UNECE TEM and TER Joint Expert Meeting
6-11 October 2013, Bad Gastein/Austria

Financing options for investment and operation of high-speed railway lines

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Head of JASPERS Vienna 2007-2012
• Funding capital investments in railways - the basic principles
• Evaluation criteria for projects by type of stakeholder
• Case study of a higher speed railway section at the crossroads of three European countries
• New emphases for EU structural funding 2014-2020
• Potential applicability of project bonds
• Conclusions
Some characteristics of railways and their infrastructure

- Railways are generally *capital intensive*

- Infrastructure utilization spans the *long term*, can stretch over decades

- *Economic* and *financial profitability* indicators often *diverge*

- Railways generally are part of a *much larger, complex system*
What are the consequences for financing railway projects?

- Large amounts of financial capital are required
- Funding needs to match the project operational period
- Appropriate cost recovery mechanisms need to be put in place
- Efficient system operation and profitability are paramount
What kind of financial funds can be envisaged?

- Own resources
- Equity-type investments
- Loans, repayable over project operation
- Bonds – corporate or project
- Grants and subsidies

Often, these sources will be complementary
What are the sources involved?

<table>
<thead>
<tr>
<th>Own resources</th>
<th>System or company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity-type investments</td>
<td>Investors – public, private</td>
</tr>
<tr>
<td></td>
<td>internal, external</td>
</tr>
<tr>
<td>Borrowed funds, repayable over project operation</td>
<td>Banks, Investors, Multilateral Institutions</td>
</tr>
<tr>
<td>Grants or subsidies</td>
<td>State, development assistance and structural funds</td>
</tr>
</tbody>
</table>
**What these stakeholders will request or emphasize**

<table>
<thead>
<tr>
<th>System or company</th>
<th>Internal analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investors – public, private internal, external</td>
<td>Criteria defined by investors, can be anything ranging from a „hunch“ to a shareholder value analysis or project-specific studies</td>
</tr>
<tr>
<td>Banks, Investors, Multilateral Institutions</td>
<td>Project feasibility, often profitability-focused</td>
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<td>State, development assistance and structural funds</td>
<td>Project feasibility, including strategic justification</td>
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</tbody>
</table>
- Internal analysis

- Criteria defined by investors, can be anything ranging from a "hunch" to a shareholder value analysis or project-specific studies

- Project feasibility, often profitability-focused

- Project feasibility, including strategic justification
Dynamics of institutional and management factors

• Management of the system impacts on the risks and rewards of a project

• Management of the project in terms of construction and prospective operations

• Key issue of financial viability both during investment and operational stages
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- Upgrading/Rehabilitation of a 115 km section linking three cities in three countries (HU, SR, RO)
- Part of a general concept of future high speed railway lines in the region
- Summary presentation of project given at UNECE TER Meeting in Timisoara on 12 September 2012
- Numerous institutional, economic and financial risks and challenges
- Promise by some of the concerned railway companies to consider the above option
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Some population data on the involved cities:

<table>
<thead>
<tr>
<th>Population</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kikinda</td>
<td>41 000</td>
</tr>
<tr>
<td>Szeged</td>
<td>170 000</td>
</tr>
<tr>
<td>Timisoara</td>
<td>319 000</td>
</tr>
<tr>
<td>Subotica</td>
<td>141 000</td>
</tr>
<tr>
<td>Arad</td>
<td>160 000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Population</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgrade</td>
<td>1 660 000</td>
</tr>
<tr>
<td>Budapest - City</td>
<td>1 740 000</td>
</tr>
<tr>
<td>Budapest - Metro</td>
<td>3 280 000</td>
</tr>
<tr>
<td>Bucharest</td>
<td>1 880 000</td>
</tr>
<tr>
<td>Vienna - City</td>
<td>1 980 000</td>
</tr>
<tr>
<td>Vienna - Metro</td>
<td>2 420 000</td>
</tr>
</tbody>
</table>
**Higher Speed Railway Line Szeged-Kikinda-Timisoara**

Some (obviously not realistic/up to date) cost data of alternative options:

<table>
<thead>
<tr>
<th>Változatok</th>
<th>Cost of Option M FT at prices of 2000 excl. VAT (M EUR)</th>
<th>M HUF/EUR, 260 M EUR/km</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Szeged-Kikinda-Temesvar</td>
<td>114.2 40 229 155</td>
<td>1.35</td>
</tr>
<tr>
<td>2. Szeged-Kiszombor-Nagyszentmiklos-Temesvar</td>
<td>115.2 46 903 180</td>
<td>1.57</td>
</tr>
<tr>
<td>3. Szeged-Mako-Apatfalva-Nagyszentmiklos-Temesvar</td>
<td>121.5 52 601 202</td>
<td>1.67</td>
</tr>
<tr>
<td>4. Szeged-Mako-Nagylak-Arad-Temesvar</td>
<td>167.7 55 338 213</td>
<td>1.27</td>
</tr>
</tbody>
</table>
For the financial period 2014-2020 the following will be especially relevant:

- Macro-economic conditionality should be respected

- Ex-ante conditionality ensuring the possibility of effective investments

- Clear performance framework for programmes and projects including measured indicators
The new EU Cohesion Policy Framework

There will be defined for each country:

• A **Common Strategic Framework** – for the transport sector, this generally means a viable longer term transport strategy must be in place; for the railways, this usually covers a needs assessment and an investment strategy

• A **Partnership Contract** comprising objectives and indicators measuring progress towards Europe 2020 targets; the relevance of this pertains to environmentally friendly transport, mitigating climate change, and providing for an ageing population which in turn translates into a mandate for developing sustainable railway transport

• **Operational Programmes** for the grant allocations will be based on effectiveness and efficiency criteria
Why is this relevant to our Case Study?

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• Need for a well-justified strategic plan for investment in Higher Speed Railway Lines
• Need for exemplary cooperation between the involved countries and entities to ensure consistency
• Need to ensure a robust basis for project decision-making, including a proper socio-economic justification (demand analysis)
• Need to ensure a proper basis for effective and efficient project implementation, including proper cost estimation, due attention to an efficient procurement framework, and a systematic risk assessment
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• Remember earlier points on requirements of various potential financiers

• For projects where a major risk is on a country level, financial constructions will to a large degree depend on full state support in each case

• There is nothing prohibiting the exploration of innovative financial constructions such as project bonds, but.....
Some key points on experience with project bonds

Traditional Project Financing Model

- Sponsors
- Special entity
- Loans
- Equity
- Banks

Classic loans or project guarantees
Some key points on experience with project bonds

Model from EC/EIB
Project bonds in practice so far.....

• First project, a gas storage facility in Spain, was agreed in July 2013
• A 1.4 bn EUR bond issue for the project was supported by a 200 M EUR liquidity line under the Project Bond Credit Enhancement Facility which allowed the project to receive a credit rating more attractive to investors
• In addition, the EIB purchased 300 M EUR of bonds as an anchor investor, placed with a wide range of institutions across Europe
• Although prime projects might aim for an « A » credit rating, the rating agencies so far believe that projects will remain constrained to the « BBB » category
• The current regulatory climate is biased against indirect security enhancements, thus tending to increase spreads for project bonds
• The Spanish project bonds are rated « BBB+ » outlook negative, because seismic problems have prevented further gas injection
Conclusions

• Remember the pyramid and the need for a solid foundation
• Any project must be grounded on an identified realistic demand, resulting in a strong economic case
• Cost estimates must be realistic and up to date and reflect best technical estimates as well as market conditions
• The first step would be a demonstration that a concerted approach by the key players (the railway infrastructure investment agencies in the three countries concerned) is institutionally possible
• Tangible evidence of this would be the launching of a cross-border concept study on the feasibility of a regional system of high speed railway lines in the medium term
Thank you for your attention!