



# Syndicate Financing of Infrastructure; A Model for Maldives

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# Demand for Infrastructure Finance in Maldives

## PSIP Allocations for Infrastructure projects 2018

Project Type	No of Projects	Value (Billions)	Allocation (%)
Real Estate	19	0.80	11.4%
Port Construction	75	2.70	38%
Water & Sanitation	57	1.10	15.5%
Land Reclamation & Road Construction	28	0.43	6.1%

Source: Public Sector Investment Program, Budget 2018

# So How Do Countries Finance Infrastructure

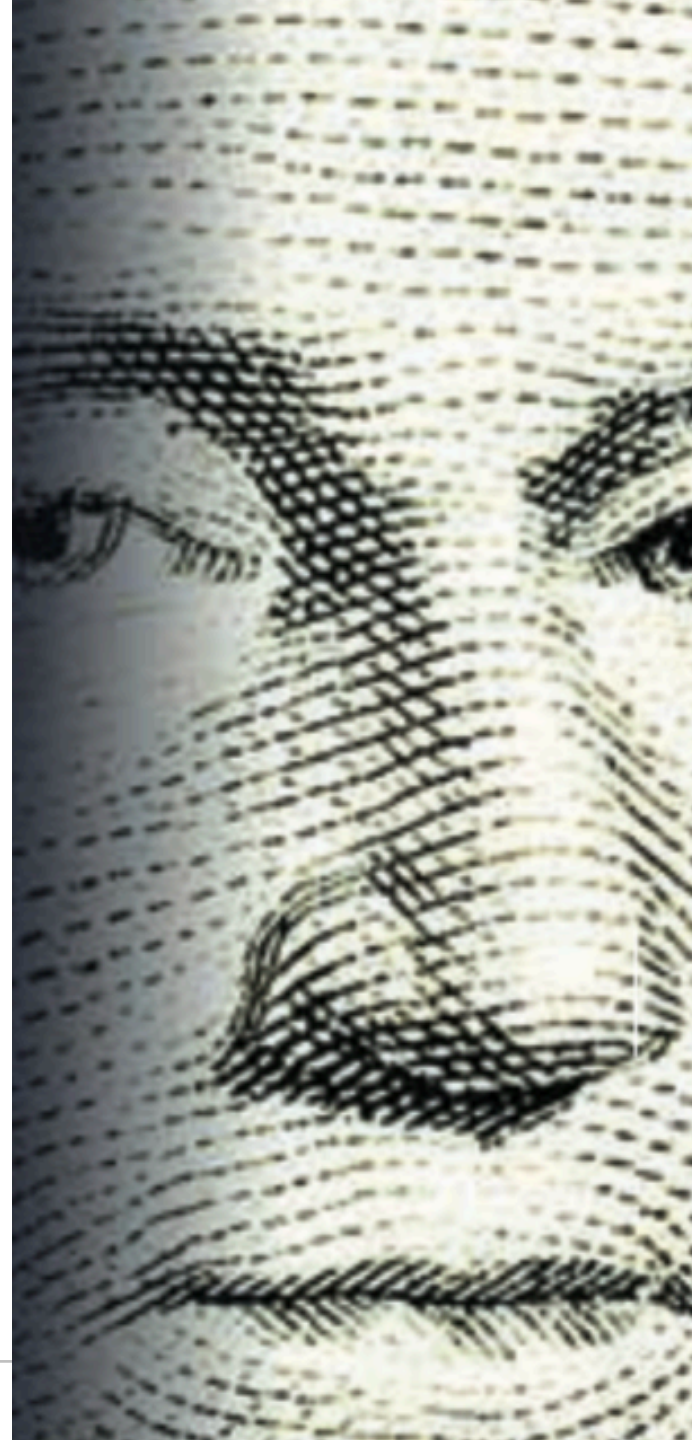
- Allocate funds from fiscal budgeting
- Pooled funds from user groups
- Funded by loans obtained by local & foreign banks
- DFI & Multilateral Financial Institutions
- EXIM Bank Funding
- Institutional Investor Funding

## Let Us attempt to Understand How Large the Institutional Fund Market is?

World's Institutional Fund Market is Estimated at US\$ 80 Trillion

The top 400 Funds Manage US\$ 63 Trillion of this

The top three of these Institutions Manage about US\$ 14 Trillion of these Funds.



# Understand Why Institutional Investors Consider Funding Infrastructure

- Institutions Manager funds with long time horizons
- The Success of the fund depends on the returns generated compared to risk taken
- Fund Manages that invest pension funds have Liability Driven Investment (LDI) Strategies

# Understanding LDI Strategies is Key to attracting Institutional Money

An average 40 year old expects to live past 80 years in most parts of the developing world. This is the typical profile of a client of a Pension Fund

- They look at a return with purchasing power protected
- Capital Preservation
- Protection from business cycles

# Advantages for Pension Funds when Investing in Infrastructure

- As discussed earlier, long term opportunities
- Inflation and currency protection
- Significantly Lower Credit Default Risk
- Cashflows of underlying asset backed by contractual cashflows
- Direct or indirect credit enhancements from governments
- The asset funded is generally in high demand (e.g. Road)







# So Where are these Institutions Seeing Deal Flow

Infrastructure	Energy	Technology
<p>Infrastructure investment required globally</p> <p><b>\$US45tr</b> by 2030<sup>1</sup></p>	<p>Investment in new power generation</p> <p><b>~\$US6tr</b> by 2030<sup>5</sup></p>	<p>Economic value created by linking physical and digital worlds</p> <p><b>\$US11tr p.a.</b> by 2025<sup>10</sup></p>
<p><b>41</b> megacities by 2030 up <b>~37%</b><sup>2</sup></p> <p><b>~1b</b> people moving to an urban area by 2030<sup>3</sup></p> <p><b>50%</b> increase in GDP per capita by 2030<sup>4</sup></p>	<p><b>~30%</b> increase in energy consumption by 2030<sup>6</sup></p> <p>Cost of producing solar electricity will reduce <b>66%</b> by 2030<sup>5</sup></p> <p>Renewable energy will account for <b>~50%</b> of installed capacity by 2030<sup>5</sup></p>	<p>Volume of business data worldwide doubles every <b>1.2 years</b><sup>11</sup></p> <p><b>40,000</b> Google searches per second<sup>12</sup></p> <p><b>500m+</b> Apple Pay, Samsung Pay and Android Pay users by 2021<sup>13</sup></p>
<p><b>\$US3tr</b> investment required in water by 2030<sup>1</sup></p> <p>Electricity and roads require <b>\$US30tr</b> of infrastructure investment by 2030<sup>1</sup></p> <p><b>\$US6tr</b> investment required in US by 2030<sup>1</sup></p>	<p><b>85%</b> of renewable infrastructure investment will be wind and solar<sup>5</sup></p> <p><b>80%</b> decrease in coal use in Europe by 2030<sup>7</sup></p> <p>Electric vehicles <b>~50%</b> of vehicle sales by 2030<sup>8</sup></p>	<p><b>\$US4.8tr</b> potential boost to global revenues from AI by 2022<sup>14</sup></p> <p><b>75b</b> connected devices by 2025<sup>15</sup></p> <p>China accounts for <b>40%</b> of worldwide digital transactions<sup>16</sup></p>
<p><b>\$US13tr</b> investment required in China by 2030<sup>1</sup></p> <p>Asia has the largest overall Infrastructure need, requiring <b>~50%</b> of global investment<sup>1</sup></p> <p>Global net public debt to exceed global GDP by 2025<sup>4</sup></p>	<p><b>~\$US4tr</b> to be invested in renewable power generation by 2030<sup>5</sup></p> <p>Investment in renewable energy capacity has outstripped investment in fossil fuel capacity over last 5 yrs<sup>9</sup></p> <p><b>~\$US5tr</b> Energy investment required in China and India by 2030<sup>1</sup></p>	<p><b>450b</b> business transactions taking place on the internet per day by 2020<sup>17</sup></p> <p><b>54%</b> of the Chinese population are not on the internet<sup>18</sup></p> <p><b>\$US6.2tr</b> potential economic impact of Cloud technology by 2025<sup>19</sup></p>

1. Global Infrastructure Hub, Global Infrastructure Outlook, 2017. 2. The United Nations, The World's Cities in 2016, 2016. 3. United Nations, World Urbanisation Prospects, 2017. 4. DNV GL, Technology Outlook – Our World: Economy, 2016. 5. Bloomberg New Energy Finance London Summit 2017, Breaking Clean, 2017. 6. BP Energy Outlook, 2017. 7. International Energy Agency, World Energy Outlook, 2016. 8. Boston Consulting Group, Electrified Vehicles to take half of Global Auto Market by 2030, 2017. 9. UN Environment and Bloomberg New Energy Finance, Global Trends in Renewable Energy Investment, 2017. 10. McKinsey & Company, Unlocking the potential value of the Internet of Things, 2015. 11. Peter Fisk, Gamechangers: Are you ready to change the world? Creating innovative strategies for business and brands, 2015. 12. Internet Stats Live, Google Search Statistics, as at 5 Feb 18. 13. Juniper Research, Contactless Payments 2017 – 2021, 2017. 14. Accenture, Reworking the Revolution: Are you ready to compete as intelligent technology meets human ingenuity to create the future workforce?, 2018. 15. Statista, Internet of Things connected devices worldwide 2015-2025, 2016. 16. McKinsey & Company, Digital China powering the economy to global competitiveness, 2017. 17. IDC and EMC Corporation, The Digital Universe Decade, 2010. 18. China Internet Watch, China Internet Statistics, 2017. 19. McKinsey & Company, How can we recognise the real power of the Internet of Things, 2017.



## Will Some of the Funds Operating look at Maldives?

Fund	AUM (Bil US\$)	Infra Exposure (Bil US\$)	Geographical Focus
 <b>中国投资有限责任公司</b> CHINA INVESTMENT CORPORATION	900	50	OECD
 <b>GIC</b>	360		Asia/OECD
 <b>MACQUARIE</b>	372	100	OECD/Oppor tunistic
 <b>CDPQ</b>	298	16	Asia/OECD
<b>AMPCAPITAL</b> 	119	2	N.A.
 <b>OMERS</b>	100	16	

## Lets take a glimpse at CIC's Numbers

- AUM of US\$ 900 Bil gave a Net income of US\$ 75 billion in 2016
- Investment income of US\$ 83 billion in 2016
- 4.76% CAGR
- 6.2% Net Return from Foreign Investments in 2016
- 14.35 Annualized Returns in 2017
- Currently 40% of the funds in overseas investments are invested in US government and agency debt
- Plans to enter the US infrastructure space where estimated investment required up to 2030 is US\$ 8 trillion

## Lets take a glimpse of the Ontario Municipal Employees Retirement System

- 11.5% Net Investment Return in 2017
- 16% Assets invested in Infrastructure
- Infrastructure provided a return of 12.3%
- Main Markets
  - USA 39%
  - Canada 36%
  - Europe 16%
  - Rest of the World 9%
- 7% Net Return over 20 years

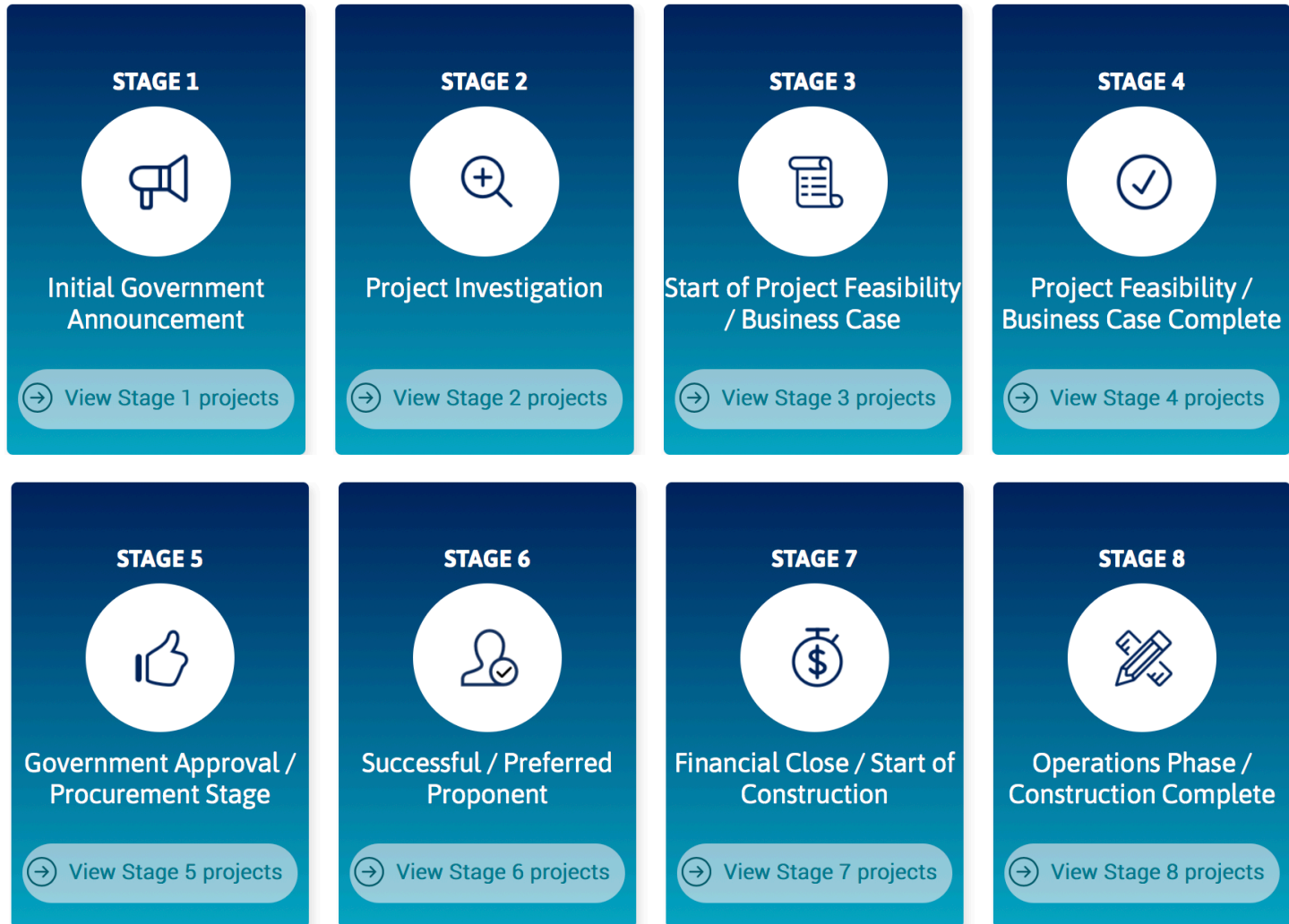
## Lets take a glimpse of Macquarie

- One of the Largest infrastructure fund managers with more than a quarter of AUM in Infrastructure
- Focus on
  - Roads, Utilities, Air Ports, Energy, Ports
- ROE 14.7% in 2016
- 5 year EPS CAGR 17%
- Funding Region
  - US 27%
  - EMEA 27%
  - Asia 25%
  - Australia 21%

# How Should Maldives Set About Attracting Institutional Capital to Infra?

1. Identify models that will create reasonable Interest From Institutional Investors
2. Understand that what works for one sector may not work for the other
3. Appreciate that the institutional investor is representing a silent pensioner in another country
4. Understand that we have to attract these investor to our country
5. Demonstrate good Corporate Governance and Fair Play
6. Undertake selective road shows to show case and demonstrate the investment pipeline – understand that institutional investors seek scale

# Understanding the Stages of an Infrastructure Project



# So What Steps Should Maldives Take?

1. Identify the infrastructure needs for the countries growth trajectory sector-wise
2. For each project/sector identify the technology type and work on the specification
3. Work on the estimated revenue model and determine the attractiveness for investors. Make an assessment on the requirement of GAP Funding
4. Determine the ideal capital structure
5. Seek prospective developers/investors/operator level of interest through road shows

# So What Model Should Maldives Use?

For Each Project/Sector determine the model that Maldives should use to get the best win-win deal (***for Maldives and the investors***)

- In water treatment for example as each project is on the smaller side it may be better to consolidate developments to seek better economies of scale. Chinese and European Interest is there for this sector.
- In power, the straight forward, IPP model for BOT will generate interest from vendors as well as institutional investors in Sri Lanka, India and even Singapore
- For ports the GOM should look at two models, JV with GOM or attracting a regional port operator to invest, develop and operate. Here too a BOT model may be suited with interest from around the world



# So how can Maldives attract Institutional Interest

- Demonstrate that Infrastructure Plans thought through and are a pivotal to continued Economic Development
- Demonstrate that once implemented there will be a **Tangible Impact to the People of Maldives** – *This will reduces political risk*
- As much as possible – **Build Bi-Partisan Plans**
- Plan, Plan, Plan – Allow a certain amount of Public Debate
- Work on creating a certain amount of competition from Investors
- Demonstrate Good Governance procedures in attracting investors
- Understand that disputes will occur and that Maldives needs to be fair by investors as well as its own population
- See How Local Institutions can Participate

We have to find  
ways to finance  
infrastructure  
that gets it done fast  
and creates a return.

Gordon Brown

Chair, World Economic Forum Global Strategic Infrastructure Initiative

