

## **DBO IN TRANSPORT SECTOR – SHARING INDIA EXPERIENCE**

# **Hybrid Annuity Model**

## DBO in Roads through PPP Scheme

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**JOINT REGIONAL WORKSHOP: DEFINING OPERATIONS AND MAINTENANCE UNDER DESIGN-BUILD-OPERATE CONTRACTS AS APPLIED TO ADB INFRASTRUCTURE PROJECTS  
ADB HEADQUARTERS 11 DECEMBER 2018**

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# Why Hybrid Annuity Model?

## Engineering Procurement and Construction (EPC) Model

Risks	Government	Private Player
Detailed Design & Building	-	Yes
Investment	Yes	-
Revenue collection	Yes	-
Operation & Maintenance	Yes	-

# Why Hybrid Annuity Model?

## Build Operate Transfer Model

Risks	Government	Private Player
Detailed Design & Building	-	Yes
Investment	-	Yes
Revenue collection	-	Yes
Operation & Maintenance	-	Yes

# History of BOT: shrinking

## National Highway Authority of India (NHAI)'s projects under BOT schemes

- In 2011–2012: **70%** (or 6,144 km)
- In 2016–2017: **10%** (or 422 km)

## Issues with BOT Model: Private player to take all risks

- Arrange entire fund (equity or debt)
- Shoulder entire risk of low traffic, leakage
- No other compensation mechanism, such as annuity
- Banks reluctant to lend on BOT projects



# Issues of BOT

## BOT Effect: Too heavy to bear

- Existing projects: On-going ones stalled; completed ones suffered from poor revenue (low traffic, leakage);
  - difficulties in land acquisitions and environmental clearance
  - Cost over-run
  - Increase in banks' NPA;
- New projects: Private players hesitating to invest, banks unwilling to fund.

# Move to Hybrid Annuity Model

Searching middle ground: more-balanced risk-sharing

- Share financing risks
- Take back revenue risk

**Adopted from 2016**

⇒ Hybrid Annuity Model

Current Users: NHAI, State Governments

# Hybrid Annuity Model

Risks	Government	Private Player
Detailed Design & Building	-	Yes
Investment	40-70%	30-60%
Revenue collection	Yes	
Operation & Maintenance	-	Yes

# HAM in India: Market Status

Triggered a significant increase in projects awarded.

In 12 months to March 2018, HAM projects account for

- 46% of total awards by highway length, and
- 63% of total awards by value (INR765 billion).

(Source: Moody's from "Infrastructure - India: Highway PPPs gaining momentum, supported by government initiatives")



# HAM in India: Market Situation

- Good initial market response.
- Companies with stronger balance sheets.
- Bidders per project typically: 5-10 nos.
- Open to international bidders (ADB funded).
- Winning bids typically 15% higher than NHAI's estimated EPC costs.



# HAM in India: ADB-funded DBO Projects

- ADB funded Karnataka project; Winning bid prices in 3 contracts
  - PK1: \$172.0 mil; 19.4% higher than estimate
  - PK2: \$181.4 mil; 12.1% higher than estimate
  - PK3: \$159.4 mil; 24.5% higher than estimate
- Conclusion: good approach of DBO financing and risk sharing

Thank you.



For any feedback, support on Hybrid Annuity Model, please let us know:  
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