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# Project Financing for PPPs – Challenges in Emerging Markets

Macquarie Capital

April 2015





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# 01

## Key Takeaways

# Key Takeaways

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1. Time for a fundamental rethink on the issue of financing of infrastructure in emerging markets
2. Too many conferences and not enough action – Governments need to grasp the nettle on all the requirements around bid rules that they are not well aware of
3. Policies have to be more responsive to private investor needs
4. Policies need to be more holistic and coordinated across Government
5. Policies need to include developing better and more educated national savings pools
6. Asset recycling has a key role to play in providing capital
7. It is time for a private sector led “Gold Standard” that can be presented to Governments at all levels on a take it or leave it basis – this initiative should be led by the new G20 sponsored Global Infrastructure Hub



# 02

## Macquarie – Who We Are



# Introduction to Macquarie Group

## Global office locations – Asia-Pacific focus

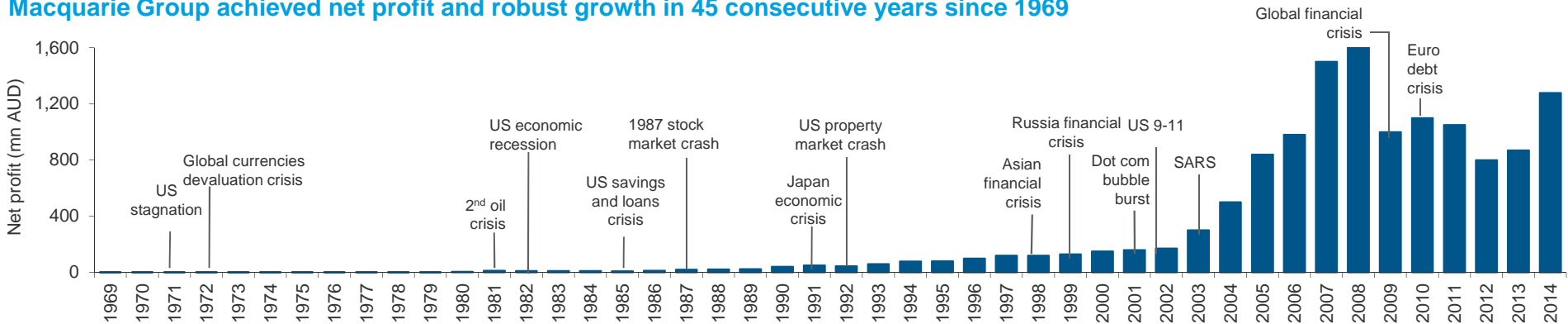
- |                    |                                     |  |                    |
|--------------------|-------------------------------------|--|--------------------|
| <b>US</b>          | <b>Canada</b>                       | <b>Europe</b>                                  | <b>Middle East</b> |
| - Atlanta          | - Burlington - Montréal             | - Amsterdam - Geneva - Madrid - Paris - Vienna | - Abu Dhabi        |
| - Austin           | - Calgary - North York              | - Denmark - London - Moscow - Reading - Zurich | - Dubai            |
| - Bloomfield Hills | - Edmonton - Ottawa                 | - Dublin - Luxembourg - Munich - Stockholm     |                    |
| - Boston           | - Philadelphia - Guelph - Toronto   |  | <b>Asia</b>        |
| - Carlsbad         | - Rockville - Kitchener - Vancouver |  | - Bangkok          |
| - Cheshire         | - Rolling - Markham - Victoria      |  | - Beijing          |
| - Chicago          | - Meadows                           |  | - Chiba            |
| - Colorado Springs | - San Diego                         |  | - Gurgaon          |
| - Columbus         | - San Francisco                     |  | - Hong Kong        |
| - Dallas           | - San Jose                          |  | - Hsin-Chu         |
| - Denver           | - Santa Barbara                     |  | - Jakarta          |
| - Duluth           | - Savannah                          |  | - Kuala Lumpur     |
| - El Paso          | - Seattle                           |  | - Manila           |
| - El Segundo       | - West                              |  | - Mumbai           |
| - Franklin         | - Hartford                          |  | - Seoul            |
| - Glen Allen       |                                     |  | - Shanghai         |
| - Houston          |                                     |  | - Singapore        |
| - Irvine           |                                     |  | - Taipei           |
| - Jacksonville     |                                     |  | - Tokyo            |
| - Lake Success     |                                     |  |                    |
| - Los Angeles      |                                     |  | <b>New Zealand</b> |
|                    | <b>Central and South America</b>    | <b>South Africa</b>                            | - Auckland         |
|                    | - Cape Town                         | <b>Australia</b>                               | - Christchurch     |
|                    | - Johannesburg                      | - Adelaide - Broadbeach - Gold Coast - Perth   | - Wellington       |
|                    |                                     | - Albury - Canberra - Melbourne - Sunshine     |                    |
|                    |                                     | - Brisbane - Darwin - Newcastle - Coast        |                    |
|                    |                                     | - Sydney                                       |                    |



## Key statistics

<b>Market capitalisation</b> US\$18bn <sup>(1)</sup>	<b>Total assets per funded balance sheet</b> ~US\$90bn <sup>(1)</sup>
<b>Total assets under management</b> US\$370bn <sup>(1)</sup>	<b>Credit rating</b> A3 (Moody's)
<b>Employees</b> ~14,000	<b>Global locations</b> 65 offices in 28 countries

## Macquarie Group achieved net profit and robust growth in 45 consecutive years since 1969



1. As at 30 September 2014



# Infrastructure, Utilities and Renewables Overview

## Who we are

Macquarie Capital is one of Macquarie Group's six operating groups, with 36 offices in 21 countries.

The team is responsible for the Group's corporate advisory and equity and debt capital markets activities.

In the year ended 31 March 2014, Macquarie Capital advised on...

**450** transactions  
worth more than  
**\$US 83 billion**

## Infrastructure, Utilities and Renewables

Our Infrastructure, Utilities & Renewables team has been at the forefront of infrastructure finance and management globally for the past 20 years.

TRANSPORT/ ROADS / AIRPORTS / RAIL / PORTS	MERGERS & ACQUISITIONS	PROJECT FINANCE	EQUITY CAPITAL MARKETS	DEBT CAPITAL MARKETS	PRIVATE CAPITAL MARKETS	PRINCIPAL INVESTMENTS
UTILITIES/ WATER / GAS / ELECTRICITY						
PPPs/HOSPITALS / DEFENCE FACILITIES / SCHOOLS / WASTEWATER / PRISONS						
ENERGY & RENEWABLES/ WIND / SOLAR						
RESOURCES/INFRASTRUCTURE*/ INFRASTRUCTURE ASSOCIATED WITH RESOURCES SECTOR						

\*JV with Resources team

Advised on **69 infrastructure-related transactions** worth more than  
**\$US 22 billion\***

\* Year ended 31 March 2014

# Global Manager of Infrastructure Assets – Trusted By Communities



Every day ~100 million people use essential services provided by Macquarie managed businesses



## AIRPORTS

~ 97 million passengers per annum



## ROADS

~13 million vehicles per day



## RAIL

~ 3 million passengers per annum



## FERRIES

~ 6 million passengers per annum



## SEA PORTS

~ 4 million standard container units handled per annum



## CAR PARKS

~ 190,000 car spaces



## COMMUNICATIONS

~ 76 million people through television, telephone and radio infrastructure



## GAS

~ 22 million households



## WATER

~ 4 million households



## ELECTRICITY

~ 2 million households



## AGED CARE / RETIREMENT VILLAGES

~3,250 beds



## EMPLOYEES

~ 63,000 across the portfolio businesses

Note: Data as at 31 March 2014 or most recent.





# Award Winning Infrastructure Platform

## Latest awards

### House

- Financial Adviser of the Year (2014)**/Asia Pacific – IJ Global
- Most Innovative Investment Bank – Infrastructure and Project Finance Category (2014)**/Global – The Banker
- Best M&A House (2014)**/Australia – Euromoney
- Best Domestic Equity House 2006-13 (2014)**/Australia – Asiamoney
- Best Domestic Equity House (2012/13/14)**/Australia – Asiamoney
- Best Investment Bank (2012/13)**/Australia – Global Finance
- Capital Advisory Firm of the Year (2011/12/13)**/Asia – PERE
- Best Investment Bank (2013)**/Australia – M&A Advisor, The Asset
- Best M&A House (2013)**/Australia – Capital CFO, FinanceAsia

### Transaction

- Transport Deal of the Year (2014)**/Global/Infrastructure Journal – Goethals Bridge Replacement
- PPP Deal of the Year (2013)**/North America/Infrastructure Investor – Goethals Bridge Replacement
- Renewables Deal of the Year (2013)**/Global/Infrastructure Journal – London Array OFTO acquisition
- M&A Deal of the Year (2013)**/Australia/FinanceAsia – Future Fund's acquisition of Australian Infrastructure Fund's assets
- Social Infrastructure Deal of the Year (2013)**/Global/Infrastructure Journal – Wiri Men's Prison
- Infrastructure Acquisition of the Year (2013)**/Global/Infrastructure Journal – Acquisition of UPP Group Holdings Limited by PGGM
- M&A Deal of the Year (2012)**/Global/Project Finance International – Open Grid Europe acquisition from E.ON AG
- Deal of the Year (2012)**/Europe/Euromoney – Open Grid Europe acquisition from E.ON AG
- Toll Road Deal of the Year (2012)**/North America/Project Finance Magazine – Downtown Tunnel/Midtown Tunnel/MLK Extension



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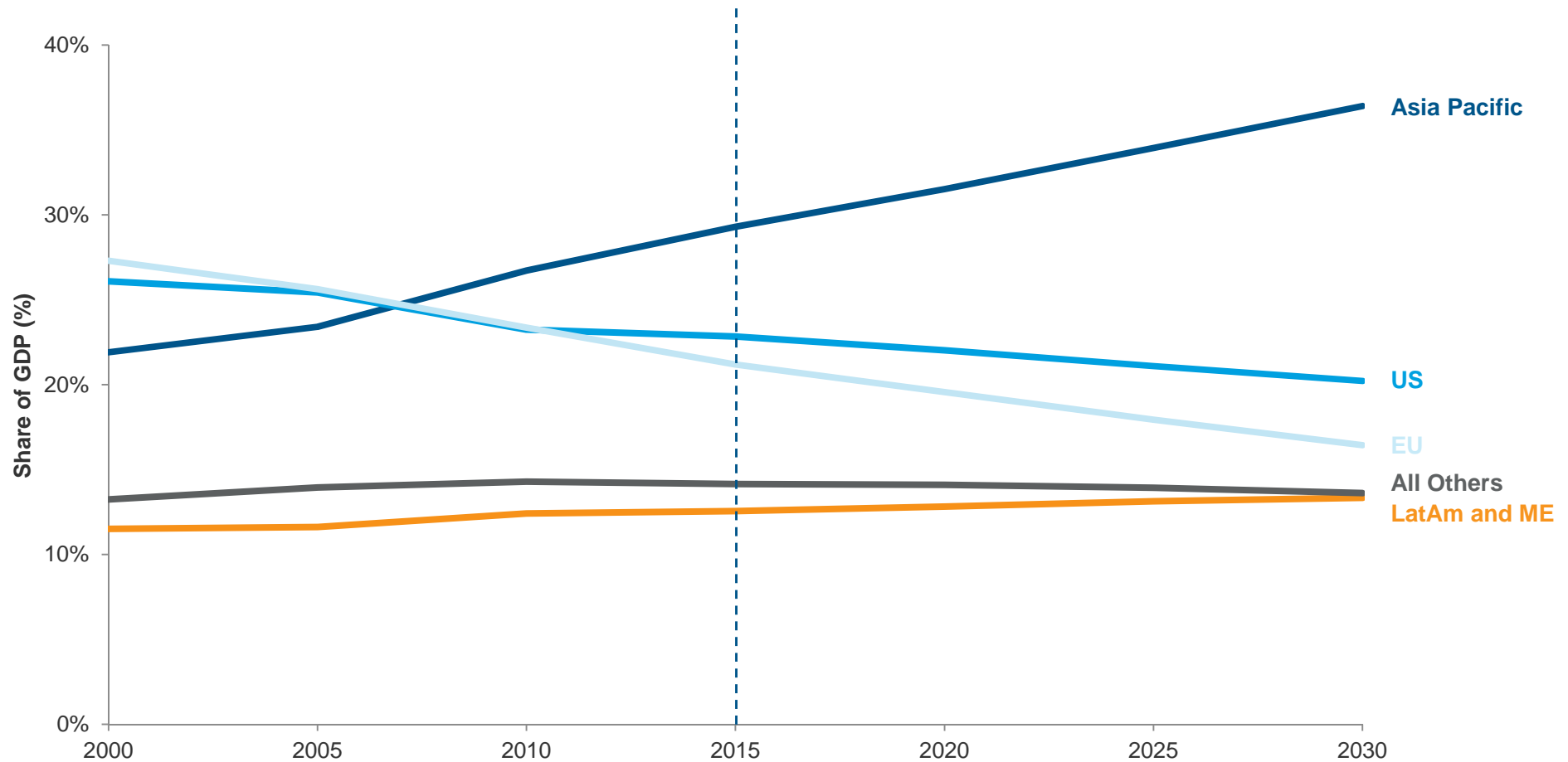
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## Growing Need for Infrastructure Investment

# Asia Pacific's growing prosperity is fuelling outsized infrastructure needs ...



## Projected GDP shares



Source: US Department of Agriculture



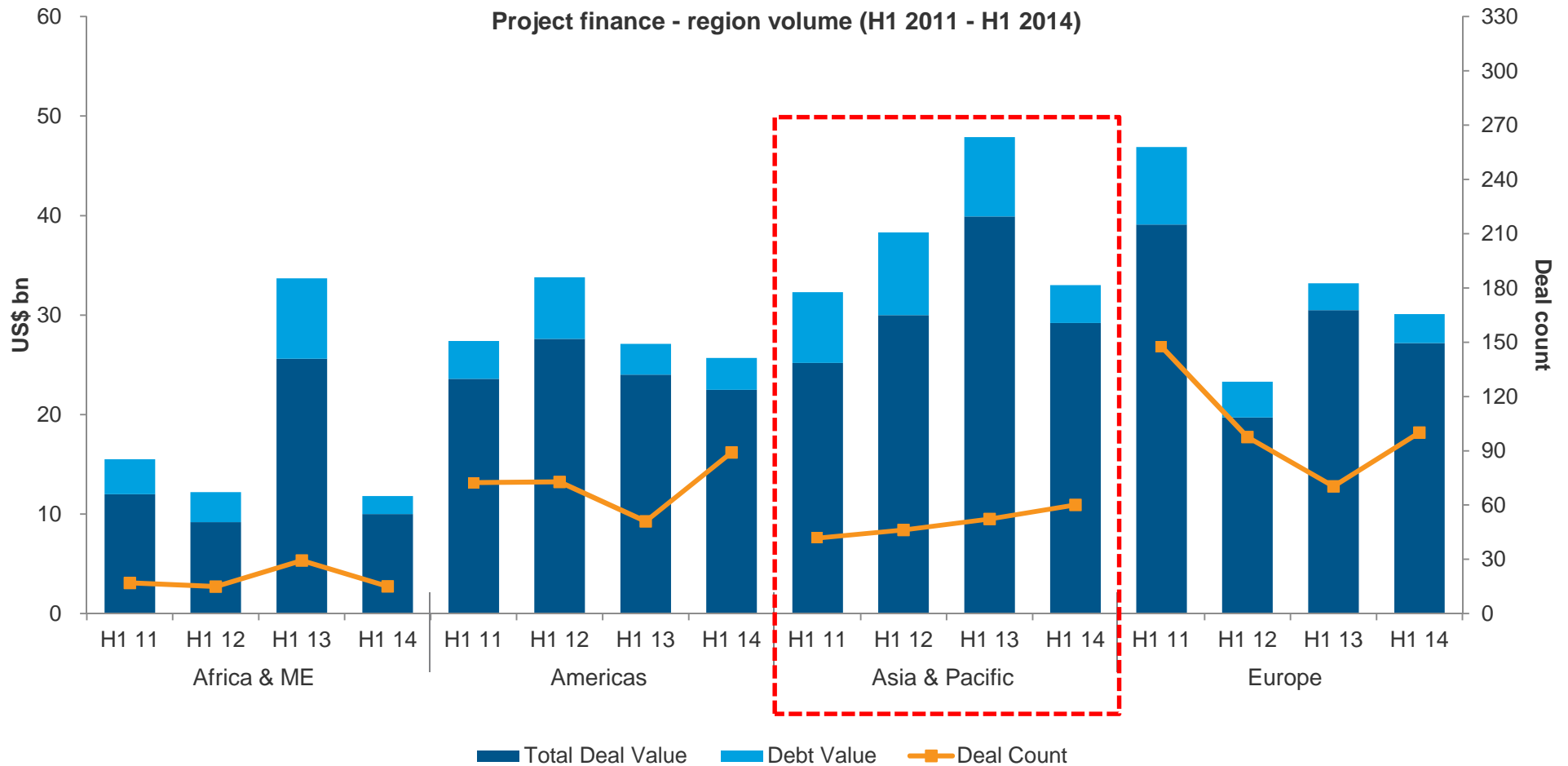
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04

## Abundant Infrastructure Funding

# Debt – Global Infrastructure Investments

Continuing growths and leading infrastructure investments in Asia Pacific

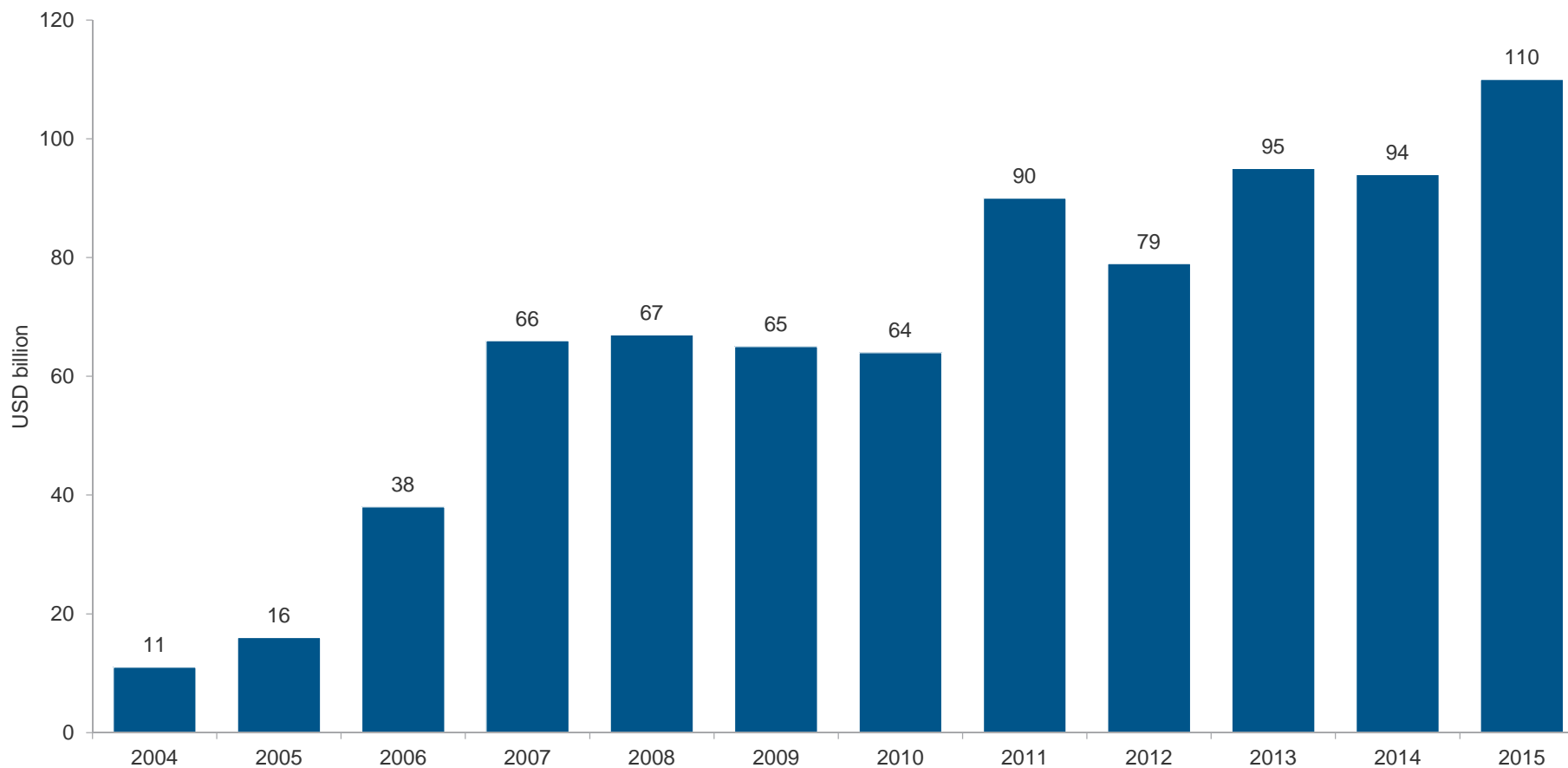


Source: Infrastructure Journal



# Equity – Infrastructure Funds Dry Powder

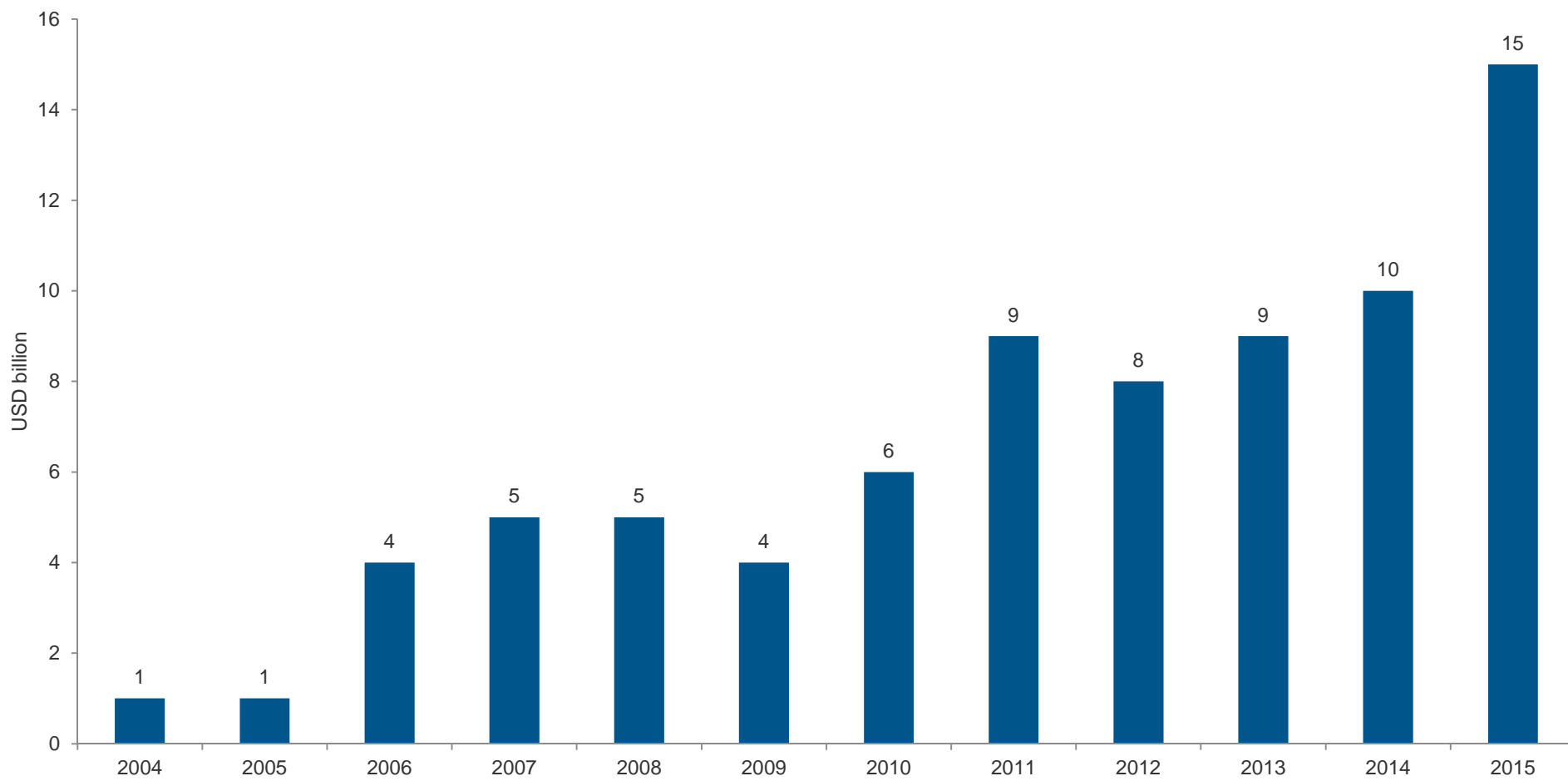
Growing unlisted infrastructure dry powder globally



Source: Preqin

# Equity – Infrastructure Dry Powder in Asia

The growth trend in Asia is significant and pronounced



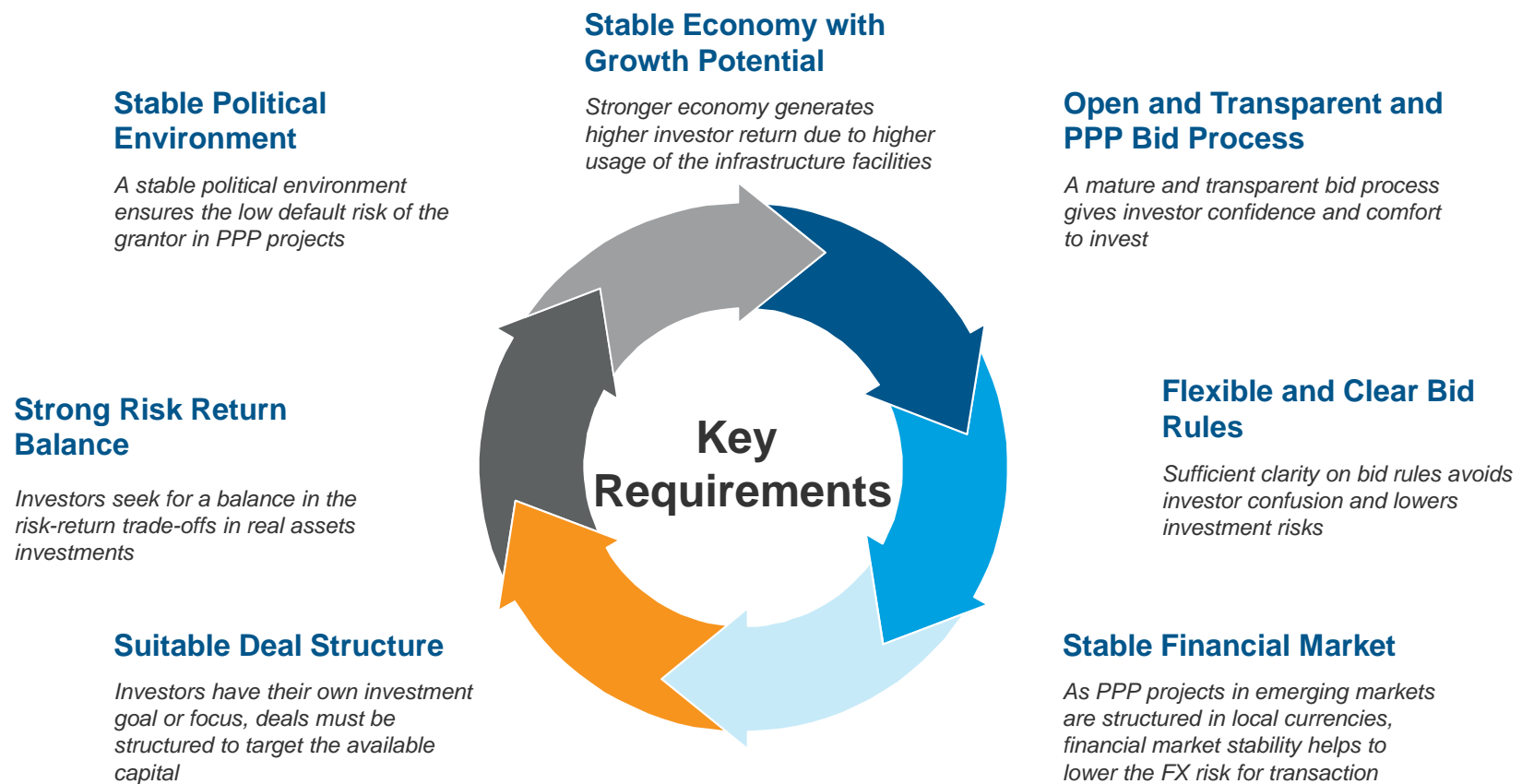


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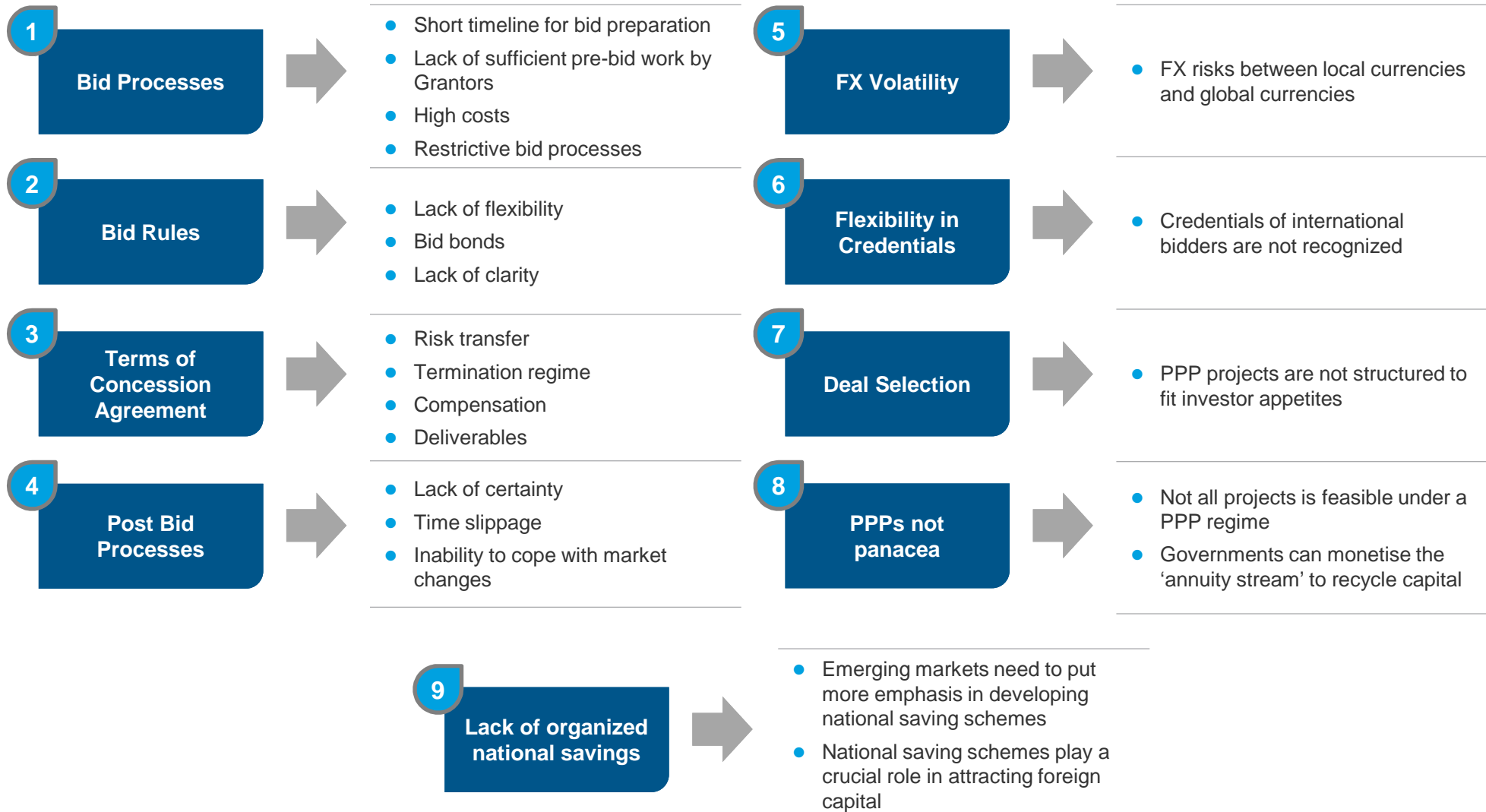
## Financing Challenges in Emerging Markets

# Investors' Requirements

Even with robust need for infrastructure investment and abundant funding, the emerging market (“EM”) still face challenges due to the discrepancies between investor needs and PPP framework



# Key Challenges in Emerging Markets





# 1 Key Challenge – Bid Processes

## Short Timeline for Bid Preparation

- Bidders for PPP projects in EM countries often complain for the insufficient time to prepare bid proposal
  - Manila Bay Reclamation Project: One of the bidder Ayala Land argued there was insufficient time for challengers to submit proposal within 1 month after the submission of EOI
- Delayed response from authorities further shorten the time for preparation
  - It took 20 days for the Ministry of Finance in Jamaica to respond to a request for information regarding PPP arrangements. This left only two days to prepare before the report is due

## Lack of Sufficient Pre-bid Work by Grantors

- Unclear PPP investment processes and timeline
- Grantors did not perform a feasibility study for the PPP projects
- Uncertainty around optimal commercial structure, including financing structure
- Uncertainty around government's role and responsibilities in PPP projects

## High Costs

- PPP projects often involve the engagement of different advisors such as technical advisors, market advisors etc. to prepare for the bid proposal
- The costs in engaging these advisors will only be fully or partially compensated for the final successful bidder
- Some markets might fully or partially reimburse the unsuccessful bidders for these costs but it is not common
- This results in higher costs for preparing the bid

## Restrictive Bid Processes

- EM countries usually sets high pre-qualification for the bidders. For example:
  - The recent Philippine Airport Projects requires the operator to put in 10% of equity into the project. However, operators usually do not want to put in equity given the risk involved
- Grantors in EM countries can be overly prescriptive

## 2 Key Challenge – Bid Rules

### Lack of Flexibility

- The PPP projects in EM countries generally lack flexibility in providing comments, adopting a change in consortium structure etc.
- For example, in Philippine, there is short timeframe for queries to the bid and bidders will be disqualified to provide mark-ups to the concession agreement after the querying period ends
- The 2-stage evaluation from technical aspect to financial aspect results in technical aspects of the bid not being reflected into the financial aspect of the project

### Bid Bonds

- The bidder will usually issue a bid bond to the grantor, in hopes to guarantee that the winning bidder will undertake the contract under the terms at which they bid
- The bid bond also serves to compensate the grantor for the time being devoted to negotiating with the preferred bidder in case they withdrawn the bid
- In EM countries, the bid bonds could be comparatively more expensive than the common market rate

### Lack of Clarity

- Overlapping calls among different ministries exist, resulting in unclear bid rules
- Limited transparency around decision making and bid award

# 3 Key Challenge – Terms of Concession Agreement

<b>Risk Transfer</b>	<b>Land Acquisition Problems</b> <ul style="list-style-type: none"> <li>For example, land acquisition in Indonesia is part of the government support but is also included in investment costs</li> <li>Private sector has to bear the cost of releasing the required land, as the land release process takes much longer than stated in the agreements</li> </ul>	<b>Land Acquisition Problems</b> <ul style="list-style-type: none"> <li>Governments change laws that affect the cost to the private sector of doing business without compensating private sector business</li> <li>The private party generally cannot unilaterally increase its prices or diversify its business so as to offset the cost impact of the change in law</li> </ul>
<b>Termination Regime</b>	<b>Debt Coverage</b> <ul style="list-style-type: none"> <li>In the event of a breach in debt coverage ratio, there will usually be a grace period for the project company to do equity cure or a period of dividend lock up</li> <li>Some EM countries do not provide this opportunity to fix the debt coverage ratio, instead they call for an event of default immediately</li> </ul>	<b>Hair Trigger Termination</b> <ul style="list-style-type: none"> <li>EM countries often have concession agreements which permit the Government to terminate for any breach. Without any apparent test of seriousness, and without any period in which to rectify</li> </ul>
<b>Compensation</b>	<b>Payment Risks</b> <ul style="list-style-type: none"> <li>For example, the grantor will usually provide feed-in-tariff (FIT) to renewable energy concessionaires</li> <li>In some EM countries, sometimes a lower FIT than what was agreed will be paid</li> </ul>	<b>Cash VS Non Cash</b> <ul style="list-style-type: none"> <li>Compensation may be in the form of upfront cash, longer concession terms, higher tariffs or other non cash items – cash compensation will require clarity on counterparty credit risk but concession agreement obligations are typically unfunded by Governments and often not backed by relevant finance ministries</li> </ul>
<b>Deliverables</b>	<b>Output VS Specification</b> <ul style="list-style-type: none"> <li>In some EM countries, it is a common problem that what the concessionaires built is not what the grantor wants, mainly due to the inadequacy in guidance or specification</li> <li>As a result, the concessionaires will have to pay a penalty to the grantor</li> </ul>	

## 4 Key Challenge – Post Bid Processes



### Lack of Certainty and Time Slippage

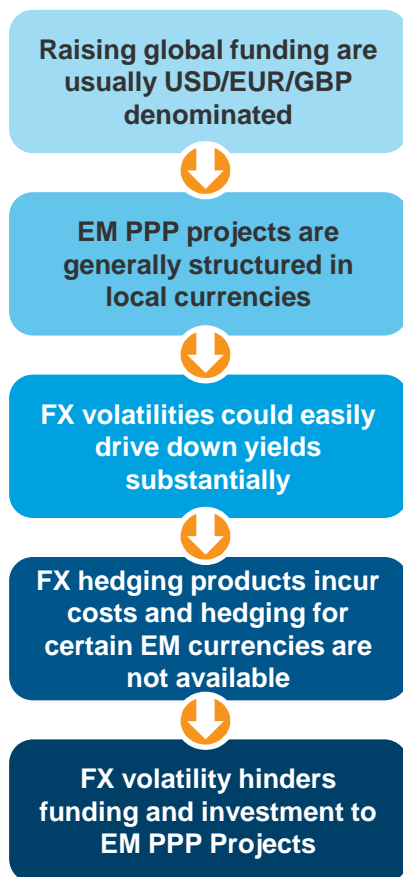
- For example, most of the infrastructure projects in India suffer from delays in completion due to an inadequate regulatory framework and inefficiency in the approval process
- Often Governments may procure PPP projects without completing the prerequisite land acquisition leading to delays and additional costs for the project
- Infrastructure projects require multiple sequential clearances at various levels of government
  - As an illustration, more than two years were needed for the Gujarat Pipavav port project to receive the necessary clearances after achieving financial closure. Moreover, most of the large projects involve dealing with various ministries
- Often, the perspectives of the different ministries/ departments vary and there is a large communication gap between central and local governments, leading to poor coordination in PPP project implementation

### Inability to Cope with Market Changes

- Environmental safeguards and guidelines have proven to be one of the major reasons for delay in post bid processes in infrastructure projects, especially in the power sector
- While new projects need to comply with these regulations, even a project under construction may need to comply with revised standards midway through the execution stage

## 5 Key Challenge – FX Volatility

Volatility in global and EM currency exchange rates places challenges to investor yields and infrastructure funding from international investors



Global and Emerging Market FX Volatility Comparison



Source: Bloomberg



## 6 Key Challenge – Flexibility in Credentials

EM lacks flexibility in recognising credentials of global infrastructure players

Example – Macquarie Infrastructure and Real Assets (MIRA) is a Global Airport Operator



Top **5**  
Global Airport  
Investor / Operator

Raised  
c.\$A **62** billion  
of financing for  
airport transactions

Manages more than  
**97** million  
of passengers p.a.

However...

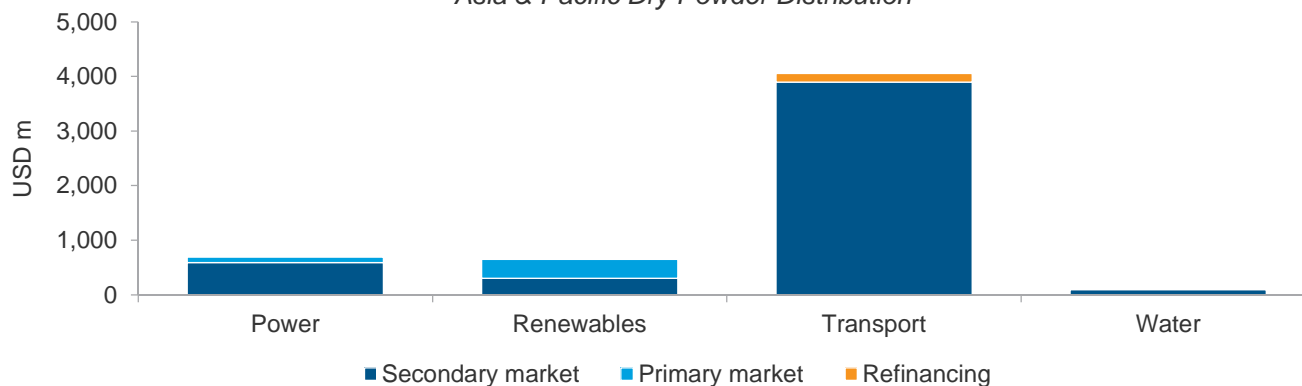
- Many bid rules in EM countries do not recognize MIRA as an operator
- The lack of flexibility in recognizing credentials of global infrastructure player reduces the amount of investors and operators in the PPP markets of different EM countries
- EM countries must learn to understand the capabilities and the credentials of international players and develop the ability to change local rules to meet the international conditions for a more mature PPP financing market

# 7 Key Challenge – Deal Selection

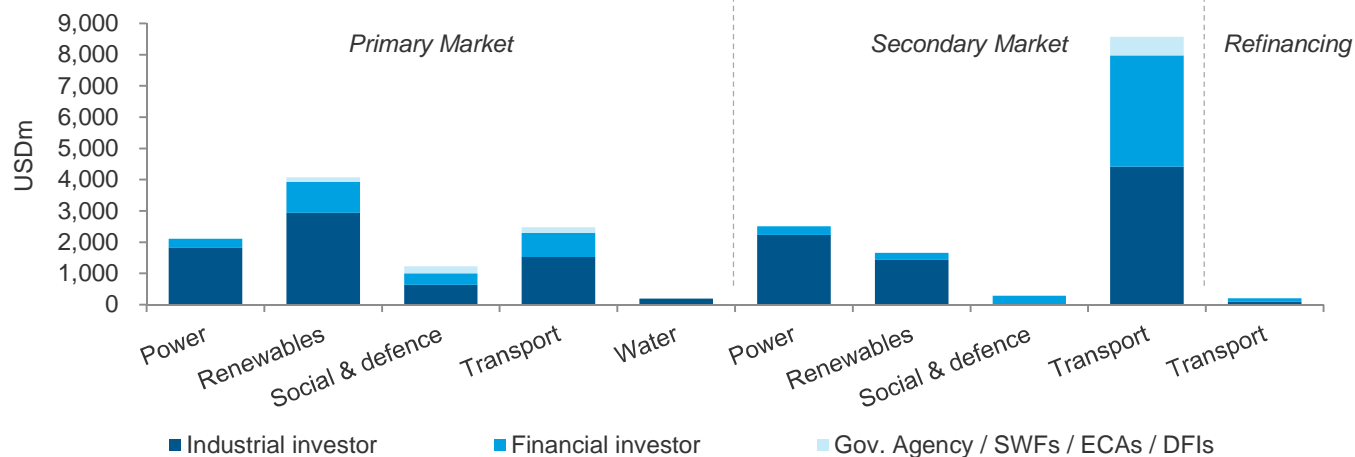
Equity investors seek different opportunities, roles and return profiles

## Most investors prefer operating assets, particularly in transport

Asia & Pacific Dry Powder Distribution



## Different Types of Equity Investors Seek Different Sectors and Markets



PPP projects in EM should be structured to target the available capital instead of just what the country needs

Most EM deals are in power and transport. However, due to patronage risk, most investors shy away from primary market transport deals

Source: Infrastructure Journal

## 8 Key Challenge – PPPs are not a panacea

Governments can consider monetising infrastructure cash flows whilst maintaining ownership to free up capital to invest into projects that can never work as PPPs

### Recycling capital

- Governments in emerging markets need to look more closely at equity recycling for those projects that can never work as PPPs
- In state owned assets, Governments hold in their hands valuable stable cash flows that private investors will pay a premium for
- If these cash flows, not necessarily the assets themselves – are partially sold to private investors, Governments will be able to receive a premium
- Governments are able to earmark specific projects, or Government sponsored infrastructure funds, to recycle this capital into
- This is currently happening in Australia – such as the Port Botany 99 year lease, where the proceeds were invested into the NSW Infrastructure Fund (Restart NSW)
- The Philippines did this very successfully some years ago



## 9 Key Challenge – Lack of organized national savings

Historically, there has been a lack of properly organized national savings plans in many emerging markets, this has impacted the ability to attract foreign investment

### Lack of organized national savings

- The emphasis on attracting capital to emerging markets infrastructure has been too piecemeal
- The challenge needs to be looked at in holistic manner
- One of the great impediments has been too little emphasis on policies that develop pension funds and other means of organized national savings
- In countries such as South Korea and Australia, pension and sovereign wealth funds have played a pivotal role in attracting other foreign capital into the infrastructure sector
- In emerging markets, Governments need to give this idea more attention – in countries where there are national savings pools, there should be a requirement to invest in local infrastructure
- National savings pools need to become “leaders for foreign capital”



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A black and white photograph of two coins on a textured surface. The coin in the foreground is a large, circular coin with a hole in the center. It has the text "DEI GRATIA" at the top, "SOUTH WALES" around the inner edge of the hole, and "CAROLUS III" at the bottom. The year "1788" is visible at the bottom. The coin in the background is smaller and shows a crown emblem.

06

A New Idea: The “Gold Standard”

# A New Idea - The Gold Standard for infrastructure projects in emerging markets



The implementation of this idea will require the myriad of participants in the private sector to agree what conditions ideally need to be met for their capital to go to Greenfield projects

## The Gold Standard

- The new Global Infrastructure Hub recently agreed by the G20 would be an ideal facilitator for preparation of this standard
  1. Private sector financial and strategic players can take the initiative and create a very specific standard for projects and guarantee project delivery if that standard is met. This may include ADB, IFC, World Bank and the new Asian Infrastructure Investment Bank (AIIB)
  2. This clarity is needed for Governments at all levels to understand the needs of private players
  3. This will be the private sector's standard under which it is prepared to invest
  4. It will be offered to Governments irrespective of what their individual PPP rules may be
  5. It will clearly outline what Governments very specifically need to do to attract investment into individual projects
  6. If Governments at local, provincial or national levels can comply with the standard they will get funding. It will be take it or leave it – hence a great opportunity for Governments to compete for available capital in terms of their policies



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# APPENDIX

## Pipeline PPP Projects in Emerging Markets

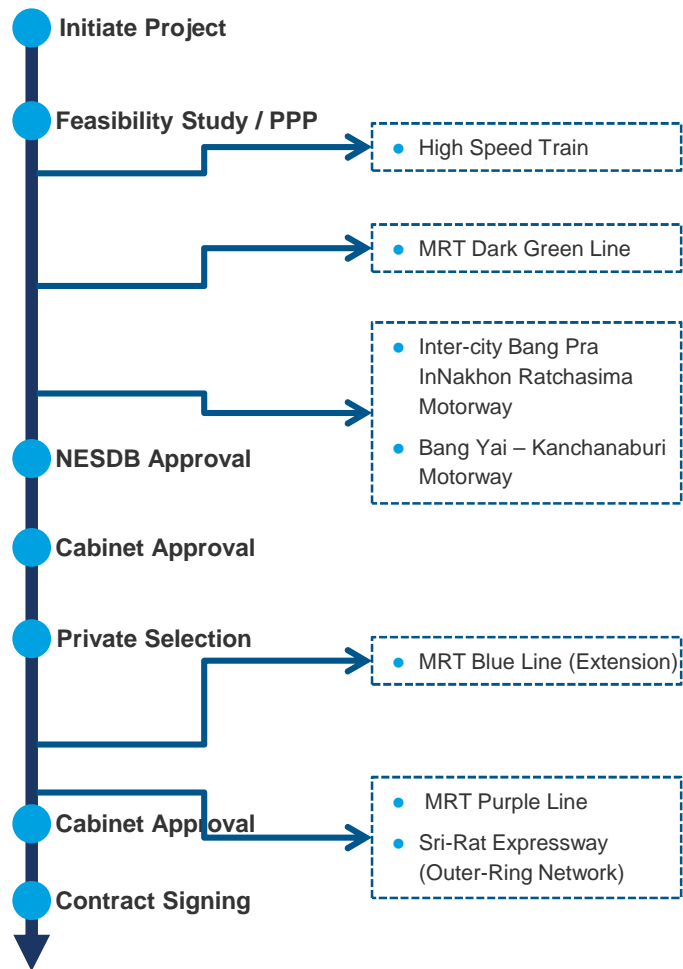


# Thailand – Active PPP Projects

PPPs have been used in sectors such as transportation, energy and telecommunications

<p><b>Mass transit systems</b></p>	<ul style="list-style-type: none"> <li>— <b>BTS SkyTrain:</b> THB52bn (USD1.63bn) concession awarded by the Bangkok Metropolitan Authority (BMA) to the Bangkok Transit System Corporation (a subsidiary of Tanayong PCL Real Estate)             <ul style="list-style-type: none"> <li>— 30 year BOT turnkey contract with a fixed price, delivery date and guaranteed performance criteria</li> <li>— Comprises 2 elevated electrified transit lines of more than 24km</li> <li>— Became operational in 1999 and was the only mass transit concession out of 3 granted by BMA in Metropolitan Bangkok in the decade</li> </ul> </li> <li>— <b>Mass Rapid Transit (MRT) metro subway:</b> Project comprises a 20km underground metro line running from Hua Lamphong to Bang Sue             <ul style="list-style-type: none"> <li>— Implemented on a DBOM basis at a cost of THB126bn (USD3.97bn) and commenced operation in 2004</li> <li>— The private sector concessionaire, Bangkok Metro Company Limited, was selected by the Mass Rapid Transit Authority of Thailand (MRTA) to finance the rolling stock of trains and equipment and to operate the line</li> <li>— Majority of the project was funded by the Government using bonds, commercial loans and soft loans</li> <li>— Passenger numbers have been smaller than originally forecasted and have not been helped by the lack of integration with the bus network</li> </ul> </li> </ul>
<p><b>Toll roads / Expressways</b></p>	<ul style="list-style-type: none"> <li>— <b>Don Muang Tollway:</b> THB12bn (USD377m) project for a 28km 6-lane elevated toll road from central Bangkok to the old Don Muang International Airport north of Bangkok             <ul style="list-style-type: none"> <li>— 25 year DBOM concession awarded in 1989 by the DOH to the Don Muang Tollway Company Limited, a consortium comprising Dywidag (German led consortium), Delta Construction (Thai construction Company) and GMI (French Company)</li> <li>— A 7km extension to the expressway was agreed in 1994</li> </ul> </li> <li>— <b>Second Stage Si Rat Expressway:</b> THB48bn (USD1.51bn) project consisting of four sections around Bangkok and urban areas totaling ~37km             <ul style="list-style-type: none"> <li>— Concession awarded in 1998 to the Bangkok Expressway Consortium (which later became the Bangkok Expressway Company Limited (BECL) on BOT basis for 30 years</li> <li>— Construction took 3 years and the expressway was first operational in 1993</li> </ul> </li> </ul>

## Ongoing PPP Projects



Source: NESDB, Allen & Ovary



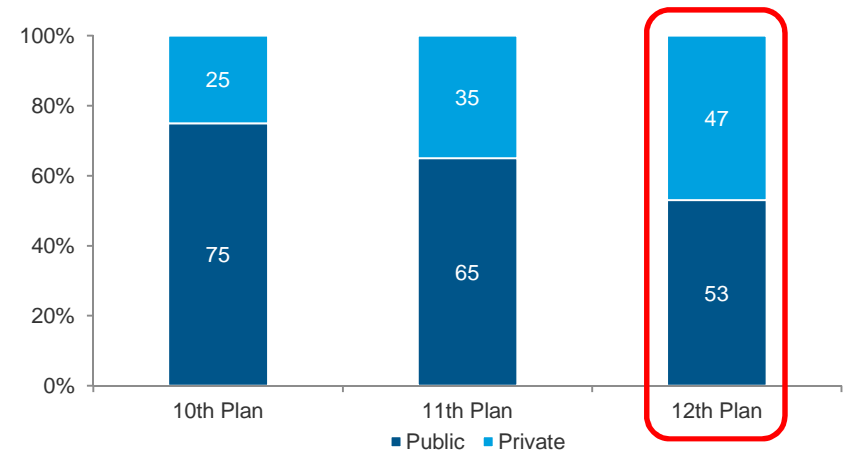
# India – Growing PPP Projects

India is set to continue promoting PPP models to fulfill its infrastructure investment targets

## Overview

- According to the World Bank, India is second only to China in terms of the number of public private partnership (PPP) projects
  - Encouragingly, the government is set to continue promoting PPP models to help achieve its investment Targets
- During the 12<sup>th</sup> Five-Year Plan, the Planning Commission targets to achieve 47% of total infrastructure investments through private funding, up from 25% in the 10<sup>th</sup> Five-Year Plan
- Projected infrastructure spending in the 12<sup>th</sup> plan is USD1,011bn
- The Ministry of Roads and Highways of India has undertaken 68 projects for a total value of USD2.6bn through PPPs
  - 34 out of these have been completed
- The Power sector accounts for nearly 18% of total PPP value, with 56 projects accounting for a total value of USD12.6bn

## Rising Private Investment Outlay



### Delicensing

- Foreign Direct Investment (FDI) of up to 100% under the automatic route as well as technology collaboration is allowed freely for Infrastructure projects

### Encouragement of Infrastructure Debt Funds (IDFs)

- The Government of India set up the India Infrastructure Finance Company (IIFCL) to provide long-term funding for infrastructure projects,
- Interest payments on borrowings for infrastructure are subject to lower withholding tax rate of 5%, down from a tax rate of 20%
- IDF's income is exempt from tax

### Special Economic Zones (SEZs)

- The government has granted sops, including a large number of SEZs, to the capital goods and real estate industries
  - Specific impetus to increase exports

### Issue of tax-free infrastructure bonds

- Infrastructure finance companies like India Infrastructure Finance Corporation (IIFCL), National Highways Authority of India (NHAI), Housing and Urban Development Corp (Hudco), Power Finance Corporation (PFC) and Indian Railway Finance Corporation (IRFC) are allowed to issue tax-free bonds
- Due to this, companies raised about USD5.5bn in FY12 and are estimated to have raised about USD4.6bn during FY13

Source: IBEF

# Malaysia – Recent and Upcoming PPP Projects

The 11th Malaysia Plan will be announced in June 2015

Sector	Recent / Upcoming Projects (based on 10 <sup>th</sup> Malaysia Plan 2011 – 2015)
<b>Roads</b>	Seven highway projects amounting to an estimated USD5.9bn, including: <ul style="list-style-type: none"> <li>— West Coast Expressway</li> <li>— Guthrie- Damansara Expressway</li> <li>— Sungai Juru Expressway</li> <li>— Paroi- Senawang - KLIA Expressway</li> <li>— Ampang - Cheras - Pandan Elevated Highway</li> </ul>
<b>Rail and Transport</b>	<ul style="list-style-type: none"> <li>— Integrated Transport Terminal in Gombak, Selangor</li> <li>— Mass Rapid Transit (MRT) project in Greater Kuala Lumpur (USD12.4bn)</li> <li>— Kuala Lumpur – Singapore High Speed Rail of 400km (USD5.8bn – currently in feasibility stage)</li> <li>— East Coast Rail Route (USD9bn – currently in feasibility stage)</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>— Two coal electricity generation plants (USD2.2bn)</li> <li>— 300-megawatt Combined-Cycle Gas Power Plant in Kimanis, Sabah (USD0.5bn)</li> <li>— Construction of the liquefied natural gas regasification by Petronas in Melaka (USD0.9bn)</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>— Perdana University, a joint venture between Academic Medical Centre Sdn Bhd and John Hopkins</li> <li>— Medicine International as well as Royal College of Surgeons Ireland (USD0.6bn)</li> <li>— Five Universiti Teknologi MARA (UITM) branch campuses</li> <li>— International Islamic University Malaysia Teaching Hospital in Kuantan (USD0.13bn)</li> </ul>
<b>Port</b>	<ul style="list-style-type: none"> <li>— Privatization of Penang Port Sdn Bhd</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>— Development of Malaysian Rubber Board's 3,300 acre land in Sungai Buloh, Selangor (USD3.1bn)</li> <li>— Redevelopment of the Angkasapuri Complex Kuala Lumpur as Media City</li> <li>— Kuala Lumpur Strategic Development by 1MDB; Sungai Besi Airport area</li> <li>— KL International Financial District in Kuala Lumpur (USD8bn)</li> <li>— Two aluminium smelters in Sarawak Corridor of Renewable Energy (SCORE)</li> </ul>

Source: Press (PwC Report September 2012)

# Vietnam – Selected PPP Pipeline Projects

Roads	Description	Timeline
<b>Ninh Binh- Thanh Hoa Highway (Priority)</b>	About 126.7km long with 6 lanes, the road passes Ninh Binh, Nam Dinh and Thanh Hoa provinces, with a total investment is USD1.86bn; the World Bank is working on procedures for securing the funding from the Public Private Infrastructure Advisory Fund (PPIAF) for the Ninh Binh- Thanh Hoa bai Vot Highway Project as a PPP	NA
<b>Ben Luc- Hop Phuoc Highway (Priority)</b>	This is an urban highway, with designed speed of 80- 100 km/h, around 25km long with four to six lanes, with an investment of USD713m; the road connects Long An province and Ho Chi Minh City	NA
<b>Ho Chi Minh Highway, Cam Lo- La Son section</b>	'B' category highway, with designed speed of 80 km/h, about 102km long with four lanes, with an investment of USD1.09bn and is located in Quang Tri and Thua Thien Hue provinces	NA
<b>Ngoc Hoi bridge and approach ramps</b>	The bridge will connect the Thanh Tri and Gia Lam districts, 5km in length, with an investment of ~USD475m; the project is in the Hanoi Capital Construction Master Plan	NA
<b>Extension of National Road No 22 (trans- Asia road)</b>	The road goes through District 12, Hoc Mon, Cu Chi of HCMC, 20km long with four lanes, with an investment of USD610m; estimated construction period is 4 years, expected to be completed by 2017, with operations spread over 30 years	Expected Completion of Construction: 2017
Railways		
<b>Ben Thanh Central Station Project</b>	A multifunctional rail terminal project, supported by the Japan International Cooperation Agency	NA
<b>Ho Chi Minh Metro Project (No 1)</b>	A metro project, which has already invited bids	Expected Completion of Construction: 2018
Airports		
<b>Long Thanh International Airport Phase I (Priority)</b>	Greenfield project with estimated 25 million passengers annually, located in the Dong Nai province; the investment for the project is USD1.4bn	Expected to become operational: 2020
Ports		
<b>Son Tay Port located in Son Tay district</b>	0.5-1.0 hectare- wide port located in Hanoi, with an investment of about USD19m	NA
<b>Hong Van Port located in Thuong Tin district</b>	1.0-1.5 hectare- wide port located in Hanoi, with an investment of about USD14m	NA
<b>Khuyen Luong Port</b>	1.5-2.0 hectare- wide port located in Hanoi, with an investment of about USD24m	NA

Source: Infrastructure Journal, Jan 2012

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