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Low angle view of skyscraper

Infrastructure Asset-Backed Securitization (IABS)

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On this page: *Find a description of Infrastructure Asset-Backed Securitization (IABS), the objectives of IABS, and the key risks managed and mitigated through it. Read more below, or visit the main page for the Asset Recycling Handbook and Content Outline, or Download the Full Report*

Description of Infrastructure Asset-Backed Securitization (IABS)

Infrastructure asset-backed securitization of infrastructure can be used to unlock capital and raise financing without losing ownership in the underlying assets.

The government, as originator, assigns the rights to future cash flows generated from the assets to a Special Purpose Vehicle (SPV). The SPV then issues fixed-income securities to investors with payments backed by the cashflow generated by the infrastructure assets.

Two key differentiating factors from direct contractual agreement and divestment models are:

In IABS, there is limited scope for the private sector to have direct input on the operations of the asset.

In IABS, there is strictly no loss of ownership of the asset. It is worth considering that assets monetized under this model be limited to those which already have good E&S risk management and a low E&S risk profile.

Objectives of IABS

Conventionally, public sector infrastructure asset owners/raise funds through debt instruments such as commercial/ concessional loans, or through government equity. IABS, on the other hand, serves as an alternate form of financing, allowing infrastructure asset owners to diversify their financing sources in addition to traditional forms of debt and equity project financing.

Table 9: Key risks managed and mitigated through IABS

Risk Category	Risk Management and Mitigation
Credit risk	The payment obligations to the holders of the IABS are backed by the rights to the future cash flow generated by the infrastructure asset. It is therefore critical that the cashflow generated by the asset is stable and predictable.
Bankruptcy risk	Bankruptcy risk can be eliminated by structuring the SPV as a bankruptcy-remote entity to transact the sale of rights to future cash flows. As a result, the bankruptcy of the operator will have no effect on the ability of the SPV to fulfil its payment obligations to the investor.
Concentration risk	The pooling of multiple sources of revenue from different infrastructure assets helps to mitigate concentration risk resulting from a single infrastructure asset.
Better credit quality	The securities issued can be of a higher credit quality than that of the originator (securities are assessed solely on the securitized future cash flows of the asset and does not include other debt obligations of the originator)

IABS are attractive to institutional investors such as sovereign wealth funds, pension funds, insurance companies as they are a low-risk alternative to outright buying stakes in an infrastructure asset. Provided that the IABS is backed by highly stable cash flow generated from the underlying infrastructure asset, the securities may be awarded high credit rating by credit rating agencies. Investors of IABS are not exposed to assetholding risks and depreciation of assets as ownership of the assets are retained by the originator and not transferred. The investors have the rights to future income generated by the infrastructure assets.

Monetization Process and Structure of IABS

The process involved in a IABS transaction is presented in the figure below.

Figure 12: Activities in IABS model



Stakeholders of IABS

The following table presents the stakeholders, including respective roles and responsibilities, in an IABS transaction.

Table 10: Stakeholders in IABS

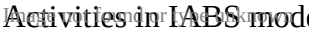
Stakeholders	Roles and Responsibilities
Originator	The originator is the owner of the underlying infrastructure assets and seller of the rights to future cash flows or income of the infrastructure assets. The originator retains the ownership of the infrastructure assets.
Arranger	The arranger is responsible for setting up the Special Purpose Vehicle (“SPV”) and coordination between stakeholders such as Originators, Investors, Credit Rating Agencies, and other consultants for the execution of the IABS transaction.
SPV / Issuer	The SPV can be set up in the form of a trust. The SPV issues fixed-income securities such as notes, bills, and bonds, backed by the rights to future cash flows generated by the infrastructure assets.
Rating Agency	Prior to issuing the IABS, the arranger, usually an investment bank, will approach a credit rating agency to rate the securities.
Investors	Investors of IABS are likely to be institutional or financial investors, such as sovereign wealth funds, insurance funds and pension funds. These are traditionally risk averse, and their investment mandates generally disallow high-risk investments rated below “AA.”
Servicer	The servicer act as an agent to the SPV and is responsible for the collection of future cash flows; it can be the originator or an affiliate of the originator or a third-party.
Service Users (of Infrastructure Asset)	Service users of the infrastructure will make user payments such as toll for using toll road, or user charges for using electricity. These user payments ultimately form the cash flow of the investment proceeds to be paid to investors of the IABS.
Regulator	Regulators are responsible for enforcing regulations and guidelines on securitizations. Some of the issues under the scope of these regulations include (i) issues affecting the originator, such as accounting regimes and capital adequacy requirements; (ii) the structuring of the SPV; (iii) licensing of parties involved in securitization; (iv) the rules on issuing and trading securities; (v) laws governing the underlying receivables

Monetization structure

The following steps presents the monetization process for an IABS model.

- A Special Purpose Vehicle ("SPV") is set up by an arranger in the form of a trust or other mechanism. The SPV is the issuer of the fixed-income securities. The SPV ensures that the underlying assets of the IABS are separate from the other assets owned by the Originator. These securities will then be rated by credit rating agencies on the IABS based on their risk level and probability of default
- Investors subscribe to IABS in the form of fixed-income securities such as notes, bills, and bonds. The amount and tenor of the securities will be approved by the investor with proof of outright sale of the financial asset / fixed-income securities. The securities entitle the investor to the rights to future cashflow generated by the infrastructure asset.
- Collection and delivery of cash flow from users of infrastructure (cash flow generated by the infrastructure assets such as future toll revenue and accounts receivable) to SPV based on the classes of the fixed-income securities. This is fulfilled by a servicer for a servicing fee.
- Investment proceeds which include principal repayments and interest payments are paid by SPV to investors.

Figure 13: Structure of IABS



Investor Class in IABS

Investors in IABS are typically institutional and financial investors such as sovereign wealth funds, pension funds and insurance companies. The nature of asset-backed securities is that of a financing instrument and does not give the holder of the security any rights over the underlying asset. This is suitable for investors that do not want any exposure to the asset itself. The investors only own the rights to future income generated by the infrastructure assets. However, this does not preclude these investors' interest in the ESG performance of these assets, as is demonstrated by such preferences among large institutional investors (e.g. BlackRock).

Strategic investors will most likely not be attracted to investing in IABS as strategic control over the infrastructure asset is not possible and does not allow the investor to enhance the asset.

Table 11: Examples of institutional and financial investors in IABS

Transactions	Examples of Institutional Investors
Jasa Marga Toll Road Securitization	Banks (48%), Pension Funds (21%), Insurance Companies (8%)

Required Setting for IABS

Legal and regulatory framework considerations

- Presence of legislation and framework on securitization: Legislation to enable securitization should be in existence. It is important to have a clear and neutral legal framework and regulations to provide clarity and confidence to both domestic and international investors. The legislation should define the legal structure of securitization, the types of assets allowed to be securitized, the process of securitization including obtaining regulatory approval and obligations of all parties involved.
- Accounting and taxation framework for securitization: Clear accounting and taxation frameworks provide investors with clarity on the accounting and tax implications of investing in securities.
- E&S performance: Assets should have good proven ESG performance

Financial and market conditions

- Market liquidity: Well-developed capital markets with a highly liquid securities market will attract investors to invest in IABS as the securities can be bought and disposed of with minimal liquidity risks. A highly liquid securities market also means that investors can benefit from the higher trading

volume and invest in securities at a lower cost.

- Restrictions on foreign investment in infrastructure: Low restrictions on foreign investment in infrastructure are important to attract foreign institutional investors typically interested in long-term, low risk, revenue-generating infrastructure assets. This is especially critical in developing countries where domestic institutional investors are not prevalent or as sophisticated as their foreign counterparts in the investment of asset-backed securities as an asset class. Foreign institutional investors represent a broader investor base which will increase the overall demand for asset-backed securities.
- Access to capable credit rating agencies: Reputable credit rating agencies provide confidence to investors and the wider market on the creditworthiness of the rated securities. The securities are accordingly priced and expected return on the securities can be determined. To attract international investors, the services of one of the Big Three credit agencies, Moody's, Standard and Poor's (S&P) and Fitch Ratings will be a prerequisite.
- Availability of credit enhancement / hedging instruments: The availability of hedging instruments such as interest rate swaps and foreign exchange swaps to mitigate interest rate risk and foreign exchange risk are necessary to attract foreign investment. The hedging instruments to be used for securitizations need to be clearly defined by regulations. Credit enhancement instruments will help to improve the attractiveness of securities with lower credit ratings.

Nature of assets

- Size, scale, and stable cash flow: Brownfield infrastructure assets with a demonstrated history of stable and growing cash flows are suitable for IABS to ensure stable stream of future cash flows. The quantum of the cash flows needs to be sufficiently large as not the entire revenue generated by the asset will be securitized. This minimizes any risk of cash flow fluctuations. Multiple infrastructure assets can be bundled for securitization.
- Creditworthiness of asset owner: Good credibility and established operating track record of asset owner / operator of assets will provide confidence to investors of securities that the future cash flows is supported by reliable stream of toll revenue.

Operational control and Ownership

- Ownership and operational capabilities: Governments seeking to monetize existing brownfield infrastructure assets without losing ownership and control over the assets can rely on IABS to unlock new capital for reinvestment into other priority infrastructure projects. In addition, operational control will also be retained by the infrastructure asset owner. Hence, the government entity responsible for service delivery should have the requisite expertise and experience in operating the asset efficiently, including for E&S aspects.

Key Features

Monetization Models	Key Objectives	Model Structure	Key Stakeholders	Investor Class	Required Setting	Consideration for choice of model
Structured Finance Mechanisms						

Infrastructure Asset-Backed Securitization (IABS)	Strong case for retention of ownership (by public sector entity) of the underlying asset, maintaining original on-balance sheet debt and reducing gearing ratio	Off-balance sheet financing: typically, the rights to the cashflow associated with the infrastructure assets are transferred to a special purpose vehicle (SPV) established for the purposes of the securitization transaction	Originator (infrastructure asset owner), arranger, SPV/ Issuer, Investors, Servicer, Service Users, Regulator	Predominantly institutional investors (such as, insurance companies, pension funds, asset managers) and other financial institutions	Depth in capital markets, market liquidity, robust credit rating agencies, creditworthiness of asset owner, credit enhancement instruments	Suitable asset ownership needs to be retained by the government and existing operating arrangements, and mobilization of institutional capital

Case Studies

Find examples for Infrastructure Asset-Backed Securitization (IABS) Case Studies.

Related Content

- **The PPPRC Asset Recycling Section**
- **Executive Summary: Asset Recycling**
- **Asset Recycling Projects**
- **Asset Recycling Programs**
- **Table of Contents for Asset Recycling**

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Infrastructure Asset-Backed Securitization (IABS) - Case Studies

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The PPPRC Asset Recycling Section

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Asset Recycling Projects

This section has not been prepared with any specific transaction in mind and are meant to serve only as general guidance. It is therefore critical that the content will be reviewed and adapted for specific transactions.

This is a new section of the website and is currently in draft form. For feedback on the content of this section or to suggest additional links or materials, please contact the PPP Resource Center using the feedback form.