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CATRIN
Cost Allocation of TRansport INfrastructure cost

D4 – To be a new Member State – What does it mean for Pricing Policy

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EXECUTIVE SUMMARY

CATRIN is a research project to support the European Transport Policy, specifically to assist in the implementation of transport pricing. CATRIN will increase the probability that new progressive pricing principles can be implemented which facilitate a move towards sustainable transport. CATRIN is both intermodal and interdisciplinary, emphasizes the needs of new member states, understands that different organizational forms require different recommendations, that recommendations need to be given in the short- and long-term perspective and that they have to be thoroughly discussed with infrastructure managers.

This deliverable is dedicated to the area of the third work package of CATRIN covering new member states’ policy and implementation problems as well as data availability. The objective of already submitted Deliverable 5 was to review data sources and information available in new member states which can be used for cost allocation studies. This deliverable addresses the CATRIN Task 3.1 “Review of important issues in transport policy”, in which the main objective is to provide an indication on the general assumptions, preconditions and key factors for ensuring a fair and efficient pricing policy at country level.

The insights from the EC transport policy prove that some characteristics as basic preconditions for the implementation of fair pricing reforms in transport can be identified. Those include:

- **The non-discrimination principle** aiming at providing a charging system that does not discriminate between operators and/or Member States.
- **The transparency principle** (cost allocation), implying that the required charges (to the user) should be determined in a transparent way. This has also implied, in presence of natural monopoly, the danger of anticompetitive collusion and/or the concentration of market power in particular operators, the establishment of independent authorities able to guarantee the third party right (new entrants) to a fair charging, e.g. in the case of air and rail sector.
- **Consultation** as a general method of defining and implementing charging involving stakeholders.

The analysis of the determinants to the implementation of transport pricing policies has to consider a fundamental aspect: the subsidiarity principle, leaving full responsibility of policy formation and implementation to the national (local or regional) governments. Considering national level and transport modes, it can be assessed that institutional and financial preconditions are complex and problematic in interurban road sector in the light of interoperability, existence of contracts for motorway construction and operation, transparency and uniformity of procedures related to the users as well as establishment of charges between operators. It should be added that in this deliverable interurban road transport is covered in detail while urban context only considers general preconditions for pricing reform with no verification for specific countries experiences. For example in rail sector, due to the absence of a complete legal, regulatory and institutional framework in several countries being an important barrier to further liberalisation (even in cases where existing EU legislation has been fully or largely implemented) it is not clear whether there is a real market opportunity for the introduction of new, competitive rail services. This is because a number of additional barriers exist, including institutional and behavioural barriers, arising from the efficiency and
effectiveness of key institutions within a country’s railway sector - notably the capacity allocation body, rather than just the legislative framework governing such institutions. Additionally technical barriers should be mentioned which are determined by the interoperability of different railway infrastructure and rolling stock and the availability of sufficient capacity on otherwise attractive passenger rail corridors. Within air sector, the implementation of the current proposal for a Directive on airport charges (EC, 2007) should provide a framework of consistency in charge determination, at least for what refers to transparency and non-discrimination. Considering waterborne transport, different institutional and legal contexts, in addition to political constraints, hamper an effective harmonization of the charging policies.

Therefore drawing on past European research projects determinants and related measures regarding pricing reforms can be identified. The relevant determinants, common to the overall countries, distinguish structural factors (the basic legislation and the institutional arrangements), technological factors (the infrastructure of pricing) and behavioural and political aspects (the acceptability of the pricing reforms). In the fourth chapter of this deliverables specific measures for transport modes are described.

Chapters 5 to 8 examine the process of reforming charges in specific transport modes (road, rail, air and waterborne) including a review of current policy in NMS and an assessment of mentioned determinants pressure.

Within the road sector legal and institutional framework for changing pricing policy in NMS considerably differs between countries. Again looking at specific examples - in the Czech Republic new system of electronic fee collection for HGV was implemented while in Slovenia microwave technology has a long tradition in toll motorway system. At the same time in other countries the reforms have only started or are at early stage. Institutional changes of road administration during transformation period have included decentralisation processes. It can be summarised that in smaller states (Slovenia, Estonia, Lithuania, Latvia) the role of state roads remains important with its share in total network ranging from 26% to as much as 97%. In bigger states (especially Poland and Hungary) the state has reduced its administration to manage roads below 5% of total network. It is not expected that any new technological solutions (specific and different in comparison to Western European ones) e.g. for electronic fee collections will be implemented in NMS. The experiences of the Czech Republic and Slovenia or Slovak and Hungarian plans prove that in all the cases Western European solutions are (or are going to be) implemented and that the special emphasis is put on ensuring technical interoperability between segments of the network and vehicles. Public consultation is usually mentioned as a necessary determinant to ensure highest acceptability level of pricing reform, especially in road transport. In some NMS (e.g. Hungary) in fact consultations contributed to high level of acceptance, but the example of Poland proves that it is not the most important and sufficient factor (still little acceptance of reform).

Most of the new member states are in the process of implementing the directives of the railway second package. For the two new member states which have joined UE in 2007, Bulgaria has recently transposed the directives of the second package into national legislation while for Romania some further works are required. Concerning Interoperability Directives 96/48 (high-speed) and 2001/16 (conventional rail systems) the authorisation of (sub)systems is needed. The Article 14 of Directive 2001/16/EC specifies that each member state shall authorise the putting into service of those structural subsystems constituting the trans-European conventional rail system which are located or operated in its territory. Member
states shall take all appropriate steps to ensure that these subsystems may be put into service only if they are designed, constructed and installed in such a way as to meet the essential requirements concerning them when integrated into the trans-European conventional rail system. In six cases out of 10 possible (Czech Republic, Hungary, Poland, Slovakia, Slovenia and Bulgaria) has the body responsible for approval of Notified Bodies been specified. Three of these countries has allocated the responsibility to a Ministry of Transport (Hungary, Slovakia and Slovenia) while the other three countries (Czech Republic, Poland and Bulgaria) used different models (usually with several organisations being involved such as national accreditation agencies and transport ministries). Information for Estonia, Latvia, Lithuania and Romania is not available yet because the legal basis is not completed. Regarding future plans for changes in railway charging only Bulgaria stated that it is going to improve the existing charging regime through differentiation of charges according to different traffic volume on different tracks and taking into consideration the hours of the train movements. But there are no specific actions in this field.

For air transport, institutional separation of Civil Aviation Authority has been established in all 10 NMS. Main differences exist in setup of charges. Different bodies are responsible in different countries. Often they are in some way subjected to governmental control. In rare cases where free-market approach is allowed there is official cap above which charges cannot be charged. This is partially due to government tendency to maintain control and partially because of lack of competition and fear of super-high monopolistic charges. Technological measures allowing for pricing are subjected to capacity constraint. Often new East European members operate their air sector based on one central airport based in capital. With exception of Poland and to some extent Romania regional airports are few and have very limited operational capacity. Due to the recent growth in air travel even major airports in those countries face serious capacity problems and extension of infrastructure is necessary precondition to any charging reform. At present the competition for free slots at airports might result in extensive pricing if unprepared reform is introduced. Level of acceptance for pricing reform is mixed between users. Air carrier operators (especially low-cost) support charges liberalization, while among passengers level of acceptance is not that high mainly due to the fears for significant increases in ticket prices. Among NMS partial acceptance is prevailing posture towards pricing reform with Latvia leading with high acceptance levels and Hungary representing lack of acceptance.

In waterborne transport legal and institutional framework differs significantly between NMS. There are different managerial solutions used in various states with private enterprises, state owned enterprises and many mixed solutions. Often governments although officially separated from port administrations maintain strong control through land ownership and long-term leases to selected managers. As for the service charges various degree of governmental influence is observed. Some charges like piloting or lighthouse charge remains under direct governmental control while other charges (usually for in-port services) are allowed to be set by competing companies. The problem is that often there are no competing companies in many ports (especially smaller ones) and therefore government is reluctant to withdraw completely from the charging. Temporary solution is establishment in form of official caps or even exact charge levels set by ministries. On the technical side new members have a good potential of often modernized and, in number of countries, well geographically located ports. Emerging problem might be a need of extension of facilities (usually container base) and improvement of land access to the ports. But almost all ports of NMS have experienced high growth of cargo turnover in latest years accompanied by major infrastructure investments (or have such schemes for significant expansion of the technical capabilities under development).
For the aim of the projects and this deliverable the questionnaire survey has been prepared in order to analyse the current situation and plans for the future in the range of cost allocation rules and practice in the EU new member states. The survey aimed at the evaluation of the transport infrastructure cost allocation rules in all transport modes, as well as the situation and plans for transport infrastructure user charges reform. This is an experts’ assessment based on wide experiences of the respondents in the area of transports costs evaluation and cost allocation methods. The questionnaires were sent to all Central and Eastern European new member states (eight post-socialist countries which joined the EU in May 2004 and two countries accepted to the EU in 2007). It is included at the end of this deliverable while detailed description and analysis of the results are presented in chapter 9.

Additionally, the report on the NMS transport infrastructure administrations and management was elaborated. It presents the current infrastructure administrations and institutional solutions in all transport modes. Synthetic conclusions of this paper are included in the main deliverable, but the whole report is attached as an annex to D4.
1. **INTRODUCTION**

CATRIN is a research project to support the European Transport Policy, specifically to assist in the implementation of transport pricing. CATRIN will increase the probability that new progressive pricing principles can be implemented which facilitate a move towards sustainable transport. CATRIN is both intermodal and interdisciplinary, emphasize the need of new member states, understands that different organizational forms require different recommendations, that recommendations need to be given in short and long-term perspective and that they have to be thoroughly discussed with infrastructure managers.

CATRIN will clarify the current position on allocation of infrastructure cost in all modes of transport. Pricing principles will be dealt with under the knowledge that they varies with the organizational structure of a sector. CATRIN will establish the micro-aspects of cost recover above marginal costs, including the results of applying a club approach and the implication of who bears the costs for cost recovery under alternative allocation rules, using game theoretic analytical tools.

This deliverable addresses the CATRIN WP3 Policy and Pricing in New Member States (NMS), Task 3.1 “Review of important issues in transport policy”, in which the main objective is to provide an indication on the general assumptions, preconditions and key factors for ensuring a fair and efficient pricing policy at country level.

The paper is structured as follows:

The chapter 1 describes the objectives underlying the pricing policy as emerging from the EC Directives and policy documents. The main reason for that approach is that pricing policies in general can be tailored to address several objectives (e.g. economic efficiency; profit maximisation; cost coverage; environmental sustainability; equity, etc) and that the instruments and the prerequisites for their implementation are conditioned by the type of objectives they serve.

Hence, the analysis of the EC documents and Directive has been designed in order to identify a) the main objectives and b) the corresponding principles.

The chapter 2 is devoted to the analysis of what is happening when the general objectives as outlined at EC level are implemented at a lower level (national/regional/local), in the context of the subsidiarity principle.

Such level of analysis aims at introducing the key determinants for a fair and efficient implementation, which are detailed by transport mode in the chapter 3. A general framework for preconditions for pricing reform is presented in chapter 4. Drawing on past European research projects, different types of determinants and the related measures are identified. This part of the paper provides a short list of measures, whose implementation can be considered a necessary condition (even if not sufficient, in some cases) for ensuring the attainment of the objectives of pricing reforms in transport sector. They could also be assumed as a reference for the analysis at NMS level. Clearly, warnings about the non exhaustive nature of the exercise have been considered, stressing the fact that only the most important (common)
determinants have been identified, leaving the door open to additional country-specific measures.

Chapters 5 to 8 examine the process of reforming charges in specific transport modes (road, rail, air and waterborne) including a review of current policy in NMS and an assessment of mentioned determinants pressure. The composition of the chapters is similar, starting from current policy and charges in NMS, then different determinants are analysed and finally concluded remarks are included.

Chapter 9 provides information about a questionnaire survey to analyse the current situation and plans for the future in the range of cost allocation rules and practice in the EU new member states. The survey concerns the evaluation of the transport infrastructure cost allocation rules in all transport modes, as well as the situation and plans for transport infrastructure user charges reform.

Finally conclusions summarise the discussion on legal and institutional factors as well as technology and acceptability as determinants of pricing reforms in specific transport modes in new member states.

2. THE INSIGHTS FROM THE EC TRANSPORT POLICY

2.1 The EC objectives underlying pricing reforms

Over the past 15 years, pricing policies in the transport sector have been endorsed by the activity of the EC. In general, pricing policies have been considered as a useful tool addressing a number of different problems arising from transport activities, e.g.:

- congestion, amounting to about 1-2% of the overall European GDP (CE, 1995 and CE, 2006b);
- environmental pollution and accidents, estimated to be about 2.4% of the EU’s GDP (CE, 1995)

The rationale of pricing policies was that the growing use of economic instruments, e.g. taxes, charges, fees, etc, would provide the appropriate incentives to the transport users’ for changing their behaviour in the direction of more sustainability and efficiency.

The background of pricing policies traced back to 1995, when the EC issued the Green Paper "Towards fair and efficient pricing in transport" (CE, 1995). The Green Paper paved the way toward the internalization of external costs in transport, whereas previous discussion of EC pricing policy had emphasised maintenance and operating costs as the key elements to be taken into account in charging practices. Hence, the Green Paper recognised the importance of pricing to reflect external costs and scarcities. The objective underlying the reforms advocated by the Green Paper was that “Transport policies have in the past focused largely on direct regulation. Whilst rules have brought significant improvements in some areas, they have not been able to unlock the full potential of response options that can be triggered through price signals. Price based policies give citizens and businesses incentives to find solutions to problems. The Union’s objective of ensuring sustainable transport requires that prices reflect underlying scarcities which would otherwise not be sufficiently taken into account. Decisions
made by individuals with respect to their choice of mode, their location and investments are to a large extent based on prices. So prices have to be right in order to get transport right.¹ "

This policy, i.e. pricing as the key instrument for ensuring efficiency in the use of transport means and infrastructure was taken further in the White paper on “Fair payment for infrastructure use”, published in 1998 (CE 1998). In this White Paper the following principles underlying pricing reforms in transport were emphasized as follows:

- Charges should be related to marginal social costs, i.e. those variable costs incurred by the additional extra-vehicle using the infrastructure, including external costs such as congestion, pollution and accidents. Such a policy should also remove unfair competitive distortions between modes, to the extent that some transport modes, e.g. road, generate significant external costs compared to other modes, e.g. rail, despite the fact that the existing charges (without internalization) do not take account of that.
- Differing transport charging structures (i.e. taxation and infrastructure charges) across Member States fail to encourage the use of the most energy efficient or environmentally friendly forms of transport. To redress these imbalances the White Paper develops policy proposals for a) the harmonization of fuel taxation for commercial users, particularly in road transport; b) the alignment of the principles for charging for infrastructure use, i.e. the marginal social cost

Summing up, it can be said that the core features of the White and the Green paper focused, on the one hand, on the need to relate charges more closely to the underlying marginal social costs associated with infrastructure use, extending these costs to include external costs, and, on the other, on the need to ensure transparency, and to facilitate fair competition between modes, within modes, and across user types. Furthermore, the contribution of transport services to the enhancement of industrial efficiency and European competitiveness was recognised as well².

The further review of Transport Policy outlined in the EC White Paper “Transport Policy for 2010: time to decide” (CE, 2001) confirmed the commitments to more efficient pricing of transport in order to internalise externalities and proposed a framework directive on pricing which should have set out the objectives to be followed in all modes of transport. Furthermore, an important link between pricing and financing was established, permitting funds raised from some sectors of the industry to be used for projects in other sectors where the result is to reduce social costs. According to that, for instance, charges raised for covering environmental costs of road transport may be used for new rail infrastructure, as in the explicit linking of new HGV charges in Switzerland to the funding of the new rail tunnels under the Alps. As stated in the introduction of the White Paper “One of the main challenges is to define common principles for fair charging for the different modes of transport. This new framework for charging should both promote the use of less polluting modes and less congested networks and prepare the way for new types of infrastructure financing”³.

The recent mid-term review of the Common Transport Policy outlined in the White Paper “Keep Europe moving” EC (2006) has confirmed the use of pricing as a key driver for

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¹ CE (1995), page i
² An overview of the key characteristics of the EC pricing reforms can be found in Bryan Matthews and Chris Nash (2002)
³ CE (2001), page 2
capacity allocation, associated to the use of other market-based instruments as transit rights in the environmental sensitive areas and in urban areas.

Another objective underlying the pricing reform, already mentioned in the White Paper “Transport Policy for 2010: time to decide”, i.e. the linkage between pricing and infrastructure financing, has been further strengthened in the Mid term Assessment. “The purpose of these charging schemes is to finance the infrastructure; in addition, where an increase in infrastructure capacity is not possible, charging can help to optimise traffic” (EC, 2006)\(^4\).

The new term “smart charging” has been used to encompass the main features of the pricing policies: “Fees may be modulated to take environmental impact or congestion risks into account, in particular in environmentally sensitive and urban areas. The charges should ensure fair and non-discriminatory prices for users, revenue for future infrastructure investment, ways to fight congestion, discounts to reward environmentally more efficient vehicles and driving. Finally, smart charging should take into account the overall burden on citizens and companies; for this purpose, the analysis of charging needs to integrate transport related tax policies which do not stimulate sustainable mobility” (EC, 2006)\(^5\).

On top of that, in June 2008 the EC intends to propose, on the basis of a “broad process of reflection and consultation” a comprehensible model for the assessment of all external costs, which is part of a more comprehensive Green transport package, to serve as the basis for future calculations of infrastructure charges. Such a methodology will be built on the basis of the road charging directive.

Drawing conclusions, the following table summaries the most important objectives underlying the EC pricing policy in the transport sector as emerged over the past 15 years.

<table>
<thead>
<tr>
<th>Policy documents</th>
<th>Objectives</th>
<th>Efficiency</th>
<th>Harmonization</th>
<th>Cost-relatedness (Polluter-pay principle)</th>
<th>Funding</th>
<th>Revenue neutrality</th>
</tr>
</thead>
</table>

It can be observed that over the past years the objectives underlying pricing reforms in transport sector have become increasingly more complex. The objectives of efficiency,  

\(^4\) CE (2006), page 26  
\(^5\) CE (2006), page 26
harmonization and cost-relatedness, that were present at the onset of pricing reforms, have been accompanied recently by the need to finance infrastructure funding and to avoid the increase of the overall burden on citizens and companies, i.e. to comply with the objective of revenue neutrality.

The implications of the above objectives in terms of the preconditions for the implementation of pricing reforms can be better gauged considering the specific directives whereby the pricing reforms have been articulated by transport modes.

### 2.2 Analysis by transport modes

The White Paper (EC, 1998) proposed a three-phased approach to the implementation of the EC pricing policy.

1. The first phase, from 1998 to 2000, would have aimed to the introduction of charging systems for railway infrastructure and airports. Air and rail were to be the particular focus of this first phase, with charges incorporating external costs were to be allowed “but total charging levels were to be capped by average infrastructure costs”\(^6\).

2. The second phase, from 2001 to 2004, would have aimed at reaching further harmonisation. The White Paper proposed in fact that this phase would focus particularly on rail and heavy goods vehicles, in which it was proposed to institute a kilometre based charging system differentiated on the basis of vehicle and geographical characteristics, and on ports, where it was proposed to introduce a charging framework.

3. The third and final phase, from 2004 onwards, should revisit the overall charging framework, with a view to updating it in light of experience.

When coming to practice implementation, important deviations from the suggested path have incurred; in particular, the failure in presenting a framework directive on infrastructure charging, which has harmed a consistent pricing reform process across transport modes.

However, despite the different speed and the different degree of advancements of pricing reforms between the transport modes, significant steps forward have been taken so far.

#### 2.2.1 Road transport

The "Eurovignette” directive (1996) aimed to further develop the functioning of the internal market through the approximation of the conditions of competition in the transport sector by reducing the differences in the levels and in the systems of annual vehicle taxes applicable within Member States. The Eurovignette was in fact intended to set a limit for the maximum infrastructure access charges payable as a general supplementary licence for heavy goods vehicles above 12 tonnes, on the basis of the average infrastructure costs, with non-discrimination between goods vehicle operators of different nationalities.

The Directive laid down the following principles:

A Minimum rates for vehicle charges, leaving the structure, the procedure of levying and collecting charges subjected to national regulations

A Maximum rate of vehicle charges, in accordance with the number and the configuration of axles and with the maximum permissible gross laden weight

A non discriminatory application of the Directive, i.e. tolls and user charges should not be “discriminatory nor entail excessive formalities or create obstacles at internal borders; therefore, adequate measures should be taken to permit the payment of tolls and user charges at any time and with different means of payment”. The charges can not be discriminatory as to nationality, origin or destination of vehicle.

The Eurovignette Directive was amended through the Directive 2006/38/EC (EC, 2006c), providing a new set of principles for road pricing (now extended to freight transport vehicles above 3.5 tonnes). The following preambles of the Directive summarises the principles:

- A fairer system of charging for the use of road infrastructure, based on the "user pays" principle and the ability to apply the "polluter pays" principle, for instance through the variation of tolls to take account of the environmental performance of vehicles, is crucial in order to encourage sustainable transport in the Community. The objective of making optimum use of the existing road network and achieving a significant reduction in its negative impact should be achieved in such a way as to avoid double taxation and without imposing additional burdens on operators, in the interests of sound economic growth and the proper functioning of the internal market, including outlying regions.

- This Directive does not affect the freedom of Member States which introduce a system of tolls and/or user charges for infrastructure to provide, without prejudice to Articles 87 and 88 of the Treaty, appropriate compensation for these charges

- Particular attention should be devoted to mountain regions such as the Alps or the Pyrenees. The launch of major new infrastructure projects has often failed because the substantial financial resources they would require were not available. In such regions, users may therefore be required to pay a mark-up to finance essential projects of very high European value, including those involving another mode of transport in the same corridor. This amount should be linked to the financial needs of the project. It should also be linked to the basic level of the tolls in order to avoid artificially high charges in any one corridor, which could lead to traffic being diverted to other corridors, thereby causing local congestion problems and inefficient use of networks.

In practice, the new Directive on charging policy benefits of a flexible structure, in which charges and tolls, given the definition of a maximum charge level to reflect variations in pollution and congestion costs, may be levied on all roads, at the initiative of each Member State. A surcharge in sensitive transport areas is allowed, also in relationships to the earmarking of revenues for financing infrastructure projects in those areas.


This Directive provides a new regulatory framework for the development of a European Electronic Fee Collection service. The basic principles are the following:
• one contract, one on board unit per vehicle
• available on the whole tolled network
• used for whatever toll or fee or tax
• same quality of service in any country, (non discrimination)

2.2.2 Rail transport

Pricing reform in the rail sector is part of more comprehensive packages of reforms whereby the EC is trying to revitalize the railway sector.

A step by step approach has been undertaken so far, including:

• the first railway package (infrastructure package), adopted in 2001, setting the framework for rail liberalisation was the first step: it provides for the opening up of the market for international freight transport by 15 March 2008;
• the second railway package, adopted in the year 2004, advancing the market opening for international transport from 2008 to 1 January 2006, and opening the national rail freight market as of 1 January 2007. It also includes a Directive on rail safety, requiring Member States to set up a safety authority, as well as a Regulation for the creation of the European Rail Agency;
• the third railways package, recently proposed by the Commission, aiming to open the market for international passenger transport by rail - including cabotage – as of 2010. The package also contains proposals to harmonise licenses for train crews and ensure quality rights of rail users (for passenger and freight services).

Before that, the Directive 91/440 (CEC, 1991) sought to separate accounting for railway infrastructure and operations in order to make the basis for railway infrastructure charging transparent, whilst opening access for specific types of international services.

In the context of the pricing reform, it is important to mention the Directive on rail infrastructure charging 2001/14 (EC, 2001a), which required marginal social cost to be used as the basis of charging, whilst permitting supplementary charges where necessary for cost-recovery purposes.

The Directive outlined the framework conditions for the allocation and charging of capacity, specifying that the infrastructure manager should develop and publish a network statement with information about the technical nature and limitations of the network, access conditions and rules on capacity allocation as well as the tariff structure.

The following principles have been established:

• Non discrimination: “To ensure transparency and non-discriminatory access to rail infrastructure for all railway undertakings all the necessary information required to use access rights are to be published in a network statement”.
• Transparency: “To enable the establishment of appropriate and fair levels of infrastructure charges, infrastructure managers need to record and establish the valuation of their assets and develop a clear understanding of cost factors in the operation of the infrastructure…”.
• **Fair competition**: An applicant shall have a right to appeal to the regulatory body if it believes that it has been unfairly treated, discriminated against or is in any other way aggrieved, about their work and decision-making principles and practice for the purpose of coordinating their decision-making”.

### 2.2.3 Air transport

Pricing reform in the air transport sector had a problematic start, reaching a first equilibrium in the recent proposal for a Directive on Airport charges (EC 2007). The first initiative of the Commission was a proposal for a Council Regulation on consultation between airports and airport users and on airport charging principles (COM 90/100 final of 22 May 1990). It meant to introduce an obligatory consultation procedure and exchange of information between airports and air carriers, and to lay down as the main principle to which charges should conform, the criterion of cost-relatedness.

The second initiative was the Commission proposal for a Council Directive on airport charges (COM 97/154 final of 23 April 1997), whose aim was to establish a common framework to ensure fair and equitable treatment of airport users, and also to allow airports to adapt the use of the charging system to be compatible with environmental constraints. The proposal of introducing a double-till separating out the airport commercial (non aeronautic) from aeronautic revenues was introduced.

The directive on airport charges tried to establish principles for airport access charging based on the underlying costs of airport operations and the need to ensure fair competition between airports.

However, both attempts failed. A relevant aspect for a number of Member States was that they did not want to give up their practice of cross-subsidisation.

The recent proposal for a Directive on Airport charge, instead of the definition of the structure of the airport charge, i.e. dual-till against single-till, is focussed on the definition of the basic criteria underlying charging, without indicating the level of charges.

The principles are the following:

- **The non-discrimination** principle aims at setting a charging system that does not discriminate between carriers (e.g. no differentiation between landing charges of domestic and international flights) and passengers. Only the quality of the service provided should justify any charge differentiation

- **The transparency principle** should be ensured by the required provision to the users (airlines) of the main items influencing the charge level, e.g. costs information, calculation methods of charges and future plan of investments

- **Consultation**, as the method whereby stakeholders, e.g. airport management and airport users representatives, justify and verify the appropriateness of the charging system (at least once a year)

Another important Directive inspired by the principles of efficiency and harmonization is the Commission Regulation (EC) No 1794/2006 of 6 December 2006, laying down a common charging scheme for air navigation management services ATM.
2.2.4 Waterborne transport

The green paper on seaports and maritime infrastructure (CEC, 1997a) has sought a similar system of charging to that for airports, again based upon underlying cost structures and a desire to ensure fair competition between ports – particularly those in adjacent countries.

The Commission made in 2001 a “Proposal for a Directive on Market Access to Port Services” (COM (2001) 35) envisaging the necessary legislative framework. This proposal aimed to increase the efficiency and lower the costs of certain port services: pilotage, towing, mooring, services to passengers and cargo handling. The proposal has led to an extensive debate, both within the inter-institutional legislative process, but also with and between stakeholders. However, on 20 November 2003, after almost three years of inter-institutional legislative process, at the end of the Conciliation procedure, the European Parliament in Plenary Session rejected by 229 votes, 209 in favour and 16 abstentions the compromise text.

The subsequent EC proposal (EC, 2004b) for a Directive of the European Parliament and of the Council on market access to port services has been withdrawn after the European Parliament rejected for the second time in two years the Directive in January 2006.

The main issue of contention is the possibility of ship owners to use their own crews to load and unload ships. Several political groups, in particular Socialists, Greens and MEPs from the European United Left, opposed this measure in order to avoid losses of occupation among the dock workers. They feared in fact that it would open the door to cheap, non-unionised labour from the third world and, into the bargain, would lead to major job losses among skilled dock workers.

The situation is at a standstill, showing the importance of acceptability among the basic preconditions for a fair implementation of pricing policies.

2.3 First conclusions

At EU level the implementation of pricing policies in the transport sector has been guided by the pursuing of the following objectives: a) efficiency, b) harmonization, c) cost-relatedness, d) infrastructure funding and revenue neutrality. These objectives, in particular a) efficiency and b) harmonization, are common to all transport modes, while the d) infrastructure funding and d) revenue neutrality are additional objectives present in particular in the road transport sector during the recent years, i.e. from the White Paper 2001 up to now. Several Directives and Regulations have been issued in order to articulate the fulfilment of the above objectives by transport modes.

In such a context, it can be said that a common characteristic to the implementation of pricing reforms in the different transport modes is the presence of the following three principles:

1. **The non-discrimination principle** aiming at providing a charging system that does not discriminate between operators and/or Member States.

2. **The transparency principle** (cost allocation), implying that the required charges (to the user) should be determined in a transparent way. This has also implied, in presence of natural monopoly, the danger of anticompetitive collusion and/or the concentration of market power in particular operators, the establishment of independent authorities able to guarantee the third party right (new entrants) to a fair charging, e.g. in the case of air and rail sector.
3. **Consultation** as a general method of defining and implementing charging involving stakeholders

These characteristics can be considered as the basic preconditions for the implementation of fair pricing reforms in transport.

### 3. THE IMPLEMENTATION OF PRICING POLICIES AT NATIONAL LEVEL

#### 3.1 The subsidiarity principle

The analysis of the determinants to the implementation of transport pricing policies has to consider a fundamental aspect: the subsidiarity principle, leaving full responsibility of policy formation and implementation to the national (local or regional) governments.

The principle of subsidiarity sets out in the Article 5 of the Treaty establishing the European Community, according to which policy action is often better pursued at the national or local, rather than at the European level, has been affirmed both in the Green Paper on fair and efficient pricing and in the preambles of the Directives on charging, e.g. the proposal of a Directive on airport charge COM(2006) 820 final and the Directive 2001/14 on rail charges.

This implies that the national/local governments, designing policies and institutional arrangements for the implementation of the EU frameworks for pricing reforms, is deemed to play a key role in the determination of the preconditions for an effective application of pricing reforms.

The following sections provide an overview of the practical implementation of pricing reforms at national/local level by transport mode, in particular focusing on road and rail, the two transport modes with major evidences.

#### 3.1.1 Road transport

The implementation of pricing reforms in the road transport must distinguish the urban and the interurban context.

**Interurban context**

On 1 January 2004, Austria introduced the ‘LKW-Maut’, a tolling system for >3,5t vehicles, based on DSRC technology, in which charges have been differentiated by number of axles. The system covers the entire motorway network and some other roads. A similar situation can be found in Germany which introduced the ‘LKW-Maut’ on 1 January 2005, only for motorways, for vehicles >12 t, based on GPS-GPRS technology; German fees are based on emission class and number of axles. In Switzerland, the distance-based charging scheme is applied to all vehicles over 3.5 tonnes along the overall road network (not only motorways) using OBUs connected to a tachograph. The distance travelled is verified through a GPS and a movement sensor.
It should be stressed that the German, Austrian and Swiss cases represent recent examples of introduction of distance charging schemes, which were considered as promising steps towards major differentiation to be applied to all vehicles regardless of nationality.

Other countries as Belgium, Denmark, Luxembourg, The Netherlands, Sweden operate a Eurovignette system (user charge) differentiated by number of axles and emission class. In the Asecap (European Association of tolled motorways, bridges and tunnels.) countries as France, Spain, Greece, Italy and Portugal parts of motorway network is tolled for all vehicles, based on distance travelled and the number of axles.

The institutional and financial preconditions for the pricing reform implementation have proved to be complex and problematic, in the light of the following aspects:

- interoperability between different motorway networks in the same or in different countries is considered to be an important technical requirement.
- the existence of contracts for motorway construction and operation,
- transparency and uniformity of procedures related to the users,
- charges determination between operators, i.e. investment responsibilities, risk bearing, and infrastructure responsibilities\(^7\).

**Urban context**

The implementation of urban pricing policies is developing along the following types of charging schemes\(^8\):

- Access charges (access charges and cordon charges), regulating the access to urban areas or particular zones - usually city inner areas; and Area charges, in which people not subjected to exemptions are charged for driving inside a specific area, including residents (even if subjected to substantial discounts as in London);
- Parking charges, i.e. charging for the use of urban public spaces, widely adopted in Europe (in practice all the major urban areas use forms of parking charges schemes);
- Charges for the use of public transport in the form of buses and trams, as well as off-road systems in the form of metros and sub-urban trains;
- Premiums for car insurance, which in more recent schemes relate directly to infrastructure usage.

At EU level, urban road pricing is currently lacking a specific legislation. In many EU member states urban road pricing is not yet legal and therefore implementation cannot be achieved. Furthermore, in some EU countries road user charges are considered as a tax, and given that only parliaments or national governments can raise taxes, the overall process risks to become complex and subjected to several policy constraints.

Another potential problem is institutional, when pricing concerns large urban areas. In such a case, if the conurbation comprises a series of different local authorities, which may benefit of autonomous legislative power and may have different policy approaches, the design of the pricing reform may become difficult and ineffective. The establishment of a single planning and transport authority would be a solution.

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\(^7\) A detailed analysis of institutional and technical preconditions can be found in the EU research project DESIRE (2003)

\(^8\) An overview of current policies can be found in the EU research project DIFFERENT (2006)
3.1.2 Rail transport

There is a diversity of approaches in terms of charging, institutional arrangements and competitive structures in the European rail industry. The graph below summarises the differentiated charging levels for rail infrastructure in the EU (ECMT, 2005). Charging regimes can be distinguished by the following characteristics and each is discussed in more detail below:

- pricing principles adopted (marginal cost pricing, marginal cost pricing with mark-ups, full cost recovery and full cost recovery less state subsidy);
- type of mark-up (if any) (either two-part tariffs or mark-ups on the variable component);
- type of variable charging (e.g. by train-km or gross t-km);
- charges for different elements of cost (e.g. maintenance, renewal and environmental).

![Diagram of Average Access Charges (€/Train-Km)]

Note: Red arrow=NMS

In general, the implementation of pricing reforms in the sector has shown that it is much easier to implement where the infrastructure manager is a public body, funded largely from general taxation, as in Sweden.

Britain and Germany feared that such a solution would have led to X-inefficiency and excessive investment at the time when the reform was discussed and designed. Therefore, in both countries, the infrastructure manager was to be a commercial body funded largely by payments from train operators.

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9 The situation in the rail sector is outlined in the EU project MC-ICAM (2002)
Other problems concern liberalization and the opening-up of the market to new entrants. Only few countries, e.g. the Netherlands, United Kingdom, Germany, Sweden, and Denmark have been proactive in encouraging market entry through extensive concession and open tender procedures in respect of passenger service provision.

Portugal and Italy have provided limited encouragement and in France, Finland, Belgium and Luxembourg, relatively little encouragement for passenger services market entry has been provided. Market entry in Ireland and Greece, given the relatively small size of these markets, will remain limited in the foreseeable future.

A general conclusion is that, while the absence of a complete legal, regulatory and institutional framework in several countries represent an important barrier to further liberalisation, even where existing EU legislation has been fully or largely implemented it is not clear whether there is a real market opportunity for the introduction of new, competitive rail services. This is because there are a number of additional barriers, including:

- Institutional and behavioural barriers, arising from the efficiency and effectiveness of key institutions within a country’s railway sector, notably the capacity allocation body, rather than just the legislative framework governing such institutions.

- Technical barriers, determined by the interoperability of different railway infrastructure and rolling stock and the availability of sufficient capacity on otherwise attractive passenger rail corridors.

### 3.1.3 Air transport

Currently, there are different airport charges structures, depending on the service provided, determined under the general ICAO recommendations. The following criteria can be identified:

- Weight of the vehicle, which can be related either to the maximum take-off weight (in the majority of cases) or to the maximum take off mass. In practice, all airports examined in the review use the weight of the vehicle as differentiation criteria.
- Noise of vehicle, in the majority of big airports and in airports nearby urban areas.
- Time of landing, according to which landing and noise emissions are surcharged during night in several airports.
- Emission charges, only applied in London Heathrow, Stockholm Arlanda, Gatwick and Zurich.
- Several discounts are applied to domestic flights and training aircraft, e.g. Larnaca, Copenhagen, Vilnius.
- Peak/off peak traffic conditions are considered only in few cases, i.e. Vienna, Helsinki/Vantaa and in UK airports London Heathrow, Gatwick and Manchester Intl.

The implementation of the current proposal for a Directive on airport charges (EC, 2007) should provide a framework of consistency in charge determination, at least for what refers to transparency and non-discrimination.

As far as the charges for ATM (air traffic management) “en route” are concerned, the Commission regulation 1794/2006 has provided steps forward to harmonization of terminal charges and transparency.
3.1.4 Waterborne transport

The charging practice at ports differs by country and also by port within certain countries. Port access charges levied on ships in Rotterdam, for example, which is Europe’s largest seaport, are as follows:

- Harbour dues for seagoing vessel;
- Harbour dues for inland vessel;
- Quay dues;
- Buoy dues (for anchoring);
- Waste disposal dues;
- Vessel traffic system (VTS) charge;
- Reporting of vessels charge;
- Pilotage charge;
- Towage charge;
- Mooring and unmooring charge.

Different institutional and legal contexts, in addition to political constraints, hamper an effective harmonization of the charging policies.

Concerning inland waterways, it has to be stressed that the Mannheim convention limits the use of taxes and duties for influencing behaviour. The Central Commission for Navigation on the Rhine (CCR) provides rule and regulation of the sector along the Rhine and its tributaries.


The provision of a general framework for identifying the preconditions for a fair and efficient implementation of pricing reforms in transport should face with the existence of different structures of transport-related domains at country level, e.g. different market structure, legislative framework, taxation level, etc.,

Historical reasons and the different degree of development of the European transport system at national level, often even accompanied by significant inter-country variations, risk to hamper the possibility to devise common patterns.

In such a context, the methodological approach for the identification of a common framework focuses on the most important determinants for a fair implementation of pricing reforms, suggesting a short list of measures able to address these determinants, which may need to be integrated by other initiatives, depending on the particular situation in a given European country.

Drawing on past European research projects, the identification of the determinants and the related measures can be represented in the table below.

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10 AFFORD (2001) and MC-ICAM (2003), for an introduction on the analysis of conditions for the implementation of pricing policies, with a particular view to the marginal cost pricing reforms
Table 1 Identification of determinants and related measures regarding pricing reforms in transport

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Type of measures (examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal and Institutional</td>
<td>• Harmonization of rules and regulation,</td>
</tr>
<tr>
<td></td>
<td>• Simplification of administrative level,</td>
</tr>
<tr>
<td></td>
<td>• Set up of independent authorities, etc</td>
</tr>
<tr>
<td>Technology</td>
<td>• Ensuring technical interoperability between different segments of network, vehicle, etc</td>
</tr>
<tr>
<td></td>
<td>• Defining common standard for on board equipment, means of payments, etc</td>
</tr>
<tr>
<td>Acceptability</td>
<td>• Raising awareness through information campaigns, communications, etc</td>
</tr>
<tr>
<td></td>
<td>• Finding easy solutions for charges implementation, e.g. facilitating payments, etc</td>
</tr>
<tr>
<td></td>
<td>• compensations for loser categories, e.g. low-income groups, elderly, etc</td>
</tr>
</tbody>
</table>

The relevant determinants, common to the overall countries, distinguish structural factors (the basic legislation and the institutional arrangements), technological factors (the infrastructure of pricing) and behavioural and political aspects (the acceptability of the pricing reforms).

It is important to stress that this classification has basically a methodological and analytical value; in the sense that in practice, i.e. when policymakers address the determinants through measures and policies, there are tight interdependencies between the determinants that may cause the need to adopt a unitary approach. For example, addressing the technological factors may involve interventions in the institutional and legal determinants.

As suggested in the MC-ICAM project\(^{11}\), in some case there is a “vicious circle”, as illustrated in the figure below, that makes for policymakers the strategy for removing the barriers to a fair implementation of pricing reforms in transport extremely complex.

![Figure](image)

The following tables show a short list of measures addressing the most important determinants for the implementation of pricing reforms by transport mode.

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\(^{11}\) MC-ICAM (2003), page 54
<table>
<thead>
<tr>
<th>Determinant</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Legal and Institutional | • Showing capability to impose sanctions on abusers (users and providers)  
• Minimising risks of abuse of position towards State agencies, private companies (namely other toll road operators) or persons;  
• Minimising risks of conflict of competencies;  
• Ensuring the coordination between different institutional level  
• Providing consistent legislation related to fiscal taxation, e.g. avoiding excessive variability in regional taxation |
| Technology | • Providing technical solutions for ensuring interoperability  
• Providing technical solutions for ensuring distance-based charging and major differentiation  
• Defining common standards for on-board vehicle, means of payments, etc |
| Acceptability | • Ensuring that tariff levels and allocation of revenues are in line with policy goals and public expectations; |

### Rail transport

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Legal and Institutional | • Separate body for infrastructure management (track authority)  
• Ensuring non-discriminate access to new operators  
• Transparent management of subsidies and public funds |
| Technology | • Providing technical solutions for ensuring interoperability |
| Acceptability | • Ensuring that particular users groups (e.g. small operators, low-income users) are nor perceiving as discriminatory or unfair the new charges |

### Air transport

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Legal and Institutional | • Harmonise state legislation according to the EU legislation (the new proposal for a Directive on Airport charges):  
• To set up an independent regulatory authority  
• To take measures against collusive and monopolistic behaviour airport/big airlines |
<p>| Technology | • Providing cost efficient technical solutions for air traffic movement management |</p>
<table>
<thead>
<tr>
<th>Air transport</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptability</td>
<td>● Favouring consultation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waterborne transport</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Legal and Institutional | ● To take measures against collusive and monopolistic behaviour port/big liners  
● Separation of port authorities from government |
| Technology | ● Introduction of IT solutions for improve port capacity, reducing delay and congestion |
| Acceptability | ● To involve all the stakeholders, e.g. working dockers, in negotiation about pricing |

It can be observed, despite the different transport modes, that among the determinants and the related measures for the implementation of pricing policies, the market characteristics are important. More specifically:

- When the existence of natural monopolies is manifest, e.g. in the interurban road (motorways), rail network, airports and ports, the basic precondition for the adoption of pricing reforms is the institution of an independent authority, able to regulate the access to the network of third parties and new entrants (competition for the market).

- When liberalization and privatization processes have determined the presence of private operators and or concessionaires, a legislative context ensuring competition and non collusive behaviour may be required (competition in the market).

On top of that, an equal important role must be assigned to acceptability issues and the adoption at national level of the EC principles for pricing reforms, e.g. non-discrimination, transparency and consultation.

5. **PRICING REFORM IN ROAD TRANSPORT IN NMS**

5.1 **Current policy and user charges in NMS**

5.1.1 **Current policy – comparative assessment**

Reforming charging policy in road transport seems to be one of the most important challenges and difficult tasks in transport policy of the European Union. At present, we can still notice a huge differentiation of transport taxes and charges in Europe. It has resulted in existing different types and amounts of taxes and charges in different modes of transport and different countries. Moreover, fees have not been depended on real costs of infrastructure use. It is especially important in the context of sustainable transport development and external costs of transport internalisation policy.
It has to be mentioned that in the range of private motorisation, transport users pay fuel taxes, taxes on vehicle purchase (sometimes also fixed vehicle taxes) and fees for infrastructure use (toll motorways, vignettes). In the cities of new member states no new road pricing reform has been started until now.

As it is shown in figure 1, within freight interurban transport road user charges and plans considerably differ between new member states, e.g. in the Czech Republic new electronic toll collection replaced old vignette system in 2007, while in Latvia or Estonia direct user fees do not exist at all and there are no plans to implement distance-related charges. At present different types and forms of vignettes are used in most NMS (Lithuania, Poland, Slovakia, Hungary, Bulgaria and Romania). In Slovenia electronic fee collection for passenger cars will be extended to goods vehicles as well. Advanced plans to implement EFC are subject to discussion and legislative changes in Slovakia and Hungary.

![Figure 1 Implementation of road freight user charges in NMS - current situation and plans (EFC)](image_url)

Source: M.Bak: New member states, IMPRINT-NET EG-1 Interurban road freight transport, Workshop 3 Impacts and implementation 15th May 2007
### Table 2  Evaluation of current charging systems in road transport in new member states

<table>
<thead>
<tr>
<th>Country</th>
<th>Passenger cars fees</th>
<th>Existing charges</th>
<th>Vehicle scope</th>
<th>Geographical scope</th>
<th>Differentiation</th>
<th>Institution responsible for setting charges</th>
<th>Legal acts</th>
<th>Revenues; use / institutional context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>vignettes</td>
<td>Vignettes; manual collection, sticker</td>
<td>Passenger cars, buses, trucks</td>
<td>All roads, except urban roads and ring-roads</td>
<td>Only 3 vehicles categories</td>
<td>Ministry of Regional Development and Public Works</td>
<td>Roads Act, Regulation on vignette system and Tariff on the charges collected in Ministry of Regional Development and Public Works system</td>
<td>Road infrastructure fund (ca. 80 mln EUR annually); agency: The National Road Infrastructure Fund</td>
</tr>
<tr>
<td>Estonia</td>
<td>-</td>
<td>None</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hungary</td>
<td>vignettes</td>
<td>Vignettes; manual collection, sticker (EFC planned)</td>
<td>All vehicles</td>
<td>677 km of motorways</td>
<td>4 vehicle categories</td>
<td>Directorate for Road Co-ordination and Management</td>
<td>n.a.</td>
<td>22 mln HUF (€85 mln)</td>
</tr>
<tr>
<td>Latvia</td>
<td>-</td>
<td>None</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lithuania</td>
<td>-</td>
<td>Vignettes; manual collection, sticker</td>
<td>Weight / length</td>
<td>Highways and national roads</td>
<td>4 vehicle categories</td>
<td>n.a.</td>
<td>Law on the financing of road maintenance and development programme of 2004</td>
<td>n.a.</td>
</tr>
<tr>
<td>Country</td>
<td>Passenger cars fees</td>
<td>Existing charges</td>
<td>Vehicle scope</td>
<td>Geographical scope</td>
<td>Differentiation</td>
<td>Institution responsible for setting charges</td>
<td>Legal acts</td>
<td>Revenues; use / institutional context</td>
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</tr>
<tr>
<td>Poland</td>
<td>tolls</td>
<td>Vignettes; manual collection, road user card</td>
<td>Goods vehicles,</td>
<td>Motorways and national roads</td>
<td>Weight, axles, emission</td>
<td>Ministry of Transport (formerly Ministry of Infrastructure)</td>
<td>Road Transport Act of 6 Sept. 2001, Regulation of the Minister of Infrastructure of 14 December 2001 on the fees charged to transport operators using national roads amended by Regulation of the Ministry of Transport of 8 August 2006</td>
<td>National road fund</td>
</tr>
<tr>
<td>Romania</td>
<td>Vignettes (tolls for use of some Danube bridges)</td>
<td>Vignettes; manual collection, sticker (tolls for use of some Danube bridges)</td>
<td>all</td>
<td>All roads, except urban</td>
<td>Axles, weight, emission class</td>
<td>National Company of Motorways and National Roads</td>
<td>Order of the Romanian Ministry of Transport, Construction and Tourism no 1702 of 2005 for approving some tariffs applied by the National Company of Motorways and National Roads S.A</td>
<td>Road infrastructure fund</td>
</tr>
<tr>
<td>Slovakia</td>
<td>vignettes</td>
<td>Vignettes; manual collection, sticker (plans to implement EFC)</td>
<td>all</td>
<td>Motorways and 1st class roads</td>
<td>Weight</td>
<td>National Highway Company</td>
<td>Electronic charging act of January 2007 (on planned changes)</td>
<td>n.a.</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Tolls (EFC for passenger cars; DSRC technology)</td>
<td>Tolls (manual collection for goods vehicle)</td>
<td>all</td>
<td>Motorways and expressways (465 km)</td>
<td>Vehicle height, axles</td>
<td>Slovenian Motorway Company (DARS d.d.)</td>
<td>Directive of the National Assembly’s infrastructure and environment committee of 1994</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

n.a. information not available

5.1.2 Country review

Bulgaria

On 1 April 2004 Bulgaria introduced a vignette system for collecting charges for the use of Bulgarian road infrastructure. A vignette is required for use of all Bulgarian roads, except urban streets and city ring-roads. As of 2007, weekly, monthly and annual vignettes are sold for buses (category K1), trucks (K2) and vehicles under 3.5t (K3). There are no known plans to change the road charging system in Bulgaria12.

The prices of vignettes for Bulgarian-registered vehicles were significantly lower than those for foreign-registered vehicles but they have been gradually aligned. After January 1, 2007 (date of joining the EU) the vignette charges for domestic and foreign vehicles have been equal.

Vehicles classification13:
I. All vehicles with more than 2 axles designated for transportation of freight and all other vehicles not covered by category II or III with more than two axles.
II. Vehicles for passenger transport with more than 8 seats (excluding the driver’s seat), normally busses, regardless the number of axles; and all other vehicles not covered in the category I or III with 2 axles
III. Vehicles for passenger transport up to 8 seats (without driver seat) with 4 or more wheels, but without regard to the number of axles; normally passenger cars, minibusses, and motor homes, but no motorcycles.

Set of vignettes offered:
♦ daily vignette (not for cars)
♦ weekly vignette good for 7 days in a row including the day of issuing;
♦ monthly vignette valid until the same day in the following month. If this day is non-existing, the vignette is good until the last day of the following month;
♦ annual vignette covering the time between January 1 through January 31 of the following year (13 month).

Czech Republic

Since 1995 the Czech Republic had operated a time-based user charge (vignette) for all vehicles with four wheels or more. Vignettes were compulsory on all motorways and expressways. They applied to 740 km of the road network (of a total of approx. 900 km)14. Now Czech Republic is the first country among EU new members which introduced electronic fee collection on road network since 1st January 2007. The electronic toll system has replaced vignettes for heavy vehicles. However, the vignette system still applies to vehicles under 12 t with four or more wheels15.

14 A price worth paying, op.cit.
15 A price worth paying, op.cit.
In order to introduce new system, an international tender was put out by the Czech Ministry of Transport in 2005 for the installation and operation of an electronic fee collection (EFC) system for heavy goods vehicles over 3.5 tonnes gross weight. Finally legislation passed only for vehicles above 12 tonnes. The implementation of new system has been planned in two phases. Firstly in phase 1 it has concerned 970 km of motorways network and 350 toll segments, then in phase 2 it will be enlarged to 1100 km of first-class roads and 500 toll segments\textsuperscript{16}. The phase 1 is competed and now new tender is planned for phase 2.

From 1\textsuperscript{st} January 2007 lorries have to be equipped with a ‘Premid’ onboard unit (or a ‘Premid plus’ unit for vehicles with metallised windscreen). The units are compulsory and available for a deposit of CZK 1550. The system uses microwave technology between the on-board units and toll gantries. The charge is differentiated by the number of axles and EURO emissions classes.

The main goal of introducing the heavy vehicle fee is to acquire funds to speed up completion of the motorway network, rather than reduce freight traffic. Slowing or halting the growth of such traffic is seen only as a secondary goal. The average toll rate for 40 t vehicles is CZK 4.05/km (€0.14) for motorways and highways. The ratio between the two emissions classes is on average 1:1.3.

The expected revenue from the fee in 2007 is CZK 5 billion (€175 million). For comparison, vignettes revenue was CZK 2.2bn in 2005. All revenues from highway and motorway tolls are received by the State Infrastructure Fund, which also collects revenue from the vignette for lighter vehicles (2007 projection of total heavy vehicle toll revenue: CZK 5bn, of which CZK 2bn for the operators and the remainder to the infrastructure fund.

There are plans to levy the toll on first, second and third class roads, also differentiated by emissions class and numbers of axles. A new public tender for a toll system using GPS technology to cover the entire road network is also planned. The system should be operational by 2009-2010 for lorries over 3.5 tonnes. Revenues from toll collection on minor roads are planned for use by the regions to improve the quality of the road network.

**Estonia**

In Estonia direct charges for road transport infrastructure use do not exist. There are no known plans to implement new system in near future.

**Hungary**

In Hungary, motorway vignettes were introduced in January 2000 and today the country has a flat-rate, time-based vignette system on all its motorways (M0, M1, M15, M3, M30, M5, M7, M70). From 1996 to 2004 direct tolls were also collected by concessionaires. In parallel vignette system had been expanded in the years 2000-2004. Several motorway sections are free of charge, however, because of concern about social impacts and political considerations. This applies mainly to conurbations, such as the M0 circular motorway around Budapest, and sections leading to national border crossings\textsuperscript{17}. The (windscreen sticker) vignette applies to a total of 677 km of the network.


\textsuperscript{17} A price worth paying, op.cit.
Annual revenues from vignettes amounted to 22 million HUF (€85 million) in 2005. The operating costs of the vignette system itself remain relatively low, though: about 5-7% of total gross revenue generated.

Structure of the vignette system in 2007 is following:\(^{18}\):
- Four user charge categories:
  - D1 \(\leq 3.5 t < D2 \leq 7.5 t < D3 \leq 12 t < D4\) (7.5 t < buses: 1 category)
- Four network extensions widening by categories:
  - for D1, D2, D3, D4 exempted m’way & e’way sections: 44 km,
  - for D1 only on m’ways (with exempted by-passing sections): 668 km,
  - for D2, D3, D4 on m’way by-passes as well + e’ways: 221 km,
  - for D4 on 42 trunk road sections around the country as well: 470 km, (above the 933 km speedway network) totally charged: 1359 km.
- Five validity periods:
  - valid for 1 calendar day (for D2, D3, D4),
  - valid for 4 consecutive days (for D1 with a summer season price),
  - valid for 10 consecutive days,
  - valid for 31 consecutive days,
  - yearly vignette (from January 1 to the next January 31).

Preparations for mileage based electronic fee collection went back to 2003. Then an advisory committee composed of experts from interested ministries, universities and the KTI research institute was set up in 2003 in order to define a long-term motorway toll strategy in compliance with EU Directives, as well as to support the activities of State Motorway Management Company. The committee worked on this issue until 2005. The evaluation committee on fee collection decided that the basis for the new scheme should be distance-related tolls, a free-flow charging system interoperable with other EU countries, and that revenue should be earmarked for motorways. Feasibility studies were undertaken in 2005-6. An international public procurement procedure for the planning, building, financing and operation is to be carried out in 2007, with a view to system installation in 2008. The Directorate for Road Co-ordination and Management is responsible for toll policy and preparations for implementing electronic toll collection.

**Latvia**

At present in Latvia no direct road tolls or charges exist. Revenues from annual vehicle tax and excise duty are spent on road construction. According to the ‘Law on roads’ it is guaranteed that annual financing from the “state budget state road fund program” must not be less than the sum of planned revenues from annual vehicle tax and 80 percents of planned revenues from excise duty on oil products.\(^{19}\)

Latvia does not plan changes of current system of road charges.

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\(^{18}\) Á.G.Siposs: Preparations for the Mileage Charging Electronic Toll Collection in Hungary. Coordination Centre for Transport Development. Presentation on the Workshop on Road User Charging Systems, Warsaw, June 12, 2007

\(^{19}\) V.Millers: Latvian Road Fund idea – still alive. Presentation on the Workshop on Road User Charging Systems, Warsaw, June 12, 2007
Lithuania

Lithuania has road charging for vehicles on the main highways and national roads. The charge can be paid on a daily, weekly, monthly or annual basis and applies to buses, coaches and agricultural vehicles as well as HGVs. Charges for HGVs are differentiated by weight (up to 3.5t / 3.5t-12t / 12t-40t / 40foot containers up to 44t). Revenues are used for road maintenance and development.

The charging system was introduced in 2005, firstly as ‘user charge’ and then from 1st of January 2007 it was replaced by new form of user charge payment – vignettes, which can be purchased in gas-stations and on the board crossing points of Lithuania20.

There are no known plans to change the road charging system in Lithuania.

Poland

In Poland, a vignette system is in place for commercial use of vehicles since 2002. Operators of vehicles over 3.5 tonnes must purchase so called ‘road card’. This applies to goods vehicles with a total weight of over 3.5 t, and passenger vehicles over 3.5 t designed for carrying more than nine persons. A new regulation from the Ministry of Transport came into force on 21 October 2006, which resulted in the reduction of types of ‘road cards’ (vignettes) being reduced from 52 to 24, as half-year cards and differentiation by number of axles were scrapped21. The toll has been administratively determined at €8 per day for vehicles over 12 t, in proportion to the annual toll. The cards are time-based and are available with daily, weekly, monthly and annual validity. The fee level varies according to vehicle type, duration of passage on national roads, total permissible weight (3.5–12t / >12 t) and emissions class (EURO 0-I / EURO II and better).

In parallel to the vignette system, there are paid motorways in Poland. Previously, all vehicles were obliged to pay, but since 2005 vehicles over 3.5 t are exempted if they have paid vignettes22. Different operators / private concessionaires of motorways employ different systems and charge different fees on each motorway. However, there are usually five vehicle categories, differentiated by number of axles and vehicle weight. Toll collection is via manual (semi-open) systems.

There are no concrete plans regarding the implementation of electronic toll collection. However, in 2004 the General Directorate of National Roads and Motorways launched a feasibility study of EFC with consultants. Studies have investigated both DSRC and GPS technologies based on the Austrian and German experiences. According to current legislation (Toll Motorway Act 27/10/1994, Act concerning preparation and realization of national road investments 10/04/2003, and amendments 14/11/2003 and 02/07/2004), all motorways in Poland are to be toll motorways. Tolls will thus be introduced on all motorways as they are completed.

20 D.Dudonis: Road Financing in Lithuania. Presentation on the Workshop on Road User Charging Systems, Warsaw, June 12, 2007
21 A price worth paying, op.cit
22 M.Bak: New member states. Presentation on the IMPRINT-NET EG-1 Interurban road freight transport, Workshop 3 Impacts and implementation 15th May 2007
Tolls are to eventually be extended to all national roads, including all motorways, expressways and standard two-lane roads, and would cover around 16,000 km in all. The proposal still outlines time-based fees (weekly, monthly, annual and daily fees), with fee differentiation based on vehicle type, weight (> 3.5 t, >12 t), and emission class (EURO 0 / EURO I / EURO II and above). The proposed system should bring in up to 50% more revenue for the national road fund.

**Romania**

The primary road network in Romania is operated by the National Company of Motorways and National Roads, which levies user charges on all foreign and Romanian motor vehicles on all national roads, except those in urban areas. Vignettes have been applied for vehicles over 12 t since July 2002 and gradually extended to include: vehicles over 7 t since January 2003; vehicles over 3.5 t since January 2004; all other vehicles under 3.5 t since January 2005.

Differentiation is on the basis of authorised maximum total weight and emissions class (EURO 0 / I /II). For trucks over 12 t, there is further differentiation based on the number of axles. Romanian road users are charged on an annual basis. Foreign users can purchase daily, weekly, monthly, half-yearly or annual permits23. On average, for vehicles over 12 t, the tariff is 25% higher for the non-EURO class vehicles than for the cleanest category included (EUROII).

There are additional tolls for the use of some Danube bridges.

There are no known plans to change the road charging system in Romania.

**Slovakia**

In Slovakia, a vignette system is in place on approximately 750 km of highways, expressways and first class roads. It applies to all vehicle categories. Vignettes are time-based (annual, monthly, 8-day for all vehicles, plus daily vignettes for vehicles over 3.5 t). Prices vary by vehicle weight. Vignette prices are administratively determined and thus are not set to reflect the costs of maintenance, road building or damage24.

In January 2007, following a feasibility study, the Slovak Parliament approved the Electronic Charging Act. Electronic fee collection will cover 2400 km of highways, expressways and parallel (first and second class) road sections on to which traffic may divert from the trans-European road network. EFC will apply to all vehicles over 3.5 t. The National Highway Company NDS set the estimated value of the order at SKK 20 billion without VAT. The winning company is to have a 14 year contract, and is to build the system within one year and operate it for 13, from the beginning of 2009. Moreover, the contract option makes it possible to prolong the contract with the future tender winner by an additional five years.

The time-based vignette system will remain in place for all vehicles under 3.5 t and will be extended to 340 km of highways and 80 km of expressways. Vehicles under 3.5 t, including private cars, are planned to be charged under this distance-based system from 2011 onwards.

There will be different fee categories for vehicles between 3.5-12 t, over 12t and for vehicles for carriage of 9 or more passengers. The charge will also be differentiated by number of

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23 A price worth paying, op.cit
24 A price worth paying, op.cit.
axles and EURO emissions class. There is a proposal to differentiate into three emissions categories: EUROIII or less / EUROIV / EUROV or more. There may also be a proposal to differentiate between daytime and nighttime driving. The fee will be calculated based on infrastructure costs (investment, maintenance and operation) and external costs (emissions and congestion). The result is the weighted average toll for highways, expressways and first class roads which will be paid to the National Highways Company.

The NDS announced the original tender in the middle of July 2007; however, it decided to cancel the tender due to the fact that twice as many companies enrolled in the tender than was expected. The next tender was also cancelled on 21 September 2007 due to formal mistakes of the National Highway Company (NDS published two different deadlines for application delivery for explanation of terms of participation; the deadline in the EU official bulletin was September 21, while the deadline in the Bulletin of the Public Procurement Office was set for September 24). A new tender was announced on September 25. The NDS is going to invite eight short-listed candidates to submit their bids on November 23. The envelopes with the bids will be opened on January 18, 2008. SANE F, Siemens, Slovak Telekom, Kapsch and consortium ToSy already confirmed interest to take part in the tender. Initially, the scheme was due to be operational in mid-2006, then was rescheduled to late 2007 and is now set for 2009.

**Slovenia**

Tolls have been collected on Slovenian motorways since 1973. All Slovenian motorways and most expressways currently charge all vehicles for use, as does the Karavanken tunnel. Most motorway sections have a distance-based fee, although some have a flat-rate toll. The legal basis of the Slovenian tolls is the 1994 Directive of the National Assembly’s infrastructure and environment committee.

Toll stations are situated on regional borders and therefore mainly apply to long-distance transit traffic. The open system (in contrast to a closed system whereby the gantries are located at motorway entries and exits) makes it possible to use a motorway within a given region without paying a toll. An electronic toll collection system for cars, known as the ABC system, has been used in Slovenia since 1995, which has engendered substantial improvements in traffic flow and cut emissions by avoiding stop-starts at toll stations. The number of ABC users is rising: in January 2004, 170,000 electronic cards were in circulation and by January 2005 that number had increased to about 200,000. Electronic fee collection is not currently used for HGVs. As of August 2006, the Slovenian Motorway Company (DARS d.d.) manages and maintains 465 km of motorways and expressways and over 130 km of their access roads. About 84% of all roads are toll roads, totalling some 380 km. Tolls are collected at 26 toll stations with a total of 178 toll lanes (including the toll station on Karavanken tunnel). The Road Directorate manages a further 6000 km for high-speed roads, main roads and regional roads. The revenues collected are used to finance motorway management and maintenance, construction of new motorways and repayment of loans. However, road pricing in Slovenia is increasingly recognized as a traffic policy instrument to reduce congestion, shift passengers and freight on to rail and public transport, and to reduce environmental impact.

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25 A price worth paying, op.cit.
The tolls are distance-based for specific motorway sections. Monthly tickets can be bought for a predetermined distance, with the price being calculated as 40 times the toll for a specified section (pass toll station twice per day x 20 working days). Drivers can also pay for single trips, or use an ABC electronic card that charges per km driven. ABC cards are transferable between vehicles. Fees are differentiated for four vehicle classes, vehicle height.

Plans to change the road charging system are under discussion in Slovenia. The intention is to follow the amended Eurovignette Directive closely, but no plans have yet been finalised. Probably the changed system will be based on GPS technology and will cover also heavy goods vehicles.

Existing tolling system can be synthetizes as follows:\(^{26}\)

- 26 toll stations, 181 toll lanes,
- 4 vehicle classes, measured and declared characteristics,
- Payment means: cash, petrol and credit cards, monthly passes, 2 types of DARS contactless cards, ABC-EFC system,
- Pre-payment and post-payment mode for DARS cards and ABC-EFC system,
- On sections with open toll system the value of collected toll is 10% lower than on those with closed toll system,
- Only 75% of traffic on motorways and expressways is tolled (due to the open toll collection system, and partly non-tolled network),
- Approx. 150 mio EUR of toll is collected per year,
- 99% of motorway user are tolled (approx. 1% of violators),
- EFC system, based on microwave link 2,45 GHz (ABC system is very reliable but it has out of date frequency 2,45 GHz. It’s used only for the first vehicle category (personal cars),
- First installation in 1995 (Toll station Torovo),
- 250,000 OBU in use,
- 60,000 transactions per day,
- Gradual transition to EFC in (free flow system) with DSRC technology for all vehicle categories; later on some solutions with satellite technology will be added and combined with DSRC system,
- Transition from open (toll stations situated on regional borders what enables to use a motorway within a given region) to closed system (where gantries are located at motorway entries and exits) on the whole motorway network (it is estimated that on sections with open toll system the value of collected toll is 10% lower than on those with closed toll system),
- Introduction of toll collection system on non-tolled sections.

5.2 Legal determinants

The general legal background for changing road charging system in interurban road transport is the European Union is the amended Eurovignette directive (Directive 2006/38/EC of the European Parliament and of the Council of 17 May 2006 amending directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures). But it has to be mentioned that this directive does not oblige member states to introduce new schemes, but

\(^{26}\) L.Prah: Toll collection system in the Republic of Slovenia. Presentation on the Workshop on Road User Charging Systems, Warsaw, June 12, 2007
only sets rules for these countries that already have or want to introduce user charges for heavy goods vehicles (over 3.5 tonnes) on roads belonging to the Trans-European Road Network.

Therefore in new member states, as in ‘old’ EU countries, legislative framework for road transport charges considerably differs.

**Bulgaria**

The basis of the implementation of a vignette system in Bulgaria on 1 April 2004 was the Roads Act and respective by-laws: Regulation on vignette system and Tariff on the charges collected in Ministry of Regional Development and Public Works system. The system was introduced in two steps. Firstly only for freight vehicles and uses with more than 8+1 seats and then from January 1, 2005 for all vehicles, including passenger cars. In April – December 2004 only paper vignettes containing the registered vehicle license plate number were issued. Since January 1, 2005 vignette stickers are in place.

**Czech Republic**

The legal basis of the new electronic fee collection system introduced in the Czech Republic from 2007 was a law on electronic fee collection (Government decree № 481, 19/05/2004). It was adopted and is supported by follow-up regulations. Toll rates per km are stipulated by Czech Government Regulation No. 484/2006 Coll. The Road Infrastructure act was amended to allow the implementation of EFC for vehicles over 12 t from January 2007. Operation of the electronic tolling system is also subject to Decree No. 527/2006 Coll. of the Czech Ministry of Transport, Czech Government Regulation No. 484/2006 Coll., and the General Business Terms and Conditions of the Operator of the Electronic tolling system.

**Estonia**

No legislation on pricing system reform, direct user charges implementation, electronic fee collection.

**Hungary**

In Hungary the special Evaluation Committee on Fee Collection was set up in 2003 to define a long-term motorway toll strategy in compliance with EU Directives, as well as to support the activities of State Motorway Management Company. The committee worked on this issue until 2005. SMMC initiated and funded R&D activities to design a future strategy, following the recommendations of the committee. According to plans charges will apply to vehicles over 3.5 t, including trucks and buses and will be levied on motorways, highways and main roads of the ‘E-network’. Light vehicles including passenger cars are to be included in a later phase.

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27 M.Herry: Road user charging in Bulgaria. Workshop on Road User Charging Systems, Ministry of Transport & World Bank, Warsaw, 11-12 June 2007
Latvia

No legislation on pricing system reform, direct user charges implementation, electronic fee collection.

Lithuania

The vignette system introduced in Lithuania in 2005 was based on the Republic of Lithuania Law amending the law on the financing of road maintenance and development programme (new version No. IX-2546 (annex 3), Vilnius, 9 November 2004). Current rates are set according to the document (Information on Vehicle Owner and Manager User Charge. Rates of user charges payable by owners or managers of vehicles registered in the Republic of Lithuania and foreign countries, including EU member states, and a description of the procedure of their payment, administration and control) approved by Resolution No 447, 21-04-2005 of the Government of Lithuania (OG, 2005, No 53-1799; 2006, No 124-4689).

Poland

In Polish road network from the 1st of January 2002 the system of vignettes was introduced for commercially used goods vehicles, both domestic and foreign. The legal basis is the Road Transport Act of 6 September 2001 (Dz.U. No 125, item 1371) and regulation of the Minister of Infrastructure of 14 December 2001 on the fees charged to transport operators using national roads (Dz.U. No 150, item 1684).

After introducing vignette system in 2002, also goods vehicle were obliged to pay on toll motorways. It has been criticised by enterprises which argued they had to pay twice for the network use. After the amendments of legal regulations, especially the Act of paid motorways (of 1994), from the 1st of January 2005 charging heavy goods vehicles on motorways was abandoned.

According to the Directive 2004/52/EC of 29 April 2004 on the interoperability of electronic road toll systems in the Community, the Act on amendments of the Act of public roads and several other regulations was published in July 2005.

Romania

The legal basis for vignette system in Romania is Government Ordinance no. 15/2002 concerning the introduction of tariffs for use of the Romanian national road network, and its modification in Ordinance no. 51 of 2004 and no. 1702 of 2005 for approving some tariffs applied by the National Company of Motorways and National Roads S.A. of Romania.

Slovakia

The legal basis for the Slovakian scheme is the Electronic Charging Act passed by parliament in January 2007. The supervisory authorities are the Ministry of Transportation, Posts and Telecommunications and the National Highway Company.
Slovenia

The legal basis of the Slovenian direct user tolls is the 1994 Directive of the National Assembly’s infrastructure and environment committee. The Decree on the toll on the use of certain roads has introduced the electronic toll collection system for cars, known as the ABC system, used in Slovenia since 1995. Legislation concerning introducing electronic fee collection for HGV was not finalised yet.

5.3 Roads administrations in NMS

Traditionally, the success of a road administration has been measured by efficiency and fulfilment of the objectives set by the higher authorities, and by the quality of the products and services offered. Nowadays, the satisfaction of customers has been given more emphasis. A satisfied customer whose expectations have been fulfilled indicates efficient and high-quality performance. The key issues facing the road transport system and road administrations include:

• decreasing road budgets,
• demand for greater transparency in road administration performance,
• separation of the traditional roles of road administrations: production and administration,
• change to customer focus instead of expert knows best attitude,
• demand for greater efficiency in all operations,
• demand for better results and quality,
• demand for more co-ordination and co-operation across the transport sector,
• demand for performance improvements to be implemented more rapidly than in the past,
• new management aspects, demand for an open and broad understanding of the mobility problems facing society,
• demand for more data and more efficient data management.

The role of the Government in post-socialist countries is thus reoriented from its former task of directly managing transport enterprises, to assuring that competition among private transport operators is fair, protecting the public interest in safety, the environment and social working conditions.

Administration and management of road infrastructure has been subject to number of organisational and legal changes similarly as other sectors of economy in 10 NMS in recent years. This process has not yet been fully completed, moreover there are vital differences between countries. The main driving forces behind those changes could be contributed to:

• Development of free-market economy,
• Changes in transport sector due to introduction of free-market,
• Introduction of EU regulations,
• World Bank requirements accompanying various support projects in NMS road infrastructure modernization programmes.

Although transformation of administration and management has been achieved along different patches in NMS, the whole group has similar goals, of which most important are:

- efficient use of financial resources for road network modernization,
- better division of tasks and

responsibilities among various road administrations allowing for better decision – making, 
broader functions performed by road infrastructure managers (e.g. new methods of 
information about current road conditions, traffic management, safety), 
development of organizational and legal framework under which private capital could be employed in road infrastructure investments.

Transformation of economy towards free–market has created necessary conditions for competition especially in the area of investment and modernization tasks. Change occurring in transport market has facilitated increasing demand for road transport services (average growth of 4-6% p.a.) which in turn further intensifies tasks facing road administrations in regard to both modernizations and regular maintenance.

One of the most notable indications of road management transformation in NMS is its decentralization. According to World Bank those tendencies are visible in most developed as well as developing countries and are conducted in order:\n
- to establish the most appropriate, sustainable balance in the allocation of administrative and financing responsibilities;
- to maximize accountability and efficiency and allow for the necessary redistributive transfers from the richer to the poorer regions all with a minimum of distortion;
- to establish the sustainability of the proposed administrative system;
- to set up the local agencies, generally more responsive to local needs and realities, and can be made more easily accountable to road users.

A road decentralization strategy, however, should be based on a careful assessment of the feasibility of the various options, which depends heavily on country conditions, including on the institutional, technical and financial capacities of the central and regional agencies, and on political support. The recent development of highway management systems and road data bases favours greater centralization of decision-making. The objective is to achieve common standards throughout the entire network, and compensate for the lack of technical expertise at the local level. In this context, head offices should retain at least network-level planning and monitoring functions, funding and some supervision functions over the decentralized units.

Table 3 Administrative structure of road network – 10NMS and EU-15 in %, as of 2004.

<table>
<thead>
<tr>
<th>Country / road type</th>
<th>Motorways</th>
<th>State roads</th>
<th>Provincial roads</th>
<th>Municipal roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>1.7%</td>
<td>15.4%</td>
<td>20.8%</td>
<td>62.1%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>0.4%</td>
<td>4.8%</td>
<td>38.2%</td>
<td>56.6%</td>
</tr>
<tr>
<td>Estonia</td>
<td>0.2%</td>
<td>31.0%</td>
<td>0.0%</td>
<td>68.8%</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.3%</td>
<td>19.0%</td>
<td>33.4%</td>
<td>47.2%</td>
</tr>
<tr>
<td>Latvia</td>
<td>0.0%</td>
<td>34.2%</td>
<td>53.5%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>0.5%</td>
<td>26.4%</td>
<td>73.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Poland</td>
<td>0.1%</td>
<td>4.8%</td>
<td>41.6%</td>
<td>53.5%</td>
</tr>
<tr>
<td>Romania</td>
<td>0.2%</td>
<td>12.5%</td>
<td>49.2%</td>
<td>38.1%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>1.8%</td>
<td>18.8%</td>
<td>21.0%</td>
<td>58.5%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>2.8%</td>
<td>97.2%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total 10 NMS</td>
<td>0.3%</td>
<td>14.9%</td>
<td>39.8%</td>
<td>44.9%</td>
</tr>
<tr>
<td>Total EU-15</td>
<td>1.4%</td>
<td>7.5%</td>
<td>25.3%</td>
<td>65.8%</td>
</tr>
</tbody>
</table>


32  Ibidem.
The process of road network management decentralization in 10 NMS is slower than in EU-15. In 2004 in EU-15 roads with the status of state road constituted only 7.5%, in the same time in 10 new members this number reached 14.9% of whole road network (see Table 3).

In smaller states as Slovenia, Estonia, Lithuania, Latvia the role of state roads remains important with its share in total network ranging from 26% to as much as 97%. In bigger states Poland and Hungary the state has reduced its administration to manage roads below 5% of total network (notably this number is lower than in EU-15 where average indicator shows 9% of state administrators).

Road building and modernization related expenditure is very high, resulting in higher risk of corruption. The key issue is creation of mechanisms and instruments preventing those activities. The results of worldwide research in that context are currently closely scrutinized in NMS and being introduced in reforming road management and administration.

Detailed comparative analysis of road administrations and management in NMS is presented in the annex to this deliverable.

5.4 Technology and other determinants

Considering technological solutions the Directive 2004/52/EC of 29 April 2004 on the interoperability of electronic road toll systems in the Community does not set any strict rules. It only suggested that all new electronic toll systems brought into service on or after 1 January 2007 shall, for carrying out electronic toll transactions, use one or more of the following technologies:

a) satellite positioning;

b) mobile communications using the GSM-GPRS standard (reference GSM TS 03.60/23.060);

c) 5,8 GHz microwave technology.

In EU member states which have already implemented new systems and other countries which plan to introduce user charges in interurban road transport different technological solutions have been used. Considering new member states the most important event was the introducing electronic fee collection in the Czech Republic in 2007. In this case the system is based on ‘traditional’ microwave technology between the on-board units and toll gantries. In a second phase of charging, the operating system will change, possibly to a hybrid microwave and satellite-based system.

Also in Slovenia, existing system for passenger cars is based on microwave technology. But it is planned to extend the EFC to heavy goods vehicles as soon as possible. The general aim however is to introduce GPS technology. The current microwave technology used for the ABC cards for private cars would need to be upgraded in any case.

In most new member states which plan to implement electronic fee collection in the near future, decisions concerning the choice of technological system have not taken. In Poland

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according to the Directive 2004/52/EC the Act on amendments of the Act of public roads and several other regulations was published in July 2005. As in EU Directive, it is only repeated that all new electronic toll systems brought into service on or after 1 January 2007 shall, for carrying out electronic toll transactions, use one or more of the mentioned technologies. So there are no concrete plans regarding the implementation of electronic toll collection. However, in 2004 the General Directorate of National Roads and Motorways launched a feasibility study of EFC with consultants. Studies have investigated both DSRC and GPS technologies based on the Austrian and German experiences. Two alternative scenarios are being examined; introduction of EFC in 2009 for heavy goods vehicles; or introduction in 2015 after completion of the Polish highway network (including A1, A2, A4 and A18 motorways and some “e-roads”).

In Slovakia in the Electronic Charging Act of 2007, it is also stated that technology will be based on either satellite positioning, microwave technology or mobile communication (GSM) or a combination and that the on-board unit must be interoperable with other European systems.

ISIS S.A.: *Extension of the estimates of traffic and toll revenues to smaller goods vehicles*, Groupe EGIS, France, 2005;

Acceptability seems to a very important determinant of road pricing reform. These problems were analysed in many EU projects dealing with reforming user charges. Within this report, acceptability in new member states, including assessment of social consciousness, public consultations etc. have been one of the subjects of the questionnaire survey with experts carrying out within CATRIN WP3. Questionnaire analysis is included in chapter 9 of this deliverable.

### 5.5 Conclusions

On the base of the detailed review presented above the preconditions for pricing preconditions for pricing reforms in waterborne transport in NMS are summarised in Table 4.

**Table 4 Preconditions for pricing reforms in road transport in NMS**

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Urban and Interurban road transport | **Bulgaria:** vignette system introduced in 2007; new Road Act of 2004; insufficient allocation of funds to road maintenance; main network managed by national Road Executive Agency;  
**Czech Republic:** EFC for lorries introduced in 2007; main network managed by RMD (Road and Motorway Directorate established by the Ministry); management efficiency still unsatisfactory  
**Estonia:** no direct charges for road infrastructure; road network managed by a government agency Estonian Road Administration (ERA)  
**Hungary:** motorway vignettes introduced in 2000; road network managed by following companies: Directorate for Road Management and Co-operation(UKIG), |
Urban and Interurban road transport

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Road Technical and Information Public Company (AKMI), State Motorway Management Public Limited Company (AAK), County-level Public Road Management Companies</td>
<td>Latvia: no direct charges for road infrastructure; since October 2004 road network managed by The State Joint Stock Company “Latvian State Roads” which is 100% owned by the state; Lithuania: vignettes introduced in two stages (2005 and 2007), road network managed by Lithuanian Road Administration (LRA) under the Ministry of Transport Poland: vignettes from 2002, in parallel toll sections of motorways, state roads managed by General Directorate of National Roads and Motorways (GDDKiA), voivodship roads by voivodship governing authority, powiat roads by powiat governing authority and gmina roads by gmina governing authority Romania: vignettes from 2002; national roads operated by National Company for Motorways and National Roads (RNCMNR) Slovenia: vignette system, electronic charging act passed in 2007; main network managed by National Highways Company established in 2006</td>
</tr>
</tbody>
</table>

| Technology | Bulgaria: - Czech Republic: microwave technology in use, possible change to a hybrid microwave and satellite-based system Estonia: - Hungary: - Latvia: - Lithuania: - Poland: feasibility study completed, possible different technological solutions Romania: - Slovakia: possible different technological solutions Slovenia: microwave technology, plan to introduce GPS technology |


* Information gathered from the questionnaire results

Legal and institutional framework for changing pricing policy in NMS considerably differs between countries. In the Czech Republic new system of electronic fee collection for HGV was implemented. In Slovenia microwave technology has a long tradition in toll motorway system for passenger cars. In other countries the reforms have only started or are at early stage. Institutional changes of road administration during transformation period have included decentralisation processes. It can be summarised that in smaller states (Slovenia, Estonia, Lithuania, Latvia) the role of state roads remains important with its share in total network ranging from 26% to as much as 97%. In bigger states (especially Poland and Hungary) the state has reduced its administration to manage roads below 5% of total network.
It is not expected that any specific new technological solutions e.g. for electronic fee collections will be implemented in NMS. The experiences of the Czech Republic and Slovenia or Slovak and Hungarian plans prove that in all the cases Western European solutions are (or are going to be) implemented and that the special emphasis is put on ensuring technical interoperability between segments of the network and vehicles.

Public consultation is usually mentioned as a necessary determinant to ensure highest acceptability level of pricing reform, especially in road transport. In some NMS (e.g. Hungary) in fact consultations contributed to high level of acceptance, but the example of Poland proves that it is not the most important and sufficient factor (still little acceptance of reform).

6. REFORMING CHARGES IN RAIL TRANSPORT IN NMS

6.1 Current policy and rail charges in NMS

The rail sector in the new member states can be generally characterised as heavily subsidised, heavily indebted state monopolies which are self-regulated and devoid of any highly structured outside control mechanisms, and has not been encouraged to reach beyond its own national borders nor to confront the new requirements of customers, too often considered as users who should be content with what they are offered. All of these elements have contributed to preserving the traditional methods of cooperation among national companies and the technological rivalries between major railways, to the detriment of administrative, social and technical interoperability among railway companies and genuine consideration of the needs of customers be they businesses or passengers.

The European Commission’s White Paper highlights the rail mode’s shortcomings affecting the transport system as a whole with foreseeable trends pointing to greater congestion, especially on the roads, and severe problems for the economy and for the quality of life of Europe’s citizens. In this system, each mode must play its role and make the most of its intrinsic assets. The rail mode is seen as a very suitable mode for hauling goods over long distances which the European dimension of the economy is stretching even farther and for passengers insofar as the quality of service meets expectations. The standard of safety and the environment-friendly qualities of this transport mode make it a preferred mode that should be promoted vigorously.

The EU made up the following financial principles on behalf of the opening and the free access to railway paths:

- the principle of transparency;
- the prohibition of cross financing;
- the principle of cost bearing;
- the accountancy separation of passenger and freight transport;
- the principle of open access to tracks.

The member states have to assure the separated keeping and publishing of the profit and loss (result) statements and accounts of the railway company (or organisation unit) providing transport services and infrastructure management. The public funds, which are given to one of these two main activities cannot be remitted to the other field. This restriction has to find an expression in the accountancy of this two activity fields. The setting and collecting of infrastructure charges concerns four issues:

1. the organisation responsible for setting the charges;
2. the organisation responsible for collecting the charges;
3. the legal basis for the charges;
4. the principles for the charges.

For all these issues Directive 2001/14/EC include provisions. Article 4 of Directive 2001/14 requires Member States to establish a charging framework while respecting the management independence set out in Article 4 of Directive 91/440/EEC. Furthermore, the determination of the charge for the use of infrastructure and the collection of the charge shall be performed by the infrastructure manager, who is independent of any railway undertaking. It states that where the infrastructure manager, in its legal form, organisation or decision-making functions, is not independent of any railway undertaking, the functions of capacity charging and allocation shall be performed by a charging body that is independent in its legal form, organisation and decision-making from any

As for the principles for infrastructure charging Articles 7 (principles), 8 (exceptions) and 9 (discounts) of Directive 2001/14/EC provide the details. In particular, charges should “be set at the cost that is directly incurred as a result of operating the train service”. Furthermore, it provides for:

- cost reflecting scarcity allowed;
- charges to cover environmental costs allowed;
- mark-ups can be allowed;
- higher charges to cover costs of investment projects;
- comparable charges to prevent discrimination;
- discounts may be allowed.

Therefore, although the principle of marginal cost pricing is promoted in the Directive, the allowance for mark-ups to achieve full cost recovery implies deviation from this principle.

Table 5 shows which organisation is responsible for setting and for collection of infrastructure charges and the details of the pricing principles and legal basis for charges.

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Table 5 Setting of infrastructure charges framework in NMS

<table>
<thead>
<tr>
<th>Country</th>
<th>Legal basis of procedure</th>
<th>Responsible institution for setting of infrastructure charges</th>
<th>Collection of infrastructure charges</th>
<th>Principles of calculating the railway infrastructure access fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>Railway Transport Act; Decree of the Council of Ministers No 302/21.12.2001 adopting the Tariff on charges for use of railway infrastructure collected by State Railway Infrastructure Company /State Gazette 1, 04.01.2002/ which are in line with the provisions of the Directive 2001/14.</td>
<td>Council of Ministers based on a proposal from the Executive Agency Railway Administration of the Ministry</td>
<td>State Railway Infrastructure Company SRIC</td>
<td>The infrastructure charges shall include the charge for reserving railway infrastructure capacity and the charge for utilising the railway infrastructure. The charge for utilizing the railway infrastructure shall include charges for using the railway track, the electrical installations, the catenary network and facilities and the traffic management and security systems.</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Network Statement + Ministry of Finance price bulletin no. 1/2007 &quot;(based on Act no. 526/1990 Coll., on prices)</td>
<td>Ministry of Finance (proposed by track operator –Czech Railways joint stock company)</td>
<td>Railway infrastructure administration</td>
<td>The following charges are levied:</td>
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<td>• a variable charge per train km – applied at different rates to both passenger and freight trains;</td>
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<td></td>
<td>• a variable charge per gross ton km – applied at different rates to both passenger and freight trains;</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>• No fixed access charge.</td>
</tr>
<tr>
<td>Estonia</td>
<td>Railways Act on March 31, 2004, § 59. Agreement on use of railway infrastructure and usage fee</td>
<td>the Director General of the Railway Inspectorate</td>
<td>Infrastructure managers</td>
<td>The fees collected from infrastructure charging will be used to cover maintenance, the organisation of railway traffic and the granting of the use of railway infrastructure to railway manager’s expenses.</td>
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<td>for the main and additional services for ensuring access is composed of the costs related to making available the railway infrastructure for use and reasonable business profit.</td>
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<tr>
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<td></td>
<td>Calculation of the user fee for ensuring access is based on the total costs of the railway infrastructure manager, which include direct costs related to the service, capital expenditure (i.e., depreciation), a proportional part of the general costs of the railway infrastructure manager and reasonable business profit. The calculation of direct costs includes maintenance, materials and running costs required for service provision and employment costs required for the provision of this service.</td>
</tr>
<tr>
<td>Country</td>
<td>Act and Details</td>
<td>Infrastructure Division</td>
<td>Methodology/Charges</td>
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<tr>
<td>Hungary</td>
<td>Act 2005/CLXXIII on rail transport, Joint Decree 66/2003 GKM-PM of the Min. of Economy and Transport and Min. of Finance on railway infrastructure charges and the principles of charge setting; Decree 67/2003 GKM of the Min. of Economy and Transport on allocation of national railway infrastructure capacity</td>
<td>Railway Capacity Allocating Office</td>
<td>A train path reservation fee (applied at different rates to both passenger and freight); a variable charge per train km (applied at different rates to both passenger and freight trains). Charges for both freight and passenger trains are differentiated by quality of train path/service and type of train. Additional charges may be levied for capacity constrained sections and for extra services (electricity, stations, marshalling yards etc.).</td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td>Law on Railway 1998. Section 12. Methods for the Calculation of the Public-use Railway Infrastructure User Fees. On December 19, 2003 the Commission’s board approved “Public railway infrastructure usage fee calculation methodology”.</td>
<td>Public Services Regulatory Commission (PUC) after consultation with the railway infrastructure managers.</td>
<td>The methodology was elaborated according to the principle that the fee for the use of railway infrastructure for transportation is set separately for each railway infrastructure category and each train category and that the fee is set for one train kilometer. The carrier pays for the actual number of kilometers covered which is determined by the distance between axis lines of stations.</td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>Law on Railway Transport Sector Reform Lithuanian Railway Transport Code Rules on Leaving of charges for the public railway infrastructure approved by the Resolution 19 May, 2004 No 610 of the Government of the Republic of Lithuania</td>
<td>Infrastructure Manager - LG</td>
<td>Existing legislation specifies that charges are based on exploitation costs. A legal act is under preparation determining the basis for access charges to depend on (anticipated): transportation volume, axle load, speed of transportation, time of day, and the intensity of traffic</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>Polish Law on Railway Transport (28th March 2003), Art. 29-36.</td>
<td>Infrastructure Manager PKP Polish State Railway Lines with supervision from Railway Transport Office (RTO)</td>
<td>The fee for infrastructure consists of: 1. Basic fee (executed train-km multiplied by the individual rate for the specific type of railway line and train) covers:  • the right of the operator to utilise the granted route  • the use of devices and objects necessary to provide technical and commercial handling on the granted route  • the use of electricity traction supply equipment (catenary)  2. Additional fees are defined by the infrastructure manager on the basis of individual calculations</td>
<td></td>
</tr>
</tbody>
</table>
within the contract concerning the additional services signed with operator. Fees for additional services cover for example:
- supervision of the transportation of dangerous goods,
- assistance in the operation of non-standard trains,
- provision of water, compressed air, receiving wastewater, fuelling,
- provision of extra information.

### Romania

| National Railway Law | Ministry of Public Works, Transport and Housing has the duty to set rail infrastructure charges to be approved by the Government | CFR Infrastructure - National Railway Company "CFR"-S.A. | A fixed access charge (independent of traffic intensity), train path reservation fee; a variable charge per gross ton km; a charge for electric current based on measured usage. The variable charges for both freight and passenger trains differentiated by:
- ability to pay,
- quality of train path/service;
- speed of train;
- weight of train.
The fixed charge differentiated by:
- ability to pay,
- quality of train path/service,
- train km planned and actual. |

### Slovakia

| The charge for railway infrastructure is a state-regulated price. Legislatively it is covered by the Act no. 258/1993 Coll. on ŽSR; Act no.164/1996 Coll. on Railways and the Act no. 18/1996 Coll. On Prices. | Ministry of Transport Posts and Telecommunication | ŽSR - The department of marketing and line management gives an approval for invoicing | The train path price depends on the train path length (quantity discount), the route category, the gross weight of the train and a coefficient of the train type (supplements for out-of-gauge, the need for timetable modifications etc.). |

### Slovenia

| Article 15 of Act Amending of Railway Transport Act The Slovenian Railway System is under reorganisation | Public Agency for Rail Transport | Public Agency for Rail Transport | Charges are levied as a variable charge per train km (applied differently to both freight and passenger traffic). The variable charges for both freight and passenger trains are differentiated by: quality of train path/ service, type of train. |

The setting of infrastructure charges is allocated to different bodies across Europe. However, the Ministry of Transport or other Government Departments/Parliament is in general responsible for this task. The Ministry of Transport decides on the infrastructure charges in Slovakia, Bulgaria and Romania. In Czech Republic the responsibility is allocated to the Ministry of Finance. In some other countries the setting of infrastructure charges is the responsibility of the infrastructure division of the national railway company. There are a few countries where direct responsibility for setting infrastructure charges has been given to the infrastructure manager. These include Lithuania and Poland. In Estonia, Latvia and Slovenia regulatory authorities are determining the charging framework. Table 6 gives a summarised overview of organisation responsible for setting of infrastructure charges in NMS.

### Table 6  Overview of organisation responsible for setting of infrastructure charges

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure manager</td>
<td>LT, PL, SK</td>
</tr>
<tr>
<td>Ministry of Transport</td>
<td>SK, RO</td>
</tr>
<tr>
<td>Other regulatory body</td>
<td>EE, LV, HU, SI</td>
</tr>
<tr>
<td>Other</td>
<td>CZ, BG</td>
</tr>
</tbody>
</table>


A main difference between EU15 on the one hand and new member states is that in the former it is more often the Ministry of Transport with the responsibility for setting infrastructure charges, whereas among the new member states the organisation most commonly responsible for setting the charges is other regulatory bodies (e.g. the case of Estonia, Latvia and Slovenia).

Infrastructure charges account for a significant part of the cost of a railway operator. Often, rail freight operators pass on 5 to 25% of revenues to the infrastructure managers. The level and structure of the charge are therefore crucial in establishing competition on the rail network. Several national systems do not meet requirements of transparency and/or are deemed unfair, for instance when a locomotive is charged as much as a train even though a line is not congested.38

According to Directive 2001/14, the infrastructure charges should cover costs that are directly related to the running of the train, including accelerated renewals. It is known that these so-called variable traffic-driven renewal costs are not always charged for at present. Renewal is mostly an investment work and not included in the access charges but directly financed from the State budget because of the long renewal periods (> 25 year). The depreciation of renewal costs is also not included in the access charge. According ECMT to 2005 report39, some countries charge at levels significantly below the rational lower bound represented by marginal costs, including renewals. It makes little sense to carry traffic that can not even pay the marginal costs it imposes on the network in terms of wear and tear and train planning. Some charging systems result in freight trains covering some of the costs of passenger trains in order to push down the budget transfers required to pay for public service obligations. This is financially unsustainable as it will destroy the competitiveness of rail freight.

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39 Railway Reform and Charges for the Use of Infrastructure, ECMT, Paris 2005.
The ECMT study into charging practices among European countries suggested that there are basically four different approaches for the of infrastructure charges:

- **Marginal social costs (MC)** - The marginal costs represents the additional cost imposed on society as a whole form a marginal addition to train kilometres.
- **Marginal cost pricing with mark-ups (MC+)** - Departures from pure marginal social cost pricing (adopted due to perceived budgetary problems). A large number of countries mainly among the EU15 use this model.
- **Full cost recovery after receipt of grants (FC-)** - This approach starts from the concept of the infrastructure manager as a commercial organisation required to recover the costs incurred. Those costs not funded by the state are shared out among the infrastructure users.
- **The full cost recovery model (FC)** is adopted in a number of NMS: Estonia, Hungary, Latvia, Poland, Romania, Slovenia.

Table 7 shows where to find the infrastructure charging framework (included in the network statement) in case it is published online. According to Table 7 most countries have introduced infrastructure charging frameworks. For the new member states infrastructure charging systems have been introduced in all countries except Slovenia where these are under preparation.

<table>
<thead>
<tr>
<th>Country</th>
<th>Infrastructure charging Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td><a href="http://www.railbg.com/">http://www.railbg.com/</a></td>
</tr>
<tr>
<td>Estonia</td>
<td><a href="http://www.edel.ee">www.edel.ee</a></td>
</tr>
<tr>
<td>Hungary</td>
<td><a href="http://www.vpe.hu/kozlemenyek.htm">http://www.vpe.hu/kozlemenyek.htm</a></td>
</tr>
<tr>
<td>Lithuania</td>
<td><a href="http://www.litrail.lt">www.litrail.lt</a></td>
</tr>
<tr>
<td>Poland</td>
<td><a href="http://www.plk-sa.pl/">http://www.plk-sa.pl/</a></td>
</tr>
<tr>
<td>Romania</td>
<td><a href="http://www.cfr.ro">www.cfr.ro</a></td>
</tr>
<tr>
<td>Slovakia</td>
<td><a href="http://www.zsr.sk/english/index.html">http://www.zsr.sk/english/index.html</a></td>
</tr>
<tr>
<td>Slovenia</td>
<td>Under preparation</td>
</tr>
</tbody>
</table>

*Source: Own elaboration.*

### 6.2 Legal determinants

#### 6.2.1 Current state – comparative assessment

**Introduction**

Table 8 shows the extent to which the EU new member states have transposed recent EU rail legislation. The table below contains an overview of the notifications sent by new member states to the Commission concerning the measures adopted to implement the EU rail *acquis* up to December 2007.

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40 Railway Reform and Charges for the Use of Infrastructure, ECMT, Paris 2005.
The columns refer to the Directives or to the national safety and technical rules that apply to the railway sector. Art. 8: Article 8 (2) of Directive 2004/49 on the notification of all relevant national safety rules. Art. 16 (3): Article 16 (3) of Directive 2001/16, as amended by article 2 of Directive 2004/50 on the notification of list of the technical rules in use for implementing the essential requirements.

Table 8 Overview of Transposition of EU Legislation in NMS (December 2007)

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<tbody>
<tr>
<td>BG</td>
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<td>RO</td>
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<td>SI</td>
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<td>SK</td>
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<td>Y</td>
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<td>Y</td>
</tr>
</tbody>
</table>

N: Notification not received
Y: Notification received

Most of the new member states as it is shown in the table are in the process of implementing the directives of the second package. All new member states have communicated to the Commission about implementation measures from the first one\(^{41}\). For the two new member states joined UE in 2007 the Bulgaria has recently transposed the directives of the second package into national legislation while for Romania some further works are required.

In this part of the chapter, more detailed information about the level of the implementation of select railway acquis can be found. Assessing the legal status of new member states railways sector we should take into consideration following elements:

- safety regulation;
- licensing;
- track access;
- setting of infrastructure charges;
- developing the capacity allocation framework;

**Safety regulation**

The objective of the directive concerning rail safety is to develop a common approach to safety and a common system for the issue, scope and validity of safety certificates. The basis for independent technical investigations of accidents is also defined here. The key provision in the Directive 2001/12/EC regarding safety regulation (Article 7) requires that member states shall ensure safety standards and rules are laid down, rolling stock and railway undertakings are certified accordingly and accidents investigated. Furthermore, these tasks shall be undertaken by entities that do not provide rail transport services themselves and are independent of bodies that do so in order to ensure equitable and non-discriminatory access to the infrastructure.

\(^{41}\) An overview of the national measures, including references to national websites where the full texts can be viewed can be found in
Table 9 provides information about the structure of organisations and competencies responsible for safety regulating tasks. It distinguishes between: (1) certification of rolling stock and railway undertakings, (2) investigation of accidents and (3) presentation of the railway undertakings which have safety certificates respectively.

### Table 9 Safety regulation overview

<table>
<thead>
<tr>
<th>Country</th>
<th>Certification of rolling stock and railway undertakings</th>
<th>Investigation of accidents</th>
<th>Safety certificates for railway undertakings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>The Directorate General Railway Inspectorate at the Executive Agency Railway Administration is responsible for issuing the certificate of safety of the railway undertakings, through the State Railway Inspection, after the assessment of all the required conditions by the private Railway Transport Technological Institute, which is the body licensed to issue the certificate of safety of the rolling stock.</td>
<td>In case of an accident, an ad-hoc Committee is established, with members from the Executive Agency Railway Administration of the Ministry, the railway operators and the infrastructure company.</td>
<td>Bulgarian State Railways EAD has a safety certificate</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Rail Authority responsible for issuing carrier certificates and railway vehicle type approval (+: approvals of changes in the railway vehicle, representing a deviation from the approved type). Rail Safety Inspection is responsible for investigation of accidents. It identifies defects endangering the safety of railway operations or railway services, their causes and persons responsible, in compliance with the relative legal regulations, for their occurrence or duration. It requires their originators to eliminate and remedy any identified defects, their causes and harmful consequences and imposes measures for their elimination and remedy.</td>
<td></td>
<td>All railway undertakings have safety certificates</td>
</tr>
<tr>
<td>Estonia</td>
<td>The Estonian Railway Authority is responsible for issuing safety certificates to railway undertakings and for approving the conformity of rail vehicles with the established requirements at any time. The Estonian Railway Authority organizes investigations of railway accidents. In case of a big accident, a special state crisis commission will be formed (police, ministry, ERA, operators). According to the new law, the Ministry of Transportation and more precisely, the new Railway Inspectorate will conduct the accident investigation. ERA will mainly play the role of technical expert and may be invited to assist in the investigation of the accident.</td>
<td></td>
<td>All railway undertakings have safety certificates</td>
</tr>
<tr>
<td>Hungary</td>
<td>The Central Inspectorate for Transport provides railway undertakings with safety certificate and infrastructure managers with safety authorisation based on their application and attached documents. Detailed reports are being made within the organisation of the railway companies and sent to the police. For all accidents with injuries or significant material damage, investigation procedure is carried out by the police.</td>
<td></td>
<td>No decisions on safety certificates have been taken yet.</td>
</tr>
<tr>
<td>Latvia</td>
<td>Railway Technical Inspection is responsible for safety certification. A safety certificate shall be issued to carriers that meet those safety requirements, which deal with carrier personnel, the rolling stock to be utilized and the internal structure of the undertaking. Technical Railway Inspection is responsible for investigation of accidents. The Cabinet though determines the procedures for investigating railway traffic accidents that takes place.</td>
<td></td>
<td>All operating companies have safety certificates, except LDZ cargo</td>
</tr>
<tr>
<td>Lithuania</td>
<td>A commission led by the State Railway Inspectorate. An operator or infrastructure manager must adopt a yearly Traffic Safety Plan. Investigation of rail accidents is done by a special commission that will be formed under the order of the Minister of Transport. A representative of the State Railway Inspectorate must be included in the commission in case of a railway accident.</td>
<td></td>
<td>LG does not have a safety certificate.</td>
</tr>
<tr>
<td>Poland</td>
<td>Railway Transport Office. The rolling stock and railway undertakings must comply with specific technical regulations (that are in accordance with such regulations of EU) in order to be issued a safety certificate. Railway Transport Office. The Minister of Infrastructure will define the detailed rules of reporting about catastrophes and railway accidents, as well as the rules and the mode of past-accidental commission, aiming at reduction of consequences of above mentioned disasters and railway accidents.</td>
<td></td>
<td>All railway undertakings have safety certificates</td>
</tr>
</tbody>
</table>
Rumania
The Romanian Railway Authority (AFER) is the technical special body of the Ministry of Public Works, Transport and Housing, issuing safety certificates for new railway undertakings and authorises the use of rolling stock.

Romanian Railway Authority, AFER elaborates evidence and statistics of railway accidents and events on the basis of reports.

A safety certificate are introduced.

Slovenia
Newly established Public Agency for Rail Transport will be responsible for safety certification.

The Slovenian Railway System is under reorganisation and the public railway infrastructure manager (Public Agency for Rail Transport), authorised manager and the carrier must cooperate in investigation of accidents.

Main operator has safety certificate

Slovakia
State Railway Administration; foreign rolling stock must be in accordance with conditions given in ŽSR regulations

Investigation of accidental cases is the task of the railway operator ŽSR. Within an agreement between ŽSR and the transport operator duties and procedures in case of accident are specified.

ZSSK (main operator) has a safety certificate

Source: Elaboration based on the 10 Country Monographs of EU project (ERAIL, 2005).

The above table demonstrates that safety regulation is organised in a number of different ways across the new member states. In general, certification of rolling stock and railway undertakings respectively are organised within the same organisation. However, it is important to emphasise the specifics concerning new rolling stock and in-use rolling stock. In the case of the former, new rolling stock, which would be authorised under the Interoperability directives, Notified Bodies may be involved followed by final authorisation by the Supervisory Authority. A safety authority/Regulator is likely to have a more substantial role in the case of in-use rolling stock. A number of countries have organised safety certification and accident investigation within one organisation for instance Estonia and Romania.

An important question concerns the extent to which the organisations assigned the task of safety certification are fully independent. In particular, a concern could be that safety certification bodies linked to a Ministry of Transport may not be fully independent of railway undertakings that are state owned creating the possibility of conflict of interest between regulatory responsibility and ownership responsibilities.

Apart from variation regarding the organisation responsible for safety certification other differences exist regarding the duration of safety certificates for railway undertakings, the cost and time of obtaining a safety certificate. As for the duration of safety certificates it is in most cases indeterminate with re-examination every 3 to 5 years. Although in some countries the safety certificate is valid for 5 years. The procedure for calculating the costs for obtaining a safety certificate varies between new member states, in most cases it is fixed although in some countries it is dependent on parameters such as track and train length condition, amount of time required for inspection (REILIMPLEMENT, 2005).

Responsibility for investigation of accidents also highlighted significant variation between the countries. In a number of countries rail safety authorities have the responsibility for accidents investigation. This is for example the case in Czech Republic and Latvia. In some cases the responsibility for accident investigations rests with railway (regulatory) authorities.

**Licensing**

The task of licensing railway undertakings relates to Directive 95/18 as amended by Directive 2001/13/EC. Analysis of this matter shows a high degree of variation between the countries regarding how the licensing procedures are specified. The licensing bodies and regimes are described in Table 10.
Table 10 The licensing bodies and regimes

<table>
<thead>
<tr>
<th>Country</th>
<th>Responsible body</th>
<th>Licensing regime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>The Executive Agency Railway Administration within the Ministry of Transport and Communications is responsible for licensing new railway undertakings</td>
<td>The Minister determines the licensing procedures. The license does not have an explicit duration, but it must be reviewed every five years. The Law does not make any distinction for application for a license in terms of nationality.</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>The Rail Authority</td>
<td>The Rail Authority deals with licensing and safety certification. It shall decide on granting a license within 60 days from the delivery of the application for granting a license. A license is usually valid for the entire network and for passenger and freight transport at the same time. Licenses are valid for various time periods, depending on the decision of the Rail Authority (usually indefinitely). Review takes place every five years. No specific requirements are in place as to the sum of insurance coverage or paid up capital.</td>
</tr>
<tr>
<td>Estonia</td>
<td>Estonian Railway Authority</td>
<td>The Railway Administration decides on the issue of an operating license or refusal to issue an operating license within one month after the submission of the application. Operating licenses shall be issued for an unspecified term. A number of requirements have to be fulfilled in order to be granted a license, including: applicant not declared bankrupt or committed a crime or offence; sufficient professional knowledge to ensure safe operation of the railway undertaking; operational requirements; previous operational licenses not revoked within the last 3 years; liability insurance.</td>
</tr>
<tr>
<td>Hungary</td>
<td>Central Inspectorate for Transport (Railway Inspectorate)</td>
<td>Standard procedure defined by Act on Public Administrative Proceedings with a modified deadline (90 days instead of 30). Assessment based on goodwill, adequate financial basis, professional suitability. As is the case in some other Member States, Hungary has a reciprocity clause in its licensing policy and will only grant licenses to foreign railway undertakings if the country of origin of the undertaking requesting a license also has an open market.</td>
</tr>
<tr>
<td>Latvia</td>
<td>Public Services Regulatory Commission (Public Utility Commission) (passenger traffic)</td>
<td>Operating licences are issued for five years and are issued within 30 days. Operators who have submitted request to one of the mentioned organisations, who can ensure the basic conditions to perform train traffic and the participation of railway specialists, who have perfect reputation and a stable financial position can receive an operating licence. A carrier license shall be issued for a period of five years.</td>
</tr>
<tr>
<td>Lithuania</td>
<td>State Railway Inspectorate (SRI)</td>
<td>The railway undertaking submits application to SRI which will be analysed and given (dis)approval within 30 days. Duration of license is unlimited. If the operator was inactive for 6 months after issuing the license it will be withdrawn. The following types of licences are available: • licence of the carriage of passengers and luggage by railway transport in the territory of the Republic of Lithuania; • licence for the carriage of passengers and luggage by railway transport in international routes; • licence for the carriage of freight by railway transport in international routes; • licence for the carriage of freight by railway in the territory of the Republic of Lithuania.</td>
</tr>
<tr>
<td>Poland</td>
<td>Minister of Infrastructure</td>
<td>The applicant for the licence to run the railway line should (infrastructure manager): (1) have legal title to operate the railway line using particular technologies, (2) employ personnel having relevant professional qualifications, (3) have a guarantee of adequate performance for the economic activity (financial capability), The applicant for the licence to perform railway services should: (1) use rail vehicle satisfying relevant conditions specified in technical regulations, (2) employ personnel having relevant professional qualifications, (3) have a guarantee of adequate performance for the economic activity covered by the application. The duration of the licence is unlimited.</td>
</tr>
<tr>
<td>Rumania</td>
<td>The Romanian Railway Authority (AFER)</td>
<td>AFER is the technical special body of the Ministry of Public Works, Transport and Housing, issuing licenses for new railway undertakings. The applicant operator must fulfill certain requirements such as to have registered the proper rolling stock, trained personnel, financial capacity, and in general, to be able to prove that it can operate efficiently, with safety, respecting all economic and social rules.</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Public Agency for Rail Transport responsible for licensing of railway undertakings.</td>
<td>The railway undertaking has to prove its financial stability, its technical competences, and it has suitably qualified personnel. It also needs to have adequate insurance. A licence is valid for as long as the carrier fulfills the conditions and requirements in the relevant legislation. Currently, the only railway undertaking is the incumbent and no other railway undertakings have applied for licences. Time to issue licence between 4 and 6 months.</td>
</tr>
<tr>
<td>Slovakia</td>
<td>State Railway Administration</td>
<td>ŽSR comments on the application of the future operator for a licence from the view of technical norms and regulations of ŽSR. The licence itself is issued by State Railway Administration. The State Railway Authority shall decide on the licence to be granted within 60 days. Depending on the requirements of the railway undertaking, the licence can be granted for the entire network or for a specific route or can also be refused if there are already capacity bottlenecks. As a general rule, they are reviewed every five years.</td>
</tr>
</tbody>
</table>

Source: (ERAIRL, 2005)
Summing up we can distinguish three models of the licensing procedures in new member states:

1. The Ministry of Transport is allocated this task (e.g. Bulgaria, Lithuania, Poland).
2. Railway regulatory authorities are responsible for licensing (e.g. Czech Republic, Estonia, Latvia, Slovenia, Slovakia and Romania).
3. The licensing responsibility is allocated to transport safety bodies (e.g. Hungary).

Of importance for access to the railway network across Europe it should be noted that the licensing process has not reached the same level even among the EU-15 member states.

Track access

Provisions concerning track access are set out in Directive 2001/14/EC. In particular, Article 13 specifies that infrastructure capacity shall be allocated by an infrastructure manager. In general, responsibility for track access is with an infrastructure manager. A description of the track access bodies and procedures is given in Table 11.

Table 11 The track access bodies and procedures

<table>
<thead>
<tr>
<th>Country</th>
<th>Responsible body</th>
<th>Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>State Railway Infrastructure Company</td>
<td>If provides access to all the railway companies that – according to the existing laws- have a license and a safety certificate. If the required access or the required slot is not provided then the applicant railway undertaking must appeal to the State Railway Infrastructure Company.</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Rail authority</td>
<td>Procedures are specified in accordance with the relevant EC Directives (2001/12)</td>
</tr>
<tr>
<td>Estonia</td>
<td>Infrastructure Manager</td>
<td>Rail transport undertakings have the right to use railways designated for public use for the provision of rail transport services without discrimination. A rail transport undertaking and the infrastructure manager shall agree on the details for access, in particular on the time and duration of use, user fee and other conditions of use. Such agreements shall be entered in writing. Foreign railways are allowed to use the infrastructure in Estonia if they establish a subsidiary in the country or conclude an agreement with an owner of infrastructure.</td>
</tr>
<tr>
<td>Hungary</td>
<td>Railway Capacity Allocation Company</td>
<td>Before preparing the Network Statement the Office for Railway Capacity Allocation is negotiating with interested parties</td>
</tr>
<tr>
<td>Latvia</td>
<td>Now Infrastructure Manager (LDZ), but later specially designated body (RTI or LRA)</td>
<td>Before being allowed to use railway infrastructure the operator must sign a contract with the railway infrastructure manager and obtain a safety certificate. The Latvian Railway Law allows foreign railway operators to use the national rail infrastructure. Foreign operators are bound by the same rules for acquiring track access as do national operators.</td>
</tr>
<tr>
<td>Lithuania</td>
<td>In future this function will be delegated to the newly established infrastructure manager (IM)</td>
<td>A railway operator will have access to tracks provided it has a license to operate and a safety certificate and provided it has signed a public transport contract with a railway infrastructure manager</td>
</tr>
<tr>
<td>Poland</td>
<td>Infrastructure Manager (PLK)</td>
<td>Since October 1st, 2001, JSC PKL that has been established on the basis of the former Directorate of Railway Infrastructure has taken over the task of regulating the track access. The contracts between JSC PKL and railway operators are based on typical commercial contracts of civil law nature.</td>
</tr>
<tr>
<td>Rumania</td>
<td>Ministry of Public Works, Transport and Housing</td>
<td>The Ministry has the following duties: (1) to ensure to all users free access, without discriminations, (2) to set rail infrastructure charges to be approved by the Government, (3) to conclude for the State contracts with CFR, and national and/or commercial entities that perform railway transport, (4) grant on the basis of reciprocity access to foreign users, (5) establish rules for granting, suspending or withdrawing of licenses and authorisations.</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Newly established Public Agency for Rail Transport will be responsible for track access</td>
<td>Procedure will be available after reorganization</td>
</tr>
<tr>
<td>Slovakia</td>
<td>Infrastructure Manager (ZSR)</td>
<td>IM evaluates the technical compatibility of a new entrant and provides track access.</td>
</tr>
</tbody>
</table>

Source: (ERAIL, 2005)
Summing up a total 8 of 10 new member states have allocated responsibility to the infrastructure manager (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia). In case of Romania the Ministry of Transport is only given this task. In Slovenia this task will be taken by newly established Public Agency for Rail Transport.

**Setting of infrastructure charges**

The setting of infrastructure charges concerns two issues:
- the organisation responsible for setting the charges;
- the principles for the charges.

For both issues Directive 2001/14/EC include provisions. This issue is discussed in item 6.1.

**Developing capacity allocation framework**

Provisions concerning capacity allocation framework are set out in Directive 2001/14/EC. In particular, Article 14 require that member states establish a framework for the allocation of infrastructure capacity while respecting the management independence specified in Directive 91/440/EEC. Table 12 provides information about the responsible body developing the capacity allocation framework and the procedures in place.

**Table 12 The responsible body developing the capacity allocation framework**

<table>
<thead>
<tr>
<th>Country</th>
<th>Responsible body</th>
<th>Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>State Railway Infrastructure Company</td>
<td>The calculation of the capacity is made according to the international (UIC) standards.</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Railway Infrastructure Administration</td>
<td>The procedures are described within the Network statement and in the Act on rail systems.</td>
</tr>
<tr>
<td>Estonia</td>
<td>Railway infrastructure managers &amp; Railway inspectorate</td>
<td>Infrastructure capacity should be distributed by the IM first towards public utility transport services, thereafter to other rail transport undertakings on the basis of a public competition. The Government shall establish the conditions and procedure for public competitions.</td>
</tr>
<tr>
<td>Hungary</td>
<td>Railway Capacity Allocation Company</td>
<td>Before preparing the Network Statement the Railway Capacity Allocation Company is negotiating with interested parties (infrastructure managers, railway undertakings, organisations of E U member states for capacity allocation). Allocation deadlines defined in the Decree in accordance with Directive 2001/13</td>
</tr>
<tr>
<td>Latvia</td>
<td>JSC Latvian Railway (IM) is responsible for allocating capacity to the carriers.</td>
<td>The Minister for Transport has the right to confer priority to services within public service obligations. However, in reality the rail infrastructure capacity has no limits in Latvia.</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Allocating public railway infrastructure capabilities is delegated to the SRL, until the set up of a separate organisation</td>
<td>Draft Government resolution on regulations for the allocation of capacity is still under preparation. It is expected that the reorganised State Railway Inspectorate will undertake the monitoring of capacity allocation to ensure non-discriminatory basis.</td>
</tr>
<tr>
<td>Poland</td>
<td>Infrastructure Manager (PLK)</td>
<td>The relevant services of CFR S.A. is in charge of administrating the capacity allocation.</td>
</tr>
<tr>
<td>Romania</td>
<td>Infrastructure manager CFR S.A.</td>
<td>The relevant services of CFR S.A. calculate the capacity for all sections of the network for better planning of railway business. The calculation of the capacity is made according to international standards.</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Newly established Public Agency for Rail Transport will be responsible for it</td>
<td>Procedure will be available after reorganization</td>
</tr>
<tr>
<td>Slovakia</td>
<td>Infrastructure Manager ZSR</td>
<td>Each new operator while applying for a license has to include his request for required infrastructure capacity as well. The given capacity is adjusted by availability. The communication between IM and operators is done in written form</td>
</tr>
</tbody>
</table>

*Source: (ERAIL, 2005)*
In most cases this task is the responsibility of the infrastructure manager: Bulgaria, Czech Republic, Estonia, Latvia, Poland, Slovakia and Romania. However, there are exceptions Lithuania where allocating public railway infrastructure capabilities is delegated to the SRI, until the set up of a separate organisation. In Hungary the Railway Capacity Allocation Company is responsible for developing infrastructure.

6.2.2 Country review

Overview of situation in the rail sector in individual countries belong to new member states are made based on the latest published on the 17 of October 2007. the third edition studies prepared by IBM Global Business Services in collaboration with Prof. Ch. Kirchner from the Humboldt University IBM, (2007). As it is shown on the figure 2 all new member states in this study are assessed as the On Schedule. This middle-ranking group is currently going through a process of dynamic liberalisation. All the new member countries are new to this group. In the case of Estonia, Lithuania which were classified in 2004 for Pending Departure they have skipped a group, and have thus moved directly from the last one into the On Schedule group.

Figure 2 Group classification in the LIB Index 2007 (Rail freight and passenger transport)

Source: IBM (2007)
**Bulgaria**

As it was assessed in Rail Liberalisation Index 2007 published in October 2007, Bulgaria belongs to the group *On Schedule*. It has created the necessary legal framework for a liberalised rail market and transposed the first and second railway packages into national law. However, the rail market is dominated by the state BDZ for both freight and passenger transport. The two private railway undertakings are niche providers for freight transport.

The infrastructure already underwent complete vertical separation from transport in 2002. Since January 2007, open access for national railway undertakings to both the national rail freight transport market and to national purely commercial rail passenger transport is regulated by law. Transit and access rights for foreign rail passenger operators exist only on the basis of Directive 91/440/EEC. Open access applies to foreign rail freight operators. Non-discriminatory treatment of railway undertakings in train path allocation is stipulated by law in Ordinance 41 of the Bulgarian Ministry of Transport with regard to access and use of railway infrastructure.

In June 2007, the network statement – which can be downloaded from the website of the national infrastructure manager – still did not comply with the stipulations made in Directive 2001/14/EC. But according to the NRIC, this situation will be changed in the near future.

The role of regulatory body pursuant to Article 30 of Directive 2001/14/EC is assumed by the Railway Administration Executive Agency which is part of the Ministry of Transport; it is responsible for licensing, safety certificates and homologation of rolling stock.

The main barrier for foreign external Railway Undertakings is to obtain information in Bulgaria, as much of the information, ordinances and laws are only available in Bulgarian.

The infrastructure charging system is linear in structure and does not grant any discounts. The government bears most of the deficits of the loss-making rail passenger transport as part of a financial compensation ruling stipulated in a transport con-tract with BDZ. Up to now, competition in rail freight transport has been marginal. Alongside the freight transport division of BDZ there are only two smaller active railway undertakings which together account for a market share of about three per cent. These are the Bulgarian Railway Company (BRC) and Bulmarket. Rail passenger transport is completely in the hands of BDZ.

Summing up it should be stated that Bulgaria has created the necessary legal framework for a liberalised rail market and transposed the first and second railway packages into national law. However, the rail market is dominated by the state BDZ for both freight and passenger transport. While the purely commercial rail passenger transport market is open to external national RUs, the low ticket prices which are stipulated by law prevent this from being profitable. Rail passenger transport under a public service contract is reserved for the BDZ.

**Czech Republic**

The Czech Republic is now included according Rail Liberalisation Index 2007 into the *On Schedule* group, compared to 2004 when it was still allocated to the *Delayed* group.

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42 Website of the Bulgarian infrastructure manager http://www.rail_infra.bg
43 [http://www.mtc.government.bg](http://www.mtc.government.bg)
This EU member state has created important general regulatory conditions for promoting competition on rail. Accordingly, national external railway undertakings have open access to both rail freight transport and also to the purely commercial rail passenger transport market. Foreign railway undertakings have open access including cabotage in rail freight transport, but access to the rail passenger market is granted only to the extent prescribed in Directive 91/440/EEC.

The public railway infrastructure administration Správa železniční dopravní cesty (SŽDC) was founded on 1 January 2003, with responsibility for train path allocation and publishing the network statement. The infrastructure charges are stipulated by the Czech Ministry of Finance. Operation and maintenance of the rail network are still in the hands of the incumbent České dráhy, a.s. (ČD), whose transport and infrastructure divisions are independent in organisational, accounting and legal terms, and functionally separate. Rail freight and passenger transport are separate in terms of their balance sheets.

The railway-specific, politically independent railway authority Drážní úřad (DÚ) is responsible for market regulation. Its competencies and procedures for dealing with investigation proceedings and sanctions are stipulated in Railway Act No. 266/1994. The regulatory body is obliged to initiate investigations in response to complaints regarding the allocation procedure, payment regulation and the amount and structure of infrastructure charges. However, the Ministry of Transport has the final authority to decide, so that regulatory activity and decision responsibility are not in the same hands.

The law stipulates a maximum period of two months for issuing licences, which the DÚ has observed up to now. The scope of a licence can encompass passenger and/or freight transport, the entire network or only sub-networks, on request. Licences are issued for an indefinite period of time, but expire after twelve months if unused. They are verified every five years.

Train path access is regulated by SŽDC on the basis of several standard contracts with the railway undertakings. Framework agreements can also be concluded. Train path allocation and conflict settlement procedures are transparent and standardised.

The uniform linear infrastructure charging system is published in the network statement; however, this does not include the use of points, switches and junctions, supply facilities for traction current and the provision of other information. No discounts are granted, either for large volumes or early booking.

**Estonia**

Estonia belongs to the *On Schedule* group. The country has therefore undergone an improvement compared to its last classification in the *Pending Departure* group in the Liberalisation Index 2004. It is important that Estonia has not yet completed the separation of infrastructure and transport in Eesti Raudtee and thus not transposed the Directive 2001/12/EC up to now.

In 2001, the largest Estonian railway operator was privatised together with all the infrastructure, but not liberalised. The private investor who was then responsible for the privately owned essential infrastructure provided access, but this was neither transparent nor

non-discriminatory. For example, the infrastructure charges had to be negotiated individually, no network statement was available and the private incumbent had grandfather rights. In other words, it was a kind of private monopoly. In January 2007 the Estonian state repurchased the shares of 66 per cent in the national railway undertaking AS Eesti Raudtee which it had sold to the private consortium BRS (Baltic Rail Services) in 2001. The rail operator is now once again a wholly owned state company. According to information supplied by the Ministry of Economic Affairs and Communication, which is also responsible for transport issues, the Estonian state is planning to hold Eesti Raudtee for at least five years, in order to sound out the options for renewed privatisation.

Railway undertakings basically have open access to both the rail freight and to the rail passenger transport market. However, purely commercial rail passenger transport has to compete with network-wide passenger transport under a public service contract. The regulation tasks pursuant to Directive 2001/14/EC are performed by the Estonian Ministry of Economic Affairs and Communication. Its competencies and the process for settling discrimination cases are stipulated in the Estonian Railway Act. The Ministry is obliged to initiate investigations on request by an EU, it is entitled but not obliged to become active ex officio.

Operating licences for rail transport are awarded by the Estonian Ministry of Economic Affairs and Communication. There are separate licences for passenger and freight transport, issued for an indefinite period of time. Regular verification is not prescribed by law. The legal period for issuing a licence after the submission of all documents is one month. Licences are valid for the entire Estonian rail network. Licences from other EU countries are recognised in Estonia.

Responsibility for train path allocation, issuing safety certificates and for the homologation of rolling stock lies with the Estonian Railway Inspectorate, whose competencies are stipulated in the Estonian Railway Act. There is a legal period of one month for issuing a safety certificate, which is then valid for five years.

The infrastructure charging system in Estonia has one unusual feature in that the charges stipulated by the Estonian Railway Inspectorate consist of one component per train kilometre and one component per gross tonne kilometre. As the infrastructure charges serve solely to cover the incurred operating costs, these can change during the year, depending on the capacity usage of the rail network at the time concerned. This model applies to all railway undertakings in Estonia.

**Hungary**

In 2007, Hungary is allocated to the second group, *On Schedule*. Hungary was already allocated to this second group in 2004, although in 2004 this corresponded to the Delayed group.

In Hungary, there are two main actors: Magyar Államvasutak Részvénytársaságot (MÁV) and Győr-Sopron-Ebenfurti Vasút Részvénytársaság (Gysev, or Raab-Oedenburg-Ebenfurter Eisenbahn). MÁV operates on the entire Hungarian network, whereas Gysev handles rail

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45 Website of the Estonian Ministry Economic Affairs and Communications [www.mkm.ee](http://www.mkm.ee), the Estonian Railway [www.evr.ee](http://www.evr.ee), the Estonian Railway Authority [www.rinsp.ee](http://www.rinsp.ee)
transports only in eastern Austria and western Hungary. Both incumbents have their own rail networks, of which they are also the infrastructure managers. This means that in Hungary there has been no change since 2004, in that the two railway undertakings have only accounting separation of infrastructure and transport, and not functional separation.

Train path allocation both for the MÁV network and also for the Gysev infrastructure is handled centrally by the company Vasúti Pályakapacitás-elosztó Kft (VPE), which deals exclusively with tasks relating to train path allocation. The infrastructure charges are stipulated by the infrastructure managers.

The Hungarian Rail Office (HRO, Hungarian: Magyar Vasúti Hivatal) is the Hungarian regulatory authority pursuant to Directive 2001/14/EC. Its competencies, tasks and structures are stipulated in Act no. CLXXXIII of 2005, which prescribes that the HRO can initiate investigations on request by an railway undertaking, but is not obliged to do so.

The HRO is responsible for licensing. Private railway undertakings describe licensing as an unbureaucratic and unproblematic process, which takes three to four months. However, the legal specification prescribes a period of two months. There are separate licences for freight and passenger transport. Licences issued by other EU Member States are recognised.

There are separate infrastructure charging systems for the infrastructure of MÁV and Gysev. These are revised by the infrastructure managers at annual intervals and must be approved by both the Hungarian Minister of Transport and also the Hungarian Minister of Finance. The infrastructure charging system in Hungary is degressive.

External railway undertakings report that access to the Hungarian rail network was difficult for them during the initial phase of market liberalisation, but that the situation has improved over the past few years. In addition to the two incumbents MÁV Cargo and Gysev, four external railway undertakings are meanwhile active in the rail freight market and now account for a market share of approximately five per cent. Public service transport contracts for passenger transport (currently 100 per cent of rail passenger transport) are awarded on a discretionary basis exclusively to the incumbents.

Important aspects as regards access conditions are the absence of regulations governing safety certificates, the degressive infrastructure charging system which grants early booking discounts, and the fact that ordered train paths can be practically free of charge.

In a European comparison, the Hungarian regulatory authority has comprehensive powers and competencies. However, no empirical values are yet available to establish how well these function in resolving conflicts.

**Latvia**

In 2004, Latvia was still in the Delayed group, but is now allocated to the On Schedule group. Owing to the overall development of the rail liberalisation process in Europe this is still equivalent to the second group.

Concerning legal basis Latvia has transposed all the Directives of the first and second railway packages into national law. This is specified in the Latvian State Railway Law and in Cabinet Decision Number 1025 of the Latvian government of 19 December 2006. As a result, the rail
freight market is open to foreign railway undertakings for cross-border transports and for cabotage. The national rail passenger transport market is however only open to international groupings as defined in Directive 91/440/EEC.

Although national railway undertakings have open access to both the rail freight and rail passenger transport markets, in the latter instance, access tends to be theoretical, as purely commercial rail passenger transport would have to be operated in competition with network-wide passenger transport which is awarded under public service contracts. However, there are plans to conduct the first public tender procedures for rail passenger transport under a public service contract in 2008.

The restructuring of the Latvian railway in terms of institutional separation under one holding was not effected until the end of 2007.

The State Railway Law regulates access to most other service facilities as defined in Directive 2001/14/EC. Many freight terminals are located in the Latvian ports and are privately owned. There is no legally guaranteed access to these terminals.

The Latvian regulatory authority as defined in Directive 2001/14/EC is the State Railway Administration, which is also responsible for issuing rail freight licences. Its competencies are specified in Chapter IV, Section 31 of the State Railway Law. It is obliged to initiate investigations in discrimination cases on request by an railway undertakings and can also take action ex officio. Its decisions are legally binding and objections to its decisions have no suspensive effect. However, the State Railway Administration is not entitled to impose coercive measures or fines.

Licences are valid for a period of five years in Latvia and are issued by two different authorities. Operating licences for rail freight are issued by the State Railway Administration, while the Public Utilities Commission issues licences for rail passenger transport. The issuing process is specified in the Latvian Cabinet Decisions dated 5 January 1999 and 1 July 2001.

Safety certificates are issued by the State Railway Technical Inspection in cooperation with the incumbent LDz. These are only valid for two years. The issuing process is specified in the Latvian Cabinet Decision of 12 October 2004. Safety certificates are issued free of charge. Safety certificates issued in other EU Member States are not recognised in Latvia. The homologation of rolling stock is the responsibility of the State Railway Technical Inspection.

The infrastructure charges are specified by the Public Utilities Commission at annual intervals. They are calculated on the basis of the infrastructure costs notified by LDz. The infrastructure charging system has a linear structure, and no discounts are available.

Although Latvia has transposed the first and second railway packages and is allocated to the On Schedule group, the Latvian rail market is still dominated by the incumbent LDz. In the rail passenger market in particular, the latest increases in infrastructure charges have reduced the attractiveness of this market segment for external railway undertakings. Moreover, the incumbent LDz is involved in the issue of safety certificates, which could impair the neutrality of the issuing process.
Lithuania

Whereas Lithuania was still in the Pending Departure group in 2004, it is now allocated to the On Schedule group.

Transposition of the first and second railway packages into national law was initiated with the reform of the Lithuanian railway Lietuvos Geležinkelio (LG) in 2006. LG was transferred to a holding structure with three separate divisions for freight transport, passenger transport and infrastructure, which also have organisational, legal and accounting independence as prescribed by law in Article 4 (4) of the Lithuanian Railway Transport Code.

Article 28 of the Railway Transport Code prescribes open access to rail infrastructure and regulates open access for foreign railway undertakings in both the passenger and freight segments, with the exception of transports between the enclave Kaliningrad and Russia.

As a general principle, national railway undertakings have open access to both the rail freight and rail passenger transport market. However, purely commercial rail passenger transport would have to be performed in competition with the network-wide transports provided under public service contracts, which are awarded to the incumbent LG on a discretionary basis.

The regulatory authority pursuant to Article 30, Directive 2001/14/EC is the Ministry of Transport and Telecommunications. It is obliged to initiate investigations on request by a railway undertaking.

In order to promote liberalisation of the rail market, the Lithuanian government has resolved to hive off rail infrastructure from the Lithuanian railway LG and transfer it to a separate state-owned company. As a result of that process, infrastructure charges will then be calculated and specified by the new company, and no longer in the form of a decree issued by the State Railway Inspectorate as in the past. The separation is scheduled for early 2008.

The State Railway Inspectorate, which is part of the Lithuanian Ministry of Transport and Telecommunications, has a wide remit. It issues licences and safety certificates, is responsible for the homologation of rolling stock, acts as train path allocation body and, to date, has also specified the infrastructure charges.

The infrastructure charging system has a linear structure, no discounts are granted. The network statement does not state any charges for the cancellation of train paths.

Lithuania has created the required legal framework for opening up both the rail passenger transport and the rail freight market. Part A of the safety certificates of other EU Member States has been recognised in Lithuania since 1 July 2007.

Poland

Poland is allocated to the On Schedule group. In 2004, it still belonged to the Delayed group.

The transport and infrastructure divisions of the incumbent Polskie Koleje Państwowe S.A. (PKP) have organisational, accounting and legal independence and functional separation. PKP PLK S.A. is the infrastructure manager. PKP Cargo S.A. is responsible for rail freight
transport, PKP Intercity Sp.z.o.o. for long-distance rail passenger transport and PKP Przewozy Regionalne Sp.z.o.o for regional rail passenger transport. PKP draws up separate balance sheets for freight and passenger transport.

Foreign rail freight operators have had open access to infrastructure for cross-border transports and cabotage rights since 2006. In the rail passenger segment, foreign railway undertakings only have access pursuant to Directive 91/440/EEC.

Rail regulation is the responsibility of the Polish railway office Urząd Transportu Kolejowego (UTK). The competencies of the UTK can be rated as transparent and procedures in the case of legal proceedings and sanctions as clear.

In its capacity as railway authority, the UTK is responsible not only for regulatory tasks, but also for licensing railway undertakings, i.e. for the issue of licences, safety certificates and homologation of rolling stock.46

Train path access is regulated by PKP PLK S.A. in a standard contract with the railway undertakings. Framework agreements are also possible. A lead time of six months is required for applications for a regular train path. Train path allocation during the year is possible. Information about available train paths is published on the Internet.

Poland has successfully implemented market opening for external railway undertakings in the freight transport segment. External railway undertakings already had open access to the freight transport market in 2006. Public service contracts for rail passenger transport are awarded primarily on a discretionary basis without exclusive rights. railway undertakings wishing to offer purely commercial passenger transport have to compete with passenger transport under a public service contract.

Romania

Romania is allocated to the second group, On Schedule. Romania began to reform its railway system in 1998. Pursuant to Ordinance 12/1998, the incumbent SNCFR was split into five companies. These joint stock companies, which are all still wholly owned by the state, are independent of each other in terms of ownership, so that there is full institutional separation of infrastructure and transport as well as separation of rail freight and rail passenger transport.

Romania has not yet notified the EU Commission of transposition of Directive 2001/12/EC. Ordinance 12/1998 states: “Under the terms and conditions of the law, parts of the public rail infrastructure may be rented out or sub-leased, upon the approval of the Ministry of Transport.” This means that an railway undertaking can actually be responsible for management of some parts of infrastructure.

When it joined the EU, Romania transposed the requirements of Directive 2004/51/EC into national law by virtue of Ordinance 155/2005, which means that domestic and foreign rail freight operators have open access to the Romanian rail network. Pursuant to Article 15 (2) of Ordinance 12/1998, foreign rail passenger operators have access to the Romanian network in the form of international groupings or other international agreements (which are not specified in any further detail).

46 Website of the rail authority http://www.utk.gov.pl
Pursuant to Article 5 (2) of Ordinance 12/1998, national rail passenger operators can obtain access to passenger transports under a public service contract through tender procedures. According to CFR, there is also open access to purely commercial rail passenger transport in addition to passenger transports under a public service contract.

The Railway Supervision Council is a part of the Romanian Ministry of Transport and acts as the regulatory authority as defined in Directive 2001/14/EC. The tasks, structure and competencies of the regulatory authority are specified in the Ordinance 89/2003 and in Government Decision No. 812/2005.

The Romanian Railway Authority (AFER) is responsible for issuing licences, safety certificates and the homologation of rolling stock. The licences are valid for a period of five years and subject to annual verification. Licences issued by other EU Member States are recognised without examination.

The Romanian Railway Safety Authority (RRSA), which is part of the AFER, is responsible for issuing safety certificates. Romania transposed the requirements of Directive 2004/49/EC into national law in Ordinance 55/2006. Pursuant to Article 12 of Ordinance 55/2006, applications for safety certificates have to be processed within four months. The RRSA is also responsible for the homologation of rolling stock.

Pursuant to Ordinance 12/1998, the incumbent SNCFR was split into five companies with separate ownership, including CFR Infrastructură S.A., CFR Marfă S.A. (freight transport) and CFR Călători S.A. (passenger transport). Rail liberalisation has had a dynamic effect on the development of the rail freight market. There are currently a total of 23 external rail freight operators active on the Romanian rail network, accounting for a market share of 25.6 per cent. In the rail passenger market, external RUs still play only an insignificant role, with a total market share of just 1.2 per cent.

Slovakia

As is stated in Rail Liberalisation Index, (2004), Slovakia was still in the Delayed group in 2004, but in 2007 it has now been allocated to the On Schedule group.

There has been separate ownership of infrastructure and transport in Slovakia since 2002. Železnice Slovenskej republiky (ŽSR) has been responsible for infrastructure since then. In the beginning of 2005, the transport division Železničná spoločnosť a.s. was split into two joint stock companies: since then Železničnú spoločnosť Slovensko, a.s. (ŽSSK) has been responsible for rail passenger transport and Železničnú spoločnosť Cargo Slovakia, a.s. (ŽSSK Cargo) for rail freight. These companies are still wholly owned by the state.

Foreign rail freight operators have open access inclusive of cabotage rights, which is guaranteed by Act No. 109/2005. In fact practically in the rail freight market, national operators have access to infrastructure partially as open access, and partially through transport contracts. Public service contracts for passenger transport are awarded only on a discretionary basis. Purely commercial passenger transport is not regulated by law. In the rail passenger market, foreign railway undertakings have access only pursuant to the provisions of Directive 91/440/EEC.
Úrad pre reguláciu železničnej dopravy (ÚRŽD) has acted as rail-specific regulatory authority as defined in Article 30 of Directive 2001/14/EC since 1 November 2005. The ÚRŽD is an independent authority and is not subject to political influence. It can be contacted easily and publishes its annual reports on the Internet. In addition to the ÚRŽD, Protimonopolný úrad Slovenskej republiky (the monopolies and mergers commission of the Slovakian Republic) monitors competition on rail. The ÚRŽD is obliged to initiate investigations in response to a request by an railway undertaking relating to allocation procedures, the charging system, or the level and structure of infrastructure charges. The regulatory authority examines both the results and also the issuing processes. It is entitled but not obliged to initiate investigations ex officio.

The ÚRŽD is responsible for issuing licences. In addition to the application, railway undertakings also have to submit police clearance certificates for all managing directors, an extract from the register of companies, proof of the professional qualifications of at least one managing director, proof of the financial soundness of the RU and proof of payment of the licence fee. Licences are verified at irregular, unspecified intervals. The law states that licences have to be issued within a period of two months, and that period was observed for licences submitted by rail freight operators to date. Licences of other Member States are recognised on the rail network of the Slovakian Republic.

The safety certificate is also issued by the ÚRŽD. By law, applications have to be processed within a maximum of 30 days, but in practice they are usually issued within 15 days. As with the licences, the safety certificate can be issued for either freight and/or passenger transport and for the entire network, a sub-network or certain lines. Part A of safety certificates issued by other EU Member States is recognised and does not undergo further examination after submission. Safety certificates are valid for five years, but expire after one year if no services are provided on the infrastructure. There are no legal specifications governing verification of safety certificates.

The allocation of train path capacities is the responsibility of the infrastructure manager ŽSR. The infrastructure manager can sign framework agreements with railway undertakings for a period of 5 years, but that period can also be adapted to suit individual requirements. Railway undertakings also have the option of signing a standard RailNetEurope agreement or negotiating an individual agreement.

The infrastructure charging system is regulated in Ordinance No. 654/2005 and the maximum charge is stipulated by the Ministry of Finance. The charging system is linear and depends on the type of transport (freight or passenger transport), the train path category, the gross weight of the train and a coefficient for the type of train. No cancellation fees are charged. It is interesting to note that no statistics are kept for the share of ordered but unused train paths.

**Slovenia**

In 2007 Slovenia is allocated to the second group, *On Schedule*. In 2004, Slovenia belonged to the third and last group, *Delayed*. In 2003, the incumbent Slovenske železnice (SZ) was converted into a holding with separate subsidiaries for freight transport, passenger transport and infrastructure. There is only accounting separation of infrastructure and transport.

In the freight segment, foreign RUs, international groupings and combined trans-порт providers have open access to cross-border transports. However, Slovenian law does not yet
envisage open access to cabotage transports in the rail freight segment, as required by EU Directive 2004/51/EC.

The Slovenian Ministry of Transport has established a regulatory authority pursuant to Directive 2001/14/EC. The competencies and tasks of the regulatory authority are regulated by law. The regulatory authority is responsible for examination of the network statement and is entitled to initiate investigations relating to train path allocation and charges. However, it is not authorised to order coercive measures or impose fines.

Licensing, safety certificate, homologation of rolling stock and access to train paths are in responsibility of the Javna agencija za železniški promet Republike Slovenije (AŽP), also known as the Public Agency for Rail Transport of Republic of Slovenia (PART). The PART is under the charge of the Ministry of Transport. In respect of the issue of licences and safety certificates, Slovenia has transposed the requirements of the first and second railway packages. To date, however, no external railway undertakings have obtained a national licence or safety certificate. There are no transparent regulations in force governing the homologation of rolling stock.

6.3 Railway network management in NMS

Railway transportation is closely related to railway infrastructure which has direct impact on efficiency, reliability and safety of this mode of transportation.

Management patterns in rail infrastructure organization evolve under the influence of EU law, knowledge and experience (the first, second and third railway packages). In World Bank opinion the main topics of those reforms are:

- Basic reforms, such as separation of policy-making, regulatory roles and enterprise functions, have already been introduced in EU member and candidate countries as well as other countries of the region; they remain, though, a challenge for some CIS countries.
- Redrawing the roles of the government, converting the technical inspectorate into the rail regulator, advancing fiscal decentralization and capacity improvement of regional and municipal governments, and establishing fair competition rules are necessary elements of railway reform but are yet to be undertaken in many countries.
- Unbundling of operations along business lines and introduction of transparent and modern cost accounting and information systems are essential to improve efficiency and financial sustainability of rail transport.
- Closure of uneconomic lines and further reductions in staff numbers will be necessary in order to make railway operations financially viable.
- Many railways should focus on core business functions and should, therefore, divest non-core services (schools, hotels, etc) as soon as possible.
- Redefining the roles of the government, converting the technical inspectorate into the rail regulator, advancing fiscal decentralization and capacity improvement of regional and municipal governments, and establishing fair competition rules, are necessary elements of railway reform but are yet to be undertaken in many countries.
- Rolling stock renewal, track rehabilitation, and modernization of signalization (signaling) are necessary to improve safety, eliminate speed restrictions and thus increase competitiveness (particularly through eliminating speed restrictions).

• Non-discrimination of track access rights and liberalization of freight tariffs at reasonable, transparent and realistic charges, are necessary to improve competition and service quality.
• Liberalization of freight tariffs and non-discriminatory track access at reasonable, transparent and realistic charges are also important.

Directive 2001/12/EC of the European Parliament and of the Council of 26 February 2001 amending Council Directive 91/440/EEC on the development of the Community's railways. specifies that independent organisational entities must be specified for transport operations and infrastructure management. Essential functions, such as rail capacity allocation, infrastructure charging and licensing be separated from transport operations to enable new rail operators fair access to the rail market. Railway undertakings are also required to set up separate accounts for passenger and freight operations.

Although there is common obligation to introduction of similar regulations among all members in regard to railways management in fact there are different schemes employed in various states.

Detailed comparative analysis of railway administration in NMS is presented in the annex to this deliverable.

6.4 Technology and other determinants

The European rail industry is in a state of rapid transformation aimed at meeting the increasing expectations and demands of today's market. Rail interoperability, defined as the operational and technical integration of the different national railway systems in the European Union, is a key element in this transformation. Its successful achievement will bring a host of benefits to citizens and businesses via seamless rail connections and better coordination of operating rules and communication and signalling systems.

January 2007 was a milestone in European rail history: the European rail freight market was finally opened completely. For decades, EU Member States had one national rail freight carrier, and international traffic was only possible in cooperation with these national carriers. Now no Member State can deny any European freight carrier access to its market. Different carriers can compete for the same business. This is an important legal step in the process of creating an integrated European rail sector (CER, 2007).

The full market opening was the final step of the liberalisation process that started in the early 1990s. Several Directives (including Directive 91/440/EEC and the subsequent First Railway Package) initiated the process of opening the rail freight sector to competition. The liberalisation process was taken one step further with the adoption of the Second Railway Package in April 2004. Amongst others, it opened (in Directive 2004/51/EC) the market for international freight services from 1 January 2006 as well as the market for national freight transport (“cabotage”) from 1 January 2007.

For its part, the European Commission has stressed the importance of rail interoperability as a prerequisite to any revitalisation of the rail system. In its 1996 Directive on 'Conventional Rail Interoperability', it set the regulatory framework necessary to enhance attractiveness,
competitiveness and efficiency of rail operations. Its aim is to harmonise the specifications of rolling stock, signalling, command and control and telecommunications systems, noise emissions, operating rules, maintenance and repair and conformity assessment.

Directives on interoperability:
- 96/48/EC on interoperability of the European high speed railway system,
- 2001/16/EC on interoperability of the European conventional railway system,
- 2004/50/EC amending the 96/48/EC, and 2001/16/EC,
- 2004/49/EC on safety on the Community's railways.

This part of study refers into interoperability of the trans-European conventional rail system. Directive 2001/16/EC on the interoperability of the conventional rail system adopted on 19 March 2001, like that on the high-speed system, introduces Community procedures for the preparation and adoption of Technical Specifications for Interoperability (TSI) and common rules for assessing conformity to these specifications.

The Directive requires a first group of priority TSIs to be adopted within three years in the following areas: control/command and signalling; telematics applications for freight services; traffic operation and management (including staff qualifications for cross-border services); freight wagons; and noise problems deriving from rolling stock and infrastructure.

**Authorisation of (sub)systems**

Authorisation of (sub)systems refers to tasks under the Interoperability Directives 96/48 (highspeed) and 2001/16 (conventional rail systems). In particular, in the case of Directive 96/48/EC (Article 14) each member state shall authorize the placing in service of those structural subsystems constituting the trans-European high-speed rail system which are located in its territory or operated by railway undertakings established there. Furthermore, member states shall take all necessary steps to ensure that these subsystems may be placed in service only if they are designed, constructed and installed and/or operated in such a way as not to hinder satisfaction of the essential requirements concerning them when integrated into the trans-European high-speed rail system. The provisions in the case of Directive 2001/16/EC are similar, where Article 14 specifies that each member state shall authorise the putting into service of those structural subsystems constituting the trans-European conventional rail system which are located or operated in its territory. Member states shall take all appropriate steps to ensure that these subsystems may be put into service only if they are designed, constructed and installed in such a way as to meet the essential requirements concerning them when integrated into the trans-European conventional rail system. In particular, they shall check the compatibility of these subsystems with the system into which they are being integrated (ERAIL, 2005).

As of December 2007 almost all new member states have implemented 96/48 (Slovakia is out of that group), while all countries of NMS notified that they have fully transposed 2001/16.

**Notified Bodies**

Provisions concerning Notified Bodies refer to the Interoperability directives 96/48/EC (trans-European high-speed rail system) and 2001/16/EC (trans-European conventional rail systems). In particular, in both directives notified bodies “means the bodies which are responsible for assessing the conformity or suitability for use of the interoperability
constituents or for appraising the "EC" procedure for verification of the subsystems”. According to Article 20.1 (in both directives) member states are required to notify the Commission and the other member states of the bodies responsible for carrying out the procedure for the assessment of conformity or suitability for use referred to in Article 13 and the checking procedure referred to in Article 18, indicating each body's area of responsibility. Table 13 shows which organisation approves notified bodies and who controls them.

Table 13 Notified Bodies

<table>
<thead>
<tr>
<th>Country</th>
<th>Approval of Notified Bodies</th>
<th>Assessment/Control of Notified Bodies</th>
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<tbody>
<tr>
<td>Bulgaria</td>
<td>Ministry of Transport and Communications, Executive Agency</td>
<td>Ministry of Transport and Communications, Executive Agency</td>
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<tr>
<td></td>
<td>Railway Administration National, Accreditation Agency</td>
<td>Railway Administration National, Accreditation Agency</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Czech Office for Standards, Metrology and Testing (UNMZ)</td>
<td>Czech Inspection Office, Rail Authority</td>
</tr>
<tr>
<td>Estonia</td>
<td>Not implemented yet</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Hungary</td>
<td>Ministry of Economy and Transport;</td>
<td>Central Inspectorate for Transport.</td>
</tr>
<tr>
<td>Latvia</td>
<td>Not implemented yet</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Not implemented yet</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Poland</td>
<td>President of the Railway Transport Office (supervisory) and the Polish Centre of Certification</td>
<td>President of the Railway Transport Office (supervisory) and the Polish Centre of Certification</td>
</tr>
<tr>
<td>Romania</td>
<td>Not implemented yet</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Slovenia</td>
<td>The Slovenian Railway System is under reorganisation and the Ministry of Transport will be responsible for approval of Notified Bodies</td>
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</tr>
<tr>
<td>Slovakia</td>
<td>Ministry of Transport Posts and Telecommunication</td>
<td>Ministry of Transport Posts and Telecommunication</td>
</tr>
</tbody>
</table>

Source: (ERAIL, 2005)

For new member in six cases out of 10 possible (Czech Republic, Hungary, Poland, Slovakia, Slovenia and Bulgaria) has the body responsible for approval of Notified Bodies been specified. Three of these countries has allocated the responsibility to a Ministry of Transport (Hungary, Slovakia and Slovenia) while the other three countries (Czech Republic, Poland and Bulgaria) used different models (usually with several organisations being involved such as national accreditation agencies and transport ministries). Information for Estonia, Latvia, Lithuania and Romania is not available yet because the legal basis is not completed.

As the important disadvantage to integration rail sector across the EU language is mentioned. It is the key to interoperability of staff and the question of language used in railway operations is a complex problem. Drivers and other railway staff – mobile or ground – staff who have to communicate for train movement and other safety purposes must do so in the “operating” language chosen by the host infrastructure manager. For this reason, CER launched a project to facilitate staff interoperability and create a common basis for teaching languages last year. The two first parts of the project have been finalised. The first part deals with finding a precise definition of the minimum language competence needed by staff involved in cross-border rail operation. The second part is to find an assessment method of this language level that can be used by any rail operating company and can be accepted by infrastructure managers and national safety authorities across Europe. These results have to be submitted now to the European Railway Agency to find the best way for making them applicable in the
whole European railway system. The third part of the project is related to the creation of a formalised language, with the definition of key messages and language elements of identical content to be used in communication between drivers and ground staff in charge of traffic management for each “risk situation” in the language of the infrastructure used. The first list of formalised messages has had to be produced by end 2007 (CER, 2007).

Numerous technical barriers, such as different track widths, supply voltages, signalling and electrical systems have long been identified. On a more fundamental level, a major barrier to the success of a new integrated rail strategy is the current lack of intra- and inter-network standards. For railways and companies to arrive at a common position for the configuration of the European rail system and thence to move forward in the creation of a single market for rail services and products, there is an immediate need for research that helps partners reconcile their national standards within new European norms.

### 6.5 Conclusions

On the base of the detailed review presented above the preconditions for pricing preconditions for pricing reforms in railways transport in NMS are summarised in Table 14.

#### Table 14 Preconditions for pricing reforms in railway transport in NMS

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Measures</th>
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| Legal and Institutional | *Bulgaria:* It has created the necessary legal framework for a liberalised rail market and transposed the first and second railway packages into national law. The infrastructure already underwent complete vertical separation from operation activity.  
*Czech Republic:* It has created important general regulatory conditions for promoting competition on rail. Accordingly, national external railway undertakings have open access to both rail freight transport and also to the purely commercial rail passenger transport market.  
*Estonia:* The new Railways Act, which came into effect at 31 March 2004, liberalises further the railway services and compels Eesti Raudtee Ltd. to compete on an equal basis with other operators for traffic quotas. It’s not difficult to have an access to the network for the reasons that by new Railways Act the Railway Inspectorate is independent body, who allocates capacity  
*Hungary:* In Hungary, there are two main actors: MÁV and Gysev, or Raab-Oedenburg-Ebenfurter Eisenbahn. MÁV operates on the entire Hungarian network, whereas Gysev handles rail transports only in eastern Austria and western Hungary. Both incumbents have their own rail networks, of which they are also the infrastructure managers. This means that in Hungary there has been no change since 2004, in that the two railway undertakings have only accounting separation of infrastructure and transport, and not functional separation.  
*Lithuania:* Concerning legal basis Latvia has transposed all the Directives of the first and second railway packages into national law. This is specified in the Latvian State Railway Law and in Cabinet Decision Number 1025 of the Latvian government of 19 December 2006. As a result, the rail freight market is open to foreign railway undertakings for cross-border transports and for cabotage. The national rail passenger transport market is however only open to international groupings as defined in Directive 91/440/EEC.  
*Lithuania:* Transposition of the first and second railway packages into national law was initiated with the reform of the Lithuanian railway Lietuvos Geležinkeliai (LG) in 2006. LG was transferred to a holding structure with three separate divisions for
railway transport

<table>
<thead>
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<tr>
<td>freight transport, passenger transport and infrastructure, which also have organisational, legal and accounting independence as prescribed by law in Article 4 (4) of the Lithuanian Railway Transport Code.</td>
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<tr>
<td><strong>Poland:</strong> It has successfully implemented market opening for external railway undertakings in the freight transport segment. External railway undertakings already had open access to the freight transport market in 2006. Public service contracts for rail passenger transport are awarded primarily on a discretionary basis without exclusive rights. railway undertakings wishing to offer purely commercial passenger transport have to compete with passenger transport under a public service contract.</td>
<td></td>
</tr>
<tr>
<td><strong>Romania:</strong> Romania has not yet notified the EU Commission of transposition of Directive 2001/12/EC. Ordinance 12/1998 states: “Under the terms and conditions of the law, parts of the public rail infrastructure may be rented out or sub-leased, upon the approval of the Ministry of Transport.” This means that an railway undertaking can actually be responsible for management of some parts of infrastructure.</td>
<td></td>
</tr>
<tr>
<td><strong>Slovakia:</strong> There has been separate ownership of infrastructure and transport in Slovakia since 2002. Foreign rail freight operators have open access inclusive of cabotage rights, which is guaranteed by Act No. 109/2005. In fact, practically in the rail freight market, national operators have access to infrastructure partially as open access, and partially through transport contracts. Public service contracts for passenger transport are awarded only on a discretionary basis. Purely commercial passenger transport is not regulated by law.</td>
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<tr>
<td><strong>Slovenia:</strong> In 2003, the incumbent Slovenske železnice (SŽ) was converted into a holding with separate subsidiaries for freight transport, passenger transport and infrastructure. There is only accounting separation of infrastructure and transport. In the freight segment, foreign RUs, international groupings and combined transport providers have open access to cross-border transports. However, Slovenian law does not yet envisage open access to cabotage transports in the rail freight segment, as required by EU Directive 2004/51/EC.</td>
<td></td>
</tr>
</tbody>
</table>

**Technology**

| Bulgaria: has transposed the Directives 96/48 and 2001/16 |
| Czech Republic: has transposed the Directives 96/48 and 2001/16 |
| **Estonia:** - Not implemented yet |
| **Hungary:** has transposed the Directives 96/48 and 2001/16 |
| **Latvia:** - Not implemented yet |
| **Lithuania:** - Not implemented yet |
| **Poland:** has transposed the Directives 96/48 and 2001/16 |
| **Romania:** - Not implemented yet |
| **Slovakia:** has transposed the Directives 96/48 and 2001/16 |
| **Slovenia:** Not implemented yet |

**Acceptability***

| Bulgaria: The issue now is to improve the existing charging regime through differentiation of charges according to different traffic volume on different tracks and taking into consideration the hours of the train movements. The Railway Administration Executive Agency is planning to amend the Railway Charges Tariff and apply two-part tariff differentiated according to different traffic volumes on different network sections. |
| **Czech Republic:** no additional plans for changes in direct charging. |
| **Estonia:** Estonian Railways Ltd infrastructure management and freight railway undertaking will be split into two companies and they will be the daughter companies of Estonian Railways. |
| **Hungary:** None changes in charging are planed, compulsory milestones have been already achieved. |
| **Latvia:** no information |
| **Lithuania:** no changes are planned |
| **Poland:** no changes are planned |
| **Romania:** - |
| **Slovakia:** no changes are planned |
| **Slovenia:** no changes are planned |

* based on questionnaire answers
As it is shown in the table most of the new member states are in the process of implementing the directives of the second package. All new member states have communicated to the Commission about implementation measures from the first one. For the two new member states joined UE in 2007 the Bulgaria has recently transposed the directives of the second package into national legislation while for Romania some further works are required.

Concerning Interoperability Directives 96/48 (high-speed) and 2001/16 (conventional rail systems) the authorisation of (sub)systems is needed. The Article 14 of Directive 2001/16/EC specifies that each member state shall authorise the putting into service of those structural subsystems constituting the trans-European conventional rail system which are located or operated in its territory. Member states shall take all appropriate steps to ensure that these subsystems may be put into service only if they are designed, constructed and installed in such a way as to meet the essential requirements concerning them when integrated into the trans-European conventional rail system. In particular, they shall check the compatibility of these subsystems with the system into which they are being integrated. In six cases out of 10 possible (Czech Republic, Hungary, Poland, Slovakia, Slovenia and Bulgaria) has the body responsible for approval of Notified Bodies been specified. Three of these countries has allocated the responsibility to a Ministry of Transport (Hungary, Slovakia and Slovenia) while the other three countries (Czech Republic, Poland and Bulgaria) used different models (usually with several organisations being involved such as national accreditation agencies and transport ministries). Information for Estonia, Latvia, Lithuania and Romania is not available yet because the legal basis is not completed.

Regarding future plans for changes in railway charging only Bulgaria stated that it is going to improve the existing charging regime through differentiation of charges according to different traffic volume on different tracks and taking into consideration the hours of the train movements. There are no specific actions in this field.

7. REFORMING CHARGES IN AIR TRANSPORT IN NMS

7.1 Current policy and airport charges in NMS

7.1.1 Current policy – comparative assessment

Recent years have witnessed a significant growth in European air travel. This is direct result of introduction into market of new carriers and general liberalization of the sector. The degree of liberalization process vary from country to country as some of new member states have negotiated limited time periods of extended protection of their national air markets. The issue of air charges and charging schemes is central to the problem of deregulation and liberalization of air industry. There are three areas of charging in question:

- Regulation of en-route charge;
- Regulation of ATM (Air Traffic Management) terminal charges;
- Regulation of airport charges.

An overview of the national measures, including references to national websites where the full texts can be viewed can be found in...
In the case of the first group the focus is on quality and the price of the services provided by Air Navigation Service Providers (ANSPs). Charges are levied on aircraft in order to cover the air navigation services provided in three main phases of flight: movements at and around the aerodrome (aerodrome control), approach and departure of flights including initial climb and descent (approach control) and en-route.

EUROCONTROL, through the Central Route Charges Office (CRCO), provides a harmonized system of charging for en-route services with a specific governing body established in each member state. In some cases there are more than one responsible body, usually when country’s ministry of transport takes active part in charging schemes introduction. As EU regulations call for separation of institutions governing navigation charges from governmental offices different approaches could be noted but considerably all countries conducted institutional separation of the appropriate organization. It must be noted that single NSA (National Supervision Authority) per country policy is criticized by airlines as inadequate in growing market.

Table 15 National Supervision Authorities in new member states

<table>
<thead>
<tr>
<th>Country</th>
<th>NSA</th>
<th>Separation</th>
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<tbody>
<tr>
<td>Poland</td>
<td>CAA</td>
<td>Institutional</td>
</tr>
<tr>
<td>Latvia</td>
<td>MoT and CAA</td>
<td>Institutional</td>
</tr>
<tr>
<td>Estonia</td>
<td>CAA</td>
<td>Institutional</td>
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<tr>
<td>Lithuania</td>
<td>CAA</td>
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<tr>
<td>Hungary</td>
<td>CAA</td>
<td>Institutional</td>
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<td>Bulgaria</td>
<td>DGCA</td>
<td>Institutional</td>
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<tr>
<td>Romania</td>
<td>RCAA and MoT</td>
<td>Institutional</td>
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<tr>
<td>Czech Republic</td>
<td>CAA</td>
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<tr>
<td>Slovakia</td>
<td>CAA and MoT</td>
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<tr>
<td>Slovenia</td>
<td>CAA</td>
<td>Institutional</td>
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</table>


Note: CAA= civil aviation authority

The equivalent system for aerodrome or approach control, which could be described as terminal European Air Traffic Management (ATM) system is still suffering from fragmentation. The annual bill to the airlines of € 9.5bn for European ATM could be approximately € 3.3bn lower if the system were operated at maximum efficiency\(^9\). It is perceived that additional savings in area of safety and environment could be made under new system. Additionally the capabilities of current system in which charging schemes are under governmental control is in question in regard to further adoption of the Single European Sky (SES) legislation.

Certain characteristics of the current systems for these charges in the EU have raised particular concerns amongst airlines. These include:

- countries levy terminal navigation charges, but it is in some cases unclear what costs these actually recover. This is additionally hard to measure or compare since there is no common approach in charging methodologies;
- boundaries between en-route and approach are not fully defined, which may lead to organizational and operational distortions;

in some cases there are explicit price discrimination in the charging formula, where charges bear no relation to costs – especially true for charging schemes differentiating between national and other carriers;

- a lack of information on the costs underlying terminal charges.

The first two points are reflected by the situation where the majority of EU airports are still publicly owned and as a result the public authorities have an interest to maximize profits from airport operations. This has negative impact on increasing number of privately owned airports which is rapidly growing within EU over past decade. This has special considerations in case of new member states where airports are being privatized. Governments usually cannot resist a move to facilitate charges increases at airports that are in the preparatory stages to privatisation so as to generate revenues from the sale of an airport to private investors.

The last point means that users are usually not consulted in any way prior to terminal charges change. Moreover any investment decisions are made by airports only without any influence from final users. On average ATM terminal charges account for between 4% and 8% of the major EU air carriers’ operational costs as calculated by ICAO and European Airlines Association. In case of new member states those values are around the top numbers. The latest legislative proposals as well as industry voice calls for freedom of ATM services as they should, wherever feasible, be performed in competition or after a transparent tender procedure. This move toward competitive service providers should be made especially in case of services such as Meteorological Services, Communication, Navigation and Surveillance which are generally more susceptible to market-based provision and should be unbundled from the core Air Traffic Control function.

Airport charges cover all operations in areas of:

- Landing / use of runway,
- Parking and handling,
- Passenger charges.

In practice those charges represent the mixed amounts of fees usually calculated in regard to aircraft MTOW or number of passengers. They might vary from airport to the airport. However the procedure for establishing those charges are similar within each country (as guidelines are provided by governments) and do not vary much from country to country. Finally the amount of airport charges is in most new member states subject to airport authorities decisions. However maximum charge is usually published by government. In many instances government has a final say as to the level of charging or reserves itself a right to veto airport established charges.

7.1.2 Country review

Bulgaria

Bulgaria has 5 airports of international capabilities. Those are: Sofia, Bourgas, Varna, Gorna-Oryahovitsa, Plovdiv.

Regulation of airport charges

At airports which are for public use, the following charges are due:

- Landing charge;
- Parking charge;
● Passenger handling charge.

The Government of The Republic of Bulgaria, via the “Civil Aviation Act” (published in the State Gazette No.85, 1998) and “Regulation concerning the fees for use of public airports and air navigation services in Republic of Bulgaria” (enacted via decree No.280 of the Council of Ministers on December 23th, 1998 and published in the State Gazette No.2, 1999) approved government fees for services provided for aircraft. The tariff regulations came into force on 1 January 1999.

**Charging schemes**

The procedure for charging could be observed on the example of Gorna Oryahovitsa airport. Landing Charges (as per Article 11, Clause 1) are based on MTOW of aircraft. Different rates apply in case of international flights or domestic flights. Furthermore, charges are applied per tonne but different rate is used within each weight category. Categories consist of up to 3 t, from 3 to 10 t, from 10 to 20 t, from 20 to 40 t, from 40 to 60 t, from 60 to 80 t, from 80 to 100 t, over 100 t.

Parking charges (as per Article 13, Clause 2 & 3) - charge rate beyond the free stay (as per Article 10, Clause 4, par. 11) is equal to 20 percent of the landing charge for any time period equal to 24 hours or a part of it. In cases where an international flight is followed by a domestic flight, the parking charge will be equal to the international flight charge. In cases where a domestic flight is followed by an international flight, the parking charge will be equal to the domestic flight charge.

The airport standing charge rate for airports serving as bases for a specific carrier (permanent or seasonal) for one day (24 hrs) is equal to 5 percent of the landing charge for domestic flights for any time interval equal to 24 hours or a part of it.

Passenger handling charge (as per Article 16, Clause 2) varies by type of flight (international and domestic). Also children from 2 to 12 years old are charged at 50 percent of the adult charge.

**Czech Republic**

Czech Republic currently has six airports of international capabilities Prague-Ruzyně, Ostrava, Brno, Tuarny, Pardubice, Karlovy, Vary, Kunovice. Still vast majority of traffic goes through Prague Airport

*Regulation of airport charges includes:*
  - Landing / Use of runway
  - Parking and Handling
  - Passenger Charge.

The airport operators are responsible for setting airport charges after consultation with airport users and the Ministry of Transport and following policies set down by ICAO. The airport operators are partly funded by the airport charges. The airport operators are supervised by the Ministry of Transport.
Regulation of ATM terminal charges

The airport operators are responsible for setting ATM terminal charges after consultation with airport users and the Ministry of Transport and following policies set down by ICAO. ANS CZ is responsible for setting ATM terminal charges at airports Prague, Ostrava, Brno Tuarny, and Kavrovy Vary airports. The airport operators are partly funded by the airport charges. ANS CZ is 100% funded by user charges. The airport operators are supervised by the Ministry of Transport.

Regulation of en-route charge

The Eurocontrol charging scheme is used for en route charges after consultation with airport users and the Ministry of Transport.

Charging schemes

Passenger service charge: departing passenger are charged a flat rate in EUR, direct transit and infants are exempt, ID ticket holders and other transfer passenger are charged reduced rate (up to 24 hrs transfer).

Landing charge is based on basic unit rate. Charge is calculated as basic unit rate times MTOW for aircrafts up to 100t, and half of the basic unit rate times MTOW for aircrafts over 100t.

There is special incentive scheme under operation at some times (as decided by airport) The so called new destination uses discounted unit charge per initiated tone MTOW. A new destination is defined as a scheduled destination that has not been flown for the last two IATA seasons. Discount is limited to the first 12 months of operation.

In case of noise charges there are four noise categories, based on ICAO Annex 17 Stage 3 limits. Specific charge is arrived at by using formula unit charge x MTOW.

Aircraft parking charge is levied per tone times MTOW and is dependent on time – normal rate for apron in time 0500 -1900 applies, while in time 1900 - 0500 reduced rate is used.

Moreover one hour free parking is available for aircraft of up to 200 seats, two hours free for aircraft of over 200 seats in the parking area: flat rate per tone MTOW is charged.

Air bridge charge and overnight services rates are based on unit price per tone times MTOW and differentiated by weight (two categories exist – up to 100t and above).

Legal regulation, charges (passenger service, landing, noise and parking) are discussed with airlines at least once in each year. The Ministry of Transport oversees consultations. In case of a dispute between the airport operator and the airlines, there is right of appeal to the Office for the Protection of Competition.

Hungary

Hungary has four airports of international importance.

Regulation of airport charges includes:

- Landing / use of runway
- Parking and handling
- Passenger charge.
Responsibility for those charges setting and collection falls into Hungarian Ministry of Economics and Transportation.

*Regulation of ATM terminal charges*

ATM terminal charges are collected by HungaroControl. HungaroControl is fully financed by state budget and from route charges.

*Regulation of en-route charge*

Those charges are collected by HungaroControl. The pricing policy is that the EUROCONTROL route charge system has been published as a Ministerial order (13/2002. (IX.5.) GKM) and founds a basis for charging procedure. Supervision over HungaroControl is with both The Ministry of Economy and Transport and The Civil Aviation Authority of Hungary.

*Charging schemes*

Landing charges are calculated in relation to weight. Different charge applies for up to 30 tonnes, 30-200 tonnes and over 200 tonnes aircrafts. There is a special discount for new flights – 50% in the first year and 25% in the second year.

Parking charges are divided into: off gate positions (calculated as flat rate for each 24 hours per tonne MTOW) and at air bridge positions, calculated as MTOW fee for first hour/aircraft and differs by weight. Another fee for each additional hour/aircraft differs by weight – there are 3 classes: 0 up to 25 tonnes, 25 tonnes up to 100 tonnes, from 100 tonnes upwards. It should be noted that positioning at air bridges exceeding 3 hours between 2200 and 0600 are considered as night parking and charged according to the following: fee for the first hour plus special night parking fee (flat rate in EUR times MTOW/24 hours) plus fee for each additional hour (in the same pattern as above). There is a parking fee discount for airlines based at Budapest Ferihegy:

- 6-10 aircraft = 10% discount;
- 11-20 aircraft = 20% discount;
- 21-30 aircraft = 30% discount;
- Over 30 aircraft = 40% discount.

Passenger charges differ between terminals – one rate is applied at terminal 2/A and 2/B and other at terminal 1. Rates are for passenger departing.

*Estonia*

Estonia has 5 commercial airports of international capabilities. Those are: Tallinn Kuressaare Kärdla Parnu Tartu. However, so far only Tallin airport conducts regular schedule operations.

*Regulation of airport charges includes:*

- Landing / Use of runway
- Parking and Handling
- Passenger Charge.
According to Aviation Act, article 59, The Minister of Economic Affairs and Communications establishes the procedure for the determination, payment and release from payment of air traffic charges. In practice charges are collected by Tallinn airport.

**Regulation of ATM terminal charges**

According to Aviation Act, article 59, The Minister of Economic Affairs and Communications establishes the procedure for the determination, payment and release from payment of ATM terminal charges. ATM terminal charges are collected by EANS.

**Regulation of en-route charge**

According to Aviation Act, article 59, The Minister of Economic Affairs and Communications establishes the procedure for the determination, payment and release from payment of en route charges. Those charges are collected by EANS.

**Charging schemes**

Landing fee is calculated as flat rate per ton MTOW regardless of type of aircraft. Passenger fee is set as flat rate for each passenger departing (excluding infants and transit/transfer passengers).

Parking fees for cargo aircrafts up to 6 hours – free, all other aircrafts – up to three hours – free. If parking time exceeds those than flat rate per ton MTOW for each 24 hours is charged. This charge is smaller for based aircrafts.

**Latvia**

Latvia has three airports of international capabilities- Riga, Ventspils, Liepaja.

**Regulation of airport charges includes:**
- Landing / use of runway
- Parking and handling
- Passenger charge.

Ministry of Transport is in charge for setting those charges.

**Regulation of ATM terminal charges**

Ministry of Transport establishes ATM terminal charges.

**Regulation of en-route charge**

Ministry of Transport establishes en route charges.

**Charging schemes**

Riga airport landing fee is set as fixed amount of EUR per 1 MTOW. Parking fee is charged based on EUR rate per 1 MTOW for each 24 hours if parking lasts longer than 3 hours. If less then three hours parking is free of charge. Passenger service fee is levied for each departing
passenger. Charges are regulated by Regulations on air navigation services within Riga flight information region and SJSC Riga International Airport services No.5, 24/12/2004 issued by Aviation Department of Ministry of Transport. Ventspils airport policy is slightly different. Aircraft landing fee is composed of basic fee set for every 1000 kg of MTOW and landing fee for general aviation flights for every 1000 kg of MTOW while for training and sport flights at 70% discount.

There is passengers security fee for every departing passenger. For aircraft with a MTOW 2000 kg or less, the fee for every departing passenger is not applied.

There is parking fee for every 24h for aircraft with a MTOW less than 5700 kg. First 6 hours are free of charge. Higher parking fee is set for every 24h for aircraft with a MTOW starting from 5700 kg to 15000 kg and even higher for those exceeding 15000 kg. Additionally airport security fee from 17:00 (LT) till 9:00 (LT), for aircraft standing time applies.

**Lithuania**

Lithuania has four airports of international capabilities- Vilnius, Palanga, Kaunas, Siauliai.

*Regulation of airport charges includes:*
  * Landing / use of runway;
  * Parking and handling;
  * Passenger charge.

Airport charges are determined by the Government of Lithuania (The Ministry of Transport and Communications of the Republic of Lithuania). In general, all charges are reviewed by the Government every 5 years.

*Regulation of ATM terminal charges*

ATM terminal charges are determined by the Government of Lithuania.

*Regulation of en-route charge*

En-route charges are determined by the Government of Lithuania.

*Charging schemes*

Landing fees for aircraft of MTOW less than 2 tones on international routes price is set per tonne and is twice the price for domestic routes. For aircraft of MTOW greater than 2 tons higher rate is applied – again domestic flights are half the price of international flights. There are security fees calculated at 10% of the landing fee. Parking fees are similarly computed as 10% of the landing fees. Leading (follow me) fee is set at flat rate and passenger service charges apply to departing passengers and are differentiated by international and domestic type of journey with the former 3 times rate of the later.
Slovakia

Slovakia has five airports of international capabilities- Bratislava, Kosice, Poprad, Sliac, Piestany. However majority of the traffic goes through Bratislava and Kosice airports.

*Regulation of airport charges includes:*
  - Landing / Use of runway
  - Parking and Handling
  - Passenger Charge.

Charges are levied through Ministry of Transport, Post and Telecommunications. The relevant act is the Aviation Act 143/1998 as later amended

*Regulation of ATM terminal charges*

ATM terminal charges are levied through Ministry of Transport, Post and Telecommunications of the Slovak Republic

*Regulation of en-route charge*

En-route charges are levied through Ministry of Transport, Post and Telecommunications of the Slovak Republic.

Slovenia

Slovenia has three airports of international capabilities- Ljubljana, Maribor, Portorož. However majority of the traffic goes through Ljubljana and Maribor.

*Regulation of airport charges includes:*
  - Landing / Use of runway
  - Parking and Handling
  - Passenger Charge.

Airport charges are determined by the airport operators. However, a User Committee is consulted on proposed changes to the charges and can request a final decision from the Ministry of Transport. Ultimately the Ministry of Transport has a right to refuse any proposed changes to the user charges.

*Regulation of ATM terminal charges*

There are currently no ATM terminal charges collected in the Republic of Slovenia.

*Regulation of en-route charge*

En-route charges are regulated in accordance with the multilateral agreement.

Poland

Poland has 12 airports of international capabilities- Warsaw, Krakow, Katowice, Gdansk, Poznan, Wroclaw, Szczecin, Rzeszów, Bydgoszcz, Łódz, Zielona Góra, Szczytno-Szymany.
There is considerable number of airports serving local traffic but having non of international potential.

*Regulation of airport charges includes:*

- Landing / Use of runway
- Parking and Handling
- Passenger Charge.

Airport charges are determined by the airport operators. Airport operators are commercial entities. Charges require approval by the CAO (Civil Aviation Office).

*Regulation of ATM terminal charges*

Regulation of ATM terminal charges is provided by PATA (national air navigation service provider). CAO only has an observatory position, and therefore it does not have the option to reject them. PATA is supervised by the CAA (Civil Aviation Authority) but only in matters concerning safety.

*Regulation of en-route charge*

Regulation of en-route charges are provided by PATA. CAO only has an observatory position and therefore it does not have the option to reject them.

*Charging schemes*

On 2 August 2005, the President of CAO approved the new airport charges to be levied by Warsaw F. Chopin Airport, Rzeszów-Jasionka Airport and Zielona Góra-Babimost Airport (airports under PPL management). An example of charge calculation scheme is based on Warsaw Airport.

Landing charge is levied for each landing and for aircraft of MTOW up to 2 tonnes inclusive (helicopters excluded) a flat rate regardless of weight is used. For aircraft of MTOW over 2 tonnes up to 25 tonnes inclusive (helicopters excluded), charge is levied for each commenced tonne of MTOW. For aircraft of MTOW over 25 tonnes (helicopters excluded) for each commenced tonne of MTOW within 25 limit one rate applies while for each additional tonne over 25 higher rate must be used. There is a separate fee for helicopters.

Passenger charges are terminal dependent- highest rate applies to Terminal 1, then VIP Aviation Terminal followed by Etiuda Terminal and Domestic Terminal. Passengers on direct transit flights and children under 2 years of age are exempt from the passenger charge.

Parking charges are based on number of commenced tonnes of MTOW and each commenced 24 hours of parking time calculated from landing to take-off. Parking up to 4 hours inclusive is free of charge.

Hangar parking charge is calculated in regard to time - up to 3 hrs (for each commenced tonne of MTOW and each commenced hour of parking time) and 3 times higher charge for time over 3 hrs up to 1 month (for each commenced tonne of MTOW and each commenced 24 hrs of parking time). The hangar charge levied on regular hangar parking customers.
(parking for a period longer than one month) may be determined in a separate agreement with PPL.

Noise charge is levied for aircraft noise emissions. The rates differ depending on aircraft noise category and time of operation (classification i). The charge varies between 06:00 and 21:59 hrs – lower (but differentiated within this time period) rates apply, and between 22:00 and 05:59 hrs (again differentiated within this time period).

The President of CAO may issue an administrative decision refusing approval of an airport charge or ordering adjustment of the same if the charge fails to comply with the rules set forth in aviation law or international regulations. Airport charges collected by public aerodromes are set in a manner ensuring non-discrimination, stability of charges throughout the calendar year, with the exception of justified cases of unforeseen events being beyond control of an airport operator yet significantly and directly affecting the level of unit costs of the services rendered and facilities made available; in a manner not discouraging airport users from using the services and facilities; and taking into consideration profit-oriented business of the company as well as levels of airport charges levied in the EU Member States for respective services and facilities. Airport charges are set on the basis of correct records and distribution of direct and indirect costs and related revenues between relevant types of services for which airport charges are levied and other activities. When allocating indirect costs, clearly specified ratios should be used to avoid excessive burdening with such costs of the type of activity for which airport charges are collected.

**Romania**

Landing fees are calculated in regard to total MTOW. For Arad airport there are three categories: plane up to 1.2 tonnes, planes between 1.2 and 2 tonnes and above 2 tonnes. The latest category further differentiates between both – propulsion type (turbo – jets and other) and level of compliment with the conditions of ICAO Annex 16 Chapter 3. The charge is EUR per tonne. Bucarest airport charging schemes differ slightly. Again total MTOW is basis for calculation, but there are 6 weight categories. Level of compliment with the conditions of ICAO Annex 16 Chapter 3 also influences the unit price. Smaller airports like Bacau, Otopeni charge flat rate per tonne MTOW.

Lighting charge basis of assessment is maximum take-off weight of the aircraft as entered in the Aircraft Flight Manual. The weight fractions of less than 500 kg are negligible and those of more than 500 kg are considered as one tone. This charge is applied for each landing and each take-off using the lighting system and airports lights.

Parking charge basis of assessment is maximum take-off weight of the aircraft as entered in the Aircraft Flight Manual. The weight fractions of less than 500 kg are negligible and those of more than 500 kg are considered as one tone. This charge is applied for each parking hour or fraction of hour except the first 3 hours after landing. The fraction of hour is established at 15 minutes.

Passenger charge is differentiated between Romanian airports. In some cases international and domestic flights are charged differently in other there is one uniform charge. In some cases additional security charge is applicable that again differs from airport to airport. This charge is levied from the aircraft operators for each passenger embarking on board of aircraft performing commercial flights from an airport within the Romanian territory.
7.2 Legal determinants

Laws and regulations in the area of air transport should be addressed in regard to five specific areas:

- safety,
- air navigation services,
- licences,
- facilitation of air transport,
- security.

The first group refers to safety measures connected to crash avoidance, maintenance of good technical level of operations both in regard to planes and to the ground handling devices, facilities as well as procedures. The second group compromises regulations aimed at provision of navigational services within aerospace of given country as well as at the airports. Third group deals with licensing laws and procedures in regard to carriers and other businesses active in air sector. Fourth area deals with regulations ruling the operational aspects of passenger, cargo and crew flows at the airports. The last group contributes to rules regarding security measures both –ground and in the airplanes.

**Bulgaria**

*Aviation safety regulation and air transport security*

Directorate General of Civil Aviation Administration sets up five regional departments - airport administrations as responsible units (regulation is based on Article 48a, par.4 of the Civil Aviation Act). The DG CAA performs the functions of a Civil Aviation Administration in accordance with the Civil Aviation Act and the International Conventions and Arrangements, which the Republic of Bulgaria is party to.

*Air Navigation Services*

ATSA (Air Traffic Services Authority) fulfils the functions delegated by the Bulgarian state, through the provision of air traffic services.

*Licences*

The problem of air operator licences and air operator certificate is under rules developed by The Civil Aviation Authority of the Bulgaria. The solutions for ground handling licences works alike.

**Czech Republic**

*Regulation of safety*

Regulations in regard to safety - flight safety oversight and control of civil aviation operators is the responsibility of the Civil Aviation Administration (CAA). The CAA is funded directly from the State budget and supervised by the Ministry of Transport of the Czech Republic. The Civil Aviation Administration (CAA) of the Czech Republic is also responsible for design, production and maintenance organizations approval and periodic inspections. The same body controls flight crew, engineer licensing and aircraft registration. Airworthiness of commercial
and general aviation aircraft is subject to CAA scrutiny as well. In the area of licensing and certification of aerodromes, the CAA is adequate body as well as Civil Aviation Department of the Ministry of Transport.

Regulation of Air Navigation Services.

The authorised legal entity for the provision of air navigation services is the state enterprise named Air Navigation Services of the Czech Republic (ANS CZ). Provision of air navigation services for airfields is responsibility of ANS CZ at airports Prague, Ostrava, Brno Tuarny, and Kavrlovy Vary. The Ministry of Defence takes over those responsibilities at military airports (and some combined military / civil airports). ANS CZ is funded by charges levied to air navigation users. The legal rules for establishing charging schemes are consistent with policies laid down by ICAO and use the Eurocontrol charging scheme for route charges. The establishment and imposition of charges is fair and transparent and is set after consultation with airspace users and is reviewed by the Ministry of Transport. The Ministry of Transport reserves itself supervisory rights in regard to the company. Provision of en-route Air Navigation Services is also responsibility of ANS CZ. Regulation of environmental standards (emissions and noise policies) falls into The Ministry of Transport and the Ministry of Environment. There is no clear division of responsibilities with regulations regarding setting and control of airspace policy, and the regulation of airspace design and classification, including the navigation and communications infrastructure. Four entities act in that scope - The Ministry of Transport, The Ministry of Defense, The CAA and the ANS CZ (the last one is empowered to make consultations only).

Licences

The issue of tour operator licences belongs to The Ministry of Regional Development Trades Licensing Office. Similar regulations apply to the issue of travel agency licences. Air operator licences and air operator certificates are issued by The Ministry of Transport Civil Aviation Department. The same applies to ground-handling licences or approvals.

Air Transport Facilitation

Policy and regulation of ICAO facilitation requirements under Annex 9 of the Chicago Convention, with respect to entry and departure of aircraft are subject to regulation by The Ministry of Transport or Ministry of Foreign Affairs (the latest has a word in case of state flights only) entry and departure of persons, baggage and cargo are regulated by Ministry of Interior and General Directorate of Customs, while facilities and services for traffic at international airports fall under control of The Ministry of Transport and the CAA.

Air Transport Security

Regulation of aviation security with respect to airports, airlines and airspace is supervised by the Ministry of Transport (Civil Aviation Department), The Ministry of the Interior, and the CAA. In practice all air accident investigations are conducted by The Air Accident Investigation Institute headed by a director appointed to and recalled from the office by Government at the Minister of Transport suggestion. The Institute activities and organization are stated in its statutes approved by Government at the Minister of Transport suggestion. The organisation is independent of the aviation regulatory bodies.
Estonia

Regulation of safety

According to the Aviation Law, Article 37, the Minister of Economic Affairs and Communications is responsible for the procedures for the flight safety of civil airline operations. The Civil Aviation Administration of the Republic of Estonia (ECAA) is responsible for certifying air traffic services and issues corresponding certificates. The CAA is funded from the budget of the Republic of Estonia. Activities of the ECAA are supervised by the European Aviation Safety Agency (EASA) and by the Division of Air and Maritime Transport in the Ministry of Economic Affairs and Communications of Estonia. Accordingly to the above quoted Aviation Law – this time Article 8 - the Ministry of Economic Affairs and Communications of Estonia is also responsible for the procedures of production and maintenance organizations. The Civil Aviation Administration issues and supervises the organisation’s certificate. The article 23, adds to its duties responsibilities for the procedures for the flight crew and engineer licensing and the control of aircraft registration. The Civil Aviation Administration issues also flight crew certificates.

Under the article 16, government establishes the procedure for the maintenance of the national civil aircraft register. Article 12, points at operator’s responsibility for the airworthiness of the aircraft, while the CAA issues, renews and continues validation of the certificate of airworthiness. Environmental safety is regulated under the guidance of government in procedures regarding noise level and emissions. In the same time CAA issues, renews and continues validation of the environmental certificates of engine powered aircraft.

Regulation of air navigation services

Flight rules are established by the Minister of Economic Affairs and Communications, but under article 60, the CAA supervises the activities of the air navigation service providers. The CAA is however responsible for the organisation of the use of Estonian airspace. Estonian ANS (service provider) is set in charge of provision of air navigation services for airfields. EANS has its own budget from navigation charges and technical assistance activities to other European ANS. Similarly provision of en-route air navigation services falls into competence of Estonian ANS. Civil Aviation Administration supervises the activities of the air navigation service provider.

Licences

Aviation Law gives the Ministry of Economic Affairs and Communications of Estonia law to establish procedures regarding aerodrome certification. As for the tour operator licences The Minister of Economic Affairs and Communications has a decisive role here as well as with the travel agency certificates. The Civil Aviation Administration is responsible for the issue of air operator licences and air operator certificate. The issue of ground-handling licences or approvals in Estonia is not fully regulated.

Air transport facilitation

Regulations of Chicago convention apply. Entry and departure of aircraft is regulated by CAA. Entry and departures of persons, baggage and cargo: by Border Guard (under the Ministry of Interior) and Customs (Ministry of Finance). Facilities and services for traffic at international airports are subjected to CAA rules.
Air transport security

According to Aviation Act, article 60, the Government of Estonia is responsible for aviation security and performs this duty through Civil Aviation Administration. In regard to accident investigations the appropriate unit is Crisis Management Department reporting to the Minister of Economic Affairs and Communications.

Hungary

Aviation safety regulation

Flight safety of civil airline operations is under control of Civil Aviation Authority of Hungary (HgCAA) financed from the budget of the Ministry of Economy and Transport. Civil aircraft design approval procedure as well as production and maintenance organization lies in CAA field of work too together with flight crew and engineer licensing and control of aircraft registration. Airworthiness of commercial and general aviation aircraft regulations also belong to Hungarian CAA.

Regulation of air navigation services

General competence in that regard falls into the Civil Aviation Authority of Hungary (HgCAA). However setting and control of airspace policy, and the regulation of airspace design and classification, including the navigation and communications infrastructure is tasked to HungaroControl (a body responsible to CAA and Ministry of Economy and Transport). The appropriate legal acts are: “Ministerial order on the Rules of Air within the airspace and aerodromes of the Republic of Hungary (14/2000. (XI.14.) KoViM)” and “Ministerial order on the rules and procedures of the Air Traffic Control Services (16/2000. (XI.22.) KoViM)” Rules for provision of air navigation services for controlled airports are set by HungaroControl, for uncontrolled aerodromes Aerodrome Flight Information Services (AFIS) are provided by AFIS units. Rules for provision of en-route air navigation services are set by HungaroControl.

Licensing

The general rules are set by The Civil Aviation Authority of Hungary (HgCAA). The issue of tour operator licences belongs to The Hungarian Trade Licensing Office (Magya Kereskedelmi Engedelyezesi Hivatal) while the issue of air operator licences and air operator certificates is in hands of CAA. Similarly ground handling service companies are professionally licensed by CAA

Air transport facilitation

The Civil Aviation Authority of Hungary (HgCAA) on behalf of the Ministry of Economy and Transport supervises the implementation of transport facilitation laws and regulations.

Air transport security

Regulation is based on ICAO, ECAC and EC provisions. They are either incorporated or reinforced in appropriate laws or governmental decrees. Supportive role is attributed to CAA
decrees. Usually laws in this area are prepared within Ministry of Economy and Transport. In regard to air accident investigations The Civil Aviation Safety Bureau (CASB) has been founded on 1st January 2002 to comply with EU directive 94/56/EC. The national legislation covering accident investigation is: Joint Ministerial Order no. 13/2000. The position of investigators follows usual pattern for NMS - CASB is functionally independent of the HgCAA.

**Latvia**

*Aviation safety regulation*

Flight safety of civil airline operations is regulated by country’s CAA which in turn is under control of MoT (Ministry of Transport). Civil aircraft design approval procedures are governed by EASA while production and maintenance regulations by CAA. Flight crew and engineer licensing as well as control of aircraft registration is undertaken by CAA. Its responsibilities cover also airworthiness rules for commercial and general aviation aircraft. Regulation of environmental standards (emissions and noise policies) is MoT competence. As to detailed solutions – policy regarding implementation of ICAO Annex 16, EU Directives on Aircraft Noise and environment and noise standards are done by CAA.

*Air Navigation Services*

Setting and control of airspace policy, and the regulation of airspace design and classification, including the navigation and communications infrastructure are regulated by MoT via CAA. Provision of air navigation services for airfields is directed by state owned SC Latvijas gaisa satiksme. The same organization is employed in provision of en-route air navigation services.

* Licenses

There are no preset regulations regarding issue of tour operator licences or travel agency licences. The issue of air operator licenses and air operator certificates is regulated by CAA and MoT, while issuance of ground-handling licenses is not regulated.

*Air transport facilitation*

Policy is subject to the Annex 9 of the Chicago Convention, and in respect to entry and departure of aircraft is managed by Customs Department (under supervision of Ministry of Finance). In respect to entry and departures of persons, baggage and cargo this is managed by State Border Guard Service (supervised by Ministry of Interior). And in respect to facilities and services for traffic at international airports by Civil Aviation Administration

*Air transport security*

Accordingly to Law on Aviation: the Government adopts the National Civil Aviation Security Programme (NCASP). The CAA implements the NCASP and exercises state supervision of airports, air carriers and air navigation service provider security. NCASP: airports, air carriers and air navigation service providers develop their own security programmes. Investigations of air accidents are carried out by the independent Aircraft Incident and Accident Investigation Bureau.
Lithuania

Aviation safety regulation

Flight safety oversight and control of civil aviation operators is performed by the Civil Aviation Administration supervised by the European Aviation Safety Agency (EASA) and by the Ministry of Transport and Communications of the Republic of Lithuania. EASA is also responsible for civil aircraft design organisations approval and surveillance, while Civil Aviation Administration of the Republic of Lithuania is responsible for production and maintenance organizations approval and continuing inspection. Other duties of Civil Aviation Administration of the Republic of Lithuania cover licensing of flight crew, maintenance personnel and air traffic controllers and control of aircraft registration. According to the Aviation Law, Article 32, Part 1 the owner/operator is responsible for the airworthiness of the aircraft, but CAA issues, renews and continues validation of the certificates of airworthiness.

In regard to environmental safety it is The Ministry of Transport and Communications which is responsible for air transport noise policy management. The Ministry of Transport and Communications and the Ministry of Environmental Protection (which has to be consulted) are obliged to prepare and approve the rules relating to restriction of aircraft noise emissions.

Regulation of air navigation services.

Civil Aviation Administration of the Republic of Lithuania supervises the activities of the air navigation service provider, a state owned firm “Oro navigacija”. The airspace classification should be approved by Civil Aviation Administration. Prohibited, dangerous and restricted areas are determined by the Ministry of Transport and Communications.

Oro navigacija is also responsible for setting temporary segregated areas. Oro navigacija company is also in charge of aerodrome control service in all international airports of Lithuania. There are 4 international airports in Lithuania, which require ANS from Oro navigacija. There are virtually no domestic operations between these airports. Oro navigacija has its own budget from navigation charges. Organisation is supervised by the State. Supervision implemented by Civil Aviation Administration in accordance with Aviation Law (approved by Government, 17 October 2000) As to the provision of en-route air navigation again the same entity is responsible.

Licensing

Aerodromes are certified by the Civil Aviation Administration. Charges for the certification of the aerodrome and the issuance of the Operation Certificate are paid to the airport managing body and further transferred to country budget, which is the source of financing of the Civil Aviation Administration. The issuance of travel agency certificates is not regulated in Lithuania, while the issue of air operator licences and air operator certificate falls into scope of duties performed by CAA. The Ministry of Transport and Communications is responsible for the issuance of the Air Operator Certificate. The Civil Aviation Administration renews the AOC annually. There are no requirements for licensing of the ground-handling activity in the Republic of Lithuania.
Air transport facilitation

Entry and departure of aircraft at international airports is managed by Customs Department of the Ministry of Finance. Entry and departure of persons, baggage and cargo is supervised by State Border Guard Service of the Ministry of Interior. Finally facilities and services for traffic at international airports are subject to regulation by CAA.

Air transport security

Lithuanian Law on Aviation provides for Government adoption of the National Civil Aviation Security Programme (NCASP) being implemented by the Civil Aviation Administration (CAA). Supervision of airports, air carriers is exercised by CAA as well. However under NCASP: airports, air carriers and air navigation service providers develop their own security programmes and submit them to the CAA for approval. There is separate air accident investigation unit – a permanent investigator-in-charge with appropriate rights is appointed by the Minister of Transport.

Poland

Poland has adopted European Parliament regulations regarding civil aviation in mid-2005 amending Aviation Law in force from 2002. The amendment was aimed mainly at protecting airline passengers rights. As a result, the Civil Aviation Office is now entitled and obligated to investigate as well as pursue violations of passenger rights in the form of imposed penalties upon air carriers.

Aviation safety regulation

Flight safety oversight and control of civil aviation operators is performed by the Civil Aviation Administration. For some provisions the Minister of National Defence, the Minister for Internal Affairs should be included. Civil aircraft design approval or production and maintenance organizations are subject of CAA regulations. Similarly flight crew and engineer licensing is performed by the Civil Aviation Administration, but the Minister for Health Services and the Minister of National Defence have to be formally consulted on some issues regarding licensing. Control of civil aircraft registration is performed by CAA while military aircraft registration is performed by the Ministry of Defence and state aircraft registration is performed by the Ministry of Internal Affairs.

CAA duty is also regulation of airworthiness of commercial and general aviation aircraft. Environmental standards regarding aircraft emissions and noise are regulated by the CAA and enforced by regional airports.

Regulation of air navigation services.

The Ministry of Infrastructure is responsible for regulating air navigation services. This task is performed by Agencja Ruchu Lotniczego ARL (Polish Air Traffic Agency, PATA), an organization within structure of Polskie Porty Lotniczy PPL (Polish Airports). PATA is supervised by the CAA concerning safety. PATA’s financial statements also have to be approved by the CAO. The Minister of Infrastructure and the Minster of Defence are responsible for regulations concerning sovereignty of the Polish airspace. PATA performs control of airspace, and regulation of airspace design and classification, including the
navigation and communications. As to the air navigation services at international airports in Poland – they are provided by PATA. The same holds true in case of en-route air navigation services.

**Licensing**

Licensing and certification of aerodromes is performed by CAA while registering of military aerodromes is duty of the Ministry of National Defence. The issue of travel agency licenses is regulated by the CAO. Air operator licenses and air operator certificates are handled by the Ministry of Economy and that of ground-handling is regulated by the CAO.

**Air transport facilitation**

Policy and regulation concerning embarkation and disembarkation of aircraft is carried out under ICAO guidelines. Entry and departure of persons, baggage and cargo are subject to Ministry of Interior (in regard to passport control procedures) and Ministry of Finance (applicable to customs).

**Air transport security**

Regulation of civil aviation security is regulated mainly by the CAO. For air incidents investigation the State Commission for Investigation of Air Accidents has been established within the Ministry of Infrastructure.

**Romania**

**Aviation Safety Regulation**

Safety issues are regulated by Romanian Civil Aviation Authority.

**Air Navigation Services**

Air navigation services are provided by ROMATSA – Romanian Air Traffic Service Administration.

**Slovakia**

With the formation of the Slovak republic in 1993 government aviation policy departments and infrastructure had to be developed from the beginning.

**Aviation safety regulation**

Flight safety of civil airline operations regulation is the field of The Civil Aviation Authority of the Slovak Republic, a state created entity by the Ministry of Transport, Post and Telecommunications of the Slovak Republic. Its duties are also:

- regulation of production and maintenance organizations for aircrafts,
- flight crew and engineer licensing,
- control of aircraft registration,
- regulation of airworthiness testing of commercial and general aviation aircraft.
In case of environmental safety Ministry of Transport, Post and Telecommunications of the Slovak Republic is responsible for air-related environmental regulations.

Regulation of air navigation services.

The provider of air navigation services is Letecke Prevadzkova Sluzby SR (LPS SR), which is a state owned enterprise and is supervised by the MoT and the CAA SK. The airspace in general is controlled by Ministry of Transport, Post and Telecommunications of the Slovak Republic under the law established by Aviation Act 143/1998 and further amended to incorporate European legislation. Provision of air navigation services for airports is managed by MoT through especially established unit – Letecke Prevadzkova Sluzby SR (LPS SR). The same applies to en-route air navigation services.

Licensing

The Civil Aviation Authority of the Slovak Republic regulates licencing procedure in regard to aerodromes. The issue of tour operator licences and travel licences lies within competences of the Ministry of the Interior of the Slovak Republic. The problem of air operator licences and air operator certificate is under rules developed by The Civil Aviation Authority of the Slovak Republic. The solutions for ground handling licences work alike.

Air transport facilitation

There are several problems with implementing ICAO rules in Slovakia at present there is no uniform approach in that regard.

Air transport security

Regulation of aviation security in airfields and airspace falls at Ministry of Transport, Post and Telecommunications of the Slovak Republic. For accident investigations the Ministry of Transport, Post and Telecommunications established a permanent commission. The Chairman is appointed by the Minister of the MoT. The Chairman then appoints members of the commission to each time formed expert commission to investigate the actual incident or accident.

Slovenia

Aviation safety regulation

Flight safety of civil airline operations is controlled by Safety and Aviation Standards Division of the Civil Aviation Authority of the Republic of Slovenia - a body within the Ministry of Transport. The same organization deals with aircraft design and production/maintenance organization standards, crew and engineer licencing, airworthiness Environmental safety regulations and standards regarding aircraft emissions and noise are set by the CAA and enforced by the Aviation Inspectorate of the Republic of Slovenia.

Regulation of air navigation services.

General regulation belongs to Air Navigation Services Supervision Department within Civil Aviation Authority. As to the airspace control it is the Ministry of Transport which is
responsible for setting and control of airspace policy, and regulation of airspace design and classification, including the navigation and communications infrastructure. Provision of air navigation services at international Airports in Ljubljana, Maribor and Portorož are provided by the public company Slovenia Control, Slovenian Air Navigation Services Limited. The Ministry of Defence is responsible for the provision of services at Cerklje Airport. The CAA supervises the services provided by Slovenia Control by checking compliance with the applicable regulations. Slovenia Control is also responsible for provision of e-route navigation services.

**Licensing**

Airports licensing is granted in accordance to rules set forth by Airports, Airfields and Obstacles Department of the Civil Aviation Authority. The issue of air operator licences and air operator certificates is subjected to rules set by Flight Operations and Air Operators Licensing Department of CAA. The issue of ground-handling licences is responsibility of aerodromes.

**Air transport facilitation**

Entry and departure of aircraft is regulated by Customs Office. Entry and departure of persons, baggage and cargo in Ljubljana Airport is maintained by state police, in Maribor and Portorož by border police. Facilities and services for traffic at international airports are subject to rules set by airport operator and air navigation service provider.

**Air transport security**

Regulation of aviation security in fields like: airports and airlines as well as aerospace belongs to Airspace, Security, Facilitation, Search and Rescue, and Transport of Dangerous Goods Division operating within Civil Aviation Authority of the Republic of Slovenia. There is a separate unit for air accident investigations - Aircraft Accident and Incident Investigation Office (AAIIIO) funded from state budget. The AAIIIO is fully independent of the aviation regulatory bodies. The investigation body (AAIIIO) submits a biannual report about its work to the government and to the minister responsible for transport.

### 7.3 Airports management in NMS

After liberalising the air transport market by the creation of the internal market and addressing the "saturation of the skies" through the Single European Sky initiative, the Commission will now focus on airports. Capacity will not be able to match demand and risks becoming the most constraining factor on air transport. The knock-on network effects of this weakest link threaten the efficiency of the whole air transport chain. Since air transport is seen as a 'motor' for economic growth, this in turn risks undermining the overall competitiveness of the European economy. Airport capacity is a function of both runway and ground infrastructure. The runway capacity corresponds to the maximum number of aircraft landing and/or taking off, taking into account physical constraints which have an impact on safety like wake turbulences vortices. The ground infrastructure capacity corresponds to the physical lay out of
the terminals (parking spaces and boarding gates, etc.) and the efficiency of their management 50.

The hierarchy of European airports is influenced by numerous factors. One of the basic factors is the liberalization of air transportation. The age of liberalization acts is also an important factor. Central European countries joined the ‘open sky’ idea relatively late on the eve of the 21st century. Previously before accepting low cost carriers in their skies only the central airport serving the capital city and the main urban area in countries like Poland, Czech Republic or Slovakia had international importance. The others were only local, usually connected only with central airport (domestic routes). There were some exceptions – Krakow and Gdansk had international connections soon after receiving their civil aviation function. Many Central European airports were managed by the army, and thus there were considerable barriers for their spatial development.

Regulation has changed in the last 15 years and today European airports are regulated under systems with very different regulatory power. The central problem for regulation is that regulator has asymmetric information about the demand and cost functions and that the regulator must design a contract to set incentives for the regulated firm. While high powered regulation sets incentives for cost reductions and productive efficiency, an efficient price structure low powered regulation does not. This power is largely determined by whether the regulated prices are cost based or price capped, but also by the decisions on the scope of regulation as well as risk sharing arrangements. Many authorities in Europe regulate airport charges according to principles of cost relatedness. The charges should create just enough revenues to cover total costs including the depreciation of capital and a normal rate of return on capital. The structure of charges should also be cost related, namely each charge should reflect its costs. In Europe many of the public airport systems like Greece, Poland and Finland set their charges in this way. Charges are supposed to be set according to ICAO principles of cost relatedness. CAA’s and Departments of Transport which operate and manage airports directly follow this principle. In the case of formally privatized airports such as most German airports the regulator approves charges only if they are cost related 51.

The formation of the EU common market and the rise of the low-cost carrier, the increased utilization of larger regional jets, conversion of former military airfields into commercial service airports and the growth and expansion of the number of regional carriers have been the key drivers for the growth of regional airports. Regional airports present a dilemma in the EU. On the one hand they provide needed capacity in areas where major airports have become congested. Regional airports have become progressively more important in the European aviation network. Traffic growth is increasingly spread over smaller airports in the European airport hierarchy as entry by airlines, especially LCCs, has been via secondary airfields. The regional airport has provided two important outcomes for Europe; first, airports have increased access to aviation markets for a large proportion of the population and, second they have increased competition among airlines which has resulted in lower fares, increased frequencies and more destinations 52.

de%20Final%20Paper%20Madrid.pdf
52 Ibidem.
After liberalising the air transport market by the creation of the internal market and addressing the "saturation of the skies" through the Single European Sky initiative, the Commission will now focus on airports. Capacity will not be able to match demand and risks becoming the most constraining factor on air transport. The knock-on network effects of this weakest link threaten the efficiency of the whole air transport chain. Since air transport is seen as a 'motor' for economic growth, this in turn risks undermining the overall competitiveness of the European economy. Regional airports are important to the development of an integrated European air transport network. In this respect, it would be desirable to unlock existing latent capacity at regional airports provided that Member States respect Community legal instruments relating to state aids. Global Navigation Satellite Systems could play a significant role for increasing capacity and flexibility of operations at those airports without increasing the cost of local infrastructure. Member States should endeavour to improve the accessibility of such airports by rail and road to allow them to act as reliever airports.

The capacity of an airport is dependent on the demand for one or more of its limiting components, such as the runway system, aircraft parking positions, gates, passenger terminal throughput (e.g. check-in and baggage delivery) and surface access. Good management of these areas will determine the extent to which the airport can reach its full capacity potential. Without an expansion in capacity or resolution of the problem by other means, an airport becomes congested at certain times. This occurs when the demand for one or more of its limiting components exceeds capacity in a certain time period. Due to an imbalance between the demand for worldwide air transport and the availability of adequate airport facilities/infrastructure and airspace systems to meet such demand, the number of congested airports worldwide is growing. As a result, the airline industry is increasingly subjected to serious operational disruptions, with a significant number of delayed departures and arrivals, which result in significant economic penalties. This adverse situation, which negatively impacts passengers, shippers, air traffic control agencies throughout the world as well as airports, has been the subject of intense consideration by Governments in recent years. Some have considered the introduction of various traffic distribution formulae to help relieve the congestion at busy airports. IATA is opposed in principle to the imposition of such rules because they can be impractical in the context of an international air transport system. Airline schedules, by their nature, involve more than one airport, often in different countries or continents. Any solution that is likely to ease the problem in one location must therefore be considered in an international context, with the active involvement of airlines and others directly involved in the air transport industry.

For the purposes of schedule clearance, there are three broad categories of airports:

- **Level 1** describes those airports whose capacities are adequate to meet the demands of users. Such airports are recognised from a schedule clearance viewpoint as non-coordinated.

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55 Ibidem.
• Level 2 describes airports where the demand is approaching capacity and a more formal level of co-operation is required to avoid reaching, if at all possible, an over-capacity situation. These airports are referred to as schedules facilitated.

• Level 3 describes those airports where demand exceeds capacity during the relevant period and it is impossible to resolve the problem through voluntary co-operation between airlines and where, after consultation with all the parties involved, there are no possibilities of resolving the serious problems in the short term. In this scenario, formal procedures need to be implemented at the airport to allocate available capacity and coordinate schedules. Airports with such high levels of congestion are referred to as coordinated.

The designated level of an airport will be reviewed by IATA Management after receipt of valid justification and explanation by the appropriate airport managing body and then distributed by IATA to the airlines affected.

In Eastern Europe passenger traffic is more concentrated at one particular international airport than in most of the states of Western Europe. When analysing the situation of the 10 recently admitted countries and the former EU-15 states in terms of airport capacity and efficiency clear differences and clear similarities can be shown. Differences arise mainly from the different historical backgrounds and similarities stem from the harmonisation of the legal and financial system in these countries with EU standards. In general differences are decreasing year by year, as the integration into Europe is wider and wider. The 10 NMS countries are harmonising their standards with those in the EU-10 and they are trying to use the same capacity enhancement techniques. However, due to the significant differences of the past to find similar solutions to the present and future problems is not always possible. Capacity bottlenecks at major EU airports are mainly due to a shortage of runways, ATC, or en-route capacity, whereas in the East European countries runway capacity usually exceeds terminal and apron capacity. Most of the terminals in those countries can serve more passengers than they serve today, the level of service might be upgraded at many airports.56.

All 10 NMS are the members of ICAO57 and 8 countries are the members of Eurocontrol58. Four countries (Bulgaria, Czech Republic, Hungary and Poland) are the members of EUACA59. EUACA Members and Associate Members manage access to more than 100 airports throughout the EU and the neighbouring countries from the Canary Islands in the South West to Finland in the North-East. The EUACA represents the views of the European Coordinators. Coordinators are responsible for managing supply and demand at the busiest airports worldwide through the process of allocating slots to airlines. Coordinators often look after many airports in their home country. Demand from airlines has grown steadily over the years and there is no sign that the rate of growth will slow down. Unfortunately airport infrastructure is not growing at the same pace. Consequently the work of the Coordinator, already heavily regulated by Brussels, is likely to become ever more complex and heavily regulated in the future.

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59  The European Union - Airport Coordinators Association (EUACA) - [http://www.euaca.org](http://www.euaca.org).
Key stakeholders in the NMS air infrastructure are:
1. government,
2. regulatory bodies,
3. airport infrastructure managers (slot coordinators),
4. companies operating in airports.

Detailed analysis of airport management in NMS is presented in the annex to this deliverable.

### 7.4 Technology and other determinants

Technology plays important role as precondition for allowing equality of opportunities that is necessary for establishment of cost based pricing. Airport charging systems currently cover a variety of charges related to the use of landing, apron, lighting, parking, security, refuelling, terminal and other facilities by aircraft, passengers and freight services. While there is a standard basis for the different airport charges, the level of charges differs widely between and within member states, generally reflecting different operating cost levels. Those cost levels are often influenced by varying degree of technical interoperability and differing technical standards. Especially two aspects should be considered:
- fulfilment of certain technical conditions allowing airport for being certified,
- environmental protection solutions.

The first issue could be assessed by analyzing the development and technical capabilities of airports in new member states.

Czech Republic has 6 major international certified airports (under IATA) in addition three non-public international airports with ICAO certification. This number is amended by total of 8 aerodromes with asphalt pavements. The number of operating airlines and destinations at major Czech airports is given in table.

**Table 16 Technical characteristics of Czech Republic air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Praha</th>
<th>Ostrava</th>
<th>Brno</th>
<th>Karlovy Vary</th>
<th>Pardubice</th>
<th>Kunovice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>93</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Airlines</td>
<td>42</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>6500</td>
<td>3500</td>
<td>3300</td>
<td>100</td>
<td>3050</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.

Estonia has 5 major international airports and one airport under military management with ICAO code. This number is amended by 7 general aviation aerodromes with grass runways. Basic technical information on Estonian air sector is given in table.

**Table 17 Technical characteristics of Estonia air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Tallinn</th>
<th>Kuressaare</th>
<th>Kärsla</th>
<th>Parnu</th>
<th>Tartu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>24</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Airlines</td>
<td>12</td>
<td>N/A</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>1400</td>
<td>15</td>
<td>N/A</td>
<td>5</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.
Hungary has 4 major certified airports. In addition there are 6 general aviation aerodromes with asphalt or concrete runways. Information regarding technical capabilities of Hungarian air sector is given in table.

**Table 18 Technical characteristics of Hungary air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Budapest</th>
<th>FlyBalaton</th>
<th>Debrecen</th>
<th>Gyor-Per</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>122</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Airlines</td>
<td>69</td>
<td>7</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>8500</td>
<td>300</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.

Latvia has three major international airports. Technical details are given in table.

**Table 19 Technical characteristics of Latvia air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Riga</th>
<th>Ventspils</th>
<th>Liepaja</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>33</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>Airlines</td>
<td>15</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>2000</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.

Lithuania has four major international airports plus eight general aviation aerodromes with asphalt or concrete runways. Technical description of main Lithuanian airports is presented in table.

**Table 20 Technical characteristics of Lithuanian air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Vilnius</th>
<th>Palanga</th>
<th>Kaunas</th>
<th>Siauliai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>20</td>
<td>10</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Airlines</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>1500</td>
<td>200</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.

Poland has 12 major airports accepted for international traffic actually serving in international capacity. There are additional 7 civil aerodromes of asphalt pavement and further 13 aerodromes under military control or being in three process of transfer from military into civil ownership. This number is further amended by more than 40 grass runway aerodromes. Technical description of major airports is given in table.

**Table 21 Technical characteristics of Poland’s air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Warsaw</th>
<th>Kraków</th>
<th>Katowice</th>
<th>Gdańsk</th>
<th>Poznań</th>
<th>Wrocław</th>
<th>Szczecin</th>
<th>Rozewięz</th>
<th>Bydgoszcz</th>
<th>Łódź</th>
<th>Złotoryja Góra</th>
<th>Szczecin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>93</td>
<td>24</td>
<td>22</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Airlines</td>
<td>34</td>
<td>19</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>6060</td>
<td>1300</td>
<td>1600</td>
<td>467</td>
<td>1500</td>
<td>600</td>
<td>860</td>
<td>500</td>
<td>210</td>
<td>50</td>
<td>150</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.
Slovakia has 5 major international airports and one general aviation aerodrome with asphalt pavement.

**Table 22 Technical characteristics of Slovak air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Bratislava</th>
<th>Kosice</th>
<th>Poprad</th>
<th>Sliac</th>
<th>Piestany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>24</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Airlines</td>
<td>8</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>1250</td>
<td>N/A</td>
<td>200</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.

Slovenia has three major certified international capable airports and two general aviation aerodromes with asphalt/concrete runways.

**Table 23 Technical characteristics of Slovenian air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Ljubljana</th>
<th>Maribor</th>
<th>Portorož</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>23</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Airlines</td>
<td>8</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>1200</td>
<td>250</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.

Romania has 12 airports that keep more or less frequent connections, from those 5 have international importance.

**Table 24 Technical characteristics of Romanian air sector**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Bucharest – Henri Coanda</th>
<th>Timisoara</th>
<th>Cluj - Napoca</th>
<th>Bucharest-Aurel Vlaicu</th>
<th>Constanca</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Airlines</td>
<td>40</td>
<td>15</td>
<td>13</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Capacity in thou.</td>
<td>2600</td>
<td>1000</td>
<td>400</td>
<td>800</td>
<td>800</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on ICAO and IATA data.

The main focus of capacity constraints in aviation is on airport slot scarcity as well as congestion problems. Capacity shortages and interface problems between different ATS regions mean that airways congestion is much more major problem than it should be under perfect interoperable technical solutions. This congestion is correlated with busy air traffic service (ATS) ‘sectors’ and correspondingly high marginal operating costs. Charges levied to meet ATS costs should therefore also include an element to deter congestion (based on travel time or the occupation of a particular sector)\(^{60}\).

As to the second important issue influencing equal charging preconditions - environmental conditions depend mostly on accepted charging systems for emissions in regard to noise and air – pollution. In Europe, some airports have introduced aircraft landing charges which are noise-related and are aimed at encouraging the use of quieter aircraft. These noise surcharges in some cases are very substantial. The air pollution produced by the aviation sector is particularly significant in terms of global pollution and specifically CO\(_2\) emissions. Global, regional and local environmental air pollution costs can be divided into two parts. First, impacts during the LTO (landing and take-off) cycle (including CO\(_2\) emissions during take-off)

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\(^{60}\) Final Report on Options for Charging Users Directly for Transport Infrastructure Operating Costs, September 1999.
when this is not charged for through a fuel tax); these should be reflected in the aircraft landing charge, based on the type of aircraft the number and type of engine. Second, impacts during the flight in high altitudes; these costs should be recovered through en-route charges, based on distance flown and the aircraft and engine characteristics. This type of charging demands simple technical measures absolutely applicable in NMS – like calculation of number of engines or their type. Technical solutions in regard to environmental costs are therefore ready to use. It is at present more political problem than technical. The competition laws will on the other hand only force the airport operators to establish such pricing schemes only if competitors from EU 15 will employ similar measures.

7.5 Conclusions

On the base of the detailed review presented above the preconditions for pricing preconditions for pricing reforms in air transport in NMS are summarised in Table 25.

Table 25 Preconditions for pricing reforms in air transport in NMS

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legal and Institutional</strong></td>
<td>Bulgaria: CAA introduced; Civil Aviation Act of 1998; Czech Republic: CAA introduced; The airport operators are responsible for setting airport charges after consultation with airport users and the Ministry of Transport, Operator supervision by Ministry of Transport. Estonia: CAA established, The Minister of Economic Affairs and Communications establishes the procedure for the determination, payment and release from payment of air traffic charges. In practice charges are collected by Tallinn airport. Hungary: CAA introduced – Hungaro-control, charges collection via Hungaro-control, authority for charges setting and collection falls into Hungarian Ministry of Economics and Transportation. Latvia: CAA in operation, Ministry of Transport is in charge for setting those charges. Lithuania: CAA in operation, Airport charges are determined by the Government of Lithuania (The Ministry of Transport and Communications of the Republic of Lithuania). Poland: CAA introduced. Airport charges are determined by the airport operators but require approval by the CAO (Civil Aviation Office). Romania: CAA established, charges levied by operators under control of Ministry of Transport. Slovakia: CAA in operation, charges are levied through Ministry of Transport, Post and Telecommunications. The relevant act is the Aviation Act 143/1998 as later amended. Slovenia: CAA in operation, Airport charges are determined by the airport operators. However, a User Committee is consulted on proposed changes to the charges and can request a final decision from the Ministry of Transport. Ultimately the Ministry of Transport has a right to refuse any proposed changes to the user charges.</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td>Bulgaria: limited capacity of major airports, one dominating airport. Czech Republic: Air traffic Praha oriented although capacity of other airports (e.g. Ostrava, Brno is sufficient to divert some traffic). Estonia: Tallin as only airport with sufficient capacity. Other airports lack both capacity and technical standard. Not a member of Eurocontrol. Few airports. Hungary: Centralization of air traffic in Budapest. Little capacity in other airports. Latvia: - Riga as only airport with sufficient capacity. Other airports lack both capacity and technical standard. Not a member of Eurocontrol. Small number of airports.</td>
</tr>
</tbody>
</table>
### Air transport

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithuania:</td>
<td>- Centralization of air traffic in Vilnius. Little capacity in other airports. Few airports</td>
</tr>
<tr>
<td>Poland:</td>
<td>- Great potential in number of airports, but in most used ones capacity is approaching its limits</td>
</tr>
<tr>
<td>Romania:</td>
<td>- Good number of airports but not all are used to the extent available</td>
</tr>
<tr>
<td>Slovakia:</td>
<td>- Centralization of air traffic in Bratislava. Little capacity in other airports</td>
</tr>
<tr>
<td>Slovenia:</td>
<td>- Centralization of air traffic in Ljubljana. Little capacity in other airports. Few airports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acceptability*</th>
<th>Bulgaria: partial acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Czech Republic: partial acceptance</td>
</tr>
<tr>
<td></td>
<td>Estonia: partial acceptance</td>
</tr>
<tr>
<td></td>
<td>Hungary: lack of acceptance</td>
</tr>
<tr>
<td></td>
<td>Latvia: high level of acceptance</td>
</tr>
<tr>
<td></td>
<td>Lithuania: partial acceptance</td>
</tr>
<tr>
<td></td>
<td>Poland: partial acceptance</td>
</tr>
<tr>
<td></td>
<td>Romania: no information</td>
</tr>
<tr>
<td></td>
<td>Slovakia: no information</td>
</tr>
<tr>
<td></td>
<td>Slovenia: no information</td>
</tr>
</tbody>
</table>

* based on questionnaire answers

Institutional separation of Civil Aviation Authority has been established in all 10 NMS. Main differences exist in setup of charges. Different bodies are responsible in different countries. Often they are in some way subjected to governmental control. In rare cases where free-market approach is allowed there is official cap above which charges cannot be charged. This is partially due to government tendency to maintain control and partially because of lack of competition and fear of super-high monopolistic charges.

Technological measures allowing for pricing are subjected to capacity constraint. Often new East European members operate their air sector based on one central airport based in capital. With exception of Poland and to some extent Romania regional airports are few and have very limited operational capacity. Due to the recent growth in air travel even major airports in those countries face serious capacity problems and extension of infrastructure is necessary pre-condition to any charging reform. At present the competition for free slots at airports might result in extensive pricing if unprepared reform is introduced.

Level of acceptance for pricing reform is mixed between users. Air carrier operators (especially low-cost) support charges liberalization, while among passengers level of acceptance is not that high mainly due to the fears for significant increases in ticket prices. Among NMS partial acceptance is prevailing posture towards pricing reform with Latvia leading with high acceptance levels and Hungary representing lack of acceptance.

## 8. Reforming charges in waterborne transport in NMS

### 8.1 Current policy and seaports / inland waterway ports charges in NMS

#### 8.1.1 Charging in waterborne transport in NMS – special features

Analysis and comparison of charging practice within waterborne transport of new member states is difficult not only due to different law systems and management practices but also
because of varying classifications and even terminological differences. The same type of charge is often named in various ways leading to miscalculations. The lack of common ground in new member states is also one of the reasons why harmonization of charging practices among their ports is hard to achieve. The charging schemes are often unique, homogeneous and incomparable. Especially in the area of port equipment use various types of infrastructure are considered with different scope and different types of equipment connected to usual kinds of operations. Many problems arise from mixing up of investments within port terminals and on access routes – regularly they are not separated in any way. Additional confusion results from lack of separation in infrastructure and suprastructure investments.

This holds true especially for instances where port authority is managing all or most port operations. Much clearer picture unfolds when port authority acts only as land and/or equipment owner leasing it to various operating bodies within port. Other important issue to be considered is a degree of separation of port authority from government. Often port authorities are public enterprises with government dictating them all moves. In some cases however this influence is limited to only cap tariff publishing while in others governmental control is strict and present on lowest levels of port organization.

The system of charging practices employed in 10 NMS in regard to maritime transport should be addressed in two ways:

- charging practices related to port management/operating bodies,
- charging related to ship operators.

The former encompasses rents or charges for the use of land or equipment owned by the port as well as energy and water provision to the companies operating in port. The later covers all charges for the provision of services and facilities to enable a ship to enter safely and use the port as well as use of all additional services required on piers and in the port aquatory together with provision of water and energy to the ship.

First issue aims at establishing charging schemes for investments for port superstructure and terminal related infrastructure. Second is directly connected with ships operations. However it is necessary to differentiate between the payments that a vessel operator has to pay to a public authority and payments to be paid to the terminal operator for commercial activities. The latter are commercial revenues. The port sector handles more than 90% of the Union's trade with third countries and approximately 30% of intra-EU traffic, as well as over 200 million passengers every year. The port policies management and pricing of services differ significantly all over EU in both areas. Even more profound differences are in new member states which systems have to adapt to Common Policy.

In the area of charging systems, the European Commission advocates a general framework requiring charges to be linked to costs. The charging policy for land and equipment use is usually addressed in one of three ways – either based on:

- average cost pricing;
- charging for operating costs only;
- marginal cost pricing.

---

According to the Green Paper, the long-term objective of an infrastructure pricing policy should be to charge for marginal social costs (capital, operating, environmental and congestion costs) of infrastructure use. This would ensure that investments are demand-driven and would also ensure fair competition in the port sector in the longer term. The general problem with this approach in many new member states is that most of the infrastructure is still government owned. Land is also often government property and leases are established at long-term agreements which prevent any quick change. The governments of new member states often oppose any move toward further privatisation of ports and as a tool helping them to achieve that goal use their ownership rights in property located in ports.

Port services on the other hand are services of a commercial value considered as general port dues (collected for allowing ship to call at port) and all supporting services whose payment is not normally included in the charges collected for being allowed to call at or operate in a port. Additional services usually cover all nautical services of pilotage, towage and mooring, all cargo handling operations (including loading and unloading, stevedoring, stowage, transhipment and other intra-terminal transport) and passenger services (including embarkation and disembarkation).

In the area of those additional ship-related and cargo-related services the environment allows for more competition. Towage, pilotage and mooring have traditionally been provided as public services, but are now viewed as commercial activities. Still some of the lobbies in new member states believe that they should remain public services. The movement towards introduction of competing service providers gains momentum in larger ports within EU where existence of competing companies might really create a difference in price levels. The ports of new member states are usually smaller and are not handling enough operations as to facilitate additional service provides. It is often believed that such a move would lead to chaos and withdrawal from some less profitable services by operators – in general the view that smaller ports simply cannot support competing service providers is shared by some of new member states port authorities and governments.

Moreover in current situation there is no common tariff structure or agreed single methodology for calculating charges. Tariffs are usually published but are complex and difficult to compare. The economic justification for changes in tariffs is rarely explained.

The discussion also covers some charges that should not be mandatory. Good example is towage – where there is a common view within the industry, that mandatory towage should only be imposed by the authorities when it is really essential for safety reasons.

This approach leads to the risk for smaller ports (often mentioned by new member states officials) as there might be not enough competition if there is not enough demand to support more than one operator. As a solution “periodic tendering for the position of “sole supplier” could be used to stimulate competition. As to the pilotage fees general feeling is that more differentiated tariffs should be promoted. With mooring services the problem is not only number of competing operators in port but also whether the ships own mooring crews should be allowed or not.
The recent proposal for the directive on market access to port services points out at the significance of competition between providers of a same port service within a port as the “essential for the functioning of the EU’s ports and hence for achieving the EU’s policy” 62.

8.1.2 Inland water transport

Inland water transport charging schemes are difficult to follow since many local ports take part in operations. Moreover most of those do not publish statistics or in scarce cases they do – they are available only in national language.

Hungary

In Hungary, no tax is perceived for the sailing the waterway, only port and pier taxes are charged. The data available as for 2004 shows tax rates which do not include VAT.

Table 26 Charges at Hungarian inland ports

<table>
<thead>
<tr>
<th></th>
<th>Gyor-Gőnyű</th>
<th>MAHART-Csepel</th>
<th>FERROPORT-Csepel</th>
<th>DUNAFERR Dunaújváros</th>
<th>ATI Baja</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port tax</td>
<td>€/t/24h</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Pier tax</td>
<td>€/tonne</td>
<td>0.26</td>
<td>0.33</td>
<td>0.33</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Source: Charging and pricing in the area of inland waterways. DGTREN 2005.

8.1.3 Maritime transport

Bulgaria

Maritime transport is handled at two major ports – Varna and Burges.

The specific tariff and rules on charging are published only in Bulgarian.

Estonia

Maritime transport is an important sector of Estonian transport system with total of 31 ports handling commercial traffic. Of those 14 are considered major ports; however the most important is port of Tallinn which handling operations constitute roughly 80% of all activities in Estonian seaports. Two other important ports Parnu and Kunda contribute only 4% each to the total cargo handled. All ports in Estonia are operated as public limited companies based on corporate law. Still some of them are a hundred percent state owned companies while other ports are privately owned. In few cases there is a mixed ownership structure. In the major port of Tallinn the state owned company manages operations. In contrast, the port of Kunda and its facilities are entirely privately owned.

Charging practices to terminal operators at national level

The Port of Tallinn has ownership of considerable real estate including land and buildings. Ownership structure determines charging practice and in case of Tallin buildings owned form considerable part of the value of the non-current assets. In 2006 the net book value of land and buildings was €368 m. Land is leased out by the port authority for periods of up to 100 years. The price is charged per square meter, per year. For example the typical leasehold in port of Tallin is a long – term (even up to 99 years) and the price is around €3, per square meter per year. This constitutes total rental income at €5.695 million per year.

Charging practices to ship operators at national level

In case of Estonia two groups of dues are collected – national and local. Estonia has three types of national dues:
- for lighthouse and ice services
- for pilotage
- for communications

Dues for lighthouse and ice that are levied by the Estonian Maritime Board (and those are based on tonnage). Pilotage dues are calculated on the basis of a regulation of the Ministry of Transport and Communication. Rates are set on the basis of tonnage and distance. For the purpose of distance calculations the sea area is divided into five sectors (Tallinn, Kunda – Loksa, Paldiski, Väinamere (West-Estonian Archipelago), Pärnu.

National dues are part of pricing system – the other part goes directly to the port authority. For example Port of Tallinn receives the following:
- Port pilotage dues;
- Tonnage dues;
- Quay dues;
- Mooring dues;
- Passenger fee.

Within the port, pilotage is carried out by port certified pilots and dues are levied based on tonnage of the ship. Tonnage dues are calculated on the basis of gross tonnage additionally surcharges are imposed on single hull tankers. There are several discounts which apply to reefer vessels, and vessels loading timber. Tonnage dues are applied also to passenger vessels but system of discounts is employed allowing for reduction based on the number of calls.

Quay charges are levied to vessels on the basis of their tonnage. Deductions apply for passenger vessels on regular liner services and for cruise vessels, yachts and sailing vessels that call multiple times per year. There are also special cases that might increase dues:
- extra charges for mooring and pilotage dues apply from 6 p.m. to 6 a.m. and on national and public holidays,
- tonnage dues and quay charges are reduced for liners depending on the number of calls.

---

Passenger dues are levied upon arrival or departure of a vessel according to the number of embarking/disembarking passengers. Passenger dues are levied regardless of whether the passenger disembarks or not.

A cargo charge is levied on ro-ro cargo of clients who have not concluded contracts on the use of infrastructure with the port of Tallinn. The charge is a fixed amount per unit.

**Table 27 Port revenues in Tallinn**

<table>
<thead>
<tr>
<th>in thousands of:</th>
<th>EFK</th>
<th>EFK</th>
<th>EUR</th>
<th>EUR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
<td>2005</td>
<td>2006</td>
<td>2005</td>
</tr>
<tr>
<td>Port dues</td>
<td>656681</td>
<td>615522</td>
<td>41969</td>
<td>39339</td>
</tr>
<tr>
<td>Cargo charges</td>
<td>183337</td>
<td>181180</td>
<td>11717</td>
<td>11579</td>
</tr>
<tr>
<td>Passenger fees</td>
<td>127763</td>
<td>131620</td>
<td>8166</td>
<td>8412</td>
</tr>
<tr>
<td>Rental income</td>
<td>107876</td>
<td>103378</td>
<td>6895</td>
<td>6607</td>
</tr>
<tr>
<td>Sale of electricity</td>
<td>77092</td>
<td>69126</td>
<td>4927</td>
<td>4418</td>
</tr>
<tr>
<td>Sale of other services</td>
<td>25204</td>
<td>31176</td>
<td>1611</td>
<td>1993</td>
</tr>
<tr>
<td><strong>Total sales</strong></td>
<td>1177953</td>
<td>1132002</td>
<td>75285</td>
<td>72348</td>
</tr>
</tbody>
</table>


**Latvia**

Latvia is a country with 10 commercial ports of which three major are Ventspils, Riga and Liepaja. Most of the throughput is cargo coming in and out of Russia and other former Soviet republics. All the ports are situated next to special economic zones which is important since companies located in those zones can receive tax reductions, depending on investments made during the tax year. While the land and quays at the ports of Riga, Liepaja and Ventspils are the property of the State or local government, the port operating equipment are privately owned. Land in ports is leased to private operators through contracts between Port Authority (responsible to the government) and given company. This source of revenue amounts to 10% of total port revenues.

**Charging practices to terminal operators at national level**

Concessions and rents for land use are subject to individual negotiations between each Port Authority and private company operating in port. Accordingly to the scheme employed in all concessions terminal operators are usually responsible for superstructure and equipment (with some exceptions when special arrangements might be done). The mixed ownership status in ports results from early privatization during 90-ties of XX century with almost all machinery and other equipment were sold to private enterprises while buildings and land transferred to port authorities. The latest are now subject of lease agreements between port authorities and private companies. The tariff level is dependent upon specific area location. The port of Riga charges LVL 1.6 per square meter flat rate for port areas not facing the sea, and LVL 3.9 per squared meter for port areas with quay. Although there are no specific quay dues terminal concessions fees are determined according to specific terminal areas and, as a result, the economic characteristics of the area, such as the presence of rail or road links, play a major role.

**Charging practices to ship operators at national level**

In the ports of Latvia the following dues can be charged:
- Tonnage dues;
- Canal dues;
- Sanitary dues;
- Small-ship dues;
- Anchorage dues;
- Ice dues;
- Lighthouse dues;
- Quayside dues;
- Freight dues;
- Pilotage fee;
- Passenger dues.

The decision on the type and level of dues is left to the port management board, with the exception of lighthouse and pilotage dues, which are collected by the Maritime Administration operating under the Ministry of Transport. All maritime dues are set per gross ton. Pilotage dues can be subject to discounts or increases depending on the type of ship and on whether the use of the pilot can be avoided. Lighthouse dues are payable for the first 6 entrances per calendar year. Ro-ro vessels and container vessels are granted a 20% reduction. Passenger ship dues are granted a 30% reduction.

Among port dues based on gross tonnage the following are charged by major ports (Riga, Ventspils and Liepaja):
- Tonnage dues
- Canal dues
- Sanitary dues
- Small-ship fee.

Those dues represent major income source of ports amounting to almost 75% of totals.

First type is based on tonnage and might be modified by number of calls and type of ship. Also ballast vessels receive a discount. In Liepaja in addition, vessels are given a discount also when they are loading or unloading less than 50% of their cargo in the port. Similar rules apply to canal dues. Sanitary dues are modified based on the duration of port stay of given vessel. Special policy applies to ships smaller than 200 gross tons – the dues are reduced. Similarly reduced dues apply to fishing vessels.

**Table 28 Port dues collected by the port of Riga 2003**

<table>
<thead>
<tr>
<th>Dues</th>
<th>Amount in th. USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage dues</td>
<td>6,921</td>
</tr>
<tr>
<td>Canal dues</td>
<td>6,310</td>
</tr>
<tr>
<td>Sanitary dues</td>
<td>860</td>
</tr>
<tr>
<td>Berthing dues</td>
<td>2,564</td>
</tr>
<tr>
<td>Pilotage dues</td>
<td>4,643</td>
</tr>
<tr>
<td>Ice dues</td>
<td>630</td>
</tr>
<tr>
<td>Passenger toll</td>
<td>156</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22,082</strong></td>
</tr>
</tbody>
</table>

Source: Port of Riga
Lithuania

The only seaport of international importance in Lithuania is located at Klaipeda. Ports in Lithuania have gone through the process of restructuring as a result of both – regained independence and change from state controlled economy into the market model. For maritime transport the effects of reform process have been concluded with the Law on Klaipeda State Seaport of the Republic of Lithuania, issued in 1996. As a result the port of Klaipeda is managed by the Klaipeda State Seaport Authority which is, a government enterprise under the direct control of the Ministry of Transport.

The major source of revenues of the port of Klaipeda are port dues (80%), followed by leases (15%) and revenues from pilotage services and minor financial transactions.

Charging practices to terminal operators at national level

Pricing policy in regard to land and terminal lease is based on individually negotiated contracts. Factors that influence price are of technical and quality kinds - water depth at berth, location with respect to the railway network, and quality of terminal infrastructure. Ministry of Transport reserves the privilege of blocking any contract and leases are usually awarded for periods from 1 to 5 years, with the possibility of renewal.

Charging practices to ship operators at national level

Since Klaipeda is the only port of international dimension, Klaipeda State Seaport Authority is the authority in charge of collecting dues and charges for maritime traffic. The process of calculation of port dues is set up by the Ministry of Transport. All operators of vessels calling at the Klaipeda State Seaport have to pay all port dues. Only state owned non commercial vessels are exempted from port dues by the procedure set forth by the Government. Additionally vessels owned by the Klaipeda Port Authority are granted exemption from any port dues. The port of Klaipeda charges the following types of dues:

- Vessel dues;
- Navigation dues;
- Berth dues;
- Tonnage dues;
- Sanitary dues;
- Passenger dues;
- Pilotage dues.

Vessel dues are calculated in regard to gross tonnage and the number of calls per year. They consist of a basic rate to which specific surcharges are added according to the size of the vessel and its class. The charging system differentiates between tramp and liner vessels. In both classes different charges are applied to specific vessel types. In tramp class special prices apply to fishing vessels, ro-ro vessels, internal water vessels and non-selfpropelled floating constructions. Moreover reductions could be applied if tramp vessel calls at the port more than 12 times in a year. For liners different charges are set for container vessels, container and general cargo vessels, railway ferries and ro-ro passenger vessels (this however applies only to ships calling more that once a week and 12 times a month). In general price differentiates on the basis of number of calls liner vessels into groups:

- 1-6 times per year,
- 7-26 times per year,
- more than 26 times per year.
Navigation fees are levied on all ships calling at the port of Klaipeda and calculated as unit price times cubic meters times gross tones. Similarly like with vessel dues the differentiation favors vessels calling more times in a year to the port. There are number of exemptions – Lithuanian navy and border guards, rescue and fire-fighting ships, hydrographic training and research ships of the Republic of Lithuania as well as medical aid ships, sport vessels of the Lithuania. Also Port Authority has power to exempt vessels carrying non-commercial charity goods and performing non-commercial functions. Berth dues (established by the Government) are paid by the ship operator and depend on tonnage and time of cargo handling operations. The following reductions apply:

- cargo vessels less than 1,000 gross tones of which handling operations do not exceed 8 hours get 50% rebate
- liner ro-ro vessels calling at least twice per week get 60% rebate
- fishing vessels registered in Lithuania and carrying their activities in the exceptional economic zone of the Republic of Lithuania
- vessels carrying passengers and/or cargo within port waters
- inland water vessels registered and operating within the territory of the Republic of Lithuania

Tonnage dues are paid for vessels that call at the port for cargo handling operations on the base of gross tonnage and how much of the vessel is loaded or unloaded at the port. In case of ro-ro units the price is established based on number of vehicles (their class and whether they are loaded or not). There are several exemptions:

- fishing vessels registered in Lithuania and carrying their activities in the exceptional economic zone of the Republic of Lithuania
- vessels carrying passengers and/or cargo within port waters
- inland water vessels registered and operating within the territory of the Republic of Lithuania
- non-commercial vessels

Sanitary dues cover all necessary sanitary operations and always depend on the time the vessel stays in port. They are calculated on the basis of the vessel’s gross tonnage and depend on the cubic meter of pollutants/waste emitted. Rebates apply to some groups of ships registered in Lithuania (fishing and non-commercial) while total exemptions apply to navy, inland vessels, sport ships, vessels serving the port and rescue, hydrographic or research ships.

All passengers of age 7 and above embarking or disembarking in Klaipeda are charged a passenger due. No dues are charged for domestic traffic.

Pilotage dues are based on the gross tonnage of the ship. The charge is fixed and depends on whether the pilot is required within the port area or outside it. Additional surcharges are applied on holidays and at night. The payment for pilotage services is calculated for sea-going vessel by applying service rate to number of gross tonnage. For some vessels (internal water vessel, non-self-propelled floating construction, and other special vessels – all that do not have documents proving their gross tonnage) the pilotage service rate is multiplied by the vessel’s maximum length, the vessel’s maximum breadth and the vessel’s summer water line.

**Poland**

Poland has three major ports or port complexes – Gdansk, Gdynia and Szczecin-Swinoujscie.
Port authorities operate based on the provisions of the Act on Seaports and Harbours and the Code of Commercial Companies.

**Charging related to port/terminal operators**

Both use of land and use of port facilities is subject to individual agreements between port authorities and companies operating in port. For example in the port of Gdansk charges paid by customers to those private operators are established on market basis by operators. All supportive services like electricity or heating are provided to the companies by port authority. Specific charges for specific port facilities and locations vary depending on location, condition of buildings. Leases are significant source of revenue in case of Port of Gdansk – they provide roughly 1/3 of total revenues.

**Table 29 Payments from the ship operators in Port of Gdansk 2004**

<table>
<thead>
<tr>
<th>Category of payments</th>
<th>Net value (€)</th>
<th>Share in total income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port charges (from vessel operators)</td>
<td>10 659 311</td>
<td>37.5%</td>
</tr>
<tr>
<td>Lease charges (terminal operators)</td>
<td>9 348 384</td>
<td>32.9%</td>
</tr>
<tr>
<td>Provision of electricity, IT services, heating etc. (vessel operators/terminal operators)</td>
<td>5 830 840</td>
<td>20.55%</td>
</tr>
<tr>
<td>Charges for port infrastructure use (terminal operators)</td>
<td>1 882 542</td>
<td>6.65%</td>
</tr>
</tbody>
</table>


**Charging related to vessel operators**

Charges for vessel operators are capped by the national law which dictates maximal level that could be levied and cannot be exceed. Specific charge level as long as it falls below government set price could be set at any point by port authorities. Tonnage dues for entry of seagoing ship to port and departure of ship from port, transit through port area, and assurance of ship waste reception for recycling or treatment are based on ship tonnage as well as ship type.

**Table 30 Differentiation by ship class in ports of Gdansk and Gdynia**

<table>
<thead>
<tr>
<th>No.</th>
<th>Tariff in port of Gdansk</th>
<th>Tariff in port of Gdynia</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Car carrier</td>
<td>Car carriers</td>
</tr>
<tr>
<td>2</td>
<td>General cargo vessel</td>
<td>General cargo vessels</td>
</tr>
<tr>
<td>3</td>
<td>Reefer carrier</td>
<td>Refrigerated vessels</td>
</tr>
<tr>
<td>4</td>
<td>Container vessel</td>
<td>Container vessels</td>
</tr>
<tr>
<td>5</td>
<td>&quot;Ro-Ro&quot; ship</td>
<td>Ro-ro</td>
</tr>
<tr>
<td>6</td>
<td>Bulk carrier</td>
<td>Bulk carriers</td>
</tr>
<tr>
<td>7</td>
<td>Passenger ship</td>
<td>Passenger vessels</td>
</tr>
<tr>
<td>8</td>
<td>Ferry</td>
<td>Ferries</td>
</tr>
<tr>
<td>9</td>
<td>Passenger - cargo ship</td>
<td>Tankers</td>
</tr>
<tr>
<td>10</td>
<td>Tanker up to 38,000 GT</td>
<td>Tugs and pushers</td>
</tr>
<tr>
<td>11</td>
<td>Tanker over 38,000 GT</td>
<td>Cutters and fishing boats less than 35 m length</td>
</tr>
<tr>
<td>12</td>
<td>Towing and pushing vessels</td>
<td>Other seagoing vessels</td>
</tr>
<tr>
<td>13</td>
<td>Other seagoing ships</td>
<td></td>
</tr>
</tbody>
</table>

Source: Own comparison based on Port of Gdansk and Port of Gdynia data.
For regular lines and ferries special rates apply:
- at least 8 times a week amount to 40%,
- at least 6 times a week amount to 45%,
- at least 4 times a week amount to 50%,
- 3 times a week amount to 60%,
- 2 times a week amount to 65%,
- 1 once a week amount to 70%,
- less than once a week amount to 75%.

Also reduced payments are for non-self-propelled vessels, fishing vessels and small ships. Ships calling port for other then commercial reasons are exempt from tonnage dues. Ship waste dues are included in tonnage dues to certain level if actual needs are higher than additional fee is required.

Wharfage is based on type of ship, gross tonnage and time it stays at pier. Again similar reductions like for tonnage dues apply based on calls frequency exists. For carriers calling at port at least 8 times a week tariff is 40%, 6 times a week – 45%, 4 times a week 50%, 3 times a week – 60%, twice a week – 65% and once a week 70%. Furthermore for carriers calling less frequently than once a week but not less than once a month a 75% tariff is used.
For both ports rate is based on ship category.

Table 31 Wharfage in Gdansk and Gdynia

<table>
<thead>
<tr>
<th>Gdynia</th>
<th>Gdansk</th>
<th>Time of using port facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferries, ro-ro, passenger vessels</td>
<td>Ferries and passenger-cargo ships, &quot;ro-ro&quot; ships, scar carriers, passenger ships</td>
<td>Time of use of facilities + 4 hours afterwards</td>
</tr>
<tr>
<td>Other vessels</td>
<td>Tankers and bulk carriers</td>
<td>Time of use of facilities + 4 hours afterwards</td>
</tr>
<tr>
<td>All vessels</td>
<td>Other ships</td>
<td>For each commenced 4 hour period after 4 hours passed from the time of completion of operational or commercial operations</td>
</tr>
</tbody>
</table>

Source: Port of Gdynia Authority and Port of Gdansk Authority.

Passenger dues are collected for all passengers embarking or disembarking. They vary between Ferries and passenger-cargo ship and Passenger ships and other seagoing ships. Vessels for domestic travel are exempt from passenger fees.

Pilotage is calculated on the volume basis, which in turn is computed according to the following formula: \( V = L \times B \times T \) in which: \( V \) - the ship or towing train volume, stated in cubic meters, \( L \) - length overall of ship or towing train (LOA tugboat + LOA towed vessel), stated in meters and centimeters, \( B \) - extreme breadth of ship or towing train, stated in meters and centimeters, \( T \) - summer draught of ship or towing train, up to the summer load-line, stated in meters and centimeters.

Additional surcharges apply for additional piloting services (e.g. piloting vessels without enough rudders, docking, undocking etc.) Price for mooring and towage services is also calculated on the volume basis. All pilot services, towing and mooring services are carried by separate companies, according to its price rates. Excused from all charges and duties are vessels of NATO Treaty.
Romania

Maritime transport is handled at three Black Sea Ports (Constanta, Midia, and Mangalia). There are four other ports (Braila, Galati, Tulcea, and Sulina) used for inland waterway and maritime transport and 26 other fluvial ports. Ports and navigation infrastructure are managed by each port administration (under the responsibility of Ministry of Transport).

Charges related to port/terminal operators

The tariff applies to:
- Power supply;
- Land lease;
- Water supply.

Those are important part of overall port incomes as Table 32 shows.

Table 32 Income structure of NC Maritime Ports Administration SA Constanza 2005 in ths. EUR

<table>
<thead>
<tr>
<th>Service</th>
<th>Amount (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port services</td>
<td>36091</td>
</tr>
<tr>
<td>Power supply</td>
<td>7781</td>
</tr>
<tr>
<td>Financial services</td>
<td>3435</td>
</tr>
<tr>
<td>Water supply</td>
<td>1593</td>
</tr>
<tr>
<td>Other</td>
<td>6657</td>
</tr>
</tbody>
</table>

Source: National Bank of Romania

Charges related to vessel operators

Port dues consist mainly of port access tariff - which is applied per GT (TB) of vessel as shown in ship's papers for each entry in port depending on the type of vessel and differently for the gross tonnage (TB) groups. A reductions are applicable for ships in line service – amount of charge is again related to GT.

Quay tariff - is applied per vessel's maximum length and number of days in port depending on the type of vessel and the gross tonnage (TB) heading under which the vessel falls. The rate differentiates between:
- Bulk carriers;
- Tankers/LPG carriers;
- Cargo-vessels;
- Container carriers;
- Ro-ro ferryboats;
- Passenger ships;
- Military vessels.

Due to the specific dual character of most Romanian ports, since they carry a lot of inland water operations – special reduced flat rate for inland water transport vessels applies.

Basin Tariff - tariff rates for port basin is applied per vessel's maximum length and number of days in port depending on the type of vessel and gross tonnage (TB) and group which the vessel falls into (similar division as with quay tariff is used).

Tariff rates for supervision, security and control of loading/discharging operations of maritime and river vessels are applied to each vessel performing loading/discharging
operations in port, including those operating Ferry Boat berth, meaning tariff rates for supervision, security and control of passenger vessels.

Maritime services related to vessels entering and leaving Romanian ports (pilotage services) are considered as public services of national interest. Therefore, their charges are set by MTCT, and bare stipulated in the concession contract. For other maritime services, such as towage, mooring, band cargo -handling services, prices are set freely by private companies, subject to negotiation with the services users. Port operators are obliged to publish their tariffs. For example the tariffs for mooring/unmooring operations are related to the ship's Length as given by the Romanian Shipping Register, not to the ship's gross tonnage. These tariffs are negotiable and applied in port of Constanta, Mangalia, Midia by SC COREMAR SA - Towage Company. The Pilotage tariffs for maritime vessels calling at Constantza, Midia and Mangalia Ports are unique and they are related to the declared Gross Tonnage of the ships, but many exemptions and reductions apply (by visit frequency, type of ship, type of cargo).

Slovenia

Slovenian maritime infrastructure consists of 3 ports. Those are: Koper, Izola and Piran. Althoug only port of Koper is truly developed and equipped seaport for handling international shipping. Management of port of Koper is under supervision of governmental bodies. The port itself is managed by Luca Koper company – a former state enterprise in market reality transformed in 1993 into business enterprise. Therefore there is a continuity of management but not a continuity of charging schemes. Port infrastructure is accordingly to Slovakian Maritime Code considered as any object in port being used to facilitate its operations.

Charging practices to port/terminal operators

The port operator from 1957 till 1999, has not paid any rent to the State for the use of port land, infrastructure and structure which were utilized free of any charges. Only, as from 2000, is paying an annual rent according to the clauses of the 2000 lease agreement an annual rent of SIT 20 (equal to € 0,0834) per ton on all kinds of goods handled in the port has been introduced. There is also additional payment on part of the operator – a land rent for land use paid to local authorities (Municipality) in the amount of € 1,45 per square meter of port land. Management company spent during last 10 years € 70 millions as port maintenance. These costs are borne by Luka Koper and are then reimbursed by the State through the Port Dues: In the instances when Port Dues exceed the costs, the company must give back the difference to the Ministry. If dues are below costs, the company has a right to reimburse them the following year from the amounts than levied.

Charging practice regarding vessel operators

Vessel operators are charged:
- Port dues;
- Wharfage;
- Pilotage;
- Towage.

Detailed charges for all services offered by the port are calculated in accordance to the Maritime Code of the Republic of Slovenia (Official Gazette, number 26/2001 and 21/2002).
Basis for charge calculation is GT of given type of cargo. There are 6 different groups of cargo.

**Table 33 Cargo groups in Port of Koper tariff**

<table>
<thead>
<tr>
<th>Type of cargo:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk and liquid cargo, crude oil, fuel-bunkerage, kaolin, phosphates, salts,</td>
</tr>
<tr>
<td>sinter magnesite, fertilizers, sulphur, coke, bitumen, all kinds of ores,</td>
</tr>
<tr>
<td>coal, scrap iron, cereals and oilseeds in grain after processing</td>
</tr>
<tr>
<td>Chemicals, wine, edible oil, latex, molasses and other liquid cargo</td>
</tr>
<tr>
<td>Piecemeal and packed goods, timber and other goods</td>
</tr>
<tr>
<td>Vehicles and livestock</td>
</tr>
<tr>
<td>Dangerous cargo (explosives)</td>
</tr>
<tr>
<td>Passengers per passenger</td>
</tr>
</tbody>
</table>

Source: Tariff of port dues for Port of Koper.

Wharfage is calculated for use of operating pier and dependent on vessel length. It amounts to 10.20 EUR per started day. A ship is charged for wharfage upon expiration of two hours after completed loading/discharging operations.

Pilotage dues tariff is based on gross tonnage. In case where ship does not have an International Tonnage Certificate, the Gross Tonnage Tariff shall be calculated according to the formula: \( GT = V \times a \) where \( V = L \times B \times H \), and:

- \( L \) = length according to the International Load Line Certificate (1966), in meters;
- \( B \) = breadth, in meters;
- \( H \) = height at side from the bottom up to the uppermost complete deck, in meters.

Following discounts apply if more calls are made:

<table>
<thead>
<tr>
<th>Number of vessel's entries into the port</th>
<th>% charged according to the Tariff</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5</td>
<td>100</td>
</tr>
<tr>
<td>6 – 15</td>
<td>90</td>
</tr>
<tr>
<td>16 – 25</td>
<td>85</td>
</tr>
<tr>
<td>over 25</td>
<td>75</td>
</tr>
</tbody>
</table>

Towage is defined as any operation rendered by tugs to the vessel by pulling, pushing and/or holding during the course of entering, departing or shifting in the Port of Koper and its aquatorium. Charge is based on GT. Additional differentiation could be used for extra services and conditions the tariff chart shall be increased by:

- 25% for the overtime on working days and Saturdays,
- 50% for operations performed on Sundays and holidays and non-work days,
- 25% for vessels with dangerous and inflammable cargo,
- 100% for vessels with nuclear substances on board,
- 30% for gearless vessels,
- 10% for supply of the towing cable by the tug,
- 25% for use of a tug with over than 1.500 KW.

**8.2 Legal determinants**

Institutional and legal issues in the area of waterborne transport that influence pricing mechanism must be addressed in two ways:

- regulations and laws,
- institutional framework.
The first area deals mainly with legal systems and adoption of specific regulations that influence pricing policy. The number of regulations has direct impact on prices – e.g. tariffs set or taxes. However there is a huge group of laws that affect pricing policy indirectly. Those could be found in the maritime safety, environmental protection or seafarers rights regulations.

Institutional framework establishes relations between governments and ship operators as well as port authorities and companies servicing waterborne traffic. Those relations are seldom influenced only by market forces. Usually in new member states some (or rather high) degree of governmental regulation and/or ownership occurs. The control structure over safety, environmental and charging issues is often in government hands. There are multiple sea agencies that influence these. Therefore revealing links that exist between various involved bodies is crucial to understanding how pricing schemes work. Some new members have set up bodies or specific procedures for coordination of maritime affairs. Others have dominant lead ministries which cover a majority of subjects related to maritime affairs. In some cases, ministries apply a degree of integration of policies in others they may be distributed among a number of ministries. Some countries employ a scheme of sectorial division of work. In that case a great number of ministries could be involved in organizing waterborne transport (e.g. transport, economics, environment, agriculture and fisheries, defence, interior). Obviously the procedures governing organisation of waterborne transport in those cases are complex and often unspecified resulting in weak coordination of appropriate policies. On the other hand this system allows for better functioning of the organisation on lower levels – since different organisations are more familiar with specific issues surfacing in their area of expertise.

Additionally a division of work and responsibilities is widely applied between different levels of government (central, regional, local) with various coordination mechanisms.

Regulatory activities and supervision is organized differently across new member states. This is result of tradition and often historical background. However in general new member states from central and eastern Europe are not and have not been as much sea-oriented as number of countries of western Europe. The tradition is not a very long-time and maritime sector has never played as important role as in case of UK or Spain. Finally considerable numbers of new member states are landlocked countries thus their maritime policies are reduced to necessary minimum and conducted as part of general transport policy. In general, the system applied is, to a greater or lesser extent, decentralised, whereby functions are shared among different services. Usually there is no clearly distinguished responsibility for defining policy among various governmental offices in the areas of their competence (taking into account and implementing both community law and relevant international legislation) and those in charge of operational functions to safeguard the compliance to the law.

On the connection of all those areas there is an issue of pricing schemes – the way that they are established. Whether it is necessary to consult it with the governments or are they subject to local authority influences, finally the important question is how well market competition could be introduced in given area. Common feature is that certain governmental activities are performed by ministries (or agencies) of overlapping competences. Most often the main policy regulator is ministry of transport (or infrastructure) while in some countries specific maritime transport dedicated ministry might exist. Moreover some specific agencies or ministries could exist under one government but with government change they might disappear or the opposite process could take place – new bodies dedicated to maritime sector
might be created (e.g. Poland’s Ministry of Maritime Transport). Overlapping competences are often those of ministries of commerce or trade as well as ministries of economy and within some issues pertaining to marine environmental protection - ministries of environment. The similarity of competence does not ensure similarity of decision processes or organizational issues. Different agencies involved in maritime sector respond to different ministries. Often this pattern creates confusion and problems with the duty to monitor and to ensure proper implementation of the legislation in force by those concerned. Moreover in number of countries some functions (especially those dealing with borders and customs) are carried out by ministries of defense and finance adding additional stakeholders to any legislative process and complicating operational issues. High degree of cooperation is required to make this system work properly and to avoid redundancy. Most importantly the laws themselves should be clear and easy to implement. This applies both to national regulations but even more to international and community law.

As Table 34 shows number of regulations in important policy areas (especially those with global repercussions) has been already adapted among new members. All of those have some impacts on costs and services valuation influencing pricing policy.

### Table 34 Maritime transport and sea related regulations - multilateral and EC instruments

<table>
<thead>
<tr>
<th>Area</th>
<th>No of regulations in force</th>
<th>BU</th>
<th>EE</th>
<th>LV</th>
<th>LT</th>
<th>PL</th>
<th>RO</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vessel safety</td>
<td>21</td>
<td>17</td>
<td>18</td>
<td>18</td>
<td>16</td>
<td>14</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>Safety of navigation</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>- shipping - traffic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salvage search and rescue</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Liability and compensation</td>
<td>14</td>
<td>5</td>
<td>4</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Maritime security</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Maritime transport</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Seafarers rights</td>
<td>44</td>
<td>25</td>
<td>11</td>
<td>10</td>
<td>8</td>
<td>22</td>
<td>18</td>
<td>23</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on EU Maritime Policy Task Force data.

The final administrative set-up in the various states, regardless of their federal or centralised structures, originates from differences in history, geography and administrative culture.

### 8.3 Seaports and inland waterway ports management in NMS

The new port hierarchy in Europe is reflected by two main developments: 1) the changes in the European container port system, 2) the renewed role of smaller ports. In Southern Europe new hubs have emerged (e.g. Marsaxlokk, Gioia Tauro, Taranto and Cagliari). The success of these ports is partly the result of the fact that a call involves a minimal diversion for a mainline vessel transiting the Mediterranean. Competition between European container ports focuses mainly on their capacity to attract the maximum container volume in order to justify direct calls. The Baltic and Atlantic ports have been linked for some time now to the major European ports by sea routes, as they had already been abandoned by large vessels. In some
cases, feeders are facing competition from inland modes. Smaller ports traditionally serve a more local hinterland. In many cases specific industries in the vicinity of the port generate the cargo volumes. Smaller ports often show a high degree of specialisation in a limited number of commodities, such as minor bulks (e.g. grain, sand or fertilizers) or conventional cargo (e.g. forest products, cars or fruit). To assess each country’s proximity to seaports we took the following into consideration: 1) the average geographic area covered per main seaport (expressed in thousands of square kilometres per main seaport); this indicator identifies the density of seaports in a country, 2) the average gross weight of goods handled per main seaport (expressed in millions of tonnes per main seaport); this indicator identifies the infrastructure for handling large volumes of goods at seaports. Clearly the Netherlands (with the Rotterdam harbour) and Belgium (with the Antwerp harbour) score best on their proximity to main seaports. Germany scores high on the average gross weight handled at seaports (especially the Hamburg and Bremen harbours) but scores low on the number of harbours in relation to the German geographic area. A lot of the new 2004 accession countries score high on their proximity to main seaports (like Latvia, Estonia and Lithuania). At the bottom of the list Romania that handled a significant amount of freight at its two main seaports, however it scores lowest on the number of seaports in relation to the Romanian geographic area. The Eastern Europe region will experience the largest implications of EU enlargement. Most of the 10 new EU countries are situated in this region in addition to some of the other possible future EU countries. Since most of the current European distribution centres are located in the Benelux region or France, many companies will establish an additional satellite warehouse or regional distribution centre in Eastern Europe because these regions cannot be reached within a reasonable timeframe from the EDC’s in the Benelux and France. In terms of attractiveness in locating Eastern Europe regional distribution centres the following ranking applies:

1. Germany
2. Poland
3. Hungary
4. Czech Republic
5. Bulgaria
6. Slovakia
7. Romania
8. Austria
9. Slovenia

Only in 7 NMS seaports exist. Those are situated on three different sea markets: Baltic (Poland, Lithuania, Latvia, Estonia), Black Sea (Bulgaria i Romania), Adriatic (Slovenia). In comparison with North Sea maritime hubs, the ports of NMS are situated peripherally, however in the list of 40 biggest EU seaports there are 4 NMS’s ports (million tons loaded in 2004):

- Constantza (Romania) – 50,4
- Tallin (Estonia) – 37,3
- Ventspils (Latvia) – 27,8


Other important NMS seaports are:
- Gdansk (Poland) – 23,3
- Klaipeda (Lithuania) – 20,3
- Szczecin (Poland) – 15,6
- Gdynia (Poland) – 14,2
- Bourgas (Bulgaria) – 14,0
- Koper (Slovenia) – 12,4
- Varna (Bulgaria) – 9,5
- Świnoujście (Poland) – 9,2
- Liepāja (Latvia) – 4,5

Constața Port is both a maritime and a river port. Daily, more than 200 river vessels are in the port for cargo loading or unloading or waiting to be processed. The connection of the port with the Danube River is made through the Danube-Black Sea Canal, which represents one of the main strengths of Constanța Port. Due to low costs and important cargo volumes that can be carried, the Danube is one of the most advantageous modes of transport, an efficient alternative to the European rail and road congested transport. Constanța Port has a handling capacity of 100 million tons per year. The port is the main container hub in the Black Sea and provides a starting point for all direct sea-lines between Asia and Black Sea^67.

Port of Tallinn is the biggest port authority in Estonia and as far as both cargo and passenger traffic are taken into account, the biggest port on the shores of the Baltic Sea. Port of Tallinn is one of the fastest developing ports in the Baltic Sea. All harbours are navigable all the year round and easily approachable with depths of up to 18 meters enabling them to receive all vessels able to pass the Danish Straits. All port facilities have security plans approved by the national maritime authority and compliant with ISPS requirements^68.

The chief role of Latvia's ports is to process transit cargo. At the port of Rīga, general cargo, containers and oil products are transhipped. The port of Ventspils has the greatest turnover of all Latvian and Baltic Sea ports. Shippers load their cargo at the largest oil and oil products terminal on the Baltic Sea. The port of Ventspils has one of the largest terminals for handling potassium salts, and it has the largest terminal for handling liquid chemicals. In 2000 a container terminal began functioning there as well^69.

Except Slovenia, all „maritime” NMS are the members of European Sea Ports Organisation (ESPO)^70.

Inland waterway transport has limited importance in NMS traffic, existing systems have to be upgraded where they exist (Hungary, Poland, Czech Republic) . All major cross-border waterways are of European interest. On the territory of NMS only the river Danube, the longest river in the EU, have European importance. The Danube is navigable by ocean ships from the Black Sea to Brăila in Romania and by river ships to Kelheim in Bavaria. Since the construction of the German Rhine–Main–Danube Canal in 1992, the river has been part of a trans-European waterway from Rotterdam on the North Sea to Sulina on the Black Sea (3500

km). In 1994 the Danube was declared one of ten Pan-European transport corridors, routes in Central and Eastern Europe that required major investment over the following ten to fifteen years. The amount of goods transported on the Danube increased to about 100 million tons in 1987\(^71\). River Oder is navigable over a large part of its total length, as far upstream as to the town of Koźle, where the river connects to the Gliwicki Canal. The upstream part of the river is canalized and permits larger barges (up to CEMT Class IV) to navigate between the industrial sites around the Wrocław area. River Vistula is navigable, but large parts of its course do not meet the requirements of modern inland navigation. From the Baltic Sea to Bydgoszcz (where the Bydgoszcz Canal connects to the river), Vistula can accommodate modest river vessels of CEMT class II. Further upstream the river does not have enough depth to allow river barges to navigate.

In the list of the members of the Inland Navigation Europe (INE)\(^72\) there aren’t stakeholders from NMS.

The organization of maritime traffic management, port management and law enforcement procedures vary in NMS. The applied schemes are country-specific and often difficult to translate due to local arrangements. Nevertheless often the adopted solutions serve the purpose of better management and more transparent pricing well. The local differences are in many cases result of local needs and should be maintained. It is probably not possible to uniform those procedures within next couple of years without significant slump in operational capacity.

The procedures regarding division of responsibilities and maritime laws of Estonia are set in Estonian Ports Act. Under its provisions a port authority is obliged to:

- maintain hydro-technical structures within the port,
- maintenance and setup of navigation marks both in-port and outside,
- deepening of internal port paths to declared depths,
- supervision of dangerous goods transported through port (both on ship and on land – within port limits),
- enforcement of fire and safety regulations,
- keeping port in clean and orderly condition.

Maritime safety is responsibility of Estonian Maritime Administration (a unit within Ministry of Economic Affairs). Main tasks of this body are maintenance and installation of navigational aids, hydrographical surveys, monitoring of vessel traffic, and arrangement of icebreaking operations. Estonian practice sets all port operators as public limited companies based on corporate law. The State ownership stake in port operator company may vary and some are fully private enterprises. The Border Guard is responsible for border protection and clean-up operations at sea. The Police, in cooperation with other authorities, have a responsibility to investigate criminal offences in maritime questions. The Ministry of Economic Affairs and Communication and the Ministry of Interior are competent for environmental protection. Cross-border cooperation relates to fisheries (through EC institutions), border protection and SAR/accident and disaster response (bi and multilateral and inter-ministerial agreements, cooperation protocols with almost all Baltic countries plus Norway, Hungary and Ukraine).

Different approach is employed in Latvia. The Security Police, State Police (subordinate to the Ministry of Interior) and municipal police carry-out police functions in regard to water transport. The Marine and Inland Waters Administration (structural unit of the State Environmental Service of the Ministry of Environment) is the competent body for the environmental protection. The National Board of Fisheries of the Ministry of Agriculture deals with fisheries management and control. The Marine and Inland Waters Administration ensures the functioning of fishing vessel monitoring system and fish lading control in Latvian ports. Search and rescue operations/accident and disaster response are carried out by the Ministry of Defence, National Armed Forces Coast Guard Service. Coast Guard is competent for the coordination and performance of SAR operations, the elimination of the consequences resulted from ship accidents and disasters, leakage of oil, dangerous and hazardous substances into the sea. Moreover, it ensures the operation of the coastal communication network of the Global Maritime Distress Safety System (GMDSS). The Maritime Administration of Latvia (operates under the authority of the Ministry of Transport) is the main administrative body dealing with maritime matters. Specific laws of Latvia create situation where all port land as well as inner port waters are property of the State. The relevant port authorities are setup by state with land transferred into them. The land is further leased to private companies on the basis of contracts between given port authority and company. However many equipments belonging to port area (warehouses, cranes) are property of private operators. Port authorities are established through local city councils but operate under supervision of the Ministry of Transport. Ports in Latvia are represented at national level by the Latvian Port Council. The latter is headed by the Prime Minister and comprises senior officials of the municipalities and professionals operating in the port sector. There is no special coordination for the work of the different services involved in maritime affairs. The Latvian Port Council brings together members of the central government, local authorities, managers of the ports and stake holders representatives, to coordinate port policy.

The procedure for establishment of port regulation is as follows: firstly port authority creates regulation, than it is send to the Ministry for approval. Port regulations are on technical issues, safety and security, environmental issues, customs arrangements, traffic control, mooring and other port operations. Administration of port land, marine infrastructure is also a subject of port authority area of work. Quay sides in the three major ports can also belong to other legal and natural persons but are managed nevertheless by the port authority. This model of operation is established under the provisions of the “Law on Ports”, adopted in 1994 as an umbrella law for the port sector. In practice this means that port authority is a “non-profit” entity, managing only infrastructure and looking after the policing of port operations. Actual provision of services is in hands of private companies. Those arrangement lead to the situation where ports operate both under private and public law – depending on tasks performed. For example, the Port of Riga (main port in Latvia) performs under public law the following activities:

- setting up of port fees and tariffs as well as their collection,
- collection of land lease (rental) payments,
- port security,
- enforcement of port and state law,
- environmental protection of port (waters and land),
- keeping port free of ice.

The private law is used in:

- introduction of all development plans for port (which is done in close cooperation with the City of Riga),
The role of State is overwhelming in practically all aspects of regulation and development of maritime transport in Lithuania. It prepares port development plans, promotion of ports and management of land. Approval of new construction projects, setting up of technical
inspections also belongs to the Authority. All operational issues are as well under its competence and those are like:

- pollution prevention,
- environmental protection,
- maintenance of piers and quays,
- deepening of water routes within the port.

The development of infrastructure within port is carried out together with municipal authorities. But final say belongs to the Authority. Independent stevedoring companies, shipbuilding and ship-repair yards and other companies are allowed to operate in the port on the basis of lease agreements with SE Klaipeda State Seaport Authority, in accordance with the landlord port model.

Example of Poland shows that in regard to maritime organization there is a strict division of labour between various sectoral ministries, although working groups can be set up regarding specific issues. Competence for spatial planning and management of the coastal zone is shared between central, regional and local administrations. Environmental protection tasks are supervised by the Ministry of Transport (or Infrastructure or Maritime Transport – depending on government structure) in cooperation with regional maritime offices, and the Ministry of Environment (through the institution of the Inspection for Environmental Protection). The Ministry of Maritime Transport has been in operation for last two years dealing with most aspects of maritime transport. However before and in the future (accordingly to new government preliminary setup of ministries) Department of Maritime Transport and Inland Navigation in the Ministry of Transport (or Infrastructure) is the competent body dealing with ship safety and security, including inspection of ships. It is also competent for certain matters relating to ports (development, security, programming and financing port waterways infrastructure, hinterland connection to sea ports and technical infrastructure in ports). Search and rescue operations are carried out by the Maritime Search and Rescue Service. Maritime tourism falls under the competence of the Ministry of Economy.

In regard to ports two supervision patterns could be identified. Ports of primary standing (Gdańsk, Gdynia, Szczecin) are run by management bodies with shares of both government (through Treasury Ministry) and local municipalities. Ports of secondary standing (e.g. Elblag, Kolobrzeg) are fully municipalized and supervised by appropriate municipalities. Some of the secondary ports that are not municipalities owned are supervised by Maritime Offices.

The way that maritime organization works could be best illustrated on the example of port – Port of Gdańsk. The port of Gdańsk Authority S.A. (the Joint Stock Company) with its registered office in Gdańsk, is a commercial partnership established in 1998 and operates based on the provisions of the Act on Seaports and Harbours and the Code of Commercial Companies. In that capacity, the Company follows the tradition of all its predecessor entities that used to manage the port grounds in Gdańsk. The Port Authority is a sole entity managing the port in Gdańsk – its tasks are in particular:

- management of port land and infrastructure,
- programming and planning of port development,
- construction, development, maintenance and upgrading of port infrastructure,
- acquisition of properties for port development needs,
- rendering of services connected with use of port infrastructure,
- assurance of access to port reception facilities for wastes from vessels.

All other port services are rendered by privately-run companies.
In Romania the number of functions regarding maritime organisation is divided between different governmental bodies. In the field of the maritime safety, the Ministry of Transport, Constructions and Tourism establishes the development policy and drafts the legislation. The law enforcement and the effective enforcement observation is carried out by Romanian Naval Authority and by the port administrations. Competences in the maritime sector are decentralized.

The environmental protection falls to the Ministry of Environment and Water Management. Fishing activities are managed by the National Agency for Fishing and Agriculture. For maritime traffic and maritime transport, it is the Romanian Naval Authority which has in its competence the safety of carrying out the maritime traffic by the port service control. This Authority is also competent, along with other authorized organizations, for the inspection of ships. The Romanian Naval Authority coordinates search and rescue/accident and disaster response activities, whereas the effective intervention is done through organizations or private companies contracted with it.

Slovenia has a system whereas the lead ministry working on maritime affairs is the Ministry of Transport; with the involvement of the ministries of environment and defense, whereby the latter performs co-ordination tasks in regard to control of maritime border. Control and sovereignty of internal waters as well as territorial sea is under the competence of national police. The Republic of Slovenia doesn’t have a Coast Guard. The common problems on sea solves a coordination group, where are the representatives of: Slovenian maritime administration, border police, customs, navy, inspection for fisheries and sea guard service. Regulations guiding Slovenian maritime law are contained in Slovenian Maritime Code. The formal responsibility for both ports and maritime policy is with Slovenian Ministry of Transport. To facilitate governing policies the Ministry has created two specialized bodies:

- Slovenian Maritime Directorate,
- The Maritime Office of the Republic of Slovenia (established in 1997).

The first body is strongly connected to Port of Koper and located in port from 1995. This solution results from Port of Koper being virtually only maritime port of Slovenia of any importance. Slovenian Maritime Directorate is responsible for:

- maritime safety,
- maritime documentation,
- adoption of international maritime laws,
- international cooperation.

Basically all aspects connected to port and navigation issues are subject to Maritime Directorate regulations. It covers safety and navigation provisions, search and rescue organizations, ships administrative issues (registration, surveys, certificates). Economic development of ports also falls into its scope of operations. Security and safety operations are conducted through the Maritime Safety Inspectors which is part of Port State Control organization acting under the Slovenian Maritime Administration. Those tasks are carried together with national police and under provisions of law cooperation of those two institutions is mandatory with both being allowed to enter the ship and carry on inspections. Maritime Office responsibilities are more with general business policy in regard to maritime transport and commerce. Especially it governs concession process, maritime traffic analysis, investments in port infrastructure.
Some commercial activities are subject to concession processes by the Office, those are:

- maintenance of port infrastructure,
- waste services for ships,
- safety facilities maintenance.

The law allows for concessions to be granted to both private and public enterprises. The Office is also empowered to establish organizational units to administer those services.

8.4 Technology and other determinants

Firstly technological requirements for employment of pricing schemes depend on:

- introduction of equipment allowing for automation of some payments,
- introduction of IT solutions allowing for data collection to establish pricing schemes,
- comparability of technical facilities in different areas that maritime transport is used.

In all 10 NMS those kind of technical solutions are employed for testing and for regular operations. However there is no single approach for their introduction involving central authorities. In places where they exist it is a matter of individual actions of separate companies. Moreover even in places that they are employed they usually are reinforced with traditional means.

The second technological precondition of efficient pricing schemes is related to setting up of identical technical standards in regard to safety and environment. Only in those circumstances equality of competition conditions between various ports might be achieved thus facilitating introduction of more efficient pricing schemes. Since all 10 NMS are included in EMSA Pollution Response Assistance scheme their situation in area of safety and environmental protection is not different from that of other member states. From the analysis of statistics for maritime incidents, the following conclusions can be made:

- maritime incidents have occurred in all European waters;
- nevertheless the majority of incidents have occurred within the North Sea, Channel and Mediterranean Sea.

Probably this is a reflection of the volume of trade in these areas. As a conclusion 10 NMS are situated with the exception of Slovenia at Baltic Sea and Black Sea – areas with lesser number of incidents. This area is not accordingly to statistics in any way more risky in regard to safety and environment than any other EU aquatic area. In case of new members local safety cooperation agreements are as important as pan-European. One must remember that technical issues on Baltic or Black Sea are strongly influenced by the fact that not all states bordering those waters are EU members or EEC area countries (thus cooperating under EMSA). The discussion of technical issues regarding safety on sea in that case must be widened to incorporate Russia which due to great degree of regulatory differences is often difficult.

In case of environmental comparability one of other technical issues that should be considered in regard to new member states is a problem of ensuring a good operation of port waste facilities as to enhance the effectiveness of the Directive 2000/59/EC This objective should allow as European Maritime Safety Agency states:

to acquire a deeper understanding of the cost recovery and waste notification systems applied in Community ports,
- to analyse the effectiveness of waste handling plans,
- to obtain information on fee reduction for “green ships” - such as ships whose environmental management, design, equipment and operation reduce the quantity of SGW,
- to determine any problem encountered by ports users.

As it could be noted this type of info is crucial to any charging principles based on real – cost in regard to waste dues and other environmental dues. Ports across NMS have interpreted the directive in different ways leading to some confusion among stakeholders (ships, shipping agents, waste operators and environmental authorities). However it should be noted that progress has been made in all NMS countries but in some substantially bigger than in the others. There are number of variations on issue of cost recovery, especially on the subject of introduction of incentives for waste delivery in the ports. The variants considered are: 100 % indirect fee, indirect fee for garbage only, fixed fee to be paid to Port Authorities beyond the direct charge from operators with possibilities of being refunded. For the NMS indirect 100% fee has been implemented in Poland, Estonia, Latvia, Lithuania and Slovenia. In many ports a lack of transparency was detected regarding the pricing of services provided by waste operators. This happens especially in ports, where port authority do not play a central role. This pattern has been observed across all EU member states and there are no regional or NMS – related exceptions.

Since the technical interoperability should be acquired as precondition to any charging system changes defining common technological platform allowing for data collection necessary to obtain costs and revenues info as well as allowing for automation of payments is main issue in this area. Finally an important factor is an inflow of skilled personnel that could use new technology in practical ways. In that aspect maritime oriented education plays significant role. Specific technical issues that have been recently taken into account could be identified for each of 10 NMS.

Slovenia for example plans to upgrade maritime traffic control through radar sensors to cover the Bay of Trieste, which is particularly important for fisheries controls and other small vessels. This would provide an overview of the entire vessel traffic in the navigation area of Slovenia’s territorial sea. Another good example are actions undertaken by The Polish Ministry of Science and Education - research funds for maritime research are estimated at 2% of expenditure on science. There is also support for economic development initiatives, e.g. between 2000-2005 period 10 projects of Polish shipyards benefited from public participation of 4 million PLN. Marine science, technology and research are crucial for the sustainable development of sea based activities. Poland for instance has a great tradition in educating personnel for the maritime sectors in a number of academies, universities and schools. Education covers a broad range of areas such as shipping, shipping industry, inland waterway shipping, maritime fishing, maritime tourism, research services. The Ministry of Infrastructure supervises the high quality of teaching and provides financial resources to cover the costs of special expertise and analyses.

In Romania “Grigore Antipa” National Institute for Marine Research and Development (based at Constanca) is the national technical operator for marine monitoring and through it the administration can unfold international cooperation. In Romania maritime training is carried out by two units at university level; perfection is carried out in a centre under the
authority of the Ministry of Transport, Construction and Tourism. Maritime education is conducted even in two landlocked countries. In Hungary Hungarian Ministry of Economy and Transport controls and audits maritime training courses. The Czech Maritime Administration co-operates with a number of foreign maritime administrations to ensure the high quality education for Czech seafarers.

One of the most important factors influencing pricing decisions are economic capabilities behind maritime sectors of each country. Port technical characteristics are perfect example of technological impacts. Differences in number of terminals and equipment could seriously influence pricing schemes. From 10 NMS most have one dominant port. This is not the case of Poland with three comparable ports – Gdansk, Gdynia and Szczecin and to some degree Romania.

**Lithuania – Klaipeda Port**

Klaipeda is a multipurpose, universal, deepwater port, providing high–quality services complying with the requirements of the European Union. 19 big stevedoring companies, ship - repair and ship – building yards operate within the port and all marine business and cargo handling services are being rendered. The annual port cargo handling capacity is up to 40 million tons. The draught of the entrance channel is 15 meters. The draught of the port navigation channel is 13-14.5 meters. Therefore, the port can accept large-tonnage vessels: dry-cargo vessels up to 70,000 DWT, and tankers up to 100,000 DWT. Between 1993 and 2006, state enterprise Klaipėda State Seaport Authority and the stevedoring companies operating in the port had allotted ca 1 billion Litas (300 million Euro) for its modernization; the money was invested into the construction of modern terminals, the reconstruction of port quays, and the construction of access roads. Another 2 billion Litas (600 million Euro) should be invested in the years 2007 to 2013. The port of Klaipėda is capable of loading up to 4,000 m³ of fuel oil, 2,500 m³ of diesel oil, 3,000 t of liquid fertilizers, 2,500 t of dry fertilizers, 1,500 t of grain and 40 containers per hour.

**Estonia – Port of Tallin**

Port of Tallinn is the biggest port authority in Estonia. In order to fit effectively into the competitive environment, Port of Tallinn underwent a complete restructuring process in the mid 1990s by developing from a service port into a port of landlord type. In 1999, the last cargo handling operations were finally given into the hands of private companies. The port authority is maintaining and developing the infrastructure of the port and leasing territories to terminal operators through building titles giving the operators an incentive to invest. Port of Tallinn consists of five constituent harbours:

- Muuga Harbour
- Old City Harbour
- Paljassaare Harbour
- Paldiski South Harbour
- Saaremaa Harbour

All harbours are navigable all the year round and easily approachable with depths of up to 18 meters enabling them to receive all vessels able to operate on Baltic. According to the Lloyds Register Quality Assurance unit the management system of Port of Tallinn is in compliance with the requirements of the international quality management standard ISO 9001:2000 and
the environmental management system standard ISO 14001:2004. Technical details as to each of internal ports and their facilities are given in Table 35.

**Table 35 Technical description of the Port of Tallin**

<table>
<thead>
<tr>
<th></th>
<th>Old City Harbour</th>
<th>Muuga Harbour</th>
<th>Paljassaaare Harbour</th>
<th>Paldiski South Harbour</th>
<th>Saaremaa Harbour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harbour territory (ha)</td>
<td>54.2</td>
<td>451.0</td>
<td>43.6</td>
<td>59.98</td>
<td>10.08</td>
</tr>
<tr>
<td>Harbour aquatory (ha)</td>
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<td>752.0</td>
<td>35.5</td>
<td>137.2</td>
<td>44.3</td>
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<tr>
<td>Canal Width (m)</td>
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<td>none</td>
<td>90 - 150</td>
<td>120</td>
<td>none</td>
</tr>
<tr>
<td>Canal Depth (m)</td>
<td>none</td>
<td>none</td>
<td>9.0</td>
<td>14.0</td>
<td>none</td>
</tr>
<tr>
<td>No. of quays</td>
<td>23</td>
<td>28</td>
<td>11</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Total length of quays (m)</td>
<td>4074</td>
<td>5900</td>
<td>1859</td>
<td>1417.5</td>
<td>445</td>
</tr>
<tr>
<td>Max. depth (m)</td>
<td>10.7</td>
<td>18.0</td>
<td>9.0</td>
<td>13.5</td>
<td>10.0</td>
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<tr>
<td>Max Length of vessels (m)</td>
<td>300</td>
<td>300</td>
<td>190</td>
<td>230</td>
<td>200</td>
</tr>
<tr>
<td>Max Width of vessels (m)</td>
<td>40</td>
<td>48</td>
<td>30</td>
<td>35</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: Port of Tallin Authority

**Latvia – Port of Riga**

Freeport of Riga lies on both banks of the River Daugava covering 15 kilometres in length. Total territory of the port is about 6 348 ha; of which land of the port share is 1 962 ha while port water area equals 4 386 ha; Total length of berths in port amounts to 13 818 metres. Maximum permissible vessel draft by the berth is set at 12.2 metres. Loading capacity (assessed) at the terminals of the Freeport of Riga accounts for 45 million tons per annum. In 2006 the volume of the transshipped cargoes has reached 25.4 million tons – it is the highest index during all the 805 years of Riga port activities. Number of vessels in 2006 amounted to 3 648. Up to 80% of the Freeport of Riga cargo turnover is made up of transit cargoes forwarded to or received from the CIS. There are 31 stevedore companies and 40 shipping agents working at the Freeport of Riga. The Port holds also two ISO certificates proving its standard (ISO 9001:2000 and ISO 14001:2004).

**Slovenia - Port of Koper**

At present the port is a multipurpose structure equipped and qualified to receive and operate all the types of ships (conventional, multipurpose, container, ro-ro and ferry vessels) as well as all kinds of cargoes (general cargo, perishable goods, livestock, all kinds of solid and bulk cargoes, etc.) in 11 specialized terminals. All terminals are located in the port area at present utilised for performing the port services. The basic technical information about those facilities is that they cover 4,737,000 square metres, out of a total of 16,000,000 square metres of space available in port. Furthermore 313,000 square meters constitute covered warehouses, including a 3.350 car capacity warehouse. In addition there is a 966,000 square meters of open storage areas, 53,000 cubic meters of shore tanks and 81,000 ton silo capacity.

The 11 specialized terminals are managed, accordingly to the Port Authority, as independent “profit centres”, and those are:

- General Cargo Terminal;
- Container and ro-ro Terminal;
- Car Terminal;
- Fruit Terminal;
- Timber Terminal;
- Livestock Terminal;
- Silo for grains;
- Alumina Terminal;
- Coal and Iron ore Terminal;
- Dry Bulk Cargo Terminal;
- Liquid Cargo Terminal.

**Bulgaria – Port of Varna**

Port Varna is a state-owned company. In practice port is divided into two separate units: Varna East and Varna West. Varna is the largest and most comprehensive Bulgarian port handling over 9 million tons of cargo per year. It has an advantageous location and modern equipment. Also a good inland transport links provide for its concurrent position. For 6 consecutive years, the port has reached 10% annual turnover growth, following a policy of constant investments in modernisation and technological development. The Port of Varna implemented quality standards ISO 9001:2000. Varna is a multi-purpose port with modern facilities and specialised terminals. It handles all types of cargo, including liquid. However, the typical features of the port is the handling of grain, containers, chemicals and general cargos. Technical description of the port reveals that there are 32 berths in operation, total quays length is 5601 meters and open storage area covers 240800 square meters while warehousing 77500 sq. meters.

**Romania – Constanza**

The Port of Constantza is located on the western coast of the Black Sea in close proximity to Sulina Branch, through which the Danube flows into the sea. It covers 3,926 ha of which 1,313 ha is land and the rest of 2,613 ha is water. The two breakwaters located northwards and southwards shelter the port creating the safest conditions for port activities. The present length of the north breakwater is 8,344 m and the south breakwater is 5,560 m. Constantza Port has a handling capacity of 100 million tons per year and 156 berths, of which 140 berths are operational. The total quay length is 29.83 km, and the depths range between 8 and 19 meters. These characteristics are comparable with those offered by the most important European and international ports, allowing the accommodation of tankers with capacity of 165,000 DWT and bulk carriers of 220,000 DWT.

**Poland – Port of Gdansk**

Port of Gdansk is situated in the middle of the South Baltic. The favorable location of the Port of Gdansk results from its central location on the southern coast route of the Baltic Sea. The Port of Gdansk is divided into two areas of naturally diversified operational parameters: the Inner Port situated along the Vistula estuary and the Northern Port with a direct access to the Gulf of Gdansk, which provides conditions conducive to servicing the largest vessels that can enter the Baltic Sea. The Inner Port consists of a container terminal, a base and a terminal for ferries and Ro/Ro vessels, handling facilities for passenger cars, citrus fruit, liquid and granulated sulphur and phosphorites. The other quays are of universal character and are suited to the handling of conventional general cargo and bulks. The Northern Port is the site of state-of-the-art handling facilities for energy source - raw materials: liquid fuels and coal.
Table 36 Port of Gdańsk technical equipment

<table>
<thead>
<tr>
<th>Berth/terminal</th>
<th>Ship length [m]</th>
<th>Quay length [m]</th>
<th>Max. draft [m]</th>
<th>Open stores [m³]</th>
<th>Warehouses area [m²]</th>
<th>Elevator [t]</th>
<th>Rate [t/24h]* or [TEU/year]**</th>
<th>Rampe [t]</th>
<th>Cranes [t]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Free Zone</td>
<td>170</td>
<td>866</td>
<td>8,4</td>
<td>87.000</td>
<td>38.553</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6 – 16</td>
</tr>
<tr>
<td>„Pferries“ Ferry Terminal</td>
<td>174</td>
<td>175</td>
<td>6,4</td>
<td>.</td>
<td>.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30,0</td>
</tr>
<tr>
<td>Oliwskie Quay</td>
<td>225</td>
<td>600</td>
<td>9,7</td>
<td>35.534</td>
<td>17.017</td>
<td>5.000</td>
<td>-</td>
<td>-</td>
<td>5 – 16</td>
</tr>
<tr>
<td>Wiślansie Quay</td>
<td>225</td>
<td>1.160</td>
<td>10,2</td>
<td>91.307</td>
<td>19.800</td>
<td>8.500</td>
<td>-</td>
<td>-</td>
<td>6 – 25</td>
</tr>
<tr>
<td>Szczecińskie Quay</td>
<td>225</td>
<td>365</td>
<td>9,2</td>
<td>67.417</td>
<td>.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>75.000**</td>
</tr>
<tr>
<td>Bytomskie Quay</td>
<td>100</td>
<td>296</td>
<td>5,0</td>
<td>14.924</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>32 - 100</td>
</tr>
<tr>
<td>Przemysłowe Quay</td>
<td>ca. 100</td>
<td>520</td>
<td>7,7</td>
<td>.</td>
<td>11.839</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3 – 8</td>
</tr>
<tr>
<td>Chemików Quay</td>
<td>240</td>
<td>352</td>
<td>10,2</td>
<td>.</td>
<td>7.500 t</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Górniczy Basin</td>
<td>225</td>
<td>1600</td>
<td>9,2 – 10,2</td>
<td>42.911</td>
<td>2.686</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8 – 25</td>
</tr>
<tr>
<td>Sulphur Terminal</td>
<td>215</td>
<td>275</td>
<td>10,2</td>
<td>-</td>
<td>-</td>
<td>5.000 m³*</td>
<td>9.000*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Obr. Westerplatte Quay</td>
<td>225</td>
<td>1.300</td>
<td>8,8</td>
<td>38.950</td>
<td>8.172</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Westerplatte Ferry Terminal</td>
<td>200</td>
<td>.</td>
<td>8,4</td>
<td>19.900</td>
<td>8.000</td>
<td>-</td>
<td>-</td>
<td>float. 80 station.40</td>
<td>-</td>
</tr>
<tr>
<td>Liquid Fuel Terminal</td>
<td>350</td>
<td>.</td>
<td>9,6 – 15,0</td>
<td>.</td>
<td>.</td>
<td>-</td>
<td>10.000 m³/h</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coal Terminal</td>
<td>280</td>
<td>765</td>
<td>15,0</td>
<td>17.355</td>
<td>3.833</td>
<td>73.000 m³</td>
<td>50.000*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LPG Terminal</td>
<td>190</td>
<td>220</td>
<td>9,5</td>
<td>13.200 t</td>
<td>-</td>
<td>500.000 t/year</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DCT – Deepwater Container Terminal</td>
<td>.</td>
<td>650</td>
<td>13,5 – 16,5</td>
<td>6.000 TEU</td>
<td>-</td>
<td>500.000**</td>
<td>40 m wide 3 post-panamax, 5 RTG</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Own calculation based on Port Authority data and www.portgdansk.pl

The direct comparisons between major ports in new members are possible. Technical equipment in most of them is modern or has been recently modernized. However this kind of straightforward comparison is always risky due to specific operating and local condition. Nevertheless it provides basic platform for assessing technical interoperability and in turn influences preconditions for efficient pricing.

8.5 Conclusions

On the base of the detailed review presented above the preconditions for pricing reforms in waterborne transport in NMS are summarised in Table 37.
### Table 37 Preconditions for pricing reforms in waterborne transport in NMS

| Legal and Institutional | Bulgaria: Some modernization and better container handling facilities are required. Czech Republic: Landlocked country Estonia: Land in Ports owned by port operating authority and leased. Charges established by Estonian Maritime Board, Ministry of Transport and port management. In some cases overlapping authority Hungary: Landlocked country Latvia: Land and quays at the ports of Riga, Liepaja and Ventspils are the property of the State or local government, the port operating equipment are privately owned. Land in ports is leased to private operators through contracts between Port Authority (responsible to the government) and given company. Charges are mostly set by port authorities, exception are pilotage and lighthouse dues set by Maritime Administration operating under the Ministry of Transport Lithuania: Klaipeda State Seaport Authority is the authority in charge of collecting dues and charges for maritime traffic. The process of calculation of port dues is set up by the Ministry of Transport. Poland: Port authorities operate based on the provisions of the Act on Seaports and Harbours and the Code of Commercial Companies. use of land and use of port facilities is subject to individual agreements between port authorities and companies operating in port. Charges for vessel operators are capped by the national law which dictates maximal level that could be levied and cannot be exceed. Specific charge level as long as it falls below government set price could be set at any point by port authorities Romania: Ports and navigation infrastructure are managed by each port administration (under the responsibility of Ministry of Transport). Pilotage is set by MTCT (government), other charges prices are set freely by private companies, subject to negotiation with the services users Slovakia: No maritime sector, inland water transport plays very little role in transport system Slovenia: Port of Koper is managing body and pays lease to the State for port ground. Detailed charges for all services offered by the port are calculated in accordance to the Maritime Code of the Republic of Slovenia |
| | Bulgaria: Some modernization and better container handling facilities are required. Czech Republic: Landlocked country Estonia: Land in Ports owned by port operating authority and leased. Charges established by Estonian Maritime Board, Ministry of Transport and port management. In some cases overlapping authority Hungary: Landlocked country Latvia: Land and quays at the ports of Riga, Liepaja and Ventspils are the property of the State or local government, the port operating equipment are privately owned. Land in ports is leased to private operators through contracts between Port Authority (responsible to the government) and given company. Charges are mostly set by port authorities, exception are pilotage and lighthouse dues set by Maritime Administration operating under the Ministry of Transport Lithuania: Klaipeda State Seaport Authority is the authority in charge of collecting dues and charges for maritime traffic. The process of calculation of port dues is set up by the Ministry of Transport. Poland: Port authorities operate based on the provisions of the Act on Seaports and Harbours and the Code of Commercial Companies. use of land and use of port facilities is subject to individual agreements between port authorities and companies operating in port. Charges for vessel operators are capped by the national law which dictates maximal level that could be levied and cannot be exceed. Specific charge level as long as it falls below government set price could be set at any point by port authorities Romania: Ports and navigation infrastructure are managed by each port administration (under the responsibility of Ministry of Transport). Pilotage is set by MTCT (government), other charges prices are set freely by private companies, subject to negotiation with the services users Slovakia: No maritime sector, inland water transport plays very little role in transport system Slovenia: Port of Koper is managing body and pays lease to the State for port ground. Detailed charges for all services offered by the port are calculated in accordance to the Maritime Code of the Republic of Slovenia |
| Technology | Bulgaria: capacity of major Ports might be insufficient in future. Location on Black Sea – limited access to western Europe but good access to Russia - Asia Czech Republic: Not a maritime country Estonia: Tallin is one of major ports in NMS also has well prered management and modern equipment Hungary: Not a maritime country Latvia: Number of smaller ports with leading role of Riga. High relevance on cargo from Russia and former CIS Lithuania: Only one significant port - Klaipeda Poland; 3 important ports with huge expansion potential. Weak land access. New investments and modernized equipment Romania: Very good location, especially Constanza on both Black Sea and Danube – major hub for all traffic in direction to Asia Slovakia: No maritime transport Slovenia: Only Port of Koper has some significance. Poor geographical location |
| Acceptability* | Bulgaria: no information Czech Republic: no information Estonia: no information Hungary: no information Latvia: no information Lithuania: no information Poland: no information Romania: no information Slovakia: no information Slovenia: no information |

* No information on the subject in questionnaires
In waterborne transport legal and institutional framework differs significantly between new members. There are different managerial solutions used in various states with private enterprises, state owned enterprises and many mixed solutions. Often governments although officially separated from port administrations maintain strong control through land ownership and long-term leases to selected managers. As for the service charges various degree of governmental influence is observed. Some charges like piloting or lighthouse charge remains under direct governmental control while other charges (usually for in-port services) are allowed to be set by competing companies. The problem is that often there are no competing companies in many ports (especially smaller ones) and therefore government is reluctant to withdraw completely from the charging. Temporary solution is establishment of official caps or even exact charge levels set by ministries.

On the technical side new members have a good potential of often modernized and in number of countries well geographically located ports. Some problem might be a need of extension of facilities (usually container base) and improvement of land access to the ports. But almost all ports of NMS have experienced high growth of cargo turnover in latest years accompanied by major infrastructure investments (or have such schemes for significant expansion of the technical capabilities under development).

Acceptability issue has not unfortunately been researched due to lack of response from the countries.

9. QUESTIONNAIRE ANALYSIS ON COST ALLOCATION OF TRANSPORT INFRASTRUCTURE COSTS IN NEW MEMBER STATES

9.1 Objectives and structure of the questionnaire survey

The main objective of this chapter is to provide information about the results of the questionnaire survey to analyse the current situation and plans for the future in the range of cost allocation rules and practice in the EU new member states. The survey concerns the evaluation of the transport infrastructure cost allocation rules in all transport modes, as well as the situation and plans for transport infrastructure user charges reform. This is an experts’ assessment based on wide experiences of the respondents in the area of transports costs evaluation and cost allocation methods. The questionnaires were sent to all Central and Eastern European new member states (eight post-socialist countries joining the EU in May 2004 and two countries entering the EU in 2007). We have received completed questionnaires from almost all countries. The only one exception was Romania, but in this case even two next trials to question other potential experts were not succeeded. They explain that the level of available information on these subjects is so low and dispersed that they are not able to assess the real current situation.

Additionally it has to be added that the level of details of the responses for specific transport modes differs between countries. Unfortunately for Slovakia, only chapters of the questionnaire for road and rail transport were completed. Also, in the case of Latvia, we did not receive replies for waterborne transport.
Table 38 Countries and transport modes covered in the CATRIN questionnaire

<table>
<thead>
<tr>
<th>Countries/transport modes</th>
<th>Road</th>
<th>Rail</th>
<th>Air</th>
<th>Waterborne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Estonia</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hungary</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Latvia</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>–</td>
</tr>
<tr>
<td>Lithuania</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Poland</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Romania</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Slovakia</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Slovenia</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

The general objective of the questionnaire survey was to assess the situation within cost allocation methods used in different transport modes in NMS as well as to get the current information about activities and plans for transport infrastructure charges reforms. More specific objectives were following:

- to assess how transport infrastructure costs and expenditures reported,
- to identify national publications and reports where infrastructure costs data is published,
- to get subjective opinion of the respondent about infrastructure cost data availability,
- to collect as complex as possible set of national studies on road transport infrastructure costs and cost allocation,
- to identify method of cost calculation in national studies,
- to define the calculation basis of existing transport infrastructure charges,
- to assess the significance of reforming transport infrastructure charges in transport policy,
- to get information about public consultation on charging scheme changes, especially in road transport,
- to get subjective opinion of the respondent about social acceptance of transport charges changes,
- to collect as complex as possible set of research projects regarding pricing reform in the country.

The questionnaire is split into four parts (see the template of the questionnaire in the annex), each of them regarding specific transport mode (from road to waterborne). Each part is organised as a set of questions grouped in three subjects:

- cost data,
- national studies on transport infrastructure costs and cost allocation,
- reforming transport infrastructure charges.

Questions can be answered through choosing appropriate mark or giving more specific explanation or comment. In all modal parts of the questionnaire similar questions are asked though they are not identical and are connected with the specific determinants of given transport mode.
9.2 Cost data in NMS – general comments

The infrastructure cost data questions are included in the first part of questionnaire. The questions concern methods of cost calculations, relating publications and subjective opinion on data availability. Answers would enable to assess if cost calculations methods are practically used and types of reporting are similar in the countries.

Concerning methods of cost calculations in road sector, in many countries according to questionnaire replies for all cost categories information is available. In Czech Republic, Hungary, Latvia, Poland the division between fixed and variable costs is not available, also these data can not be found in Bulgaria where it is even a problem with investment and reconstruction costs. In Latvia besides the lack of fixed and variable costs, also maintenance costs are not reported for the whole network.

It is a differentiation of publications and reports, where the cost data can be found. It is summarised in the Table 39 (covering all transport modes). There are official statistical yearbooks or transport yearbooks, but also state budget reports, annual reports of road infrastructure managers and working papers of transport ministries.

Experts were also asked about cost data availability. Only in Slovenia it was assessed very well (no problems with data availability). In other countries it was reports that good and reliable data is available only for main road network (Estonia, Latvia, Poland, Slovakia) or that data is good and reliable but difficult to access, i.e. information is restricted or non-published (Lithuania, Czech Republic, Hungary). In the case of Bulgaria the expert assesses that the published data is not reliable for cost allocation and determination of infrastructure charge and the level of disaggregation is very low.
For railway sector, maintenance costs are available almost in all countries (excluding Czech Republic). But fixed and variable costs are published only in Czech Republic, Lithuania, Poland, Slovakia and Slovenia. Also it is a lack of reporting data for reconstruction and modernisation costs and investment expenditures in many countries. Additional cost categories mentioned by experts are operation and management cost and overheads.

For railway cost data availability in almost all countries was assessed as good and reliable but difficult to access. Only in Latvia it was mentioned that data are available for parts of the network and in Slovakia fixed and variable costs are accessible with no problem.

Airports cost data are available in all given cost categories in Czech Republic, Lithuania, Poland and Slovenia. In other countries only reconstruction and modernisation costs and investment expenditures are reported (Latvia and Hungary) or investment and maintenance information (for Bulgaria). There is no information for Slovakia and Estonia in the subject.

As in railways data availability is almost in all cases estimated as good and reliable but difficult to access. In Latvia and Estonia data for main airport can be found.

Waterborne cost data is the worst reported. Only investment expenditures are accessible for some countries (Czech Republic, Estonia, Hungary, Lithuania and Poland). In Bulgaria only maintenance data is available. The division between fixed and variable costs is available in Czech Republic, Lithuania and Poland. Data information is ranked as good and reliable but difficult to access. In Poland and Hungary it is mentioned that data is differentiated for different ports.

National publications on cost data are summarised in Table 39.
### Table 39 National publications/reports on cost data

<table>
<thead>
<tr>
<th>Country</th>
<th>Road</th>
<th>Railway</th>
<th>Air</th>
<th>Waterborne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>Estonian Road Administration – Annual Report Statistics Estonia – Monthly Bulletin of Estonian Statistics, and Statistical database</td>
<td>Data is reported to Ministry of Economic Affairs and Communications quarterly and to Railway Inspectorate within capacity allocation progress</td>
<td>Data is not submitted to aviation and maritime department so we don’t have any information concerning infrastructure costs and expenditures</td>
<td>Data is reported to Ministry of Economic Affairs and Communications</td>
</tr>
<tr>
<td>Hungary</td>
<td>Gross expenditures on municipal road network (Hungarian Roads Management Company) Operation and maintenance costs on motorway network (State Motorway Management Company) Investment expenditures on the road network (National Infrastructural Development Corporation)</td>
<td>Reported in: Accounting Management System at IM; published in: annual business statement (only aggregated)</td>
<td>Reported in: business accounting systems; published in: annual business statements (only aggregated)</td>
<td>Ministry of Economy and Transport</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Latvia</td>
<td>Data is reported to superior / Governmental institutions - Lithuanian Road Administration under the Ministry of Transport and Communications (MoTC); to the Ministry of Transport and Communications of the Republic of Lithuania, and to the Department of Statistics to the Government of the Republic of Lithuania</td>
<td>Data is reported to relevant superior / Governmental institutions - the State owned Joint-Stock Company Lithuanian Railways; the Ministry of Transport and Communications of the Republic of Lithuania; the Department of Statistics to the Government of the Republic of Lithuania</td>
<td>Data is reported to the responsible / Governmental institutions - Civil Aviation Administration, the Ministry of Transport and Communications of the Republic of Lithuania; the Department of Statistics to the Government of the Republic of Lithuania</td>
<td>Data is reported to superior / responsible / Governmental institutions - State Enterprise Inland Waterways Authority; State Enterprise Klaipeda State Seaport Authority; the Ministry of Transport and Communications of the Republic of Lithuania; the Department of Statistics to the Government of the Republic of Lithuania</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Data is reported to superior / Governmental institutions - Lithuanian Road Administration under the Ministry of Transport and Communications (MoTC); to the Ministry of Transport and Communications of the Republic of Lithuania, and to the Department of Statistics to the Government of the Republic of Lithuania</td>
<td>Data is reported to relevant superior / Governmental institutions - the State owned Joint-Stock Company Lithuanian Railways; the Ministry of Transport and Communications of the Republic of Lithuania; the Department of Statistics to the Government of the Republic of Lithuania</td>
<td>Data is reported to the responsible / Governmental institutions - Civil Aviation Administration, the Ministry of Transport and Communications of the Republic of Lithuania; the Department of Statistics to the Government of the Republic of Lithuania</td>
<td>Data is reported to superior / responsible / Governmental institutions - State Enterprise Inland Waterways Authority; State Enterprise Klaipeda State Seaport Authority; the Ministry of Transport and Communications of the Republic of Lithuania; the Department of Statistics to the Government of the Republic of Lithuania</td>
</tr>
<tr>
<td>Poland</td>
<td>Statistical yearbooks - data on fixed assets in the economy, information on investments and value of fixed assets; these data are aggregated (concerning total transport by land and waterway); Reports on the state property – data on replacement value for public main road network administered by GDDKiA (General Directorate by National Roads and Motorways), evidence reported since several years, data concern replacement value of the network, Budget Reports – new investments, expenditure for roads, Data of the Institute of Roads and Bridges (e.g. from System of Road Evidence in Poland) - renewals and maintenance expenditures.</td>
<td>Data published in internal reports of PKP PLK S.A. – not available publicly General data available in: Annual reports of PKP PLK Transport. Results of activities (published by Central Statistical Office)</td>
<td>Internal reports for management and boards (no public disclosure) Financial statements of airports operating under PPL</td>
<td>Financial reports of port managing companies</td>
</tr>
<tr>
<td>Slovakia</td>
<td>Slovak Road Administration for 1st class roads, National Motorway Company for motorways and expressways</td>
<td>Decree of the Railway Authority No. 654/2005 Coll., Laying down the scope of price regulation in the railway transport service.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Source: Questionnaire results
9.3 National studies on transport infrastructure costs and cost allocation

One part of the questionnaire aims at gathering information about national studies on road transport infrastructure costs and cost allocation. We were interested if such studies had been conducted recently, and if yes, where results are published, what was the type of data taken into account and method of calculation (econometric methods, engineering methods, other), what were final outputs of the calculations (total costs, average, marginal costs).

If following countries national studies have not been conducted recently:
- in road sector in Estonia, Slovakia,
- in railway sector in Poland, Slovakia,
- in air sector in Poland, Estonia, Slovenia, Hungary (no information for Slovakia),
- in waterborne sector in: Estonia, Lithuania, Slovenia (no information for Slovakia and Latvia).

In other countries in the studies in road and railway sector engineering methods of cost calculations predominate. In most cases average costs (in vehicle kilometre or passenger kilometre/tonne kilometre) are outputs of the calculations. Within econometric methods and marginal cost calculations Bulgarian, Polish and Slovenian studies can be mentioned. Considering other transport modes only several studies are enumerated mainly resulted only in total cost calculations for ports.

Figure 4 National studies on transport infrastructure costs and cost allocation

<table>
<thead>
<tr>
<th>Final outputs of the calculations</th>
<th>Road</th>
<th>Railway</th>
<th>Air</th>
<th>Waterborne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal costs</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Average costs in vehicle kilometres</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Average costs in passenger kilometres/tonne kilometres</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Other</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

BG - Bulgaria, CZ - Czech Republic, EE - Estonia, HU - Hungary, LV - Latvia, LT - Lithuania, PL - Poland, RO - Romania (excluded), SK - Slovakia, SI - Slovenia

Source: Questionnaire results

National studies on transport infrastructure costs and cost allocation mentioned in the questionnaires are summarised in Table 40.
### Table 40 National publications/reports on cost data

<table>
<thead>
<tr>
<th>Country</th>
<th>Road</th>
<th>Railway</th>
<th>Air</th>
<th>Waterborne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Studies Available</td>
<td>Reports Ordered from Different Audit Firms</td>
<td>No Studies Available</td>
<td>Investment Analysis of Container Terminals in Ports of Gdansk and Gdynia</td>
</tr>
<tr>
<td>----------</td>
<td>------------------</td>
<td>---------------------------------------------</td>
<td>---------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Estonia</td>
<td>No studies available</td>
<td>reports ordered from different audit firms like BDO, Deloitte, Ernst &amp; Young which deal with this topic more or less extent. These studies were ordered both by company and by state.</td>
<td>No studies available</td>
<td>No studies available</td>
</tr>
<tr>
<td>Hungary</td>
<td>No studies available</td>
<td>Self cost calculation rules at IM (Hungarian State Railways – MÁV) - restricted</td>
<td>No studies available</td>
<td>No studies available</td>
</tr>
<tr>
<td>Latvia</td>
<td>No studies available</td>
<td>No studies available</td>
<td>Reports of the Ministry of Transport for selected airports</td>
<td>n.a.</td>
</tr>
<tr>
<td>Poland</td>
<td>GRACE project case study on marginal cost calculations, studies for World Bank</td>
<td>No studies available</td>
<td>No studies available</td>
<td>Investment analysis of container terminals in ports of Gdansk and Gdynia</td>
</tr>
<tr>
<td>Slovakia</td>
<td>No studies available</td>
<td>No studies available</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Several studies prepared for each motorway section, in the preparation phase as well as after their completion. It is a responsibility of the contracting authority</td>
<td>Study of the Ministry for Transport, Public Agency for Rail Infrastructure of Republic of Slovenia</td>
<td>No studies available</td>
<td>No studies available</td>
</tr>
</tbody>
</table>

Source: Questionnaire results
9.4 Current charges calculations and plans for the future

This part of report considers the analysis of the questions 3.1 and 3.2 (in road transport questions 3.1 and 3.3) of the questionnaire, respectively:

- What is the basis of charges calculations?
- Is reform of transport charges a priority in transport policy?

The aim of these questions is to collect information about the basis of charging in individual modes of transport in new member states, on the one side and assessing the importance of reform in the transport charging, on the other side. Figure 5 presents the results in respecting these two questions.

**Figure 5** Presentation of basis of existing charge calculation in NMS in different modes of transport taking into consideration the charges reform - priority in transport policy

![Figure 5](chart.png)

Note: CZ additionally in road transport: km-charging depends on the total investment costs, maintenance costs and some external costs (external costs of emissions and noise);
LT investment needs are taken into consideration in all modes;
SI investment needs are taken into consideration in all modes;

Source: Questionnaire results

Assessment of the significance of reforming transport infrastructure charges in transport policy can be summarized as follows:

- the road transport - domination of answers that the objective is important but is not considered as priority. Only in two cases Hungary and Slovakia it is regarding as very important;
- the rail transport – only in case of Slovenia this matter is regarding as priority in other countries is treated as one of the policy objectives. In Hungary in the contrary the process of reforming charges are initiated by professional decision makers.
– the air sector – in two of three Baltic States (Estonia and Latvia) this matter is regarding as a priority in the transport policy in other cases it is important but with no higher priority.

– the waterborne transport – there is no priority status in any of analysed countries. It is common statement in most of questionnaires that it is important but no priority.

Analysing the basis of charges calculations in individual modes we can notice that in road sector the administrative decision as the charge basis dominated, whilst in rail transport average cost calculation is mentioned in majority of answers. Only in Latvia and Slovenia there are still administrative decisions as the basis for prices of using infrastructure but we have to keep in mind that in these countries reforms in railway sector are behind the other new member states.

In air transport sector and waterborne one it is very strongly depended to the country but two kinds of basis can be identified: administrative decision or average cost calculation. Very often in analysed answers we can find amalgamation of two or three basis. For instance in Lithuania or Slovenia it is stated that the basis for charge calculation is the administrative decision but it includes some element concerning investment needs or average cost calculation.

### 9.4.1 Road transport

Within the subject of road direct charges changes in NMS several specific questions were asked in the questionnaire:

- What are the existing direct charges for road infrastructure use (vignettes, tolls, km-charge),
- Are there any specific plans for changes in the area of direct charging for road infrastructure use? (eg. introduction of electronic fee collection, change in vignettes policy, implementation of EC amended Eurovignette Directive 2006/38/EC etc.),

Also, we have been interested if there been any public consultation on road charging scheme changes and what is the general level of social acceptance and awareness toward reform of charges for road infrastructure use (in the opinion of the respondent). For the pricing policy the institutional arrangement seems to be one of the most important factors, so the question was asked if the expert was aware of any changes planned in the area of road infrastructure management. Additionally we aimed at gathering information about any research projects or other activities regarding pricing reform in road transport that have been conducted recently.

As it has been already described in chapter 5 of the report, direct charges for road infrastructure use exist in the form of vignettes in five countries. Additionally tolls or km-charge were introduced in the Czech Republic and Poland. In Slovenia tolls for use of motorways exist. In Estonia and Latvia direct charges were not introduced.
Table 41 Direct charges for road infrastructure use in NMS

<table>
<thead>
<tr>
<th>Country</th>
<th>vignettes</th>
<th>tolls</th>
<th>km-charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>v</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>v</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(vehicles of less than 12 tonnes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>v</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(vehicles of more than 12 tonnes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>v</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>v</td>
<td>v</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(paid motorway sections)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>v</td>
<td>v (paid motorway sections)</td>
<td></td>
</tr>
<tr>
<td>Slovak</td>
<td>v</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td></td>
<td>v</td>
<td></td>
</tr>
</tbody>
</table>

Source: Questionnaire results

Considering plans for changes in the area of direct charging for road infrastructure use, it has appeared that there are different activities in the actual transport policy directions. This can be summarised as follows:

- **Bulgaria** - the Operative Programme for Transport Sector envisages introducing tolls for highways and respectively applying electronic fee collection. The Ministry of Transport of Bulgaria plans to amend vignette system in few years and to introduce road charges for the use of the national network (including first, second and third-class roads) for certain periods of time;

- **Czech Republic** - Enlargement of km-charging to other roads than motorways (now km-charging is applied only to about 972 kms of motorways; since 2008 additional 193.8 kms; and in the future (a precise date is missing) the final aim of about 1,200 kms) and to vehicles over 3.5 tonnes probably in 2008 (now only vehicles over 12 tonnes). Revenues from km-charging go directly to the State Fund of Transport Infrastructure;

- **Estonia** – no concrete plans;

- **Hungary** - introduction of performance based electronic toll collection system on the motorway and selected parts of the main road network (primarily for HGVs according to the 2006/38/EC and 2004/52/EC Directives) – planned in 2008;

- **Latvia** - a plan of use PPP mechanism for building road Riga-Elgava with electronic fee collection;

- **Lithuania** - introduction of electronic fee collection, change in vignettes policy Implementation of EC amended Eurovignette Directive 2006/38/EC. In compliance with EU transport policy to develop better infrastructure charging including internalisation of external costs;

- **Poland** – introduction of EFC (transposing EC Directive), but no concrete plans;

- **Slovakia** - nowadays is following the tender for ETC, operation planned form 1.1.2009 – satellite oriented;
• Slovenia - an action plan on the EFC implementation has been adopted by the Government, the EC amended Eurovignette Directive 2006/38/EC is being transposed into the national legislation.

For any pricing reform public acceptance is needed. In the questionnaire one of the questions concerns any public consultation scheme in a given country as well as level of acceptance of any changes.

Table 42 Public consultation and level of social acceptance of pricing policy reform

<table>
<thead>
<tr>
<th>Country</th>
<th>Public consultation</th>
<th>Social acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>lack of acceptance</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>no</td>
<td>v</td>
</tr>
<tr>
<td>Estonia</td>
<td>no</td>
<td>v</td>
</tr>
<tr>
<td>Hungary</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>Latvia</td>
<td>no</td>
<td>v</td>
</tr>
<tr>
<td>Lithuania</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>Poland</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>Slovakia</td>
<td>no</td>
<td>v</td>
</tr>
<tr>
<td>Slovenia</td>
<td>no</td>
<td>v</td>
</tr>
</tbody>
</table>

Source: Questionnaire results

In four analysed countries public consultations to a different extent have been conducted. Surprisingly these consultations have not influenced positively on social acceptance for the reform. In most countries partial acceptance can be noticed, but still in Estonia and Poland the social acceptance of the reform is very low. In Estonia it can be explained by long tradition of “free” roads. In Poland it is resulted in the organisational problems, existing of paid motorway sections and vignette system and unclear transport policy objectives. Only in Hungary the social acceptance is high, what is a result of long preparation of the new system introduction.

Within the subject of the institutional arrangement respondents are not aware of any changes planned in the area of road infrastructure management. But there are some exceptions. In Estonia the completion of transferring state road agencies into 100 % contract based maintenance during 2008-2009 is planned. In Bulgaria the government is planning to consign the highways to the management under public-private partnerships (concessions). The first stage was the agreement between the Bulgarian Government and the Bulgarian-Portuguese Consortium named Highway Trakia JSC. The next stages will be public-private partnerships for managing the highways Hemus, Maritza, Struma and Liulin. It can be also mentioned that Lithuanian National Road administration and Regional Road Administrations have already underwent a substantial restructuring; road construction and major part of road maintenance activities have been outsourced and are provided by private sector.

The questionnaire aimed also at collecting information about research projects and other national studies on road pricing policy in the countries. The following studies can be enumerated:
• Bulgaria – no national studies available;
• Czech Republic - Methods of financing of the system of electronic charging and economic models of the kilometric charging; study prepared for the Ministry of Transport by Deloitte&Touche, December 2004;
• Estonia - no national studies available;
• Hungary - Traffic and revenue forecast study for performance based road charging system (in Hungarian) by BAUCONSULT Ltd.; Implementing pricing reform in transport – criteria for Hungary (part of IMPRINT-EUROPE project, reference: GTC1/28034/2000) by BUTE Dept. of Transport Economics;
• Latvia - no national studies available;
• Lithuania - no national studies available;
• Poland - Feasibility study on electronic fee collection conducted by GDDKiA; CONNECT project - CO-ordination and stimulation of iNNovative ITS activities in Central and Eastern European CounTries;
• Slovakia - no national studies available;
• Slovenia - Interoperability in toll charging: RCI, Media, CESARE III.

9.4.2 Rail transport

In the part of rail transport in the questionnaire there are placed questions concerning a standardized train path price system and system of the control regarding the level or structure of infrastructure fees. Important information we can received from this part is which institution is responsible for the investigation in case when unfair practices appear in individual member state. We asked also about the way in which system of charges is made public. All this information is summarised in the Table 43.

Table 43 The structure of price system and its control in railway sector in new member states

<table>
<thead>
<tr>
<th>Countries</th>
<th>a standardized train path price system</th>
<th>Control of the level or structure of infrastructure fees</th>
<th>The system of publishing of the train path price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>freight transport</td>
<td>passenger transport</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Estonia</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Hungary</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Latvia</td>
<td>yes</td>
<td>yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Lithuania</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Poland</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Slovakia</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Slovenia</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

Source: Questionnaire results
Looking at the plans for changes in the area of direct charging for rail infrastructure use it can be noticed that the Directive on rail infrastructure charging 2001/14 has been implemented in all new member states.

In Bulgaria for instance the works are going on the issue how to improve the existing charging regime through differentiation of charges according to different traffic volume on different tracks and taking into consideration the hours of the train movements. The Railway Administration Executive Agency is planning to amend the Railway Charges Tariff and apply two-part tariff differentiated according to different traffic volumes on different network sections.

In Czech Republic the Directive is already implemented by the Act No. 103/2004 and there are no additional plans for changes in direct charging. The same situation is in Hungary where compulsory milestones have been already achieved and there is no plan in this area. While in Estonia in the area of rail infrastructure management according to the questionnaire Estonian Railways Ltd infrastructure management and freight railway undertaking will be split into two companies and they will be the daughter companies of Estonian Railways. Also in Lithuania some changes are planned in infrastructure management. For the management of public railway infrastructure it is planned to establish a relevant state enterprise.

Among the international project mentioned in the questionnaires it can be enumerated:
– UNITE (Unification of accounts and marginal costs for Transport Efficiency);
– GRACE (Generalisation of Research on Accounts and Cost Estimation);

As the national project it is mentioned the Hungarian project “Review of the Hungarian Rail Infrastructure Charging System” but unfortunately in Hungarian prepared by Hungarian Rail Office.

9.4.3 Air transport

In regard to air transport there are mixed approaches to changing schemes. Out of 9 analysed NMS Czech Republic reports limited discussions within air sector – even those are oriented mainly at emissions and indicated only because of enlargement plans of several airports. Estonia, Lithuania and Slovenia report some future changes in the area necessary to be in line with EU directive on airport charges. Hungary points at reforms including environmental aspects and proprietary requirements. Other states do not stress importance of charging reforms.

The acceptance level for charging changes is varied among the countries. Usually partial acceptance is noticed while Hungary reports lack of acceptance, Latvia high level of acceptance and Slovakia little acceptance.

Future management changes are not considered in Slovenia nor Czech Republic. Some changes are to take place in Lithuania, where it is planned to restructure by the year of 2010 the state enterprises administering international airports to a single airports administration, sharing its revenue equally for airports. In Latvia changes will be related only to increase in the number of maintenance and management staff, in Hungary to decomposition of interest
relations between proprietorship and operation. In Estonia they will be resulting from development of new infrastructure to accommodate increasing passenger movements. In Bulgaria plans are set towards public-private partnerships in the airport management. In Poland further privatisation of remaining state-owned airports is discussed. In research capabilities neither report indicated any domestic research projects or other activities regarding pricing reform in air transport within last three years.

9.4.4 Waterborne transport

Waterborne transport in NMS in regard to future amendments to charging port dues could be described as not an important issue in case of Bulgaria, Czech Republic, Estonia (which further points out that even if those plan exist they are clearly intents of private port operators thus not made public), Poland (same situation as with Estonia), Hungary. Lithuania reports that a pattern of continuous changes in order to increase competitiveness in regard to charging is employed. Only significant change should take place in Slovakia, where port dues will no longer be collected by the Port of Koper but by the Republic of Slovenia Ministry of Transport. As for the change in management some organizational moves are expected in Bulgaria where the Ministry of Transport is planning to apply public-private partnerships in the port management in case of 4 ports. Some changes are also expected in Poland with strengthening of division between port managers and operators. Minor changes will occur in Lithuania with introduction of The Freight and Goods Information System (KIPIS) in 2008, which will force some management changes. The most extensive change is to happen in case of Slovenia, where Port of Koper is planned to be operated by The Republic of Slovenia, rather than by the management of Port of Koper as it is now.

Research on charges and dues reforms in NMS are usually conducted locally and reported (as partial solutions) in number of financial statements. More specific pricing oriented projects are rare. One might mention: Estonian “Transit policy, Short Sea Shipping, Ferry connection between Saaremaa and Mainland (fix link or ferry connection)” project and Lithuanian “Study on Klaipeda State Seaport charges and competitiveness (2005)”.

10. CONCLUSIONS

The answer to the question of the report - what does it mean for pricing policy to be a new member state? - is very difficult in short. Although most so called New Member States (NMS) emerge from a situation under Soviet Union control and state controlled economies towards, in some cases, regional independences and a move towards the market economy the transport policy have developed differently in the NMS. It would be a mistake to treat all NMS as one entity following one path of development. Usually in their pursuit of integration with Europe they use rather different and country specific methods. However, some similarities can still be found – those has been identified and described in detail.

The role of the Government in post-socialist countries is reoriented from its former task of directly managing transport enterprises, to assuring that competition among private transport operators is fair, protecting the public interest in safety, the environment and social working conditions.

As a background of the conclusions a synthetic picture (based on the previous chapters of the report) of the organisational structure and ownership of infrastructure managers in NMS can be presented.
### Table 44 Ownership and administrative structure of infrastructure managers (as of January 2008)

<table>
<thead>
<tr>
<th>Country/Transport mode</th>
<th>Road</th>
<th>Rail</th>
<th>Air</th>
<th>Waterborne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>public company, an independent legal entity (main road network management)</td>
<td>State National Railway Infrastructure Company NRIC founded in 2002</td>
<td>state budget supported legal entity within the Ministry of Transport</td>
<td>maritime administration and port administrations operating under Ministry of Transport and being state owned companies</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>national contributory organisation, founded by the Ministry of Transport and Communications (Road and Motorway Directorate) managed main roads and motorways; secondary roads managed by local authorities</td>
<td>State company - infrastructure administration Správa železniční dopravní cesty (SŽDC) founded in 2003 (operation and maintenance of the rail network are still in the hands of the České dráhy – Czech Railways)</td>
<td>state company (administration of 4 major airports)</td>
<td>Department of Navigation and Waterways of the Ministry of Transport responsible for execution of state administration in inland navigation</td>
</tr>
<tr>
<td>Estonia</td>
<td>government agency operated within the administrative area of the Ministry of Economic Affairs and Communications</td>
<td>National railway undertaking (both operation and infrastructure management). In January 2007 the Estonian state repurchased the shares of 66 per cent in the national railway undertaking AS Eesti Raudtee. The company is now once again wholly state owned</td>
<td>100% state-owned company: Tallinn Airport</td>
<td>mixed, some ports private managers, others public, in most important port – Tallin state owned company is manager under supervision of the Ministry of Economic Affairs and Communications</td>
</tr>
<tr>
<td>Hungary</td>
<td>State Motorway Management Company, local roads managed by Hungarian Public Roads</td>
<td>Two main actors: MÁV and Gysev. MÁV operates on the entire Hungarian network, whereas Gysev handles rail transports only in eastern Austria and western Hungary. Both incumbents have their own rail networks</td>
<td>State Privatization and Holding Co./APV Rt. – Budapest, limited company -FlyBalaton Airport</td>
<td>port authorities of inland ports (national public ports category) – state owned and responsible to Ministry of Economy and Transport. Small local and regional ports managed by local authorities or private managers</td>
</tr>
<tr>
<td>Latvia</td>
<td>since October 26, 2004, a State Joint Stock Company</td>
<td>State joint-stock company (both operation and infrastructure management). The LDz Holding is the umbrella organisation for seven subsidiaries, including the infrastructure manager LDz Infrastruktura</td>
<td>state joint-stock company (Riga airport)</td>
<td>Infrastructure - port authorities responsible to the government, under the Ministry of Transport; equipment – private managers</td>
</tr>
<tr>
<td>Country</td>
<td>Description</td>
<td>Details</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>public company founded by the Government of the Republic of Lithuania</td>
<td>In 2006 the Lithuanian railway Lietuvos Geležinkeliai was transferred to a holding structure with three separate divisions for freight transport, passenger transport and infrastructure</td>
<td>State Enterprise Vilnius International Airport (and 3 other state IM)</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>central authority of the government administration (responsible for the state roads), decentralisation (local roads managed by gmina authorities)</td>
<td>PLK (Polish Rail Lines company) responsible for management of national railway network - public company of the holding PKP Group</td>
<td>Polish Airports State Enterprise (managed 3 airports), other airports - commercial law companies</td>
<td>major ports -enterprises operating based on commercial law but owned jointly by government and local governments, medium – size ports – municipalized, small ports under direct control of government established Maritime Offices</td>
</tr>
<tr>
<td>Romania</td>
<td>national company - an entity under the Ministry of Transports (national roads and motorways), secondary network - local authorities</td>
<td>In 1998 the Romanian Railway company SNCFR was split into five companies. These joint stock companies, which are all still wholly owned by the state, are independent of each other in terms of ownership</td>
<td>4 main airports owned by the State, other owned by the local county authorities</td>
<td>port administrations under the responsibility of Ministry of Transport</td>
</tr>
<tr>
<td>Slovakia</td>
<td>joint stock company (national roads and motorways), secondary network - local authorities</td>
<td>State owned company - Železnice Slovenskej republiky (ŽSR) has been responsible for infrastructure since 2002.</td>
<td>joint stock company named Letisko M. R. Štefánik - Airport Bratislava, state owned joint-stock company Letisko Poprad-Tatry</td>
<td>State Navigation Administration under The Ministry of Transport, Posts and Telecommunications, for maritime affairs – Maritime Navigation Office</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Two levels: main and regional roads - DRSC state agency, motorways – DARS - joint-stock company</td>
<td>In 2003, the incumbent Slovenske železnice (SŽ) was converted into a holding with separate subsidiaries for freight transport, passenger transport and infrastructure</td>
<td>public limited company Ljubljana Airport , Aerodrom Maribor Ltd.</td>
<td>Luca Koper enterprise operating based on commercial law but owned jointly by government and local governments</td>
</tr>
</tbody>
</table>
Considering transport modes, in road sector legal and institutional framework for changing pricing policy in NMS significantly differs between countries. In most countries the decentralisation of the road sector is ongoing but it is still more centralised network than in the rest of Europe. In some NMS main road network is managed by state agency, while in some other countries it is a public company, but independent legal entity (e.g. in Slovakia, Slovenia and Bulgaria). In most countries, secondary roads are managed by local authorities. In several countries a special organisation managing secondary roads has been established, e.g. in Hungary (by merging former decentralised managers) or in Slovenia (state agency DRSC). It can be summarised that in smaller states (Slovenia, Estonia, Lithuania, Latvia) the role of state roads remains important while in bigger states (especially Poland) the state has reduced its administration to manage roads below 5% of total network.

While looking at pricing reforms, it should be stressed that in the Czech Republic new system of electronic fee collection for HGV has already been implemented (following Austrian, Swiss and German experiences). In some other NMS the reforms should be implemented soon. In Slovenia microwave technology has a long tradition in toll motorway system for passenger cars. The experiences of the Czech Republic and Slovenia as well as Slovak and Hungarian plans prove that in all the cases Western European solutions are (or are going to be) implemented and that the special emphasis is put on ensuring technical interoperability between segments of the network and vehicles.

All of the NMS are on schedule regarding the alignment towards the European railway packages. It seems that NMS have reorganised the sector more thoroughly than the EU15. In NMS regulatory bodies are in charge for setting charges compared to Ministry of Transport as the case often in EU15. Some NMS have tried bold privatisation (Estonia) but have cancelled the process due to some disadvantageous effect (it created a kind of private monopoly, non-transparent regulations towards the network access etc.). Finally, in January 2007 the Estonian state repurchased the shares of 66 per cent in the national railway undertaking AS Eesti Raudtee.

Considering organisational structure and location of rail infrastructure manager in NMS, in some countries holdings of rail transport companies are present (in Poland, Latvia, Lithuania and Slovenia). In other countries it is a state owned but independent enterprise, e.g. in Bulgaria, Czech Republic, Slovakia and Romania. In some cases this entity is responsible both for infrastructure administration and operation, e.g. in Estonia (at present again state owned company), in Hungary MAV and GYSEV.

As for the air sector in Central and Eastern Europe passenger traffic is more concentrated at one particular international airport than in most of the states of Western Europe. When analysing the situation of the 10 recently admitted countries and the former EU-15 states in terms of airport capacity and efficiency clear differences and clear similarities can be shown. Differences arise mainly from the different historical backgrounds and similarities stem from the harmonisation of the legal and financial system in these countries with EU standards. In general differences are decreasing year by year, as the integration into Europe is wider and wider. The 10 NMS countries are harmonising their standards with those in the EU-10 and they are trying to use the same capacity enhancement techniques. However, due to the significant differences of the past to find similar solutions to the present and future problems is not always possible.
Capacity bottlenecks at major EU airports are mainly due to a shortage of runways, ATC, or en-route capacity, whereas in the CEE countries runway capacity usually exceeds terminal and apron capacity. The level of service might be upgraded at many airports. This is however under the assumption that local airports could attract more traffic currently going through central airport. In addition introduction of low-cost carriers has resulted in separate process of significant development in air traffic in regional airports across CEE countries. Extension of services has been in many cases blocked by inadequate airport infrastructure. Even if the main problem is not the number of runways it is certainly their technical condition and length. But the most serious bottleneck is in terminal handling capacity. There are simply not enough land based facilities to serve ever increasing number of passengers. Here – the post-socialist past reveals itself. The whole structure of air industry has been organized around the central airport serving as the only one external link model, while regional airports were only connected to this central port. During past couple of years those regional airports given free hand have developed significant number of connections. But in the same time they usually lacked resources for serious terminal upgrades thus today’s problems.

Institutional separation of Civil Aviation Authority has been established in all 10 NMS. Main differences exist in setup of charges. Different bodies are responsible in different countries. Often they are in some way subjected to governmental control. In rare cases where free-market approach is allowed there is official cap above which charges cannot be levied. This is partially due to government tendency to maintain control and partially because of lack of competition and fear of super-high monopolistic charges. The airport operators are in general financed by charges collected. The degree of self-financing depends strongly on the ownership structure of the airport. In the instances when airports are part of bigger group the financing might be accounted for the group as a whole rather than single airport. Also there are cases of airports that are still fully state-owned – then financing from the budget might occur. This is a case of shared military/civil airports or airports under restructuring where financial sources are mixed. It should be stressed that in all NMS the goal is a self-sufficient financing of airports based on appropriate charges.

In case of waterborne transport mostly seaports are operated by port authority which leases land within port to private enterprises that operate in port. The rules of such a lease differ. Sometimes they are subject of free market negotiations while in other cases the free market price is capped by government regulation. The degree of ownership rights in managing authority varies. In some countries government maintains strong ownership and controls authority activities. In others while maintaining ownership leaves all managerial decisions to authority. Finally there is third model – although not often employed of full privatization and following real separation from the state. In countries where more than one port play significant role (e.g. Poland, Bulgaria) ports act as competitors on a free market. Technical equipment in most of them is modern or has been recently modernised. But with increase of traffic capacity problems (especially for containerized cargo handling) might occur. The process of setting up charges is also country specific. Usually there is a mixed competence scheme. Some charges (e.g. pilotage) are established by appropriate ministries (transport or maritime affairs) while others are free to negotiate. In some instances all charges for vessel operators are capped by the national law which dictates maximal level that could be levied. Specific charge level as long as it falls below government set price could be set at any point by port authorities. On operational level maritime sector of NMS could be characterised as highly decentralized and competitive market. On the other hand strong competition exists between major ports in given area while smaller ports lack both capacity and investment capital to threat main ports.
11. RECOMMENDATIONS

11.1 Legal and institutional context

Road transport

- to continue the process of decentralisation of road network from the fully centrally planned administration towards more independent institutions (already existing in Slovakia, Slovenia or Bulgaria),
- to ensure capability for efficient decision-making processes within road infrastructure management, better division of tasks and responsibilities (concerns all new member states), to improve coordination in decision-making process (in some countries road administrations are independent company, e.g. in Slovakia, while in others it is a state agency, e.g. Estonia; in all cases there are different competencies of the institutions),
- to improve administrative capacity on the local road network management level (even if decentralisation process results in operation of two levels’ road administration, within secondary and local roads data shortages and low administrative competencies are quite often, e.g. in Poland),
- to take advantage of ‘best practices’ of the neighbouring countries, especially experiences of the Czech Republic for the implementation of electronic fee collection system,
- to assess institutional reforms in road transport management systems in new member states in a special transformation context showing barriers, successes and defeats,
- to improve reporting systems and databases for road network characteristics and expenditures,
- to improve methods of cost calculations (division between fixed and variable cost is unavailable in Poland, Czech Rep., Latvia, Hungary, Bulgaria),
- to conduct studies on cost calculations and allocation (both based on engineering and econometric methods),
- to explore all potential solutions for revenue use in a specific conditions of post-socialist economy and financial shortages for transport infrastructure investments (allocation of revenues, earmarking).

Rail transport

- to continue implementation of the rail packages directives. As all new member states have communicated to the Commission about implementation measures from the first package but as regard to the second one some additional efforts are needed especially in Bulgaria and Romania,
- to go on with the process of separation of infrastructure and transport services. The proper implementation of the principle of accounts separation has been of great importance in the process of restructuring of railway sector. There are still models in NMS that vary quite significantly. The degree of separation extends from a purely accounting separation to a complete ownership unbundling of infrastructure and services (the full institutional separation between infrastructure and provision of services could be noted in Bulgaria, Romania and Slovakia, while in Czech Republic, Lithuania and Poland, there is a functional, organizational, accounting and legal separation, while in Estonia, Hungary, Latvia and Slovenia, the infrastructure is separated from transport on an accounting basis only),
• to improve and standardise methods of cost calculations. One of the major problems is the huge variance in the methods used to calculate rail charges. In consequence, charges differ significantly between Member States. In general, it can be said that while charges are at relatively low level in the EU-15, they are very high in NMS.
• to include external cost in charges for infrastructure use (Directive 2001/14/EC only allows charging for external costs if competing transport modes do the same);
• to continue debt restructuring of state owned railway enterprises in face of continuous concerns about the growing debt of state railways in NMS;
• to make more transparent charging system for the use of service facilities and stations,
• to improve access to all service facilities as described in Annex II No. 2 of Directive 2001/14/EC;
• to separate safety from certification accident investigation. A number of countries have organised safety certification and accident investigation within one organisation for instance Estonia and Romania.
• to undertake some works on national procedures for licensing and safety certification due to them being sometimes non-transparent, arbitrary, too complex, lengthy and expensive.
• to improve the basis of market access to passenger market by reducing the time and costs for external railway undertakings to acquire licenses when applying for train paths as well as during operation.
• to make clear division of responsibilities and regulatory powers between different actors in railway sector;

**Air transport**

• to fully accept and introduce Eurocontrol solutions (especially Baltic states),
• to improve cost data collection and set standard for cost categories used (all countries),
• to introduce competition for ground services providers in airports (especially needed in case of Poland),
• to improve administrative capacity in regard to CAA tasks in safety and security,
• to establish clear rules of control over navigation service provider (in some countries it is controlled by Ministry of Transport in other by CAA with often both responsible with mixed competences) – Hungary, Estonia, Latvia, Poland, Lithuania, Slovakia. Additionally to move responsibility for navigation services provision from military (in some joint civil/military airports) to civil service providers,
• to make clear division of responsibilities and regulatory powers between CAA and MoT (Romania, Slovakia, Latvia),
• to create transparent rules on capping charges (the consultancy policy is currently in place giving MoT right to veto charges – but there are no uniform rules guiding this kind of decisions) or in cases with good and efficient competition contemplate withdrawal from charges regulation.

**Waterborne transport**

• to allow more than one service provider in port, if not applicable due to port size – promote occasional tenders for the role of “sole provider”,
• to work toward introduction of comparable charges in ports (often charging schemes are unique and homogenous - also due to lack of common methodology describing types of charges),
• to separate investments in ports from investments on en-route waterways,
• to separate infrastructure and suprastructure investments,
• to continue with set-up of independent port authorities (if state owned to facilitate solutions where government only supervises port authorities without meddling in all port activities),
• to reform role of port authorities as owners of ground leasing it to companies operating in ports instead of performing all port functions by themselves,
• to continue privatisation of smaller ports as important competitors in local traffic and small scale shipping (advanced in Romania and to lesser degree Poland),
• to work toward introduction of more differentiated tariffs.

11.2 Technology context

Road transport

• to support research on technical solutions for ensuring interoperability on the base of specific national determinants,
• to take advantage of ‘best practices’ of the neighbouring countries (as on the legal level), especially experiences of the Czech Republic for the implementation of electronic fee collection system,
• to prepare feasibility studies for electronic fee collection,
• to discuss and disseminate results of the studies and policy programmes.

Rail transport

• to support research on technical solutions for ensuring interoperability on the base of specific national determinants,
• to take advantage of ‘best practices’ of the most advanced in rail market liberalisation countries;
• to support rolling stock renewal, track rehabilitation, and modernization of signalization (signalling) as necessary to improve safety, eliminate speed restrictions and thus increase competitiveness (particularly through eliminating speed restrictions).

Air transport

• to increase capacity (terminal and apron operations),
• to reduce dependence on only one central airport in international connections (already partially implemented in Poland and Romania),
• to increase role of regional airports,
• to develop new airports especially in area of capitals,
• to analyse possibilities for automation of terminal services.

Waterborne transport

• to increase terminal capacity, especially container terminal capacities - thus increasing competition within port (already under development in Poland and Romania, necessary in Bulgaria and Baltics),
• to improve land links with ports (Poland, Latvia, Lithuania, Bulgaria, Romania),
• to continue integration of maritime and inland water services where possible (Romania, Poland).
11.3 Acceptability context

Road transport

- to disseminate results of external international studies and research projects analysing pricing reform and acceptability determinants,
- to support domestic studies and case studies on impact analysis of pricing reform in road transport (different segment of the network, users, producers, operators, the whole system etc. still it is a shortage of national studies in new member states in this area),
- to favour public consultations (up to now directions of pricing reforms have been consulted only in Bulgaria, Hungary, Lithuania and Poland),
- to ensure that tariffs and allocation of revenues are in line with policy goals and public expectations.

Rail transport

- to overcome information barriers (process duration for obtaining information, quality of personal and non-personal information provided regarding access regime, train path allocation, licence, safety certificate and homologation),
- to overcome language barrier for railway staff – mobile or ground – staffs who have to communicate for train movement and other safety purposes.

Air transport

- to conduct at least couple of national level studies oriented at charging at airports,
- to prepare consultancies with air operators and education/consultancy with passengers (there is little interest from general public, on the other hand charges reforms are perceived as leading to charge increases – high acceptance has only been reported in Latvia while no or little acceptance in Hungary and Slovakia and limited acceptance in other NMS),
- to facilitate discussion on charging reform within air sector as it is reportedly at present not a major interest of stakeholders.

Waterborne transport

- to support domestic studies on pricing options in ports (as example one could use Estonia or Lithuania case studies),
- to prepare public consultations with all stakeholders as to the rules regarding charging for port access,
- to create better communication between ports, shippers and other users since the sector is particularly fragmented.
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APPENDIX: QUESTIONNAIRE ON COST ALLOCATION OF TRANSPORT INFRASTRUCTURE COSTS IN NEW MEMBER STATES
TRANSPORT INFRASTRUCTURE
– COST ALLOCATION

QUESTIONNAIRE

This survey refers to the current situation and plans for the future in the range of cost allocation rules and practice in the EU new member states. It is realised within the EU 6th Framework Programme project CATRIN (Cost Allocation of Transport Infrastructure cost)

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This questionnaire was completed by
Name:
Institution:

CATRIN is a research project to support the European Transport Policy, specifically to assist in the implementation of transport pricing. CATRIN will increase the probability that new progressive pricing principles can be implemented which facilitate a move towards sustainable transport. It is both intermodal and interdisciplinary, emphasizes the need of new member states and understands that different organisational forms require different recommendations.
A. ROAD TRANSPORT

A1. Cost data:

A1.1. How are transport infrastructure costs and expenditures reported by:

- fixed and variable costs,
- investment expenditures,
- reconstruction, modernisation costs,
- maintenance costs,
- other.

If other, please specify …………………………………………………………………………………………………………………

A1.2. Where is such data published/reported? (Please specify the institution and/or publication if possible)

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A1.3. What is your general opinion on infrastructure cost data availability in this area?

- good, no problems with data
- good and reliable, but difficult to access (restricted or non-published information)
- data only for main network, for other road categories – very little information
- other: …………………………………………………………………………………………………………………

A2. National studies on road transport infrastructure costs and cost allocation:

A2.1. Were such studies conducted in recent years?

- yes
- no

A2.2. If yes, please specify the study / publication/ institution responsible?

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A2.3. What was the range of the studies (e.g. for the whole country or only for some type/section of infrastructure)?

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A2.4. What was the type of data taken into account (what level of disaggregation, what traffic data etc.)?

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A2.5. What was the method of calculation in these studies?:

- econometric methods,
- engineering methods,
- other.

- Don’t know.

If other, would you specify this method: ……………………………………………………………………………………………

A2.6. What were the final outputs of the calculations?

- average costs in vehicle kilometres
- marginal costs
- average costs in passenger kilometres/tonne kilometres
- other outputs: …………………………………

A3. Reforming road transport infrastructure charges:

A3.1. What is the basis of charges calculations:

- administrative decision
- average costs calculation
- investment needs
- other: …………………………………………………………………………………………………………………

A3.2. What are the existing direct charges for road infrastructure use?

- vignettes
- tolls
- km-charge
- other: …………………………………………………………………………………………………………………

A3.3. Reform of road transport charges – is it a priority in transport policy?

- very important objective
- mentioned as one of the objectives
- mentioned, but not a priority
- other remarks: …………………………………………………………………………………………………………………

A3.4. Are there any specific plans for changes in the area of direct charging for road infrastructure use? (eg. introduction of electronic fee collection, change in vignettes policy, implementation of EC amended Eurovignette Directive 2006/38/EC etc.)
A3.5. Has there been any public consultation on road charging scheme changes?

☐ yes  ☐ no

A3.6. How would you assess the general level of social acceptance and awareness toward reform of charges for road infrastructure use?

☐ lack of acceptance  ☐ partial acceptance

☐ little acceptance  ☐ high level of acceptance

A3.7. Are you aware of any changes planned in the area of road infrastructure management?

☐ yes  ☐ no

A3.8. If yes, of what kind?

B. RAIL TRANSPORT

B1. Cost data:

B1.1. How are railway transport infrastructure costs and expenditures reported?

☐ fixed and variable costs,  ☐ maintenance costs,

☐ investment expenditures,  ☐ other.

☐ reconstruction, modernisation costs,

If other, please specify ……………………………………………………………………………………………………….

B1.2. Where is such data published/reported? (Please specify the institution and/or publication if possible)

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B1.3. What is your general opinion on cost data availability?

☐ good, no problems with data

☐ good and reliable, but difficult to access (restricted or non-published information)

☐ data only for parts of the network

☐ other: ……………………………………………………………………………………………………………………………

B2. National studies on rail transport infrastructure costs and cost allocation:

B2.1. Were such studies conducted in recent years?

☐ yes  ☐ no

B2.2. If yes, please specify the study/publication/institution responsible?

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B2.3. What was the range of the studies (e.g. for the whole country, TEN corridor or only for some type/section of infrastructure)?

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B2.4. What type of data was taken into account (what level of disaggregation, what traffic data etc.)?
B2.5. What was the method of calculation used in these studies?:

☐ econometric methods,
☐ engineering methods,
☐ other.
☐ don’t know.
If other, please specify this method: ..............................................................

B2.6. What were final outputs of the calculations?

☐ average costs in vehicle kilometres  ☐ marginal costs
☐ average costs in passenger kilometres / tonne kilometres  ☐ other outputs: .........................

B3. Reforming rail transport infrastructure charges:

B3.1. What is the basis of charges calculations:

☐ administrative decision  ☐ average costs calculation
☐ investment needs  ☐ other: ..............................................................

B3.2. Is reform of rail transport charges a priority in transport policy?

☐ very important objective  ☐ mentioned as one of the objectives
☐ mentioned, but not a priority  ☐ other remarks: ........................................

B3.3. Are there any specific plans for changes in the area of direct charging for rail infrastructure use? (eg. implementation of the EC Directive on rail infrastructure charging 2001/14 etc.)

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...................................................................................................................................................

B3.4. Is there a standardized train path price system, which applies to all market participants? In:

freight transport?

☐ yes, ☐ no

passenger transport?

☐ yes ☐ no

B 3.5. Can the regulation authority carry out investigations regarding the level or structure of infrastructure fees, which a train operating company has to pay or would have to pay?

☐ yes ☐ no

B 3.6. Is the train path price system published for:

freight transport?

☐ yes, please supply documentation or references: ..............................................................
☐ no

passenger transport?

☐ yes, please supply documentation or references: ..............................................................
☐ no

B3.7. Are you aware of any changes planned in the area of rail infrastructure management?

☐ yes ☐ no

B3.8. If yes, of what kind?

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B3.9. Have any research projects or other activities regarding pricing reform in rail transport been conducted recently? (1 year, 2, 3 ago)

☐ yes ☐ no

B3.10. If yes, please state project name and subject:
C. AIR TRANSPORT

C1. Cost data:

C1.1. How transport infrastructure costs and expenditures are reported:
- fixed and variable costs,
- maintenance costs,
- investment expenditures,
- reconstruction, modernisation costs,
If other would you specify .................................................................

C1.2. Where is such data published/reported? (Please specify the institution and/or publication if possible)
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C1.3. What is your general opinion on infrastructure cost data availability in this area?
- good, no problems with data
- good and reliable, but difficult to access (restricted or non-published information)
- data only for the main airport, for remaining airports - very little information
- other: ......................................................................................................................

C2. National studies on air transport infrastructure costs and cost allocation:

C2.1. Were such studies conducted in last years?
- yes
- no

C2.2. If yes, would you specify the study / publication/ institution responsible?
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C2.3. What was the range of the studies (e.g. for the whole country or only for some type/selected airports)?
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C2.4. What was the type of data taken into account (what level of disaggregation, what traffic data etc.)?
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C2.5. What was the method of calculation in these studies (e.g. econometric, engineering methods, other)?
- econometric methods,
- engineering methods,
- other.
- Don’t know.
If other, would you specify this method: ...........................................................................................................

C2.6. What were final outputs of the calculations?
- only total costs
- marginal costs
- other outputs: ......................

C3. Reforming air transport infrastructure charges:

C3.1. What is the basis of airport charges calculations:
- administrative decision
- investment needs
- average costs calculation
- other: ......................................................................................................................

C3.2. Reforms of air transport charges – is it a priority in transport policy?
- very important objective
- mentioned, but not a priority
- mentioned as one of the objectives
- other remarks: ........................................................................................................

C3.3. Are there any specific plans for changes in the area of airports charges?
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C3.4. How would you assess the general level of social acceptance and awareness toward reform of charges for airports use?
C3.5. Are there any changes planned in the area of air infrastructure management?

☐ yes ☐ no

C3.6. If yes, of what kind?

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C3.7. Are you aware of any research projects or other activities regarding pricing reform in air transport that have been conducted recently? (within the last 3 years)

☐ yes ☐ no

C3.8. If yes, please state project name and subject:

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D. WATERBORNE TRANSPORT (inland waterways and / or maritime)

D1. Cost data:

D1.1a. How transport infrastructure costs and expenditures for inland waterway transport are reported:

☐ fixed and variable costs, ☐ investment expenditures,
☐ reconstruction, modernisation costs, ☐ maintenance costs,
☐ other.
If other would you specify …………………………………………………………………………………………….……..

D1.1b. How transport infrastructure costs and expenditures for maritime transport are reported:

☐ fixed and variable costs, ☐ investment expenditures,
☐ reconstruction, modernisation costs, ☐ maintenance costs,
☐ other.
If other would you specify …………………………………………………………………………………………….……..

D1.2. Where is such data published/reported? (Please specify the institution and/or publication if possible)

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D1.3. What is your general opinion on infrastructure cost data availability in this area?

☐ good, no problems with data ☐ good and reliable, but difficult to access (restricted or non-published information)
☐ differentiated data for different ports ☐ other: ………………………………………………………………………………..…..

D2. National studies on waterborne transport infrastructure costs and cost allocation:

D2.1. Were such studies conducted in last years?

☐ yes ☐ no

D2.2. If yes, would you specify the study / publication/ institution responsible?

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D2.3. What was the range of the studies (e.g. for the whole country or only for some type / selected ports)?

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D2.4. What was the type of data taken into account (what level of disaggregation, what type of data)?

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………………………………………………………………………………………………………………………………………

D2.5. What was the method of calculation in these?
CATRIN D4 - To be a new member state – what does it mean for pricing policy

☐ econometric methods,
☐ engineering methods,
☐ other.
☐ Don’t know.
If other, would you specify this method: …………………………………………………………………………………………………

D2.6. What were final outputs of the calculations?
☐ only total costs
☐ marginal costs
☐ other outputs: ……………………

D3. Reforming waterborne transport infrastructure charges:

D3.1. What is the basis of port dues calculations:
☐ administrative decision
☐ average costs calculation
☐ investment needs
☐ other: ………………………………………………………………………………………………………

D3.2. Reforms of waterborne transport charges – is it a priority in transport policy?
☐ very important objective
☐ mentioned as one of the objectives
☐ mentioned, but not a priority
☐ other remarks: …………………………………

D3.3. Are there any specific plans for changes of ports dues?
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………………………………………………………………………………………………………………………………………………
………………………………………………………………………………………………………………………………………………

D3.4. Are there any changes planned in the area of ports management?
☐ yes
☐ no

D3.5. If yes, of what kind?
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………………………………………………………………………………………………………………………………………………
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D3.6. Are you aware of any research projects or other activities regarding pricing reform in air transport that have been conducted recently? (within the last 3 years)
☐ yes
☐ no

D3.7. If yes, please state project name and subject:
………………………………………………………………………………………………………………………………………………
………………………………………………………………………………………………………………………………………………

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ANNEX: TRANSPORT INFRASTRUCTURE ADMINISTRATIONS AND MANAGEMENT IN NMS

Author: Jan Burnewicz (University of Gdansk)
Separate report