Funding Regional Passenger Rail Rolling Stock
Example of the Czech Republic

Report prepared on the basis of a Consultancy Contract with Kompetenzzentrum Wettbewerb, KCW, Berlin

September 2008

JASPERS Project 2007 018 CZ MUN RAL Regional rolling stock replacement
Foreword

The Czech authorities requested JASPERS support in the area of EU funding for regional passenger rolling stock. JASPERS provided support in this area via a consultancy contract with Kompetenzzentrum Wettbewerb, KCW Berlin. This report contains the full version of the Final Report under this consulting assignment.

JASPERS has decided to disseminate this report because it provides methodological support in a complex and new area of EU funding where state aid, competition and specific funding rules have to be applied. EU funds provide a unique opportunity to start modernising the outdated regional transport rail vehicle fleet in all new EU Member States.

The report provides an overview of rolling stock financing schemes, it determines the role of public transport authorities in those schemes, it presents and analyses relevant public funding schemes for regional rail rolling stock in European countries and regions and it develops and evaluates models how EU funds can be used to support the provide upfront funding for the acquisition of new vehicles. While it is based on the example of the Czech Republic most findings are transferable to the situation in other New Member States. The report has been edited for general readers.

We would like to thank the principle authors of the report, Volker Eichmann, Ingo Kühl, Esther van Engelshoven and Melanie Oertel from the KCW consultant team, as well as Mr Joachim Schneider, the JASPERS Task Manager. We would also like to thank the Czech Ministry of Transport and the managing authorities for the Regional Operational Programmes (“Cohesion Regions”) as beneficiaries of JASPERS support under this Action, for their cooperation and support.

We owe special thanks to Alejandro Martinez Godin, responsible desk officer at the state aid unit at DG TREN for his competent and swift feedback and guidance.

This is second report of a series of JASPERS outputs from “horizontal” tasks aimed at addressing generic issues which impact the development of projects anticipated for EU-funding during 2007-2013.

Disclaimer & Copyright

This report is provided in good faith, to be used at the risk of the reader. JASPERS does not warrant the accuracy or completeness of the information contained in this report nor does it assume any legal liability or responsibility, direct or indirect, for any damages or loss caused or alleged to be caused by or in connection with the use of or reliance on materials contained in this report.

This report has not been formally discussed or approved by the European Commission. The comments expressed in this report do not necessarily state or reflect the views of the JASPERS partners (European Commission, EIB, EBRD and KfW).

In particular, the views expressed herein cannot be taken to reflect the official opinion of the European Union.
Content

1. Tasks and structure of the report ................................................................. 5
2. Financing rolling stock in competitive markets: an overview ...................... 6
   2.1 Legal background for rolling stock subsidies ........................................ 8
       2.1.1 Assessment of state aid compatibility .......................................... 9
       2.1.2 Assessment of state aid notification obligations ......................... 10
       2.1.3 Specific rolling stock state aid guidance ..................................... 11
   2.2 Overview of rolling stock financing options ........................................ 12
   2.3 Asset classifications and Maastricht criteria ....................................... 18
   2.4 Risk allocation between the TOC and the PTA ................................... 20
3. European Case Studies ............................................................................... 22
   3.1 Core questions and methodology ..................................................... 22
   3.2 United Kingdom .................................................................................. 24
   3.3 Ireland ................................................................................................ 29
   3.4 France ................................................................................................ 31
   3.5 Germany ............................................................................................ 36
   3.6 The Netherlands ................................................................................ 45
   3.7 Poland ................................................................................................ 48
   3.8 Sweden ............................................................................................... 50
   3.9 Core aspects of European experiences ............................................. 53
4. Railway structures in the Czech Republic .................................................. 55
   4.1 Organisational structures ..................................................................... 55
       4.1.1 Governmental organizational units ............................................. 55
       4.1.2 Organisation of railway infrastructure ...................................... 55
       4.1.3 Public transport authority (PTA) for rail passenger services ....... 57
       4.1.4 Train operating companies (TOC) ............................................. 59
4.1.5 Public Transport Authorities (PTA) for public road transport and urban transport ................................................................................................................. 61

4.2 Relationships between the different actors ........................................... 62
  4.2.1 Legal and organisational relationships ........................................... 62
  4.2.2 Transport contracts ........................................................................ 62
  4.2.3 Financing .......................................................................................... 64

4.3 State of contractual regulations in public transport in the local authorities 65
  4.3.1 Directly awarded services ............................................................... 65
  4.3.2 Competitive tendering procedures ................................................... 66
  4.3.3 Services without contracts .............................................................. 67
  4.3.4 Regional bus services and urban transport ....................................... 68

4.4 Market situation and financial structures in public rail transport ........... 68
  4.4.1 Key figures for rail transport ........................................................... 68
  4.4.2 Rolling stock .................................................................................. 69
  4.4.3 Financial system of public transport vehicles .................................... 70

5 Conclusions from European experiences and from the current situation in the Czech Republic .................................................................................................. 72
  5.1 Main results based on European experiences .......................................... 72
  5.2 Main results based on the current situation in the Czech Republic ............ 73

6 Recommendations ....................................................................................... 76
  6.1 General Framework Conditions .............................................................. 77
     6.1.1 Economic aspects ........................................................................... 78
     6.1.2 Legal framework ............................................................................ 80
     6.1.3 Duration of procedures ................................................................... 85

6.2 Model A - State aid notification separate from PSC................................ 87
  6.2.1 Description of the model ................................................................... 87
  6.2.2 Requirements of the model ............................................................... 88
6.2.3 Strength and risks of the model ...................................................... 88

6.3 Model B - Direct award with direct subsidies to the TOC ............... 89
  6.3.1 Description of the models .......................................................... 91
  6.3.2 Requirements of all sub models ................................................. 96
  6.3.3 Strengths and risks of model B (including sub models) ............... 96

6.4 Model C - Tendering procedure with direct subsidies to the TOC ....... 98
  6.4.1 Description of the model .......................................................... 98
  6.4.2 Requirements of the Model ..................................................... 100
  6.4.3 Strengths and risks of the model ............................................. 101

6.5 Model D - Public Rolling Stock Pool solution and subsidies to the PTA .... 102
  6.5.1 Description of a public rolling stock pool .................................. 103
  6.5.2 Requirements of the model ..................................................... 104
  6.5.3 Strength and risks of the model ............................................. 105

6.6 Additional measures ....................................................................... 106

6.7 Conclusion and Comparative appraisal ............................................ 107

List of abbreviations ............................................................................ 111

References .......................................................................................... 113
1. **Tasks and structure of the report**

The Czech Republic plans to use EU Structural Funds to subsidize the procurement of new rolling stock for regional passenger rail services and has requested JASPERS guidance for that purpose (2007 018 CZ MUN RAL).

JASPERS was asked by the Czech Ministry of Transport to provide an overview of ways to organise and fund the purchase of rolling stock and to provide recommendations regarding

a) the possibilities to use EU grants for rolling stock renewal in accordance with the EU policies and regulations, and the implications for the way regional rail services are organized in the Czech Republic,

b) approach to different Public Service Obligation Contracts (PSO Contracts) for the utilisation of new vehicles can be resolved.

To support its work JASPERS has commissioned a study to KCW GmbH, Berlin.

The result of the research undertaken in this study and the recommendations based on it is presented in the following five chapters:

Chapter 2 reflects to the range of institutional and financing structures and presents an overview of procurement and financing options for rail rolling stock.

Chapter 3 demonstrates and analyses relevant cases where the public subsidies have explicitly aimed for the acquisition of new rolling stock for regional passenger rail services. The selection includes cases in the following countries: United Kingdom, Ireland, France, Germany, Netherlands, Sweden and Poland. Further comparative analysis provides basic knowledge and information for recommendations for the rolling stock funding in the context of the European legal framework and market organisation.

Chapter 4 gives an overview about the organisational and market structures of passenger rail transport in the Czech Republic. A brief survey on passenger transport authorities, transport operating companies, contract types and procurement forms is included. Main contents and results in this chapter were provided by the Technical University Dresden, department for urban and regional transport.

Chapter 5 summarises conclusions from European experience and compares with the background situation in the Czech Republic.

Chapter 6 provides recommendations how EU funds can be used for rolling stock acquisition in the Czech Republic and proposes four different model approaches which could be applied by the competent authorities at regional level.
2. Financing rolling stock in competitive markets: an overview

Current conditions on the transport market require additional financing of the public transport investments (including rolling stock for regional rail service). Ticket sale revenues are not efficient to heavy up-front investments. Public support is needed to enable system improvements and even the system operation. The EU treaties and specific EU legislation has established a legal framework which aims at prevention of any distortion of efficiency and transparency of the European common market. Public funding is therefore subject to state aid rules and has to be based on appropriate procurement procedures and contractual forms.

Purpose of the public support for rolling stock purchase is meant to relieve operators from financial burden and shift risks on the public authority, as long as it is better dealt with those risks. Therefore potential arrangements have to be analysed in which public funds are optimally used. A sensible and economic use of public funds in general and EU funds in particular should help to fulfil the following goals:

- Efficient utilisation of public funds
- Efficiency of transport services
- Achievement of politically defined aims regarding the quality of services
- Control of technical and economic risks

In many European countries public transport authorities (PTAs) do not subsidise rolling stock directly but fund the politically and administratively defined level of transport services on the basis of public service contracts. Normally the level of necessary remuneration is determined in a competitive tendering process. Under those conditions, the choice of the best financial concept to finance rolling stock is at the discretion of the winning bidder. Therefore, financial arrangements can be entirely organised by private parties (via leasing arrangements or via debt or project finance).

Financial institutions will look at the following indicators to determine financial conditions:

- Appropriateness of rolling stock as a security
- Credit history and rating of the operator
- Financing volume for rolling stock
- Contract risks and rate of return to the project
- Guarantees and guidelines by the PTA

If the PTA does not pay subsidies for the financing of rolling stock, its influence on the quality of the vehicles in only indirect and relies on quality specifications within
the awarding documents and on financial penalisation if the required quality is not delivered.

Direct influence of public transport authorities on the quality of rolling stock is only possible if the PTA issues direct subsidies or becomes owner of the vehicles. The following options exist:

- public institution grants direct financial support for rolling stock
- public institution issues guarantees
- a public institution finances (and procures) rolling stock itself

Financial arrangements and the subsidy policy of PTAs or other institutions are deeply intertwined. One substantial effect of a subsidy policy on financial arrangements is that the PTA might take over the financing (forfaiting) or the financing and procurement of vehicles (PTA Pool) himself. Efficient use of grants much depends on the chosen financing concept. The choice of a particularly useful financial arrangement combined with e.g. a debt-service guarantee will reduce the overall level of remunerations paid by the PTA.

The development of the European single market led to a growing market orientation in passenger rail services. Moreover, even without mandatory EU-guidelines, competition takes place in many countries because of national law or economic considerations. EU grants for rolling stock need to consider these aspects.

At the outset, it is the task of public authorities to assure that benefits from public subsidies will lead to appropriate benefits for public transport services and not for a particular company. Hence, in order to establish fair conditions for competition, discriminatory measures need to be prevented. Public authorities have to take this advantage into consideration since established operators have benefited from subsidies for rolling stock in the past.

Transport operators’ main up-front investments are related to the purchase of rolling stock. Costs and cost risks related to the acquisition of rolling stock can complicate or even prevent the market entry of new operators, particularly for smaller and medium sized companies. Less competition for the service might be the consequence, which will lead to higher public costs for the requested service quality.

The legal and economical framework of passenger rail services features some differences to road-bound services that need to be taken into consideration. At the present time, so-called “in-house” operators barely exist. Regions or municipalities owning rail operators are rare; it is common that the rail passenger services are offered (completely or partially) by state-owned or private railway companies.
2.1 **Legal background for rolling stock subsidies**

An evaluation of all legal aspects related to state aid and subsidies cannot be presented in this study. Nevertheless a short consideration of legal questions focussed on relations between tendering of PSC and state aid is necessary.

The legal framework for the grant of investment subsidies is dominated by EC law, namely the provisions of the EC Treaty on State aid and the regulations and directives applicable in the field of railway undertakings.

Article 87 (1) of the EC Treaty states as follows:

"Save as otherwise provided in this Treaty, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market."

State aid is subject to the prior notification requirement laid down in Article 88 (3) of the EC Treaty. Procedure rules for state aids are laid down in Regulation (EC) No 659/1999.\(^1\) Unlawful state aid can be subject to recovery from the recipient.

The EC Treaty also provides rules for the justification of such aids, such as in Article 87 (3) and, for the purposes of the transport sector, in Article 73 which provides that aids shall be compatible with the common market

"if they meet the needs of coordination of transport or if they represent reimbursement for the discharge of certain obligations inherent in the concept of a public service."

Theses general principals stated in Article 73 have been specified in Regulation (EEC) Nos. 1191/69\(^2\) and 1107/70\(^3\), State aid which cannot be authorised on the basis of these Regulations cannot be declared compatible on the basis of Article 73 of the EC Treaty.\(^4\) The two Regulations are going to be replaced by Regulation (EC) No 1370/2007\(^5\) on 3rd December 2009.

---


4 Judgement of the Court of 24th July 2003, Case C-280/00 ("Altmark"), ECR I-07747, paras 106-109.

Thus two questions arise when granting investment subsidies:

1. Does the subsidy constitute state aid in the sense of Article 87 (1) of the EC Treaty?
2. If yes, can the state aid be justified, i.e. be declared compatible with the common market?

The following sections will give an overview of the criteria applied in the assessment of public subsidies.6

## 2.1.1 Assessment of state aid compatibility

In the “Altmark” judgement, the European Court of Justice (ECJ) held that state aid according to the EC Treaty requires the following cumulative conditions:

1. There must be an intervention by the State or through State resources.
2. The intervention must be liable to affect trade between Member States.
3. It must confer an advantage on the recipient.
4. It must distort or threaten to distort competition.

As to conditions No 1 and 2, an investment subsidy constitutes an intervention by the State. The ECJ ruled that the mere fact that the recipient of the public subsidy provides only local or regional transport services and only inside its State of origin does not exclude an effect on trade between Member States.7

As to condition No 3, the ECJ held that a public subsidy is not capable of being regarded as an advantage conferred to the recipient when it constitutes a “compensation for the services provided by the recipient undertakings in order to discharge public service obligations, so that those undertakings do not enjoy a real financial advantage and the measure thus does not have the effect of putting them in a more favourable competitive position than the undertakings competing with them”. The Court then defined four criteria that have to be met so that the subsidy will not be regarded as an advantage and thus does not constitute state aid according to the EC Treaty:8

---


7 Cp. fn. 4 (Altmark), para 77.

8 Cp. fn. 4 (Altmark), paras 87 and 88-93.
1. The recipient undertaking must actually have public service obligations to discharge, and the obligations must be clearly defined.

2. The parameters on the basis of which the compensation is calculated must be established in advance in an objective and transparent manner.

3. The compensation cannot exceed what is necessary to cover all or part of the costs incurred in the discharge of public service obligations, taking into account the relevant receipts and a reasonable profit for discharging those obligations.

4. Where the undertaking which is to discharge public service obligations, in a specific case, is not chosen pursuant to a public procurement procedure which would allow for the selection of the bidder capable of providing those services at the least cost to the community, the level of compensation needed must be determined on the basis of an analysis of the costs which a typical undertaking, well run and adequately provided with means of transport so as to be able to meet the necessary public service requirements, would have incurred in discharging those obligations, taking into account the relevant receipts and a reasonable profit for discharging the obligations.

If the subsidies confer an advantage on the recipient, they threaten to distort competition in the sense of condition No. 4.

2.1.2 Assessment of state aid notification obligations

Subsidies fulfilling the conditions of Regulations No. 1191/69 or 1370/2007 (for subsidies granted after 3rd December 2009) are exempt from the prior notification requirement of Article 88 (3) of the EC Treaty, cp. Article 17 (2) Regulation No. 1191/69 and Article 9 Regulation No. 1370/2007. In return, they have to be notified if they do not fulfil the conditions of these regulations.

According to Article 1 of Regulation No. 1191/69, the competent authorities are free to choose whether to impose public service obligations or to conclude public service contracts (PSC) with transport undertakings. In the former case, the conditions and details of operation, including methods of compensation, are laid down in Sections II, III and IV of the Regulation. Rules for PSC can be found in Article 14; they do however not contain provisions for the method of compensation. Thus, to the opinion of the European Commission, the general principles for the assessment of compatibility of state aids have to be applied, meaning that there is state aid where the subsidy does not fulfil the four criteria of the “Altmark” judgement mentioned above.

Regulation No. 1370/2007 will provide rules for the method of compensation in its Annex in case of direct award of a PSC. Irrespective of how the contract has been

---

9 Cp. fn. 6 (Postbus), para 93.
awarded, all PSC have to comply with the provisions of Article 4, which basically reflects the first three criteria of “Altmark”, thus demanding to prevent overcompensation.

Beyond the scope of the Regulations just mentioned, Article 3 of the Regulation (EEC) No. 1107/70 lists the circumstances under which state aid can be granted in compliance with Article 73 of the EC Treaty. These circumstances are for example expenditure relating to the infrastructure or excess capacity causing serious structural problems.

Regulation (EEC) No. 1192/69\(^{10}\) allows certain subsidies for the purpose of the normalisation of the accounts of railway undertakings. According to Article 3(1), the Regulation applies to the České dráhy (ČD) a.s. and the Správa zeleznicí dopravní cesty s.o.

It has to be noted that the latter Regulations do not exempt subsidies from the notification requirement.

### 2.1.3 Specific rolling stock state aid guidance

Up to now there are no further binding rules for the grant of rolling stock subsidies. The European Commission has recently adopted Community guidelines on State aid for railway undertakings, which include amongst others criteria for the assessment of aids for the purchase and renewal of rolling stock.\(^{11}\) Regardless of how a subsidy for the purchase and renewal of rolling stock is granted, according to these guidelines four cumulative conditions must be fulfilled:

1. The rolling stock concerned must be exclusively assigned to urban, suburban or regional passenger transport services,

2. the rolling stock must remain exclusively assigned for at least 10 years to the specific service or region for which it received aid,

3. the replacement of rolling stock must meet the latest interoperability, safety and environmental standards applicable to the network concerned and

4. the Member State must prove that the project contributes to a coherent regional development strategy.

In order to maintain effective competitive conditions on the market, the Commission may oblige the recipient of the state aid to allow its further use by other operators. This is in case when the rolling stock is not going to be used anymore under normal


\(^{11}\) European Commission, Directorate-General for Energy and Transport, Community guidelines on State aid for railway undertakings (2008/C 184/07)
market conditions and they are object to sale; in this case the revenues from the sale of the rolling stock will be deducted from the eligible costs.

European Commission will base its future decisions on these guidelines. Finally, it should be mentioned that in case the subsidy is granted under the regime of a European grant programme, it has to be declared as compatible with the common market.

2.2 Overview of rolling stock financing options

From the view of Train Operating Company’s (TOC’s), regional rolling stock can be financed in general either by loans, by leasing or by rolling stock pools initiated by a passenger transport authority (PTA). Pools can also be managed by private operate leasing companies. Public funding can be allocated in different forms (as shown in the models in Fig. 1), depending on whether public money is spent directly (e.g. by subsidies to the TOC or funds to the PTA) or indirectly (e.g. assumption of re-use guarantee).

![Diagram of rolling stock financing options](Own sources: based on VDV, 2007)

Fig. 1: Options for public financing of rolling stock

Direct financing of rolling stock by the PTA or by public funds can take place via the options of non-recourse forfaiting and of PTA-Pool (generally, this also includes the virtual pool). Direct subsidies are also possible and can help TOCs to reduce expenses for conventional financing.

With all other options, initial financing is the responsibility of the TOC, while refinancing via the payment of fees for service contracts is carried out by the PTA. By the use of certain guarantees, the PTA can additionally take over a part of the...
financial risks and thereby indirectly finance the TOCs. A guarantee on debt services is similar to non-recourse forfaiting. The PTA assures that the fee, which covers payments for rolling stock investments, will be paid to the TOC under any circumstances. The PTA therefore ensures that the TOC can always pay back debts to the bank. If the PTA grants a re-use guarantee to the operator, the authority is obliged to take over rolling stock after the expiration of the contract period (in case the operator loses the next contract). The result of this arrangement are better financing conditions or cheaper leasing rates.

Conventional **financing by loans** is still the most common option of financing rolling stock. The bank evaluates the credit worthiness of the transport operator in order to determine the financing conditions under which a credit will be issued. Operating companies make use of equity capital only to a small degree, but are bound by bails or comfort letters. The amount of loans depends on the number of vehicles and the extent of direct public financial support.

![Financing by loans](image)

**Project financing** also mainly depends on borrowed capital. In contrast to conventional financing, banks and other creditors evaluate the performance of the project (structure, profitability) in order to determine credit worthiness. For the payment of debts revenues of the project are used, therefore it is also called cash flow related lending. The project is mainly financed by borrowed capital (about 80-90%). A provider of senior debt is mostly a commercial state bank. In contrast to conventional financing by loans, control and supervision rights of the bank are more comprehensive. With a typical project financing, creditors have limited recourse to
the assets of the investors. However they will only be willing to carry part of the credit risk, if the project will provide sufficient and constant revenue and if they receive additional securities (e.g. the right to intervene and take over the management in case of serious defaults, physical securities like rolling stock, letter of credits). Operating companies generally contribute with the equity capital or comparable financial arrangement. Equity capital will be higher, if the risks of the project are assessed to be high. The relative advantage of project financing is therefore dependant on the level of risks and the revenue streams associated with a certain project. Project financing of rolling stock has as of yet barely been utilized. But we can expect that with upcoming larger tendering procedures (> 5 Million train-km) and a need for optimized financial solutions, project financing will become more and more common.

**Project financing**

A *debt service guarantee* is a subordinate concept, which covers financing arrangements for which the PTA guarantees that the operator will always receive remuneration, covering costs related to the debt service of rolling stock. The bank can therefore take the creditworthiness of the PTA into account in determining financial conditions. The strongest type of debt service guarantee is **non-recourse forfaiting**. In contrast to debt service guarantees within project financing or conventional financing, the PTA becomes the principle party in financial relations, if it uses non-recourse forfaiting. It assures that, if necessary, it will take over the debt service. In the case of an infringement to the contract by the operator, however, it is worth refraining from making use of the right of a reduction of payment (generally this only covers payments for the regular outlays for rolling stock and should be secured by the operator to the PTA). The PTA pays the fee for rolling stock investments not to the operator, but directly to the bank, which has granted the loan. Non-recourse forfaiting has the advantage that financial conditions are similar
to those of local authority loans. Non-recourse forfeiting has been recently offered by the German Verkehrsverbund Rhein-Ruhr (VRR) in North-Rhine-Westphalia for a tendering procedure of the Maas-Rhein-Lippe network, but has not as of been undertaken yet. Until now it was not possible to investigate the reasons behind.

If financial conditions are set during a tendering procedure, this might not always lead to a distortion of competition for other companies. Therefore, state aid risks don’t incur when a debt service guarantee is offered in combination with the tendering of transport services. Risks only occur, like for any other form of support, in the case of a directly awarded contract. The European Commission recently adopted a new Notice on state aid in the form of guarantees fixing the conditions under which such a guarantee does not constitute state aid.\textsuperscript{12}

Budgetary effects always need to be taken into consideration. Since the PTA assumes long-term financial responsibility for a debt service guarantee vis-à-vis a bank, it runs the risk of losing its investment. For that reason, budgetary restrictions are set into place. As a rule, a controller finalises a commitment authorisation within a budgetary timetable for the duration of the guarantee. Here, the budgetary differences as opposed to a more conventional servicing agreement need to be made perfectly clear.

\textbf{Non-recourse forfeiting}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig4}
\caption{Non-recourse forfeiting}
\end{figure}

With a \textbf{re-use guarantee}, the PTA promises to keep on using rolling stock after the expiration of the first contract period (independent of whether the old operator remains or not). Rolling stock will be taken over by the successor company. In order to prevent an above-average level of depreciation, the PTA should have control over whether the operator carries out adequate maintenance work. In case of an operator

\textsuperscript{12} IP/08/764 of 20 May 2008.
receiving direct subsidies for the financing of rolling stock the transfer of rolling stock to the PTA or the new operator should become obligatory, so as to avoid problems of discrimination or state aid problems. Alternatively, the operator should hand back part of the subsidies.

**Re-use guarantee**

![Diagram showing the process of re-use guarantee](image)

**Leasing** means the medium term or long-run rent of goods and real estate. The lessee pays a leasing rate, which covers costs of procurement, financing, insurance and an appropriate rent on capital. For the lessee, the right of ownership of a certain entity is not what is important, but rather the right to use it. Leasing facilitates market entry for operators, because up-front investments are unnecessary. Costs related to rolling stock accrue over the time of usage and are covered by service fees, which the operator receives from the PTA.

With an *operate lease*, the lessor carries the investment risk. If the fees of leasing are not sufficient for amortization, the lessor has to rent the good several times. Additionally, the lessor carries the risk of accidental loss and obsolescence. The lessor is also responsible for the maintenance of rolling stock. Operate leasing, therefore, is part of the pool options. This procedure has been adopted in several European countries. Well-known are ROSCOs (rolling stock leasing companies) in the United Kingdom, established as private-owned companies in 1996 after the split-up of British Rail (BR). They have subsequently started doing business with TOCs in other European countries.

In 1996 the five ROSCOs were founded and took over all old rolling stock from former British Rail (BR). They are bound to make rolling stock available for all TOC's winning a franchise. Theoretically the winner of a franchise is free to choose the ROSCO he wants. In practice this works for about 60% of all franchises. Reasons are restrictions from planned services, tracks or form of electrification. It is criticised that ROSCOs has no interest in the development of rail system as a whole. There have
been hesitations when purchasing a new rolling stock. Technical innovations e.g. tilting technology were rather sold to the United Kingdom later than in other countries. It is also criticised that there is a lack of incentives for the ROSCOs concerning the quality of rolling stock. Hence newer contracts between leasing companies and TOCs or PTAs in other European countries often focus on incentives to improve quality.

With a financial lease contract, the lessee carries the investment risk, while the lessor only carries the loan-related risk.

**Leasing**

![Leasing Diagram]

If the PTA decides to establish a rolling stock pool, which is intended to supply the operators in the PTAs territory, two options are possible. With a PTA pool, the PTA procures and finances rolling stock directly and makes it available to the operators in its area. In Germany, there are two existing PTA pools (LNVG and fahma). The pool of the Landesverkehrsgesellschaft Niedersachsen (LNVG) is responsible for the procurement and administration of vehicles and makes them available to operators in its area. Vehicles are financed by funds from the Land (the Federal State of Lower Saxony). One aim of the LNVG is to implement a well-functioning market for passenger rail services by improving the ability for smaller companies to compete for tendered services. The pool levels the conditions of procurement of rolling stock, where smaller companies usually have disadvantages compared with bigger companies. For example, bigger companies often use frame contracts and options in combination with other procurements, which results in much better conditions. With
the tendering of several networks, the LNVG can profit from economies of scale and pays a lower price. The reduction of lead time is an additional advantage.

The fahma, which is a subsidiary of the Rhein-Main-Verkehrsverbund (the Rhine-Main Transport Authority), procures rolling stock by way of the taking out of loans or lease contracts. With the establishment of a pool, the RMV attempts to take advantage of time and financial savings. Additionally, it aims at promoting funding that does not interfere with competition. Finally, the fahma procures rolling stock that has special technical features and therefore can only be used in the region. If companies had been obliged to procure rolling stock themselves, capital costs would have been higher.

The PTA can also charge a private Pool company with services “procurement”, “financing” and “provision of rolling stock to TOCs”. Except from a concept, experience with virtual pools does not yet exist.

PTA Pool

![PTA rolling stock pool](image)

Fig. 7: PTA rolling stock pool

2.3 Asset classifications and Maastricht criteria

In 2004, Eurostat has taken a decision on the accounting treatment in national accounts of contracts undertaken by government units in the framework of partnerships with non-government units. Financial arrangements like virtual pools or franchise contracts with re-use and debt-service guarantees can be classified as partnerships between the PTA and operators or private leasing companies.

Eurostat recommends that assets like rolling stock should be classified as non-government assets, if the project partner bears most of the project risks. According
to Eurostat, this condition is generally met when the private partner bears the construction risks and at least one of either availability or demand risk.

Construction risk covers notably events like late delivery, non-respect of specified standards, additional costs, technical deficiency, and external negative effects. The transfer of construction risk to the private partner means that he is responsible for delivering and providing rolling stock at the agreed time and standards and that payments by the PTA are dependant on the effective state of the assets.

The take-over of availability risk by the private operator means that he has to pay penalty payment, if he is defaulting on its service obligations (operation and maintenance tasks).

The take-over of demand risks by the operator means that fluctuation in payments due to external impacts on demand (e.g. business cycle, new market trends, intramodal competition) are not compensated by the PTA.

For the case of a virtual pool, the PTA carries the demand risk, since it assures the use of rolling stock in its territory for a period in which the leasing company will earn an adequate return on his assets. On the other hand, the virtual pool will normally carry the construction and availability risk. Hence assets can be classified as assets of the partner.

For the case of a re-use guarantee, the PTA may in our view at least carry part of the demand risk, since payments to the operator are at least partly met by fixed payments of the PTA. Eurostat states that “Government will be assumed to bear the risk where it is obliged to ensure a given level of payment to the partner independently of the effective level of demand expressed by the final user”\(^\text{13}\). For a net cost contract demand risks to the operator are attenuated by regular payments of the PTA. The other two risks are however carried by the operator. Therefore assets are classified as assets of the partner.

With a debt-service guarantee the result is more ambiguous, since the PTA assures that the operator will always be able to comply with its debt service obligations which are related to rolling stock. Payments should therefore not vary with failure of the operator to deliver rolling stock at the right time and with agreed specifications. However, the operator may hand over securities to the PTA, which he can use in the case of late delivery or deficiencies of rolling stock.

If assets are classified as government assets, this has important consequences for government finances, both for the deficit and the debt. The initial capital expenditure relating to the assets will be recorded as government fixed capital formation, with a negative impact on government deficit/surplus. As a counterpart of this government expenditure, government debt will increase in the form of an “imputed loan” from

the partner, which is part of the “Maastricht debt” concept. The regular payments made by government to the partner will have an impact on government deficit/surplus only for the part relating to purchases of services and “imputed interest”.

2.4 Risk allocation between the TOC and the PTA

The PTA is in a position to take over two main risks, the serving of debts and the use of vehicles after one contract period. In the following, the financial arrangements that cover each of these risks will be demonstrated:

- By a re-use guarantee or by the foundation of a (virtual) PTA pool, the PTA takes over the risk related to the residual value of rolling stock after the end of a first contract period.
- If the PTA does not take over this risk, operating companies can transfer the risk to a private leasing company by means of an operate lease contract.
- If rolling stock has certain technical features and can therefore not be easily utilized in other areas, risk mark-ups of operators or leasing companies will be high, if they are left with rolling stock at the end of a contract period.
- By a debt service guarantee (which also includes non-recourse forfaiting) or by a (virtual) PTA pool, the PTA takes over the risk of paying back debt, in case the operator experiences problems of liquidity.

The allocation of risks between TOC and PTA in a public service contract has also a strong influence on the conditions of financing rolling stock, especially when credits for rolling stock are concluded within project finance. Financing conditions then depend crucially on the height and variability of cash flows (after-tax profit + write offs) during the contract period.

Public transport authorities generally intervene in the design of services, so as to meet public demands which are not necessarily in the interest of private operators. That means that private operators are restricted in the way they may influence revenues and profit – on the one hand they may not take decisions, which will increase revenue or decrease costs (like an increase in fares, a cut in non profitable routes), on the other hand they cannot adequately respond to external shocks (e.g. they may not increase fare levels although energy costs have increased). In the following, we will discuss in how far the allocation of risks in service contracts has an influence on the height and variability of profit streams:

- Revenue risks: In the case of net cost contract with revenue risks allocated to the operator the financial conditions depend on the possibilities of the operator to influence the growth of ridership or the level of fares. Problems occur if the allocation of revenue risks to the operator does not fit with the real allocation of responsibilities. If the operator has small room for manoeuvre to influence
decisions which have repercussions on demand, he will face incalculable risks. With a gross cost contract the problem of the variability of cash flows can be foregone.

- Cost Risks: Some contracts for public transport services allow for a reimbursement of price increases for personnel or energy costs. Also rail infrastructure costs are often directly carried by the PTA. Furthermore the PTA often takes over capacity risks related to increases in demand, which means that they will pay for the use of additional rolling stock, if capacity is not sufficient. These measurements will generally transfer part of the cost related risks on the PTA and will reduce the variability of profit flows.

The distribution of risks within a contract is a complex decision-making process. Higher risks on the operator side, which he can not optimally influence, will mean higher risk mark-ups to compensate for higher variability of profit streams. A well defined distribution of risks will decrease costs on the PTA side and will facilitate borrowing for operators. However, that does not mean that the PTA necessarily will take over all risks, since then the operator holds no incentive anymore to meet the conditions of the contract. The above mentioned risk factors have a main influence on the adequateness of a contract. A full evaluation of contract risks can however not be accomplished within the framework of this report.

For the financing of rolling stock, financial institutions will also assess the risks and returns of a contract. The bank will be willing to grant favourable financial conditions to the operator, if he has concluded a gross cost contract with sufficient remuneration. With a net cost contract, remuneration has to compensate for higher risks. The PTA can reduce total contract costs and facilitate financial possibilities of operators, if it takes care of an adequate distribution of risks and considers an appropriate model of financing rolling stock e.g. pool solutions, for which risks related to the procurement of rolling stock are lifted from the operator.
3 European Case Studies

This overview of alternatives for financing rolling stock demonstrates that there are many possibilities for direct and indirect support of TOCs. The following parts of this study will focus on direct financial support for the procurement of rolling stock. The inclusion of other – normally indirect – financial instruments should also be mentioned in order to complete the picture of financing arrangements upon which we would like to base appropriate recommendations.

Following the specific financial arrangements, the transfer of funds and the respective conditions or guidelines for the grant acquisition, we will analyse as well the respective overall structure. We will take a special look at which parties are involved in the funding of rolling stock and to what extent the regional passenger transport market is competitively structured.

3.1 Core questions and methodology

In the following sections, European case studies are summarised and the main results presented in brief overview tables. The presentation of the cases below gives answers to the following core questions:

- Which parties are involved in the funding of rolling stock?
  - Funding authority: governmental entities (state, Länder (federal states), regions, municipalities, others)
  - The companies who profit from funds
  - Financial institutions

- What is the current situation of contracts and tendering?

- What regulatory rules exist for the transfer of vehicles if transport operations are taken over by a new operator?

- What are the details of the funding arrangement? (Amount of the whole investment in rolling stock, fund percentage on the whole investment in rolling stock, number of vehicles)

- Are there restrictions concerning the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)?

- Is public funding of rolling stock interlinked with the conclusion of service contracts?

- Are funds integrated in a support programme?
Are there any funding guidelines or directives that have to be taken into consideration?

In some countries different ways of public funding exist, especially in so far the public transport responsibility has been transferred to the regional or local level. Different funding models are presented in so far they contribute to the range of basic models, e.g. in Germany. In other countries, rules of funding are standardised so that case studies do not specify individual regions, but the general situation, e.g. in the United Kingdom.

In the European countries represented in the analysis, most PTAs and other public funding authorities deal with the direct financial support for the procurement of rolling stock. The UK, the Netherlands and Switzerland belong to those countries that do not enter into direct funding arrangements anymore. As far as there was a direct financial support in the past, this was due to non-competitive environment. Meanwhile, TOCs receive subsidies only as payments, which have been established in the public-service transport contract, or, if necessary, indirect financial support, e.g. in the form of re-use guarantees. In Germany direct financial support is still granted to certain operators, despite competitive structures in the regional passenger transport market. In other countries, such as France or Ireland, rolling stock is directly subsidised since there is no competition in the regional passenger transport market. This situation shall remain also for the near future.
3.2 United Kingdom

The United Kingdom has a completely liberalized rail network. There is a free access for all transport companies offering international services or domestic services on their own commercial risk. In fact most services are franchises, tendered by public transport executives (PTE).

Financing of rolling stock in the UK is generally practiced in the same way all over the country, so no special case study will be presented. Direct subsidies are not paid since the privatisation of British Rail. Financial support by PTE or Department for Transport is given for the conclusion of franchise contracts. The fee paid to operators also covers capital payments for rolling stock. Train Operating Companies (TOC) are the only recipient of subsidies of franchises or concessions. They lease rolling stock from Rolling Stock Companies (ROSCO) which in turn are profitable companies and make their investment decision rather independently from the public sector.

However, there are three examples where central or local governments fund rolling stock procurement directly, namely:

- The proposed Inter City Express-Programme [IEP] funded by the UK Department for Transport [DfT]
- The planned extension of the pendolino-fleet currently operated by Virgin Trains
- The London Overground Concession where Transport for London [TfL] procures and takes ownership of the rolling stock

The IEP was initiated by DfT to procure the next generation of long-distance trains for the UK. Main reason for this initiative is the lack of incentives for ROSCOS to invest strategically in rolling stock – where economic life-time exceeds those of the average franchise-duration by a factor 3 to 4. Furthermore, DfT seeks to achieve economies of scale by standardizing the fleet configuration. Aim of the IEP is to introduce between 500 and 2000 carriages during a period of 30 years with either one supplier or a consortium.

The aim of the proposed lengthening of the pendolino-fleet from 9 to 11 cars per train which are currently operated on the West Coast Main Line [WCML] by Virgin Trains is similar: Considering the expected demand growth on the WCML the scheme has the potential to delay by approximately ten years the need for investment in further major capacity improvements (probably involving the construction of new route) on the West Coast. The reason for DfT funding the scheme is the fact that its economic benefits go beyond the purely financial benefits of the ROSCO – Angel Trains – on top of the reasons discussed in the paragraph above.

The only case in the UK where a local authority is involved in direct funding is the London Overground Rail Concession
**Regional franchises**

<table>
<thead>
<tr>
<th>General description:</th>
<th>Tendered service contracts, payments for service obligations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country, Region/City</strong></td>
<td>United Kingdom</td>
</tr>
<tr>
<td><strong>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</strong></td>
<td>Mainly Passenger Transport Executives (PTE) and central government represented by Department for Transport (DfT)</td>
</tr>
<tr>
<td><strong>Funding authority, co-funding if existent</strong></td>
<td>If the PTE procures vehicles, the funding authority is the central government (capital grants). Example: London Rail Concession, where Transport for London takes ownership of some of the rolling stock. The PTE and its administrative body respectively might be co-financing the procurement.</td>
</tr>
<tr>
<td><strong>Current Situation of contracts and tendering</strong></td>
<td>Passenger train services in the UK are structured on the basis of regional franchises awarded by the Department for Transport (DfT) or some PTE to Train Operating Companies. There were initially 25 such franchises, but some franchises have since been combined. In general all franchises are tendered out. Main principle: one single subsidy payment: DfT together with PTE specifies franchise output. Based on specifications train operating companies (TOCs) bid for franchise and either provide own rolling stock or have to find an agreement with rolling stock leasing companies (ROSCOs) regarding procurement of new rolling stock.</td>
</tr>
<tr>
<td><strong>Other framework conditions</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Recipient of grants (operating company, public authority, leasing company, etc.)</strong></td>
<td>No direct funding, subsidies only for service contracts. TOCs are the only recipient of subsidies for a franchise. All subsidies regarding vehicles are covered by this cash flow.</td>
</tr>
<tr>
<td><strong>Integration of grant in a support programme</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Amount of the whole investment in rolling stock</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Fund percentage on the whole investment in rolling stock</strong></td>
<td>-</td>
</tr>
<tr>
<td>Funded vehicles, number of vehicles</td>
<td>-</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Considered funding guidelines or directives</td>
<td>-</td>
</tr>
<tr>
<td>Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)</td>
<td>None, in case of TOC buys its own rolling stock. In case PTE procures rolling stock there are restrictions. Lease supplements between TOC and ROSCO may refer to the specific routes on which the TOC may operate the rolling stock.</td>
</tr>
<tr>
<td>Regulation rules for transfer of vehicles if transport operations will be won by a new operator</td>
<td>Regulation is very strict: TOC which has won the new franchise inherits the right to lease the rolling stock from the ROSCO and/or the PTE.</td>
</tr>
<tr>
<td>Sources</td>
<td>Steer Davies Gleave Ltd. London</td>
</tr>
</tbody>
</table>
## London Overground Rail Concession

<table>
<thead>
<tr>
<th>General description: Tendered service contracts, PTA pool, grants for pool</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Country, Region/City</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK, Greater London</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater London, Transport for London as the executive administrative body</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Funding authority, co-funding if existent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport for London</td>
</tr>
</tbody>
</table>

### Current Situation of contracts and tendering

London Overground came into operation on November, 11 2007. Currently the service is operated with the vehicles inherited by the former franchisee Silverlink. However, Transport for London [TfL] has committed to introduce new rolling stock on all lines which will be purchased by TfL with an obligation for the franchisee (MTR/Laing) to use the trains. (MRT/Laing has to lease 8 additional units from a ROSCO though).

Information on the tendering procedure

- **Contract length:** 7 years
- **Total volume:** As the type of contract is a concession its value is confidential
- **Number of vehicles:** TfL have ordered trains worth £223m from Bombardier Transportation, consisting of 24 3-car dual-voltage Class 375 trains for the North London Railway (to be delivered 2009), and 20 4-car trains for the East London Railway (to be delivered 2010).
- **Tendering package:** Bidders have an obligation to use the train procured by TfL. They gain no property right nor right of using the rolling stock for any time beyond the end of the franchise agreement. The bidder may have to procure own rolling stock on top of TfL’s fleet.

4 Bidders: Four bidders, Govia, MTR Laing, National Express Group and Nedrail have been shortlisted; MTR Laing is the successful bidder.

### Grants for rolling stock depend on the conclusion of a public service contract

not the case

### Other framework conditions

- -

### Recipient of grants (operating company, public authority, leasing company, etc.)

- -
<table>
<thead>
<tr>
<th>Integration of grant in a support programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of the whole investment in rolling stock</td>
</tr>
<tr>
<td>~ £223 million</td>
</tr>
<tr>
<td>Fund percentage on the whole investment in rolling stock</td>
</tr>
<tr>
<td>100%</td>
</tr>
<tr>
<td>Funded vehicles, number of vehicles</td>
</tr>
<tr>
<td>24 x 3 car electrical unit 100% owned by TfL</td>
</tr>
<tr>
<td>20 x 4 car electrical unit 100% owned by TfL</td>
</tr>
<tr>
<td>Considered funding guidelines or directives</td>
</tr>
<tr>
<td>None (since TfL takes ownership, this is not a funding regime, therefore no funding guidelines)</td>
</tr>
<tr>
<td>Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)</td>
</tr>
<tr>
<td>Franchisee must not operate outside the agreed network.</td>
</tr>
<tr>
<td>Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator</td>
</tr>
<tr>
<td>No transfer of ownership possible.</td>
</tr>
<tr>
<td>Other conditions of funding</td>
</tr>
<tr>
<td>-</td>
</tr>
<tr>
<td>Sources</td>
</tr>
<tr>
<td>Steer Davies Gleave Ltd. London</td>
</tr>
<tr>
<td>Department for Transport</td>
</tr>
<tr>
<td>Transport for London</td>
</tr>
</tbody>
</table>
### 3.3 **Ireland**

The Irish Rail system is not organised competitively until today, the Irish State Rail Company Iarnród Éireann is a monopolist for all passenger rail services and also owns the infrastructure. Therefore financial support for rolling stock has been granted to the operator without considerations of contractual arrangements or competitive requirements.

**Dublin**

<table>
<thead>
<tr>
<th>General description:</th>
<th>Direct awarding (monopoly for state railway), grants to the TOC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country, Region/City</strong></td>
<td>Ireland, Dublin</td>
</tr>
<tr>
<td><strong>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</strong></td>
<td>European community</td>
</tr>
<tr>
<td><strong>Funding authority, co-funding if existent</strong></td>
<td>European community</td>
</tr>
<tr>
<td><strong>Current Situation of contracts and tendering</strong></td>
<td>Small rail network (1919 km/ 27 m/km² 2003), low passenger volume (1,6 Mrd. Pkm/ 390 Pkm/EW, 2003), fares barely cover the operational costs. Traffic congestion around Dublin, the EU encourages a public transport strategy. Public transport in Dublin is run by three 100% public companies, belonging to the same group:</td>
</tr>
<tr>
<td>- <strong>Irish Rail</strong>, has a monopoly on passenger rail services, except Dublin – Belfast, run in cooperation with the north-Irish rail company</td>
<td></td>
</tr>
<tr>
<td>- <strong>Dublin Bus</strong>, running the urban bus-services</td>
<td></td>
</tr>
<tr>
<td>- <strong>Irish Bus</strong>, runs city-to-city bus-services, is in competition with private operators</td>
<td></td>
</tr>
<tr>
<td><strong>Other framework conditions</strong></td>
<td>There is no competition in Dublin.</td>
</tr>
<tr>
<td><strong>Recipient of grants (operating company, public authority, leasing company, etc.)</strong></td>
<td>The Rail Cars were used for an entirely new service, the subvention went directly to the operator in a not liberalised context without competition.</td>
</tr>
<tr>
<td><strong>Integration of grants in a support programme</strong></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>EU-Programme: Operational Programme “Economic and Social Infrastructure” (ERDF)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Amount of the whole investment in rolling stock</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget 113 Mio.€, EU-funding 56,5 Mio.€</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Fund percentage on the whole investment in rolling stock</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>50% EU-subsidies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Funded vehicles, number of vehicles</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of 76 diesel railcars for use on suburban rail services in and around Dublin.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Considered funding guidelines or directives</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Regulation rules for transfer of vehicles if transport operations will be won by a new operator</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>No such rules</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>John WALSH</td>
</tr>
<tr>
<td>Deputy Head of Unit</td>
</tr>
<tr>
<td>DG REGIO/C1 - Thematic development and impact</td>
</tr>
</tbody>
</table>
3.4 France

In France the Regions have been established as PTA in 2002. Legal basis is the SRU Law (Loi n° 2000-1028 du 13 décembre 2000 relative à la solidarité et au renouvellement urbains). Since then the Regions are responsible for defining supply, quality, information and funding of the service of existing TER-networks (Transport express régional).

French state railway SNCF still has a monopoly for all passenger rail services and concludes contracts in the form of so-called conventions with each Region for regional services. Long-distance services are provided by SNCF on its own commercial risk.

Concerning quality of service, Regions are financing new rolling stock with funds from the regional/state budget. SNCF orders new rolling stock on account for the Regions and assume responsibility for maintenance.

Different financing models are applied. Although in most cases rolling stock needed to improve the quality of regional rail services is paid from the regional budgets, some Regions like Rhône-Alpes head in addition towards separate leasing contracts.

Rolling Stock financed by the regions is purchased by SNCF. In this case SNCF is owner of the vehicles on the basis of specific agreements which establish the conditions of the transfer of the vehicles to the regions. The agreements ensure that the regions are the final owner of those newly acquired rolling stock vehicles. The regions could transfer them to other operators, which may be selected on the basis of future competitive tenders.

**TER Alsace region, France**

<table>
<thead>
<tr>
<th>General description:</th>
<th>Direct awarding (monopoly for state railway), grants to the TOC, rolling stock returns to PTA after end of contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country, Region/City</td>
<td>France, Région Alsace</td>
</tr>
<tr>
<td>General description (network, population, surface)</td>
<td>630 km railway network with regional passenger-trains, 163 stations, 550 trains per day, 55.000 users per day; 1.817.000 inhabitants (2006), surface 8.280 km² (220 inhabitants /km²)</td>
</tr>
<tr>
<td>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</td>
<td></td>
</tr>
</tbody>
</table>

---

14 regional budget for rolling stock is partly financed with a State decentralization endowment.
<table>
<thead>
<tr>
<th><strong>The region alone</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding authority, co-funding if existent</strong></td>
</tr>
<tr>
<td>100% region, who receives an (uncommitted) attribution of about 13 Mio. € from the state</td>
</tr>
<tr>
<td><strong>Current Situation of contracts and tendering</strong></td>
</tr>
<tr>
<td>Operation-contract between the region and the state-owned French railway-company SNCF 2002-2009, net cost contract</td>
</tr>
<tr>
<td><strong>Other framework conditions</strong></td>
</tr>
<tr>
<td>Competition for French rail passenger services is not admitted by law.</td>
</tr>
<tr>
<td><strong>Recipient of grants (operating company, public authority, leasing company, etc.)</strong></td>
</tr>
<tr>
<td>Recipient is the SNCF, but the vehicles return to the state by the end of the operating-contract. As there is no competition in French rail-services, it is expected, that the next contract (and the vehicles) will be also given to SNCF, but in case the law changes, the region disposes of all options.</td>
</tr>
<tr>
<td><strong>Integration of grant in a support programme</strong></td>
</tr>
<tr>
<td>-</td>
</tr>
<tr>
<td><strong>Amount of the total investment in rolling stock</strong></td>
</tr>
<tr>
<td>About 35 Mio. € per year (280 Mio. € over the 8 years of the operation-contract)</td>
</tr>
<tr>
<td><strong>Fund percentage on the whole investment in rolling stock</strong></td>
</tr>
<tr>
<td>100%</td>
</tr>
<tr>
<td><strong>Funded vehicles, number of vehicles</strong></td>
</tr>
<tr>
<td>New vehicles and renovation of older rolling stock</td>
</tr>
<tr>
<td><strong>Considered funding guidelines or directives</strong></td>
</tr>
<tr>
<td>Loi SRU (Loi n° 2000-1028 du 13 décembre 2000 relative à la solidarité et au renouvellement urbains), transport chapter</td>
</tr>
<tr>
<td><strong>Evaluation of conformity with EU procurement and state aid rules</strong></td>
</tr>
<tr>
<td>-</td>
</tr>
<tr>
<td><strong>Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)</strong></td>
</tr>
<tr>
<td>The rolling stock can only be used within the Alsace region, agreements exist for interregional services</td>
</tr>
<tr>
<td><strong>Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator</strong></td>
</tr>
</tbody>
</table>
The vehicles return to the region without compensation by the end of the operation-contract in 2009, since they have been financed entirely by the region. (however the region has to pay the VAT, the SNCF is exempted from the VAT)

**Sources**

Telephone interview with M. Bernhard Loss, Département Transports du Conseil Régional d’Alsace, 12 November 2007 (T : +33 3.88.15.68.67)
**TER Rhône-Alpes region, France**

<table>
<thead>
<tr>
<th>General description:</th>
<th>Direct awarding (monopoly for state railway), rolling stock leased, obligations for disposal of RS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country, Region/City</strong></td>
<td></td>
</tr>
<tr>
<td>France, Région Rhône-Alpes</td>
<td></td>
</tr>
<tr>
<td><strong>General description (network, population, surface)</strong></td>
<td></td>
</tr>
<tr>
<td>2,150 km active railway network, 261 stations, 1,000 trains per day, 95,000 users per day</td>
<td></td>
</tr>
<tr>
<td>6,004,957 inhabitants (2006), surface 43,698 km² (137 inhabitants/km²)</td>
<td></td>
</tr>
<tr>
<td><strong>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</strong></td>
<td></td>
</tr>
<tr>
<td>The region alone</td>
<td></td>
</tr>
<tr>
<td><strong>Funding authority, co-funding if existent</strong></td>
<td></td>
</tr>
<tr>
<td>100% region, who receives a (relatively small and uncommitted) attribution from the state</td>
<td></td>
</tr>
<tr>
<td><strong>Current Situation of contracts and tendering</strong></td>
<td></td>
</tr>
<tr>
<td>Operation-contract between the region and the state-owned French railway-company SNCF 2007-2014, net cost contract</td>
<td></td>
</tr>
<tr>
<td><strong>Other framework conditions</strong></td>
<td></td>
</tr>
<tr>
<td>Competition for French rail passenger services is not admitted by law.</td>
<td></td>
</tr>
<tr>
<td><strong>Recipient of grants (operating company, public authority, leasing company, etc.)</strong></td>
<td></td>
</tr>
<tr>
<td>For new rolling stock, region and SNCF conclude a contract. The SNCF can then buy the vehicles for account of the region and dispose of it until the end of the operation-contract in 2014. As there is no competition in French rail-services, it is expected, that the next contract will be also given to SNCF. In case the law changes, the region disposes of all options though it is not owner of the vehicles.</td>
<td></td>
</tr>
<tr>
<td>The vehicles are bought by a leasing-company, owned by a bank and paid-off over 25 years by the region.</td>
<td></td>
</tr>
<tr>
<td>Renovated vehicles are owned by SNCF, they are given to the region by the end of the operation-contract in 2014.</td>
<td></td>
</tr>
<tr>
<td>Maintenance is done by SNCF.</td>
<td></td>
</tr>
<tr>
<td><strong>Integration of grants in a support programme</strong></td>
<td></td>
</tr>
<tr>
<td>Total budget for subventions of regional rail-services = 500 Mio. €</td>
<td></td>
</tr>
<tr>
<td>(about 350 Mio. € for operation, 100 Mio. € for rolling stock, 50 Mio. € for infrastructure and stations)</td>
<td></td>
</tr>
<tr>
<td><strong>Amount of the total investment in rolling stock</strong></td>
<td></td>
</tr>
<tr>
<td><strong>About 100 Mio. € (70 – 140 Mio. € depending on the year, e.g. 112 Mio. € in 2007)</strong></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Fund percentage on the whole investment in rolling stock</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Funded vehicles, number of vehicles</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>New vehicles and renovation (generally if they have a minimum life-expectance of 15 years)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Considered funding guidelines or directives</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loi SRU (Loi n° 2000-1028 du 13 décembre 2000 relative à la solidarité et au renouvellement urbains), transport chapter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Evaluation of conformity with EU procurement and state aid rules</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The rolling stock can only be used within the Rhône-Alpes region, agreements exist for interregional services. International regional rail-services (Bellegarde – Genève) are run by the Swiss railway-company SBB.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The rolling stock (new and also renovated) returns to the region with the end of the operation-contract in 2014. If the legal situation changes to permit competition in rail-services, the operation-contract can be partially or totally cancelled.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone interview with M. Jaussaud, Département Transports du Conseil Régional de Rhône-Alpes, 13 November 2007 (T : +33 4.72.59.40.00)</td>
</tr>
</tbody>
</table>
3.5 Germany

In general on German rail systems there is free access for all German operators, for foreign operators only in case of reciprocity in the respective country. Market initiated services can be provided from all operating companies. Public money usually is paid only for suburban and regional services, not for long-distance services. Due to the dimensions of certain federal states (Länder) some funded services can be regarded as long-distance services considering the length of routes and travel times but normally long-distance services are only market initiated services, mostly provided by Deutsche Bahn AG (except a few private trains).

Within Germany, funding arrangements are diverse. As a market for used rolling stock for regional rail transport has not yet completely emerged within Germany, the risk to operators of selling vehicles for a price below their residual value after the loss of a contract is high. On the other hand, regional rail transport services are still mainly operated by the DB Regio AG, which has benefited from public funds for rolling stock in the past (up to 100%). To avoid competitive advantages due to this previous public funding, some PTAs have made arrangements in tender procedures for regional rail transport on how to transfer those benefits to new operators (see the example of Stuttgart).

When contracts are tendered out, direct funding of an operator is hardly ever practiced anymore. In a few cases, however (like, for example, in Dresden), subsidies have been granted to the incumbent shortly before the tendering procedure. These arrangements have been criticized for undermining competition. But options have also been considered that are in line with competition. In the tendering documents for the Marschbahn, the PTA guarantees to take over vehicles in the case that the former operator loses in the next tendering procedure. The re-use guarantee transfers cost risks to the PTA, which it is better able to manage (because it can use old vehicles in its territory), without leading to any interference with competition. Furthermore, two PTA pools have been established in Germany (fahma – which is one of our case studies - and LNVG) that are responsible for the procurement of vehicles and for making them available to operators in their territory. As a result, no single operator is privileged. Furthermore, PTAs aim at releasing operating companies from high up-front investments, so as to attract more competition for the service.
**S-Bahn Stuttgart**

<table>
<thead>
<tr>
<th>General description: Tendering, grants to the TOC</th>
</tr>
</thead>
</table>

**Country, Region/City**

Germany, Region Stuttgart

**Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)**

Land Baden Württemberg, Region of Stuttgart

**Funding authority, co-funding if existent**

For the last purchase of vehicles (for the suburban train *S-Bahn*), the Land Baden Wuerttemberg (GVFG grants) and the Region of Stuttgart shared the financial burden equally.

**Current Situation of contracts and tendering**

The current *S-Bahn* net-cost contract was concluded in July 2003 with DB Regio AG. In November 2005 the committee for transport decided, to tender out *S-Bahn* operations for 2013, the final possible year in which the current contract ends. Three companies had shown interest in the tender (Keolis Deutschland, Veolia Verkehr Regio and DB Regio). However competitors of DB Regio withdraw from the tendering procedure in February 2008.

Information on the tendering procedure

**Contract length:** 15 years

Distribution of revenue risk: the PTA had originally opted for a gross-cost contract, since the DB Regio AG has a competitive advantage with a net-cost contract (DB is the only company, which has access to data which are relevant for revenue forecasts). Since now the DB is the only residual bidder, the contract will be designed as a net-cost contract.

**Total volume:** 9.8 Million train-km (biggest tendering procedure in Germany)

**Number of vehicles:** about 125 vehicles are needed for the operation of the *S-Bahn* plus additional reserve vehicles

**Tendering package:** Bidders can either apply for one of the two partial networks or can apply for the whole network. The first partial network consists of the S-Bahn line S1 (which will be extended) and S5, the second larger package consists of all other lines and planned extensions S 40 and S 60.

**Grants for rolling stock depend on the conclusion of a public service contract**

not the case

**Other framework conditions**

**Recipient of grants (operating company, public authority, leasing company, etc.)**
### DB Regio AG (current operating company)

### Integration of grant in a support programme

Nonexistent

### Amount of the whole investment in rolling stock

The last 25 vehicles which were procured by the DB Regio AG costed 92 Million Euros.

### Fund percentage on the whole investment in rolling stock

100% for the last 25 vehicles

### Funded vehicles, number of vehicles

In the past 54 vehicles were subsidised by the Region of Stuttgart and the Land (17 vehicles of the type ET 420 and 37 vehicles of the type ET 423).

### Considered funding guidelines or directives

Gemeindeverkehrsfinanzierungsgesetz; Verwaltungsvorschrift des Ministeriums für Umwelt und Verkehr zur Gewährung von Zuwendungen für die Beschaffung von Fahrzeugen nach dem Gemeindeverkehrsfinanzierungsgesetz/ Regionalisierungsgesetz (VwV-Fahrzeuge)

### Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)

Rolling stock has to be used only in the *S-Bahn* network

### Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator

After the tendering procedure, the DB Regio AG is bound to hand over the subsidised vehicles to the new operator (if it would have been different from the DB). One of the reasons which were named by competitors for their withdrawal was the low incentive of the DB on supporting the transfer of existing rolling stock.

### Other conditions of funding

During the current tendering procedure, companies are responsible for the procurement and financing of new vehicles. For the first package all vehicles will be supplied by the Region of Stuttgart. For the second package the operator has to procure and finance additional vehicles.

### Sources

Eurailpress, online: Baden-Württemberg/ Stuttgart: vier Bewerber um die S-Bahn, 13.09.2007
**S-Bahn Dresden**

<table>
<thead>
<tr>
<th>General description: Direct procurement (in the future tendering), grants to the TOC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country, Region/City</strong></td>
</tr>
<tr>
<td>Germany, Dresden (Verkehrsverbund Oberelbe)</td>
</tr>
<tr>
<td><strong>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</strong></td>
</tr>
<tr>
<td>Free State (Freistaat) of Saxony</td>
</tr>
<tr>
<td><strong>Funding authority, co-funding if existent</strong></td>
</tr>
<tr>
<td>Free State (Freistaat) of Saxony</td>
</tr>
<tr>
<td><strong>Current Situation of contracts and tendering</strong></td>
</tr>
<tr>
<td>The DB Regio AG received financial support by the free state of Saxony for new double deck coaches which will operate on regional transport lines in Dresden.</td>
</tr>
<tr>
<td>The network, in which the new vehicles have been inserted, will be tendered by the Verkehrsverbund Oberelbe (VVO). At the moment European-wide tenders of regional passenger transport are prepared. The new transport contract will be concluded in 2010. It includes the most profitable lines in Saxony.</td>
</tr>
<tr>
<td>The subsidised vehicles can be operated for about 20 years. After the tendering procedure those vehicles shall still operate on the S-Bahn network of Dresden, since they are specifically adapted to its technological conditions.</td>
</tr>
<tr>
<td>The decision to subsidise the vehicle fleet of DB Regio was criticised in some public statements. By granting subsidies, the DB has a comparative cost advantage. This would prevent competition for the operation of the S-Bahn.</td>
</tr>
<tr>
<td>Before the decision for subsidies was taken, the State of Saxony rejected an alternative form of financing vehicles, which would not distort competition. It was envisaged to establish a pool, where the procurement and management of vehicles is taken over by the PTA or where the pool is managed by a private operator. The state capital Dresden as well as the committees of the VVO were in favour of the pool alternative. But without the cooperation of the state of Saxony the pool could not be established. This was due to the objections of the ministry of economics and transport.</td>
</tr>
<tr>
<td><strong>Other framework conditions</strong></td>
</tr>
<tr>
<td><strong>Recipient of grants (operating company, public authority, leasing company, etc.)</strong></td>
</tr>
<tr>
<td>DB Regio AG (current operating company)</td>
</tr>
<tr>
<td><strong>Integration of grants in a support programme</strong></td>
</tr>
<tr>
<td>Gemeindeverkehrsfinanzierungsgesetz (GVFG)</td>
</tr>
</tbody>
</table>
### Amount of the whole investment in rolling stock

The investment cost for the 53 new double deck coaches sum up to about 70 Million Euros.

### Fund percentage on the whole investment in rolling stock

40 Million € (nearly 60%)

### Funded vehicles, number of vehicles

53 double deck coaches, build by Bombardier in Görlitz. 8 new vehicles have already been inserted on the line S2. Until December 2007 61 new vehicles will be inserted on all three S-Bahn lines, which operate in Dresden and the hinterland.

### Considered funding guidelines or directives

No information available

### Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)

No information available

### Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator

No reliable information available, but the decision of funding was criticised by politicians due to the danger of undermining future competition and tenderings

### Sources

- BÜNDNIS 90/DIE GRÜNEN Landesverband Sachsen, Pressemitteilung, Nr.: 2007-07, Datum: 06.04.2007: Sachsens Grüne kritisieren Nahverkehrsförderung an DB Regio - Minister Jurk hält nichts von Wettbewerb
# Odenwaldbahn (Rhein-Main-Verkehrsverbund)

**General description:** Tendered service contract, PTA pool, grants to the pool

**Country, Region/City**

Hesse, Baden-Wurttemberg

**Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)**

Rhein-Main-Verkehrsverbund GmbH

**Funding authority, co-funding if existent**

Grants by Rhein-Main-Verkehrsverbund

**Current Situation of contracts and tendering**

The Fahma (Management of vehicles region of Frankfurt RheinMain GmbH (Ltd.)) is to 100% a subsidiary company of the RMV (Rhein-Main-Verkehrsverbund GmbH). The company was founded in 2003 for the procurement of vehicles of the Odenwaldbahn. The following year the fahma also procured the vehicle fleet for the Taunusbahn. The fahma is responsible for financing and procuring vehicles for regional passenger transport.

- Fahma receives grants from the RMV and takes out loans or leases vehicles after tendering procedures.
- Fahma selects appropriate vehicles and accompanies the process of building vehicles. Afterwards she concludes contracts with the operators, which regulates the assignment of vehicles to the operator.
- As an owner of vehicles, the fahma controls the quality and value of vehicles.

Since the Fahma can oblige operators to use its vehicles and since it watches over the quality of the condition of vehicles, risks related to the re-use of vehicles after one contract period are reduced.

**Other framework conditions**

**Recipient of grants (operating company, public authority, leasing company, etc.)**

The operator on the Odenwaldbahn is VIAS, which has won the contract in 2004 and which will operate the network until December 2015. On the Taunusbahn the Hessische Landesbahn has taken over services. The operators are responsible for the maintenance of vehicles and use them for the contracted services in the region.

**Integration of grants in a support programme**

**Amount of the whole investment in rolling stock**
<table>
<thead>
<tr>
<th><strong>Fund percentage on the whole investment in rolling stock</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Funded vehicles, number of vehicles</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The fahma owns 22 vehicles of the type ITINO D2 (Bombardier) as well as ten vehicles of the type CORADIA LINT 41 (Alstom LHB).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Considered funding guidelines or directives</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling stock is only used for lines of the Odenwaldbahn and the Taunusbahn.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Since vehicles are in the property of the PTA, ownership of vehicles does not have to be transferred to the new operator</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>What is the purpose of the PTA pool?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The RMV has the following aims:</td>
</tr>
<tr>
<td>- Adaption of the competition strategy of the RMV in due time</td>
</tr>
<tr>
<td>- The reduction of public funds through the use of cheaper financial options as well as the reduction of risks related to the re-use and residual value of vehicles</td>
</tr>
<tr>
<td>- non-discriminatory use of subsidies for regional passenger transport and regulations compatible with state aid</td>
</tr>
<tr>
<td>- further opening of the market through the reduction of barriers</td>
</tr>
<tr>
<td>implementation of environmentally friendly technologies and handicapped accessible facilities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Website of the fahma: <a href="http://www.fahma-rheinmain.de/content/fahma.html">http://www.fahma-rheinmain.de/content/fahma.html</a></td>
</tr>
</tbody>
</table>
**Marschbahn (Schleswig-Holstein)**

<table>
<thead>
<tr>
<th>General description:</th>
<th>Tendered service contract with revenue risk for TOC, re-use guarantee for rolling stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country, Region/City</td>
<td>Land Schleswig-Holstein, Marschbahn</td>
</tr>
<tr>
<td>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</td>
<td>The Land Schleswig-Holstein</td>
</tr>
</tbody>
</table>

**Funding**

The HSH-Nordbank has concluded an operate lease contract with the operator NOB (VeoliaTransport) for the route Hamburg-Sylt. The operate lease contract includes 90 railway carriages and two locomotives. The lessors are two Swedish lending companies of the HSH N Nordic Finance AB (a subsidiary of HSH Nordbank).

Already in 2003 Veolia ordered carriages and locomotives at Bombardier Transportation. Veolia has selected and ordered the vehicles itself, but it didn’t want to include them in its balance sheet. The NOB as lessee borrows the carriages and locomotives from the Swedish renting companies. The renting companies enter the contract with the producer Bombardier and make the advance payments and watch over the delivery process.

**Current Situation of contracts and tendering**

In 2003 the Nord-Ostsee-Bahn (Veolia Transport) won the tendering procedure for the Marschbahn (route Hamburg-Westerland, 4,2 Mio train-km p.a.). Starting from the 11th of December 2005 the NOB has taken over transport services for the next 10 years.

The contract is a net cost contract with high revenue risks on the operator’s side (e.g. if demand increases significantly the operator has to procure and finance additional rolling stock)

**Interlink of financing rolling stock and conclusion of service contract**

**Other framework conditions**

**Recipient of grants (operating company, public authority, leasing company, etc.)**

Nord-Ostsee-Bahn (Veolia Transport)

**Integration of grant in a support programme**

**Amount of the whole investment in rolling stock**
<table>
<thead>
<tr>
<th><strong>Fund percentage on the whole investment in rolling stock</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Funded vehicles, number of vehicles</strong></td>
</tr>
<tr>
<td>90 carriages and 4 locomotives</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Considered funding guidelines or directives</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator</strong></td>
</tr>
<tr>
<td>The Land Schleswig-Holstein has been called in for a guarantee, in which it promises to continue using the train fleet. If the current operator will not win the next contract, the Land makes available the vehicles to the new operator. Since use is guaranteed for the whole life-cycle of carriages, financing conditions are much more attractive (write-offs are in line with depreciation).</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Other conditions of funding</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Sources</strong></td>
</tr>
<tr>
<td>HSH Nordbahn Ostsee Report 4/05 bzw. 9/05,</td>
</tr>
<tr>
<td>Die Volkswirtschaft, 3-2007</td>
</tr>
</tbody>
</table>
3.6 **The Netherlands**

In the Netherlands, most of the regional passenger services on secondary lines have been tendered out. The national railways NS however dominates the market. It still has a monopoly on the intercity network and regional trains on the main lines until 2015. Since the NS is a public company it benefits from attractive loans for rolling stock. The cost for rolling stock is covered by remunerations for transport services. Lately, regional authorities and the government have tried to reduce risks on the operator’s side which are related to the procurement of rolling stock. Regional authorities are obliged to offer a re-use guarantee in tendering procedures; some have also considered establishing PTA pools. Direct subsidies for rolling stock are not in use anymore.

<table>
<thead>
<tr>
<th>General description: Tendered service contracts, no direct grants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country, Region/City</strong></td>
</tr>
<tr>
<td>The Netherlands</td>
</tr>
<tr>
<td><strong>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</strong></td>
</tr>
<tr>
<td>Regional authorities</td>
</tr>
<tr>
<td><strong>Funding authority, co-funding if existent</strong></td>
</tr>
<tr>
<td>Regional authorities</td>
</tr>
<tr>
<td><strong>Current Situation of contracts and tendering</strong></td>
</tr>
</tbody>
</table>
| Experiences with tendering of regional rail passenger services have been made since 1998. Responsibility for regional services on secondary lines is delegated to regional authorities, they are also responsible for tendering procedures. Most of these services have been tendered out (10 out of 13).

Netherlands Railways is the only operator for passenger services on the main rail network. The main operators for regional services are:

- NS
- Connexxion
- Synthus (owned by Connexxion and NS)
- Arriva

NS owns a leasing company that leases rolling stock to NS and to Syntus. The national railways NS can get attractive loans, being a government company.

Procurement of Rolling stock:

- Regional authorities demand the introduction of new rolling stock quite often (also with additional guidelines such as accessibility for handicapped people).
- The central government stimulates the cooperation between the authorities to
demand a standard type of light rail rolling stock.
- A franchise period lasts for 5 or six years without the investment in new rolling stock. If transport operating companies invest in new rolling stock, the franchise period is extended up to 10 or 15 years.

Grants for rolling stock depend on the conclusion of a public service contract

Other framework conditions

Recipient of grants (operating company, public authority, leasing company, etc.)

Usually the cost for rolling stock in the Netherlands is covered by remunerations for transport services to the operators.

Integration of grant in a support programme

Amount of the whole investment in rolling stock

Fund percentage on the whole investment in rolling stock

Funded vehicles, number of vehicles

Considered funding guidelines or directives

Article on re-use guarantee in the *Concessiewet*

Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)

Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator

A new law defines the transfer of vehicles for tendering procedures. It includes a put and a call-option. The old operator may exercise the put option and may require that its rolling stock will be taken over for the service in question. The new operator may demand the receipt of rolling stock, which has been deallocated by the old operator. This system is only valid for services, which have already been tendered out for the first time.

Other conditions of funding


**Sources**


3.7 **Poland**

In Poland the tendering as well as the direct award of regional passenger rail services is possible. The PKP as the incumbent operator dominates the market; however the market share of other operators for passenger rail services is between 9-11%. Local and regional services are normally subsidised and are tendered or direct awarded to PKP or private companies. Services on own commercial risk can be offered by all polish railway operators, foreign operators only according to directive 91/440/EEC.

No case study from the rail sector was chosen due to a lack of available and reliable data. Instead we present a case study from the urban public transport sector since in this case the new rolling stock was funded with European grants.

**Warsaw**

<table>
<thead>
<tr>
<th>General description: Direct awarding (inhouse), grants to TOC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country, Region/City</strong></td>
</tr>
<tr>
<td>Poland, Warsaw</td>
</tr>
<tr>
<td><strong>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</strong></td>
</tr>
<tr>
<td>state: Ministry of Economics and Labour: decision procedure</td>
</tr>
<tr>
<td><strong>Funding authority, co-funding if existent</strong></td>
</tr>
<tr>
<td>European Union</td>
</tr>
<tr>
<td><strong>Current Situation of contracts and tendering</strong></td>
</tr>
<tr>
<td>Tramwaje Warszawskie (TW) is the only one tram operator in Warsaw. Owned by the City of Warsaw, TW is responsible for the operating of the tram lines and for the maintenance of the infrastructure. TW works on infrastructure investment projects, too. The aim of the project described here is the renewing of the main tram axis in Warsaw (Aleje Jerozolimskie), bounded with buying of rolling stock. (2 types of trams). A contract was concluded in 2003 (which should continue until 2010). However for the next year a new long-term contract will be concluded, which lasts until 2027. TW is financed on the basis of km, the new contracts includes higher remuneration, so as to be able to make more investments in the network. In addition, the city gives the operator a debt-service guarantee. Rolling stock was tendered, both types.</td>
</tr>
<tr>
<td>Currently ending of the project. The renewal of the tram line is completed and 24 of the 30 trains are already in Warsaw. Percentage of realisation: 80%</td>
</tr>
<tr>
<td><strong>Other framework conditions</strong></td>
</tr>
<tr>
<td><strong>Recipient of fund (operating company, public authority, leasing company, etc.)</strong></td>
</tr>
</tbody>
</table>
**Tramwaje Warszawskie Ltd.** Operator of the tram system in Warsaw. Municipal company.

### Integration of fund in a support programme

ZPORR (Integrated Operation Programme of Regional Development) – grants from the European Fund for Regional Development.

### Amount of the whole investment in rolling stock

27,1 Million €

### Fund percentage on the whole investment in rolling stock

50% of the price of the high floor (HF) trams (only the HF trams were funded), which means 19,5% of the whole investment (15 LF + 15 HF trams). One can say that it was a political decision to classify low-floor trains as not being qualified costs. The high floor cars were subsidised by 50%, the rest had to be paid by TW, since the city refused to co-finance the project or issue a debt-service guarantee.

### Funded vehicles, number of vehicles

15 low-floor, 32-meter long trams type 120N (producer: PESA Bydgoszcz)

15 traditional new two-car units, high-floor cars, electro-energetic power-supply (producer: Fabryka Pojazdów Szyńowych Cegielski Poznań)

### Considered funding guidelines or directives

TW had to prequalify for funds in a competitive procedure. TW is obliged to tender out rolling stock. This has proved to be difficult and time consuming, since requirements of vehicles may not be discriminatory.

### Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)

Only on the renewed route (Between the tram endpoints Gocławek-Banacha). Problem is, that there is no tram line on this route. According to this, the trams operate on 2 lines which are the most similar to the renewed route: 9 and 25. Restrictions on reselling: trams must not be resold in 5 years after the ending of the project (probably March 2008)

### Regulation rules for transfer of vehicles if transport operations would be tendered out

no information

### Sources

Grzegorz Madrjas, Tramwaje Warszawskie, +48 22 534 55 12; zeuro@tw.waw.po
3.8 Sweden

Sweden is the European country with second highest market share of private rail operators in passenger service (after UK). Since 2001 there is free access to the Swedish market for both passenger and freight services. Only commercial long-distance passenger trains (i.e. with no need for co-financing from the state) are a monopoly from Statens Järnvägar (SJ), the state-owned national railway company. The state-owned banverket has the responsibility for infrastructure development, operation and maintenance.

As a rule all regional passenger rail services are tendered according to PSO rules. The PTA for regional rail services are located on regional level, the 21 Swedish provinces ("Läri") are responsible for contracts, services and coordination.

Actually 18 of the 21 Regions founded jointly a pool for rolling stock. Transitio AB is responsible for purchase and maintenance for all new rolling stock needed in the 18 Regions. Ownership of the rolling stock still remains with the regions. State aid for purchasing of rolling stock is also received by the regions, not by Transitio AB.

Gothenburg

<table>
<thead>
<tr>
<th>General description:</th>
<th>Tendered service contracts, grants to the PTA, PTA pool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country, Region/City</td>
<td>Sweden, Region Gothenburg (Göteborg)</td>
</tr>
<tr>
<td>General description (network, population, surface)</td>
<td>Surface 23.942 km², inhabitants: 1,5 Mio. (17% of Swedish population), inhabitants/km²: 62</td>
</tr>
<tr>
<td>Regional passenger rail network with 11 lines, most lines electrified, 1 line run by Veolia, others by SJ</td>
<td></td>
</tr>
<tr>
<td>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</td>
<td>State government, Rikstrafiken (PTA for long-distance transport)</td>
</tr>
<tr>
<td>Banverket (state-owned company, responsible for rail tracks and maintenance, also for funding of rolling stock with so-called „Statsbidrag“ (state share))</td>
<td></td>
</tr>
<tr>
<td>Funding authority, co-funding if existent</td>
<td>Banverket (state-owned company, responsible for rail tracks and maintenance, also for funding of rolling stock with „Statsbidrag“)</td>
</tr>
<tr>
<td>Current Situation of contracts and tendering</td>
<td>Next tendering in 2010. All TOCs get rolling stock at their disposal from västtrafik</td>
</tr>
</tbody>
</table>
### Other framework conditions

Västtrafik procures new rolling stock own their own or together with other regions, no lease as in other swedish regions. All new rolling stock shall be in ownership of Västtrafik

### Recipient of fund (operating company, public authority, leasing company, etc.)

Västtrafik (PTA, owner: 50% Län (Region), 50% Kommun (Municipalities))

### Integration of fund in a support programme

“Statsbidrag” programme, programme is planned each for 4 years, no direct funds for TOCs

### Amount of the whole investment in rolling stock

Region has programme for 10 years, budget of 90 Mio. SEK (therefrom 18 Mio. state-funded, now replaced by “statsbidrag”)

### Fund percentage on the whole investment in rolling stock

Theoretically up to 50% (certain exceptions up to 75%, in real lower rates), depends on equipment

### Funded vehicles, number of vehicles

No exact figures available.

### Considered funding guidelines or directives

### Evaluation of conformity with EU procurement and state aid rules

Procedure goes conform with EU state aid rules, due to ownership by PTE.

### Restrictions according the rail services that have to be provisioned with the funded rolling stock (e.g. certain routes)

Not necessary due to ownership by PTE.

### Regulation rules for transfer of vehicles if transport operations will be taken over by a new operator

Not necessary due to ownership by PTE.

### Sources
**Transitio AB**

<table>
<thead>
<tr>
<th>General description:</th>
<th>Tendered service contracts, grants to the PTA, joint PTA pool</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Country, Region/City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden, 18 of 21 PTA for regional rail passenger services</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General description (network, population, surface)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Governmental actors involved in financing and decision of the funding (state, Länder (federal states), regions, municipalities, others)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State government, Rikstrafiken, Banverket</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Funding authority, co-funding if existent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banverket (state-owned company, responsible for rail tracks and maintenance, also for funding of rolling stock with „Statsbidrag“)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Situation of contracts and tendering</th>
</tr>
</thead>
<tbody>
<tr>
<td>All regional passenger rail services are tendered. Number of tendered services changes each year due to different duration times of contracts or volume of tendered services. Form of contracts differs from region to region, some use also hybrids from net cost and gross cost contracts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other framework conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>All new rolling stock is purchased by Transitio AB by order of a region. Ownership still remains to the region. Transitio is also responsible for controlling of maintenance.</td>
</tr>
<tr>
<td>Older rolling stock remains to SJ, a few newer vehicles belong to some regions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recipient of fund (operating company, public authority, leasing company, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The regions receive state aid for rolling stock Transitio gets no own funds from state</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Integration of fund in a support programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Statsbidrag” programme, programme is planned each for 4 years, no direct funds for TOCs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount of the whole investment in rolling stock</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Fund percentage on the whole investment in rolling stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>theoretically up to 50% (certain exceptions up to 75%, in real lower rates), depends on equipment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Funded vehicles, number of vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Core aspects of European experiences

From the observed examples we can see that funding arrangements across Europe are diverse. One can assume that the following factors influence the approach to funding:

- **The funding purposes**: In general, many European countries ended practice of direct funding for rolling stock either to operating companies or PTAs in recent years (as in the cases of Netherlands or Switzerland).

- **The organisation of the transport market**: if there is long standing experience with tendering procedures, it can be expected that a market for used vehicles has already been established and that companies will either procure vehicles themselves or charge leasing companies (see the UK example). If tendering procedures are not the rule (as in the case of Germany), it might be the endeavour of PTAs to offer guarantees for the re-use of vehicles. At the same time, the DB Regio AG as the dominant and established operator has benefitted from public funding (see the example of Dresden). In the current situation of the opening of regional rail passenger markets, this gives a comparative advantage to the DB Regio AG. Some PTAs have therefore preferred to establish PTA pools. In other countries (such as Ireland) competition for the market is not practiced. In other cases, like in French
regions the incumbent operator has to return the subsidised rolling stock to the regions.

- The aims of the public transport authority: if it is the aim of the public transport authority to promote competition and to offer smaller companies the chance to enter the market, the PTA will be willing to take over more risks related to the procurement and financing of rolling stock. This will entail the use of instruments such as re-use guarantees or guarantees on debt service or the establishment of a PTA pool.

The European experiences allow drawing conclusions (see chapter 5) and help to draft recommendations (see chapter 6) for the funding of rolling stock and the design of contracts in Czech Republic.
4 Railway structures in the Czech Republic

4.1 Organisational structures

4.1.1 Governmental organizational units

The Ministry of Transport (Ministerstvo dopravy; MDČR) is responsible for the railway services and transport whereas the Rail Authority (Drážní úřad; DÚ) is the regulatory and supervisory body. The tasks of the DÚ include, among others:

- conferral of permissions for train operating company (TOC), specified for traffic modes
- conferral of licences to TOCs to carry out railway transport
- control of requirements regarding licences from EU member states
- technical inspection and permission of railway vehicles
- control and permission of staff in areas relevant to safety
- supervision of special railways (light rail, funicular, trolleybuses)

4.1.2 Organisation of railway infrastructure

The public network of the Czech Republic consists of 9491 km standard gauge tracks and 102 km narrow gauge tracks. Not included are industrial railways and special railways (light rail, funicular and trolleybuses). The Czech rail network has a high density compared with other rail networks. It is one of the densest networks in Europe measured in length per area as well as per inhabitants.

<table>
<thead>
<tr>
<th>Area (in sqkm)</th>
<th>Inhabitants (in 1000)</th>
<th>Length of network</th>
<th>km rail per sqkm</th>
<th>km rail per 1000 inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>78864</td>
<td>10306</td>
<td>9594</td>
<td>0.12</td>
</tr>
<tr>
<td>Germany</td>
<td>357114</td>
<td>82236</td>
<td>38200</td>
<td>0.11</td>
</tr>
<tr>
<td>Switzerland</td>
<td>41285</td>
<td>7591</td>
<td>5002</td>
<td>0.12</td>
</tr>
<tr>
<td>Austria</td>
<td>83871</td>
<td>8334</td>
<td>5680</td>
<td>0.07</td>
</tr>
<tr>
<td>Poland</td>
<td>312685</td>
<td>38116</td>
<td>20253</td>
<td>0.06</td>
</tr>
<tr>
<td>Slowakia</td>
<td>49035</td>
<td>5431</td>
<td>3658</td>
<td>0.07</td>
</tr>
<tr>
<td>Belgium</td>
<td>30528</td>
<td>10531</td>
<td>3536</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Fig. 8: Data of European rail networks in 2006 (source: Eurostat, www.railneteurope.com, Wikipedia)
Owners and administrators of railway infrastructure

Most part of the network belongs to the Czech State. The public network amounts to 9492 km with 9469 km in standard gauge and 23 in narrow gauge. The network is administered by Správa železniční dopravní cesty s. o. (SŽDC, the state owned Railway Infrastructure Administration).

SŽDC allocates tracks and had commissioned České dráhy (ČD, see 4.2.2) with the infrastructure operation and maintenance. Since 1.7.2008 those tasks have been transferred from ČD to SŽDC, so that it now fulfils the role of the national rail infrastructure manager.

In three cases track allocation as well as operation of branch lines is handled by a third party:

- Klub přátel lokálky o. s. (KPL, Association of the Friends of branch lines)
  - Česká Kamenice – Kamenický Šenov (5 km)

- Ostravsko-karvinské doly Doprava a. s. (OKD D; Mining Ostrava-Karviná)
  - Milotice nad Opavou – Vrbno pod Pradědem (20 km)

- Viamont a. s.
  - Trutnov hl. n. – Svoboda nad Úpou (10 km)
  - Sokolov – Kraslice, National border (27 km)

In addition, several regional lines are owned by municipalities:

- Svazek obcí údolí Desné (Municipalities association Desná valley)
  - Šumperk – Petrov nad Desnou – Kouty nad Desnou (19 km)
  - Petrov nad Desnou – Sobotín (3 km)

Furthermore, there is a privately owned narrow gauge network:

- Jindřichohradecké místní dráhy a. s. (JHMD; Branchlines Jindřichův Hradec, narrow gauge)
  - Jindřichův Hradec – Obrataň (46 km),
  - Jindřichův Hradec – Nová Bystřice (33 km)

Operation and track allocation of the Desná valley lines are carried out by SART (see 6.2.2), regarding the branch lines Jindřichův Hradec, directly by the owner.
**Railway infrastructure companies**

Not considering industrial railways and special railways (light rail, funicular, trolleybuses and the like), there are six operators of railway infrastructure in the Czech Republic in total. However, the largest part of the infrastructure is being operated by the State railroad ČD. As already mentioned, the operation of the lines is going to be transferred from ČD to SŽDC.

- **České dráhy a. s (ČD; Czech Railways)**
  - Operation of the major part of the network of SŽDC (9430 km), includes all public railway lines with the following exceptions:

- **Jindřichohradecké místní dráhy a. s (JHMD), Operation of own lines, length: 79 km (only narrow gauge)**
  - Jindřichův Hradec – Obrataň (46 km),
  - Jindřichův Hradec – Nová Bystřice (33 km)

- **Klub přátel lokální o. s. (KPL; Association of the Friends of branch lines), Operation of the line of SŽDC**
  - Česká Kamenice – Kamenický Šenov (5 km)

- **Ostravsko-karvinské doly Doprava a. s. (OKD D); operation of the line of SŽDC**
  - Milotice nad Opavou – Vrbno pod Pradědem (20 km)

- **SART - stavby a rekonstrukce a. s. (Construction and Reconstruction, inc.); operation of the line of Svazek obcí údolí Desné (Municipalities association Desná valley; Length: 22 km**
  - Šumperk – Petrov nad Desnou – Kouty nad Desnou (19 km)
  - Petrov nad Desnou – Sobotín (3 km)

- **Viamont a. s.; operation of the line of SŽDC; length: 37 km**
  - Trutnov hl. n. – Svoboda nad Úpou (10 km)
  - Sokolov – Kraslice, National border (27 km)

**4.1.3 Public transport authority (PTA) for rail passenger services**

The Czech Republic has three levels of public transport authorities (PTA): one responsible for the provision of long distance transport services (ministry of transport), one for regional basic transport services (regions/kraje) and one for other local transport services (municipalities).
Public transport authority (PTA) for long distance passenger services

Trains of the type „SuperCity“, „InterCity“, „EuroCity“ und „EuroNight“ (SC, IC, EC, EN) are operated by ČD on their own account and commercial risk. The PTA for long distance passenger services is accountable for all express and rapid trains (train types „rychlík“ (R) und „expres“ (Ex)). Public transport authority is the Czech central state, represented by the Ministry of Transport (Ministerstvo dopravy; MDČR). In spite of the fact that generally the responsibility of the state and regions (kraje) is based on the category of trains (R + Ex financed by MDČR, „spěšný vlak“ (Sp) and „osobní vlak“ (Os) financed by the regions), in several cases the fast trains (category R) are financed by the regional PTA if they fulfil the objectives of regional services. From December 2008 the MDČR will contribute (partly finance) Sp (semi-fast services) on one interregional line. International rapid trains are contracted and financed within the Czech section to the national border.

Public transport authorities (PTA) and other authorities for regional passenger services

The responsibility for the provision of “regional basic services” comprises of semi-fast trains and passenger trains (Sp + Os). Also, the PTA is responsible for regional bus services who guarantee a self-defined provision of services in order to satisfy the basic cross-community transport requirements (to schools, authorities, health care, etc.) through public transportation. Public authorities are the districts (kraje), represented via district offices (Krajské úřady). Czech Republic consists of 14 kraje as can be seen in the following map:

(Source: Wikipedia)

Fig. 9: Administrative structure of Czech Republic
Cross-regional trains are financed by
  - the involved districts together, or
  - by the particular district across the regional border to the next railway junction in the neighbouring district.

International semi fast trains and passenger trains are contracted and financed within the Czech section to the national border.

Fare and transport associations ("Verkehrsverbünde") exist in 12 of 14 districts with different levels of integration. Though there are no legal directions or obligations, the associations are based on voluntary initiatives of the particular districts (e.g. in the districts Brno (Jihomoravský kraj) or Olomouc (Olomoucký kraj)) or the transport companies.

The responsibility as PTA for the provision of “other local services” comprises of cross-regional semi fast trains and passenger trains (Sp and Os) and also bus services, which exceed the provision of basic services. Public transport authorities are the cities (města) and municipalities (obce), represented by the respective town and municipal offices. This means, that municipalities have the opportunity to order transport services at their own discretion on lines where the district does not order the provision of basic services. This is mainly the case for attractive tourist routes (see 2.2).

Inner-city services in the capital Prague (Hlavní město Praha) are classified as basic services, since the capital is a district (Kraj Praha) by itself. The urban services in the other cities are not considered as basic services (see 1.5).

Staffing in the districts to perform their duties as a PTA is low compared to PTAs in most of the countries presented in the overview of relevant cases in chapter 3. The number of staff in the district authorities responsible for the administration of the provision of basic services, for instance in the districts Liberec and Ústí amounts to 3 to 4 persons. With this staff the regions handle railway services as well as regional bus services. An example for a typical transport authority in Germany is the adjacent Verkehrsverbund Oberelbe with similar size, covering the region of Dresden with almost 35 persons.

4.1.4 Train operating companies (TOC)

In general, there is free market entry for all national TOCs - that applies to passenger as well as freight transportation. For foreign companies market entry exists only according to the EU directive 91/440, i.e. only for international traffic. Overall there are 20 TOCs at present, which render services in passenger and/or freight transportation.
The major player in passenger transportation is České dráhy. On some regional lines, even on those which are state-owned and operated by ČD, exclusively or partially some third party TOC are active. The following list includes all TOCs for passenger services. Indicated are all lines with regular scheduled services. Extra tours of individual TOCs to events like train station celebrations, which are scheduled in the railway timetable, are not fully considered.

- **Connex Česká železniční s. r. o.**; occasional passenger services (Pairs of trains each Saturday) on the line
  - Liberec – Zittau (Germany), closed down on December 9th 2007

- **Connex Morava a. s.;** Regional passenger services on the lines of Železnice Desná
  - Šumperk – Petrov nad Desnou – Kouty nad Desnou
  - Petrov nad Desnou – Sobotín

- **České dráhy a. s (ČD);** passenger Services; Regional and long distance services on all passenger lines of SŽDC excluding the following lines
  - **KPL:** Česká Kamenice – Kamenický Šenov
  - **OKD D:** Milotice nad Opavou – Vrbno pod Pradědem
  - **Viamont:** Trutnov hl. n. – Svoboda nad Úpou (10 km)
    - Sokolov – Kraslice, National border (27 km)
    - Karlovy Vary – Mariánské Lázně

  Additional taxi services available for registered groups on the lines:
  - Bezdružice – Konstantinovy Lázně,
  - Litovel předměstí – Mladeč

- **Jindřichohradecké místní dráhy a. s (JHMD);** Regional Passenger services; on the lines:
  - Jindřichův Hradec – Obrataň,
  - Jindřichův Hradec – Nová Bystřice

- **Klub Přátel lokálky o. s. (KPL);** Passenger Services with heritage trains on the line
  - Česká Kamenice – Kamenický Šenov,

- **Klub železničních cestovatelů Doprava s. r. o. (KŽC Doprava);** Occasional recreational Passenger services on the lines
  - Pečky – Bošice – Kouřím
  - Bošice – Bečváry
- Třemešná ve Slezsku – Osoblaha (Narrow gauge)
- Praha-Vršovice – Vrané nad Vltavou – Čerčany – Kačov,
  - Ostravsko-karvinské doly Doprava a. s. (OKD D) Regional Passenger services on the line
    - Milotice nad Opavou – Vrbno pod Pradědem
- Posazavský Pacifik o. s.; Occasional touristic and recreational Passenger services on the lines
  - Pečky – Bošice – Kouřím
  - Praha-Smíchov – Praha-Hostivař – Čerčany – Kačov
- Railtrans s. r. o.; regional Passenger services on the lines
  - Liberec – Zittau (Germany)
  - Großschönau/S. (Germany) – Varnsdorf – Seifhennersdorf (Germany)
  - Varnsdorf – Praha Masarykovo nádraží
  - Varnsdorf – Kutná Hora město
  - Occasional long distance services on the lines
  - These transport services are delivered regularly by Railtrans, but they can be rather classified as recreational traffic.
- Viamont a. s.; Regional Passenger services on the lines
  - Trutnov hl.n. – Svoboda nad Úpou
  - Karlovy Vary – Sokolov – Kraslice – Klingenthal (Germany)
  - Karlovy Vary – Mariánské Lázně
- Společnost železniční výtopna Jaroměř (SŽVJ); Occasional touristic Passenger services on the lines
  - Velké Březno – Velké Žernoskey – Úštěk
  - Náchod – Hradec Králové hl. n.

4.1.5 Public Transport Authorities (PTA) for public road transport and urban transport

The long distance bus services are operated in a dense network throughout the country. However, it is operated for own account without intervention of PTAs. As a result of the multitude of long distance bus services, there is, for many lines, serious competition to railway services. More details on franchising and licensing are not available at present.
The provision of “regional basic services” and “other local services” is, like regional rail services (see 1.3.2), under the responsibility of Public Transport Authorities (PTAs). The districts, represented by district offices, act as PTAs for the provision of “regional basic services” whereas the cities (města) and municipalities (obce) are responsible for the provision of “other local services” through their respective offices:

Cross-regional bus services are financed by

- the involved districts together, or
- by the particular district across the regional border to the next transfer point in the neighbouring district.

Urban public transport is financed – with the exception of the capital Prague (see. 1.3.2) - by the particular city.

4.2 Relationships between the different actors

4.2.1 Legal and organisational relationships

The Railway Act (Zákon o drahách) 460/2006 and No. 266/1994 Coll. is the basis for the distribution of responsibilities for passenger services in rail transport on PTAs. The responsibility covers the total covering of deficits (including loss of revenue due to legal reductions e.g. for students or senior citizens). Timetables have to be prepared by the TOCs, however, PTAs need to be consulted. All timetables are compiled by the infrastructure manager, i.e., since 1st July 2008, by ŠŽDC (see chapter 4.1.2).

If the “basic services” are provided by railway, financing of parallel bus services is prohibited.

4.2.2 Transport contracts

Transport contracts in regional (passenger) rail services are basically net-cost contracts and include the scope of operating performance, the detailed timetable, capacity and, if necessary, quality features of the vehicles used, the level of compensation and the amount of contract penalties (e.g. for delays, missed connections, use of vehicles with reduced quality). For financing principles, see chapter 7.3.

Transport contracts for long distance services exist between Ministry of Transport (MDČR) and České dráhy a. s.

Transport contracts for the provision of regional basic services exist between
the district office (Krajský úřad) of every district and České dráhy a. s.

and between the districts

- Brno (Jihočeský kraj) and JHMD a. s. for the services
  - Jindřichův Hradec – Obrataň und
  - Jindřichův Hradec – Nová Bystřice

- Karlovy Vary (Karlovarský kraj) and Viamont a. s. for the services
  - Karlovy Vary – Mariánské Lázně (5 years) and
  - Sokolov – Kraslice – Klingenthal (D)

- Hradec Králové (Královéhradecký kraj) and Viamont a. s. for the services
  - Trutnov hl. n. – Svoboda nad Úpou

- Ostrava (Moravskoslezský kraj) and OKD Doprava a. s. for the services
  - Milotice nad Opavou – Vrbno pod Pradědem

Transport contracts for the provision of other local services exist between

- Svazek obcí Podlipanska (Municipalities association) and KŽC Doprava a. s. for the services
  - Pečky – Bošice – Kouřím/ Bečváry

- Konzultační dopravní společnost (Consulting firm, on behalf of the municipalities Chbany und Rokle) and České Dráhy a. s. for the services
  - Kadaň předměstí – Vilémov u Kadaně – Radonice u Kadaně,
  - Vilémov u Kadaně – Kaštice - Podbořany

- Svazek obcí údolí Desné (Municipalities Association) and Connex Morava a. s. for the services
  - Šumperk – Petrov nad Desnou – Kouty nad Desnou / Sobotín

The basic duration of the transport contracts currently in force is one year (minimum duration according to the Railway Act) - with exception of the tendered service Karlovy Vary – Mariánské Lázně (contract duration 5 years from December 2006 to December 2011) and the provision of regional basic services in the district Liberec, allocated by a single tender action (contract duration 4 years from December 2007 to December 2011). In case of procurement of the services Liberec – Zittau – Rybníště/Seiffhennersdorf (Germany), it is possible to take the line Liberec – Zittau out of the contract and terminate the agreement to December 2010.
4.2.3 Financing

According to the Railway Act, the deficit in the ordered long-distance service has to be covered by the Ministry of Transport in coordination with the Ministry of Finance, while the districts will cover the provision of regional basic services. The Railway Act does not specify any requirements regarding the provision of other local services. Compensation paid to the operators by PTA in case of long-term contracts is not covered by existing legislation; therefore if the compensation is increased it has to be dealt within the concluded contract.

The transport contracts between the districts and the TOCs usually include the scope of operating performance, the detailed timetable, etc. and define the amount of deficit coverage. Hence, they are basically net-cost contracts and the amount can merely be increased by inflation rate. Unscheduled loss of income has to be compensated via a reduction of the operating performance. For instance, fewer people used public transportation and continued to walk or ride their by bike because of the mild winter 2006/07, which caused a loss of income for the TOCs. To compensate that loss in case of constant coverage of deficit, the district of Liberec for example, cancelled some regional bus services.

The payment for passenger rail services differs from line to line. As an example in the northern region of Ústí nad Labem subsidies range from 0,80 to 2,40 € per train kilometre in 2006. On average a subsidy of 1,45 € per train km was paid by the region. The complete budget in 2007 for regional public transport differs from region to region as can be seen in the following table:

<table>
<thead>
<tr>
<th>Kraj (region)</th>
<th>Expenses for regional public transport (Mio CZK)</th>
<th>complete regional budget (Mio CZK)</th>
<th>percentage of budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capital city</td>
<td>total</td>
<td>Rail</td>
</tr>
<tr>
<td>Jihočeský</td>
<td>České Budějovice</td>
<td>696</td>
<td>321</td>
</tr>
<tr>
<td>Jihomoravský</td>
<td>Brno</td>
<td>922</td>
<td>468</td>
</tr>
<tr>
<td>Karlovarský</td>
<td>Karlovy Vary</td>
<td>294</td>
<td>170</td>
</tr>
<tr>
<td>Královéhradecký</td>
<td>Hradec Králové</td>
<td>513</td>
<td>298</td>
</tr>
<tr>
<td>Liberecký</td>
<td>Liberec</td>
<td>400</td>
<td>205</td>
</tr>
<tr>
<td>Moravskoslezský</td>
<td>Ostrava</td>
<td>961</td>
<td></td>
</tr>
<tr>
<td>Olomoucký</td>
<td>Olomouc</td>
<td>615</td>
<td>328</td>
</tr>
<tr>
<td>Pardubický</td>
<td>Pardubice</td>
<td>476</td>
<td></td>
</tr>
<tr>
<td>Plzeňský</td>
<td>Plzeň</td>
<td>540</td>
<td>320</td>
</tr>
<tr>
<td>Praha</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Středočeský</td>
<td>(Praha)</td>
<td>1.391</td>
<td>778</td>
</tr>
<tr>
<td>Ústecký</td>
<td>Ústí nad Labem</td>
<td>681</td>
<td>393</td>
</tr>
<tr>
<td>Vysočina</td>
<td>Jihlava</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Zlínský</td>
<td>Zlín</td>
<td>472</td>
<td></td>
</tr>
<tr>
<td>total:</td>
<td></td>
<td>7.961</td>
<td></td>
</tr>
</tbody>
</table>
Fig. 10: Budget of Czech regions for public transport in 2007

Notes:
Budgets for Bus include payments for urban bus services only in case of city border crossing services.
In some regions complete budgets include payments for school affairs (as an item in transit, up to 50%).
In Zlínský kraj payments for school bus services is included in the total value.

Budget and service plans for 2008 can be seen in the next table:

<table>
<thead>
<tr>
<th>Passenger services commissioned by the regions in 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kraj (region)</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>Jihočeský</td>
</tr>
<tr>
<td>Jihomoravský</td>
</tr>
<tr>
<td>Karlovarský</td>
</tr>
<tr>
<td>Královéhradecký</td>
</tr>
<tr>
<td>Liberecký</td>
</tr>
<tr>
<td>Moravskoslezský</td>
</tr>
<tr>
<td>Olomoucký</td>
</tr>
<tr>
<td>Pardubický</td>
</tr>
<tr>
<td>Plzeňský</td>
</tr>
<tr>
<td>Praha</td>
</tr>
<tr>
<td>Středočeský</td>
</tr>
<tr>
<td>Vysočina</td>
</tr>
<tr>
<td>Ústecký</td>
</tr>
<tr>
<td>Zlínský</td>
</tr>
</tbody>
</table>

(Source: Internet research by TU Dresden)

Fig. 11: Ordered passenger services in 2008

4.3 State of contractual regulations in public transport in the local authorities

4.3.1 Directly awarded services

The majority of the regular services in passenger transport (long distance and regional services) is based on directly awarded transport contracts (exceptions in railway services - see chapters 4.3.2 and 4.3.3).
4.3.2 Competitive tendering procedures

Since 2005, only a few passenger services were tendered by the State or the districts. One invitation to bid (in the district Liberec) was cancelled after arrival of the offers. Though, it is planned to tender the network again.

Successful tenders

With respect to long distance services, express train services on the lines

- Liberec – Pardubice hl. n. and
- Most – Plzeň hl. n.

were tendered in 2005 by the Ministry of Transport for the period of 2007 to 2014. The winning bid came in both cases from České dráhy a. s., by a price of 52,30 kč per kilometre. Viamont as a private competitor made a bid of 74,60 kč per kilometre. Because of the budgetary restrictions the contract is concluded annually and both parties acquired the option to conclude the PSO contract till 2014 if set conditions are met.

In the case of regional services, only services on the line

- Karlovy Vary – Mariánské Lázně

was tendered in the district Karlovy Vary in 2005 and contracted out to Viamont a. s. for the timetable periods 2006/07 to 2011/12.

Planned tenders

At present, there are two competitive tendering procedures in the planning stage for 2008 concerning regional services. The district Brno plans to tender the services on the lines

- Břeclav – Brno – Žďár nad Sázavou und
- Vyškov – Brno – Blansko

Details about the contents of the procurements, duration and risk allocation are not specified yet. The services on the following lines will be tendered for the duration of 10 years starting December 2011 again by the district Liberec

- Liberec – Tanvald – Harrachov,
- Tanvald – Železný Brod and
- Smržovka – Josefův Důl
The selected TOC has to bear the income risk from ticket sales (net-cost contract). The procurement of the following line, which is planned for 2008, is of particular nature:

- Liberec – Zittau – Rybníště/Seifhennersdorf (Germany).

The line leads through the districts Liberec und Ústí as well as the service area of the public transport agency Oberlausitz-Niederschlesien (ZVON) in the German Free State of Saxony. The procurement with the duration of 10 years starting December 2010 will be carried out by the three affected PTAs together, lead-managed by the ZVON. The selected TOC has to bear the income risk from ticket sales (net-cost contract).

Cancelled tenders

Already in 2006, regional services in the district Liberec were competitively tendered. The tendered services comprised the following lines

- Liberec – Tanvald – Harrachov,
- Tanvald – Železný Brod and
- Smržovka – Josefův Důl

The tender documents specified very demanding requirements regarding the quality of the vehicles used. All the offers (from Connex Česká Železniční s. r. o., České dráhy a. s., Railtrans s. r. o. and Viamont a. s.) were considerably higher than the previous services of České dráhy a. s. Therefore, the procurement was cancelled and the services were directly awarded to České dráhy a. s. On the basis of the cancelled procurement, the new agreement contains higher quality standards compared to the former contract.

4.3.3 Services without contracts

Regular services without contracts are operated on own entrepreneurial risk from

- České Dráhy a. s.: Supercity- and EuroNight-Trains
- Railtrans s. r. o. on the lines:
  - Großschönau/S. (Germany) – Varnsdorf – Seifhennersdorf (Germany)
  - Liberec – Zittau (Germany) (Regional trains)
- Viamont a. s. on the lines:
  - Sokolov – Karlovy Vary dolní nádraží
Furthermore, all non-regular services listed in chapter 1.4 operate without contract and on own risk.

The timetable of December 10th 2006 to December 8th 2007 scheduled seven daily Intercity-train-pairs from Railtrans s. r. o. between Praha-Holešovice and Ostrava-Svinov or Ostrava hl. n. However, operations could not start because the designated locomotives from the pool of Siemens-Dispolok did not receive a license to operate in the Czech network. Additionally, not enough alternative licensed efficient locomotives from sources other than from ČD were available. SŽDC was not able to provide scheduled slots in the timetable period 2007/08, which were acceptable to Railtrans. SŽDC argued that infrastructure works on the junction Praha reduced capacities. Therefore, the present timetable no longer contains any Intercity-trains from Railtrans s. r. o.

The company Student Agency s. r. o., which operates long-distance bus-services as TOC, plans to service the line Praha – Ostrava with fast and high-quality trains. However, the company does not own a license yet. At present, provisions for the acquisition of new multi-unit rail coaches are being made. A target date for the start of operations is not known at the moment.

4.3.4 Regional bus services and urban transport

Competitive tendering procedures for regional bus services are the exception, in urban transport tendering is unknown up to now. Tendering procedures took place only in two districts so far.

Tendering and contracting of the complete bus services regarding the provision of basic services in the district Ústí (Ústecký kraj) took place in 2006 and 2007. In the course of the implementation and continuous enlargement of the public transport agency in the district around Brno (southern Moravia - Jihomoravský kraj), a great deal of the provision of the basic services was tendered and awarded to private companies. Pražská Integrovaná Doprava (PID; Prague public transport agency) tendered several packages of regional bus services, for example five lines from Praha-Opatov to Čestlice.

Regarding urban transport, no procurement took place so far. All services were contracted out directly to the local operators of urban transport or – in smaller cities – to operators of regional bus services.

4.4 Market situation and financial structures in public rail transport

4.4.1 Key figures for rail transport

České dráhy a. s. provides the lion’s share of the operating performance in passenger transport for the year 2006, i.e. 99.31% of 116'302'650 train-km.
Viamont a. s. accounts for 0.43%, OKD, Doprava a. s. for 0.13% and the remaining parties for 0.13% of total train-km. Figures for 2007 are not published yet.

A similar detailed breakdown does not exist regarding the volume of traffic and transport services. According to the incomplete table in the annex, České dráhy a. s. has again a share of more than 98.5% of the aforesaid key figures.

The available data does not distinguish between long distance and regional services.

4.4.2 Rolling stock

Not all TOCs active in passenger transport possess their own or enough own vehicles. The following companies rent vehicles

- OKD, Doprava a. s. from České dráhy a. s.,
- Viamont a. s. from České dráhy a. s. and Vogtlandbahn GmbH (Germany)
- Railtrans s. r. o. from SBE GmbH (Deutschland),
- Connex Česká železniční s. r. o. from Veolia Deutschland AG (Germany)
- Connex Morava a. s. from Svazek obcí údolí Desné und
- KŽC Doprava s. r. o. from Railtrans s. r. o.

The rolling stock owned by the TOCs is listed in the next table. It was not possible to solve the contradiction that all diesel railcars in stock can be attributed to one TOC, however, the vehicles owned by Svazek obcí údolí Desné cannot be found in the list. Again, the available data does not distinguish between long distance and regional services.

<table>
<thead>
<tr>
<th>Rolling stock of Czech railway companies (in 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOC (Dopravce)</td>
</tr>
<tr>
<td>Electric (elektrické lokomotivy)</td>
</tr>
<tr>
<td>České dráhy a. s.</td>
</tr>
<tr>
<td>ČD Cargo a. s.</td>
</tr>
<tr>
<td>Connex Česká železniční s. r. o.</td>
</tr>
<tr>
<td>Connex Morava a. s.</td>
</tr>
<tr>
<td>Jindřichohradecké místní dráhy a. s.</td>
</tr>
<tr>
<td>Klub přátel lokálky o. s.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
The main problem for rolling stock in the Czech Republic is the obsolescence of all sort of rolling stock. Normally the useful economic life of rolling stock for passenger services is about 30 years. Since creation of ČD in 1992 only 67 railcars for regional trains were purchased. Considering that ČD has e.g. up to 770 diesel railcars this shows the lack of modern high quality rolling stock. Programmes for modernisation of railcars and wagons are under preparation but it unclear whether the dimension is sufficient to generate sustained impact on costs and attractiveness.

### 4.4.3 Financial system of public transport vehicles

Concerning the financing of vehicles, the situation of České dráhy a. s compared to the remaining private TOCs is different. ČD as a joint stock company established according to the Czech commercial code does not benefit from state guarantees for its credits. The Czech state may grant state guarantees to any company by individual act, notified to and approved by the European Commission. An example for this is the actual notification of a guarantee for Eurofima loans to purchase new passenger coaches for ČD. Until now only ČD made use of such a state guarantee. ČD has also the possibility to finance new vehicles via Eurofima. All the vehicles currently owned by the private TOCs are financed with their own resources.

The retrospective information on the initial purchase of vehicles in the periods 1993-2003 and 2004-2006 according to the table in Fig. 12 seems incomplete. Unfortunately it is not possible to obtain more detailed information in the context of this study. It was also not possible to find data on the number of modernised vehicles in those periods as well as about the share of public funds regarding the initial purchase and the modernisation.
5 Conclusions from European experiences and from the current situation in the Czech Republic

European experience consists of a range of different ways to subsidise rolling stock. Questions of state aid and financing in general are among the main reasons for the development of the described different models throughout Europe. The European experience also shows that the European legal framework enables different national solutions according to the particular national conditions and circumstances. The questions of how far these findings are relevant in the Czech context will be pointed out as well as their consideration in the elaboration of possible models and solutions.

The description and analysis of the current situation in the Czech Republic has shown a strong need for new rolling stock to deliver up to date public service quality and to compete with bus and individual transport. Financing of rolling stock and public service contracts should be long-term oriented and in compliance with the European and national legal framework, especially concerning state aid and procurement law. The current situation in the Czech Republic also has certain implications for conditions of rolling stock subsidisation. They relate to the existing time pressure and to the need for models which are easy to handle on the basis of the existing capacities of both public transport authorities and railway undertakings.

5.1 Main results based on European experiences

Direct investment subsidies to the TOC are difficult to handle due to state aid problems (e.g. problems of overcompensation), therefore some countries in Western Europe reduced or abolished direct subsidies for rolling stock in recent years (Netherlands, Switzerland, Denmark, etc.)

In countries with existing direct subsidies for rolling stock the analysed case studies show either monopolies for state railways (like in Ireland) or usage of additional instruments like termination clauses and additional obligations to avoid problems with regard to competition and/or state aid law. Some PTAs have laid down rules which oblige incumbent operators to return subsidised rolling stock to the regions or the next operator (like in France or Stuttgart, Germany) so as to avoid discrimination of competitors at new tendering rounds.

Specific subsidies for rolling stock are paid to PTA by a few countries, mainly for pool solutions, like in Sweden. Other countries switched over to payment for public service contracts and other financing instruments.

The trend in some countries is also to offer indirect investment subsidies such as re-use guarantees as part of a PSC, or to procure and finance rolling stock in the framework of a pool for rolling stock, either PTA-owned (Transito AB in Sweden) or private. If there is already long standing experience with tendering procedures, it can
be expected that a market for used vehicles has already been established. TOC therefore can rely on financially attractive offers by leasing companies (see the UK example) and do not depend on additional public investment support. As has been shown in previous chapters, the efficient use of public funds depends fundamentally on their integration into overall financial concepts and on appropriate risk allocation between operators, rolling stock leasing companies and PTAs.

Next to economic considerations, the payment of investment subsidies has to be in line with the European and national legal framework. According to European state aid requirements, investment subsidies classified as state aid are incompatible with competition rules of the common market; EC Regulations 1191/69 and 1370/2007 do apply. Irrespective of the establishment of public service contracts, according to the Community guidelines on state aid for railway undertakings of April 30th, 2008 state aid is only permitted if four additional conditions are met (see Chapter 2.1.3 and below).

The main consequences for all possible models applicable in the Czech Republic and for further approach are:

- All models have to comply with European state aid requirements, either by notification or reimbursement according to Reg. (EEC) No 1191/69 resp. Reg. (EC) No 1370/2007.
- The awarding of public service contracts has to be in line with the European and national framework.

### 5.2 Main results based on the current situation in the Czech Republic

Recommendations have to take account of the public transport situation and the institutional framework conditions in the Czech Republic.

- Although the Czech market for public rail services has been opened to other operators, a de facto monopoly structure still exists. České dráhy (ČD) still covers 99% of the market for regional rail services. Furthermore ČD is the only TOC with sufficient knowledge of the market and resources such as vehicles, maintenance facilities etc. The regions are not obliged to use the instrument of tendering procedures, but have the right to do so. Until now, the regions do not...

---

15Communication from the Commission: Community guidelines on State aid for railway undertakings (2008/C 184/07), point 36: Firstly the rolling stock concerned must be exclusively assigned to urban, suburban or regional passenger transport services in a specific region or for a specific line serving several different regions; Secondly the rolling stock must remain exclusively assigned to the specific region or the specific line passing through several different regions for which it has received aid for at least ten years; Thirdly the replacement rolling stock must meet the latest interoperability, safety and environmental standards applicable to the network concerned; Fourthly the Member State must prove that the project contributes to a coherent regional development strategy.
have sufficient experience with tendering procedures and especially with tendering rail passenger services.

- The Czech PTAs lack experience in defining and organising public transport tasks and therefore tend to leave the whole chain of strategic, tactical and operational decisions up to the discretion of the TOC. In view of the financial and legal responsibility of the public authorities, this situation is unsustainable. A coherent strategy of PTA capacity improvements should therefore be established and agreed at the national level.

- Public financing of passenger services in the Czech Republic is unstable; as a consequence, regions contract only for the possible minimum period, usually one year. These one year contracts do not provide a reliable basis for financing in accordance with European state aid regulations. Furthermore other operators might not show sufficient interest to participate in a tender.

- The separation between basic and additional services may lead to separate contracts between TOCs and PTAs (regional and local) on the same railway line. This would be difficult to handle and complicated discussions on financing and allocation of rights and duties are conceivable.

When preparing EU funding for rolling stock investments and more broadly improving public (rail) transport services under the existing circumstances described above, it is crucial to focus on models which can be easily implemented.

The following general consequences which are relevant for all possible models applicable in the Czech Republic have to be drawn:

- A nationwide, consistent, reliable framework for the distribution of subsidies is necessary

- Solutions should consider the different level of know how of the responsible authority in comparison with the service providers. In the medium and long term it will be essential to establish an equal level on both sides, TOC and PTA. Solutions may therefore be phased or differ in accordance to the actual handling ability at the public level.

- Models should be compatible with existing and forthcoming PSO regulations 1191/1969 and 1370/2007 (either directly awarded or tendered). In particular, the procedural provisions of Article 7(2) of Regulation 1370/2007 could be applied already before 3 December 2009 so as to increase legal security of contracts awarded during the first year of application of Regulation 1370/2007.

- A well-balanced risk allocation between PTAs and TOCs is needed as a provision of a sufficient base for the TOCs’ calculations

- The Czech PTAs need a certain level of flexibility to readjust services and Public Service Contracts (PSCs) to react to changing objectives, passenger demands, socio-economic developments and budget restrictions
A nationwide consistent fleet strategy and technical compatibility of rolling stock (e.g. couplings, floor level, technical train communication) would help to ensure flexibility for future changes.

The current situation does not allow an efficient and sustainable long-term strategy for both PTAs and railways. In the short run cooperation between PTAs should be fostered and the legal and financial framework of rail passenger services should be reviewed. On the long term it has to be assessed whether a revision of the PTA structure in the Czech Republic might be useful to implement stronger PTA bodies providing the necessary skills and manpower for future challenges.
6 Recommendations

Based on the above conclusions, an overview of possible strategies and procedures for the utilisation of EU funds for rolling stock investments is provided in this chapter.

A detailed investigation of legal requirements (especially in respect to the specific Czech legislation) or economic calculations have not been foreseen in this study. However legal and budgetary risks as well as open questions to be investigated in more detail will be addressed.

The following four models cover the range of reasonable options:

- Model A – direct investment subsidy for new rolling stock to an operator independent of the conclusion of a public service contract. Subsidy is treated as state aid and has to be notified to the European Commission.

- Model B - direct award of a public service contract combined with a direct subsidy to the TOC and the obligation to use new rolling stock. Investment subsidies are regarded as part of the PSC payment and are treated as state aid.
  
  o Sub model B1: Payment of investment subsidies will be regarded as part of payment within an existing and adjusted PSC (in accordance with Reg. (EEC) No 1191/69). State aid has to be notified to the Commission.

  o Sub model B2: Investment subsidies are paid before the signature of a new PSC. The payment of subsidies is tied to the obligation on the conclusion of a PSC (in accordance with Reg. (EC) No 1370/2007) in a limited time frame. State aid has not to be notified to the Commission.

  o Sub model B3: Payment of investment subsidies and conclusion of a PSC (in line with Reg. (EC) No 1370/2007) will be handled jointly. State aid has not to be notified to the Commission.

- Model C - award of a competitively tendered PSC based on Reg. (EC) No 1370/2007 and direct investment subsidy to the winner of the tendering process. Investment subsidies are regarded as part of the public service contract payment, similar to model B.

- Model D - rolling stock pool, where the PTA is the recipient of subsidies and is responsible for the financing and procurement of rolling stock in his region. Awarding of PSC is independent from payment of subsidies16.

16 From the European experience we have concluded that in addition to the payment of direct subsidies to the TOC, it seems useful to analyse other options such as the establishment of a public rolling stock pool. In regard to the present situation in the Czech Republic, the recommendations should however not be connected with high preparation and adaptation costs. We
The following figure gives an overview of the models and their main criteria:

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B1</th>
<th>B2</th>
<th>B3</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awarding of PSC</td>
<td>Directly awarded public service contract (PSC)</td>
<td>Competitive tendering</td>
<td>Direct or competitive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relation between PSC and subsidy</td>
<td>Isolated subsidy, separated payment of PSC</td>
<td>obligation for new PSC (1370/07)</td>
<td>adjusting of existing PSC (1191/69)</td>
<td>jointly regarded and negotiated subsidy and PSC (1370/07)</td>
<td>only indirect relation; e.g. contract rules maintenance of RS</td>
<td></td>
</tr>
<tr>
<td>Recipient of subsidy, owner of RS</td>
<td>Train operating companies (e.g. CD, Connex Moravia, Viamont)</td>
<td>PTA (Regions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problems at the awarding stage</td>
<td>Notification necessary</td>
<td>Subsidy and PSC payment has to be regarded as an economic unit</td>
<td>Problems regarding overcompensation</td>
<td>requires knowledge about participation in tenders</td>
<td>requires knowledge of pools</td>
<td></td>
</tr>
<tr>
<td>Problems at the end of the contract</td>
<td>Handover of funded vehicles or refund of subsidies</td>
<td>Otherwise cost advantages in following tenders</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible Add-Ons</td>
<td>Re-use guarantee for fleet after contract</td>
<td>Dept service guarantee</td>
<td>Not necessary</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 13: Overview on possible models

Each model is described in the following chapters including possible variations. The advantages and risks of the models will be compared, especially in terms of the legal framework, economic consequences and possible problems of implementation under the specific circumstances in the Czech Republic.

6.1 General Framework Conditions

Certain framework conditions have to be met irrespective of the model in question. The most important conditions for a successful use of investment subsidies consist in an economic use of financial means, in the consideration of legal requirements and in the respect of the timeframe necessary until new rolling stock can be procured. Economic aspects are related to two main challenges - to avoid negative effects on future competitive procedures and to ensure a balanced distribution of risks between TOC and PTA. In regard to the legal framework, certain conditions and questions of therefore promote a two step approach. Models A-C are based on existing structures, which have to be re-enforced while model D is only applicable in a later phase in so far it would require the establishment of new structures and additional capacities.
state aid and procurement law have to be considered in all models. At last it will be shown that the duration of the preparation time needed will be different for each model.

6.1.1 Economic aspects

The following aspects are relevant to ensure economically efficient use of public funds and well-functioning public service contracts:

- If support rates are too low they will not be attractive for TOC and PTA. Costs for transactions and additional financing instruments might not generate real advantages.

- A substantially longer duration of contracts is necessary to generate real economic advantages, independent of the selected model. The current short-term contracts include high risks for the TOC, e.g. high remanence costs for staff, facilities and rolling stock. Especially private companies will have to factor such risks in but also for ČD such contracts do not provide sufficiently stable business conditions.

- The investment into new rolling stock has considerable effects on total costs for rendering public service obligations. If these investment payments are partially or totally subsidised, capital costs during the following years will decrease. Furthermore, it can be expected that the use of new rolling stock will lead to a decrease in energy and maintenance costs and will be a precondition for possible future demand increase for services (which will in turn lead to an increase in ticket revenue and therefore higher cost coverage). In order to ensure a proper payment scheme, the PTA has to assess the effect of the timing and the level of investment subsidies on the total costs of the TOC. The PTA should also be aware of the general payment practices of the rolling stock industry so as to adapt the timing of investment subsidy payments to the financing needs of the TOC (the TOC may also take over the preliminary financing):
  - First instalment: 10-30% of investment costs must be paid directly after the signature of the purchase contract,
  - Intermediate instalments: payments linked to different stages of manufacturing and testing.
  - Last instalment: 10% at fulfilment of all contractual obligations (placing into regular service, delivery of training and documentation, fulfilment of guarantee, etc.).

- It has to be ensured that investment subsidy payments do not have a distorting effect on actual or potential competition. In case a public pool benefits from investment subsidies, it has to lease rolling stock to each potential operator at equal conditions. If an operator benefits from investment
subsidies, termination clauses must be introduced. Those termination clauses should include the following transfer rules:

- By contract the operator will be obliged to hand over rolling stock to the PTA or to the next operator at the end of contractual period if the follow up contract will be awarded to a different service provider (such as is the case in the Netherlands for new tendering rounds or in Stuttgart, where the incumbent operator is obliged to make rolling stock part of the current tendering procedure). Differences between the current value of rolling stock and the level of the original grant have to be compensated by the PTA or by the new operator if necessary.

- If the old operator wants to use the rolling stock for other services after the termination of the contract, he would be obliged to repay the subsidies on a pro-rata basis to the PTA. The PTA should be bound to use the repaid subsidies only for rail passenger services for which the former TOC originally received the investment subsidies.

- If operators cannot be sure if they will obtain the subsidy while calculating their offers, they will not take this subsidy into account or they will add a considerable risk mark-up (which displays the possibility of not receiving any investment subsidy). That would mean that in case of a payment of an investment subsidy to the winner of a tendering procedure or the direct award of a contract to one operator, the benefit would only accrue to the operator (windfall profits) but not to society, especially not to the PTA (see Fig. 14).

![Total costs and income flows over the whole contract period](image)

**Fig. 14: Windfall profits**
Windfall profits can be avoided by obliging the operator to hand over possible gains to the PTA. This means that in the case of a successful application for grants, PTA payments (as laid down in the PSC) will be reduced by the amount of the subsidy payments. If an application for subsidies is not successful, the PTA has to pay the whole amount of remuneration as stipulated in the PSC.

The PTA has to assure that it can finance the whole payment within its budget independent of the possibility of the TOC to apply for Cohesion or ERDF funds for its rolling stock procurement. In regard to the financial situation of Czech regions and the origins of the planned funding programme, this solution is connected with the problem of assessing what the PTA can afford without risking high financial outlays. Since the price for the fixed service offer is not known before the outcome of the tendering procedure, the PTA has to be able to make predictable statements on the costs of the desired service level. Such estimation for the expected level of prices by the way is necessary in general due to the indispensable calculation of the whole budget for public service contracts.

As long as investment subsidies cannot be calculated in advance by the TOCs respectively guaranteed by the PTA, awarding procedures are connected with additional transaction costs (esp. complicated evaluation of bids in model C) and risks (windfall profits for the TOC or high financial burden on the PTA side). Therefore it is recommended to launch the tender procedure only on the basis of reliable subsidy level information.

It is therefore crucial to establish a PSC preparation agenda in which the grant application timetable will match the contract award timetable. If done properly, there can be reasonable certainty that the grant will be available (e.g. if earmarked in the funding programme or agreed with management authority), which subsequently reduces the risk of non-payment of investment subsidies.

The funding authority could also make a binding commitment that it will pay the investment subsidy once the operator has been chosen. The problem about this option is that the funding authority does not know the exact amount of subsidy payments in advance. However the PTA might make a rough assessment of costs based on minimum quality requirements and the level of services which have to be provided. Alternatively, the funding authority hands out a fixed amount (not percentage) of subsidy payments to the PTA, which in turn incorporates this payment into the tender documents. In this case subsidy payments could be related to a rough assessment of the PTA on how much vehicles would be needed, but it would be independent of the exact type and number of rolling stock, which would be actually procured by the operator.

6.1.2 Legal framework

Procurement and state aid rules have to be taken into consideration when selecting the most suitable option for the payment of investment subsidies. A clear distinction must be made between the purchase of rolling stock by a company and the awarding
of a public service contract for the provision of a transport service by railway to a company.

- Contracts for the purchase (including also lease) of railway rolling stock will normally fall under the application of the so-called Utilities Directive, Directive (EC) No 2004/17/EC, whenever awarded by contracting entities as defined in that Directive and having a value of currently 412 000 Euro or more.

- The conclusion of a public service contract will, however, be subject to the procedural provisions of Regulation (EC) No 1370/2007 in so far as they concern rail or metro services or can be defined as concessions in relation to bus and tram services.

The following legal requirements have to be taken into account.

### Direct award of contracts

Direct award of contracts is possible under the regime of the new Regulation (EC) No 1370/2007 provided the criteria laid down in the Regulation are met. However, there are some uncertainties left:

- **Current situation until 3.12.2009:**

  Two situations may jeopardize the legal security of a public service contract in anticipation to the application of Regulation (EC) No 1370/2007 on 3 December 2009:

  - The awarding of concession contracts to a pre-selected transport operator without competitive procedures, because ECJ jurisprudence based on Articles 43 and 49 (Article 49 does not apply to transport services) of the Treaty has developed basic awarding conditions to be applied in the absence of specific EU legislation, or

  - the financing of public services not fully in compliance with the still binding conditions of Regulation 1191/69 as finally amended by Regulation 1893/91.

Contrary to these two cases the Commission sees however no legal obstacle, in applying certain procedural provisions of Regulation (EC) No 1370/2007 before its entry into force. The procedures provided for in Article 7(2) of Regulation (EC) No 1370/2007 could be applied already before 3 December 2009 so as to increase legal security of contracts awarded during the first year of application of Regulation 1370/2007.

---

17 In particular by public authorities or companies benefiting from exclusive rights or other forms of preferential market access.
• **Future situation under regulation (EC) No 1370/2007:**

Unless prohibited by national law, contracts concerning transport by rail can always be awarded directly for up to 10 years, with the exception of those dealing with other track-based modes such as metro or tramways (Art. 5 (6)). In this case there is an obligation to publish certain details about the awarded contract (cp. Art. 7 (3)) and to fulfill the additional requirements of the Annex concerning compensation. However, one has to judge case by case whether a direct award is really appropriate. Each direct award should have a justification in its own right. The justification will have to satisfy the spirit of the requirements of recital 20 of the regulation (EC) No 1370/2007 which states that the basic principals of transparency and equal treatment will also apply in case of a direct award. Thus the provisions of the Treaty still have to be taken into consideration in the case of a direct award.

• Czech legislation has up to now not restricted the possibility of directly awarded contracts for public service obligations in passenger rail services.

**State aid and market regime**

Generally investment costs for rolling stock and operating costs cannot be analysed separately. It is therefore crucial that the investment subsidies for new rolling stock are part of the financial compensation as laid down in the public service contract (PSC). Investment subsidy payments can be included into the compensation structure of the PSC. The existing contract will then have to be modified. In case the former contract is about to expire, the investment subsidy agreement should include a binding obligation to establish a PSC, which defines the service for which rolling stock will be used. In the new PSC investment subsidies will be part of compensation payments.

In the case of directly awarded contracts, the risk of market distorting state aid persists, also if investment payments are included in the calculation for compensation for public service obligations.

Theoretically one can distinguish between authority initiated and market initiated regimes. In authority initiated regimes, transport authorities have the legal monopoly of initiative in the sense that autonomous market entry is legally impossible and that all production or market entry is the result of a conscious one-sided authority initiative to produce or request the production of services. This is the current legal situation in passenger rail transport in France. In market initiated regimes, the supply of transport services is based upon the principle of autonomous market entry resulting from a market process with more or less regulatory checks at the entrance. Private services have precedence. Only if the market cannot offer services of public interest, the state is going to intervene (via tendering procedures). This is the current legal situation in passenger transport in Germany.

In the Czech Republic no specific market entry barriers exist. Each operator who wants to access the railway passenger service market has the right to obtain a
licensure issued by the railway authority (Drážní úřad) if the conditions are fulfilled. The Czech market thus also has been opened for market initiated rail services as shown in chapter 4. Questions of state aid therefore have to be checked depending on the different models.

**Notification requirement**


As Reg. No. 1191/69 does not provide for conditions for the compatibility of payments granted in contracts, the European Commission held\(^\text{18}\) that the assessment of those payments follows the general state aid rules specified by the Commission for example in the Community framework, which in return clarifies the practical application of the Altmark criteria.\(^\text{19}\) The conditions laid down in Reg. No. 1370/2007 on the other hand reflect – beside other requirements, mostly concerning the award of the contract - the first three Altmark criteria. This means in practice that any payment which meets the first three Altmark criteria is more likely to be exempt from the notification requirement.

Thus subsidies granted according to the models B1-3 and C are free from notification if they comply with the conditions laid down in the regulation applicable to them. As model C is based on competitive tendering it is more likely to comply with the mentioned conditions due to its results that will provide market prices. This will reduce notification risks significantly. As in model A the subsidy is granted independent of a PSC, which defines the transport services in detail, the exemptions of the regulations do not apply and the aid has to be notified.

The following table gives a general overview on the need to notify a granted subsidy:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct subsidy</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Imposed PSO</td>
<td>No if requirements of Art. 9-13 are</td>
<td>No if requirements of Reg. are met</td>
</tr>
</tbody>
</table>

\(^{18}\) European Commission, State aid C 16/07 – Official support for Postbus in the Lienz district, OJ C162, p. 28; State aid No N 495/2007 – Czech Republic, para 78.

\(^{19}\) European Commission, Community framework for State aid in the form of public service compensation, (2005/C 297/04).
<table>
<thead>
<tr>
<th></th>
<th>met (cp. Art. 17 (2))</th>
<th>(cp. Art. 9 (1))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSC</strong></td>
<td><strong>Yes</strong></td>
<td><strong>No</strong></td>
</tr>
<tr>
<td><strong>Exception:</strong> tendered PSC or PSC meeting the four Altmark criteria</td>
<td>→ PSC meeting criteria 1-3 have to be notified</td>
<td>→ PSC meeting criteria 1-3 are exempt from notification requirement</td>
</tr>
<tr>
<td><em>Probability of positive decision by Commission:</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- <strong>No</strong> if criteria 1-3 are not met</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- <strong>Yes</strong> if only criteria 4 is not met</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td><strong>Yes</strong></td>
<td><strong>Yes</strong></td>
</tr>
</tbody>
</table>

Fig. 15: Overview on needs for notification

**Indications for the notification**

The grant of the subsidy has to be notified to the Commission by the Czech Republic who has identified one competent authority for that purpose. The grantor has to describe the measure in question so as to enable the Commission to assess its compatibility. This contains for example information on the beneficiary and the grantor, the objective of the aid, the national legal basis for its granting, its amount and its form, the means of funding and its duration. The necessary documents have to be attached to the description.²⁰

The European Commission provides the grantor with the necessary standard forms so as to help the applicant to meet the formal requirements. In justified cases the Commission will grant confidentiality for information that must not be disclosed to third parties.

---

²⁰ For more information at a first glance about the notification procedure, authorities may consult the DG TREN web site: http://ec.europa.eu/dgs/energy_transport/state_aid/procedure_en.htm
6.1.3 Duration of procedures

The following models are connected with different time horizons of installing new rolling stock. In the following the demand of time for the most important steps in the process of the procurement of rolling stock are displayed:

- Notification of state aid: process can take 3 months at the best, but according to recent experiences much longer duration of 18 month or longer is possible.\(^{21}\)
- The award of subsidies should be possible within three months under normal conditions
- The purchase of rolling stock depends on the volume of services as fixed in the contract. Production and introduction will normally take up to two years in case of the procurement of well-known, reliable and field-tested vehicles. In the case of newly developed vehicles this may take much longer (and also depends on the quality of services and vehicles demanded by PTA). The actual production time also depends on the capacity of the rail industry.
- Duration of the awarding procedure: A directly awarded contract can normally be concluded within one year, a procedure of competitive tendering can take up to two years.
- Establishment of a PTA pool: A public pool will have to be set up before transport services are awarded. The time needed for the establishment of a pool depends on local knowledge and on the use of external support (such as a private pool company).

The sequence of preparatory steps, the possibilities to overlap steps and the total duration of the procedure will vary depending on the model. Certain tasks cannot be undertaken in parallel so that the procedure can only continue after completion of the previous step, such as a notification procedure, where the final decision has to be awaited until state aid payments can be transferred. The following illustration gives indications about the duration of relevant procedural steps within the whole process. For estimation of the complete process normally the different tasks have to be added. Otherwise high risks for example in case of refusal of notification would occur.

\(^{21}\) Commission decision of 21 december 2005 concerning State aid proposed by Italy (Autonomous Province of Trento) in the transport sector, OJ L 57, p. 18, of 1st march 2003: duration from 2001 (first application) to end of 2005 final decision
Notification of state aid by EC

Awarding of subsidies

Purchase of rolling stock

Awarding and/or negotiation of PSC
  (direct)  (competitive)

Fig. 16: Demand of time for important tasks within process of application and awarding of subsidies and PSC
6.2 **Model A - State aid notification separate from PSC**

6.2.1 **Description of the model**

The current railway undertaking (normally the national railway České dráhy) will be the recipient of the investment subsidy in this model. The situation of current contracts would not be changed; especially the short-term conditions would not be subject to a change. Subsidy rates will be restricted to 30-50%, depending on the region.\(^{22}\)

![Diagram](image)

Fig. 17: Model A: Isolated investment subsidy

In this model there is no direct connection between the agreement on a payment of state aid for rolling stock investment (although the subsidy in itself would also be considered a public service contract (PSC)) and a specific operational PSC.

The investment subsidy would be split up e.g. in three tranches and paid in addition to the operational contract payments.

If the PTA wishes to set quality or environmental standards for the rolling stock these issues could only be taken into account in the operational public service contract(s).

---

\(^{22}\) Guidelines on national regional aid for 2007-2013 (2006/C 54/08)
6.2.2 Requirements of the model

Model A would not require changes of existing operational public service contracts but it will induce challenges regarding all aspects of state aid.

Since investment subsidies are paid independently of regular compensation payments, they have to be notified according to Article 88 of the EC Treaty and to Regulation (EC) No. 659/1999. The conditions established in the railway sector guidelines (2008/C184/07) will have to be fulfilled (see mainly points 36-40). Among those conditions some are incompatible with the current situation in the Czech Republic, like the current short term operational public services contracts (see chapter 4.2.2) and some can only be fulfilled upon changes of the contractual relationship between the government and the incumbent railway operator, such as deduction of the proceeds from the sale of older vehicles which are replaced by the funded rolling stock. The restriction on subsidy rates according to the regional aid ceilings will complicate the financing of the total investment in rolling stock, since that would mean that the TOC would have to pre-finance at least 50% of the total investment costs.

Due to these circumstances model A is strongly dependent on the moment and the conditions of state aid decisions of the European Commission.

Time-wise this model is not dependent on decisions regarding the awarding of public service contracts, so that the submission of a project application could swiftly follow the positive result of a notification procedure.

6.2.3 Strength and risks of the model

Model A seems to be a solution which can easily be implemented. At first sight, there are some advantages connected to this model. On the other hand this model includes severe uncertainties regarding all questions of state aid as well as regarding the duration of the notification procedure.

- The main advantage of model A is its simplicity. The current situation of PSC in the Czech Republic would not need to be changed with the possible exception of their duration. The PTA in turn would not need to improve their knowledge concerning PSC and quality standards for rolling stock on the short run.

These advantages could on the other hand be absorbed by important disadvantages, including substantial risks of delay and recovery of subsidies. If investment subsidies are paid to a TOC without taking its repercussions on future costs into account, these will be connected to the following difficulties:

- The notification requirement means that transport authorities depend on the decision of the European Commission and that there is at least a high risk of delay of investments in new rolling stock or a high risk for a demand of recovery pronounced by the Commission. It is uncertain whether the outcome of the notification procedure will be positive. In the Czech case, the national law requires the financial compensation for vehicle purchase to be based on
the overall compensation agreement of public service contracts, which may prevent model A to be applied for any Czech case. The recent state aid decision regarding rolling stock support (State aid No N 495/2007 – Czech Republic) is in fact based on the requirements of model B1 (see below).

- Once an investment subsidy is paid and regular compensation payments are not adjusted accordingly, this will have an effect on future costs and income flows. On the one hand, capital costs of the TOC will decrease (since investment costs in rolling stock have been either partly or totally covered by investment subsidies). Likewise energy and maintenance costs will be reduced if new rolling stock runs on the network. Finally in the case of net cost contracts the TOC can also skim additional revenues from ticket sales (since new rolling stock will have a positive effect on the demand). On the other hand, it is possible that the operator gains higher than normal profits and will benefit from the ownership of subsidised rolling stock in future awards of operational PSCs.

- For directly awarded contracts, compensation payments have to meet the Annex of Reg. (EC) No 1370/2007. After the payment of investment subsidies it will be difficult to assess whether regular compensation does not overcompensate the costs. Under current conditions the total amount of state aid will be unknown so that the risk of overcompensation seems very high. In order to eliminate this risk it has to be checked every year whether there is overcompensation according to the Annex of Regulation (EC) Nr. 1370/2007 (cp. Art. 6 (1) Reg.(EC) No. 1370/2007). Such a yearly monitoring would be linked with high controlling costs.

6.3 **Model B - Direct award with direct subsidies to the TOC**

Model B is divided into three sub models. The main difference between those submodels consists of the way in which investment subsidy and public service contracts will be connected. The main characteristic of all submodels is the economically combined treatment of subsidy and PSC payment. In each sub model investment subsidies for rolling stock are directly paid to the TOC (as in model A). The public service contract will be directly awarded to a transport company, which is obliged to use the new rolling stock for either all awarded services or parts of it. Subsidies will always be regarded as a part of the payments for the public service contract.

- Model B1 will be based on an existing PSC in line with Reg. (EEC) No 1191/69. To secure the joint economic treatment the renegotiation of PSC will be necessary, including the addition of certain obligations in the contract.

- In model B2 the PSC can be negotiated afterwards. Investment subsidies are paid before the signing of a new PSC. As a condition for the award of the subsidies there must be an obligation to conclude a new PSC according to
Reg. (EC) No 1370/2007 within a defined time limit including specific obligations.

- A directly awarded PSC meeting the requirements of Reg. (EC) No 1370/2007 and including certain obligations, which is negotiated at the same time as the application for investment subsidies, is the core principle of sub model B3.

The main differences between model A and model B and all sub-models are shown in the following figure.

Fig. 18: Main differences between models with direct awarded PSC
6.3.1 Description of the models

Detailed agreements between PTA, TOC and the funding authority will be designed differently in all sub models. The following conditions have to be agreed upon by TOC, PTA and funding authority in all sub models:

- The PTA has to specify the rail passenger service in question and the standards for rolling stock.

- The PTA offers a contract to the TOC which has to have a duration of at least 10 years to fulfil the conditions established in the railway sector state aid guidelines (2008/C184/07), point 36 b. An even longer duration of up to 15 years may be economically justified.

- The amount of EU grants and the number of subsidised rolling stock will be laid down by the funding authority.

- Requirements for the receipt of subsidies:
  - The PSC will facture in investment subsidies as a part of the total compensation paid out in return for transport obligations
  - The TOC is obliged to buy and use new rolling stock, the use of subsidised rolling stock will be restricted to the railway lines covered by the contract.
  - Yearly control of overcompensation
  - Adequate termination clauses and transfer rules have to be included in the PSC.

- The PSC has to be approved by the funding authority

As an optimum the conclusion of the contract on subsidies should be part of the negotiations for the PSC, so as to avoid the problems of uncertainty over the payment of subsidies, which will arise in model A. Due to the existing lack of time trilateral negotiation will be replaced by obligations in bilateral contracts between PTA and funding authority resp. between PTA and TOC in sub models B1 and B2.

The main contractual and financial relations between PTA, TOC and funding authority can be seen in the following figure. Common basis is the economical unit of investment subsidy and PSC payment, the subsidy has to be regarded as part of the contractual reimbursement.
Contents of contractual regulations in all sub models

Contractual obligations in the public service contract should cover the following items:

- Duration of contract according to EC regulation (minimum of ten years according to the guidelines for state aid, maximum of 15 years according to Reg. (EC) No 1370/2007)

- Quantity of awarded passenger services (e.g. x Mio. train-kilometres on lines a-town to b-village and a-town to c-city)

- Quality of passenger services as requested by the PTA (e.g. assignment of staff, security, level of service, capacity, environmental standards, served stations)

- Number of funded vehicles to be procured by the TOC, configuration (seats and other technical characteristics)

- Subsidies and PSC payment have to consider the complete life cycle of rolling stock by termination clauses (transfer of rolling stock to next operator after end of contract for current value or repayment of subsidy on pro rata basis)
• Transaction of payments within the PSC has to take into account common requirements for procurement of rolling stock (advance payment, payment plan) within the rolling stock industry

**Model B1**

Model B1 should cover all regions with current existing public service contracts. State aid and the existing PSC will be interlinked by adjusting the contract. The application and agreement on state aid payments refer to the existing contract and turn core requirements of the contract obligatory. A renegotiation of the PSC is therefore necessary, mainly on adequate termination clauses and the other requirements mentioned in the general description of model B. Negotiation of investment subsidy and adjusted PSC should be managed in parallel within this model.

Main precondition of this sub model is an existing public service contract in accordance with Reg. (EEC) No 1191/69. A legal alternative would be to impose the public service obligation (if imposition is possible according to Czech law.

![Fig. 20: Model B1: Subsidy with adjustment of existing PSC](image)

**Model B2**

In Model B2 the railway undertaking receives an investment subsidy prior to the signature of a new public service contract in accordance with Reg. (EC) No 1370/2007. The agreement on state aid payments refers to the future public service
The new contract has to be concluded within a defined time limit and should include the necessary obligations, mainly the termination clauses, e.g. the handover of rolling stock to the new operator or refunding of subsidy. Awarding of the contract should fulfill all requirements for directly awarded contracts according to Reg. (EC) No. 1370/2007 including the Annex.

It would currently still be possible (until December 2009) to apply the model on the basis of a PSC according to Reg. (EEC) No 1191/69 and fulfilling the Altmark criteria. Due to the time needed for the conclusion of a PSC, this seems to be a rather theoretically option and cannot be recommended.

Since the state aid agreement establishes a link to the future public service contract, subsidy payments are based on total costs and form a unity in economic terms.

The submission for subsidies can be started quite quickly in model B2. At first it is necessary to achieve a trilateral commitment for the investment subsidy, payable only on signature of the PSC. The procurement of rolling stock can be started earlier based on the commitment. In the frame of the commitment it is necessary to install basic agreements between TOC and PTA about the main conditions of the proposed services. As in the other models the subsidy can be regarded as a start-up financing for the TOC.

**Model B3**
In this model the state aid agreement and the PSC are developed and negotiated at the same time. Obligations necessary for the public service contract are similar to the other sub models. Main precondition of this sub model is an existing public service contract in accordance with Reg. (EC) No 1370/2007. Although this regulation is not obligatory until 2009, it seems useful to consider its content due to the appropriate amount of time for the preparation of the application, the awarding of the contract and the procurement of rolling stock. It can also be recommended to already apply the procedural rules with respect to the awarding procedure set out in art. 7 (2) Reg. (EC) No 1370/2007 before its entry into force in order to increase legal security (cp. chapter 6.1.2).

Fig. 22: Model B3: Subsidy and PSC directly awarded and negotiated together
6.3.2 Requirements of all sub models

Procurement requirements
According to the requirements of the Regulation No. 1370/2007, the direct award of a PSC has to fulfill all conditions laid down in the Annex of the Regulation notwithstanding that negotiations can be led with only one company. As in the case of competitively tendered PSCs directly awarded contracts have to be concluded in a transparent and non-discriminating procedure. The main condition is the prior information to third parties. The awarding PTA has to announce the planned awarding of a public service contract one year in advance in the Official Journal of the European Union regardless if the PSC is subject to a direct award or a tendering procedure. On request of potential competitors the PTA has to disclose its reasons for the planned direct awarding. If the requirements of the Regulation (EC) No. 1370/2007 are not met, the procedure will have a discriminatory effect and the payments will not be exempt from the notification requirement. The consequences might be long lasting lawsuits.

State aid requirements
In case the PSC meets the conditions laid down in Regulation No 1370/2007, the compensations paid are regarded as compatible with the Common Market and therefore not subject to the prior notification requirement.

The consequences of the currently discussed draft for guidelines have already been mentioned within model A. State aid problems at the end of the contract period can be avoided via termination clauses for rolling stock or the repayment of subsidies as described in the general conditions (see above).

6.3.3 Strengths and risks of model B (including sub models)

Legal risks
As has been addressed in chapter 2 it currently cannot be assessed in how far and under which conditions a direct award of a contract is possible. It is still unclear

a) in how far current debates on the legitimacy of direct awards will prove (partially) valid and

b) which conditions have to be met (prior publishing, disclosure of payments, annual monitoring etc.).
The combination of direct awards and direct subsidies to the TOC would render the alignment with state aid regulations quite difficult although the risks are clearly reduced compared to model A. During the time of the contract period the risk of overcompensation always exists.

**Economic risks and opportunities**

Also in this model some uncertainty on the payment of grants exists, and the operator will generally not take the benefit of subsidies into account when risks of non-payment are involved which are too high. This problem can be solved via the suggestions made above on trilateral negotiations and agreements.

Benefits can be realized if the model is combined with additional measures (like guarantees) which reduce the re-use or debt-service risk of operators and therefore contribute to a reduction in overall transport costs.

It is to assume that PSCs will be directly awarded only the incumbent railway operator ČD. Applied on broad scale that approach may sustain the existing monopoly of ČD. This may lead to long term risks for regional budgets due to expectable monopoly prices.

If investment subsidies are (in economic terms) part of the total compensation, the subsidy will not have to notified to the Commission, which saves time leads to comprehensive compensation terms. With directly awarded contracts, compensation payments have to be in line with the annex of Reg. (EC) No. 1370/2007.

**Convenience of implementation**

Model B and all sub models generate lower preparation costs than model C since the PTA can negotiate with only one operator. One main advantage of sub model B3 is that negotiations can be led with the funding authority at the same time, however this advantage can also be realised in model A under the assumption that negotiations take place as described above. The trilateral negotiations therefore are easier to deal with, no different solutions for chronology of awarding procedure and application of grants have to be developed and implemented.

Models B1 and B2 do not have this advantage but their step-by-step design provides the possibility to start application for subsidies independent of the time needed to prepare the public service contract.

During the contract period model B may be more difficult to manage than model C. Higher efforts will arise for both TOC and PTA due to the need for annual monitoring of possible overcompensation, while the general efforts of contractual monitoring arise in the same height as in model C. Whether the contract has been concluded under Reg. (EEC) No 1191/69 or Reg. (EC) No 1370/2007 does not matter. In both
cases the reporting requirements have to be met. The costs of rolling stock transition from one contract period to the next (complicated regulations for the transfer of rolling stock) might arise like in model C.

In case of directly awarded contracts to ČD (or another TOC) it is not necessary to establish separate regional subsidiaries. All conditions described above can be met by a clear and transparent account treatment on the part of the TOC separate for each PSC.

Another advantage of this model is that there is no need for the development and implementation of knowledge for competitive tendering. Keeping in mind that tendering procedures may play a more important role in the future, this would however only be a short-lived advantage.

6.4 Model C - Tendering procedure with direct subsidies to the TOC

6.4.1 Description of the model

Model C is based on model B3. Most items are similar to it; the main difference is the form of awarding of the corresponding public service contract. Taking into consideration the fact that some Czech regions have already scheduled competitive tenders, one of the proposed models should reflect this actual development. Model C therefore is based on a competitive tendering of the public service contract in line with Reg. (EC) No 1370/2007.

Main characteristics can be described as follows:

- The TOC is the direct recipient of subsidy; application has to be dealt with by the TOC.

- The PTA has to specify the rail passenger service in question and the standards for rolling stock. It has as well to calculate the estimated expenses for rolling stock (level of market prices) and to get an upfront commitment from the funding authority.

- The amount of EU grants and the number of subsidised rolling stock will be laid down by the funding authority.

- The PTA is responsible for the process of tendering, the PSC has to fulfil same conditions as in model B:
  - Obligation to procure and use new rolling stock
  - Adequate termination clauses
  - Use of subsidised rolling stock will be restricted to the railway lines covered by the contract.
The PSC will facture in investment subsidies as a part of the total compensation paid out in return for transport obligations.

- Unity of financial compensation with two elements: investment subsidy and regular compensation payments, as compensation for all public service obligations set out in the PSC (according to reg. (EC) No 1370/2007)

The PTA offers a contract which has to last for at least 10 years according to the EC guidelines for state aids in the railway sector (2008/C 184/07), maximum of 15 years according to Reg. (EC) No 1370/2007)

- In the PSC the TOC has to be obliged to reduce the amount of compensation in case of a successful application for grants. The level of reduction has to comply with the amount of the subsidy.

- The PSC has to be approved by the funding authority.

---

**Tendering procedure**

In an open procedure (which is the rule), negotiations are not part of the tender. It should however be assessed whether it is useful to include one negotiation round as part of the tendering process. This would mean that the PTA would determine certain terms of the contract which he would be willing to negotiate. The PTA would subsequently ask bidders to hand in first indicative bids. After the first evaluation
round preferred bidders would have the chance to clarify certain discussion points during a negotiation round. On the basis of the outcome of the negotiations, they would be able to revise their offers. The PTA and preferred bidders could discuss the requirement regarding certain quality standards or the redistribution of risks, if for instance costs would be higher than previously assessed by the PTA.

The Czech legal framework does not exclude or restrict negotiated procedures. One can conclude that a negotiated procedure is always advisable if the PTA is not sure how costly certain quality requirements may be. He then has the chance to revise his expectations, include innovative suggestions through operators and receive an optimised offer in the end.

6.4.2 Requirements of the Model

Procurement requirements
Concerning EC procurement law the model will not cause any problems if all usual requirements for a competitive tendering are fulfilled, i.e. a fair, transparent and non-discriminatory selection and award process.

A special risk will occur at the end of a contract concerning the costs for operation and maintenance of rolling stock. As will be shown below obligations for hand over of rolling stock (or repayment of subsidies) are necessary due to state aid requirements. Such an obligation has also some consequences for the next tendering. It is essential to provide equal information to all bidders about previously experienced costs for maintenance and operation on the basis of adequate contract obligations. Otherwise this knowledge would give the incumbent TOC a comparative advantage which may be so important that all non-incumbent bidders may refrain as happened in the tendering of S-Bahn services in Stuttgart.

State aid requirements
In case the PSC meets the conditions laid down in Regulation No 1370/2007, the compensations paid are regarded as compatible with the Common Market and therefore not subject to the prior notification requirement. Due to the chosen procedure of competitive tendering the PSC normally will be in line with these conditions.

State aid problems at the end of the contract period can be avoided via termination clauses for rolling stock or the repayment of subsidies as described in the general conditions (see above).
6.4.3 **Strengths and risks of the model**

**Legal risks**

It has been pointed out in chapter 2 that state aid problems do not arise at the beginning of a contract period and can be avoided at the point of transition of one contract period to the next in the case of a competitive tendered PSC. We therefore assess this option to be in principle legally compliant under following circumstances:

- The awarding meets the requirements of Reg. (EC) No 1370/2007
- The contract includes termination clauses for assignment of rolling stock either to the PTA or the next operator after the contract has ended. Alternatively a repayment of subsidies on pro-rata basis is stipulated.

**Economic risks and opportunities**

The competitive award of a contract assures that the PTA receives an economically optimized offer (on the assumption that a tendering procedure is set up in a proper way – including a sound distribution of responsibilities and risks, a clear description of objectives by the PTA and the avoidance of discriminatory elements in the contract).

Additional benefits can be realized if model C is combined with additional measures (like guarantees), which reduce the re-use or debt-service risk of operators and therefore contribute to a reduction in overall transport cost.

**Convenience of implementation**

If a tendering procedure like in model C is chosen, the PTA has to cope with relatively high preparation costs before the start of the first contract period (description of desired service level, construction of an evaluation scheme). In addition extra effort is related to the subsidisation of rolling stock and the conditions which then have to be laid down in the tendering documents and the transport contract.

Certain PTAs and operators dispose of initial experiences in tendering public transport services in the Czech Republic. This option seems to be manageable by local authorities. This model is assessed to be the option with the lowest legal risks, due to the fact that it can best avoid of state aid problems.
6.5 Model D - Public Rolling Stock Pool solution and subsidies to the PTA

Models A, B and C are based on direct investment subsidies to a TOC. As mentioned above different risks and problems are related to all three models. The establishment of a public rolling stock pool can circumvent the above mentioned restrictions and problems, especially regarding complex contract termination clauses. It eliminates the uncertainty concerning the payment of grants and the critical effects on the awarding of a PSC. Pool solutions also have the advantage of disentanglement between rolling stock procurement and tendering procedures for PSCs. Additionally on the long run a pool model could help to establish a working market for public rail services in the Czech Republic.

On the short run pool solutions do not appear reasonable for the Czech Republic due to the existing conditions, especially the fragmented organisational structure with its related problems e.g. a lack of knowledge and restricted financial strength of most PTAs. The establishment of a pool may pay off through in the long run. One can expect that a pool solution will help to support an economic and efficient use of public money and trigger competition for public rail services since this important market entry barrier is reduced.

Obviously, the effort to implement a pool is only justified if there is a long term commitment for competition in the public rail service sector. Since no common future awarding strategy has been established in the Czech Republic, it might be reasonable to ensure only the option of a pool model as a minimum preparatory step without any binding commitment. This would comprise a contractual clause within the PSC and investment subsidy agreement which gives the PTA a call option for a pool model.

In the following we describe a scenario of a public rolling stock pool, which should cover the rolling stock demands of several regions. Such a pool can in principle also cover all Czech regions. The option of individual PTA pools was not analysed, since that would be connected with very high learning efforts (and related implementation risks) for each PTA. A single public rolling stock pool responsible for several or all regions would reduce those capacity problems at the level of the regions. It also can save on acquiring specific knowledge on procurement strategies and maintenance monitoring. The example of an interregional public pool builds upon the Swedish experience (see WP1), but is adapted to Czech conditions.
6.5.1 Description of a public rolling stock pool

In this model PTAs will found a common pool subsidiary, which is responsible for the core management tasks (purchase and controlling of maintenance) of rolling stock in the regions. The PTAs or their joint pool company can be the owners of rolling stock and receive subsidies. It is however conceivable that the management of the pool is taken over by a private operator. This operator should be established by a separate tendering. The TOC’s are responsible for operation and maintenance based on contractual obligations.

The following diagram shows how an implementation strategy for a PTA-owned pool for rolling stock could look like. In a first step the transport operator procures new rolling stock himself and receives an investment subsidy payment similar to model A or B. Within the duration of the first contract period the pool would be prepared and erected by the PTAs. At the transition point from the old to the new contract period the old operator transfers rolling stock into the public pool. The old operator will get a compensation payment as in model A or B. At later stages additional rolling stock for other networks will be added.
6.5.2 Requirements of the model

Tasks and duties of the contract partners

The pool manager procures and finances rolling stock and places them at the operators’ disposal under common conditions. Transport operators are committed by the PSC to use the rolling stock offered through the pool. Whether transport operators have to pay a leasing rate or whether the PTAs directly compensate for the costs of the pool is up to the discretion of the PTAs, since in any case they have to cover total costs for transport services. Tax questions have to be examined separately. The pool manager assures the preservation of rolling stock, actual maintenance work can however be delegated to transport operators. Ownership of rolling stock can be either transferred to the joint pool company or to each PTA separately.

Rolling stock of ČD

ČD would have a competitive advantage in tendering procedures if it is allowed to offer offers based on existing rolling stock. In order to prevent discrimination of other bidders, used rolling stock from ČD could be placed in a PTA pool as well. It has to
be verified in how far the current legal restrictions for ČD to hand over its property can be altered.

### 6.5.3 Strength and risks of the model

#### Legal risks

As long as the obligations of the Reg. (EC) No 1370/07 are met the use of the pool vehicles can be based on competitively tendered or directly awarded PSCs. The procurement of rolling stock and the incorporation of investment subsidies can be handled independently of the PSC award procedure. If the pool is managed and owned by the regional public authorities further problems will not occur. Problems may arise if the pool was owned and/or managed by private investors.

A distortion of the market for privately operated vehicle pools will not occur. Public transport authorities have the right to provide equipment for the fulfilment of a public service contract to the operators at reduced subsidised prices.

#### Economic risks and opportunities

A nation wide pool may contribute to reduce public transport costs and help to establish a competitive transport market. Costs for transport services will be reduced for three reasons:

- **An overall reduction of risks:** On the one hand investment subsidies are directly paid to PTAs and the TOCs do not have to provide rolling stock themselves, therefore they will not take into account the costs and risks which are involved in the financing and procurement of rolling stock. The PTAs generally have much lower risks to re-use rolling stock transferred to the pool after the expiration of a PSC; if services are cancelled, rolling stock can be easily transferred to networks in other regions, likewise, if more demand occurs additional rolling stock can be acquired.

- **A lowering of market entry barriers:** Investments into rolling stock are a high market barrier to entry in the regional passenger transport market. Once the PTA makes rolling stock available to the TOCs, more operators will be able to participate in the tender.

- **Economies of scale:** Furthermore a nation wide pool can attain economies of scale for the procurement, financing and management of rolling stock.

On the other hand economic costs and risks are connected with the establishment of a PTA pool as well:

- **Public budget requirements:** Since the investment subsidy does not cover the full costs for new rolling stock the PTAs have to contribute matching funds.
Different approaches are possible. A private partner for example could cover this part by leasing the rolling stock to the PTA pool. The TOC would pay leasing rates for the rolling stock either via the PTA pool or directly to the private partner, depending on the specific legal and tax framework in the Czech Republic. Detailed elaboration of possible financial concepts should be part of further investigation.

- **Capacity building necessary:** High costs in the beginning but the advantage of an inter-regional or nation-wide pool is that know-how does not have to be build up for each region separately.

- **Fleet management necessary:** A fleet replacement strategy should be part of the development of a PTA pool. Knowledge on the current situation and demand in the existing rolling stock fleet of ČD seems necessary. Such know-how still has to be built up.

**Convenience of implementation**

The establishment of a pool generates high preparation costs in the initial phase. However, once a pool is in place, PTAs can reduce preparatory time for transport services, since the procurement of rolling stock can start before an operator has been selected.

Transaction costs can be high, if interfaces between PTAs, operator, pool manager and passengers are not sufficiently regulated. Even with a proper contract in place, disagreements can still arise for instance due to technical problems.

### 6.6 Additional measures

**Guarantees**

Guarantees are a useful tool to reduce the overall costs of financing, independent of the payment of subsidies by the funding authority to the TOCs. Guarantees have already been introduced in the first work package and are meant to lift risks from the operator, which the PTA is better able to handle. With a re-use guarantee for instance the PTA grants the operator the option to take over rolling stock after the termination of the first contract period. With a debt-service guarantee such as a forfeiting option, the public transport authority forwards the share in remuneration, which covers rolling stock costs, directly to the bank. The appropriateness and design of actual guarantee options would have to be investigated in detail and would require additional advice in economic terms as well as with regards to legal requirements and to tax regulations in the Czech Republic. One of the questions would be related to the implications of a debt-service guarantee on the regional budget.
Leasing
In the models A and B it has always been assumed that new rolling stock is procured and owned by the operators. It should however also be checked whether the above models could also be implemented if rolling stock was only leased but not owned by transport operators.

Development of guidelines
Due to the problems of different know-how and the lack of experience with tendering procedures it seems useful to issue more detailed advice to the Czech PTAs. Especially for models B and C a standard procedure or a checklist would help to ensure quick implementation and effective usage of EU funds. In case of a necessary state aid notification a standard procedure should be agreed with the Commission.

6.7 Conclusion and Comparative appraisal
The table below serves to give an overview and comparative evaluation of the main features and risks attributed to models A to D. Four important aspects are considered:

- Risk of non-compliance with European state aid rules, possible need for notification (including also the demand of time)

- Risks related to the PSC awarding procedure (appeals against awarding decisions, predictability of legal decisions)

- The likely duration of preparatory steps in each model (time needed for the notification and/or awarding process, time needed for the procurement of rolling stock and the interaction of different tasks)

- Other problems of implementation such as the stakeholder know-how and political aspects
All models have advantages and disadvantages. Whilst models A, B and C are based on the transfer of investment subsidies between funding authority and operator, model D describes and evaluates a PTA pool, where investment subsidies are directed towards the PTA.

In Model A, B and C the PSC includes termination clauses to avoid legal and economic problems at the end of the contract. Common clauses should include the following aspects:

- rules for the transfer of rolling stock
- vehicle maintenance control of the operator
- obligation for the old operator to provide information on rolling stock (condition, age) to avoid risk of asymmetric information between established operator and competitors
- longer duration of contracts should be chosen so as to reduce transaction costs
Model A has particular disadvantages and risks due to the necessary notification procedure with the European Commission.

Model B has the advantage that negotiations with only one bidder are necessary. Transaction costs are therefore relatively low, especially in sub-model B2 which is based on an existing contract. EC legislation however requires the PTA to design a transport contract and monitor the appropriateness of remuneration payments to the operator.

In model C, preparation of the tendering procedure will probably be time consuming and the tendering outcome may not necessarily lead to the desired outcome by the PTA (not enough bidders, demands of the PTA are too high). It may therefore be useful to include negotiations about certain aspects into the tender documents so as to overcome uncertainties about the costs of the specifications of services. Model C avoids competition rule related legal risks at the European level. Its compliance with the national legal framework would have to be assessed in more detail.

While model D overcomes the above mentioned restrictions, it includes the disadvantage that it is coupled with a partial restructuring of the market insofar as part of the service responsibility (and risks) is transferred to the PTA. The PTA then has to assume the tasks of procuring and managing a rolling stock pool. Due to the high preparation costs involved, the implementation of model D has only been recommended at a later stage (for instance for the beginning of the second contract period, subsidized rolling stock of the old operator would then be transferred to the rolling stock pool). Contractual stipulations in the other models therefore should consider future possibilities to implement a rolling stock pool either nationwide or covering some regions.

A general recommendation in favour of a single most suitable model is not useful. The contractual situation as well as the status quo of knowledge and experience with competitive tenderings differs between the Czech regions. Recommendations regarding the most useful model will therefore depend on the specific situation in a region. The remaining duration of the PSC and the future planning for the award of contracts, the actual experience of the PTA and the availability of own funds should be decisive factors in defining the procurement strategy and the choice of the most appropriate model at the regional level.

For regions with some experience in competitive tendering model C is the most useful solution. It will avoid most problems concerning notification and state aid law. Regions without such an experience should concentrate on the different sub models of model B. If there is enough time because of a longer duration of the current contracts it might be useful to apply model B3. In case of a very strong demand for new rolling stock model B2 will help to provide a swift replacement of rolling stock. In general model B is easier to handle in accordance with Reg. (EC) No 1370/07 due to the clearer requirements concerning state aid and notification. Considering the remaining time until December 2009 and the general demand of time for preparation and awarding of a PSC it can be recommended to negotiate the PSC according to the requirements of the (future) regulation 1370/07 and to wait with its implementation
until December 3\textsuperscript{rd} 2009. Expiring existing contracts can be extended through imposed public service obligations.
**List of abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ČD</td>
<td>České dráhy (Czech state railway)</td>
</tr>
<tr>
<td>DB, DB AG</td>
<td>Deutsche Bahn AG (German state railway)</td>
</tr>
<tr>
<td>DFT</td>
<td>British Department for Transport</td>
</tr>
<tr>
<td>DMU</td>
<td>Diesel multiple unit</td>
</tr>
<tr>
<td>DÚ</td>
<td>Drážní úřad (Czech rail authority)</td>
</tr>
<tr>
<td>EC</td>
<td>European Community</td>
</tr>
<tr>
<td>ECJ</td>
<td>European Court of Justice</td>
</tr>
<tr>
<td>EMU</td>
<td>Electric multiple unit</td>
</tr>
<tr>
<td>ERDF</td>
<td>European Regional Development Fund</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>GVFG</td>
<td>Gemeindeverkehrsfinanzierungsgesetz (German local transport financing act)</td>
</tr>
<tr>
<td>IEP</td>
<td>Inter City Express-Programme</td>
</tr>
<tr>
<td>JASPERS</td>
<td>Joint Assistance to Support Projects in European Regions</td>
</tr>
<tr>
<td>LNVG</td>
<td>Landesnahverkehrsgesellschaft Niedersachsen</td>
</tr>
<tr>
<td>MDČR</td>
<td>Ministerstvo dopravy České republiky (Czech ministry of transport)</td>
</tr>
<tr>
<td>NOB</td>
<td>Nord-Ostsee-Bahn (Veolia Transport)</td>
</tr>
<tr>
<td>NS</td>
<td>Nederlandse Spoorwegen (Dutch state railway)</td>
</tr>
<tr>
<td>Os</td>
<td>osobní vlak (Local trains in Czech Republic)</td>
</tr>
<tr>
<td>PKP</td>
<td>Polskie Koleje Państwowe (Polish state railway)</td>
</tr>
<tr>
<td>PID</td>
<td>Pražská Integrovaná Doprava (Prague public transport agency)</td>
</tr>
<tr>
<td>PSC</td>
<td>Public Service Contract</td>
</tr>
<tr>
<td>PSO</td>
<td>Public Service Obligations</td>
</tr>
<tr>
<td>PTA</td>
<td>Public Transport Authority</td>
</tr>
<tr>
<td>PTE</td>
<td>Public Transport Executive</td>
</tr>
<tr>
<td>RMV</td>
<td>Rhein-Main-Verkehrsverbund</td>
</tr>
<tr>
<td>ROSCO</td>
<td>Rolling stock leasing company (in United Kingdom)</td>
</tr>
<tr>
<td>RS</td>
<td>Rolling Stock</td>
</tr>
<tr>
<td>R</td>
<td>Rychlík (Fast trains in Czech Republic)</td>
</tr>
<tr>
<td>SJ</td>
<td>Statens Järnvägar (Swedish state railway)</td>
</tr>
<tr>
<td>SNCF</td>
<td>Société nationale des chemins de fer français (French state railway)</td>
</tr>
<tr>
<td>Sp</td>
<td>spěšný vlak (Semi-fast trains in Czech Republic)</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Name</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>SŽDC</td>
<td>Správa železniční dopravní cesty (Czech Railway Infrastructure Administration)</td>
</tr>
<tr>
<td>TER</td>
<td>Transport express régional</td>
</tr>
<tr>
<td>TfL</td>
<td>Transport for London</td>
</tr>
<tr>
<td>TOC</td>
<td>Train Operating Company</td>
</tr>
<tr>
<td>TW</td>
<td>Tramwaje Warszawskie</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>VAT</td>
<td>Value Added Tax</td>
</tr>
<tr>
<td>VRS</td>
<td>Verband Region Stuttgart</td>
</tr>
<tr>
<td>VVO</td>
<td>Verkehrsverbund Oberelbe</td>
</tr>
<tr>
<td>WCML</td>
<td>West Coast Main Line</td>
</tr>
<tr>
<td>ZVON</td>
<td>Zweckverband Verkehrsverbund Oberlausitz-Niederschlesien</td>
</tr>
</tbody>
</table>
References

Bahnzentrum Ingenieurbüro Stephan Schröder; Allied Progress Consultants Igor Chovanec (2006): Bahnen und Busse verbinden die Grenzregionen der Nationalparks Böhmische und Sächsische Schweiz; Bielefeld/Prague, November 2006

Česká republika: Zákon o drahách 460/2006 (railway act)


European Commission (2007): Draft for Guidelines on state aid for railway undertakings (German version; Vorentwurf Gemeinschaftliche Leitlinien für staatliche Beihilfen an Eisenbahnunternehmen)

IBM Global Business Services; Christian Kirchner (2007): Liberalisierungsindex Bahn 2007 (Marktoffnung: Eisenbahnmärkte der Mitgliedstaaten der Europäischen Union, der Schweiz und Norwegens im Vergleich; Presentation in Brussels, October 17th 2007


Stephen Perkins (2005): The role of government in European railway investment and funding, Presentation on China railway investment & financing reform Forum, Beijing, China; 20 September 2005

Steer Davies Gleave Ltd. (2007): International Comparisons of Rail Networks and Policy Lessons for Scotland; Study provided for Scottish Executive Social Research
