



EU Infrastructure Investment through Private Financing Vehicles

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Importance of Rail Infrastructure Investments

Rail infrastructure is
an important **driver**
for **economic growth**

Rail infrastructure
is key to making
economic
growth **greener**

Rail infrastructure
offers the **fastest** and
cost effective to any
other means of **transport**

**Shift to on-rail
transport**
will pull **green
technologies** for
on-rail applications

Negative Trend in Public Infrastructure Investments in the EU

Shift in financing models is needed to accelerate investments – increasing gap since 2008 crisis

- Traditionally infrastructure investments have been financed by public funds
- Public deficits , increased public debt to GDP ratios
- Inability to deliver efficient investment spending have led to a dramatic reduction post financial crisis

Annual Investment Needs EU

Source: EIB, OECD 2017

		(in EUR bn per annum)				
Area	Total of GDP (%)	Total	Energy	Transport	Water	Telecom
EU	4.7	688	280	160	138	160
World	7.5	5'678	1893	2434	811	541

- Total investment in EU infrastructure is at 1.8% of GDP – the gap currently growing exponentially

Vehicles of Private Infrastructure Financing

Asset Category	Instrument	Infrastructure Project
Fixed Income	Bonds	Project Bonds
		Municipal, Sovereign Bonds
		Green Bonds, Sukuk
	Loans	Direct/-Co-Investment, Lending to infrastructure project, Syndicated Project Loans
Mixed	Hybrid	Subordinated Loans/Bonds, Mezzanine Finance
Equity	Listed	YieldCos
	Unlisted	Direct/Co-Investment in infrastructure project equity, PPP

RZD – a successful role model for tapping into private financing

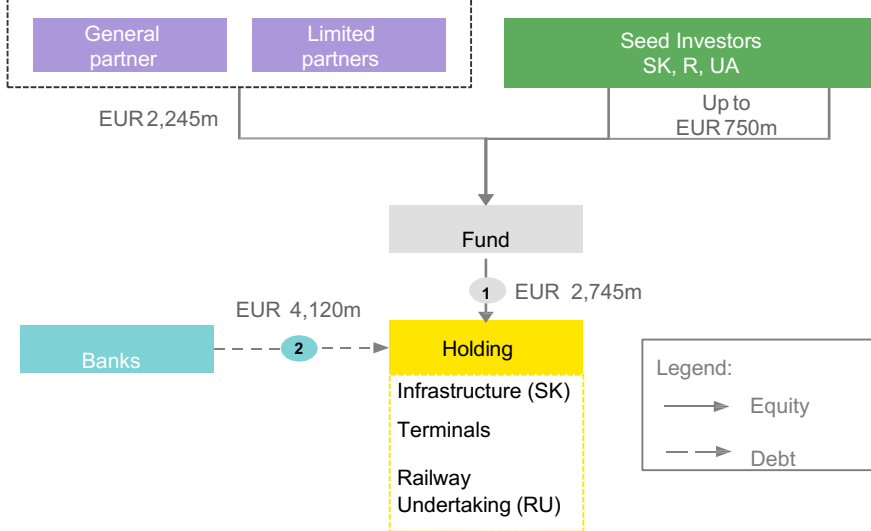
- ➔ RZD placed over Euro 6 bn Eurobonds successfully in institutional market to finance infrastructure investment
- ➔ Additional Placement of EUR 82.5 bn Eurobonds in local currency
- ➔ Credit rating improvement to Baa2 (Moody's)

1520mm ERC – A Lighthouse Project in Central Europe

1520mm ERC line investment grade with > 10% IRR on project level

- Seamless connection from Far East through through the Russian Railway Network
- Flow of goods are estimated to grow at >5% CAGR between 2030 and 2050

Illustration Structure & Financing



Selected Project Drivers

<p>Shorter Transport Routes</p> <p>(Route Chengdu – Twin City) Ship + Truck: 16.200 km Railway: 9.800 km</p>	<p>Environmentally Friendly Transport</p> <p>reduction of CO2 emissions reduction of empty runs reduction of fine dust</p>
<p>Faster Transport Times</p> <p>(Route Chengdu – Twin City) Ship + Truck: 35 Days Railway: 10 Days</p>	<p>Reducing Costs to Society</p> <p>fewer accidents & traffic jam less environmental damage less noise</p>

Thank You



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The SilverArrow logo features the company name in a bold, italicized sans-serif font. A white arrow graphic is positioned above the 'o' in 'Arrow', pointing to the right.