

# Korea's PPP Policy and Risk Managing Measures



Ministry of Strategy  
and Finance

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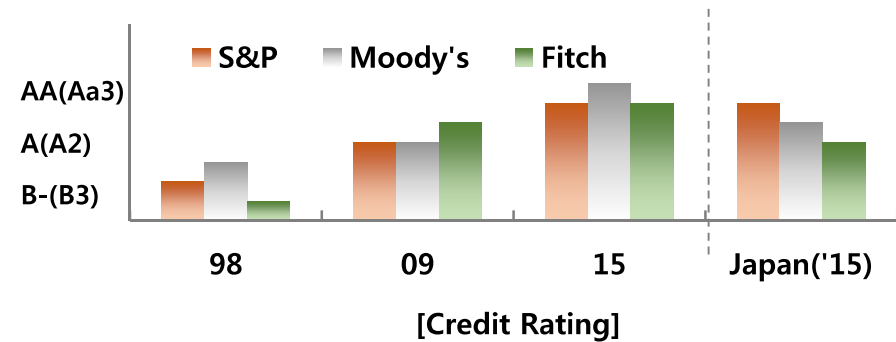
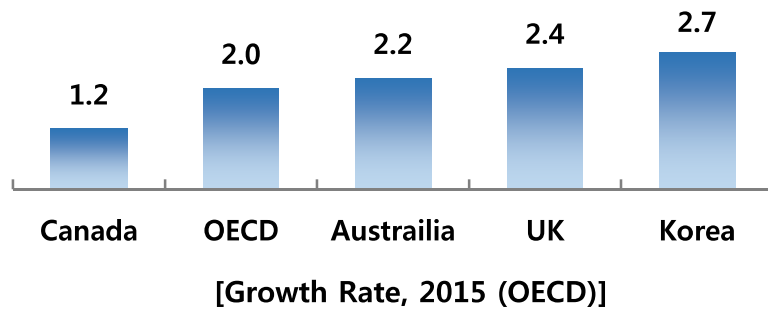
# **I. Economic and Fiscal State of Korea**

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# Korean Economy at a Glance

## Economic Growth



## Soundness of National Finance

(Compared to GDP, %)

	Korea	France	Japan	UK	Canada	USA	OECD avg.
Fiscal Balance	△2.1	△4.4	△8.3	△5.5	△2.0	△5.1	△3.9
National Debt	35.7	114.1	230.0	95.9	93.9	109.7	112.0

(OECD Outlook, '14.11)

# SOC Stocks

## SOC Stocks

	Dimension	1960	1970	1980	1990	2000	2010	2014
Road	(km)	27,169	40,244	46,950	56,714	88,775	105,565	105,673
Railway Passengers	(Mil., per year)	-	-	469	644	837	1,061	1,263
Airport Capacity	(1,000 flights, per year)	-	-	-	1,578	1,887	-	2,197
Port Capacity	(Capacity/Quantity)	-	-	-	78.6	79.3	93.9	99.8
House	(per 1,000 ppl)	-	141	142	170	249	364	-

## Several SOC issues

### ROAD

Express Way (km)

: ('77) 1,225 → ('14) 4,111

### RAILWAY

KTX (km)

: ('04) 238.6 → ('14) 368.5

### AIRPORTS

Passengers (thousands/year)

: ('95) 33,600 → ('14) 81,426

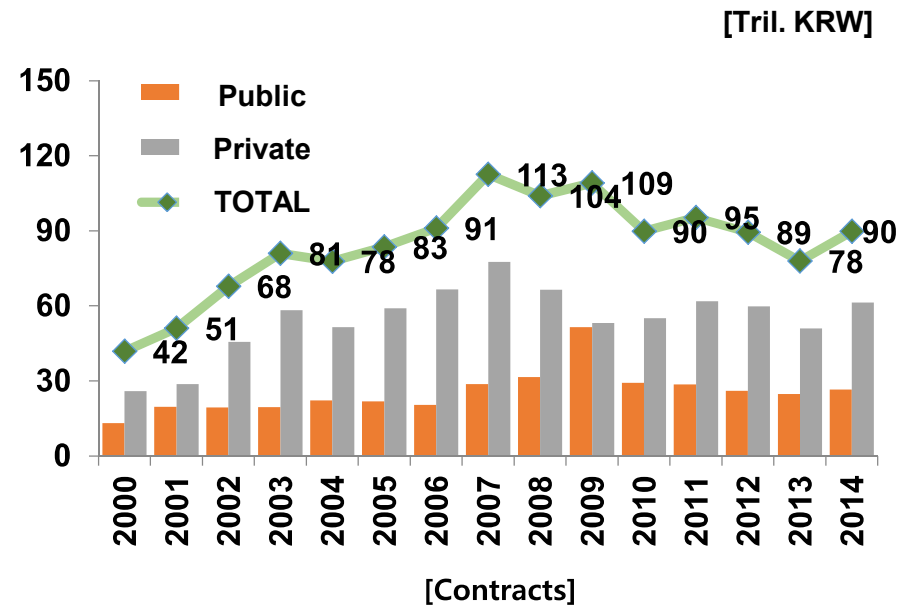
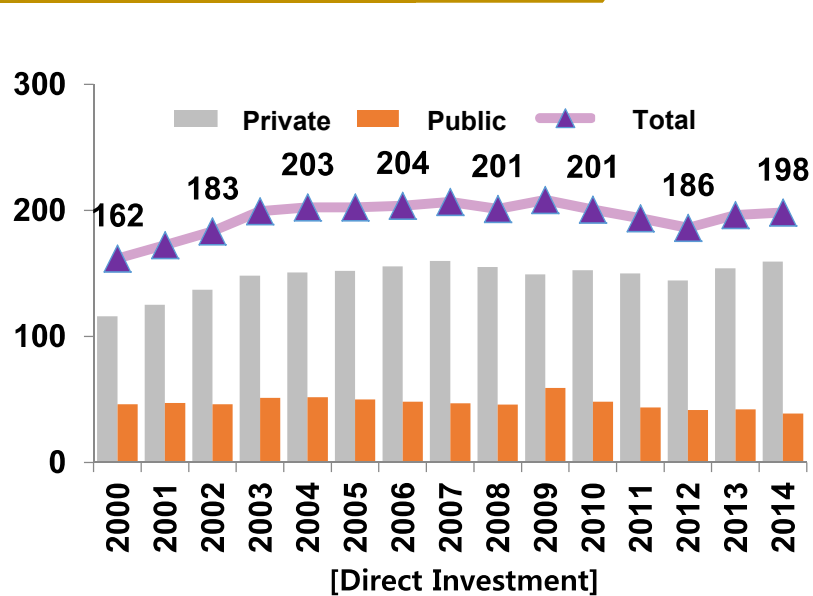
### PORTS

Goods (mil. ton)

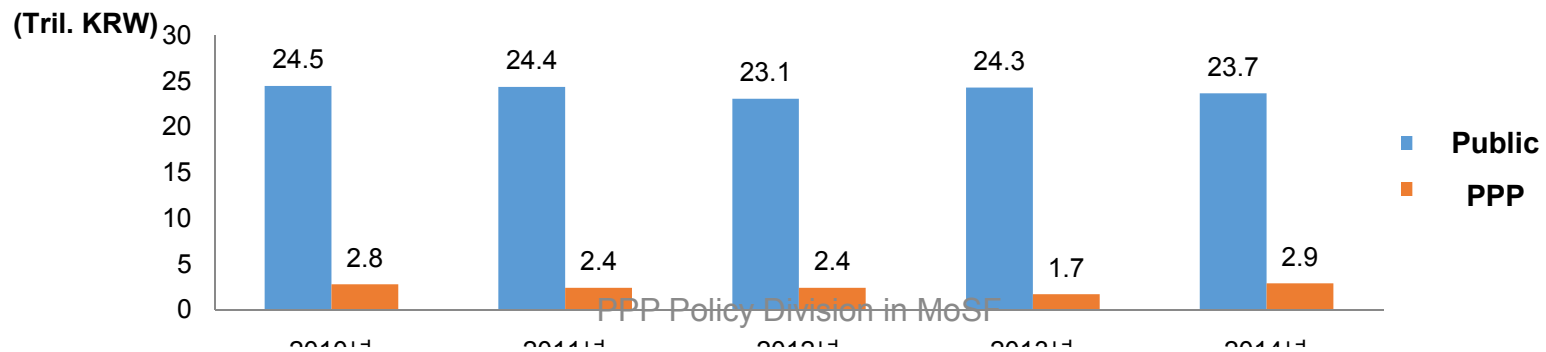
: ('88) 293 → ('14) 1,415

# SOC Investment

## Total SOC Investment



## Publicly financed vs. PPP financed



PPP Policy Division in MoSF



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## **II. Institutional Arrangement**

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# PPP Procurement Types

	<b>Build-Transfer-Operate (BTO)</b>	<b>Build-Transfer-Lease (BTL)</b>
<b>applicable facility type</b>	Facilities where investment costs can be collected (recovered) by levying user fee (Express Road, Seaport, Subway etc.)	Facilities where investment costs can't be collected(recovered) thru levying user fee. (schools, military facilities, library etc.)
<b>Investment collection</b>	User fee (payment by beneficiary principle)	Government's rent (Burden on Public Finance)
<b>Risk</b>	High risk, high return (IRR > 5.0%)	Low risk, low return (IRR < 3.0%)
<b>budget support</b>	<p>&lt;during construction &gt;</p> <ul style="list-style-type: none"> <li>• construction subsidy(20~50% of total investment cost)</li> <li>• 100% of the land acquisition cost</li> </ul> <p>&lt;during operation &gt;</p> <ul style="list-style-type: none"> <li>• MRG Payouts(abolished in 2009)</li> </ul>	<p>&lt;during construction&gt;</p> <ul style="list-style-type: none"> <li>• No construction subsidy</li> <li>• 100% of the land acquisition cost</li> </ul> <p>&lt;during operation&gt;</p> <ul style="list-style-type: none"> <li>• government's rent(payment) (equiv. to total investment cost)</li> </ul>
<b>Achievement</b>	<b>229 PJs, 73.6 Tril. KRW</b>	<b>461 PJs, 30.5 Tril. KRW</b>

# PPP Procurement Types

	Build-Transfer-Operate (BTO)	Build-Transfer-Lease (BTL)
applicable facility type	  	  

# PPP Procurement Process

## Solicited Project

1) PFS and Feasibility evaluation

2) Designate project as PPP

3) RFP draft Announcement

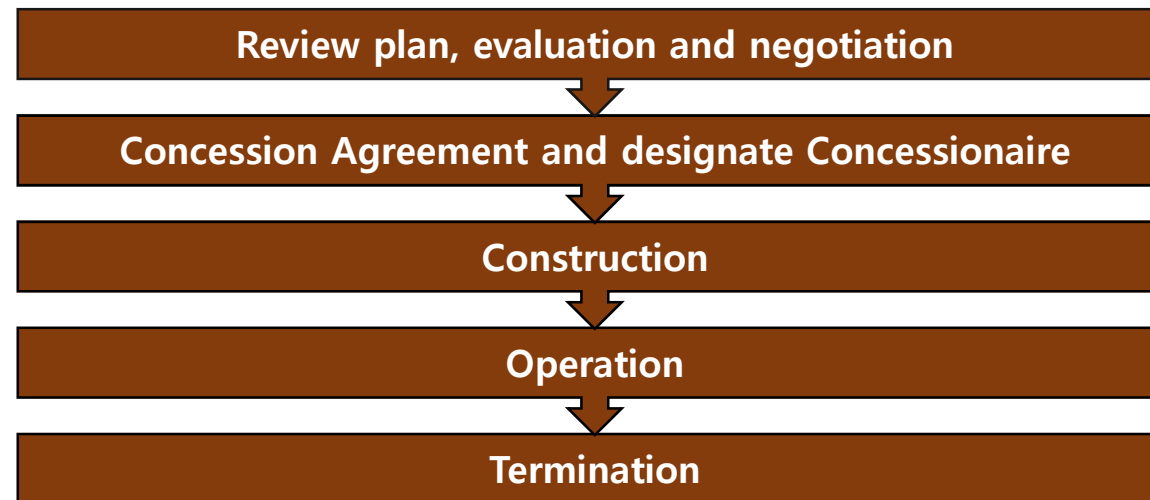
## Unsolicited Project

1) Proposal from private sector

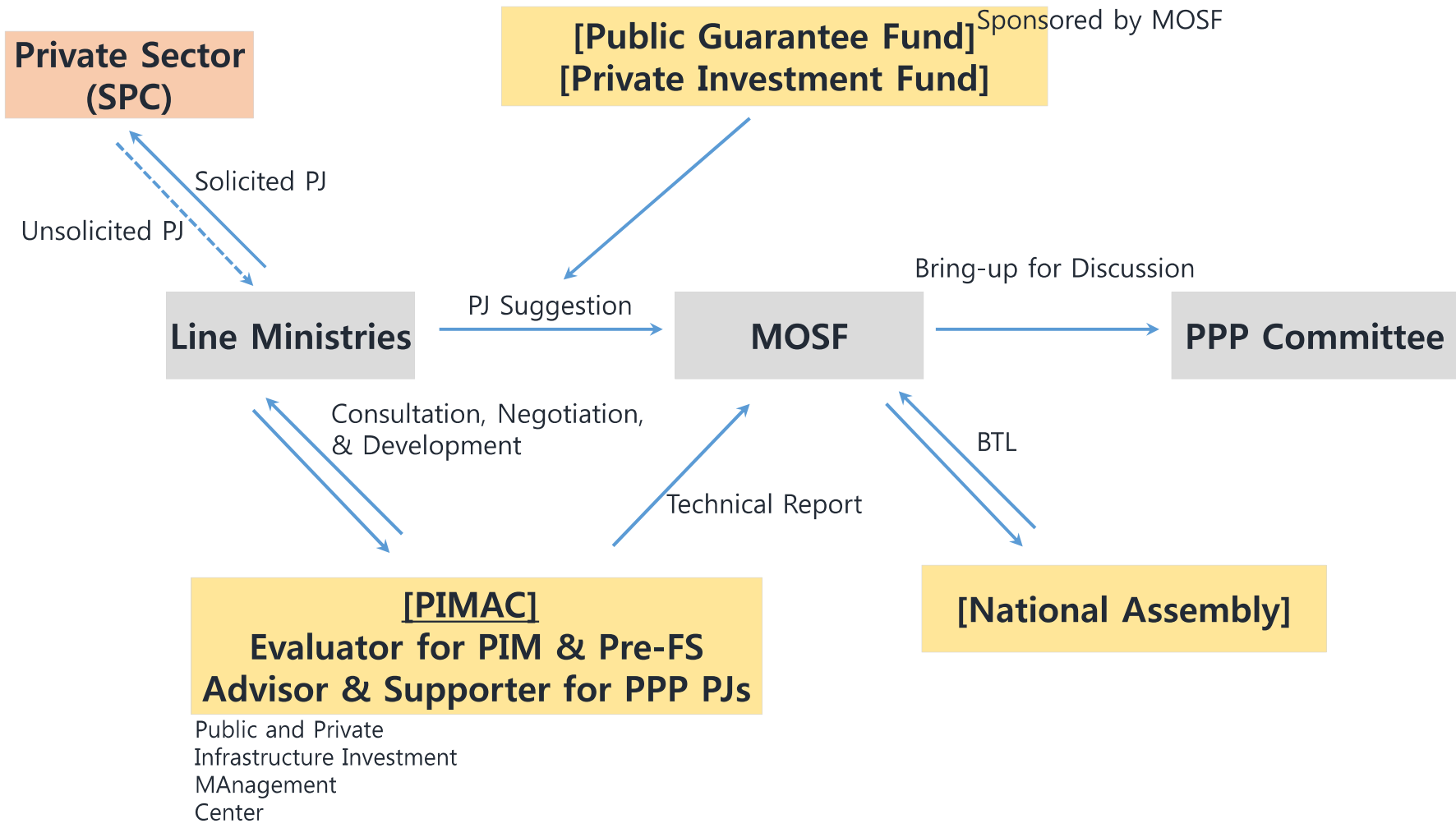
2) Feasibility evaluation

3) Decide unsolicited project

4) Announcement for the 3<sup>rd</sup> person proposal



# Major Players of PPP in Korea





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## **III. Efficient Risk Sharing**

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# Types of Risk Sharing

## Types of Risk

**Construction  
Risk**

**Operation  
Risk**

**Procedural  
Risk**

**Force Majeure  
Risk**



## Risk Sharing Measures

- Land Acquisition
- Construction Subsidy

- MRG
- Credit Guarantee Fund
- Rent and Operation Subsidy(esp. BTL)

- Dispute Mediation Committee
- One-shot Permission

- Termination Payment

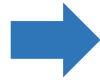
# Construction Risk Sharing

## Land Acquisition Cost Support

- Land acquisition cost for BTO and BTL projects is covered by the gov'n't because the facility will be eventually transferred to the gov'n't.
- In some cases, when a PPP project is very profitable, the SPC bears land acquisition expenses.

\* In FY2015, land acquisition budget takes 37.5% of all PPP related budget expenditure (1.26 trillion KRW)

## Construction Subsidy



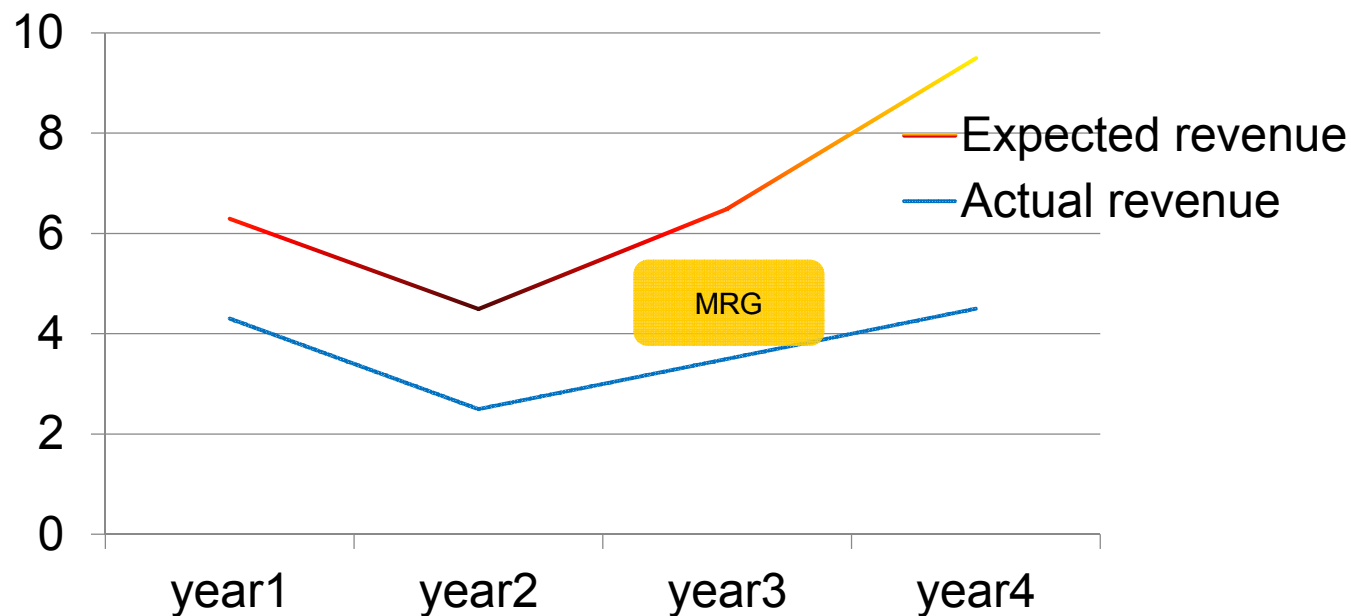
**With these subsidies, SPCs can secure relevant IRR of the projects.**

- Roads: within 30% of total investment cost
- Railroads: within 50% of total investment cost
- Ports: within 30% of total investment cost
- Environmental facilities: commensurate to facility types and local government's support

# Operation Risk Sharing

## MRG (Minimum Revenue Guarantee)

- The government may pay the difference between expected revenue and actual operation revenue.
- If the actual operation revenue exceeds the expected revenue, it will be redeemed within the limit of the amount previously paid.



# Operation Risk Sharing

## Infrastructure Credit Guarantee Fund

- It provides credit guarantee for the SPCs obtaining a bank loan
- Guarantee amount: Maximum 300 million USD per project
- Has guaranteed 194 PJs, 20.8 trillion KRW so far

## Rent and Subsidy (esp. BTL)

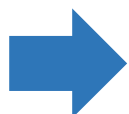
- BTL types of facilities are built thru privately invested capital, then the government pays the whole investment cost in equal installment for certain duration of time (ex. 20 yrs)
- BTL procurement is much like government budget in that, government annually pays rent (lease) directly to the concessionaire

# Force Majeure Risk Sharing

## Termination Payment

- PPP Act: When PPP projects can't be continued;
  - SPC may request the gov't to buyout the project in the case of termination of construction or operation of facility due to unavoidable incidents including force majeure.
  - Gov't takes over the management & operation rights of the facility, offering a certain amount of termination payment to the SPC.

Responsibility attributable to	Amount of termination payment
SPC	Total private investment – invested capital
Natural disaster	Total private investment(1+r)
War	Between natural disaster and government responsibility
Government	Total private investment(1+r+premium)



### Collateral role when SPC obtains a loan from FI

\* In case of SPC's responsibility, FI can secure(collect) at least principal



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# **IV. Fiscal Risk Management**

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# Government Budget Support

## Risk Sharing Measures

- Land Acquisition
- Construction Subsidy

- MRG
- Credit Guarantee Fund
- Rent and Operation Subsidy(esp. BTL)

- Dispute Mediation Committee
- One-shot Permission

- Termination Payment



**Supported by  
allocation of budget  
(mandatory earmarking)**

# Ref.) PPP Support Budget for 2015

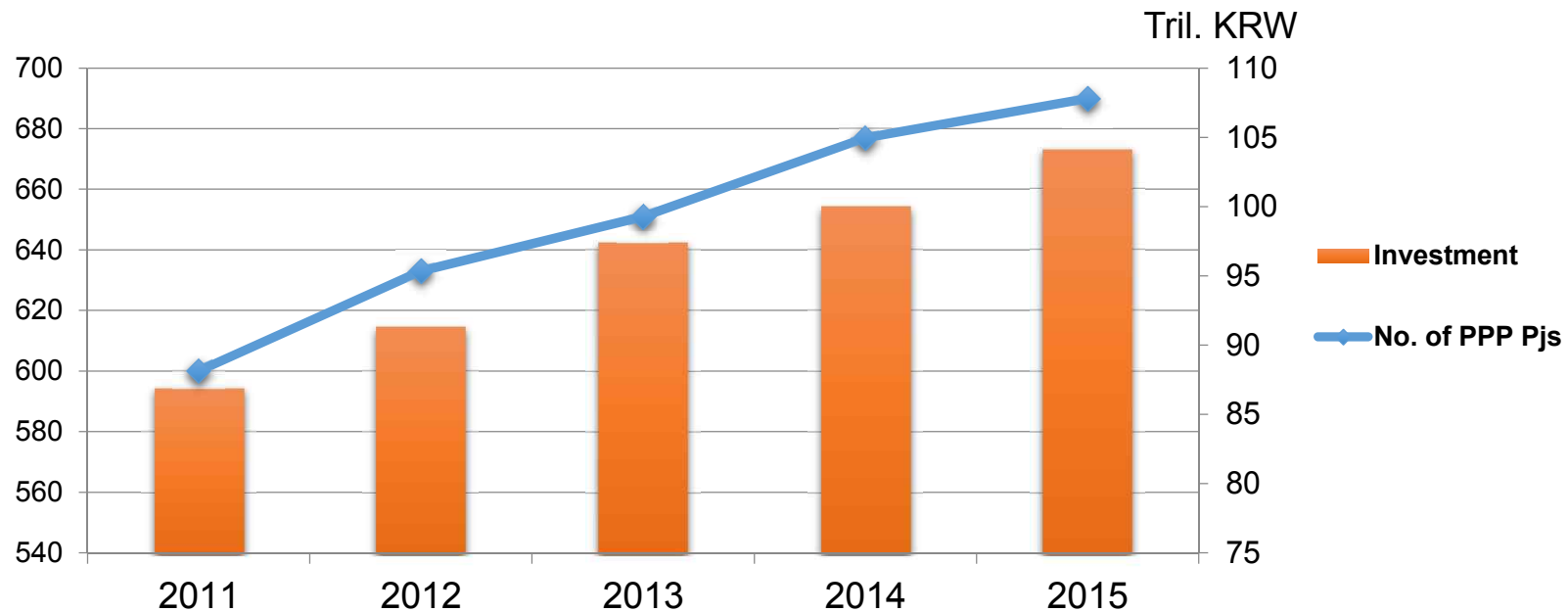
- PPP related budget amount(KRW 5.4 trillion) is about 1.38% of total budget amount of central and local government

Bil. KRW

procure type	type of infra.	Budget Item	'15 Budget
<b>BTO + BTL</b>			<b>5,420</b>
BTO	<b>Total</b>		<b>3,031</b>
	Roads, Railroads, Seaports, Environment	Construction Subsidy	556
		Land Acquisition	1,544
		MRG	528
		ETC.	402
BTL	<b>Total</b>		<b>2,389</b>
	Defense, Environment, Education, Others	Rent	1,947
		Operation Cost	399

# Increasing Number of Projects

- PPP projects usually last more than 30 years and new projects keep launching every year.
- The total number of projects and investment keeps increasing, resulting future fiscal burden to the government





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# **IV. Fiscal Risk Management**

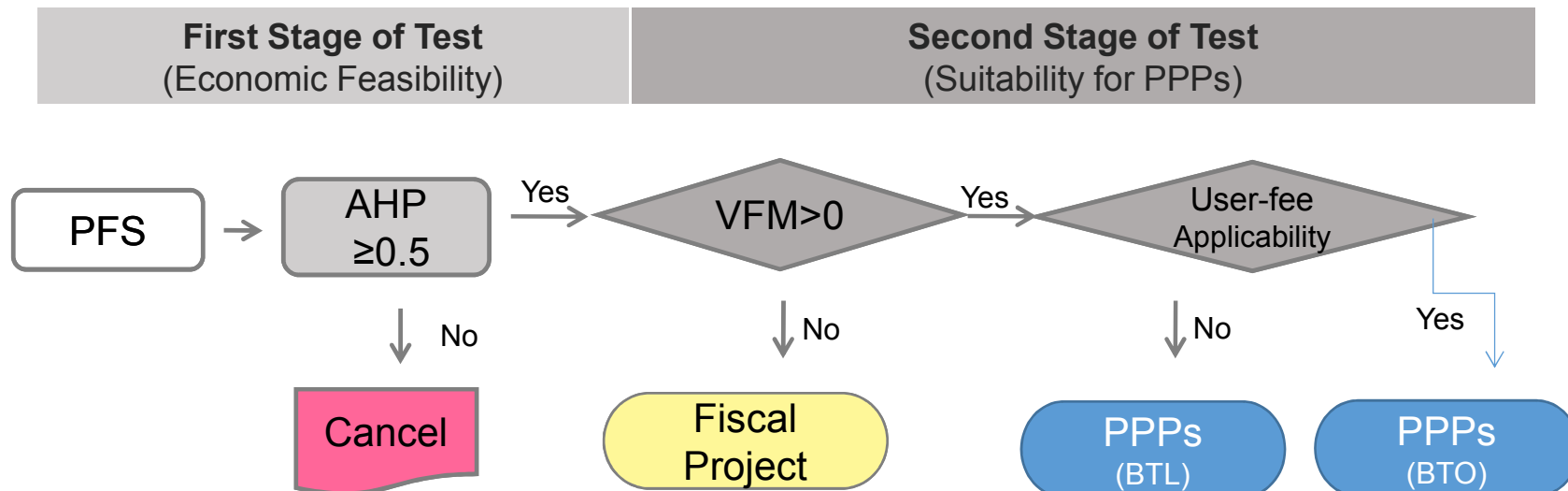
## **- thru Feasibility Evaluation**

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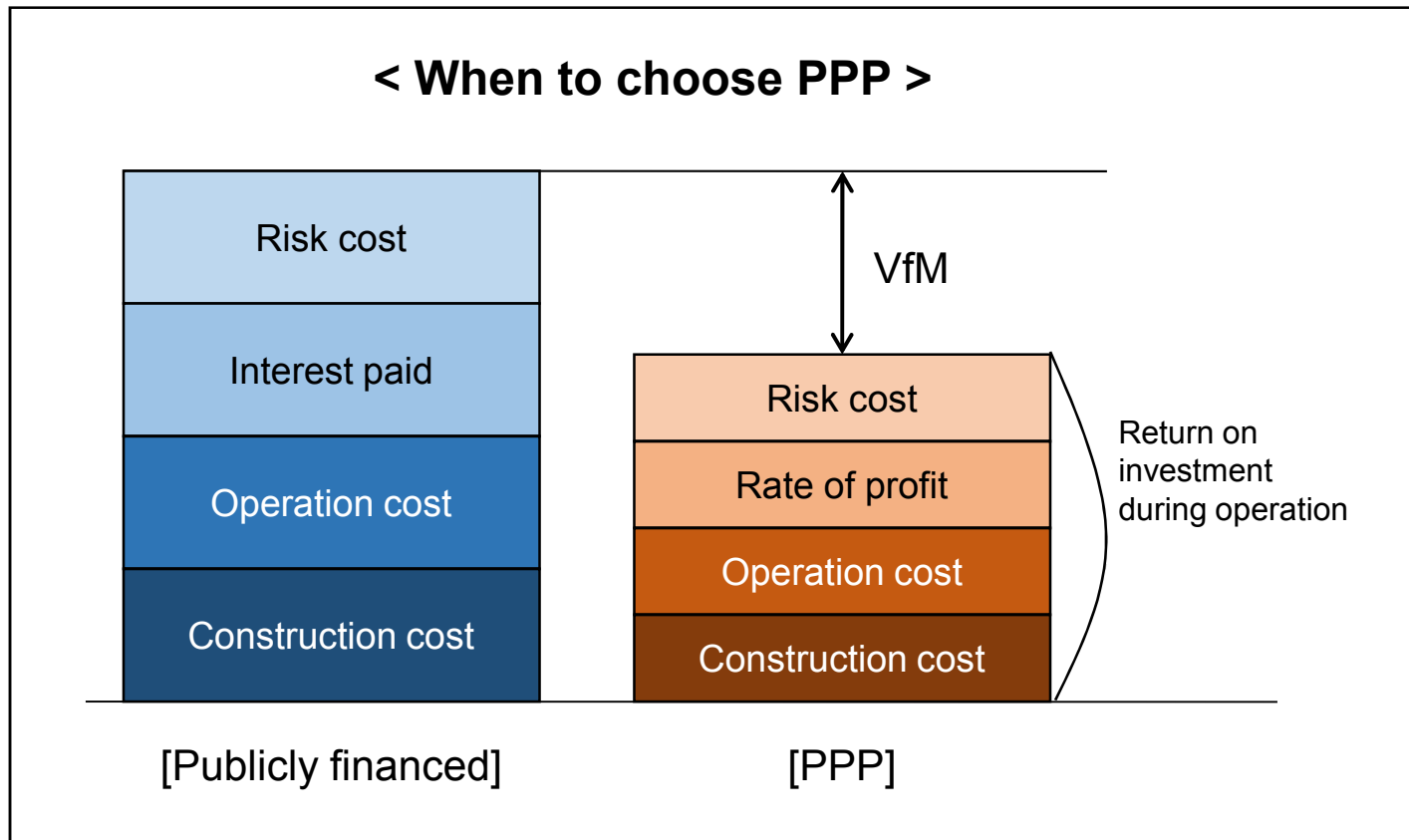


# Feasibility Evaluation (F/S and VfM test)

- PPP projects are subject to the same F/S as publicly financed projects.
  - 1<sup>st</sup> stage(Feasibility Study): Economic and Political Feasibility ( $AHP \geq 0.5$ )
  - 2<sup>nd</sup> stage(Value for Money Test): Decide whether PPP procurement is better than government procurement( $VfM > 0$ )
  - 3<sup>rd</sup> stage(Design PPP implementation alternative): Calculate reasonable project cost, user fee level, budget support amount etc.



# Ref.) VfM Test





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# **IV. Fiscal Risk Management**

## **- thru Monitoring and Evaluation**

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# Self-Monitoring : 2% Fiscal Rule

- In 2007, Korean government set 2% fiscal rule on PPP project related fiscal expenditure.
  - 2% rule is to maintain the percentage of PPP related budget in total government budget under 2%

## < PPP related budget vs. Total govt. budget >

(trill. KRW, %)

Item	2009	2010	2011	2012	2013	2014	2015	2016
Total expenditure(A)	324.1	319.3	330.7	348.5	374.5	383.5	397.1	414.8
PPP related expenditure(B)	2.8	2.3	2.8	3.7	4.3	5.8	5.0	5.1
<b>Ratio of PPP expenditure(B/A)</b>	<b>0.9</b>	<b>0.7</b>	<b>0.8</b>	<b>1.1</b>	<b>1.2</b>	<b>1.5</b>	<b>1.3</b>	<b>1.2</b>

# Triennial Comprehensive Evaluation

- Every 3 years, a comprehensive evaluation of the PPP projects are conducted and the evaluation results are fed back in major policy directions.

## < Main result of 2013 comprehensive evaluation >

class.	evaluation
performance	From 1995 to 2012 total number of PPP projects is 633, total investment cost amounts to KRW 93.3 trillion
Effects on national economy	Analysis proved the effective PPP projects contributed to economic growth, employment, fiscal soundness, and public welfare
Policy recommendation	Facilities types eligible for PPP projects need to be expanded to include public buildings, crematory facility etc * PPP eligible facilities are defined in the PPP Act on a positive system

# Monitoring by National Assembly

## Ex-ante approval of BTL budget ceiling

- National Assembly deliberates & determines BTL expenditure ceiling.  
Budget support(rent + operation cost) is paid in equal installment during operation period

※ Recent expenditure ceiling (bill. KRW): ('12) 757 → ('13) 699 → ('14) 494 → ('15) 536

## Annual Report to the National Assembly

- MoSF annually prepares report (end of May) on the PPP project operation status and performance analysis of the PPP projects(Y-1) and submit the report to the National Assembly
- PPP project information can be assessed by the citizen thru internet.



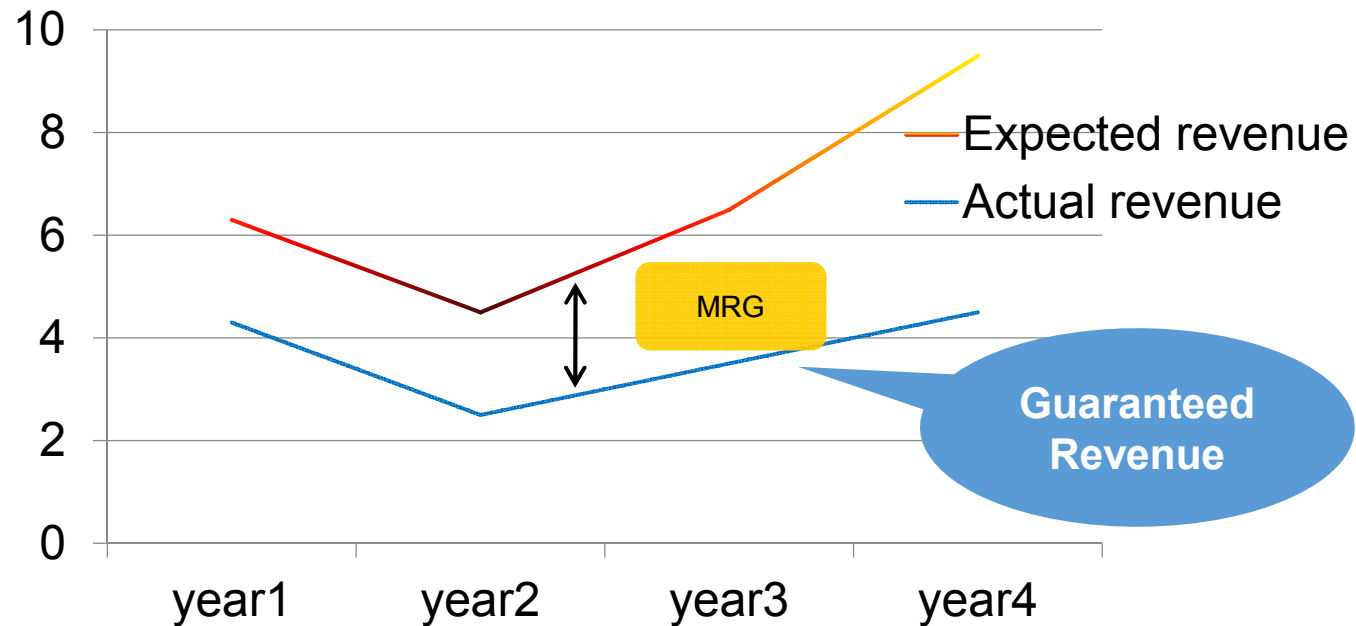
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# **IV. Fiscal Risk Management**

## **- thru Reforming MRG**

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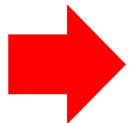
# Positive Effect of MRG



**In the early days of Korean PPP, MRG played an important role in attracting private sectors to PPPs**

# Negative Effect of MRG

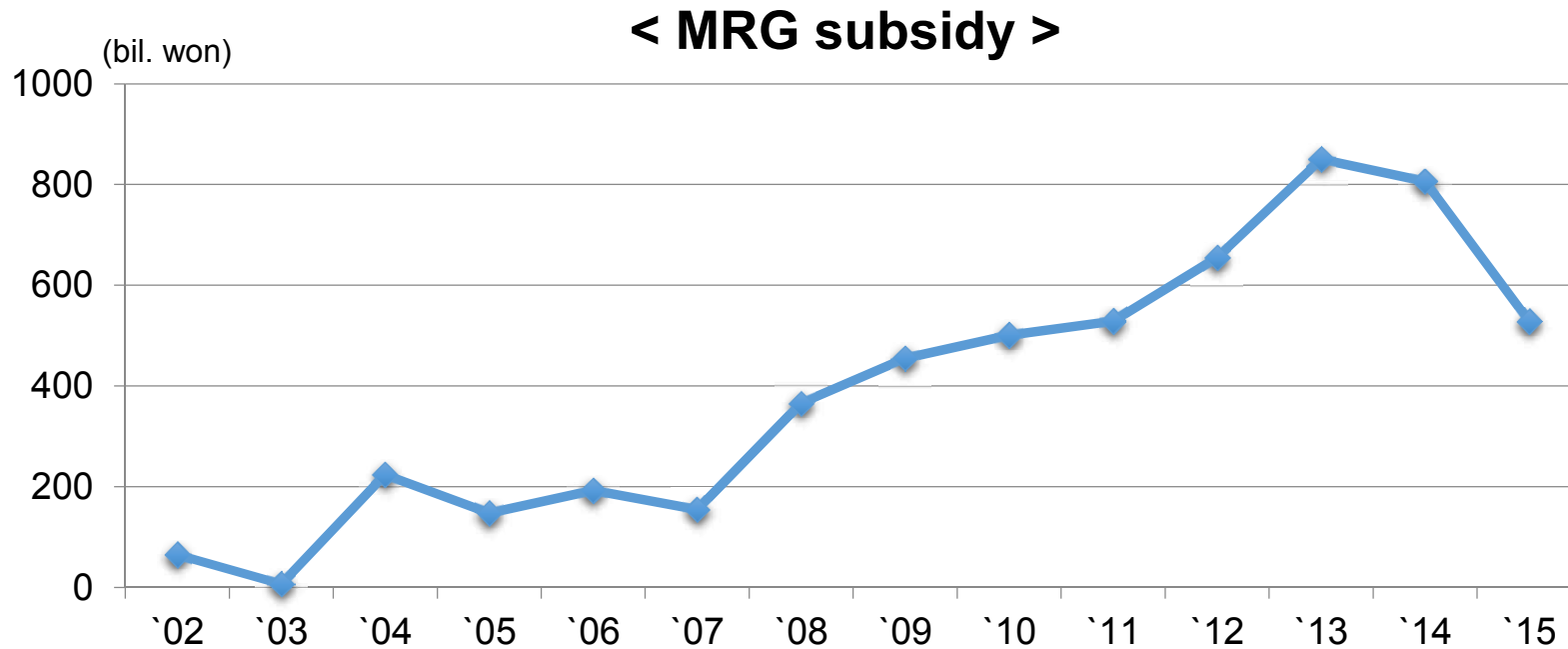
- Overestimated traffic volume
  - Overestimated expected revenue
- Huge fiscal burden caused by subsidy for MRG
  - National Assembly and NGOs raised big issues on MRG
- Moral hazard by SPCs
  - No need for improvement in service quality which boosts actual revenue



**In 2009, MRG was abolished in PPP Act.**

# MRG-related Fiscal Burden so far

- 78 MRG cases in Total. By 2015, 5.5 trillion won for 45 PPPs
- Subsidy Amount ; (2002) 65 billion → (2015) 528 billion won



# MRG-Relief Measures 1: Sharing Refinancing Revenue

## Concept

- When SPC's revenue increases by Refinancing\*  
government and SPC share its additional revenue.

\* Refinancing: PPP contract changing concerning sponsor's stake, capital structure or borrowed capital conditions.

## Sharing Rate and Usage

- Competent authority : SPC = 50:50 (without MRG; 30:70)
- Competent authority uses shared revenue to cut user-fee, deduct MRG subsidy or shorten free-operation period.

## Achievement

**MRG rate 90% → 46~82%, cut user-fee, 13 cases**

# MRG-Relief Measures 2: Restructuring

## Concept

- Existing shareholders sell maintenance & operational rights to new shareholders, moving from MRG to Cost Compensation(CC) structure
- Over the rest of the contract period, compare operating cost with return, covering or collecting the difference

\* Actual income > cost → excess return reduces a toll

Actual income < cost → the government makes up the shortfall

## Achievement

### **adjusted a toll and reduced public spending**

- e.g. 9 successful cases: Yong-in Light Rail(July. 2013), Seoul Subway Line 9 (Oct.2013), Won-jeok Tunnels (Incheon, April 2014) etc.

## Constraints

### **available with the consent of private partners**

- Private participants do not prefer any contractual change due to concern over lower return, negligence, etc.



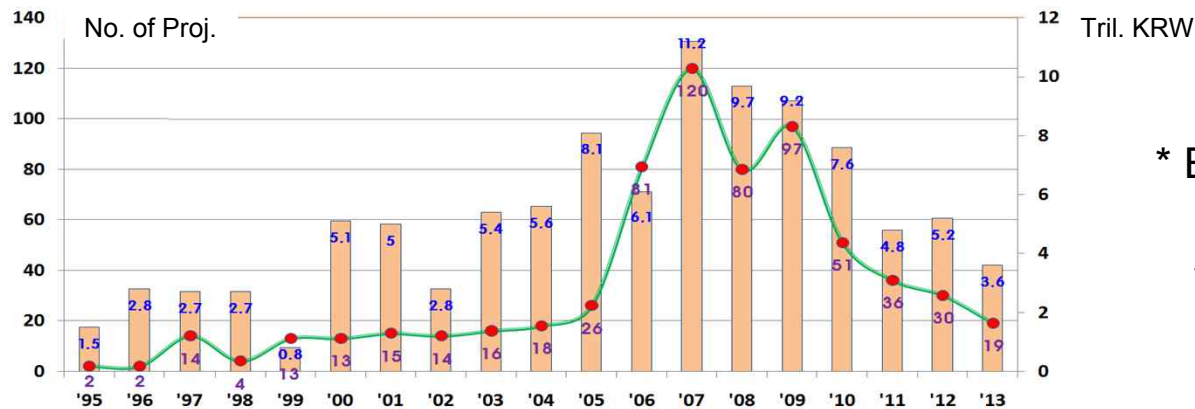
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## **V. PPP Re-invigoration Initiative**

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# Background of PPP Invigoration Policy

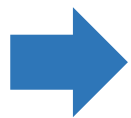
- Declining number of PPP projects due to the abolition of MRG, subject limitation, financial crisis



\* BTO contract  
 ('05) 18, 7.7tril.  
 → ('14) 9, 1.6tril.

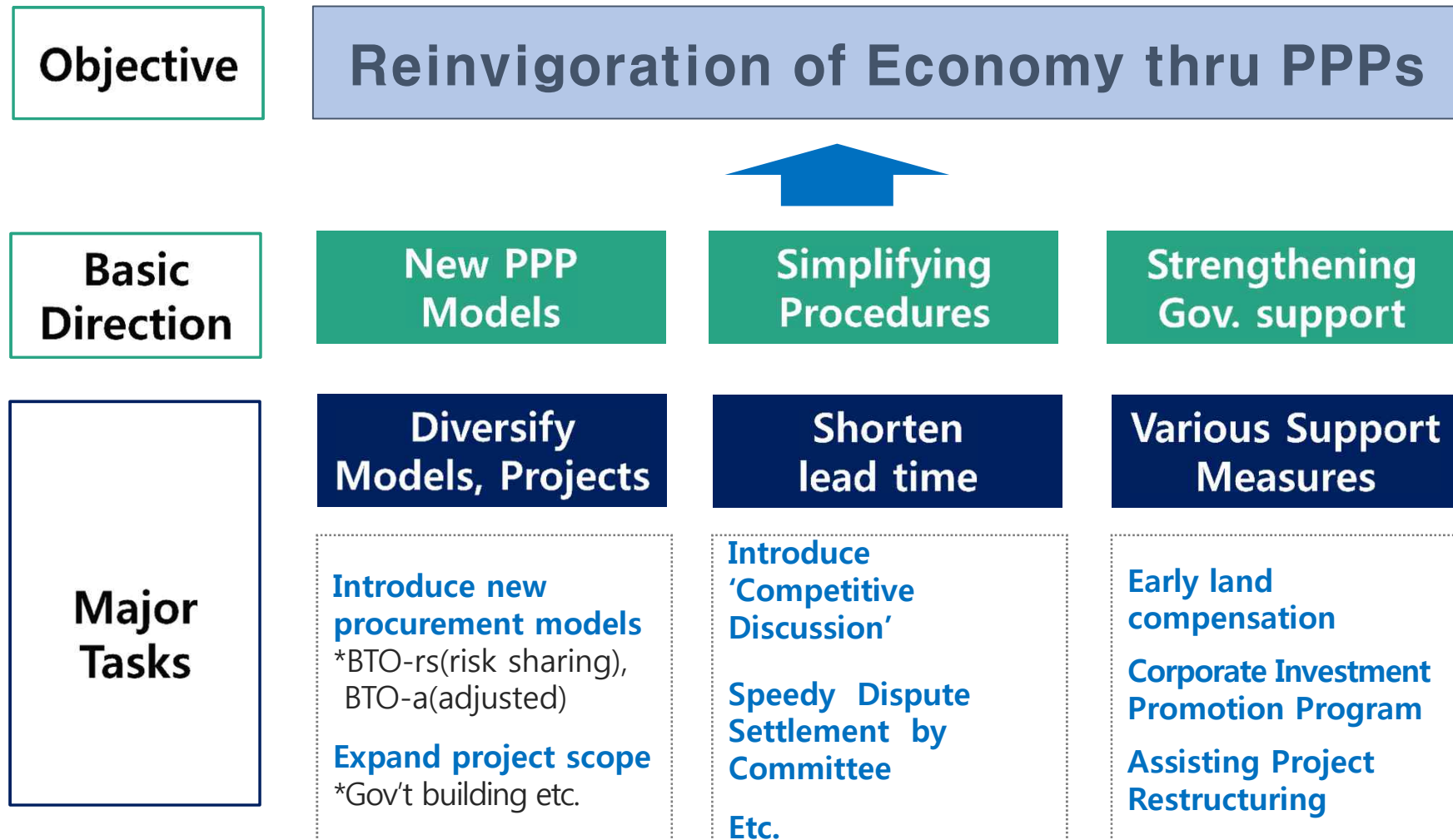
- On the other hand, private investors keep searching for investment opportunities with extra money in hand\*

\* Time deposits less than a year: ('12) 54tril. → ('15) 100tril. KRW

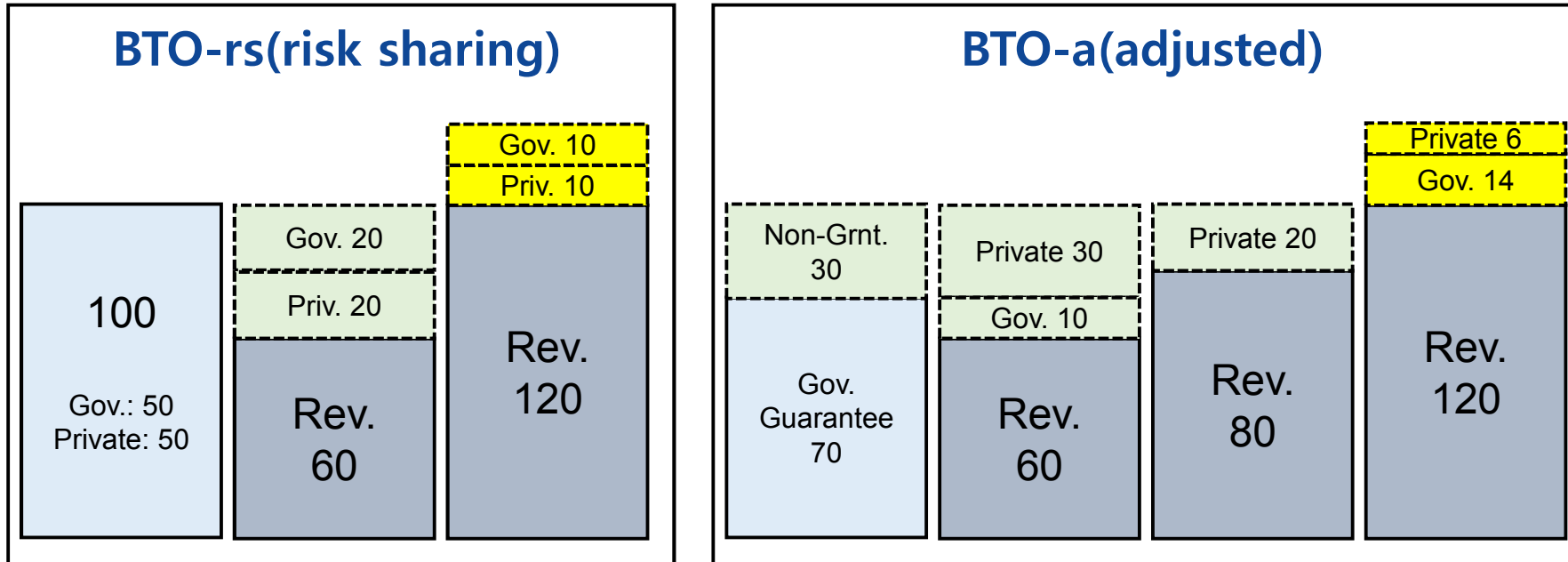


**Measures to attract private investors and to promote national economic recovery**

# PPP Invigoration Policy



# New PPP Models



## Simulation results

Toll road Cheonan – Nonsan (81km - Profitable)	IRR(%)			Government Support (bil. Won)		
	BTO	BTO-rs	BTO-a	BTO	BTO-rs	BTO-a
	10.32	5.11	4.42	649	-607	-677
				(Benefit Sharing)		

# Newly Launched PPPs

2015

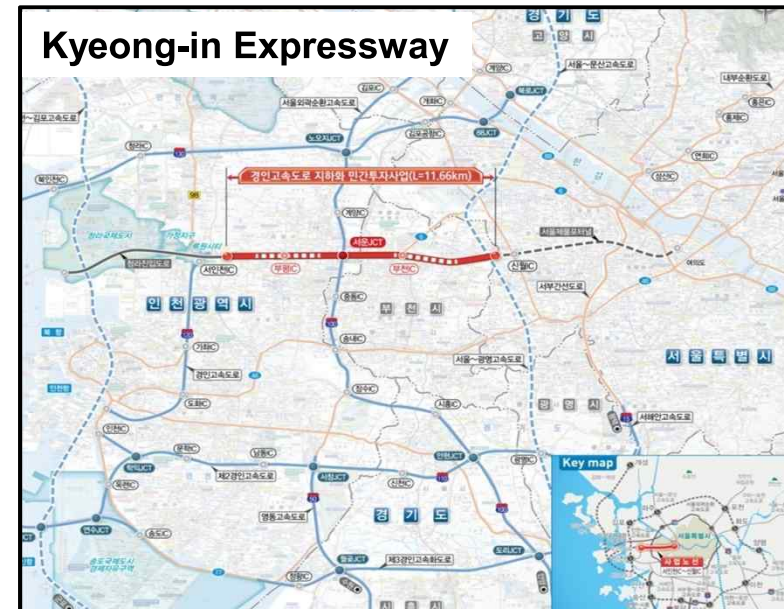
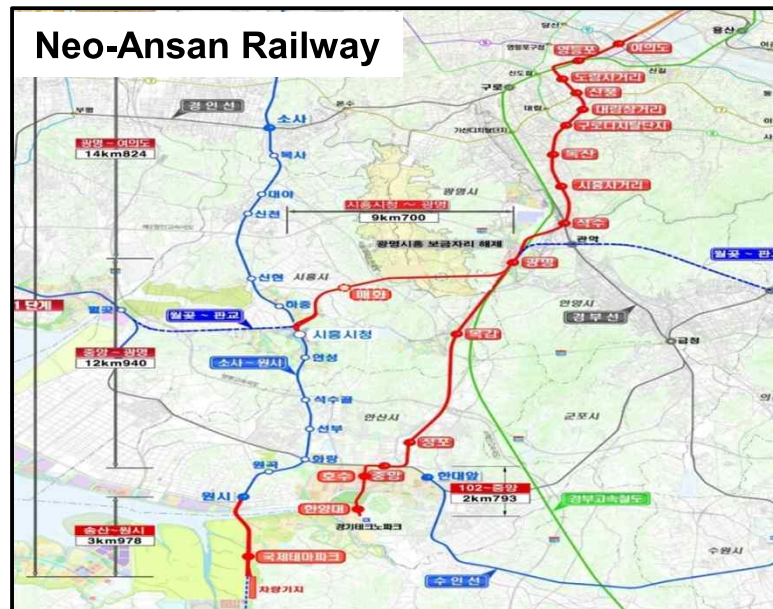
## 6 Solicited PPPs, 13 tril. KRW

\* Seoul-Sejong Expressway(5.3), Seoul-Incheon Sub-road(1.0), GTX-A(3.3), Neo-Ansan Railway(3.2), Wirye Line of Seoul Metro(0.2), Sewerage system(0.1)

2016.6

## 15 Unsolicited PPPs, 26 tril. KRW

\* 7 toll roads, 3 railways, 2 metros, 2 environments, and 1 port



# Key Factors for Successful PPP

- **Cooperative partnership between public and private**
- **Private sector contributes to efficiency and creativity**
- **Government make rules and environment,  
encourage private investment**
- **Technical support from PIMAC**

# Future Challenge

- **Negative publicity from users and national assembly**
- **High user-fee compared to fiscal project**
- **SPC's moral hazard**
- **Legal dispute between government and SPC**
- **Risk averse tendency of private investors**



**Thank you**