



# **Application of PPP in metro industry**

## **- Beijing Line 4**

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**August 22, 2013**

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- **MTR's PPP Practice in China**
- **Case Study – Beijing Line 4**
- **Contributions and Challenges**

# Briefing on MTR

- Established in 1975, and owned by HK government
- Listed in HK Stock Exchange in 2000, and HK government owned its 76.5% share
- M&A with KCRC in 2007
- At the end of 2012, MTR's market value is about 163 billion HKD



# MTR's PPP projects in mainland China

Name	Introduction	Share Structure
Beijing Line 4	<ul style="list-style-type: none"> <li>• 29 KM, 24 stations</li> <li>• Total investment is 15.3 billion RMB</li> <li>• Part B which MTR jointly invested, covers 30% of the total investment, costing 4.6 billion RMB</li> <li>• Opened on Sep 28, 2009</li> <li>• Concession period lasts 30 years</li> </ul>	MTR 49% BCG 49% BIIC 2%
Beijing Line 14	<ul style="list-style-type: none"> <li>• 47.3 KM, 37 stations</li> <li>• Total investment is 50 billion RMB</li> <li>• Part B which MTR jointly invested, covers 30% of the total investment, costing 15 billion RMB</li> <li>• Phase I opened on May 5, 2013, and the rest part will open in 2015</li> <li>• Concession period lasts 30 years</li> </ul>	ditto
Hangzhou Line 1	<ul style="list-style-type: none"> <li>• 48KM, 31 stations</li> <li>• Total investment is 22 billion RMB</li> <li>• Part B which MTR jointly invested, covers 37% of the total investment, costing 8.1 billion RMB</li> <li>• Opened on Nov 24, 2012</li> <li>• Concession period lasts 25 years</li> </ul>	MTR 49% HZMG 51%

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# Internal / External Conditions of PPP Project

## 1 External Conditions

- Legal: the policies and law are clear and well-established, e.g.: ‘Beijing's urban infrastructure franchise regulations’
- Economy: government supports in both policy and finance; enough patronage; big revenue of non-fare business; can meet the ROI requirement of the investor.
- Market Environment:
  - Financing System
  - Tendering and Bidding System
  - Insurance System

## 2 Internal Conditions

- efficient organization chart (3 shareholders)
- professionals and experts
- reasonable risks-sharing mechanism



# Shareholders of the JVC



**Beijing Infrastructure Investment Co. Ltd (BIIC)** is an SOE, undertaking investment and financing and capital management in infrastructure industry. At the end of 2012, the total investment in railway reached 479.6 billion, and the length of network BIIC owns will reach 561km by 2015.



**Beijing Capital Group Co., Ltd. (BCG)** is an SOE of Beijing. It has 3 BUs - infrastructure, real estate, and financial services, owning 6 listed company, 2 of them are listed in HK.



**MTR Corporation Limited (MTR)** is held by HK Special Administrative Region Government, and listed on the Stock Exchange of HK. MTR operates 9 metro lines, 1 airport line as well as light rail whose total length is 218 and daily patronage is 5.1 million. MTR is famous for its safety, reliability, professional customer service and high cost efficiency.



# Background of Beijing Line 4

- The government officials from both Beijing and Hong Kong attended the 6<sup>th</sup> BJ-HK Investment Meeting. The intention of PPP model cooperation was raised in this meeting.
- The Concession Agreement was formally signed between BJMTR and BJ Municipal Government on 12<sup>th</sup> April 2006.
- Beijing Line 4 PPP project was the first metro project making the society investors involved in mainland China, and was also the biggest cooperation project in infrastructure field between BJ and HK at that time.

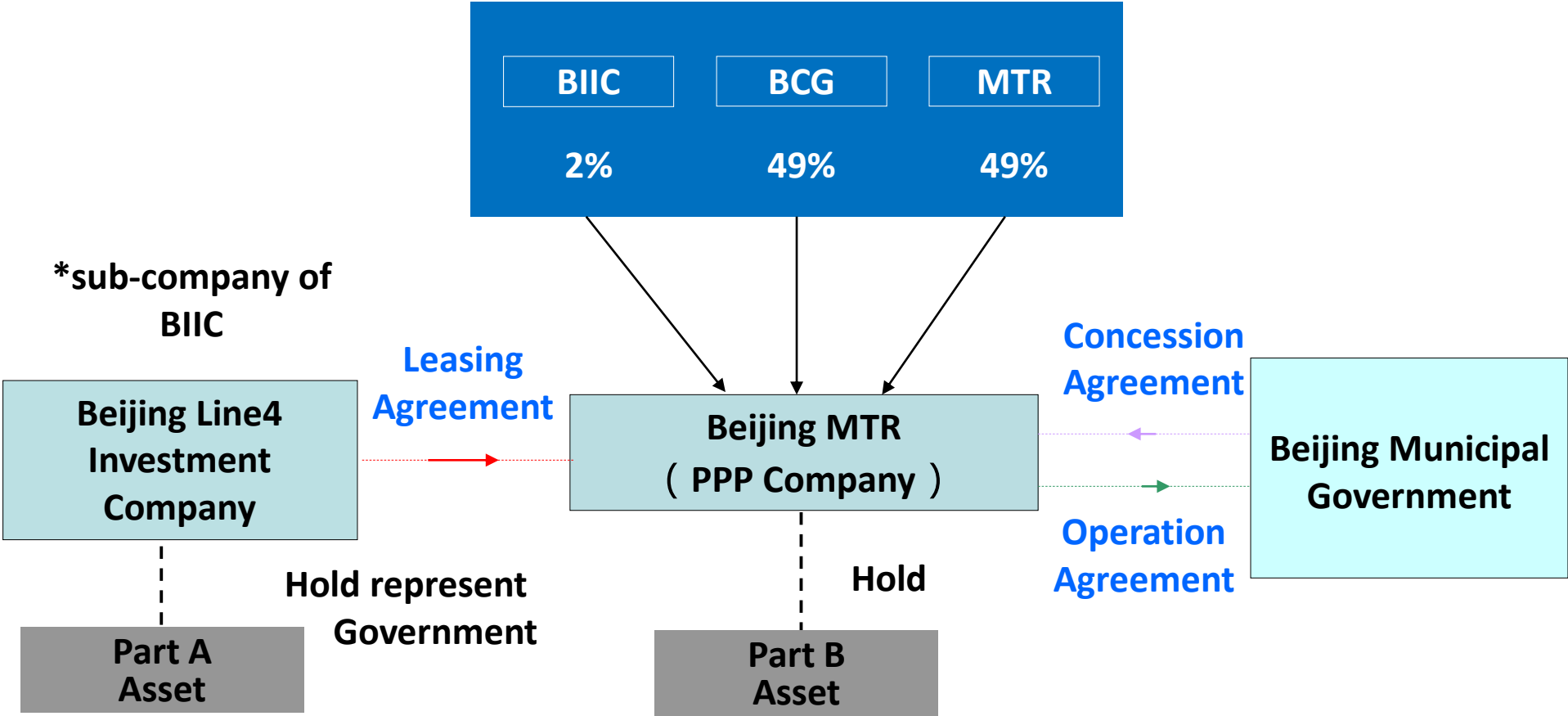


Signing Principal Agreement



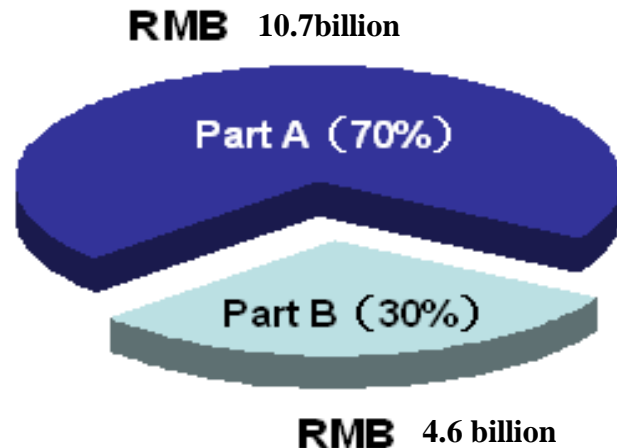
Signing Concession Agreement

# BJMTR – PPP Company



Beijing MTR Co. Ltd was funded on 16<sup>th</sup> Jan 2006

# PPP Project of Line 4



- Part A (Civil Construction / Channel) was funded by Beijing Municipal Government
- Part B (M&EE / trains) was funded by PPP company, BJMTR
- Set up a compensation mechanism linked to patronage and ticket fare, and PPP company is entitled to operate the project for 30 years.

**PPP project is market-oriented; therefore, it requires a reasonable ROI**

**On the other hand, metro is a non-profit public project; therefore, it still needs the subsidies from the government**

## Ticket Fare Mechanism

- (1) Currently, the ticket fare (2 RMB) was decided by Beijing Municipal Government
- (2) Operations costs changes with the changes of CPI, citizen income, and electricity price
- (3) The Concession Agreement of L4 set the initial ticket price of each operation, and set up a mechanism of periodically reviewing and adjusting the estimated ticket price while signing this CA, based on the changes of the 3 factors above
- (4) When the actual ticket fare (after clearance) is lower than estimated ticket price (after adjusting), the government shall pay the price difference subsidy to PPP company; when the actual ticket price is higher than the estimated price, the extra benefits will be shared by the PPP company and the government

## Risks taken by PPP Company

- Risk of Construction Costs Control:  
price, interest rate, exchange rate, construction period
- Risk of Operation Costs Control
- Patronage Risk
- Force Majeure Risks

# MTR's Elements in PPP Project



- **MTR's PPP Practice in China**
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- **Contributions and Challenges**



# Contributions

- **Tackle financial shortage issue, and speed up the metro development:** Take BJ Line 4 for an example, according to the post-evaluation organized by BJDRC, the whole project saved 4.6 billion RMB for the initiate investment, 600 million RMB for additional investment , and 4 billion for replacement and renovation.
- **Build up an example and boost city's comprehensive competitiveness**
- **PPP company has a strong motivation to save construction and operation costs, as well as ensure the project quality and operation safety.**
- **Clearly fixed the responsibilities of each parties via the contract**
- **Import a competition mechanism**
- **Coach the high-competent talents**

# Challenges

- Market-oriented ticket fare is basis of market operation of a PPP project; however, due to metro project's non-profit feature, the low ticket price policy still requires government financial subsidy. Therefore, the each parties of PPP projects needs relevant longer time to thoroughly and deeply understand the model.
- Metro project is feature by huge investment, long investment return period, high construction difficulty, technical sophistication, and wildly involved by different parties. Hence, constitution of agreement and negotiation is regarded as a complicated systematical project, which therefore requires abundant input from the participated parties at the initiation stage of the project.
- Presently, metro is quickly developed in China, and the preparation time of PPP model for government and investors are limited.

*Thank you !*