Capital Projects and Infrastructure

Financing infrastructure

Innovative Finance

Mark Rathbone, PwC Singapore

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Defining Innovative Finance

The future to 2025 – The infrastructure investment challenge

Asia Pacific infrastructure market is expected to grow by **7–8%** annually over the next decade

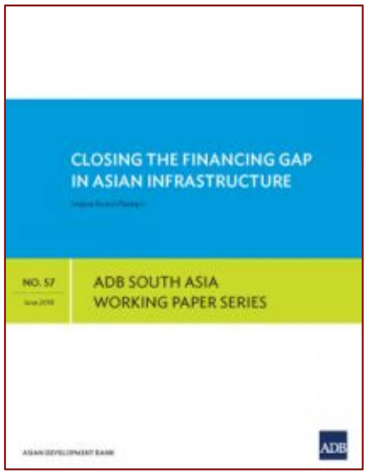
By 2025 forecast spending for Asia Pacific is c.**$5 trn**, nearly 60% of world's total

Size of the deficit is very substantial – ADB estimate that between 2015-2030 Asia will need to spend **$26trn** to maintain current levels of growth

Source: PwC and Oxford Economics, PwC's Capital project and infrastructure spending: Outlook to 2025, research findings, PwC, 2014

Why Innovative Finance?

The difference in required infrastructure spending to meet economic and social needs, and actual investment spending is termed as the “**infrastructure financing gap**”.



ADB in 2017 estimated a financing gap in economic infrastructure of $459 billion per year for Asia. The gap almost doubles to $907 billion with the expected need for funding of social infrastructure.

One of the reasons cited for this gap is the **lack of innovative financing products/ models** that hinders private investment from the developed economies within Asia,

Source: Public Information, ADB

Defining Innovative Finance

Objective -> Mobilisation of additional finance, apart from public/development finance, towards sustainable development in developing countries.

OECD
BETTER POLICIES FOR BETTER LIVES

raising funds or stimulating actions in support of international development that go beyond traditional spending approaches by either the public or private sector.

THE WORLD BANK
IBRD • IDA

approaches that generate funds by tapping new funding sources or by engaging new partners, including approaches that "enhance the efficiency of financial flows by reducing delivery time and/or costs" and "make financial flows more results oriented"

In summary, innovative finance tools are models beyond commercial debt finance that are able to **attract private and institutional capital, along with public funds, into the infrastructure sector**

Source: Public Information

Blended Finance

Blended finance

Blended finance is the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries.

In February 2016, The OECD Development Assistance Committee (DAC) agreed to develop 'an inclusive, targeted, results-oriented work programme' on blended finance

The following mechanisms will provide recommendations to bring together public and private investors for the use and deployment of blended finance to achieve the SDGs.

Evidence based: Collate evidence and lessons learned on blended finance with a focus on targeting private finance and the use of blended finance across different regions.

Best practices: Develop best practices for deploying blended finance in key economic systems and sectors, such as sustainable infrastructure, and to address specific issues such as climate change.

Policy guidance: Deliver policy guidance and principles on the use of blended finance to deliver development impact.

Source: Public Information (OECD)

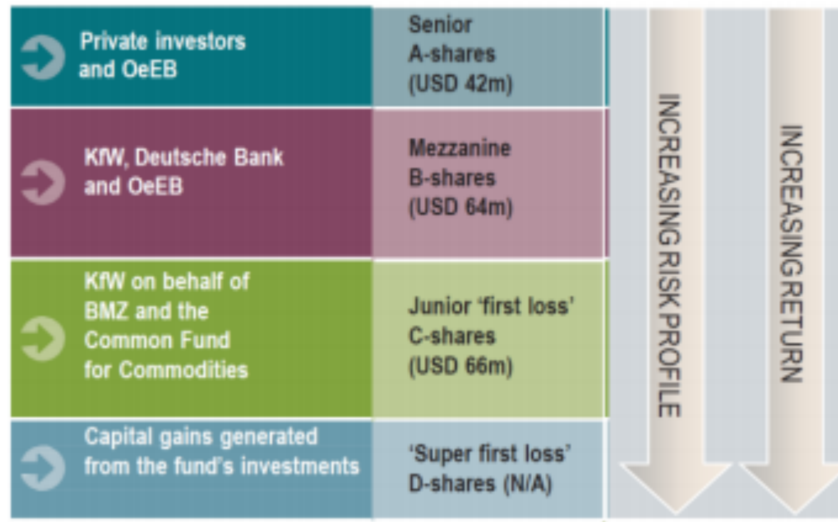
Case Study:
Africa Agriculture and Trade Investment Fund

Origination

- Public-Private structure debt fund administered by **Deutsche Bank**
- To target sustainable agriculture in Africa
- Total fund size: USD$172mn

Benefits in context

- 'Cascade' Approach
- Consists of tranches of different size (USD$0.25-30m), risk-return profile and maturity (3-5 years)



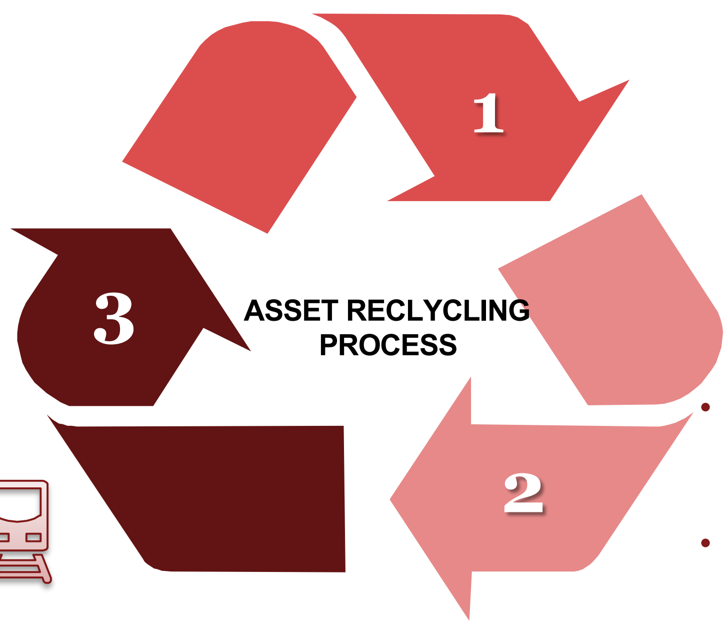
- **A-tranche**: invested in by private investors and Development Bank of Austria
- **B-tranche**: invested in by Deutsche Bank, the Austrian DFI OeEB, and KfW
- **C-tranche**: invested in by German Federal Ministry for Economic Cooperation and Development (BMZ) through KfW (German Bank). Provides **public 'first loss' capital**, serving as catalytic risk buffer to attract investment in senior tranches.
- **D-tranche**: protects A, B and C-shareholders. Made of capital gains generated by the fund's equity investments, and provides '**super first loss' capital.**

Source: Public Information (AATIF website)

Asset Recycling

Asset Recycling

- Review of public assets
- Identify those that are non-core or surplus public assets



- Divestment of identified assets to a private sector consortium
- Realising the potential benefits to be obtained by monetizing these assets

- Reinvesting proceeds from divestment on new infrastructure
- Upgrading/modernization of existing infrastructure

Asset Recycling has become important funding tool used by governments to address the infrastructure gap and avoid the need to continually raise taxes or rely on public debt.

The case for Asset Recycling is defined by the government's:

1. ***Infrastructure procurement strategy*** anchored on clear policies for selecting the most suitable procurement option and evaluating available funding sources;
2. ***Ability to unlock the value of non-core and surplus assets*** (which are often underperforming) through a divestment programme; and
3. ***Commitment to re-invest proceeds*** (from the asset divestment) to develop new infrastructure or upgrade existing assets.

Case study:
National Highways Authority of India (1/2)

Key Features

Asset Monetisation through long-term lease concession: NHAI identified and tendered 9 highway assets as a single bundled project, having an aggregate length of 650 kms, under the 2017 Toll-Operate-Transfer (TOT) scheme. A 30-year Concession was granted for the operation of 9 highways. Key features of the concession include:

- Upfront lease payments to NHAI in exchange for the operation and maintenance contract based on specified KPIs of 9 highways;
- Concessionaire takes demand risk, subject to a 'Rolling concession period structure' – where the concession period may be lengthened or reduced depending on actual road user volume (traffic); and
- Capacity Augmentation will be undertaken by NHAI.

Reinvestment of proceeds: The upfront lease payments, recycled as capital for other infrastructure projects, primarily new highways.

Key Benefits

✓ *TOT scheme enables upfront payment of lease to fund other infrastructure projects* – enable capital to be recycled to finance other infrastructure builds and upgrade.

✓ *Encourage private sector participation to broaden the funding base and reducing reliance on debt* – institutional investors including Pension & Insurance Funds, Sovereign Wealth Funds, etc.

✓ *Harness private sector innovation and efficiency* – the private sector will operate the assets for a 30 year concession period

Case study: National Highways Authority of India (2/2)

Dec 2017	• First bundle of ToT was floated by NHAI for a bundle of 9 highway projects for ~650 km
Jan 2018	• Four bidders submitted bids for first bundle ToT RFP - Brookfield Asset Management, Macquarie, IRB Infrastructure and Roadis-NIIF
Mar 2018	• NHAI received the highest bid of Rs 9,681 crore (USD 1.4 bn) from Macquarie Group-Ashoka Buildcon as against the reserved bid price of Rs 6,258 crore (USD 0.9 bn) to manage 648 km of national highways in Andhra Pradesh, Odisha and Gujarat.
August 2018	• NHAI launched second TOT RFP for 8 road assets in four states for total 586 km
Target	• The aim is to put 75 road projects on a long-term lease • About Rs 60,000 crore (**USD 8bn**) is estimated to be raised by NHAI over the next two to three years till 2020.

Objective **->** *finance construction of a large cross-country road project "Bharatmala". This is a centrally-sponsored and funded road and highways project of the Government of India.*

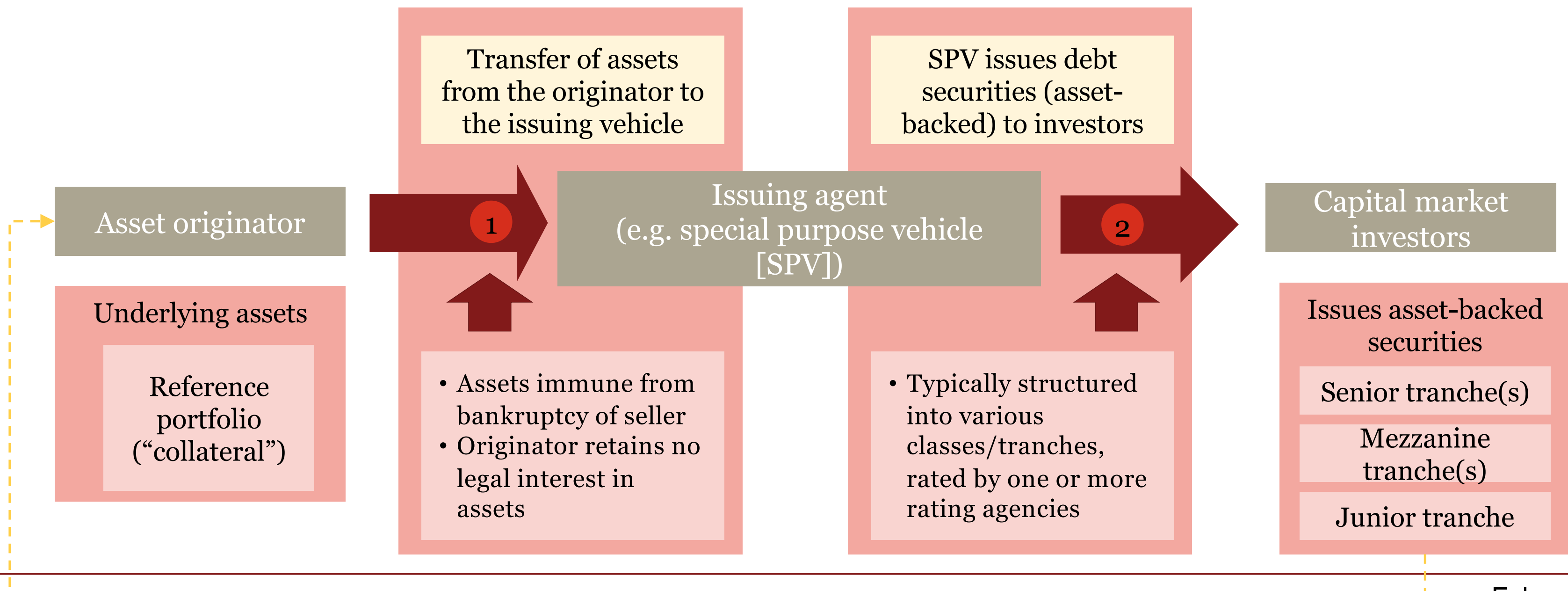
Source: Public Information (News articles and NHAI website)

Asset Securitization

Asset Securitisation

- Asset securitisation involves the sale of debt securities backed by the cash flows from a pool of financial assets such as loans or leases, where it enables the holder of the underlying debt to refinance the debt.
- Held by a trustee or special purpose vehicle (SPV) which is separate from the company originating the underlying assets. This transfers the credit risk of the securities to the holding entity.
- The diagram below illustrates how a typical securitization process works, where there are 3 main parties to the process, which are the asset originator, SPV and the capital market investors.

How securitisation works



Asset securitisation allows flexibility that can benefit infrastructure financing

Releases funds for public sector banks by converting their infrastructure assets (which are less liquid), into marketable securities to sell to institutional investors, which is also a means of transferring risk

Strengthens banks' capital position, and makes infrastructure financing more accessible to institutional investors, offering a lower cost of capital to the investors

Reduces the reliance on the state budget for infrastructure financing whilst unlocking funding potential to meet the country's infrastructure needs

Facilitates marketing of securities to investors with different risk appetites and investing time horizons

Pricing of risks is more effective with market assessment as compared to the bank's balance sheet

Case Study - Infrastructure Take-Out Facility ("TOF") Inaugural Infrastructure Project Finance Securitisation in Asia

CLIFFORD CAPITAL

Designed and structured by Clifford Capital Pte. Ltd. ("Clifford Capital") with a view to mobilising institutional capital for infrastructure debt in Asia-Pacific and the Middle East by facilitating the transfer of exposure in long-term project and infrastructure loans from banks to institutional investors

Strategic objectives:

- addressing Asia Pacific's infrastructure financing gap by mobilising a new pool of institutional capital
- unlocking additional capital for Asia-Pacific infrastructure financing through facilitating capital recycling by banks
- creating a new asset class for institutional investors to access project and infrastructure loans in the Asia-Pacific and the Middle East regions in a credit-enhanced structure,
- addressing existing market frictions that prevent large scale mobilisation of institutional capital for infrastructure financings

Overview of Issuance

Pre-assembled US$458 million portfolio of marquee project and infrastructure loans diversified across 16 countries and 8 industry sub-sectors

Clifford Capital acts as Sponsor, Manager and Subordinated Note Investor, creating alignment of interests with investors

Four classes of Notes were issued by Bayfront Infrastructure Capital Pte. Ltd. ("BIC"), which is sponsored by Clifford Capital

Class	Amount (US$ million)	Ratings (Moody's)	Spread[2]	Legal Maturity Date
A	320.6	Aaa (sf)	145 bps	11- Jan-2038
B	72.6	Aa3 (sf)	195 bps	11- Jan-2038
C	19.0	Baa3 (sf)	315 bps	11- Jan-2038
Subordinated[1]	45.8	Not rated	N.A.	11- Jan-2038

[1] *Retained and not offered*
[2] *Spread is applied over 6 months LIBOR*

Source: Public Information

Innovative Finance Models – Summary

Innovative Finance Models – Summary (1/2)

Summary of seven (7) innovative finance models for meeting infrastructure financing gap in Asia

Asset recycling involves:

1. Review of public assets and identifying potential assets for monetisation
2. Monetising existing infrastructure assets through sale or lease to the private sector
3. Investing in new infrastructure using the proceeds received from asset monetisation

Blended finance is the strategic use of public development finance to mobilise private capital flows towards sustainable development in developing countries.

Asset securitisation is the transformation of infrastructure assets (which are less liquid) into marketable securities to sell to institutional investors. Loans or other financial claims are assigned or sold to a third party, typically a special-purpose vehicle (SPV), who in turn issues one or more debt instruments, where interest and principal payments are dependent on the cash flows coming from the

Innovative Finance Models – Summary (2/2)

Green bonds are fixed income instruments created to fund projects that have positive environmental or climate benefits.

Municipal bonds are debt obligations issued by a state or local government, or one of its agencies or authorities. A primary feature of most municipal bonds is that interest payments received by investors are exempt from taxes.

Convertible debt structures include convertible loans and grants that can be converted to equity at certain milestones or pre-agreed terms.

Government green funds / Transition funds are a financial commitment to transit the economy into a low carbon and green one, using a broad range of financial instruments such as private, non-sovereign and sovereign guaranteed loans, direct equity and equity funds, to finance projects which bring about environmental benefits.

For further information or a discussion, please contact:

Capital Projects & Infrastructure Leader
Mark Rathbone
+65 6236 4190
mark.rathbone@sg.pwc.com