Smart City / Urban Development Financing

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An easy way to understand KIND is to think as ‘bilateral IFC focusing on green field projects’.

Thing in common

Promoting private investment by co-investment

Equity investment

Green field or brown field **project companies only**

Other products

Advisory, and **Investment** in **Equity / bonds / funds**

Target markets

Incl. advanced economies

Identity

**Investor and Developer** (ECA (X), bank (X), Donor (X))

Project companies **and** existing companies

Advisory, lending, guarantees, funds, bonds **all available**

Developing countries

**MDB, Investor, and DFI**
KIND is a young governmental institution set up in 2018 under MOLIT of Korea.

[Shareholders]
Government of Korea;
7 SOEs (State-Owned-Enterprises);
Korea EXIM Bank and Korea Construction Guarantee.

[Basic workflow]
Constant discussions with companies, governments, banks, and MDBs
Support project preparation (M/P, F/S) and provide advisory
Opportunity identified
Structured bankably
Investment in equity, fund, bond
KIND sustains itself from investment returns, advisory fees, and governmental programs operation fees.

KIND’s profit sources

[Investment]  
Shareholder dividends, Fund returns, Bond returns

Equity investment  
Korean Investor  KIND (Co-investor)  Local or Global investors

Debt financing  
Local or Global Lenders  KIND (By investing in bonds or funds)

[Advisory fees]  
Project structuring advisory / Financial advisory

[Other fees]  
Fund supervision, Feasibility study support program operation (2019~)
Smart city-focused project planning support program operation,
EIPP(Economic Innovation Partnership Program) operation (2020~)
Direct Project Investment Commitments: 5 Projects (2018~19)

<table>
<thead>
<tr>
<th>Project</th>
<th>KIND Commitment</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakh Almaty Ring road PPP ('18. 4Q)</td>
<td>$ 15.0M</td>
<td>Financial closing</td>
</tr>
<tr>
<td>Chile Talca Solar Power ('18. 4Q)</td>
<td>$ 6.5M</td>
<td>COD since Sep 2019</td>
</tr>
<tr>
<td>Poland Polimery Police PDH/PP plant ('19. 2Q)</td>
<td>$ 57.0M</td>
<td>Working on financial closing</td>
</tr>
<tr>
<td>Plant tender - Middle East region ('19. 3Q)</td>
<td>$ 5.0M</td>
<td>Bid submitted / Waiting for the result</td>
</tr>
<tr>
<td>Chile Maria Pinto Solar Power ('19. 4Q)</td>
<td>$ 2.0M</td>
<td>In construction</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 85.5M</strong></td>
<td></td>
</tr>
</tbody>
</table>

Feasibility Study Supports: 16 Projects (2019)

<table>
<thead>
<tr>
<th>Country</th>
<th>Project</th>
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<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mozambique</td>
<td>Maputo CCPP</td>
<td>Bangladesh</td>
<td>Dhaka-Chattogram Expressway</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Medan LRT+MRT</td>
<td>Iraq</td>
<td>Karbala Solar Power</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Hanoi Agro/Fishery Wholesale Complex</td>
<td>Georgia</td>
<td>Tskhenistsqali Hydro Power</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>Bishkek University Hospital</td>
<td>Mongolia</td>
<td>Ulaanbaatar Airport Railway</td>
</tr>
<tr>
<td>Turkey</td>
<td>3-Storey Istanbul Tunnel</td>
<td>Bangladesh</td>
<td>400kV Transmission Lines</td>
</tr>
<tr>
<td>Myanmar</td>
<td>Dala New City</td>
<td>Bangladesh</td>
<td>Upgrading Dhaka-Mymensingh Highway</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Bekasi Proving Ground</td>
<td>Costa Rica</td>
<td>San Jose Railways</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Dung Quat Urban Development</td>
<td>Indonesia</td>
<td>Rehabilitation of Landfill Site</td>
</tr>
</tbody>
</table>
## Fund Investments – Global Infrastructure Funds (GIF)

<table>
<thead>
<tr>
<th>Funds No. (Launch year)</th>
<th>Themes</th>
<th>Cap Amt.</th>
<th>KIND Shares</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIF 1 ('15.12)</td>
<td>Energy</td>
<td>$ 45M</td>
<td>64%</td>
<td>Gas power plant (Completed)</td>
</tr>
<tr>
<td>GIF 2 ('11.8)</td>
<td>Energy</td>
<td>$ 180M</td>
<td>50%</td>
<td>Hydro and solar power plants (Completed)</td>
</tr>
<tr>
<td>GIF 3 ('16.10)</td>
<td>Energy, Healthcare</td>
<td>$ 100M</td>
<td>54%</td>
<td>Solar power plants, hospital (Completed)</td>
</tr>
<tr>
<td>GIF 4 ('18.12)</td>
<td>Venture fund (Early expenses cover)</td>
<td>$ 70M</td>
<td>In discussion</td>
<td>Road PPP (Not fully invested)</td>
</tr>
<tr>
<td>GIF 5 ('19.5)</td>
<td>Regional focus on India+ASEAN</td>
<td>$ 90M</td>
<td>45%</td>
<td>Seeking new opportunities</td>
</tr>
<tr>
<td>GIF 6 ('19.5)</td>
<td>Regional focus on Eurasia+LAC</td>
<td>$ 90M</td>
<td>45%</td>
<td>Seeking new opportunities</td>
</tr>
<tr>
<td>GIF 7 ('19.3)</td>
<td>Energy, Infrastructure</td>
<td>$ 90M</td>
<td>10%</td>
<td>Solar power plant (Not fully invested)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$ 665M</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Fund Investments – Plant, Infrastructure, and Smart City (PIS) Fund

<table>
<thead>
<tr>
<th>Funds</th>
<th>Cap Amt.</th>
<th>KIND Shares</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Fund ('20. 2Q)</td>
<td>$261M</td>
<td>$32M</td>
<td>Energy, Plants, etc.</td>
</tr>
<tr>
<td>Infrastructure Fund ('20. 2Q)</td>
<td>$522M</td>
<td>$64M</td>
<td>Airports, Roads, Railroads, etc.</td>
</tr>
<tr>
<td>Smart City Fund ('20. 2Q)</td>
<td>$348M</td>
<td>$48M</td>
<td>Smart cities, Hospitals, ICT Infrastructure, etc.</td>
</tr>
<tr>
<td>[Fund of funds]</td>
<td>$174M</td>
<td>$16M</td>
<td>General infrastructure including brown field investments</td>
</tr>
<tr>
<td>Global Infra Fund ('19. 6)</td>
<td>$174M</td>
<td>$16M</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1.3B</strong></td>
<td><strong>$160M</strong></td>
<td></td>
</tr>
</tbody>
</table>
Unlike IPP projects, smart city / urban development projects can minimize debts by leveraging flexibility and by utilizing installments and deposits.

**Power Plant**
- Fixed cash flow with PPA
  - => Easier debt sourcing
- Very rigid on project scope and construction period
  - => Liquidated damage, repayment rescheduling risk

**Urban Development**
- Very difficult to estimate cash flow
  - => Minimize debt by sales installments and lease deposits before completion
- Flexible phasing with flexible schedules
  - => Sales&marketing – receiving installments – funding phase 1 – constructing phase 1 – receiving full payment – funding next phases....
Risks have different magnitudes throughout project lifecycle.

**Power Plant**

- Land acquisition
- Licenses & permits
- Construction risk
- Operation risk
- Credit risk

**Urban Development**

- Land acquisition
- Licenses & permits (incl. plans)
- Construction risk
- Operation risk (incl. sales)
- Credit risk
Project sizes and business models vary according to target of the development.

- Smart service operation: Concession-based BM / Amount rather small
- Industrial complex: Management fee based BM / Risk rather small
- Residential complex: Sales&Rent BM / Moderate market risk
- Commercial development: Sales&Rent BM / Rather high market risk
- New city development: Land sales BM / Demand risk highest

Stable

Cash flow

Difficult To estimate

Small | Project size | Big

1. Smart city risks and implications

VARIOUS PROJECT TARGETS
1. Smart city risks and implications

IMPLICATIONS ON BMs AND FINANCING

**Smart service operation**
- Areas: Mass transportation card, e-Citizen services
- BM: Concession (Fee per clearing, Fee per issuing register)
- Financing: Conventional project financing

**Industrial complex**
- Areas: Industrial zone, special economic zone development
- BM: Building infrastructure – Lease – Management fee & rent
- Financing: High equity, low or no debt, land mortgage

**Residential complex**
- Areas: Developing countries’ major cities and their vicinities
- BM: Sales or lease / Involving moderate degree of demand risk
- Financing: Sponsor g’tee, land mortgage, sales installments, financial support to buyers with local banks

**Commercial development**
- Areas: Location with high population flows, Residential areas
- BM: Lease and sales - Management fee & rent
- Financing: Land mortgage, sales installments, lease deposits

**New city development**
- Areas: Target area designated by the government
- BM: Planning, basic infrastructure construction -> Land sales
- Financing: Blended financing including ODA
### JOIN’s Myanmar Project

- **Name:** Yangon Landmark Project
- **Space:** 4ha, Total 200,000㎡
- **Office, condominium, hotel, and serviced residence**
- **Location:** Near Yangon central station

### Current status (Foundation)
2. Measures to develop projects

PROJECT CASES (continued)

Strong business model with competitive edge leads to continuous success stories.

Affordable apartments (Cebu, the Philippines)

=> 3 Phases completed without debt,
  4th Phase started with KIND’s F/S support
=> Competitive edge:
  Low design cost utilizing Korean cases +
  Strong know-how to manage local contractors

Minh Hung Industrial park
(90km from Ho Chi Minh, Vietnam)

=> 65 companies (Korea, China, Japan, Netherlands)
=> Competitive edge:
  Addressing the regional government’s BT development request + Timely construction of access road
2. Measures to develop projects

PROJECT CASES (continued)

Blended financing with policy support is a must for city-level developments.

Dalat New City development (South of Yangon, Myanmar)

=> Master plan was supported by KOICA’s grant in 2014 – KIND carried out pre-F/S for the 1st phase in 2019 – in 2020, KIND and LH will co-develop Phase 1

=> Competitive edge:
   Strong will of the regional government +
   Well structured supports + Workable business model

First modernized agro-fishery wholesale center
(Near Hanoi, Vietnam)

=> KDB works as financial advisory, KRC (Rural Community Corp) as technical advisory, KIND supported F/S to develop further

=> Competitive edge: First modern wholesale market, Regulatory support, Well structured supports + Workable business model (sales/lease + fees)
There are many expert institutions in Korea, and each one has differentiated functions and roles.

<table>
<thead>
<tr>
<th>Category</th>
<th>Institution</th>
<th>Functions</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export Credit Agencies</td>
<td>KEXIM, K-Sure</td>
<td>Export credit and insurance</td>
<td>Long time support in <strong>debt financing</strong></td>
</tr>
<tr>
<td>Official Development Assistance</td>
<td>KEXIM, KOICA</td>
<td><strong>Soft loan, Grant</strong></td>
<td>Ministries and regional govs also have grant budgets</td>
</tr>
<tr>
<td>Govt. Bank</td>
<td>KDB</td>
<td>Advisory, loan</td>
<td><strong>Strong PF track record</strong></td>
</tr>
<tr>
<td><strong>Developer / Investor</strong></td>
<td>KIND</td>
<td>Equity investment</td>
<td>Complementary to debt support</td>
</tr>
<tr>
<td>Govt. Research Institutes</td>
<td>KDI (Development Institute)</td>
<td>Think tank, Research</td>
<td><strong>Achieving Korea’s experience, Policy analysis and suggestion</strong></td>
</tr>
<tr>
<td></td>
<td>KAIA (Agency for infra advancement)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KRIHS (Research institute for human settlement)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State-Owned Enterprises</td>
<td>LH (Land &amp; Housing)</td>
<td>Abundant domestic experiences</td>
<td><strong>Strong technical expertise</strong></td>
</tr>
<tr>
<td></td>
<td>LX (Land &amp; Geospatial informatriX)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipality</td>
<td>Seoul Metropolitan govt</td>
<td><strong>Field operation know-how</strong></td>
<td>Working with SUSA (Seoul Urban Solutions Agency)</td>
</tr>
</tbody>
</table>
3. Cooperation Suggestion

PITFALLS TO AVOID

Let us not set too ambitious goals, such as ‘zero emission’, ‘AI’ smart city.
=> ‘Populating target areas in sustainable enough manner’ precedes.

Having the locals choose needed smart solutions is crucial.
=> As cultures, setups, situations and environments are all different.

Let us negotiate with open options, rather than with apple-to-apple trade.
=> In case MRG or VGF are not accepted, we should be flexible enough to ask other benefits in taxes, accounting rules, or subsequent projects.

Let us not be confused with causes, results, or attendant circumstances.
=> Strong business potential (cause) can even populate an wilderness (result), while no one would come into a zone with perfect infrastructure but without business opportunities. (Infrastructure alone cannot populate a city, so we need stronger cause such as business opportunities)
America, the origin of securitization:

1. Hudson Yard redevelopment project

NYC has IDA (Industrial Development Agency), that runs 3 tax incentives for commercial development.

- PILOT (Payment in Lieu of Taxes) : Real estate tax reduction
- PILOST (Payment in Lieu of Sales Taxes) : Sales and use tax reduction
- PIOMRT (Payment in Lieu of Mortgage Recording Tax) : Mortgage recording tax reduction

These tax benefits are transferrable. So they are securitized, sold to others, and that payment from sales flows into project financing.

2. Bronx West Farms redevelopment project

LIHTC (Low Income Housing Tax Credit) Program offers 4% tax reduction for 10 years and this tax benefit was also securitized and sold to others, and the amount flew into project funding.
3. Cooperation Suggestion

SUGGESTION TO WBG

Please help Korea disseminate experience/knowledge more efficiently.

=> Korea chose to go the difficult way to preserve and emulate its success, but is struggling. WBG’s more integrated cooperation is crucial.

Let us communicate more actively and share each other’s project pipeline.

=> In order to identify projects where we co-invest or complement each other.

Let us endeavor frontier financing methods together.

=> Including funding by securitization, and Land value capture, etc.