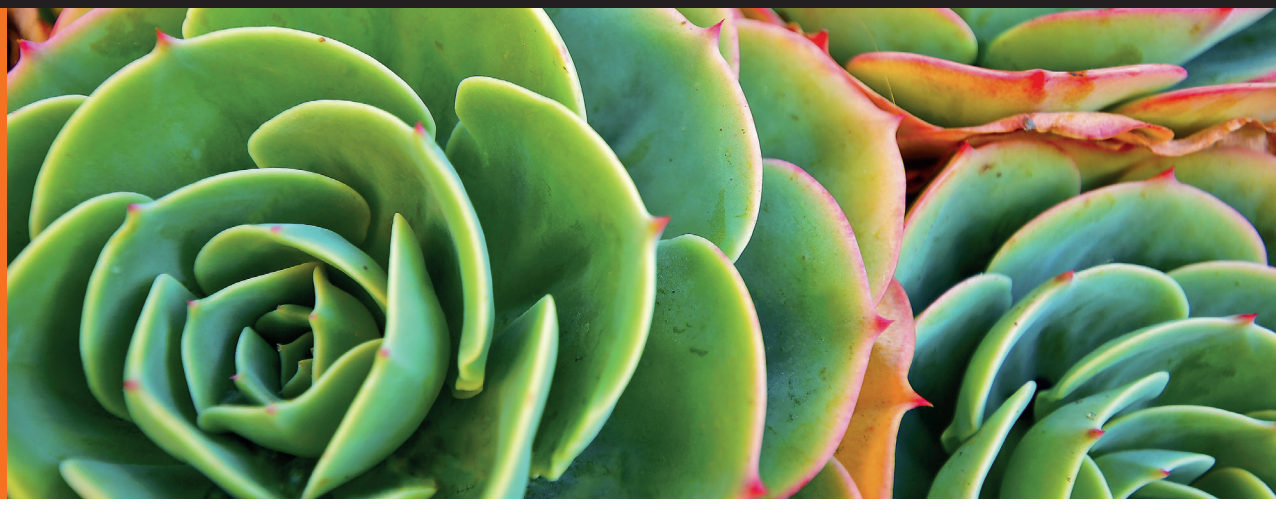

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Green securitisation development in Asia

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The green bond market has been experiencing a very strong issuance growth in Asia Pacific. Senior unsecured corporate, financial institution and sovereign green bonds are the major green bond types, while green securitisation has started gaining momentum. This paper examines the green securitisation definition, benefits and challenges; comparison of green securitisation versus green bonds, two green securitisation transactions recently completed in Asia, and green securitisation developments in Asia.

Defining green securitisation

Green securitisation is the process by which securities are issued, backed by the predicted cash flows from specific green assets. Collateral green assets are isolated from the insolvency of the originator. The repayment of such securities relies on the performance of the green assets, not the performance of the originator.

Major green asset types include, but are not limited to, the following:

- Green asset backed securities (ABS): Green credit cards and green auto loans etc
- Solar asset backed securities (ABS): Solar loans, leases and purchase power agreements
- Green commercial mortgage-backed securities (CMBS): Green commercial mortgage loans with commercial property collateral
- Green residential mortgage-backed securities (RMBS): Green residential mortgage loans with residential property collateral
- Collateralised debt obligation (CDO): Green corporate loans which are usually unsecured

The green assets collateralising the securitisation are aligned to the Green Bond Principles (GBP) published by the International Capital Markets Association (ICMA).

The GBP are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for issuance of a green bond. The GBP are intended for broad use by the market: they provide issuers

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with guidance on the key components involved in launching a credible green bond; they aid investors by promoting availability of information necessary to evaluate the environmental impact of their green bond investments; and they assist underwriters by offering vital steps that will facilitate transactions that preserve the integrity of the market.

The GBP recommend a clear process and disclosure for issuers, which investors, banks, underwriters, arrangers, placement agents and others may use to understand the characteristics of any given green bond. The GBP emphasise the required transparency, accuracy and integrity of the information that will be disclosed and reported by issuers to stakeholders through core components and key recommendations.

The four core components for alignment with the GBP are:

- Use of proceeds
- Process for project evaluation and selection
- Management of proceeds
- Reporting

The key recommendations for heightened transparency are:

- Green bond frameworks
- External reviews

However, a widely used standard has not been developed for what can be considered a green securitisation, such as the minimum percentage of an asset pool that must be considered green. Such standards, in addition to the current international framework for standards, principle and criteria, would clarify the environmental performance and benefit of the green securitisation.

Benefits of green securitisation

Loans to smaller scale projects can be aggregated and then securitised to reach an adequate issuance size for the bond markets. Capital raised through the securitisation by the loan originators can be used to originate another portfolio of loans. Tagging the securitisation as 'green' enables issuers to tap into the increasing demand for securities with environmental benefits.

In high interest rate environments, securitisation paper issued in bond markets can offer lower cost of capital compared to bank financing. This is important for low carbon projects featuring typically high capital expenditure. By aggregating loans, which can be refinanced through a securitised bond, the underlying investment can access a broader range of fixed income investors.

Investors of securitisation can include pension and insurance companies with long-dated liabilities. For a life insurer, prepayment of loans is a significant risk, so they need to maintain assets with long tenors. As a result, these companies have been significant investors in long dated paper historically and can become major supporters of long dated securitisation.

A securitisation program can have varying maturities according to the existing demand in the market and replenish the collateral pool with new assets during the life of the securitisation program.

The creation of equity and mezzanine tranches plays an important part in the success of green securitisations. They provide investors with a higher yield than vanilla bonds with an equivalent credit rating. This is particularly interesting for tranches with a rating (AAA or AA), as they offer an attractive yield pick-up over sovereign bonds, while carrying an equivalent rating.

As well as constraints in the overall capital account, a prudent bank will limit exposures to any given industry sector. The rapid growth in credit lent to a single industry sector, such as renewable power, could cause banks to reach their exposure limits.

For the securitisation investor, a selection process targeting a diversified pool of underlying loans (by geography, by types of borrowers, by types of assets) can limit the concentration risk of the green collateral pool.

If a lender has exhausted its lending capacity, securitisation allows the bank to offload loans so it can originate new loans. Green credit is debt financing provided by a bank or bank syndicate to firms or projects that offer environmental benefits. Securitisation on green credit assets can therefore help the lenders (such as commercial banks and policy banks) to free up their balance sheet.

There is potential to scale up the green bond market by addressing issues such as small project size and low credit ratings: asset securitisation can restructure the underlying assets by combining individual project assets that are too small or have low credit ratings, to reduce the risk of individual assets and stabilise cash flow.

Key challenges of green securitisation

The development of a green securitisation market depends on the existence of a clear definition of a green securitisation. The definition needs to be flexible and capable of applying to a wide range of potential deals both in terms of the category of green securitisation and the range of underlying assets.

Although originators may currently collect some green data, there is no consistent systematic approach to green data collection and tracking. This will need to be developed to determine whether a securitisation is green or brown upfront and enable the green aspects of the securitisation to be reported on an ongoing basis.

It will be difficult for investors to take security over certain types of green assets (for example, solar panels, battery storage etc.) as such assets are usually highly bespoke and/or integral to the land or property where they are established.

The identity of the underlying customer may also change, for example, upon the sale of the related property or land, requiring legal techniques to be developed to attach the green receivable to the property rather than the relevant customer.

Green securitisation vs. green bonds

Both green bonds and green securitisation belong to the fixed income securities class. However, there are some major differences between these two types of fixed income securities:

Firstly, the green bond issuer is typically a company, financial institution or government itself, and such green bonds issued belong to the senior unsecured obligation of the issuer. However, the green securitisation is typically issued by a bankruptcy remote special purpose vehicle (SPV), typically set up to purchase the eligible green receivables from the originators including the company, financial institution or the government.

Secondly, the green bond holders are the creditors of the green bond issuer, and hence have full recourse to the issuer in case of default of the green bond. However, the green securitisation holders are the creditors of the SPV and hence have full recourse to the SPV instead of the originator.

Thirdly, the payment of coupon and principal of the green bond relies on the operating cash flow and refinancing

Capital Structure **Exhibit 1**

Class	Expected Rating	Outlook	Amount (CNYm)	CE (%)	Interest Rate (%)	Legal Final Maturity
Senior	AAA(EXP)sf	Stable	1,730	26.5	Fixed Rate	May 2028
Subordinated	NR	NR	270	15.0	n.a.	May 2028
OC	NR	NR	353	0.0		
Total			**2,353**			

Notes: CE – Credit Enhancement; OC – Overcollateralisation; NR – Not Rated

Source: Fitch Ratings

flexibility of the green bond issuer. Yet the payment of coupon and principal of the green securitisation relies solely on the cash flow from the green receivables owned by the SPV, not the originator.

Fourthly, the credit rating of the green bond is directly tied to the credit rating of the green bond issuer. In green securitisation, multiple tranches of bonds can be issued with different rating levels targeting bond investors with different risk and return profiles, and the credit rating of different bond tranches depends on the credit risk of the underlying green receivables owned by the SPV.

Last, but not least, the green bond details the use of process in the bond offering circular, and eligible green projects are defined with or without specification of the projects. However, in green securitisation, the eligibility criteria governing the nature of assets the SPV can purchase from the originator is detailed to ensure certain green attributes of the receivables are fulfilled before the originator can sell such receivables to the SPV.

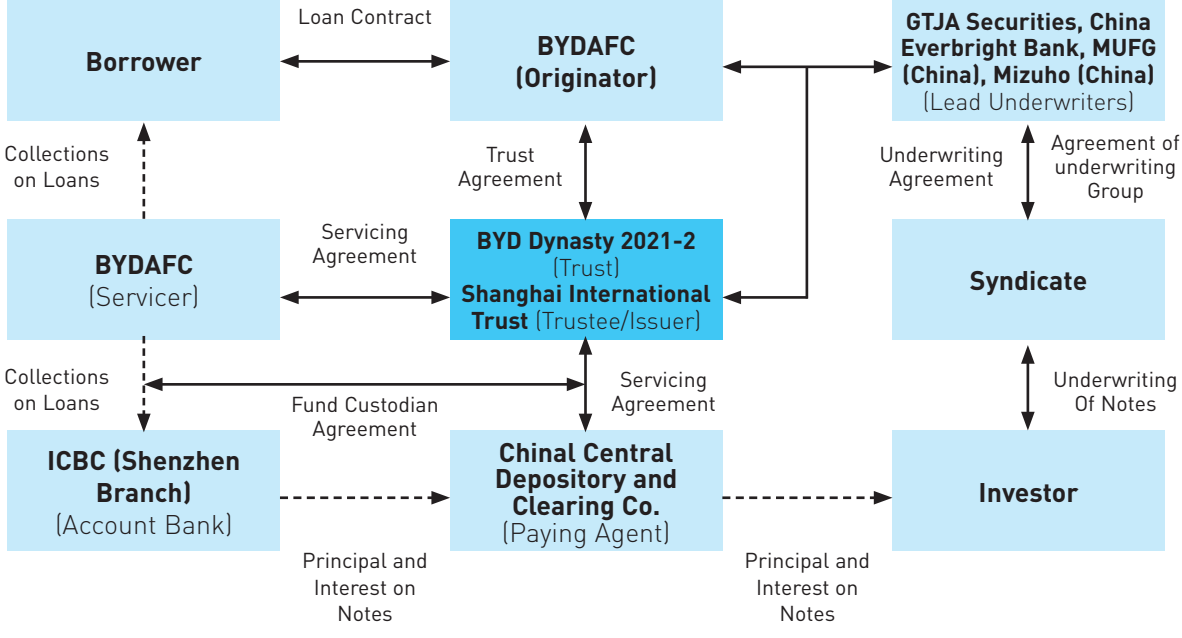
Green auto loan ABS - BYD green auto loan ABS

BYD Auto Finance Company Limited (BYDAFC) is an auto finance company established under the laws of the PRC. It is 77% owned by BYD Company Limited, 20% by Bank of Xi'an Co., Ltd. and 3% by BYD Precision Manufacture Co., Ltd. as of June 2021.

'BYD Dynasty 2021 Phase II Retail Auto Mortgage Loan Green Securitization Trust' is a special-purpose bankruptcy-remote trust that is set up under PRC trust law according to the trust agreement between BYDAFC (as settlor) and Shanghai International Trust (as trustee).

The trustee issues the senior and subordinated notes at

Structure Diagram **Exhibit 2**



Source: Fitch Ratings

par. The settlor entrusts its receivables to the trust. The trustee, on behalf of the trust, performs its duties according to the transaction documents.

The subordinated notes are held by the settlor, and satisfy the risk retention requirements of the People's Bank of China and the China Banking and Insurance Regulatory Commission for credit asset securitisation. The settlor intends to hold the subordinated notes.

The legal opinions pertaining to PRC laws cover, among other matters, the enforceability of the parties' obligations under the transaction and security rights over the vehicles and that the trust assets are bankruptcy-remote from the originator and trust company.

On the establishment of the trust, the trust property is isolated from the property of BYDAFC and the trustee. However, the collection obtained from the cut-off date to the first calculation date will not be transferred until the first collection transfer date. This means the initial collection is subject to commingling risk should the settlor default between the trust effective date and the first collection transfer date.

Green project finance CLO - Bayfront Infrastructure Capital II Pte. Ltd.

Bayfront Infrastructure Management ("BIM"), a vehicle 70% owned by Singapore's Clifford Capital and 30% by the Asian Infrastructure Investment Bank, aims to connect private institutional capital with the infrastructure financing market by acquiring and warehousing loans, then bundling them into securities.

BIM strategy is to reach a wider network of institutional investors through the IABS issuances and other potential distribution channels to develop a new asset class to help address the large infrastructure financing gap in Asia.

Bayfront Infrastructure Capital, sponsored by Clifford Capital, brought a debut infrastructure asset-backed securities offering in 2018 to help banks take project finance loans off their balance sheets and allow institutional investors to take exposure.

Bayfront Infrastructure Capital II, sponsored by BIM, built on that experience and refined the model with a US$401.2m multi-tranche offering that included an ESG

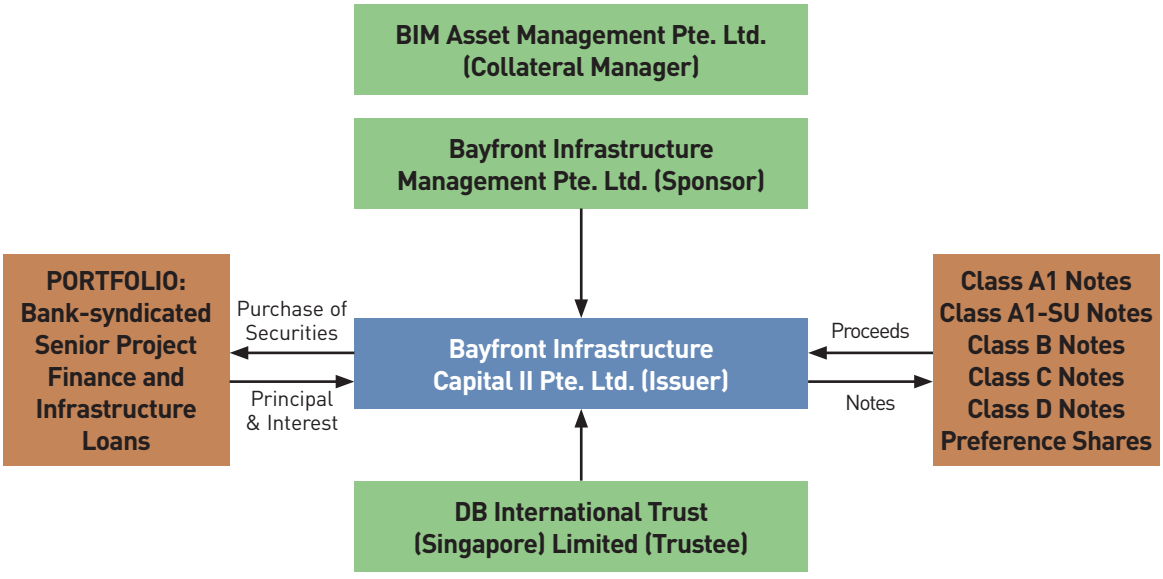
Green Project Finance CLO Structure **Exhibit 3**

Class	Ratings	Amount ($m)	Share of Capital Structure (%)	Effective Subordination (%)(a)	Coupon (b)
Class A1 Notes	Aaa (sf)	176.90	44.09	26.00	6m USD Libor + 1.25%
Class A1-SU Notes	Aaa (sf)	120.00	29.91	26.00	6m USD Libor + 1.20%
Class B Notes	Aa1 (sf)	33.30	8.30	17.70	6m USD Libor + 1.85%
Class C Notes	A3 (sf)	22.10	5.51	12.19	6m USD Libor + 2.35%
Class D Notes	Baa3 (sf)	8.80	2.19	10.00	6m USD Libor + 3.40%
Preference Shares	Not rated	40.12	10.00	n/a	Residual
Total		**401.22**	**100.00**		

(a) Effective subordination is based on the target par amount of the portfolio.
(b) 6m USD-Libor = six-month USD-Libor. Upon a change in notes' payment frequency from semiannual to quarterly, the reference rate would change to three-month USD-Libor.

Source: Moody's

Structure Diagram **Exhibit 4**



Source: Moody's

component and additional structuring features.

Bayfront Infrastructure Capital II (the issuer) is a project finance collateralised loans obligation (the CLO or the transaction) cash flow securitisation, backed by a US$401.2m portfolio of bank-syndicated senior secured project finance and infrastructure loans to projects in Asia-Pacific, Middle East and South America. The issuer has entered into a purchase and sale agreement with BIM to acquire or to participate in the loans that form the US$401.2m initial portfolio.

BIM Asset Management Pte. Ltd. (BIMAM or the collateral manager), a wholly owned subsidiary of Bayfront, will manage this transaction and all future project finance CLOs sponsored by Bayfront.

A range of institutional investors, from insurers, pension funds and banks to specialised asset managers, participated.

Green securitisation development in Asia

For green securitsation issuance to further grow in Asia, it is important for the asset originators to integrate green and ESG practices into their business operations, so that they can generate (and continue generating) enough green assets to comply with the GBP.

Financial institutions in general are better at integrating green and ESG practices into their banking operations, and green assets by FIs are generally easier to analyse (from the credit perspective) compared with the green assets of non-FIs.

Besides, there is still ample liquidity in Asia. For the originators with high credit rating, securitisation may not necessarily be a more competitive funding option compared with the senior unsecured corporate bonds. Hence the securitisation yield needs to be further tightened

in order to attract those originators with enough green assets to consider issuing green securitisation.

A dedicated green and ESG investor base focusing on green securitisation also needs to be developed on the ground in Asia in order to subscribe the continuing supply of green securitisation in the region. Their green and ESG securitisation investment guidelines can also serve as a template for the originators to follow when setting originating criteria in their business operations.

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