

# *Chinese Outbound Funding*



"China-West-Developing Markets" Infrastructure

Collaboration - Chinese bilateral financing, One-Belt-

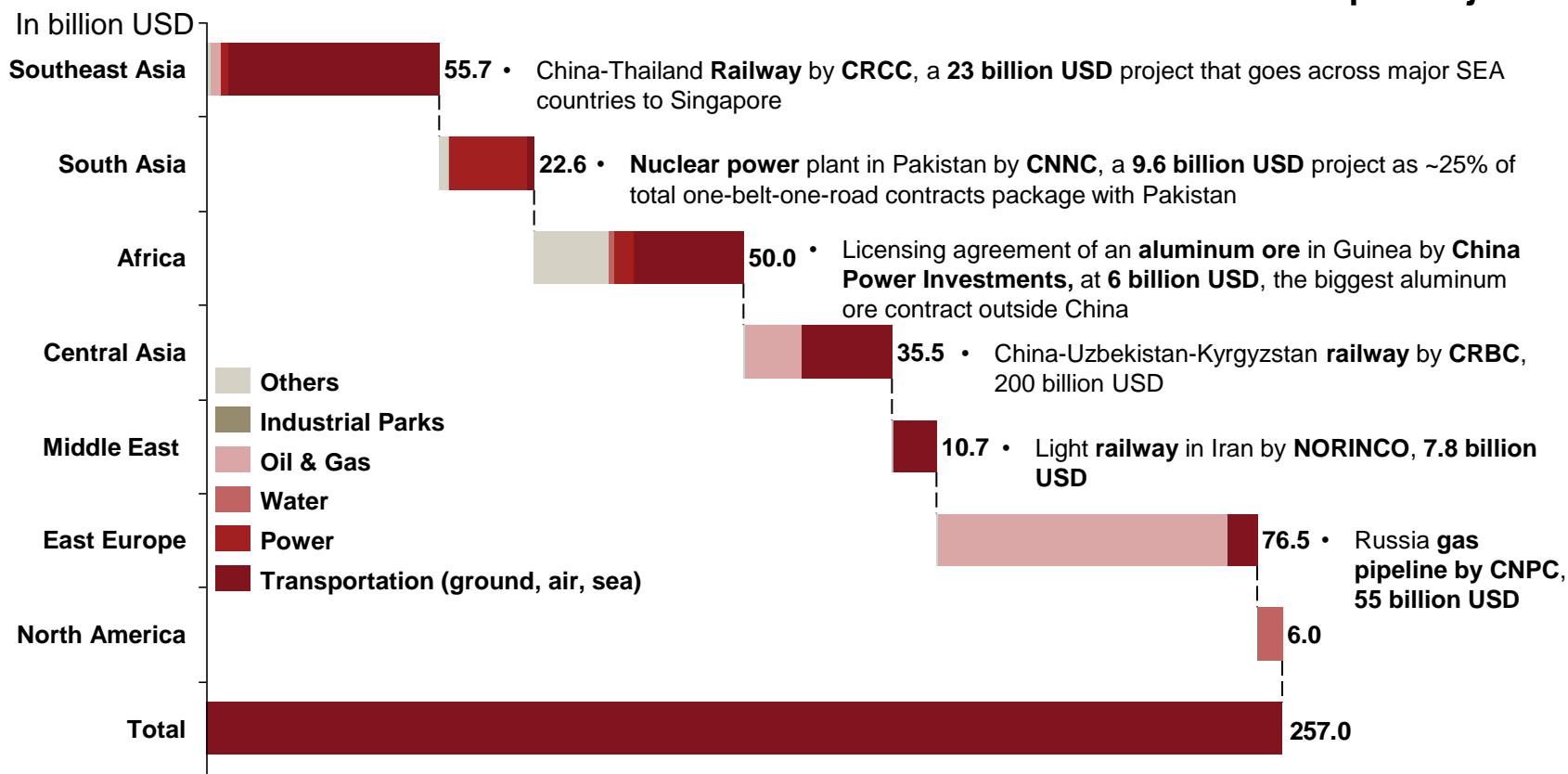
One-Road, host government PPP, and western capital

markets

# We have started to track a subsection of OBOR projects, worth a total of >250B USD

## Contract Value of Projects by Region in PwC OBOR Database

## Representative Sample Projects



\*Projects are collected from publicly available sources with a focus on projects contracted after the announcement of one-belt-one-road strategy

Source: literal search, Strategy& analysis

# List of Countries along One Belt One Road

There are 65 countries along One Belt One Road, which includes:

## Middle East Europe (16)

- Poland
- Romania
- Czech Republic
- Bulgarian
- Lithuania
- Slovenia etc.

## West Asia & North Africa (16)

- Saudi Arabia
- United Arab Emirates
- Egypt
- Iran
- Turkey
- Israel etc.

## Commonwealth of the Independent States (11)

- Kazakhstan
- Uzbekistan
- Ukraine
- Kyrgyzstan etc.

## Russia

## Mongolia

## China

## South Asia (8)

- India
- Pakistan
- Bangladesh
- Nepal etc.

## Southeast Asia (11)

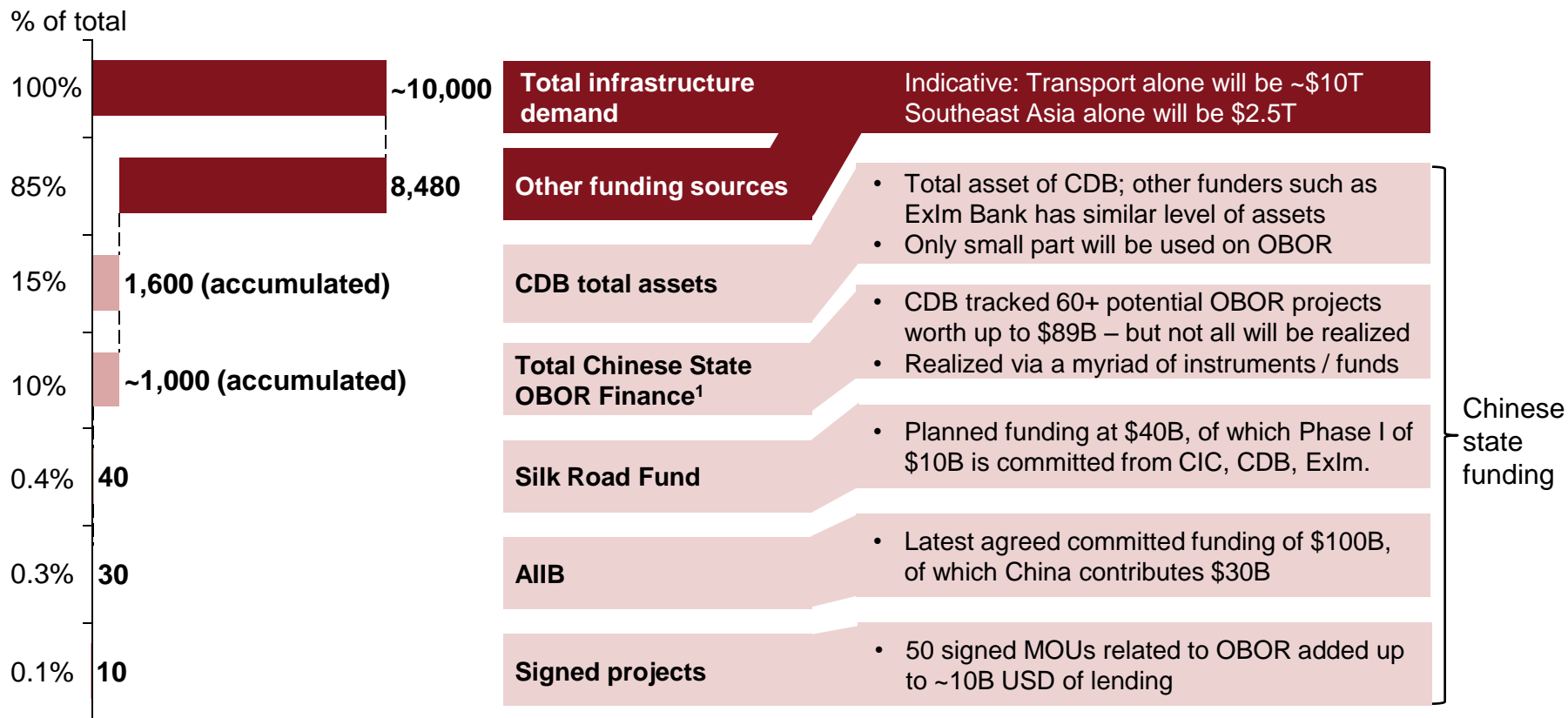
- Indonesia
- Thailand
- Malaysia
- Vietnam
- Singapore etc.

Source: literal search, Strategy& analysis

# ***While China will fund up to trillion dollars to OBOR/FOCAC, this is only a fraction of global infrastructure demand***

## **Developing Markets Infrastructure Demand**

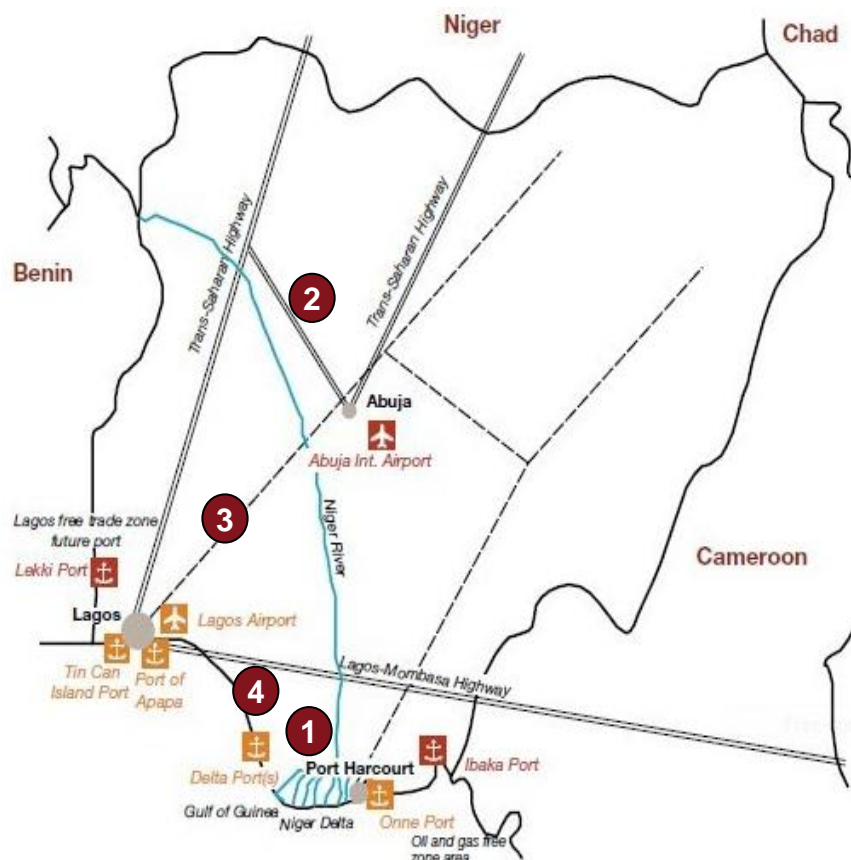
2015-2025 estimates, billion USD



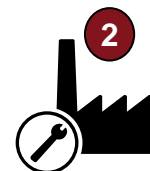
1) CDB = China Development Bank; AIIB = Asian Infrastructure Investment Bank

Source: Public sources, World Bank, Strategy& analysis

## Example: Country deep dive-Nigeria



- China Railway Construction (**CRCC**) has won a **coastal railway project** with contract value **\$12 billion** from the Nigerian government in 2014



- **Power Construction Corporation of China** has signed a **\$ 1.3 billion** contract with Nigeria government to build **power plant** in Sep. 2013



- **CRCC** has won a **public road project** with contract value **\$12 billion** from the Nigerian government in 2014



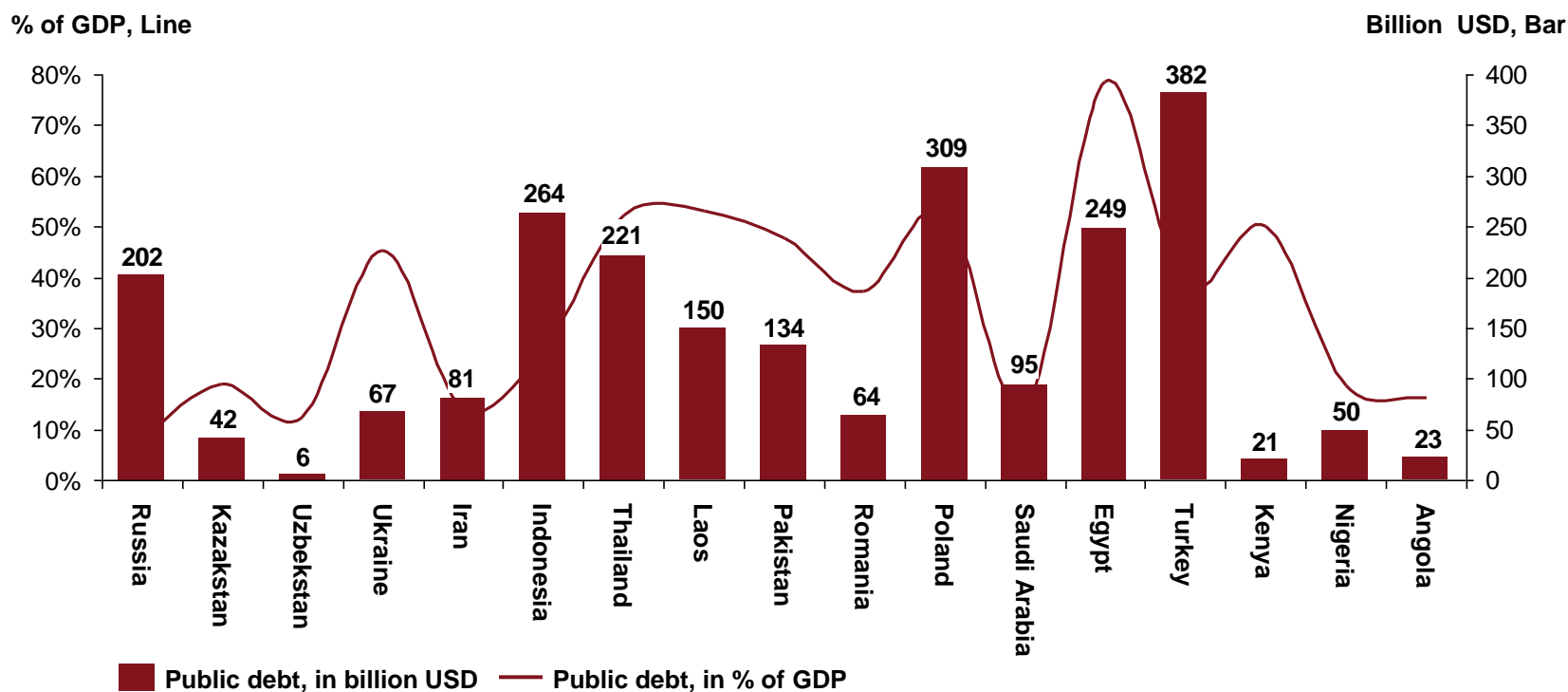
- **CHINA HARBOUR ENGINEERING COMPANY** signed a **\$ 45 million** contract with Nigeria to reconstruct Warri **harbor** in 2013

Source: literal search, Strategy& analysis

# Countries in the OBOR and FOCAC initiatives have highly varied level of public finance conditions

## Public Debt of Major OBOR Countries

In % of GDP V.S. in billion USD

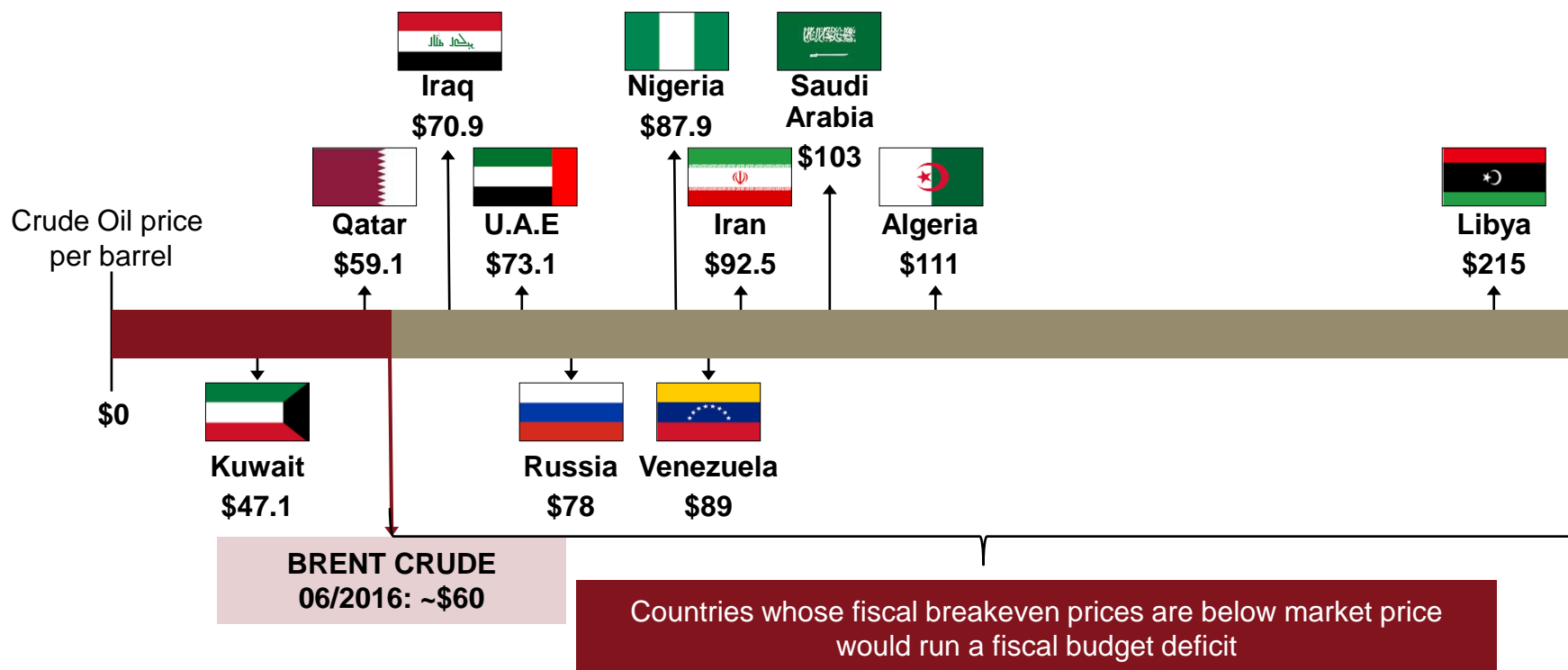


Source: IMF, literal search, Strategy& analysis

# *Current oil price is below government budget breakeven price for many countries*

## Government Fiscal Breakeven Crude Oil Prices

Major oil exporting countries, 2015, in USD per barrel



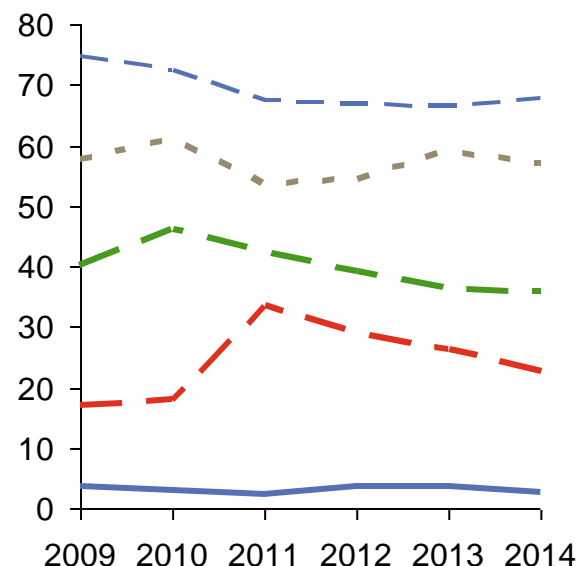
Note: The breakeven price of oil is calculated from variables including oil production costs, population size, domestic demand for petroleum products, export percentage, royalties and taxes, exchange rates, non-oil revenue and fiscal expenses

Source: US EIA, IMF, national statistics, public sources, Strategy& analysis

# Although Russia's public external debt is only ~3% of GDP, much is actually borrowed on through SOEs' balance sheets

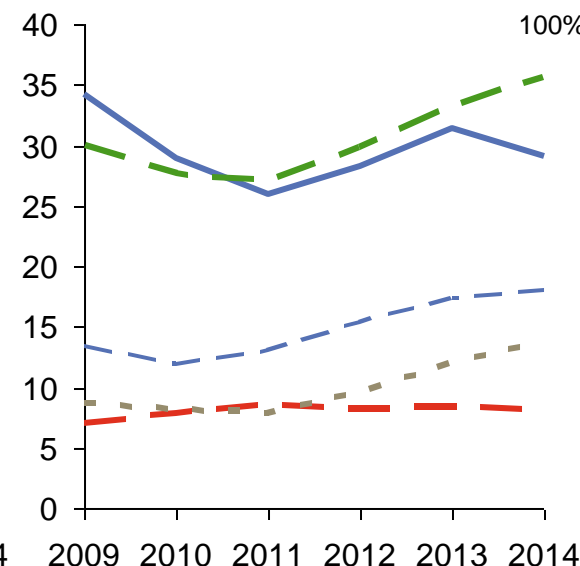
## Russia: very low public debt ...

Public external debt, % of GDP



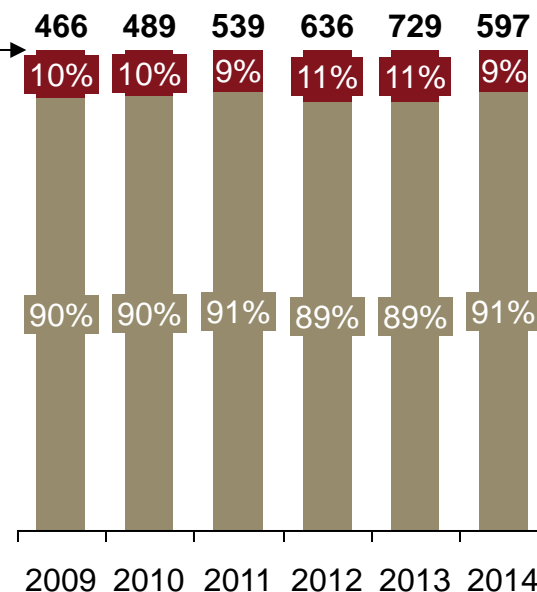
## ... along with descending private debt, but still high

Private external debt, % of GDP



## Low level of public debt thus conceals a wider debt burden

In billion USD



— Russia — China — Brazil — India — Turkey

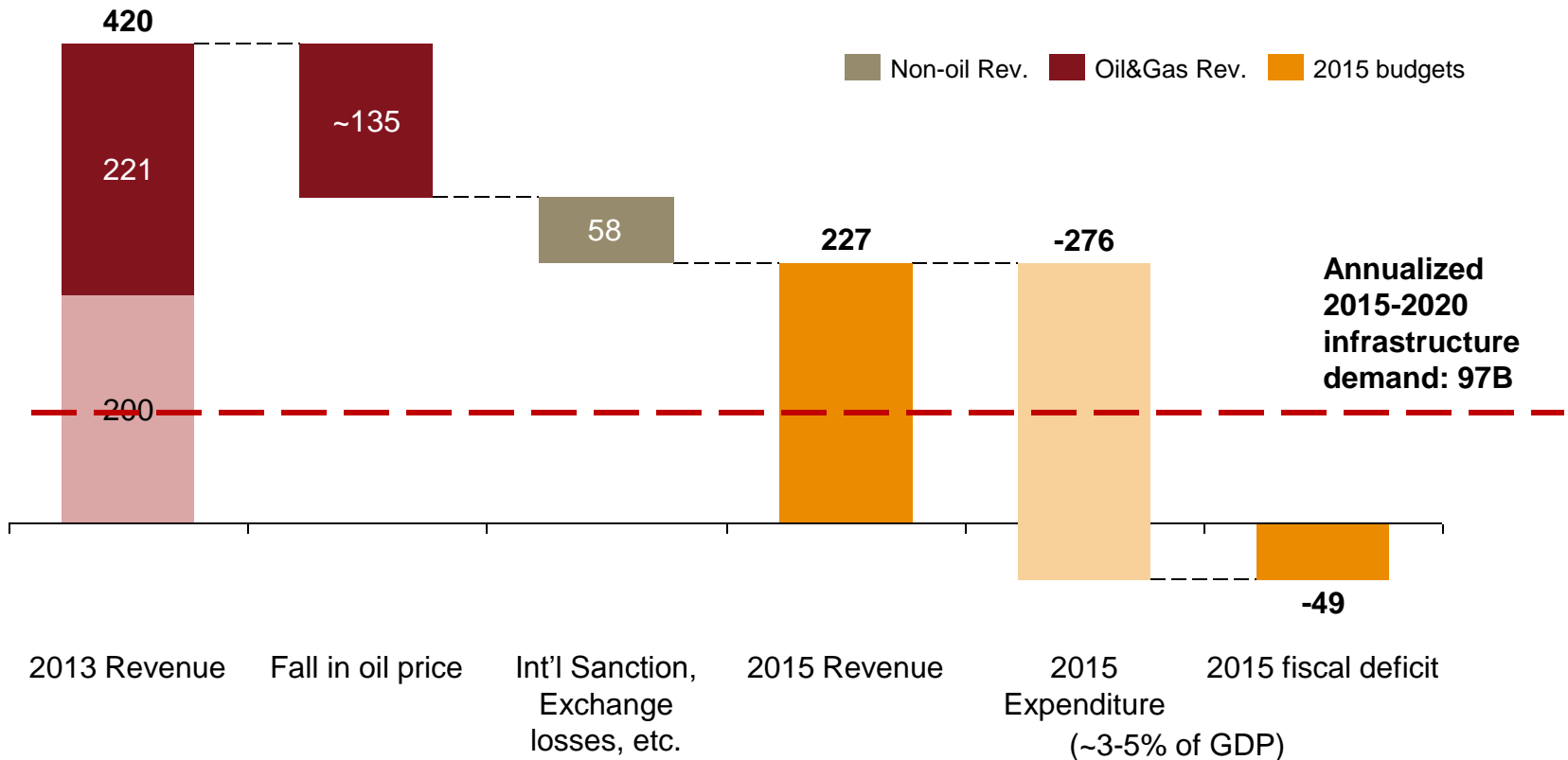
■ Public External Debt  
■ Private External Debt

Source: central banks, State Administration of Foreign Exchange, literal search, Strategy& analysis



# Oil price and sanctions led to drastic increase in Russia's budget deficit, lowering its ability to finance infrastructure

**Federal Government Budget Comparison 2013 vs 2015, in Context of Infrastructure Demand**  
in billion USD, 2015, nominal price

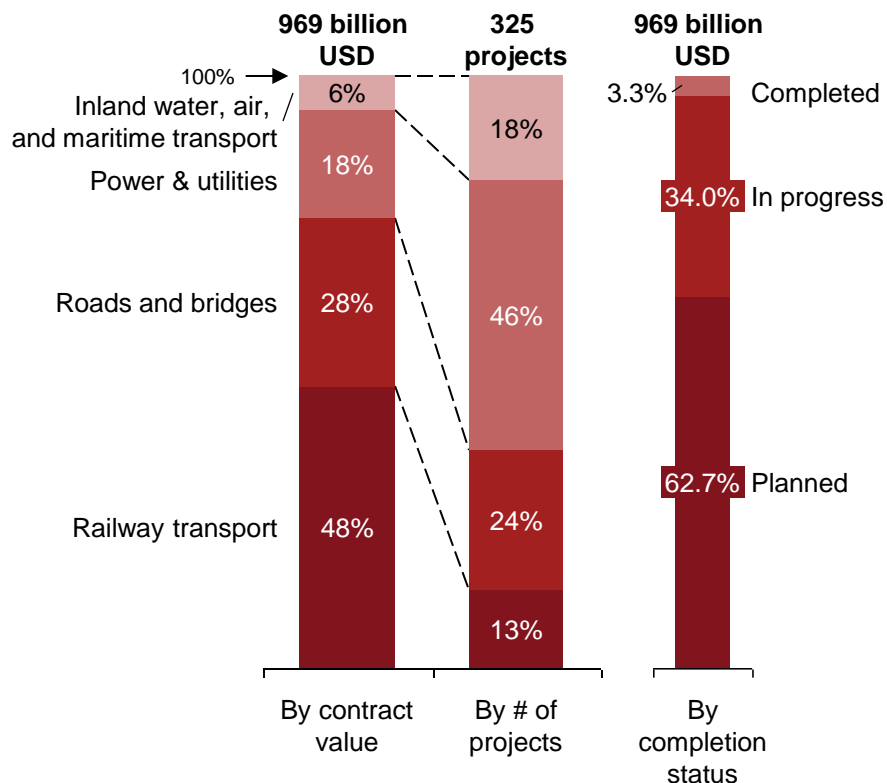


Note: Assumes USD : Russian Rubles is 1:55.5 in 2015, and 1: 31 in 2013; calculation excludes state-level budgets.

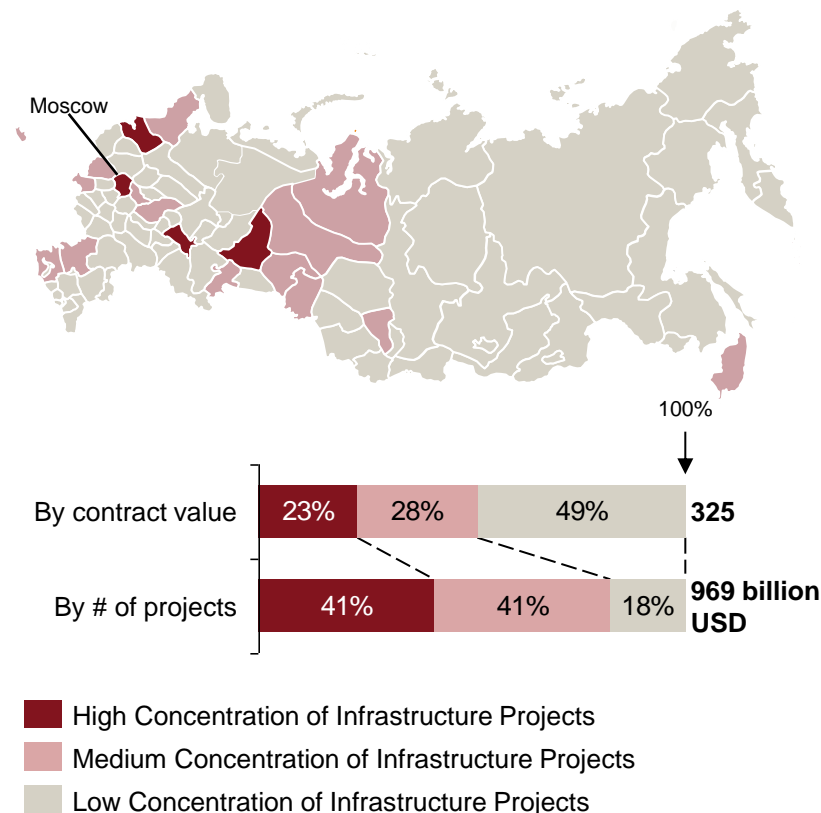
Source: Russian Ministry of Finance, Strategy& analysis

# Infrastructure demand will be massive, with close to 1T USD of projects identified for 2015-2030

Russia Infrastructure Projects by Value  
2015-2030



Russia Infrastructure Projects by Geography

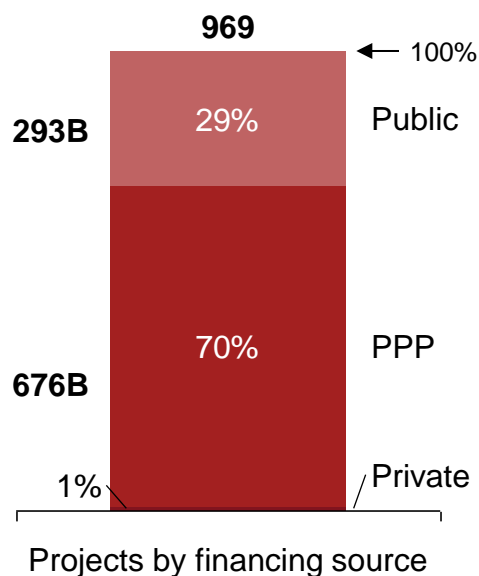


Source: Oxford Economics, literal search, Strategy& analysis

# Yet, due to the fiscal condition, government is seeking ~70% from PPP; Chinese lending fulfills only a small portion

The Government is looking to PPP for 70%, or ~680B USD, for financing for its infrastructure need in next 15 years

Russia planned infrastructure spending identified projects / demand  
2015-2030, in billion USD



Only a small portion is filled by bilateral official Chinese lending

China's official bilateral lending, although large at >50B USD, fulfills only a small portion of this opportunity

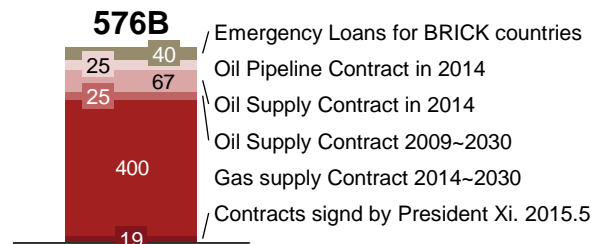
## Recent major loans

"China would push forward the development of silk road economic belt with Russia"

- President Xi, who signed announcement of 'silk road economic belt' with Putin during visit to Russia, 2015.5



## Recent indirect funding

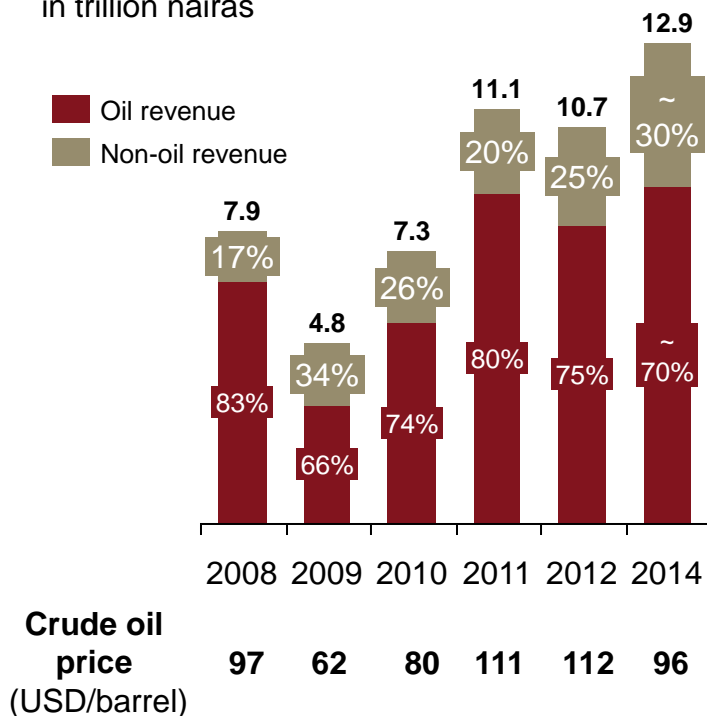


Source: Oxford Economics, literal search, Strategy& analysis

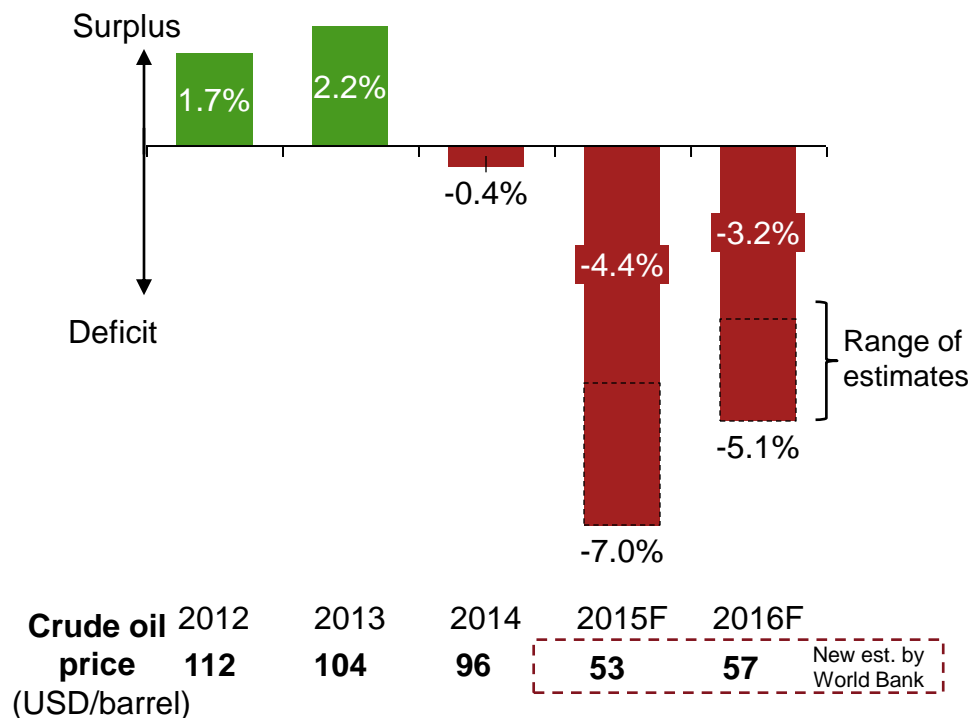
***Similarly, oil exports drive 70% of Nigerian government's income; 20% decrease in price leads to ~60% more deficit***

## Federal Gov. Revenue

in trillion nairas



## General Gov. Balance as % of GDP

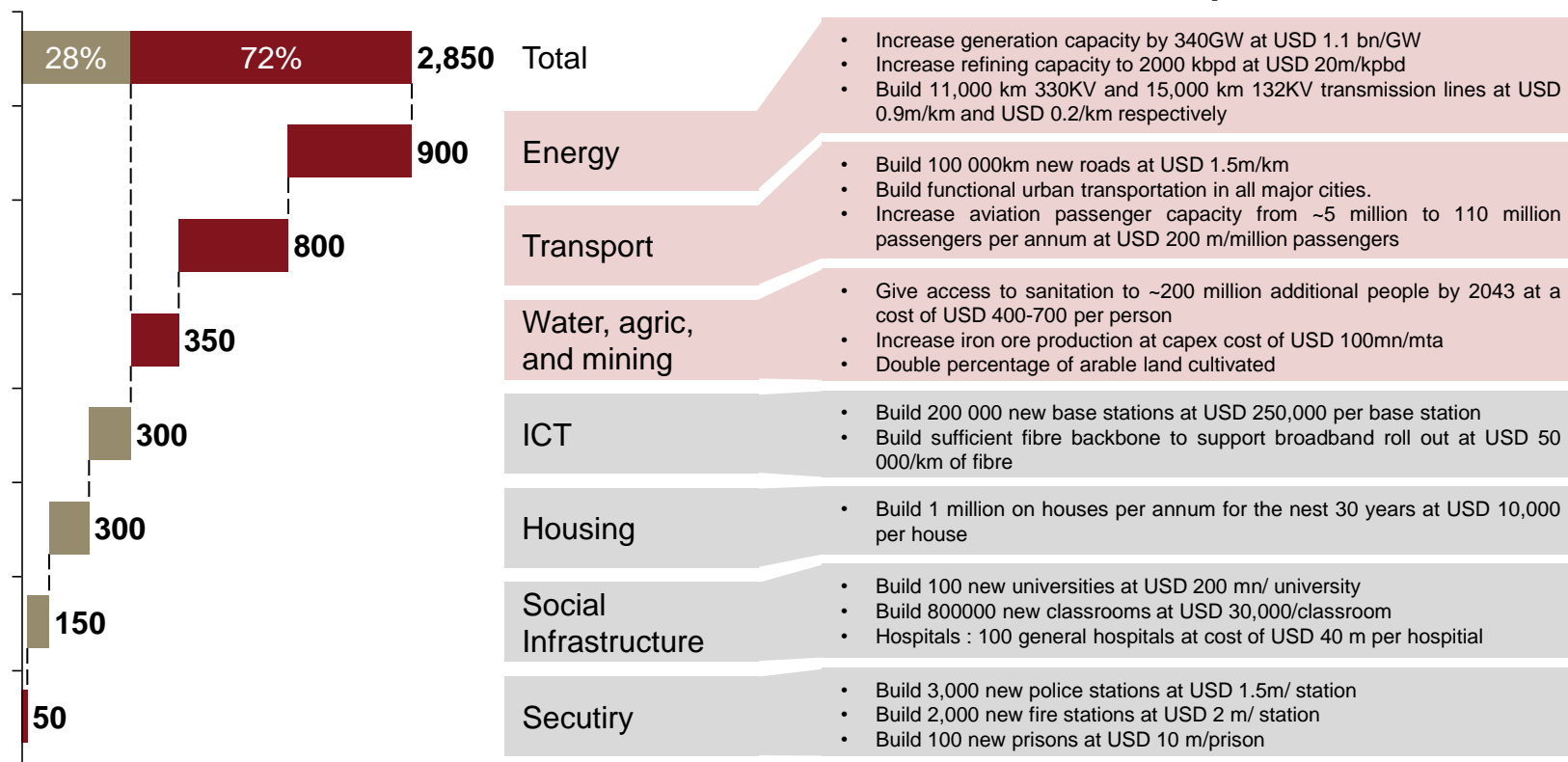


Source: World bank, Nigeria Central Bank, Oxford economics database, literal search, Strategy& analysis

# *The Government has delineated a detailed national infrastructure development plan, to be ~2.9T USD*

## Infrastructure Spend per Sector

2014-2043, in billion USD



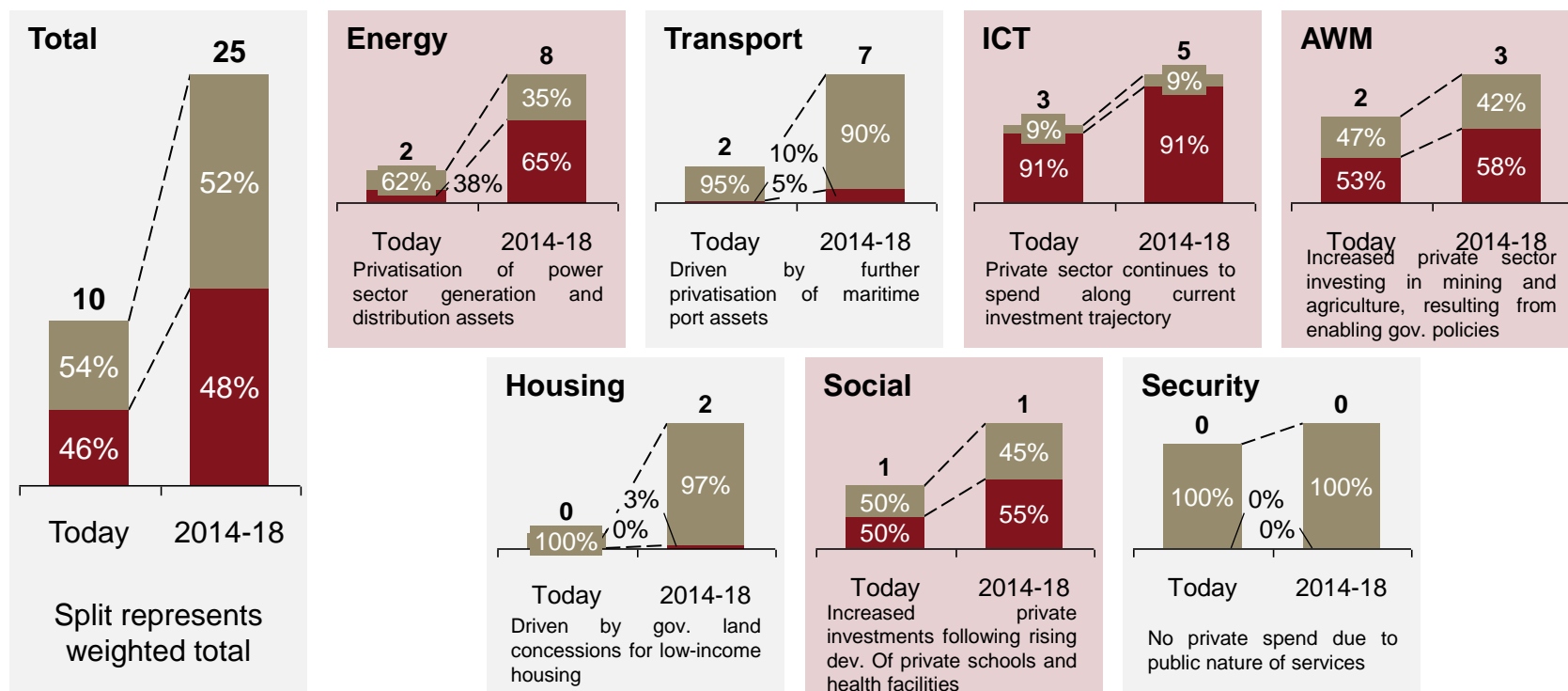
Source: literal search, Nigeria Gov., Strategy& analysis

# *The Government explicitly looks to PPP for half of financing of its projects – especially in ICT, energy, AWM, social, etc*

## Funding Source of Public and Private Sectors

In billion USD at 2010 constant prices

Public Private



Source: Nigerian official sources, public sources, Strategy& analysis

# *There are wide possibilities of fund-raising for PPP for Nigeria – with different pros/cons and levels of ease*

## Example PPP funding sources for Chinese players in Nigeria

	Header title	Costs	Ease of access	Comments
<b>Chinese funding</b>	Bilateral policy lending			<ul style="list-style-type: none"> <li>Rates: 1%~2%</li> <li>China gov. offer special low rates for infra. projects in Nigeria</li> </ul>
	Sovereign bonds Issued by China Gov.			<ul style="list-style-type: none"> <li>Rates: 3.58%</li> <li>Low cost feasible way if Nigeria projects could be tied to China credit</li> </ul>
	Chinese commercial bank			<ul style="list-style-type: none"> <li>Rate ~5-8%</li> <li>Moderately available, but FX risks against foreign project</li> </ul>
<b>Int'l Institutions</b>	WB PPP Program for Nigeria			<ul style="list-style-type: none"> <li>For infrastructure dev. In Nigeria, provide consulting service to support tech./legal/transaction, fund sourcing and management, and even provide physical building to these agencies</li> </ul>
	Nigeria Infrastructure Advisory Facility (NIAF)			<ul style="list-style-type: none"> <li>Well connected to Nigeria infra. dev. Agencies of various types</li> </ul>
<b>Nigerian debt markets</b>	Bank term loans			<ul style="list-style-type: none"> <li>Rates: 20%~25%; Potentially available but high interest rate</li> </ul>
	Nigerian Sovereign Investment Authority			<ul style="list-style-type: none"> <li>Rates: US CPI + 5%, currently 5%~6%</li> <li>Interest rate is mid-to-high and scale of fund is limited</li> </ul>
	Infrastructure bonds			<ul style="list-style-type: none"> <li>Rates: target 2% added to inflation of Nigeria, (current 12%~13%)</li> <li>Mid-high cost but feasible fundraising way if credited by 3<sup>rd</sup> party</li> </ul>
<b>Global equity market</b>	Infrastructure funds (eg. JV)			<ul style="list-style-type: none"> <li>Rates: various a lot depend on projects invested</li> <li>Funds would prefer to invest by itself and required yield can be high</li> </ul>
	Raising in Hong Kong			<ul style="list-style-type: none"> <li>Rates: ~11%</li> <li>Free market that local Nigeria could raise fund at medium costs</li> </ul>
	Corporate debt in Europe (euro bonds)			<ul style="list-style-type: none"> <li>Rates: 1-3% recently</li> <li>Added benefits if euro depreciates; but has FX risks</li> </ul>

High cost:

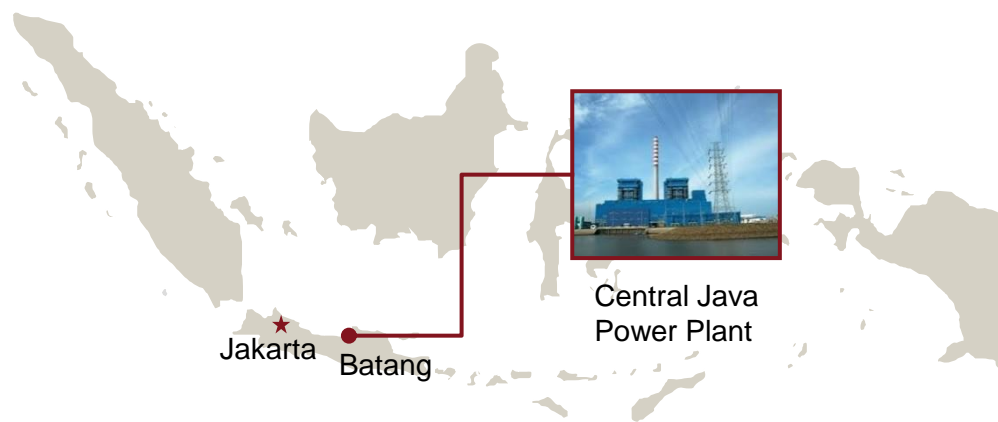
Hard to access:

Note: Indicated rates are nominal excluding related and indirect costs

Source: literal search, Strategy& analysis

# *The Central Java Power Plant in Batang is a model project under PPP scheme of 4~5 billion USD investment*

## Project background: Central Java Power Plant (CJPP) Project in Batang



### The CJPP is:

- One of the ten model infrastructure projects of PPP scheme proposed by Indonesia Gov.
- An 2,000MW greenfield coal-fired power plant
- Indonesia's largest power plant to be built for power shortage
- 4~5 billion USD of CAPEX, increased from 3 billion USD originally
- To begin operating in late 2018 with first 1,000 MW unit and followed by the second 1,000 MW unit in 2019

### Project Details

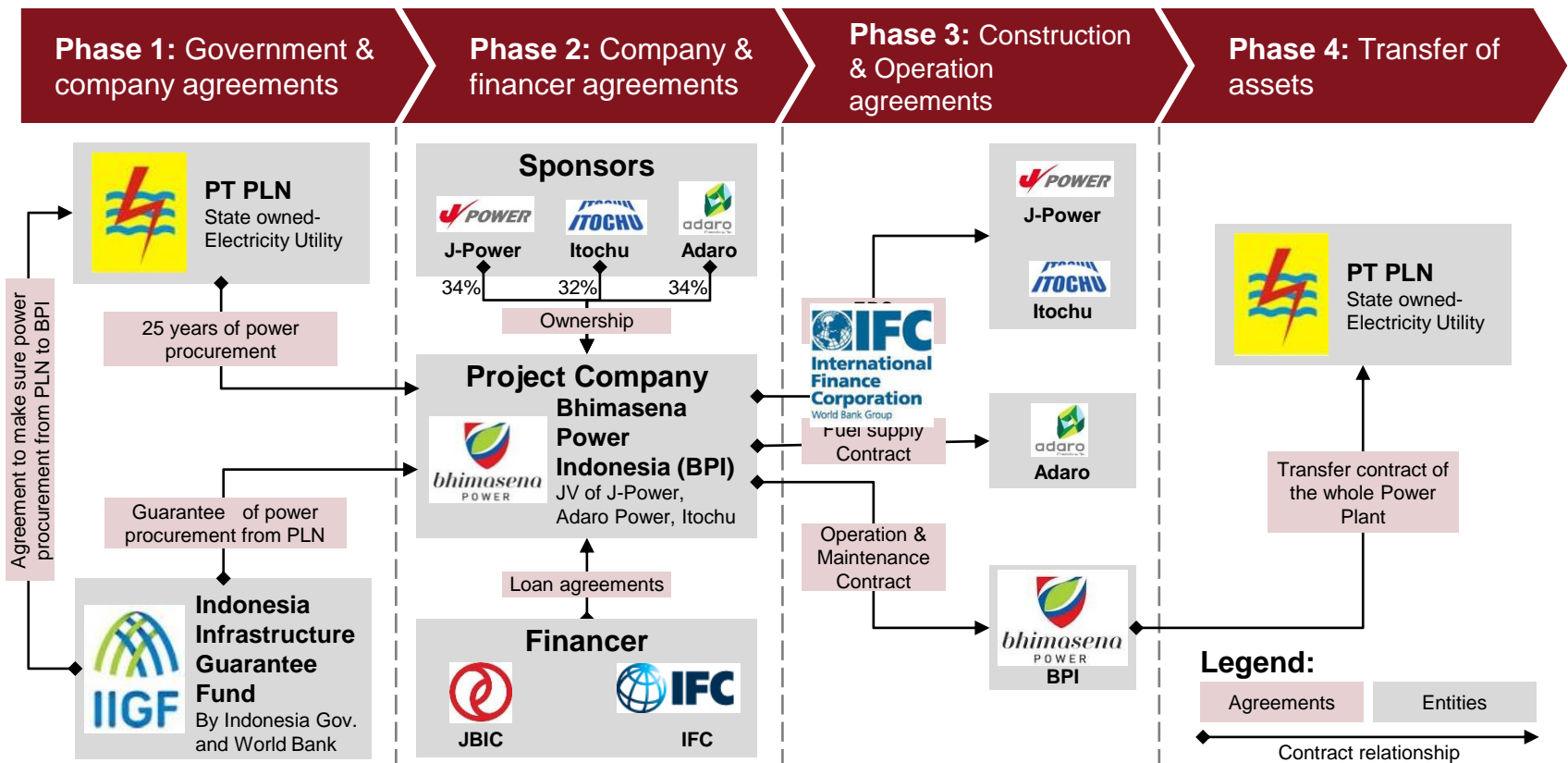
<b>Project Sponsor</b>	PT Bhimasena Power Indonesia
<b>Parent company</b>	J-POWER(Japan): 34%; Adaro Power(Indonesia):34%; Itochu: 32%
<b>Contract Period</b>	25 years to build, own, operate and transfer the power plant
<b>Recipient of power</b>	PT PLN (electricity utility owned by the Indonesian government)
<b>Location</b>	Pemalang, Central Java
<b>Status</b>	Pre-permit development
<b>Gross Capacity</b>	Unit 1: 1000 MW operating, Unit 2: 1000 MW operating
<b>Technology</b>	Ultra-supercritical[1]
<b>Original start date</b>	Unit 1: 2016; Unit 2: 2017
<b>Latest projected start date</b>	Unit 1: 2018; Unit 2: 2019
<b>Coal Type</b>	lower quality coals
<b>Coal Source</b>	Indonesia
<b>Financers</b>	World Bank, Japanese Bank for International Cooperation

Source: literal search, Strategy& analysis



***Compared to EPC scheme, J-Power and Itochu had to drive more cooperation under BOOT scheme of PPP***

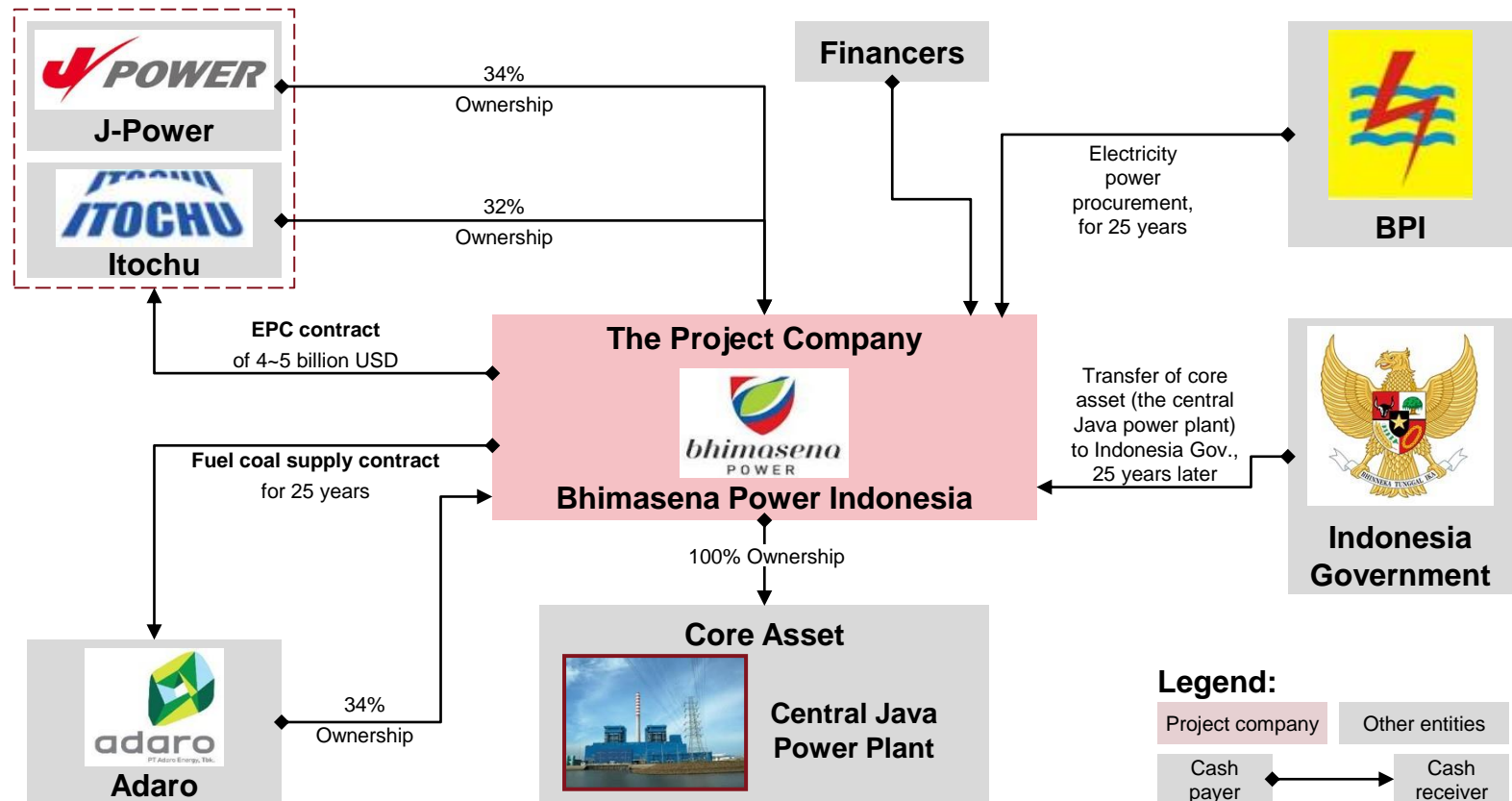
## PPP scheme of the CJPP: Build-Own-Operate-Transfer (BOOT)



Source: literal search, Strategy& analysis

# *The Project company, Bhimasena Power Indonesia, will be the functioning core for the CJPP project*

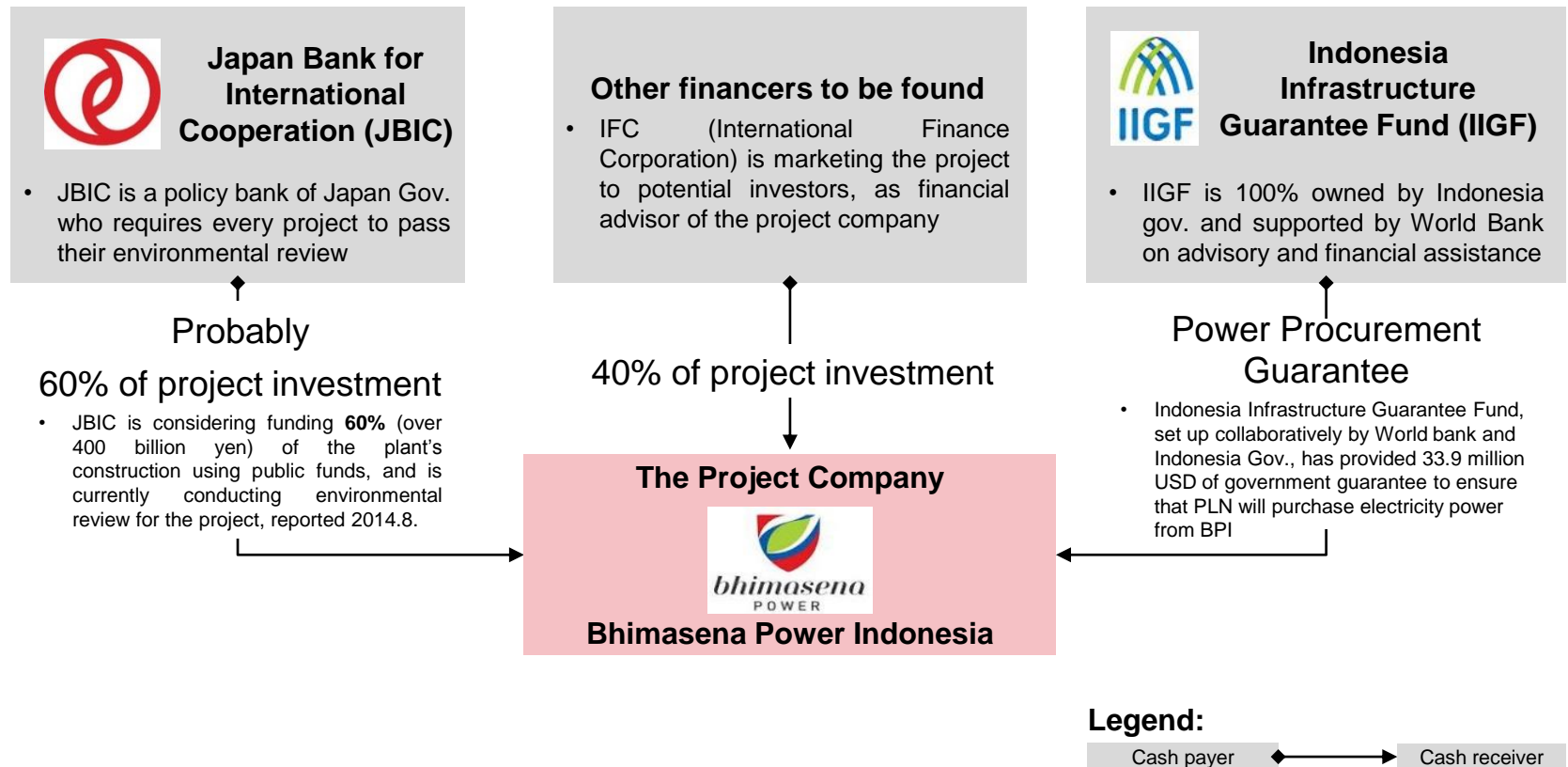
## Project company structure of the CJPP



Source: literal search, Strategy& analysis

*At current stage, the major financiers are JBIC but BPI still need to find other financiers*

## Financing model of the CJPP



Source: literal search, Strategy& analysis

## *Construction of CJPP has been heavily delayed due to difficulty of land acquisition but has started again recently*

### Timeline of CJPP project



Source: literal search, Strategy& analysis

# *Within major financing options, concessional loans are the preferable choice for oversea projects of China EPCs*

## Major Financing Options of EPC projects

### Export credit

- Export credit: gov. provide seller's credit and buyer's credit to support exportation of domestic goods
- Concessional loans: Concessional Loan and Preferential Buyer's Credits, provided by gov.

### Project financing

- The project entity as the borrower to get financed by banks on the basis of project future returns
- Usually applied to projects with mature tech., stable income, low market or management risk

### Syndicate d loan

- Syndicated loans are usually led by one bank and participated by several banks to provide financing to the same borrower under the same negotiated agreement

## Comparison: Concessional / Business Loan

	Concessional Loan and Preferential Buyer's Credit.	Business loan
Rates	$\leq 3\%$	~7%
Cost	Low	High
Approval procedure	Slow	Fast
Banks	China EXIM Bank	All commercial bank
Credit insurance	No insurance required as it's gov. loan	Insurance required

- For the Concessional Loan and Preferential Buyer's Credit., the advantage is low financing cost and no credit insurance required; But only applicable to gov. projects not including private sector projects, and approval time is long due to long procedures between gov.
- Commercial loan has the advantage of fast approval procedure and private sectors could apply, while credit insurance is required on top of higher financing cost

Source: literal search, Strategy& analysis

# Application processes & offerings are different between ‘Gov. Concessional Loan’ and ‘Preferential Buyer’s Credit’

## Comparison between offerings

Both of the two types of loans are provided by China EXIM BANK in the form of buyer’s credit, but the offerings are different:

#	Gov. Concessional Loan	Preferential Buyer’s Credit
1	• In RMB	• In USD
2	• 100% funded	• 85% funded
3	• Longest maturity: 20 years	
4	• Maximum Interest rate: 3%	
5	• Commitment fee: 0.75%	
6	• Management fee: 1%	
7	• Minimum of loan allocated to Chinese party of the project: 50%	

Source: literal search, Strategy& analysis

## Comparison between application processes

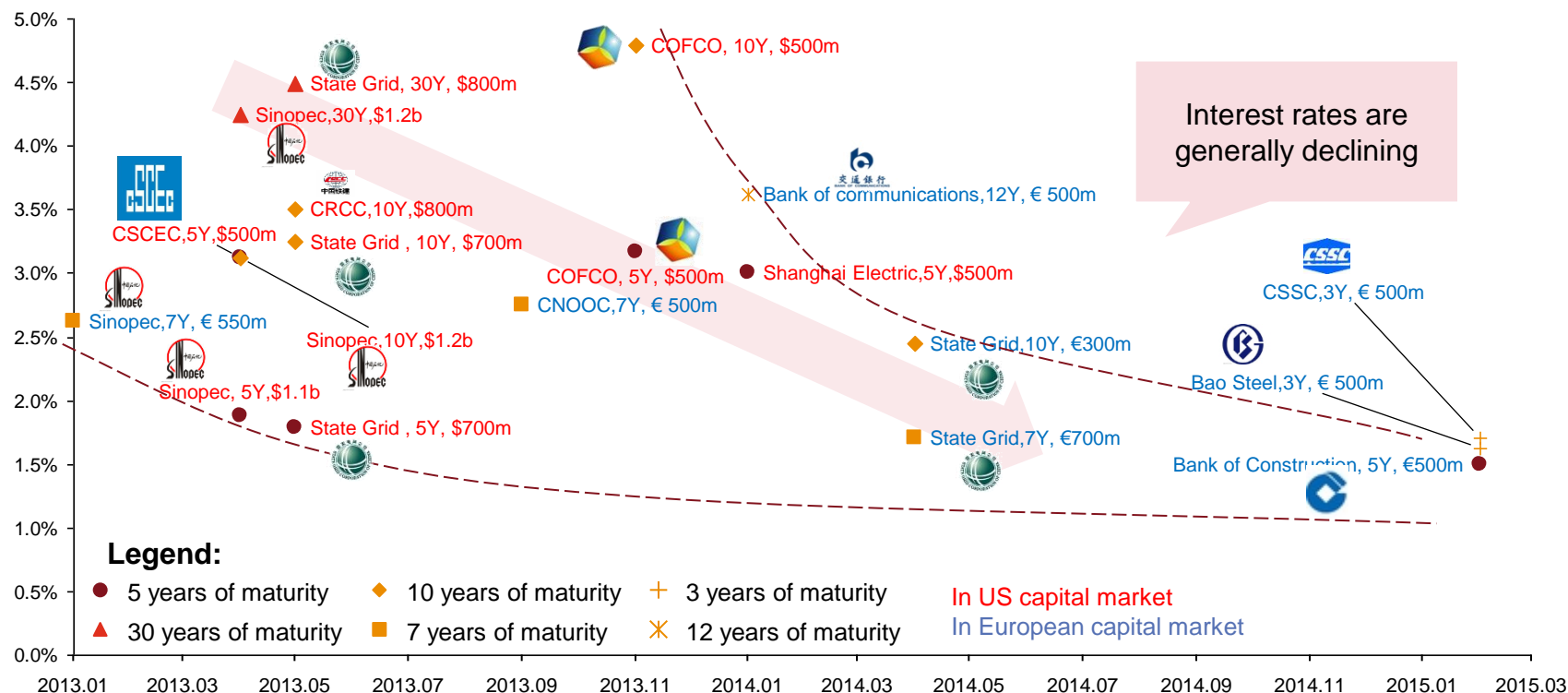
Application of both types of loans are initiated by the borrowing country but the reviewing processes are different:

#	Gov. Concessional Loan	Preferential Buyer’s Credit
1	Borrowing country proposes application to China Exim Bank	
2	The project will be reviewed by China Exim Bank	China Exim Bank will sign general loan agreement with the borrower
3	For project that passes the review, Dpt. of foreign assistance of ministry of commerce of the PRC would sign framework agreement with borrowing country	The borrower will propose his project to the Ministry of commerce of the PRC, who would then confirm the project after taken advice from relevant dpt., and then the project is reviewed by China Exim Bank
4	China Exim Bank will sign the loan agreement based on gov.’s framework agreement	China Exim Bank will sign detailed loan agreement with borrower

# Leading Chinese SOEs are rapidly taking advantage of low rate US dollar – and most recently Euro – bond issuance

## Bonds issued in US and European Capital Markets by Mega SOEs of China

X-axis: date, Y-axis: interest rate of bonds



Source: literal search, expert interviews, annual reports, Strategy& analysis

# *There has been a flood of Chinese companies issuing low-cost euro bonds to take advantage of negative interest*

## Examples of bonds issued by China players in European Capital market

Date	Issuer	Bond type	Amount	Rate
2013.9	China National Offshore Oil Corporation	7 year euro bond	500 million Euro	Not disclosed but was mid-high
2013.11	Industrial & Commercial Bank of China	RMB bond	2 billion RMB	
2014.3	Sinopec	5 year USD bond	2.75 billion USD	2.626%
2014.3	Sinopec	10 year USD bond		4.461%
2014.3	Sinopec	30 year USD bond		5.417%
2014.3	Sinopec	7 year euro bond	550 million euro	2.74%
2014.4	China Construction Bank	Swiss franc bonds		
2014.5	Bank Of China	RMB bond	1.5 billion RMB	
2014.5	Agricultural Bank of China	RMB bond	1.2 billion RMB	
2015.1	State Grid	7 year euro bond	700 million euro	1.54%
2015.1	State Grid	12 year euro bond	300 million euro	2.45%
2015.3	China Construction Bank	Senior euro notes	500 million euro	1.5%
2015.2	BaoSteel	unsecured bonds		
2015.2	China State Shipbuilding Corporation	3 year euro bond	500 million euro	1.7%

Rates offered to European capital market are declining

“For China, **bonds issued in European** capital market are expected to **grow from <5%** of total overseas bonds issued, **to 10%~15% in 2015**, almost tripled from previous years”

-Interviewed financial industry expert

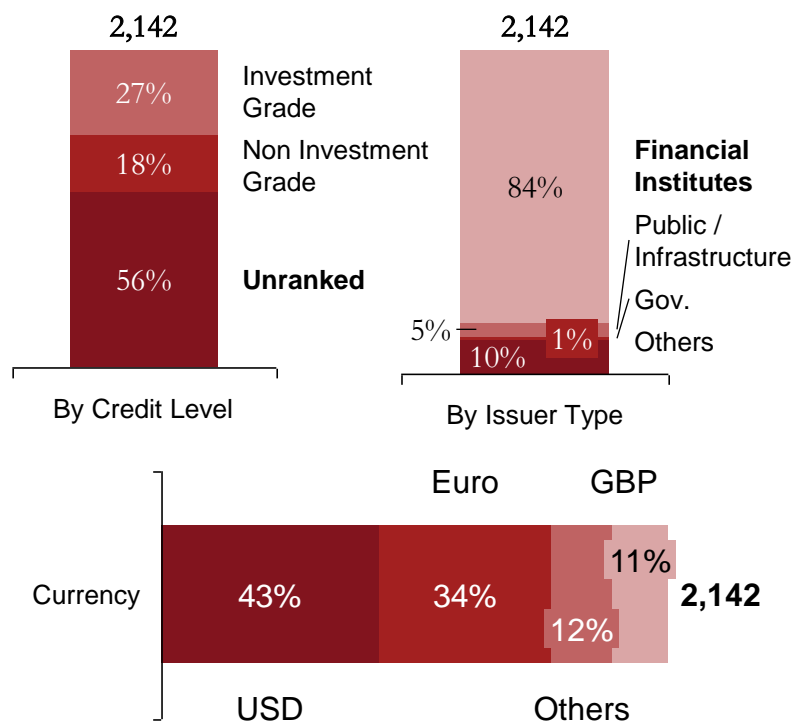
Source: literal search, Strategy& analysis



# *Perpetual bonds are mainly issued in USD and Euro by financial institutes as a Equity financing tool*

## International Market of Perpetual Bonds

In billion USD, 2013



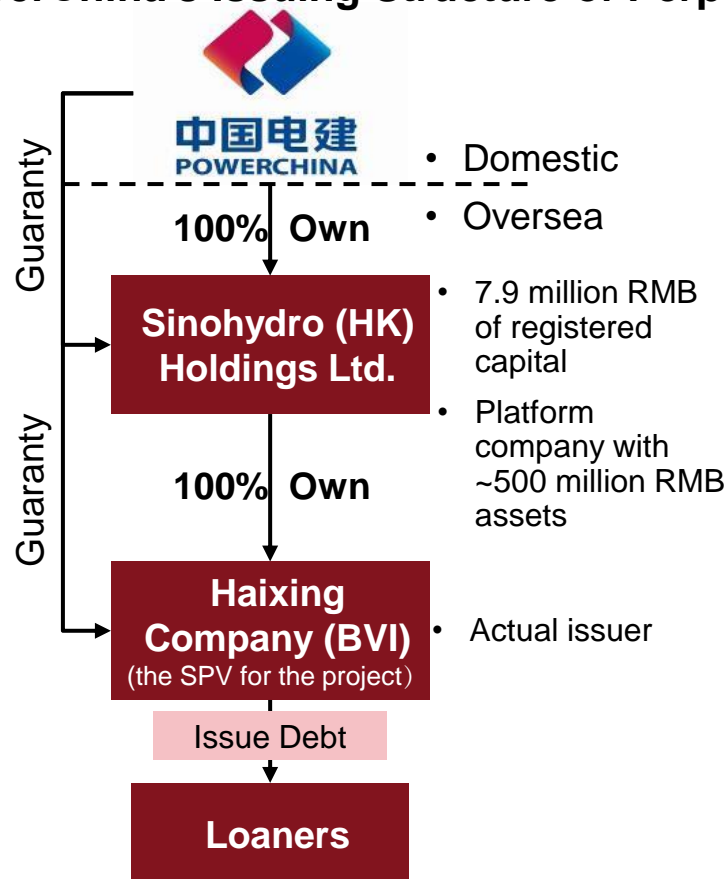
资料来源：彭博社，海通证券，专家访谈，思略特分析

## Description of Perpetual Bonds

- A perpetual bond is a **financial tool positioned between bonds and equity financing**:
- It's liquidation order is **prior to equity financing** (preferred and common stock), **after debt financing** (secured and non-secured liabilities)
- **There's no maturity date** (or very long maturity), but redemption provision added to the bond
- Investors can't get their total investment back at any specific time point, but they **could get interests periodically**
- **Interest rates are relatively high**, and could be changed (increase periodically, or **increase under agreement**, e.g. increase for every 3~5 years)
- Issuer should **pay off the interests of perpetual bonds before distributing dividends** to preferred / common stocks
- There's no restriction to force issuer to do credit rating or credit guaranty (though credit rating and credit guaranty would help to do equity underwriting)

# ***PowerChina was the first EPC owned by central gov. to issue perpetual bond oversea in 2014.10***

## **PowerChina's Issuing Structure of Perpetual Bonds**



## **Descriptions of PowerChina's Perpetual Bond**

	Description
Issuing period	8~10 weeks from credit rating to issuing
Issued amount	500 million USD
Yield	4.05% for the first 5 years Dynamically increase 5 years later
Rating agencies (2)	Moody (rated at A3), S&P
Global coordinators (2)	HSBC, Standard Chartered
The joint bookrunners, and lead agencies (5)	HSBC, Standard Chartered, Bank of Communications (HK), China Construction Bank International, Bank of China (Shanghai)

Sources: Expert interviews, Strategy& analysis

---

# ***Thank you***

**We welcome further discussions with relevant stakeholders**

## **Contact**



**Joshua Yau, Lead of One-Belt-One-Road and China-Africa  
Initiatives  
PwC Strategy&, Greater China**

**Email: [joshua.yau@strategyand.pwc.com](mailto:joshua.yau@strategyand.pwc.com)  
Phone: +86 13910825448**