreover, the refinancing of existing infrastructure projects is expected to support the pipeline of potential financing opportunities for power generation, utilities, networks and midstream assets, as issuers continue to take advantage of the historically low interest rate environment.

A widening opportunity set: The current pipeline of transactions indicates a widening opportunity set for transportation and social infrastructure transactions, representing about 36% of projected deal flow.

Historically, the municipal bond market has played a key role in funding projects in the social infrastructure and transportation sectors. With investment needs growing just for the maintenance of existing transport and social infrastructure, and prospects of rising public deficits following COVID-19, we expect that private infrastructure debt investors may gradually play a bigger role in funding transportation and social infrastructure projects, particularly as more U.S. states are adopting Public Private Partnerships (PPPs) regulatory frameworks.

FIGURE 2. PIPELINE OF INFRASTRUCTURE DEBT TRANSACTIONS IN THE UNITED STATES BY SECTOR



As of: 27 August 2020; source: Infrastructure Journal database, DWS International GmbH.

Beyond policy, we expect the opportunity set of private infrastructure debt transactions to benefit from two key megatrends, including energy transition and digitalization. The ongoing energy transition process may increasingly offer investment opportunities across the greenfield renewable energy space, smart grids, energy storage and transport electrification.

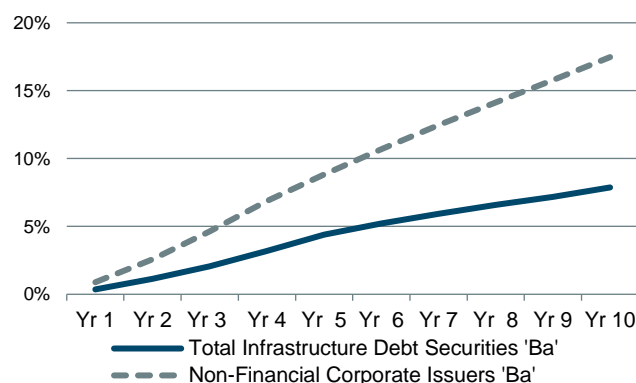
⁴ ASCE, Infrastructure Reportcard 2017

Further, we expect a growing opportunity set in the digital infrastructure space, as the volume of sub-IG financings in the fibre and datacentres sectors continues to increase, supported by higher investment needs driven by an acceleration in data consumption, amplified by the COVID-19 pandemic.

Resilience during COVID-19: COVID-19 has pushed the global economy into a recession in 2020, with a simultaneous demand and supply shock concentrated in the first half of 2020. Overall, private infrastructure has demonstrated comparatively resilient performance so far. Some infrastructure sectors, particularly passenger transportation, including airports, and merchant energy projects have been exposed to substantial demand volatility over the last months. Other infrastructure sectors, particularly regulated networks, contracted energy projects and freight transport are proving comparatively more resilient in the current environment.

Following the COVID-19 pandemic, we have seen a widening in liquid infrastructure debt credit spreads, and have observed a similar dynamic across private infrastructure debt transactions, increasing yield expectations for investors. Historically, cumulative default rates for infrastructure debt have been lower than in the non-financial corporate sector, particularly in the high-yield space, supporting the default-adjusted performance of the asset class.

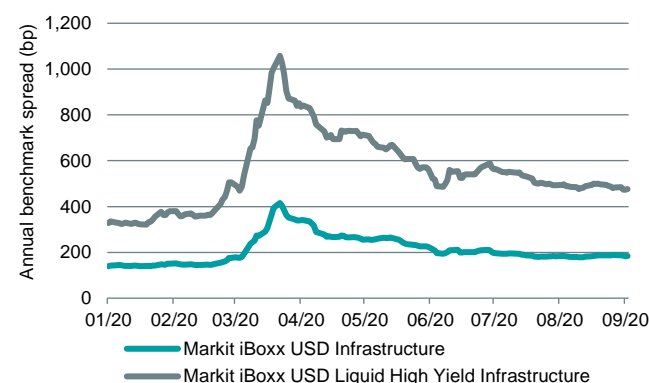
FIGURE 3. AVERAGE CUMULATIVE DEFAULT RATES, 1983 – 2018



As of: August 2019; source: Moody's Infrastructure Default and Recovery Rates 1983-2018.

Moreover, secured infrastructure debt investors have benefited from equity valuations that have been supported so far by the resilient performance of the asset class, in our view. We see equity sponsors continuing to fund asset capex needs with a combination of equity and debt that should support collateral value as well as the financing pipeline, in our view.

FIGURE 4. IBOXX INDEX SPREADS



As of: 3 September 2020; source: IHS Markit.

How insurance companies can access infrastructure debt

Besides direct investments, insurers may access infrastructure debt via mutual funds or securitisation structures.

Direct investments

Direct investments comprise all kind of investments where the infrastructure debt is consolidated to the insurer's balance sheet. This typically also includes segregated accounts and dedicated funds. From an RBC perspective, this means that the insurance company is exposed to an unrated loan subject to a capital charge for the associated credit risk. Under most Asian RBCs, unrated loans receive a capital charge that sits between that of an instrument with an investment grade rating and a high yield rating. Under some RBC regimes in Asia, like Korea, infrastructure loans can receive a favourable capital charge, reflecting potentially higher recovery rates and lower default rates compared to unsecured loans.

Over the next few years, many insurance companies across Asia will start to classify and measure their financial instruments according to IFRS 9. The accounting standard does not only apply to public debt instruments but also to private loans. As outlined in Figure 5, 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.

FIGURE 5. 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 predictable 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: September 2020; source: DWS International GmbH

In many cases, insurance companies prefer to measure their debt instruments at fair value through OCI (even though the loans are generally held to maturity), to avoid accounting 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 default probabilities can result in lower impairments for expected credit losses required under IFRS 9, thus reducing P&L volatility.

Mutual funds

In a mutual fund, the loans are typically not directly owned by the insurance investor but by the fund itself. However, under most Asian RBC regimes, a look-through to underlying fund holdings applies. As such, direct investments and indirect investments via funds typically attract the same capital charges.

From an IFRS 9 perspective, there is no look-through for (non-consolidated) fund investments. Mutual funds are considered puttable instruments, which are always measured at fair value through profit or loss, regardless of the fund holdings. This can lead to a strategic disadvantage of fund investments compared to direct investments in instruments that might be eligible for other measurement methods. Nevertheless, mutual funds represent a key part of infrastructure

portfolios held on insurance company balance sheets. Due to the liquidity profile of mutual funds, underlying companies need to be valued on a daily basis, unlike direct ownership of infrastructure assets.

Securitisation structures

Perhaps the greatest benefit of a rated pass-through or tranching note to an Asian insurer is the possibility of reducing the risk charge of the investment from "unrated" to "investment grade", depending on the credit quality of the underlying investment. A tranching note, in particular, can structurally reduce credit risks, also allowing for a reduced capital charge.

In addition to the illiquidity premium derived from the underlying asset class, notes offer an additional complexity premium. This could potentially increase yields on the investment or reduce credit risk. Figure 6 illustrates the pick-up in spreads from the illiquidity and complexity premium across the credit spectrum.

FIGURE 6. YIELD PREMIUM IN INFRASTRUCTURE DEBT SECURISATIONS

	Markit iBoxx Infra Debt Index – Asset Swap Spread ¹	Tranching Notes – Spread ²
AAA	N/A	[150]bp
AA	152bp	[185]bp
A	195bp	[255]bp
BBB	249bp	[400]bp
BB	420bp	[800]bp

(1) As of 27 July 2020 from Markit iBoxx by rating category.

(2) Illustrative spreads based on Wells Fargo research as of 11 September 2020. Market conditions will determine ultimate spreads.

As of: 27 July 2020; source: Markit iBoxx, Wells Fargo, DWS International GmbH estimates

Under most Asian insurance regulations, a securitized product like a note would attract similar risk charges to that of a liquid corporate bond. As such, the pick-up in yield from illiquidity and complexity premium over liquid corporate bonds, coupled with high quality rating, could make this wrapper one of the most capital efficient ways for an insurer to access higher yields.

However, it is important to note that such wrappers can be punitive in some Asian insurance markets. For example, in Singapore, the securitization will attract an additional 50% premium on the derived market risk requirement or a fixed 50% risk charge on the entire mark-to-market value of the investment.

Under IFRS 9, tranching notes are classified as contractually linked instruments for which also a look-through applies.

This means that not only the note itself but also the underlying loans must pass the SPPI test in order to be eligible for fair value through OCI treatment.

Summary

Insurers globally have had to tackle challenges on multiple fronts, many of which are exacerbated by persistently low interest rates. Insurers in Asia are further constrained by shallow domestic capital markets and rising hedging costs. Infrastructure private debt provides a viable option to address the multiple challenges that Asian insurers are up against, without necessarily increasing the risk of their portfolios. Whilst the underlying asset class itself offers several risk mitigation features, such as cash flows being backed by real assets, the choice of vehicle could provide further protection. For instance, a tranching note could allow insurers to access a higher quality slice of the asset class.

Furthermore, evolving insurance regulations in Asia could provide additional tailwind by reducing capital charges for real-asset backed investments. For example, the International Association of Insurance Supervisors has recently announced that it will be exploring whether there should be a differentiated capital treatment of certain eligible infrastructure within the ICS framework, which many Asian RBC regimes mirror closely. This could make private infrastructure debt one of the most capital efficient asset classes for insurers in Asia.

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