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INTERNATIONAL RAILWAY

Congress 2019

VIENNA

MARCH 17 - 19, 2019

ROLLING STOCK FINANCE – CHALLENGES AND OPPORTUNITIES

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VIENNA – March 18, 2019

BUSKE LAW

Munich



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

BUSKE LAW – ABOUT US

- Munich based Corporate, Transport and Finance Counsel
- More than 20 years of international experience in structured, asset and project finance transactions.
- Team of experienced, internationally trained lawyers with commercial experience and sound understanding of the finance and transport industry and network with reknown law firms.
- Recent transactions, *inter alia*, include
 - Structuring of financing and procurement of new hybrid six-axle locomotives for launch customer including full-service maintenance;
 - Tender for procurement of up to 125 new locomotives for Pan-European rolling stock operator;
 - Procurement and maintenance of new hydrogen powered EMUs
 - Structuring of financing of new EMUs for transport authority with volume in excess of EUR 3bn.

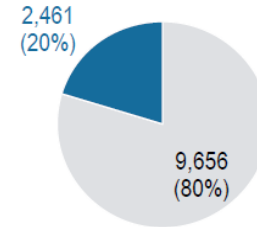


CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

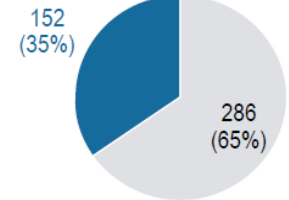
INFRASTRUCTURE INVESTMENT

- More than USD 50 trillion must be invested in infrastructure to maintain economic growth through 2030, according to McKinsey Global Institute and the World Bank.
- By volume, private financing is accounting for only 12% plus of overall investment volume.
- Private financing is particularly relevant in locomotive and EMUs/DMUs financing.
- Infrastructure assets, and especially railway infrastructure, require great capital, have long-life spans and need complex operations.

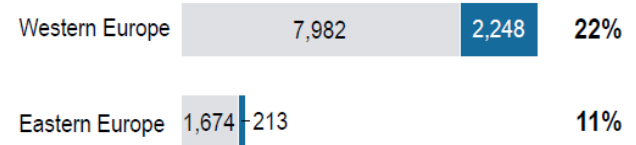
By volume [EUR m, p.a.]



By projects [#, total 2013-15]



By volume and region [EUR m, p.a.]



Private finance Public finance

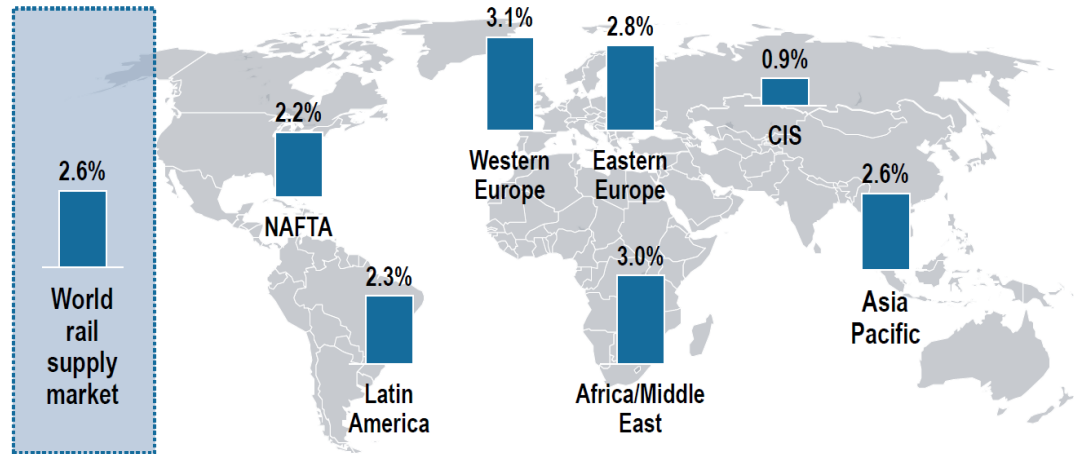


CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

RAILWAY MARKET AT A GLANCE

- Growth rates in Western and Eastern Europe around 3% until 2021
- Russia appears considerably low with ca 1% CAGR
- However, Russia established an infrastructure program with an investment volume conforming of EUR 82 bn by 2024 (high speed and freight corridors).

Total market growth rates per region [CAGR¹], %]



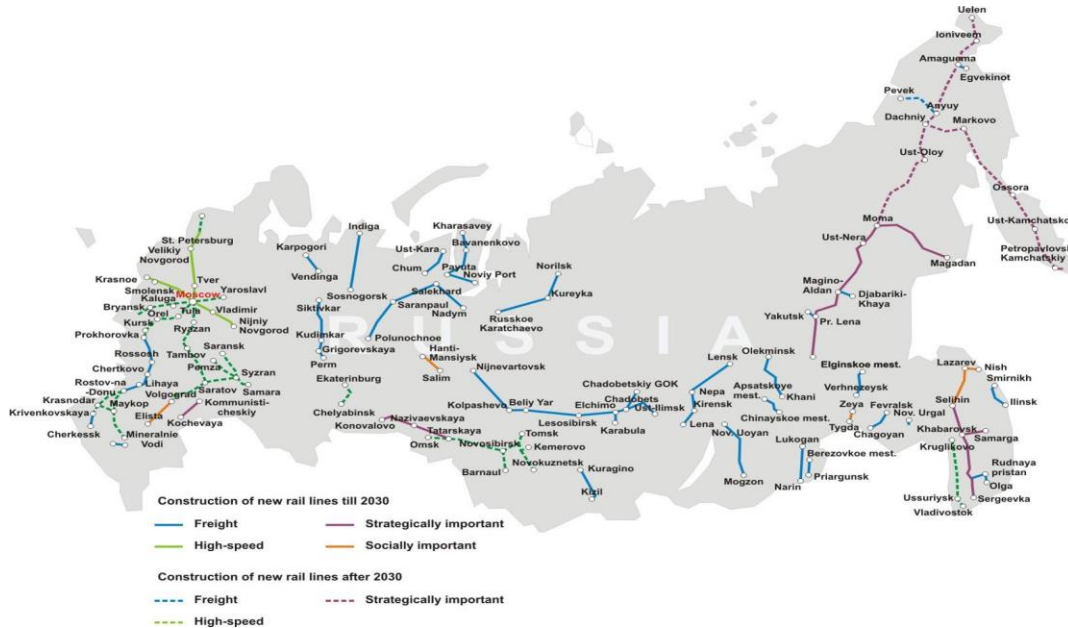
1) Compound rate 2019 – 2021

Source: roland berger, Unife world rail market study2016, page 6.



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

IN PARTICULAR: THE RUSSIAN INFRASTRUCTURE PROGRAM



- Russia to invest in up to 20,730kms of new railroad by 2030.
- In excess of EUR 4bn in new rolling stock of which ca. 1.3 bn will be invested in 23,000 new locomotives.
- $\frac{1}{4}$ of the overall investment, i.e. EUR 1bn is expected to be privately funded.
- Infrastructure investments to be funded by public and private initiatives.

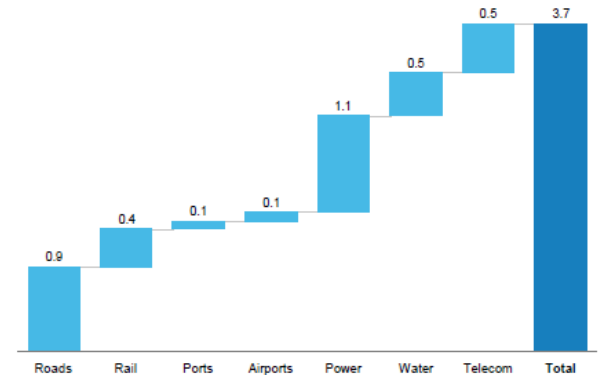


CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

THE INVESTMENT GAP

- Overall investment volume for rail infrastructure is expected to be ca. USD 7.9 bn pa to conform to annual GDP growth rate.
- The funding gap worldwide is conforming to USD 5.5 trillion until 2035 with rail infrastructure investments conforming to only 0.4% of GDP.
- The funding gap for Germany is conforming to 0,5% while Russia is accounting for 0.3%.
- Such funding gap must be closed shortly to prevent economies from creating growth restrictions as a result of underdeveloped infrastructure.

Average annual need, 2017-35
\$ trillion, constant 2017 dollars



	Roads	Rail	Ports	Airports	Power	Water	Telecom	Total
Annual spending % of GDP	1.0	0.4	0.1	0.1	1.3	0.5	0.6	4.1
Aggregate spending, 2017-35 \$ trillion	18.0	7.9	1.6	2.1	20.2	9.1	10.4	69.4

NOTE: Numbers may not sum due to rounding.

SOURCE: IHO Global Insight; ITF; GWI, National Statistics; McKinsey Global Institute analysis



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

CLOSING THE INVESTMENT GAP



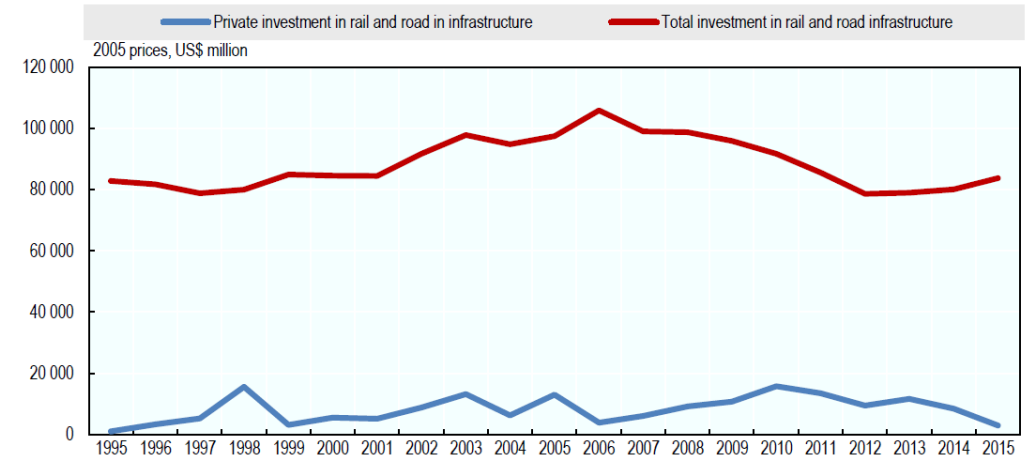
- Key factors for successful implementation
 - Political commitment
 - Affordable debt
 - Legal Framework
 - Complexity of country risk
 - Minimum return and efficiency gains
 - Stable cash flows
 - Clear risk allocation



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

CLOSING THE INVESTMENT GAP – PPP

- Investing in infrastructure assets and rail in particular is requiring a long term investment approach.
- Intensive capital requirement and high regulation are limiting factors for private companies or investors.
- Stability of legal and regulatory framework is key for stable and cost covering returns.



Note: Data from the UK, Spain, Portugal, France, Turkey, Italy, Germany. Greece not included due to incomplete data.

Source: Dealogic Projectware database, OECD/ITF statistics; Makovšek (2018c).

Source: Private Investment in Transport Infrastructure: Dealing with uncertainty in contracts – OECD/ITF 2018. Overview private and total investment in seven OEC countries 1995 – 2015



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

CLOSING THE INVESTMENT GAP – KEY DRIVERS

Efficiency & Cost

- Asset utilization and revenue basis
- Safety and reliability
- Reduce time and cost overrun
- Budgetary certainty
- LCC reduction

Quality & Innovation

- Technology and modernization
- Customer expectations
- Improved public services
- Efficiency gains in infrastructure sector

Private Capital

- Growth in infrastructure
- Public financing constraints
- Leverage private sector know-how
- Strategic investments
- Transparency



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

CLOSING THE INVESTMENT GAP – PPP

- PPP is not a standardized product and is, as such, allowing for flexibility to address various needs.
- Various models require definition of project needs prior to opting for one thereof.
- PPP is not, in itself, a miracle cure or alleviating financing and increasing efficiency.
- PPP may, however, if structured adequately improve use of public funds

Management of Service Provider	Private	Management contract, Franchising, O&M	Lease contract, Affermage	Divestiture Concession, Outsourcing
	Mixed	Service contracts Corporatization, Performance contract	Joint venture	BOT, BOOT, DBFO, DCMF, IPP, BOO
	Public	Municipal or Provincial Authority	Cooperatives, Twinning	
		Public	Mixed	Private
		Control of Assets		

Source: Delmon, Projects in Infrastructure: An Essential Guide for Policy Makers, p. 8.



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

CLOSING THE INVESTMENT GAP – RISK MITIGATION

RISK – DE-RISKING	INSTRUMENT
Revenue	Minimum payment guarantee, Default payment guarantee, exchange rate guarantee
Revenue	Offtake Agreement – Traffic Shortfall Agreement
Funding	Credit Agency Grant
Grants	Lump sum grant, revenue grant, optimized taxation scheme
Completion	Availability payments

The instruments envisage to reduce risk margin and optimize capital efficiency



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

OUTLOOK – INCREASED DEMAND FOR PRIVATE FUNDING

Further Liberalization

- 4th railway package
- Further market liberalization to attract private funding
- Public tenders and reduction of private awards
- Opening of network and service facilities

Limited Public Funding

- Expected budget constraints of public sector result in increased demand for private financing
- Rising interest rates are likely to exacerbate the funding constraints
- Private funding to increase flexibility and efficiency and drive innovation

Enhanced Regulatory Framework

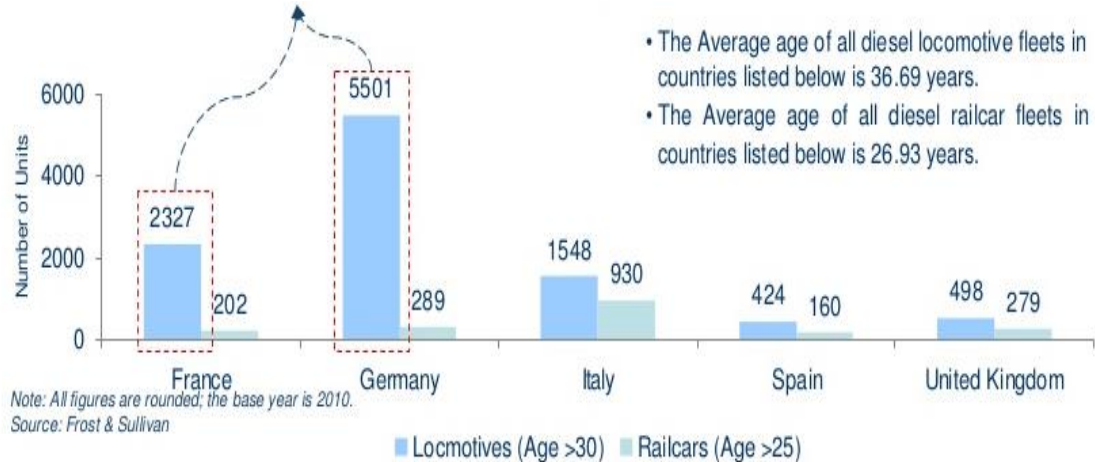
- Luxembourg rail protocol to facilitate private financing
- Legal framework for security interests established in rolling stock
- Global identification of security interests
- Identification system on worldwide basis to monitor location of assets



CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

ANNEX: INVESTMENT VOLUME

- The average age of diesel locomotive in Europe is almost 40 years while for electric locomotives the average age is conforming to almost 30 years.
- Average age of railcar fleets is ca 25 years.



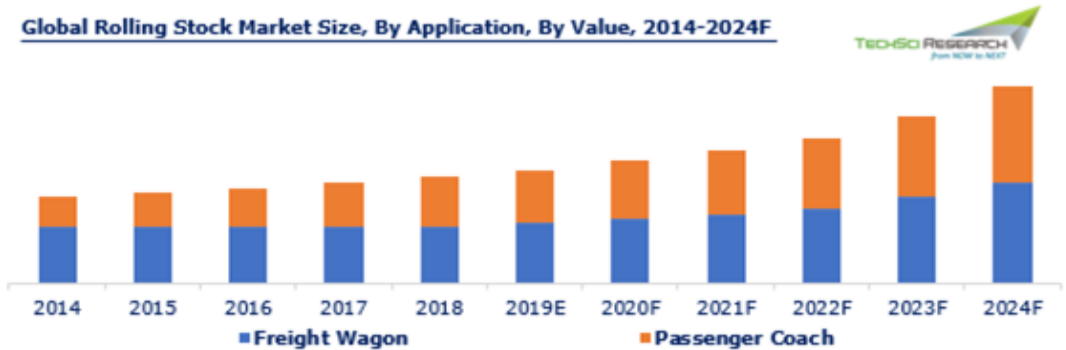


CHALLENGES AND OPPORTUNITIES IN ROLLING STOCK FINANCE

ANNEX: INVESTMENT VOLUME

- Overaged fleets, competition and technology upgrades boost CAGR and overall investment volume which is expected to be around EUR 70bn until 2026.
- Growth is further driven by strategy for low carbon transport.

Global Rolling Stock Market Size, By Application, By Value, 2014-2024F



Source: TechSci Research

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– Many thanks for your attention –



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