PPP: New Financing Trends Impact on Tunnelling Contracts

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PPP: New Financing Trends
Impact on Tunnelling Contracts

Contents

- Contractual Structure of PPP Projects
- Investment – Return of Funds
- Why PPP?
- Participation in a PPP Project from the Contractor's Point-of-View
- Risk Evaluation from the Contractor's Point-of-View
- Typical Risks of a PPP Project versus “Classical Scheme”
- Risk Evaluation between the Contractor and the Concessionaire
- Availability Fee versus Traffic Risk
- Summary / Conclusion
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Contractual structure (example)
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Detailed contractual relationships (schematic)

Project Contracts:
1. PPP-Project and Consortium Contract
1a. Partnership Agreement
2. Leasing Contract
3. Renovation and Rental Agreement
6. Facility Management Contract (with service level agreement and bonus/malus rule)
7. Cleaning Service Contract (with service level agreement and bonus/malus rule)
8. Grounds Servicing Contract (with service level agreement and bonus/malus rule)
9. Mediation and Arbitration Agreement
10. Direct Agreement
11. Arbitrator's Agreement

Financing Contracts Project Partnership:
2. Garnishment Agreement on Accounts
3. Contract to Assign Bonds on Claims from Project Contracts
4. Loan Agreement
5. Contract to Assign Bonds on Claims from Insurance

Sub-Contractor Contracts Project Partnership:
8. General Contractor Contract with Consortium Partners
9. Contract to Carry-Out Maintenance Work with Consortium Partners
10. Agency Contract with Consortium Partners

Miscellaneous Contracts:
17. General Agreement

Contractual Structure

<table>
<thead>
<tr>
<th>Investment</th>
<th>Why PPP?</th>
<th>PPP Participation</th>
<th>Risk Evaluation</th>
<th>Real Risks</th>
<th>Risk Sharing</th>
<th>Availability Fee</th>
<th>Summary / Conclusion</th>
</tr>
</thead>
</table>
Investments & Return - Sources of Funds

Construction Period
- Equity by the Sponsors
- “European Money” e.g. EIB Loan
- Loan by Lenders / Banks

Operation Period
- Government Funds:
  - Availability payments Subject to deduction regime
  - Or Direct Income from Toll Collection
- Petrol Station Fee
- Operation Fee
- Heavy Maintenance Costs
- Renewal Costs of TME (Tunnel Management Equipment)
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Why PPP?
Advantages for the State / the Users

- Off Balance Sheet
  - Concession period
  - Maastricht criteria

- Realisation Time
  - PPP = usually much earlier
  - Traditional = later
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Why PPP?
Advantages for the State / the Users

Shared Risk Allocation

- design
- finance
- construction
- operation
- maintenance

Safety

- design according to expectations

Contractual Structure

- Investment
- Why PPP?
- PPP Participation
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Why PPP?
Advantages for the State / the Users

Comfort
- faster connection

Region
- modern infrastructure
- first-class availability
Participation in a PPP from the Contractor’s Point of View

Strategic Decision!

Resources

- Management capacity
- Long period of time
- External expenses
Participation in a PPP: Analysis / Consequences

- Competitive Situation
  - Number of tendering companies?

- Contractual Risks
  - Type?
  - Accumulation?
  - Mitigation?
  - Sharing?
  - "no goes"?
Participation in a PPP: Analysis / Consequences

Key Resources

- to tender?
- to execute?

Consortium

- fit together?

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Contractual Structure
Investment
Why PPP?

PPP Participation
Risk Evaluation
Real Risks
Risk Sharing
Availability Fee
Summary / Conclusion
Participation in a PPP: Analysis / Consequences

Consequence: NO Tender
Participation in a PPP: Contractor’s Main Tasks

Construction Partner's Responsibility
- design & its feasibility
- design life
- determining and adhering to
  - construction time
  - schedule
  - cost plan

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Why PPP?
- Investment
- Contractual Structure
- PPP Participation
  - Risk Evaluation
  - Risk Sharing
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Participation in a PPP: Contractor’s Main Tasks

Depending on extent of delivered documents

contractor assumes 70% over classical ownership
Participation in a PPP: Design Process

Value Engineering

- operating costs reduced through costly construction methods
- first-class quality
Participation in a PPP: Design Process

- Ideas needed for:
  - Tunnel ventilation concepts
  - Speed layout design
  - Etc.

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Participation in a PPP:
Integrated Design through early Examination of the Utilization Expenses

Design & Construction Costs

Ability to be Influenced

Total Expenses (after 40 years)
Participation in a PPP: Communication Channels between Work Groups during the Tender Preparation Phase
Participation in a PPP:
Communication Channels between Work Groups during the Tender Phase

Interdisciplinary Work Groups

- resolve interfaces
- identify risks
- summarize risks

consolidated risk matrix
Participation in a PPP: 
Communication Channels between Work Groups during the Tender Phase
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Risk Evaluation

Risk Impact: Time

Risk Impact: Costs

commensurate & sufficient
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Risk Evaluation

- Consequent
- Non-Emotional
- Systematic
- Clear
- Transparent
- Practice-Oriented

Set Up
Risk Evaluation

Good feelings not enough and dangerous!

Rough extra charges may not be economical!
Risk Evaluation Tools

Scientific Base

- Monte-Carlo-Simulation
- Chaos Theory
- etc.

Operators

- no actuaries
- well-skilled engineers
- working under time pressure
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Risk Evaluation Tools

Pareto Principle

- 20% effort
- yields
- 80% of the result
### Risk Evaluation Tools

**Operation + Input + Result Analysis**

of the tool must be simple, fast and fool-proof!

<table>
<thead>
<tr>
<th>Frequency</th>
<th>x</th>
<th>Consequence</th>
<th>=</th>
<th>Risk Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>very likely</td>
<td></td>
<td>disastrous</td>
<td></td>
<td>unacceptable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>negligent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>very unlikely</td>
<td></td>
<td>insignificant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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Impact of Time Overrun

Time Schedule Allocation

Target Completion Date = Payback Date, plus interest
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Impact of Time Overrun

Key Milestones

- operationally possible
- not operationally possible
- finalising works

liquidated damages
consequential losses
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Risk Transfer Mantra

Risks shall be borne by the partner 
who is best able to manage and handle it!

Lenders: 

NO 
RISK
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Risk Transfer Mantra

Managing / Handling risk

- influence
- qualifiable & quantifiable
- not to one contractor
- minimizing "bankability"
- bank willingness
- increased financing costs

Nobody has an advantage!
Example:
Risk Allocation according to the Concession Agreement

- **Republic of Hungary**
  - Site Availability
  - Demand Risks
  - Discrimination Legislation
  - Inflation Risks
  - F/X Risks
- **M6 Duna**
  - Permits
  - Construction Risks
  - Operating Risks
  - Maintenance Risks
  - Availability Risks
  - Interface Risks
  - Changes in Interest Rates

**Risks allocated to the country of Hungary**

**Shared Risks**

**Risks allocated to the Project Partners**

**Summary / Conclusion**

**PPP: New Financing Trends Impact on Tunnelling Contracts**

**Contractual Structure**

**Investment**

**Why PPP?**

**PPP Participation**

**Risk Evaluation**

**Risk Sharing**

**Availability Fee**

**Summary / Conclusion**
Example : Risk Allocation within „Concession Company“

<table>
<thead>
<tr>
<th>Sub-Contractor / Insurer / Banks</th>
<th>M6 Duna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Risks</td>
<td>Increasing Insurance Costs</td>
</tr>
<tr>
<td>Permits</td>
<td>Maintenance Risks</td>
</tr>
<tr>
<td>Operating Risks</td>
<td>Legal Changes</td>
</tr>
<tr>
<td>Completion Risks</td>
<td>Contract Partner Insolvency</td>
</tr>
<tr>
<td>Changes in Interest Rates</td>
<td>Increased Costs of M6 Duna Zrt</td>
</tr>
<tr>
<td>Interface Risks</td>
<td></td>
</tr>
<tr>
<td>Force Majeure</td>
<td></td>
</tr>
</tbody>
</table>

Risks shared by the Sub-Contractor / Insurer / Banks

Risks remaining with M6 Duna

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Summary / Conclusion

PPP Participation

Risk Evaluation

Risk Sharing

Availability Fee

Why PPP?

Investment

Contractual Structure
Typical Risks of a PPP Project versus a Classical Scheme:

<table>
<thead>
<tr>
<th>CONTRACTOR’S Particular Risks in PPP / BOT Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ground conditions</td>
</tr>
<tr>
<td>Unforeseeable ground conditions / contamination / soil type / ground water / obstructions / service diversions / archaeological findings</td>
</tr>
<tr>
<td>2. Design</td>
</tr>
<tr>
<td>Design risks related to multi-party influence: Owner / Authority – SPC – Lenders – Operator – Related Advisors – Engineer</td>
</tr>
</tbody>
</table>

1 In this table the following terms / abbreviations have the following meanings:
CA = Concession Agreement; SPC = Special Purpose Company / Concessionaire; Contractor = Design Build Contractor; Operator = Operation and Maintenance Contractor
Typical Risks of a PPP Project versus a Classical Scheme:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>3. Information and reports</td>
<td>No warranty for correctness and completeness of reports, including soil investigations, and all other information provided by Owner</td>
</tr>
<tr>
<td>4. Change in law + technical regulations</td>
<td>Distinction between discriminatory, i.e., project-related change in law and general change in law including regulatory change and change in specifications/codes/standards. No compensation for general change in law.</td>
</tr>
<tr>
<td>5. Permits</td>
<td>including principal planning approval and environmental approval; in addition terms and conditions of these approvals to be obtained in the future may influence design and/or construction / right of way</td>
</tr>
<tr>
<td>6. Protesters' action / trespassers</td>
<td>Political background may change</td>
</tr>
<tr>
<td>7. Fit for purpose</td>
<td>Design life</td>
</tr>
</tbody>
</table>
Typical Risks of a PPP Project versus a Classical Scheme:

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<table>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8. Utilities</strong></td>
<td>connections of new services into existing systems / modifications to and relocation of existing services: no influence of the Contractor on the Public Utility Organizations</td>
</tr>
<tr>
<td><strong>9. Force majeure</strong></td>
<td>No compensation by Owner under CA – partly uninsurable risk, risk of increase in premium for insurance cover</td>
</tr>
<tr>
<td><strong>10. Latent defects</strong></td>
<td>CA requests responsibility of SPC for any latent defects, including existing works constructed by third parties</td>
</tr>
<tr>
<td><strong>11. Hand-over process</strong></td>
<td>Substantial completion to be defined between SPC and Contractor</td>
</tr>
<tr>
<td><strong>12. Liquidated damages</strong></td>
<td>In standard infrastructure projects the foreseeable damages of the Owner in case of delayed completion are relatively minor. Under a financed PPP the interest to be paid to the Lenders by the SPC has to be taken into account; buffer between scheduled completion date and first repayment should be considered by SPC.</td>
</tr>
</tbody>
</table>
### Typical Risks of a PPP Project versus a Classical Scheme:

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension of Time / Liquidated damages</td>
<td>In some projects even if an Extension of Time has been granted for delay events (e.g. force majeure) the Contractor is requested to pay liquidated damages if he fails to meet the original completion date.</td>
</tr>
<tr>
<td>13. Warranty periods</td>
<td>Under PPP structures the warranty periods are extended compared to purely design build projects. If during repair by the Contractor availability payments are reduced by the Owner SPC / Lenders may ask for compensation by the Contractor.</td>
</tr>
<tr>
<td>14. Direct agreement with Lenders</td>
<td>If SPC fails to perform Lenders are entitled to step in and take over the control of the project – including an ongoing construction contract.</td>
</tr>
</tbody>
</table>
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Risk Sharing / Mitigation

Main Risks

- not reasonably acceptable
  - Reject "No Go" Project
- reasonable & fair
  - contingency
  - time extension
  - unit prices
  - uninsured loss
- retain risk
  - money & time
- insure risk
  - franchise exclusions

Typical Risks

Risk Sharing / Mitigation

Summary / Conclusion

Availability

Fee

Contractual Structure

Why PPP?

PPP Participation

Risk valuation

Typical Risks

Risk Sharing
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Availability Fee versus Traffic Risk

- Traffic Risk
  - positive
  - negative

- Availability Fee
  - vignette price
  - toll fees
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Availability Fee versus Traffic Risk

Concessionaire's Risk

project availability

performance-linked Availability Fee
Availability Fee versus Traffic Risk

Adjustments made for

project non-availability

"Performance Point" system

traffic safety requirements
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Advantages for the Availability Fee

- Simple structure
- Clear interfaces
- Clear risk transfer
- Project cost optimisation
- Net present value
- Influence by private sector

Availability Fee Advantages
Advantages for the Availability Fee

- Effective instrument
- Active public participation not necessary
- Budgeting foresight
- Traffic risk remains in public sector
- Private sector contribution
- Performance-based claims & potential deductions
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Summary / Conclusion

PPP projects interesting, but different rules!

Tender costs high, be critical and restrictive!

Understand intentions, interests and contractual relationships of all parties!
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Summary / Conclusion

Making claims is difficult and limited

practical risk management tools

feasible design, timeframe & related cost balance
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Summary / Conclusion

After being awarded the contract:

build within contractual time

and

within the given revenue frame
Thank you for your kind attention!

GLÜCK AUF!