IBM Global Business Services

Rail Liberalisation Index 2011

Market opening: comparison of the rail markets of the Member States of the European Union, Switzerland and Norway

A study conducted by IBM Deutschland GmbH in collaboration with
Prof. Dr. Dr. Dr. h.c. Christian Kirchner, Humboldt-University, Berlin

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The complete study, the summary and the annexes are available at:
www.deutschebahn.com/liberalisierungsindex (German)
www.deutschebahn.com/liberalisation-index (English)

You will find the IBM homepage under www.ibm.com

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1. Management Summary

Continuing liberalisation of the European rail market has resulted in the need for a new edition of the Rail Liberalisation Index (or LIB Index for short). The present study is the fourth edition of the Rail Liberalisation Index and, as was the case with the first three editions for 2002, 2004 and 2007, has been conducted by IBM Global Business Services in collaboration with Professor Christian Kirchner, Humboldt University, Berlin.

The new regulatory framework for international rail passenger transport (Directive 2007/58/EC), Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road, Directive 2007/59/EC for the recognition of the European train driver's licence, the Interoperability Directive 2008/57/EC for the recognition of vehicle approvals and the infringement proceedings against several EC member states by the European Commission alleging inadequate implementation of Directive 2001/14/EC were the occasion for updating the Rail Liberalisation Index between October 2010 and March 2011. In addition, in 2010, the European Commission submitted proposed legislation for a revision of the first railway package ("recast"). The recast is aimed at increasing competition in the rail transport market by eliminating technical, administrative and legal obstacles to market access. Lastly, the new Transport White Paper for 2010-2020 announces new legislation for further liberalisation of rail passenger transport for 2012. In light of these facts, the updated LIB Index is intended to provide facts and figures for the ongoing EU discussions about further opening of the market. The study was presented to the public on April 20, 2011 in Brussels.

The LIB Index compares the status of the relative degree of market opening in the European rail transport markets within the European Union, including Norway and Switzerland, in January 2011. The study is a *benchmark* of the legal and de facto barriers to market access from the perspective of an external railway undertaking (RU[1]) seeking access.

Legal access conditions, such as the powers of the regulatory body and the market access regime, are contained in the LEX sub-index (*law in the books*). The de facto access conditions, such as barriers to information, administrative and operational barriers, and the share of the market that is accessible to external RUs, are included by the ACCESS sub-index (*law in action*). The results included in the LEX Index account for 20 percent of the LIB Index, with 80 percent accounted for by the results included in the ACCESS Index. A separate index, which is not included in the LIB Index, the COM Index, indicates the competitive dynamics reflected in rail's *modal split* and in the intramodal market share and number of external RUs active in addition to the *incumbent*. As the access requirements for rail passenger and freight transport differ, in addition to the indices mentioned, separate liberalisation indices are provided for each of these segments.

Per country, a total of 250 items of data (6750 in total) were collected, analysed, verified, consolidated and if deemed necessary, broken down into passenger transport services provided under a public service contract or on a purely commercial basis, plus freight

[1] For explanations of terms, see Chapter 8 Glossary on page 209

transport. In just 2.1 percent of the questions it was not possible to obtain a qualified answer. The data were obtained and verified from regulatory bodies, transport ministries, *incumbents*, external RUs, rolling stock manufacturers and infrastructure managers by means of interviews and questionnaires. The information-gathering process also encompassed the analysis of secondary materials such as legislative texts, network statements, websites of the relevant undertakings and institutions or other existing studies. To enable verification of the data, several different sources were used for each country.

Results of the LIB Index

As in the previous issues, three groups can be identified with regard to the degree of rail market opening achieved. As was the case in the 2007 issue, we have used the categories *Advanced*, *On Schedule* and *Delayed*. The category *Pending Departure* has not been used since 2007, since all countries have since scored at least 300 points and have thus achieved the required threshold value.

Comparison of market opening categories for LIB Index 2002/2004 and 2007/2011

LIB Index points	Groups in the LIB Index 2002-2004	Groups in the LIB Index 2007 and 2011
800 – 1,000	No country with more than 800 points	Advanced
600 – 799	On Schedule	On Schedule
300 – 599	Delayed	Delayed
100 – 299	Pending Departure	No country with less than 300 points

Table 1

The countries in the *Advanced* group, which is the top group in the LIB Index, consisting of Sweden (872), Great Britain (865), Germany (842), Denmark (825), the Netherlands (817) and Austria (806), have made considerable progress in terms of the degree of market opening achieved compared with the other European states. Both the legal (LEX Index) and the de facto access conditions (ACCESS Index) of these countries offer the best conditions in Europe for *newcomers*. This finding is also confirmed by the significant market shares achieved by external RUs in the COM Index in a European comparison. The practical experience with the market opening process has had a positive effect on the operational network access and regulatory processes. All countries in the *Advanced* group have regulatory bodies with wide-ranging powers and competencies as well as experience in dealing with complaints from external RUs. These countries are included in the same group, despite very different approaches to liberalisation. Significant differences can be identified, primarily in the de facto and legal access regime for passenger transport services provided under public service contracts and services provided on a purely

commercial basis, in the infrastructure charging system and in the organisational structure of the *incumbent*.

Sweden has moved ahead two slots compared with its 2007 ranking and now leads this group. This puts Great Britain and Germany back by one. Denmark was able to jump ahead from sixth to fourth place, thus also moving from the second group to the first. The next positions within the *Advanced* group are held by the Netherlands and, for the first time, Austria.

Compared to the LIB Index 2007, the gap between the top group (*Advanced*) and the second (*On Schedule*) group has increased quite significantly. The difference between Austria and the first country of the second group (Belgium) is 53 points. *On Schedule* is by far the largest group. It includes the following countries: Belgium (753), Switzerland (741), Czech Republic (738), Slovakia (738), Portugal (737), Poland (737), Italy (737), Estonia (729), Norway (729), Romania (726), Bulgaria (718), Finland (672), Slovenia (672), Hungary (658) and France (612). Compared with 2007, France was the only country to move from the third group into the second.

The third group (*Delayed*) includes Lithuania (592), Greece (592), Latvia (587), Luxembourg (585), Spain (583) and Ireland (467). A noticeable feature is that Lithuania, Latvia and Spain all have lower scores compared with 2007 and are now included in the *Delayed* group. This does not mean that conditions for market entry have become worse in these countries compared with the last LIB Index. Rather, this is because there is still a need for actions to be taken due to the acceptance of new evaluation criteria to reflect the new EU Directives in these countries, or because no empirical values yet exist for these new subject areas.

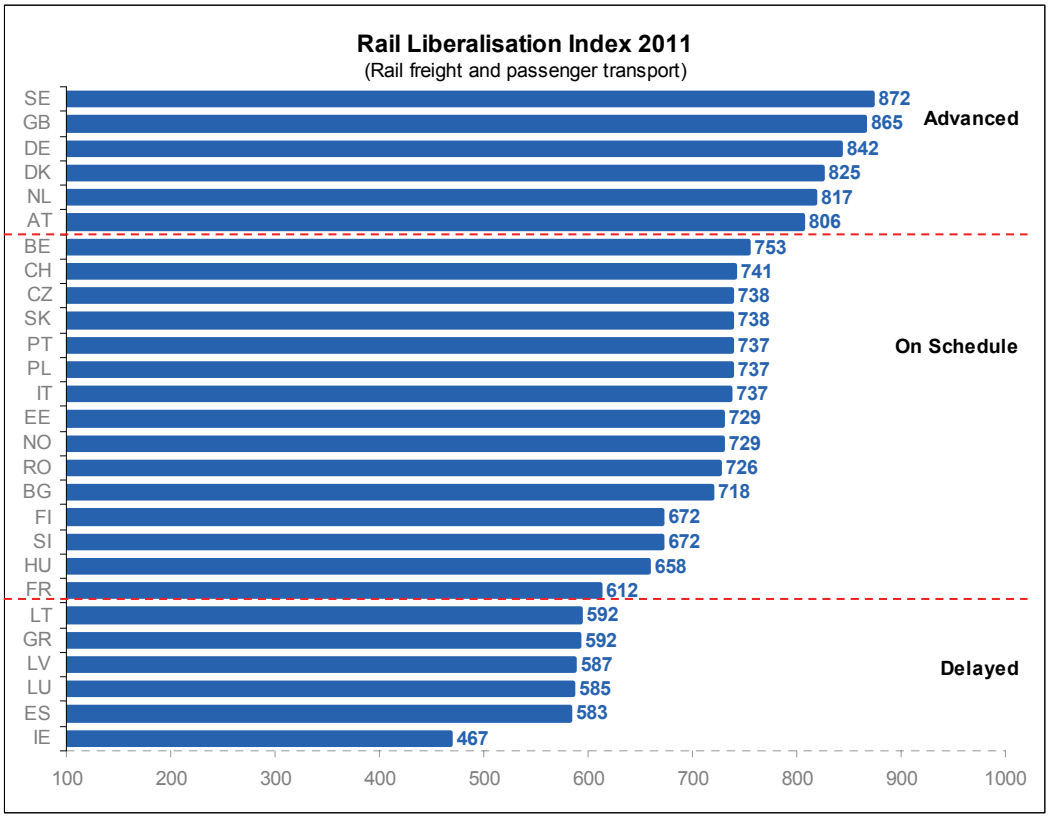


Figure 1

To summarise, we can identify the following points.

- Countries that lead in terms of liberalisation also have the highest number of external RUs and external RUs also have the highest market share compared with other countries.
- The countries of the leading group (*Advanced*) have scores that are significantly higher than the second group (*On Schedule*). In the second group (*On Schedule*), most countries are very close to each other in terms of the scores they have achieved.
- Generally speaking, there is a distinctly positive correlation between the results of the LIB Index and those of the COM Index. This can be seen as an indicator that lowering barriers to market access promotes the entry of *newcomers* into the market. However, entry may not occur if is not economically attractive enough.
- Most countries were able to further improve their score compared with 2007. All countries have made improvements to their relevant legislation and access regimes and have thus promoted market opening. In the course of the EU infringement proceedings, many countries affected have granted their regulatory bodies more independ-

ence and greater powers. This is particularly true in France, Belgium, Denmark, Luxembourg, Slovenia and Greece.

- Countries with a strong and independent regulatory body occupy top places in the LIB Index. This includes for example Great Britain, Germany and the Netherlands. This shows that a strong and independent regulator is an important precondition for non-discriminatory access to the rail infrastructure. Furthermore, the necessary level of independence and power of the regulatory bodies is not guaranteed in all European states.
- The leading countries have selected different organisational models with regard to the separation between infrastructure and operations. No identifiable correlation exists between the organisational model and the established degree of market opening.
- Large differences continue to exist between rail freight and rail passenger transport services, which are reflected in the sub-indices. The countries with the highest scores have a smaller difference between rail freight and passenger transport services than the countries with lower scores. However, it can also be seen that even the top group includes one country - the Netherlands - in which purely commercial passenger transport is mostly closed to external RUs because the *incumbent* holds an exclusive concession.
- International, purely commercial passenger transport in accordance with Directive 2007/58/EC is possible in most countries, but in practice, it is operated primarily in international co-operations. In addition to familiar co-operations such as Thalys and Eurostar, new routes are currently coming about between Germany, Austria and Italy as well as between Sweden and Denmark.
- In some countries, national rail passenger services provided under a public service contract continues to be reserved for the *incumbent*, either by law or by concessions, and are thus closed to external RUs. This is the case in Belgium, Switzerland, Finland, France, the Netherlands, Norway, Ireland, Portugal and Spain.
- To date, purely commercial rail passenger services provided by external RUs have been marginal. Though permitted by law in many countries, providing such services remains unattractive for many RUs. However, changes are evident in Germany, Austria, Italy and the Czech Republic, where an increasing number of RUs plan to enter the market for purely commercial rail passenger transport, including high-speed rail transport in Italy.
- Most Eastern European countries remain confronted with a declining proportion of rail traffic compared with other forms of transport. On the other hand, rail accounted for an increasing proportion of the *modal split* in most Northern, Central and Southern European countries. In the opinion of the authors, a variety of reasons exist for the situation in Eastern Europe: in addition to the rising standard of living and the associated increase in attractiveness of individual transport, a lack of investment in the rail infrastructure makes rail less attractive.

Results of the COM Index

The COM Index provides an indication of the intensity of competition in the countries studied. A closer look shows that as was true in 2007, the range (scatter) is greater compared with the sub-indices of the LIB Index. Thus the competitive dynamics vary significantly in the countries examined. Furthermore, all countries in the top group of the LIB Index are also represented in the top ranks of the COM Index. One exception in this regard is Estonia, which takes fourth place in the COM Index despite being only in the middle rankings of the LIB Index[2].

Great Britain leads the COM Index with a clear margin. There, a high degree of competitive dynamics has taken hold since the liberalisation of the rail market and the breakup of the *incumbent* in 1994. However, it is worth noting that a prime driver in Great Britain's high score on the COM Index is the large share of the market operated by external RUs. Their share is given as 100 percent in the index calculation, as the *incumbent* was broken up into numerous smaller companies in the course of the rail reform. Great Britain is followed by the Netherlands, Denmark, Estonia, Germany, Sweden and Austria. On the other hand, Luxembourg, Ireland, Lithuania, Greece and Finland have seen hardly any competition to date.

[2] The reasons are freight transport's relatively high modal split and the fact that a large portion of rail passenger services is provided by an external RU (*Edelaraudtee*), while rail passenger transport's modal split has increased in the last few years by 11 percent.

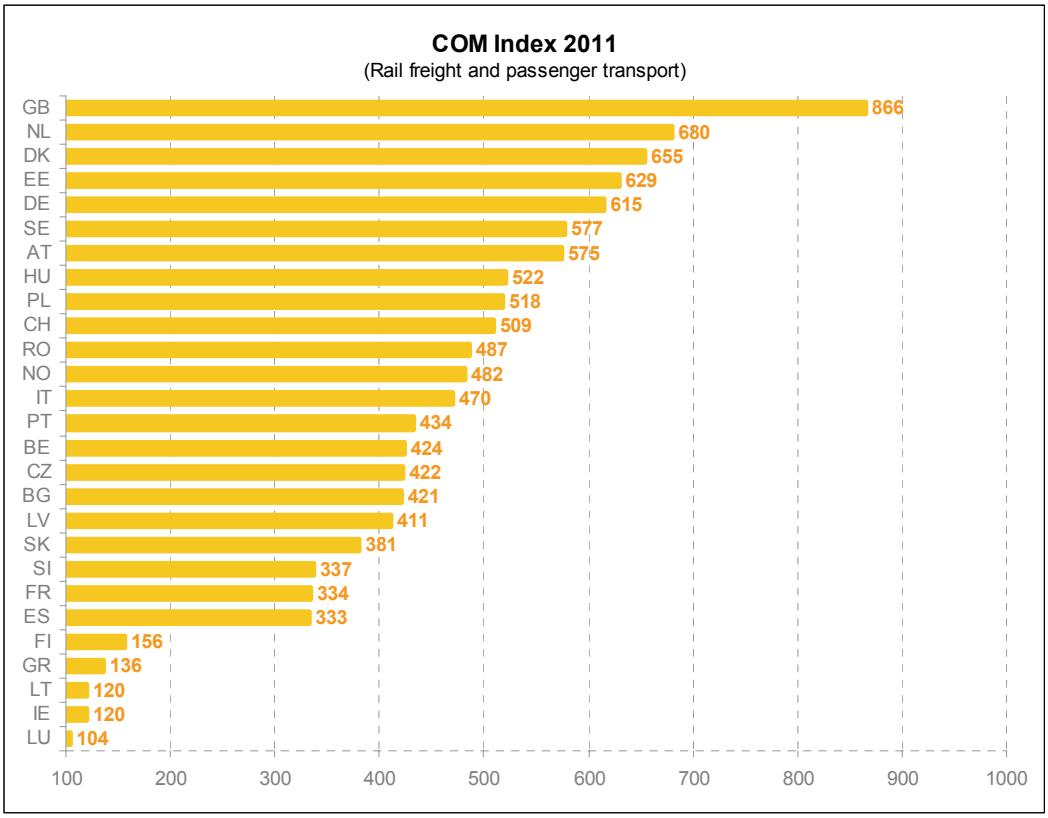

COM Index 2011
(Rail freight and passenger transport)
GB 866
NL 680
DK 655
EE 629
DE 615
SE 577
AT 575
HU 522
PL 518
CH 509
RO 487
NO 482
IT 470
PT 434
BE 424
CZ 422
BG 421
LV 411
SK 381
SI 337
FR 334
ES 333
FI 156
GR 136
LT 120
IE 120
LU 104
100
200
300
400
500
600
700
800
900
1000

Figure 2

2. Introduction

The last Rail Liberalisation Index (LIB Index) was prepared for the year 2007. Since then, there have been changes in the legislative and regulatory framework for railway markets in Europe. In particular, there have been further liberalisation steps in the rail passenger sector, which has been opened for international transports since 1 January 2010. There has also been progress with the transposition of the various European railway packages into the law of Member States of the European Union, especially as regards establishing and strengthening the independence and powers of national regulatory authorities. For all these reasons a new edition of the Rail Liberalisation Index for 2011 had become necessary.

2.1. Goals

2.1.1. Initial Theses

The Rail Liberalisation Index 2011 – like the previous indices from the years 2002, 2004 and 2007 – is intended as an empirical study of the extent to which the rail markets in Europe are open for rail-bound freight and passenger transport. It considers the relative differences in the degree to which the individual national markets have been liberalised. In view of the great disparity of the individual national markets, any attempt to measure the absolute – rather than the relative – degree of market opening would require a substantially greater undertaking. Moreover, it would first be necessary to find a uniform definition of the term "complete market opening". Such an undertaking would inevitably be doomed to failure, not only because of the disparity of the individual markets, but also because the objectives themselves continue to change as market opening progresses. Nor would it be possible to compare the findings obtained as regards the absolute openness of individual markets. There are various reasons for the disparity of the markets, first and foremost historical in nature. The application of different liberalisation concepts has also played – and still plays – an important role, especially in terms of the different variants of separation and integration concepts. If one takes these differences seriously, but nevertheless wishes to achieve openness of the national railway markets in the European Union for reasons of the single market objective alone, it is essential to consider how this objective can be accomplished in the different Member States of the European Union on the basis of a legal framework which is enshrined in European law. In that case, the crucial question is not to assess the degree of absolute market opening. From the comparative viewpoint, it is a question – simply in terms of regulatory competition – of ascertaining the relative degree of market opening.

The objective is to place the debate on the ongoing market opening process on a sustainable empirical, methodologically sound footing. It is not a question of assessing the pros and cons of various models for opening up access to the existing rail networks for railway undertakings. Accordingly, the LIB Index does not examine whether preference should be given to complete separation of infrastructure and transportation activities or to

models which favour the integration of both functions. These models come into the focus of the study only indirectly, viz. in connection with the question of how high the market entry barriers are for newcomers. Any examination of the question of ensuring the strict separation of all infrastructure functions which are relevant for competition, and thus also ensuring non-discriminatory access to infrastructure, also has to consider the structure and competences of the regulatory authority. The central consideration is the degree of de facto market opening, and not a theoretical discussion of the mere potential for discrimination.

The *Rail Liberalisation Index 2011* is intended to provide new momentum for the process of opening the national railway transport markets - in particular the passenger markets - in Europe and help to strengthen these markets. This is based on the consideration that the opening process in other transport markets, such as the aviation market and the road transport market, began earlier and has been more successfully achieved than has been or still is the case in the railway markets. This has contributed to the ongoing discrimination of rail-bound transport in intermodal competition. Pursuing the opening of the railway market systematically and vigorously could therefore reduce and perhaps even eliminate the weaker position of rail-bound transport in intermodal competition. The target is thus to make up for the backlog in opening up the railway markets compared with other trans¬port markets. The fundamental concept in this respect – for which there are also good ecological reasons – is to increase the share of rail in total traffic performance. In layman's terms, this is expressed in the demand to 'shift more traffic onto rail'. In economic terms, it is a question of the potential comparative advantages of rail-bound transport, which can be fully exploited only when closed national markets are opened, enabling rail transports over longer distances. Market opening is not an end in itself, but provides scope for improving the efficiency of transport markets. Efficiency reserves in the rail sector could be raised by systematically opening the markets, which would lead to an increase in intramodal competition. Moreover, competition regularly proves to be a driving force for innovations, improving quality and reducing costs.

Finally, opening the rail transport market in Europe would have positive international effects. Open markets in Europe lead to new opportunities for international competition. Market opening does not benefit only European railway undertakings, but also undertakings in non-European countries, making this an interesting development for international transport between Europe and East Asia, or from Europe to the Middle East. Conversely, competition in these international markets could be stimulated by the admission of European railway undertakings.

2.1.2. The European Union Single Market Programme

Implementation of the European Union's Single Market Programme for the rail transport market (cf. Chapter 4.3 Legal Framework) cannot succeed as long as national state monopolies control their national markets and close them off to competition by continuing to control the rail infrastructure by denying other railway undertakings access to this monopolist bottleneck. Where competing companies were formerly able to offer transport services only on their own – usually insignificant, regional – rail infrastructure, the com-

petitive situation has changed radically following the initiation of liberalisation measures. Instead of only intermodal competition in the transport markets, there is now a mix of inter- and intramodal competition. Competition between different railway undertakings strengthens the position of rail-bound transport in intermodal competition. On the other hand, developments in other transport markets also affect competition in railway markets. This applies to the introduction of motorway tolls for trucks, to the increasingly dense route networks operated by airlines and the advent of low-cost flights. This intermodal competitive pressure has also been confirmed in scientific studies. A recently published survey, for example, comes to the conclusion that the entry of one low-cost carrier on a particular route leads to a drop in rail traffic performance of roughly eight per cent and a significant reduction in the prices of long-distance rail tickets, in both first and second class.[3]

2.1.3. Two components of the objective

In order to obtain empirically sound findings which can provide a working basis for the ongoing liberalisation process of the European rail markets, it is necessary to achieve clarity as regards the ranking of the individual national rail markets in respect of the degree of market opening. This applies particularly in view of the different extent to which European legislation has been transposed into national law by the Member States. The LIB Index simultaneously pursues a second objective of delivering information about the effectiveness of the different national regulatory concepts.

2.2. Instruments of market opening

2.2.1. Access to infrastructure as a prerequisite for opening the railway markets

The pivotal point for the success of the Single Market Programme for European rail markets is non-discriminatory access for railway undertakings to essential facilities, i.e. to the national rail infrastructure. As the success chances of negotiated access to infrastructure are low, access has to be governed by a regulatory process which complies with the provisions of European legislation. These provisions do not have to ensure that all Member States follow the same approach to access regulation. Competition between different regulatory concepts can certainly be conducive, as it opens up more potential for innovations than one single Europe-wide regulatory concept would do. However, the provisions of European law must ensure that railway undertakings wishing to enter a rail market must be granted non-discriminatory access not only by law, but also in practice.

Ensuring access to essential facilities which are in the hands of the incumbent who controls the rail infrastructure is an instrument that is used both in general competition and

[3] Friederiszick, Gantumur, Jayaraman, Röller, Weinmann (2009), Railway Alliances in EC Long-Distance Passenger Transport: A Competitive Assessment Post-Liberalization 2010. Full study available at http://www.esmt.org/fm/479/WP-109.01.pdf

antitrust laws as well as in sector-specific regulation for the rail markets. Competition and antitrust legislation justifies access to essential facilities as a restriction of the ownership rights of the owner of such essential facilities, claiming that it is legitimate in terms of competition law ("essential facilities doctrine"). Such essential facilities are deemed to be in particular the networks or infrastructure of the network industries, insofar as duplication of these facilities would be impossible or the required investment would be out of all proportion to the potential success. In German competition law, this is provided for by Section 19 (4) No. 4 of the German Act against Restraints of Competition (GWB). This right to network access, which is enshrined in competition law, is aimed at achieving negotiated access; access denial, however, is deemed to be inadmissible exploitation of a dominant market position.

Alongside this concept of network access which is governed by competition legislation, there is also another variant in the form of a right to network access which is based on sector-specific regulation, as has been implemented in the telecommunications sector and the markets for electricity and natural gas. In that regulatory concept, network access is designed as the legal right of the competitor seeking access which is enforced by a regulatory authority. The orders of these regulatory authorities – like those of an competition authority – are subject to review by the courts of law. In the occasionally highly controversial discussion of whether it is preferable to have a network access concept which is based on competition law or on sector-specific regulation, it should be noted that the provisions of the three European Union railway packages which have been implemented to date have all opted for the regulatory concept. Accordingly, the situation in railway markets is not directly comparable with that of the other network sectors, such as the telecommunications sector, where an increasing number of competitive networks are evolving. In the railway sector, that would only be possible under exceptional circumstances, such as in the Japanese Kansai region (Osaka-Kobe-Kyoto), where the cities are linked by competing railway companies, each of which operates on its own infrastructure. The construction of new, competitive rail infrastructure today, however, is already ruled out on environmental aspects alone.

2.2.2. Opening access to infrastructure in railway markets by way of sector-specific regulation

The central instrument for granting infrastructure access to competitors of the incumbent by means of regulation is 'non-discriminatory infrastructure access'. The objective is to enable competitors to use the infrastructure under conditions which are comparable with those of the incumbent. This is possible only if infrastructure access is monitored by an independent and neutral instance, viz. the regulatory authority which is responsible for the rail sector. In contrast to a concept of infrastructure access in which the incumbent remains the legal (or economic) owner of the infrastructure and the regulatory authority monitors the granting of non-discriminatory infrastructure access (integration model), there is another concept in which infrastructure and operations are separated (separation ¬model), and in which the infrastructure manager – under the supervision of the regulatory authority – has to ensure that all railway undertakings enjoy equal treatment in terms of infrastructure access. In that model, the infrastructure manager is responsible for the

operation and maintenance of the infrastructure and the necessary investments. The proponents of this model claim that the risk of discrimination is lower than in the integration model. The problem of the separation model is that it entails a potential loss of efficiency resulting from the fact that the synergies between infrastructure and operations can no longer be exploited, or only to a much lesser extent.

There is a whole continuum of other possibilities between the concept of full separation of infrastructure and operations, and a pure integration model. The separation of infrastructure and operations in legal, organisational, accounting and functional terms is already prescribed by European Union law. A distinction can be made between legal and economic ownership of the infrastructure. The advantages of the integ¬ration model can also be achieved if only economic ownership remains with the incumbent and is legally structured so as to retain the aforesaid efficiency advantages, for instance in the form of strong, long-term operating rights which create incentives for investing in the infrastructure. But no matter how the model is designed – and this includes both pure separation models and full integration models – non-discriminatory access for any railway undertaking seeking access to the infrastructure is the crucial factor for effecti¬ve market opening. The regulatory authority which is responsible for monitoring that access is granted on a non-discriminatory basis consequently plays a central role.

2.2.3. Different national liberalisation concepts in regulatory competition

The Member States of the European Union and also of the European Economic Area (EEA) are obliged to transpose the provisions of the European railway packages into national law. Good progress has meanwhile been made with this legislative implementation. Switzerland – which is linked to the European Union by a large number of bilateral Treaties – is also pushing ahead with the liberalisation of its rail market by means of national legislative and liberalisation measures and thus ensuring compatibility with the provisions of European Union law.

The transposition of the relevant European legal provisions has led to a harmonisation, rather than complete uniformity, of the legal framework which has been created for market opening of rail markets. The harmonisation concept provides a certain leeway for national solutions and is therefore essential for a learning process in which the experience acquired from the implementation of different national concepts can be pooled in order to further these concepts and also adjust the European legal framework in the light of that experience. Such a learning process, however, can only take place on the basis of a comparative study of the success of the different competing concepts. It is not the concepts themselves which have to be compared, but the way in which they actually take effect. It is not the law as stated in directives, regulations and statutory acts (law in the books) that is decisive, but rather the actual effects of the law (law in action). The findings acquired from such an analysis of the comparative effects then provide an information basis for the future development of liberalisation of the rail markets at European and national level. Delivering these findings is the task of this Rail Liberalisation Index 2011. They will make it possible to review the hypotheses about the preferability of one liberalisation concept over another put forward in the theoretical academic debate in the light of

the actual achievements of these concepts. It is not merely a question of whether certain concepts prove theo¬retically superior – each on its own individual premises – but whether, how and over what period of time they actually lead to opening of the rail markets.

2.3. Effects of liberalisation

The separate COM Index is designed to examine the effects of liberalisation – insofar as these effects can be at all reliably identified and quantified. It takes into account factors such as the number and market shares of external railway undertakings (RU) and the rate of change for these RUs. The market share of rail in intermodal competition with the other transport modes and the change in that share over the last few years serves as a benchmark for determining the changing attractiveness of the product range offered by the railway companies and the relative prices of these products.

2.4. Goals and Methodology

The information value of the Rail Liberalisation Index depends on the methods it uses to measure the relative opening of the national rail transport markets. But before the different criteria can be measured, the following questions first have to be clarified:

- From what perspective is the study to be conducted?
- How are the markets to be defined?
- What role is played by existing and potential competition?
- How are market entry barriers to be identified?
- How should the problem of the Index figures be resolved?
- How to handle the problem of transparency of data collection?

Perspective

The study adopts the viewpoint of a railway undertaking which intends to enter a market as a newcomer. Such a company is first faced with the question of market entry barriers. From the point of view of the newcomer, the law in the books is not such an important consideration; the adequate design of that law in respect of market opening is a necessary condition for potential market entry, but not sufficient in its own right. The central issues for the newcomer are the actual existing barriers which prevent or impede market entry. In the first sub-index, the LEX Index, the existing law is presented as law in the books, whilst the second sub-index, the ACCESS Index, presents the way in which the existing law actually takes effect ("law in action").

Market definition

The aim of opening the railway markets in Europe is to achieve opening of both the freight transport and the passenger transport markets (both regional and long-distance passenger transport). In view of the different competitive pressure in the different markets, it would appear advisable to conduct separate analyses of these markets in terms of their relative degree of openness. At the same time, however, if a liberalisation policy is to be drawn up and applied to the different railway markets throughout Europe, it is first necessary to assess the overall situation as regards the extent to which these markets are open. The Rail Liberalisation Index 2011 therefore contains statements on both these levels, with a weighted aggregation of the results for the individual market segments, which provides an idea of the status quo of the endeavours made by the individual countries to achieve liberalisation.

Existing and potential competition

In order to examine the degree of market opening, it is necessary to investigate not only the current status – i.e. the existing competition – in a railway market, but also to consider the question of potential competition. The focus of interest is the potential market entry. Accordingly, the degree to which a market is open cannot be ascertained merely from the market shares of the incumbent and the newcomers. On the contrary, in a market which has been opened to a high degree, it is to be expected that the market shares will shift in favour of the newcomers in future. Accordingly, in an analysis of the present markets, attention has to be paid especially to the development of market shares in the past, although that does not permit extrapolation of the future developments.

Market entry barriers

The industrial organisation discussion examines different concepts of market entry barriers. In each case, the additional costs which a newcomer would have to bear compared with the incumbent serves as the starting point. This could be, for example, the cost of retrofitting locomotives, or the cost of satisfying the administrative requirements of the host country. In some cases, the concept of market entry barriers takes into account the economies of scale of the incumbents, which often cannot be matched by newcomers. However, in many cases, that factor is not relevant for railway markets which are gradually opening, as most of the newcomers are actually subsidiaries of large corporations which benefit from the economies of scale of the parent company. Finally, in some concepts of market entry barriers, possible strategic moves of the incumbent are qualified as special market entry barriers. This involves a deterrent effect which the newcomer takes into consideration when planning to enter a market. In the rail sector, which is subject to sector-specific regulation, the ability of incumbents to make such strategic moves depends on the effectiveness of regulation. To assess how effective regulation actually is, factors such as the independence of the national regulatory authority and the extent to which the authority is provided with material and human resources also have to be considered.

Problem of index figures

Any attempt to establish the relative degree of market opening of the different railway markets in Europe is inevitably faced with the methodological problem of first designing a standardised scheme in which the various market entry barriers – from the viewpoint of a railway undertaking wishing to enter a market – are weighted so that the market entry conditions in the different markets can be captured on a comparative basis in a single figure. The conversion of empirically obtained statements about the significance of individual market entry barriers into a system of figures confronts the authors with the problem of the index figures. Two steps have to be undertaken to resolve that problem: (1) The different market entry barriers have to be weighted in a way which is accepted by the parties concerned (i.e. in particular the representatives of the newcomers). (2) These weightings then have to be varied to check whether the results (i.e. the relative degree of market opening, or the order of the individual markets in the ranking) are robust. Both these steps have been taken by the authors of the Rail Liberalisation Index. It has emerged that the problem of the Index figures is in fact a (purely) theoretical pro¬blem which is of no actual significance in the concrete cases.

Transparency of data collection

Transparency of data collection might be impaired if people answering the question are free not to be named individually. On the other hand access to sensitive data often depends on such confidentiality. Thus, the pros and cons of obtaining sensitive data with confidentiality and better transparency of data collection have to be weighed. To escape this type of dilemma it is necessary to ensure a balance between answers of representatives of government agencies, regulatory bodies, external railway undertakings and incumbents. Thus, the transparency problem cannot be solved but its effects can be minimised.

2.5. LEX Index, ACCESS Index and COM Index

2.5.1. LEX Index

The LEX Index is virtually a critical stocktaking of the actual situation to verify the suitability of the provisions of the individual national laws that are intended to achieve market opening. As the provisions of the railway packages of the European Union have meanwhile largely been transposed into national law of Member States, the relative importance of this sub-index has gradually declined in the versions published in the years 2002, 2004 and 2007. As regards Switzerland, it is a question of the extent to which unilateral legal amendments have created a legal situation which is comparable to the situation created by transposition of the railway packages into national law of Member States.

As the provisions of the railway packages, as far as market opening measures are concerned, refer to the minimum requirements to be satisfied by the national legislation of the

Member States, it is conceivable that some individual national legal regimes could overfulfil these requirements. This is to be measured by the LEX Index. It is therefore not merely a question of whether the provisions of EU legislation have been correctly transposed, but of the – theoretical – suitability of the national legal provisions for achieving market opening. However, the question of the actual effectiveness is not examined until the ACCESS Index.

2.5.2. ACCESS Index

The ACCESS Index is aimed at identifying the actually relevant access barriers. Recording the access barriers which are truly relevant from the point of view of a newcomer poses a number of methodological questions as far as obtaining a comparable record of these market entry barriers is concerned. Network industries – such as the rail sector – are characterised by specific market power phenomena. Market power is not simply the result of market shares, or of having access to superior technologies, the benefits of the vertical integration of a company or economies of scale. In network industries, market power in the downstream markets – in this case in the market for rail transportation services - results primarily from the fact that monopolistic bottlenecks exist at the upstream network level and access to the downstream markets can be channelled by controlling these bottlenecks. If access to such a bottleneck is essential for a newcomer to compete in the downstream markets, the party which has control of the bottleneck can also control competition in the downstream markets. That party has what is known as network-specific market power. That is why regulation which promotes market opening has to primarily tackle such bottlenecks. In the terminology of competition and antitrust law, it is these bottlenecks which are referred to as ‘essential facilities’.

Any survey of market entry barriers in a network sector has to identify the relevant bottlenecks. If such bottlenecks exist, it can be assumed that the market is closed off, unless effective access regulation ensures that it is possible for companies wishing to enter the market to overcome these barriers. It is then no longer a question of bottlenecks per se, but of barriers which still remain despite regulation. The ACCESS Index therefore does not record the existence of bottlenecks per se, but rather the effectiveness of regulation. In the light of that examination, it is then possible to deduce the degree to which a market is closed or open.

In addition to absolute entry barriers, the bottlenecks, there are also barriers which, from the point of view of a newcomer could be overcome, but only at considerable time and expense. Such barriers – the relative entry barriers – are also of relevance for identifying the degree of market openness. The majority of the entry barriers to national railway markets which still exist today are such relative entry barriers, for instance the need to obtain a safety certificate before a railway undertaking can begin operations.

It is not the task of the ACCESS Index to ascertain all theoretically conceivable barriers to market entry and record them in cost categories. If such a task were to be based, for instance, on different capital costs for rolling stock, investment costs for passenger information systems, sales systems or transport infrastructure, the problem would arise that under conditions of imperfect capital markets each undertaking calculates different capital

costs and opportunity costs, which would jeopardise comparability. That is why a market entry barrier concept has to be applied which is based on the additional costs which a newcomer would have to take into account when drawing up a business case. The ACCESS Index is thus concerned with the relative weighting of the individual categories of barriers.

From the point of view of the newcomer, it is not the market entry barriers alone that are relevant for market access, but also the potential market exit barriers. These are significant for a newcomer if he has to take into account the possibility that his attempt to enter the market might not be successful, which means he has to consider the reversibility of any investments made. The more specific an investment and the lower its value in the second-best use, the higher the market exit costs. An assessment of the market exit barriers therefore also has to take into account the degree of specificity of the investments which a player has to make in order to enter the market. For instance, if there is no leasing market for rolling stock, so that a newcomer first has to invest in his own rolling stock, but would be faced with high markdowns when subsequently reselling that stock, the absence of a leasing market, together with the deficits of the market in connection with the sale of rolling stock, constitutes a market exit barrier.

The above market entry and market exit barriers are only significant in that part of a national railway market which is accessible to newcomers in the first place. If parts of a market are completely closed off, the overall degree of market openness per se is also reduced. This plays an important role particularly in those access regi¬mes in which certain market segments are put up for tender only at prolonged intervals. In this study, this refers to countries such as the Netherlands, in which an exclusive licence for almost the entire rail passenger transport market was awarded to the incumbent NS up to the year 2015, and in particular also to Belgium, France and Spain, where the national rail passenger transport markets are still completely closed.

2.5.3. COM Index

The COM Index is intended to reflect some of the effects of the ongoing liberalisation process. To avoid confusing the causes and consequences of liberalisation, this subindex is not included in the Liberalisation Index. The COM Index is restricted to those effects of liberalisation which can be captured and quantified on a viable basis. On the one hand, this refers to the market structu¬res – i.e. the number and market shares of the competing companies. It is immediately evident that these figures reflect the degree of competition to a certain extent. Other effects of competition, however, such as the quality of the products offered, the relative prices, or the innovation level, are far more difficult to compare. Accordingly, the COM Index takes the level and change rate of the market share of all railway undertakings in the transport market as the benchmark for the attractiveness of rail resulting from the above factors.

There are, of course, other factors which influence the attractiveness of rail transport, such as the development of the price of petrol, or tax privileges for other transport modes. Nevertheless, it cannot be denied that market opening and increasing competition in rail

markets – assuming that all other conditions are equal – also have an effect on the attractiveness of rail transport. And that, of course, is the objective of market opening.

The market structure is included in the compilation of the COM Index on the one hand in the form of the number of active external railway undertakings competing against the incumbents, and on the other hand in the market shares of these competitors and in the rate of change in these market shares. This leads to the following problems: in some countries, such as Great Britain, there is either no longer an incumbent, or the incumbent has withdrawn from entire market segments. This latter scenario applies to Denmark, the Netherlands and Hungary, where the entire freight transport sectors of the former incumbents have been sold. In Poland, the regional transport segment of the incumbent, *PKP Przewozy Regionalne*, was transferred to the voivodeships, i.e. the regional administrative authorities. The method of assessing the degree of competition by means of the market shares of external railway undertakings, which has been retained from the previous Rail Liberalisation Indices due to better comparability, reaches its limits here. In by far the majority of all countries, that method is effective because a loss of market shares by the incumbent is an indicator of more intensive competition. In the countries stated above – and some others – however, railways which are classified as "external" have the largest market shares, so that an increase in their market shares cannot be interpreted as an increase in competition. This restriction applies in particular to countries in which the former state-owned railway has been fully or partly sold.

2.5.4. Weighting

The weightings used in the Rail Liberalisation Index 2011 have been selected to ensure that as a fundamental principle, the Index remains comparable with the Rail Liberalisation Indices for the years 2002, 2004 and 2007.

2.6. Important findings

Three findings of the 2011 Rail Liberalisation Index are of utmost importance for the opening of European rail transport markets: The ongoing transposition of European law into the national law of Member States, which were not confined to formal transposition but which tackled the problems of factual access, has generally led to a positive development of market opening. The actual market opening is apparently not dependent on a specific separation or integration model. What has been relevant was the actually enforced non-discriminatory access to external railway undertakings to the existing rail infrastructure. In general the reduction of existing market entry barriers had increasingly induced actual access of newcomers thus improving competition in the rail sector.

3. Retrospective view of the Rail Liberalisation Index 2007

Background and motivation

On 17 October 2007 in Brussels, IBM and Prof. Dr. Dr. Dr. h.c. Christian Kirchner presented the third *Rail Liberalisation Index*.

In much the same way as the previous editions published in 2002 and 2004, the *Rail Liberalisation Index 2007* analysed and compared the status of the market opening in rail transport – as a result of EU enlargement – of 25 EU Member States[4] for the first time, in addition to Norway and Switzerland.

The focus of this version was on the effects of the new framework conditions for the rail transport market in force since 1 January 2007 and in particular the full liberalisation of the rail freight transport market and the enlargement of the European Union to include Bulgaria and Romania. Two separate liberalisation indices for rail passenger transport and rail freight had been included for the first time to supplement the Rail Liberalisation Index, since access requirements in these two segments were quite different as a result of to the above-mentioned market opening.

Results of the LIB Index 2007

By comparison with the previous editions of the LIB Index, a number of countries for the first time had more than 800 points, with the result that a new group with *Advanced* status was added. On the other hand, there were no longer any countries with less than 300 points, which meant that the group that had been assigned the status *Pending Departure* in 2002 and 2004 was no longer required.

The order of the first four countries remained fairly stable compared with the LIB Index 2004, the only difference being that Germany and Sweden changed places. The three leading countries – Great Britain, Germany and Sweden - had virtually identical ranking with 827, 826 and 825 points, with the Netherlands following at some distance.

[4] Malta and Cyprus were not included in the study, since they have no rail networks.

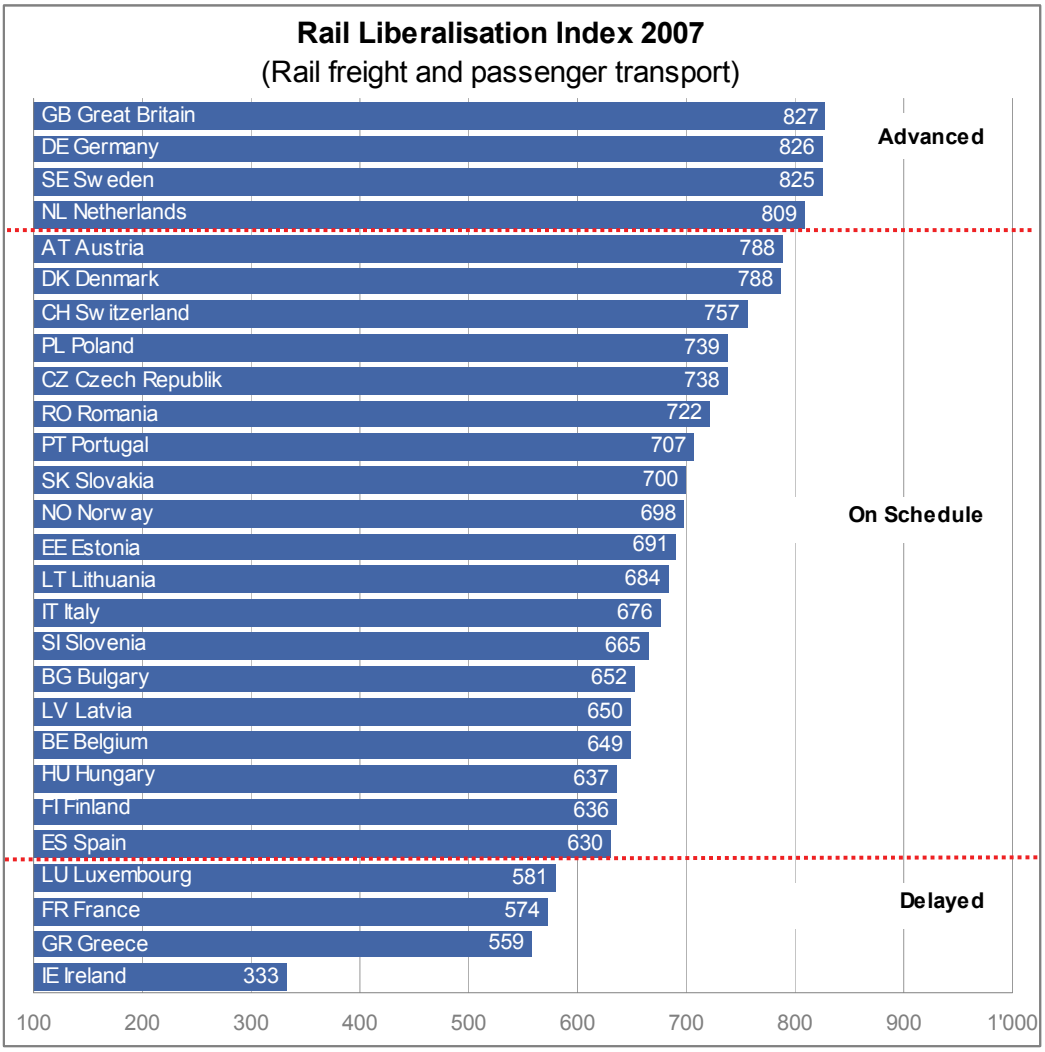


Figure 3

The following results are based on the Rail Liberalisation Index 2007:

1. All the countries examined had continued to open their rail markets from 2004 onwards and the differences between them overall had been reduced somewhat. However, there were still no uniform access conditions, as high market entry barriers still existed in some countries. The countries were classified into three categories, which represented the status quo of liberalisation:
   I. *Advanced*,
   II. *On Schedule* and
   III. *Delayed*.

2. In principle, market entry was now possible for national and foreign rail freight companies in each of the countries examined. Nevertheless, an RU seeking access still encountered what were very restrictive access conditions in a number of countries. In most countries, however, external RUs were already licensed and active, although significant differences continued to exist between the countries in terms of rail passenger transport. There were countries, for example, in which external RUs were still refused access to the market altogether and countries in which numerous RUs had been operating successfully for a long time.
3. Although EU law has provided for open access to all EU rail freight operators since 1 January 2007, there were still six countries at that time that only granted foreign rail freight companies open access to their network with restrictions.
4. Rail regulation continued to vary quite considerably from country to country. There were still countries, for example, which had implemented EU directives on paper only and/or had only provided their regulatory authorities with weak competencies. Very few countries in fact had regulatory authorities that were actually capable of providing non-discriminatory network access. In this respect, the countries in the *Advanced* group were an exception.
5. As a result of the relatively short period of time available for the practical implementation of the regulatory framework at that time, the practical market access processes in most cases were not as well understood and developed as the legal requirements. There were other countries, however, in which the legal requirements were hardly developed at all by comparison, while the practical market access conditions had already reached an advanced stage of development, and *vice versa*. Interestingly, Romania (RO) and Bulgaria (BG), which had already introduced rail reforms prior to EU accession on 1 January 2007, were now included in the *On Schedule* group, which meant they had rail markets that were as liberalised as the founder members of the EU.

4. Concept of the Rail Liberalisation Index 2011

4.1. Object of the study and survey method

The study examines and compares the accessibility of the national rail markets in Europe from the point of view of potential market players. For this reason, information is collected that is of key importance for the preparation of a business case and for the actual market entry. In this respect, the LIB Index represents the basis for a comparison of the effectiveness of the various national liberalisation concepts relating to market opening.

The ranking of the countries, due to the method employed, is an indicator of the relative barriers to market entry. The higher the ranking of a country, the lower are its relative barriers to market entry. In the European countries compared, the degree of market opening is examined.

As described in the introduction, the LIB Index does not examine the effects of market opening. The main task of the LIB Index is to analyse and compare the legal and practical market access barriers in Europe from the point of view of an external RU seeking and capable of market entry. The effects of rail liberalisation are presented in the COM Index, provided there are measurable and reliable indicators available.

Furthermore, it is not the purpose of the LIB Index to collect information on all the financial market entry barriers, such as the capital costs for rolling stock, the investment costs for customer information systems, sales systems or transport networks, since each company applies different capital costs and opportunity costs and has a market entry strategy of its own, so that these factors would be difficult to compare. Taxes and wage levels are also not taken into account.

The index thus concentrates on a comparison of barriers to market entry such as the required approval processes (safety certificate, licensing and rolling stock homologation), information barriers, network access conditions, the infrastructure charging system, plus a comparison of the accessible markets, access to other service facilities and services, the decisive regulatory aspects and legal market access conditions.

In view of the goal of integrating national rail markets to create a harmonised, single European market, one of the principal goals of the European Community and today the European Union, a co-existence of de facto closed national rail markets was and remains unacceptable. A single market assumes that the same market entry conditions prevail for all market players and that this is true in both a national and European comparison. If the relative barriers to market entry vary significantly between individual countries, this does not constitute a single European market. It is precisely these differences in market entry conditions that the LIB Index is designed to reveal by means of the methodology used and the collection of data.

The aim is thus to make the various features of the market access barriers clear and comparable, in order to provide an objective basis for the discussion of non-discriminatory open access to the rail markets in Europe.

The area examined by the LIB Index 2011 – as with the previous version – includes the EU Member States, plus Norway and Switzerland. The following countries were thus examined:

Belgium (BE), Bulgaria (BG), Denmark (DK), Germany (DE), Estonia (EE), Finland (FI), France (FR), Greece (GR), Great Britain (GB), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), the Netherlands (NL), Norway (NO), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Sweden (SE), Switzerland (CH), Slovakia (SK), Slovenia (SI), Spain (ES), Czech Republic (CZ) and Hungary (HU).[5]

Both the rail freight and rail passenger transport market segments are included in the overall index, each accounting for 50 per cent. In addition, special indices have been created for freight transport and passenger transport. To this end, it was necessary to collect the data separately for the two market segments – if this was deemed useful.

In passenger transport, a distinction is made in the subject area L II “Regulation of market access” and A IV “Accessible market in 2009” between services provided under a public service contract and purely commercial rail passenger services. Urban transport (metro, tram and bus services) has not been included in this study.

All institutions and companies with decision-making authority in a country were contacted. In general, these were

- regulatory authorities,
- incumbents,
- external RUs,
- train path allocation offices,
- infrastructure managers,
- rolling stock manufacturing industry, and
- ministries and authorities responsible for licensing, safety certificates and rolling stock homologation.

The correctness of the answers was verified by comparing the answers of more than one interview partner. Additional verification was carried out using secondary material such as legislative texts, network statements and studies on the subject. The country-specific sources on which the evaluation is based, are included in the country chapters and classified on the basis of the companies interviewed, public institutions, documents and websites. In compliance with the laws on data protection, the names of the persons interviewed cannot be disclosed.

The willingness to provide information on network access (access regime, licence, safety certificate, rolling stock homologation and train path allocation) is assessed in the ACCESS sub-index and is one of the first key indicators of the degree of market opening or the transparency of market access regimes.

[5] Malta and Cyprus were not included in the study, since they have no rail infrastructure.

The survey period began on 3 January 2011 and ended on 15 February 2011. If it was not possible to find a plausible answer to the questions that were to be included the LEX and ACCESS sub-indices within this period, despite intensive research, the assumption was made that it would be too time-consuming and therefore too costly for a potential market player to collect the data that was essential for market entry or that a clear specification did not exist and there was thus the possibility of an arbitrary answer being given. In such cases, the minimum number of points (one point) was assigned.

A total of 6,750 items of data on rail liberalisation in Europe were collected.[6] Answers were submitted for 97.9 per cent of the questions, which meant that only 2.1 per cent or 141 questions remained unanswered. In these cases, as just described, the score "No data available – 1 point" was given, since no information had been obtained, despite intensive research.[7]

All the data collected can be classified on a scale of 1 to 10 (see details on the range of answers in Annexes V and VI). The range of answers reflects the extreme values per question that exist in Europe (one point and ten points) and the relevant grading (two to eight points).

Questions on information barriers, experience or contactability were assessed by external RUs and the consultants from *IBM Global Business Services* assigned to the study.

The cut-off date for the LEX and ACCESS indices was 1 January 2011. The reference periods for the individual questions relating to the COM Index can be found in the relevant questionnaire in the Annex.

4.2. Conceptual adjustments with respect to the Rail Liberalisation Index 2007

The concept of the LIB Index 2011 is a continuation of the concept used in 2007 that has been further developed with great care to ensure comparability has been maintained.

Minor adjustments were made due to

- changed framework conditions, and
- improved differentiation methods.

These conceptual adjustments are explained and justified below. The differences with respect to the LIB Index 2007 are also identified in Annex IV.

[6] 250 items of data per country.

[7] Number of "No data available " per country: BE 3, BG 7, CH 2, CZ 5, EE 5, ES 4, FI 5, FR 2, GB 2, GR 6, HU 5, IE 19, IT 3, LT 15, LU 14, LV 18, NL 1, NO 6, PL 1, PT 3, RO 3, SE 3, SI 6 and SK 3; 141 cases in total.

Changes in the LIB Index

The most recent EU directives and regulations relating to the liberalisation of the railway market have been included in the assessment. Specifically, these are as follows (cf. Chapter 4.3)

- Directives 2007/58/EC and 2007/59/EC included in the third railway package,
- Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road, and
- the revised Interoperability Directive 2008/57/EC.

Changes in the LEX Index

For the first time in this LIB Index, an investigation was carried out to determine to what extent Directive 2007/58/EC has been implemented regarding the opening of international rail passenger transport and whether there is a possibility of restricting access for international services and in particular national sub-routes on international routes within the meaning of this directive.

In the case of the access regime, which is regulated by law, the award process for services provided under a public service contract in the rail passenger transport segment has been more precisely defined. Unlike earlier editions of the LIB Index, a distinction is made in the current study as to what extent passenger transport services of a country provided under a public service contract are granted on the basis of a direct award (with or without negotiation), a formal public tender or a combination of both. In this context, an investigation was also carried out to determine to what extent the legal requirements designed to make the transparency provisions of Regulation (EC) No 1370/2007 on public passenger transport services by road and by rail effective for the award of transport services are in place.

In the case of national passenger services provided on a purely commercial basis, investigations were carried out to determine whether this market is closed to external RUs or whether transport services can be provided in accordance with the open access regime or via concessions. In the case of concessions, an investigation was made into the way in which the award process is conducted. As with passenger transport services provided under a public service contract, investigations were carried out to determine whether these concessions were granted by direct award, by negotiation or by formal public tender.

The access regime for the national rail transport market, which had a weighting of 80 per cent in 2007, now accounts for only 60 per cent of the market access conditions of foreign RUs in the LEX Index. On the other hand, the establishment of the legal requirements that are to make Regulation (EC) No 1370/2007 effective will now be included in the assessment for the first time with a weighting of 20 per cent.

Changes in the ACCESS Index

Minor adjustments have been made in terms of the quality of non-personal information provided. In contrast to earlier editions of the LIB Index, a survey of the existence of paper-based leaflets has been eliminated for example, and the weighting points that subsequently became available have been reallocated equally to the current validity and existence of forms available for download.

The two-part safety certificate is now included as a new addition. This involved verifying that Part B Safety Certificates were issued within the stipulated period and that general Part A Safety Certificates issued in another country and their respective examination period were accepted.

Another question which has been included for the first time in the current version of the LIB Index dealt with the possible statement from RUs on the planned line utilisation when applying for train paths.

The question relating to the possibility of having train path allocations examined by a court was a supplement to the questions raised in the subject area relating to track access conditions. In this context, investigations were also carried out to determine whether restrictions on cabotage possibilities provided for in Directive 2007/58/EC are currently being implemented for international transport services.

Since the composition of infrastructure charges can vary considerably from country to country, this aspect was analysed more precisely. As a result, a new question was included as to whether, in addition to the infrastructure charges, other charges are payable when rail transport services are provided, and whether the calculation of such charges is to be performance- related or based on a fixed price. Another question was whether other services such as halts in stations or the use of bridges and tunnels are covered by the infrastructure charge. The new questions also included the possibility of railway undertakings being able to calculate the infrastructure charges themselves. This is due to the fact that in many countries the infrastructure charge is made up of many different factors, which makes the calculation difficult for RUs. Two other questions dealt with reservation fees when ordering train paths and whether different rates are used for regular train path orders and ad-hoc orders.

Quality aspects were also included in the subject area relating to infrastructure charges. Investigations were also carried out as to whether it is permitted to reduce the infrastructure charge in the event of poor service and whether a performance regime exists as an incentive to increase the quality.

In addition to the infrastructure charges, charge for the use of passenger stations were also investigated. The example taken in this case was for a stop in the central station of the country's largest city on a working day at 8:00 hrs for an electric Euro/Intercity train weighing 590 gross tonnes with a seating capacity for 750 passengers and – in addition – for a stop at a station in a small town with a population of around 50,000 on a working day at 8:00 hrs for a local public transport electric train weighing 270 gross tonnes with a seating capacity for around 400 passengers. Since charges for using the passenger stations are included in the infrastructure charges in some countries, no direct comparison of

the rates is possible. For this reason, this data is collected for information purposes only and is not included in the assessment.

In addition to infrastructure charges and station charge, the prices for the supply of traction current have been analysed for the first time in this version of the LIB Index. This is reflected in questions on the existence of a binding traction current charging system, including the granting of discounts on quantity, for example, and the possibility of obtaining electricity from third-party power utilities and refunds for energy recovery[8].

An additional new question is about providing external RUs with access to the operations centres of the infrastructure manager.

The question relating to a domestic market for new rolling stock was deleted from the catalogue of questions, since this question had always been answered in the positive and therefore served no particular purpose.

As part of the implementation of the third railway package, a new question dealt with the acceptance of the European train driver's licence.

A new subject area covered sales services in passenger transport. On the one hand, investigations were carried out as to whether space in passenger stations can be rented by RUs to set up their own sales offices and to what extent external RUs have access to the sales channels of the *Incumbent,* of transport associations or to other RU-independent sales platforms.

In the subject area of “Accessible market“ in the “rail passenger transport“ segment, a more precise distinction is also made between the various types of awards in passenger transport services provided under a public service contract. In this subject area, the contract award terms and conditions actually implemented in practice are investigated. It can happen, for example, that a country has created the legal conditions for formal public tenders, but only direct awards without negotiations are actually made in practice. The options for answers have been adjusted accordingly (see details in Annex IV). Enquiries were also made as to what extent the transparency provisions of Regulation (EC) No 1370/2007 were complied with in the award of transport services.

Changes in the COM Index

In the COM Index, only one new question has been included. This deals with the percentage of external RUs that regularly provide passenger transport services.

The reference periods for the development of the *Modal Split* (now between 2001 and 2008) and for the market growth for external RUs (now between 2006 and 2009) have been updated.

For the presentation of the current *modal split*, the year 2008 was purposely used as the current reference year since the short-term collapse of the market as a result of the economic crisis in 2009 would have led to a severe distortion of the findings. In addition, at

[8] E.g. in the form of regenerative braking energy in modern electric traction units

the editorial deadline for this LIB Index, there were no comparative figures on passenger transport available from the statistical office of the European Union *Eurostat* for 2009 and 2010.

Summarising, it can be said that the methodological adjustments in the LIB, LEX, ACCESS and COM Index reflect the new framework conditions, and have been reduced to the most essential, thus ensuring comparability with the *Rail Liberalisation Index 2007* and earlier editions. Furthermore, the more precise distinction of contract award terms and conditions of services provided under a public service contract makes it possible to assess the accessible market more precisely in terms of transparency and contract award terms and conditions (legal and practical).

4.3. Legal framework conditions

The legal framework conditions for the European rail markets have advanced since the *Rail Liberalisation Index 2007* was published. The third railway package in particular, which introduced open access rights for international rail passenger services and is thus of major importance for this study, has now been implemented into national law by an overwhelming majority of the Member States. In 2010, the European Commission also presented a proposal to recast the first railway package in order to increase competition in rail transport, to enhance the powers of the regulatory bodies and to strengthen the legal framework for public and private investment.

The basis for market opening and competition on the European rail transport market was established with the first railway package, the so-called “Infrastructure package”, which was adopted in 2001. The package consists of Council Directive 2001/12/EC on the development of the Community’s railways (amended Council Directive 91/440/EEC), Council Directive 2001/13/EC on the award of approvals to railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity, the collection of charges for the use of railway infrastructure and safety certification. In its second report on monitoring the development of the rail transport market dated 18 December 2009[9], the European Commission certified that all Member States – at least officially – had transposed the first railway package. This means in particular that, from a legal point of view, as a result of the separation of infrastructure and operations and the setting up of regulatory bodies, the basic requirements for a non-discriminatory network access have been established. Nevertheless, in the view of the European Commission, implementation of the first railway package directives was inadequate in many Member States. As a result, in November 2010, it sued 13 Member States before the European Court of Justice. The most frequently mentioned infringements involved the insufficient independence of the infrastructure managers from the railway undertakings, in addition to the lack of competences and independence of the regulatory bodies.

The Commission is also of the opinion that the enforcement of the existing legislation has been aggravated by ambiguities and gaps in the first railway package. To eliminate these

[9] COM (2009) 676 final.

obstacles, the Commission submitted a proposal on 17 September 2010 to amend the first railway package directives ("recast"). The recast is intended to merge the three directives of the first railway package in a legal act. The aim is to simplify and modify the rules and, if necessary introduce new rules. The key focus of the recast is on the stricter regulation of access to service facilities, such as stations or maintenance facilities, and the increased independence and authority of the regulatory bodies. The Commission is proposing additional rights for the regulatory bodies, for example, to oversee the separation of the accounts and access in the case of service facilities. In addition, powers provided to the regulatory bodies are to be strengthened by means of sanctions, audits and official powers of investigation. In addition, the Commission proposes to include ticket sales and information systems at stations in the list of regulated service facilities. The Commission's proposal contains no details regarding a more extensive separation of infrastructure and operations. The recast also includes no specific legal changes for a further liberalisation of rail passenger transport. However, the Commission announced in the communication accompanying the recast that it intended to adopt by 2012 a new initiative to extend the liberalisation of rail passenger transport. In this context, it ought to be mentioned that a study commissioned and already published by the Commission[10] comes to the conclusion that full liberalisation of the European passenger transport markets is desirable.

The second railway package foresaw full market opening for European rail freight transport, which became effective on 1 January 2007 (Directive 2004/51/EC), which has subsequently been implemented by all Member States. The package includes the so-called Railway Safety Directive (Directive 2004/49/EC), which harmonises such things as the requirements of safety certification and approval. It also includes Directive 2004/50/EC on interoperability, which merges Directive 96/48/EC on the interoperability of the trans-European high-speed rail system and Directive 2001/16/EC on the interoperability of the trans-European conventional rail system. The directive aims at narrowing down the technical differences between the rail systems to provide a smooth transition when changing networks with completely safe operating conditions. In this respect, it regulates the basic requirements that are valid throughout Europe for the technical harmonisation of the rail systems, the technical specifications for interoperability (TSI) and for the homologation of rail sub-systems (e.g. rolling stock, infrastructure, energy). As a result of the so-called Agency Regulation (Regulation (EC) No 881/2004), the European Railway Agency (ERA) was created to draw up technical specifications for interoperability, common safety goals, indicators and methods that would be valid throughout Europe.

In the above context, the third railway package that was adopted on 23 October 2007 is of special importance. The package includes directives on the liberalisation of international rail passenger services (Directive 2007/58/EC), on the certification of train drivers (Directive 2007/59/EC) and a regulation on the rights and obligations passengers (Regulation (EC) No 1371/2007). With Directive 2007/58/EC, the market for international rail passenger services with the possibility of carrying passengers on national sub-routes (cabotage) was opened on 1 January 2010.[11] However, the directive provides for the

[10] cf. Everis (2010), Study on Regulatory Options on Further Market Opening in Rail Passenger Transport.

[11] On 3 June 2010, the European Commission sent a reasoned opinion to Denmark, Lithuania, Luxembourg and the Netherlands for failing to transpose Directive 2007/58/EC.

possibility of imposing limitations. For instance, Member States can prohibit cabotage if the principal purpose of the service is not to carry passengers travelling on an international journey or the service compromises the economic equilibrium of a service provided under a public service contract on the same routes. Market access can also be restricted as a result of time-limited exclusive rights granted before the directive came into force. Furthermore, the possibility exists of levying a charge to be used for financing public service obligations. However, such a charge must not be allowed to compromise the commercial viability of the international passenger service. The Commission however would like to impose narrow limits on these restrictions. In a communication dated 28 December 2010, the Commission made it clear that when determining whether "the principal purpose of a service is to carry passengers travelling on an international journey", the analysis should take into account the quantitative and qualitative characteristics in the medium term and the medium-term purpose of the services and should include an element of foresight in the evaluation and market conditions have to be taken into account. A detailed economic analysis must be carried out to assess the economic and financial impact of the services on the public service contract concerned.

For opening of national rail passenger transport markets, Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos. 1191/69 and 1107/70 is of fundamental importance. It was published in the Official Journal of the EU on 3 December 2007 following a long and controversial legislative process. The regulation governs the award and financing of public passenger services by road and by rail. By providing for both possibilities of direct award and formal public tenders, the regulation has created a framework for market access in the case of services provided under a public service contract. Both award procedures must be available to all operators and must be fair, transparent and non-discriminatory. In addition, the regulation requires the competent transport authorities to define their public passenger transport requirements precisely and specify the extent of public subsidies in a binding agreement. It also specifies the maximum duration of transport contracts. The regulation entered into force on 13 December 2009. With respect to regulations on public service contracts, a ten-year transitional period is allowed.

4.4. The structure of the Rail Liberalisation Index 2011

The LIB Index 2011 consists of the sub-indices LEX and ACCESS. The COM Index is not included in the overall index. As the so-called market test, however, it forms an integral part of the study. The content of the sub-indices can be summarised as shown below:

Key content of the sub-indices of the LIB Index and the COM Index

LEX Index: (law in the books)	**ACCESS Index: (law in action)**	**COM Index:**
What are the legal requirements for market entry and to what extent does a regulatory authority support external RUs?	What do the practical market access possibilities and barriers look like from the point of view of external RUs? Which market is accessible and what allocation procedures are employed?	What are the dynamics of competition in the rail transport market and what progress is being made in rail's *modal split*?

Table 2

Structure of the Rail Liberalisation Index

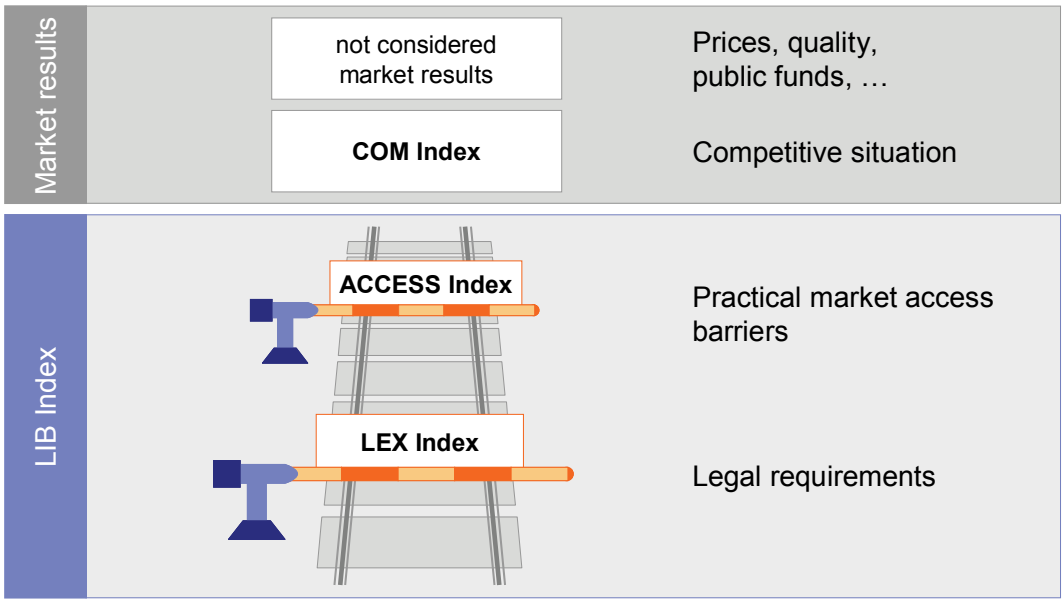


Figure 4

What is being aimed for, as described above, is not an absolute measure of liberalisation, but only the relative degree of liberalisation that has been achieved in the various countries.

Each sub-index is made up of several subject areas, which themselves contain determinants that are subsequently broken down into sub-criteria. These determinants and sub-criteria determine what information is collected during the research work. The LIB Index thus consists of five levels:

Level 1: LIB Index

Level 2: Sub-indices (LEX and ACCESS)

Level 3: Subject areas (I, II, III, …)

Level 4: Determinants (1., 2., 3., ...)

Level 5: Sub-criteria (A, B, C, …)

LIB Index consolidation levels

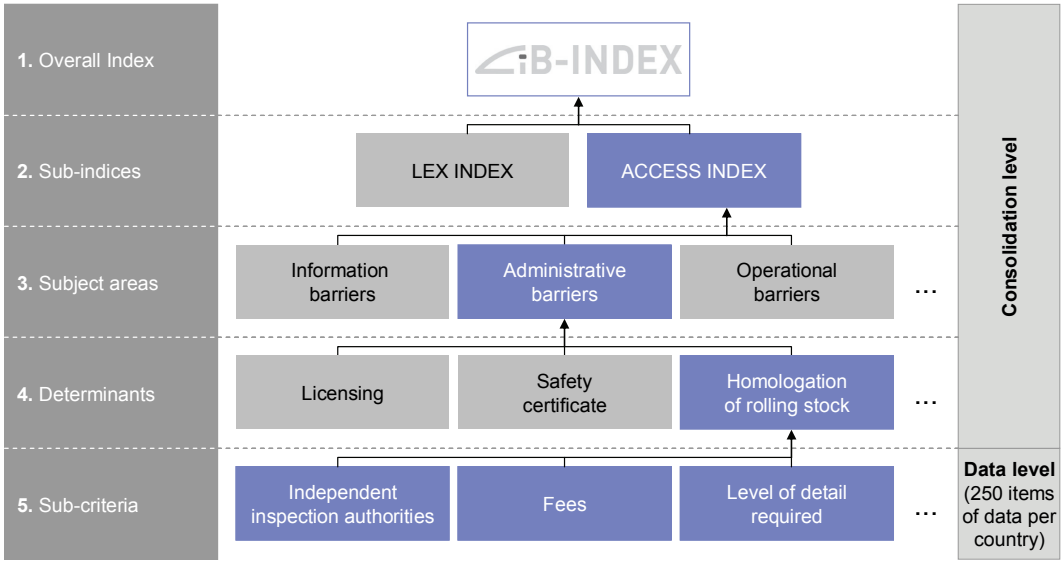


Figure 5

The sub-indices, the subject areas, determinants and sub-criteria are all weighted in accordance with their individual significance. The determination of the weightings is carried out on the basis of market entry barriers that are associated with the individual questions, and in the past was safeguarded by interviewing experts, performing pair comparisons and plausibility checks. A high value is placed on consistency with the weightings in the LIB Index 2007, to ensure comparability. The detailed catalogue of questions relating to

each of the sub-indices LEX, ACCESS and COM, the weightings of the relevant questions and the range of answers are shown in detail in the following annexes:

Annex I:	LEX Index catalogue of questions
Annex II:	ACCESS Index catalogue of questions
Annex III:	COM Index catalogue of questions
Annex IV:	Weightings and range of answers

The subject areas and determinants are dealt with in more detail in the sections below. In addition, the relevant weightings in the sub-indices are indicated.

4.4.1. The LEX Index

National legislation forms the basis for the market entry of external RUs. For a company that wants to invest in the railway market, secure and transparent legislation is a requirement without which an investment decision cannot be made.

For this reason, the first question that is asked therefore refers to the progress made in transforming European Community law into national law. In addition, legal aspects of EU law are analysed, i.e. questions are raised about the law in the books. Aspects of railway regulation are also evaluated.

In this sub-index, the extent to which the basic legal and regulatory conditions meet the goal of opening up the market to new competitors is included. For these procedures, the individual aspects of the guideline provisions and not the formal notification of the total package are relevant.

The LEX Index consists of the following three subject areas, each of which is subdivided into three determinants.

Subject areas and determinants of the LEX Index

Subject area/determinants	(Percentage)
L I Organisational structures of the *incumbent*	**25 per cent**
1. Incumbents' independent status with respect to the state	5 per cent
2. Degree of vertical separation – network/operations	80 per cent
3. Degree of horizontal separation – freight/passenger transport	15 per cent
L II Regulation of market access	**45 per cent**
1. Market access regime for foreign RUs	40 per cent
2. Market access regime for domestic RUs	40 per cent
3. 3. Legally controlled access to operational facilities as described in Annex II No. 2 of Directive 2001/14/EC	20 per cent
L III Regulatory authority powers	**30 per cent**
1. General aspects of the regulatory authority	30 per cent
2. Scope of regulation	30 per cent
3. Powers of the regulatory authority	40 per cent

Table 3

4.4.2. The ACCESS Index

From the point of view of an RU, the second barrier lies in the practical conversion of the existing laws on liberalisation, i.e., law in action. A second sub-index results that classifies the individual countries by the extent that investments of external RUs in the railway business are permitted in practice, by the extent that planned market activities can be converted in practice, and by the extent that the administrative processes are designed so that they are RU friendly.

In the second sub-index, therefore, questions are pursued regarding the actual possibilities of market entry or the de facto barriers and the time and costs for external RUs to acquire licences when applying for train paths as well as during operation. The key figures regarding the length and the complexity of the approval processes are included. The evaluation of how essential facilities are provided in practice takes place on the basis of RU progress reports, regulation reports and journalistic material.

When preparing an ACCESS Index, the authors of the study thus put themselves in the position of an external RU that must go through all the steps required to attain a market presence. The most important aspects for the preparation of a market entry strategy, such as access to qualified staff, access to rolling stock, language barriers and network access, are analysed in the ACCESS Index.

Of importance also, for example, are the appropriateness of the licensing, safety certificates and vehicle approval processes, or how the structure of the railway infrastructure

charging system is set up. With regard to the infrastructure charging systems, questions are raised on whether the charging system is a single or a two-part charging system, whether there are discounts that put small competitors at a disadvantage, and what further services are included in the infrastructure charges.

Because of the different infrastructure charging systems currently in use in Europe, several assumptions were made so that an average price could be computed. A non-linear infrastructure charging system is defined as follows: the longer the train path ordered, the more favourable will be the charge per train path kilometre. The linear infrastructure charging system is defined by a uniform infrastructure charge per train path kilometre for all RUs.

As long as there is nothing indicated to the contrary in the reports from a given country, the following criteria have been set down for the determination of the average infrastructure charges for a specimen train:

- rail freight transport: average infrastructure charge in euros/train path kilometre between the two largest national freight stations for a 960 tonne gross weight long-distance freight train with diesel power
- long-distance rail passenger transport: average infrastructure charge in euros/train path kilometre between the two largest national cities for a 590 tonne gross weight electric European/intercity train with approximately 750 seats
- local rail passenger transport: average infrastructure charge in euros/train path kilometre in the largest national population centres for a 270 tonne gross weight electric local passenger train with approximately 400 seats
- high-speed line: average infrastructure charge in euros/train path kilometre for a high-speed train operating on a high-speed line (>210 km/h). Since high-speed lines do not exist in all EU Member States, no comparison is possible in this case. For this reason, the results were not included, but collected for information purposes only.

Since other charges are levied in some countries in addition to purely infrastructure charges, e.g. for the use of bridges, viaducts or tunnels, or route charges, accident charges or emission charges in addition to the infrastructure charge, the infrastructure charge as such must always be considered in combination with these added charges. For this reason, a question was included in the catalogue of questions that explicitly requested information on the existence of any such additional charges. Due to the various elements which make up the infrastructure charge and the possible inclusion of additional services (such as a charge for the use of stations), great care must be taken when making a direct comparison of infrastructure charges.

With regards to applying for train paths, other factors of interest must be considered such as the lead time for the train path application, the possibility of applying for a train path during the year (i.e. between the annual deadlines which apply in the construction of the train time table) and the proportion of train paths applied for but unused in combination with cancellation costs. For example, with lower cancellation costs, the RUs have a greater incentive to order train paths that are not absolutely essential, which reduces the number of train paths available to potential competitors. Shorter lead times, as well as

train path applications for less than a year, reduce the time intervals between potential entries into the market and thus increase the competitive pressure on the *incumbent*.

Since no separate charging system exists for the use of stations in some countries, and instead, the use of passenger stations is covered by the infrastructure charges, information on the actual charge for the use of stations was actually collected, but was not included in the assessment due to insufficient comparability.

Information on the market actually accessible for external RUs was also collected. The subject area “Accessible market“ was given a weighting of 25 per cent in the ACCESS Index, since the market that is accessible in practice is the crucial requirement for testing practical market access conditions. The subject of the survey is therefore to find which portion of the total market was accessible and to what extent. Thus the contract award terms and conditions applied in practice are examined and evaluated for openness, transparency and promotion of competition. The more transparent and open the contract award practice is for market players, the more points are assigned.

The ACCESS sub-index consists of five subject areas that are in turn subdivided into either three or two determinants.

Subject areas and determinants of the ACCESS Index

Subject area/determinants	(Percentage)
A I Information barriers	**5 per cent**
1. Process duration for obtaining information	40 per cent
2. Quality of non-personal information provided	30 per cent
3. Quality of personal information provided	30 per cent
A II Administrative barriers	**20 per cent**
1. Licence	35 per cent
2. Safety certificate	25 per cent
3. Homologation of rolling stock	40 per cent
A III Operational barriers	**45 per cent**
1. Track access conditions	25 per cent
2. Infrastructure charging system	50 per cent
3. Other service facilities and services as described in Annex II of Directive 2001/14/EC	25 per cent
A IV Share of domestic market accessible 2009	**25 per cent**
1. Method of awarding transport contracts	20 per cent
2. Compliance with transparency provisions in accordance with Regulation (EC) No 1370/2007	10 per cent
3. Percentage of the accessible market for RUs	70 per cent
A V Sales services in passenger transport	**5 per cent**
1. Rental of space for ticket sales offices	50 per cent
2. Access to sales services	50 per cent

Table 4

4.5. The COM Index

The third subject area investigates how the market has developed until now for external RUs. This aspect results into an ex-post assessment of the liberalisation.

With the aid of key aggregated indicators, such as market concentration (number and market share of competitors), modal split, and growth dynamics, the determinants of the COM Index measure the actual development of competition. As far as possible, a distinction is made between the market segments in freight transport, rail passenger transport services provided under a public service contract and on a purely commercial basis. The more intense the competition, the greater the perceived opportunities for entry to external RUs. Thus the COM index can be interpreted as an indicator that measures the results of entry conditions. It must be pointed out however that the determinants examined here, such as the modal split and market share development, are not determined by the degree

of liberalisation alone. The *modal split*, for example, also depends strongly on the inter-modal framework conditions compared with other modes of transport that lie outside the scope of this survey. Considering market shares alone is also too short-sighted, since these also depend considerably on the relative efficiency of the companies, on the form of the network effects, and the prevailing attractiveness of the market. Ultimately, it is the potential competition as it affects the LEX and ACCESS sub-indices that is the deciding factor.

The data are obtained from questionnaires, from business reports as well as from transport statistics published by the European Union and national authorities.

The following three subject areas and determinants are contained in the COM index.

Subject areas and determinants of the COM Index

Subject area/determinants	**(Percentage)**
C I Changes in the modal split[12]	**20 per cent**
1. Change in the *modal split* for rail freight transport (2001 – 2008)	40 per cent
2. Change in the modal split for rail passenger transport (2001 – 2008)	
3. Share of modal split for rail freight transport 2008	40 per cent
4. Share of modal split for rail passenger transport 2008	
	10 per cent
	10 per cent
C II Number of external RUs 2009	**20 per cent**
1. Certified RUs (excl. *incumbent*) in relation to network length	40 per cent
2. Ratio of active RUs to certified RUs	50 per cent
3. Number of active RUs providing rail passenger services on a regular basis	10 per cent
C III Market share of external RUs 2009	**60 per cent**
1. Market share of external RUs in terms of transport performance in per cent[13]	75 per cent
2. Increase in market share of external RUs between 2006 and 2009 in per cent	25 per cent

Table 5

Countries without an existing incumbent gain the full score in the subject area CIII (market share of external RUs and its increase).

[12] In order to ensure comparability, years have been included in each case for which reliable and complete data material is available. At the editorial deadline for this LIB Index, most of the figures for 2009 and 2010 were not available.

[13] Passenger and tonne kilometres in per cent.

4.6. Method of calculation used in the Rail Liberalisation Index 2011

The results in LIB Index 2011 are calculated from the two sub-indices, LEX and ACCESS. The LEX Index forms 20 per cent of the LIB Index and the ACCESS Index forms 80 per cent of the LIB Index.

The minimum LIB Index score is 100 points; the maximum score 1,000 points. The higher the score, the lower the relative entry barrier for an interested RU in a particular country, i.e., the greater the process of liberalisation of the corresponding transport market has progressed.

During the answering of the questions to the LEX and ACCESS sub-indices, as well as to the COM Index, complete scores from "one" to "ten" were assigned. The minimum and maximum scores in the sub-indices correspond to those of the overall index, that is, 100 or 1,000 points.

Calculation formula applied in the LIB Index

$$\begin{aligned}\text{LIB Index} &= 0{,}2 \times \text{LEX Index} + 0{,}8 \times \text{ACCESS Index} + 0 \times \text{COM Index} \\ &= 0{,}2 \times \sum_{i=1}^{3} G_{L.i} L.i + 0{,}8 \times \sum_{i=1}^{5} G_{A.i} A.i \\ &= 0{,}2 \times \sum_{i=1}^{3} (G_{L.i} \times \sum_{j=1}^{x} (G_{L.i.j} \times \sum_{k=1}^{y} (G_{L.i.j.k} \times L.i.j.k))) \\ &+ 0{,}8 \times \sum_{i=1}^{5} (G_{A.i} \times \sum_{j=1}^{x} (G_{A.i.j} \times \sum_{k=1}^{y} (G_{A.i.j.k} \times A.i.j.k)))\end{aligned}$$

Legend:
L = Elements from LEX Index (3 subject areas)
A = Elements from ACCESS Index (5 subject areas)
G = Weighting
x = Maximum number of determinates
y = Maximum number of sub-criteria

The results are given in detail in Annexes V to VI for each country. These tables make a direct comparison possible between the individual countries up to the fifth level.

5. Rail Liberalisation Index 2011 – Results

5.1. LIB Index results

The current status with regard to the opening of the rail transport market in the 27 countries examined can be divided into three groups as in the previous *Rail Liberalisation Indices*. The boundary thresholds are, as was the case in the *LIB Index 2007*, with a total number of points of up to 600, up to 800 and over 800.

The table below provides an overview of the liberalisation categories from 2002 to 2011:

Market opening categories in the LIB Indices 2002/2004 and 2007/2011 compared

LIB Index points	Groups in the LIB Indices 2002 and 2004	Groups in the LIB Indices 2007 and 2011
800 – 1.000	No country with more than 800 points	Advanced
600 – 799	On Schedule	On Schedule
300 – 599	Delayed	Delayed
100 – 299	Pending Departure	No country with less than 300 points

Table 6

Since the last survey, most countries have continued to advance in terms of market opening. This can be seen for example in the fact that the total points scored by many countries, unlike the previous editions of the LIB Index, have increased. The bottom group in 2002 and 2004 *Pending Departure* – with a boundary threshold of 300 points, was not included in the 2007 LIB Index nor is it included in the current version. The groups are now sub-divided into the *Delayed, On Schedule* and *Advanced* categories.

In the top group, the *Advanced* group, which consists of six countries - Sweden, Great Britain, Germany, Denmark, the Netherlands and Austria - market opening is already well advanced. These countries scored over 800 points in the index calculation and reveal the following similarities:

- Both the legal (included in the LEX sub-index) and the de facto access conditions (included in the ACCESS sub-index) are the most advanced in Europe.
- In a European comparison, the significant market shares achieved by external RUs demonstrate that the countries have many years of experience with the market opening process. This experience has a positive effect on the operational network access and regulatory processes.

- With one exception[14], all countries in the group demonstrated a positive development in the *modal split* for rail between 2001 and 2008 in both rail freight and rail passenger transport.
- All six countries in this group possess regulatory authorities with wide-ranging powers as well as experience in dealing with complaints from external RUs.

Despite their similarities, the six countries have selected different approaches to liberalisation and are therefore distinct from one another, primarily in terms of the de facto and legal access regime for public service and commercial passenger transport, the infrastructure charging system, the powers of the regulatory authority and the infrastructure manager's separation model.

In the Netherlands, although the *incumbent* NS enjoys exclusive concessions for long-distance passenger transport, which are not due to expire until 2015 and not until 2022 in the case of the new high-speed lines[15], the country nevertheless remains in the top group, since the market access conditions for external RUs in rail freight transport and in services provided under a public service contract are very favourable. In the other five countries of the top group, RUs have *open access* to rail passenger services provided on a purely commercial basis.

The countries of the top group also differ from one another in their choice of structural model. Germany and Austria, unlike the other countries in the *Advanced* group, have no complete ownership separation of infrastructure and operations. The existence of different models of vertical organisation in the top group indicates that this organisational aspect has no fundamental impact on market opening.

All six countries possess regulatory authorities with wide-ranging competencies and powers, though they differ from one another in relation to their facilities for ordering penalties and fines. The German regulatory authority, the Federal Network Agency, can order the highest penalty payments in Europe. However it does not have the power to impose fines, which in contrast is possible in Sweden, the Netherlands and Great Britain. Nevertheless, appeals against decisions of the regulatory authority in the Netherlands have a delaying effect. In Austria, the SCG and SCK regulatory authorities can neither order penalties nor impose fines.

The *Advanced* group is way ahead of the second *On Schedule* group. The difference between the last country in the top group (Austria, 806 points) and the leading country in the second group (Belgium, 753 points) amounts to a total of 53 points.

[14] Sweden was the only country to report a slight decline in rail freight transport between 2001 and 2008 of 3 per cent. If the period between 2001 and 2009 is considered, however, the *modal split* for rail freight also increased in Sweden.

[15] Operator is the *High Speed Alliance* (HSA), a joint venture between NS and the national airline KLM.

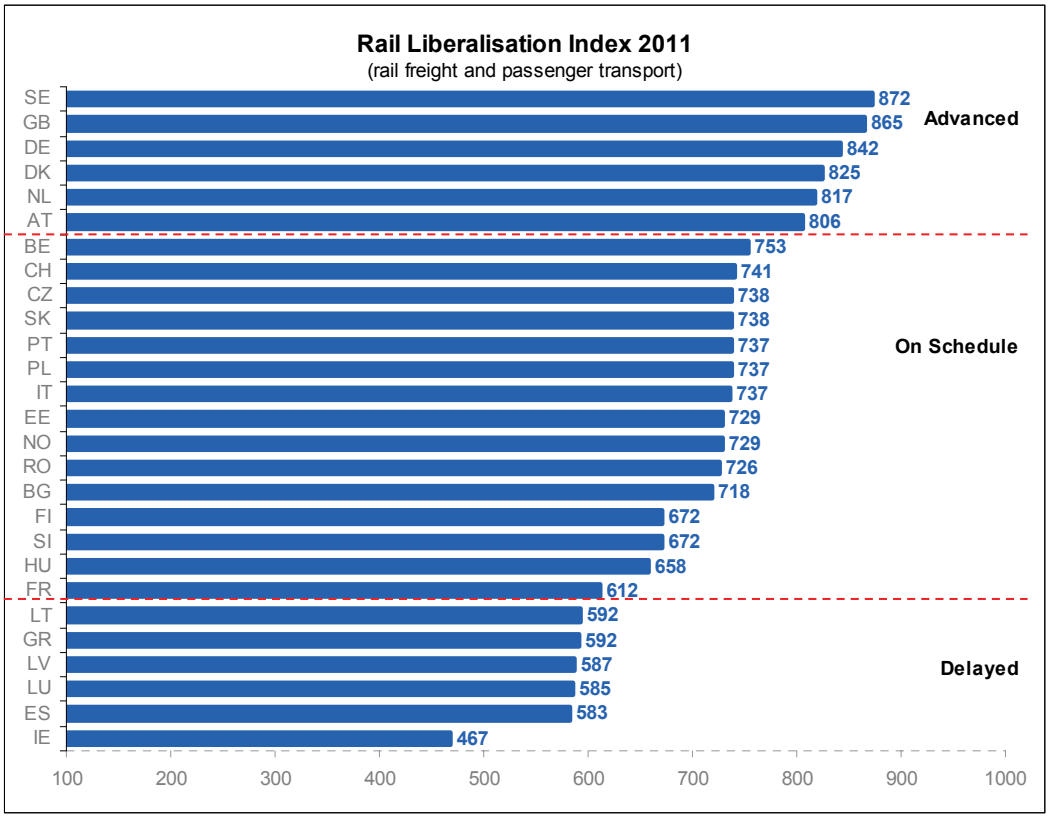


Figure 6

The second, and by far the largest group, the *On Schedule group*, consists of the following 15 countries: Belgium, Switzerland, the Czech Republic, Slovakia, Portugal, Italy, Poland, Norway, Estonia, Romania, Bulgaria, Finland, Slovenia, Hungary and France. These countries scored between 600 and 799 points in the index calculation. In 2007, there were still 19 countries in this group. In 2011 Denmark and Austria moved up into the top, *Advanced* group, the ranking of Lithuania, Latvia and Spain moved into the third, *Delayed* group. This relegation does not mean that the level of liberalisation is worse than it was in 2007. It is due simply to the new questions that have resulted from the third railway package and the more precisely defined award criteria in rail passenger services provided under a public service contract and the lack of experience relating to market access for external RUs. New to the second group is France, which in previous editions of the LIB Index was always assigned to the third group. This promotion is due to the market opening of rail freight transport and international passenger transport, and to the creation of an independent regulatory body. Because the scores achieved by the Czech Republic, Slovakia, Portugal, Poland and Italy are similar or only marginally different and a ranking is thus difficult to identify, it can be said that these countries exhibit a comparable level of liberalisation.

The third group, the *Delayed* group, includes Latvia, Greece, Lithuania, Luxembourg, Spain and Ireland. Compared with 2007, Ireland improved considerably in terms of the number of points achieved, but still has the worst ranking overall. A noticeable feature is that there are no external RUs active in any of the countries in the bottom group.

It can generally be stated that the LEX and ACCESS Indices, with a correlation coefficient of 0.76, reveal a high degree of interdependence. This confirms the view that legal requirements (*law in the books*) are necessary to create the basic framework conditions for de facto market access (*law in action*).

Slovakia, France, Finland, Belgium, Denmark and Sweden made the greatest progress in terms of their ranking in the LIB Index. Compared with the LIB Index 2007, they advanced by more than one position. What is noticeable in four of these countries (France, Finland, Denmark and Sweden) is that organisational restructuring took place in rail regulation. In France and Denmark, independent regulatory authorities were created, while Finland and Sweden incorporated their regulatory bodies into cross-sectoral authorities. Belgium and Slovakia improved as a result of the market opening for rail freight transport services and recent experience with competition in these countries. There is also a positive impact in Belgium due to the better provision of information and the introduction of more transparent administrative processes for issuing operating licences and safety certificates and for awarding contracts.

Virtually all countries improved their scores compared with the LIB Index 2007. Only Spain, Latvia and Lithuania saw a loss of points worthy of any mention. With the progress made in liberalisation and the new EU directives resulting from the third railway package, a number of additional questions were included in the LIB Index 2011 and the weighting of various subject areas was adjusted slightly[16]. In view of the increasing focus on the rail passenger transport market, the associated questions were given a slightly higher rating. There are currently no external RUs active in rail passenger transport in any of the three countries, with the result that virtually no empirical values are available in this market segment.

The most recent EU infringement proceedings relating to inadequate implementation of Directive 2001/14/EC have had a positive impact in many countries in terms of providing the regulatory bodies with greater powers and improving train path access. In most countries, a performance regime including the appropriate bonus/penalty system to improve the quality of rail services is now in place.

The strengths and weaknesses of the individual countries in the liberalisation process and the reasons for the changes can be seen in an analysis of the sub-indices. As a supplement to this analysis, the country reports below and the table of results in Annexes V and VI, in which all the standardised answers for all countries are listed in the survey's questions, are also included.

[16] cf. Chapter 4.2 on page 32

5.1.1. LEX Index results

The LEX Index accounts for 20 per cent of the LIB Index assessment. Within the LEX Index, the subject area “Regulation of market access” (45 per cent) has been given the greatest weighting, followed by “Powers of the regulatory authority” (30 per cent) and “Organisational structures of the incumbent” (25 per cent).

A significant improvement in the LEX Index of more than 100 points was achieved by Ireland, Luxembourg, Greece, Bulgaria, Estonia, Denmark and Sweden. These countries improved in terms of rail regulation in the country, market access or the organisational structures of the incumbent. Also the results of the LEX Index of France improved because of the implementation of the independent regulation authority *ARAF*.

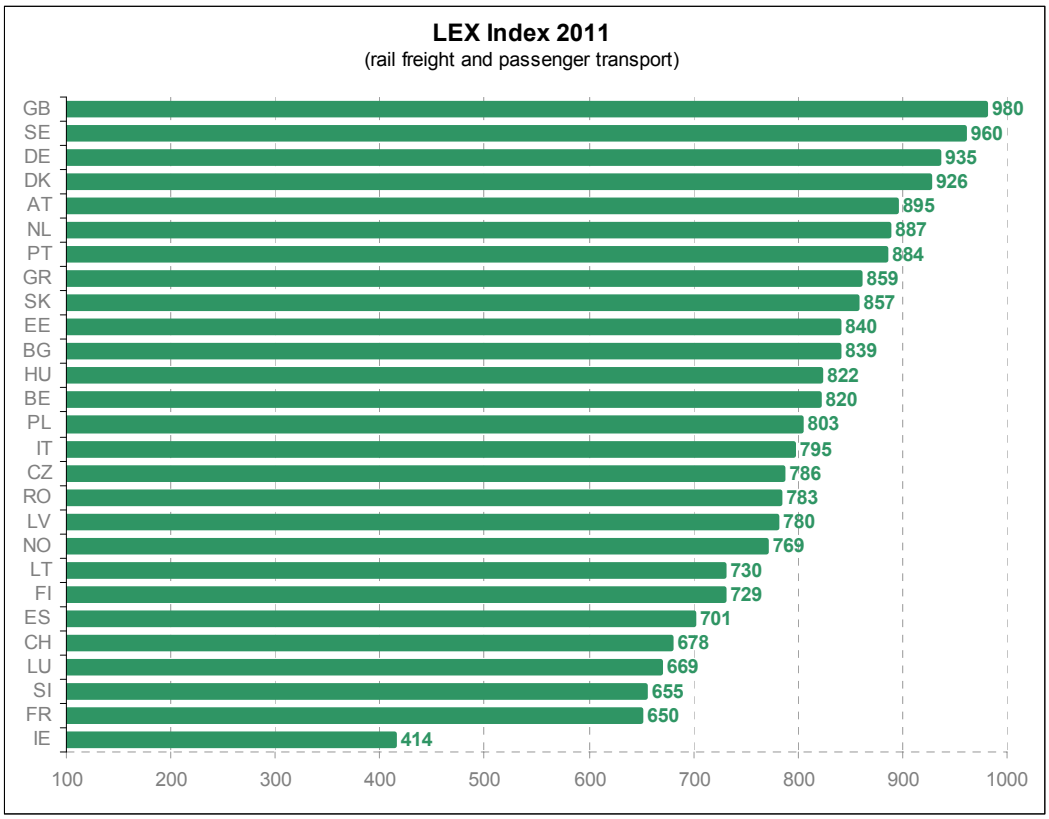


Figure 7

Great Britain (980 points) has the best legal requirements for opening the rail market.

In the case of the following countries, various changes in the ranking can be identified compared with 2007. Second place in the LEX Index is now occupied by Sweden, followed by Germany, Denmark, Austria and the Netherlands. These are the same six coun-

tries included in the top group of the LIB Index. They feature special regulatory bodies with wide-ranging powers and comprehensive market access regulation.

In a European comparison, the legal framework conditions in Ireland, France, Slovenia, Luxembourg and Switzerland support network access for external RUs least of all.

The present study reveals the following similarities between all 27 countries in the LEX Index:

- all (former) *incumbents* of the countries examined, in accordance with applicable national law, have independent status and have separated their assets, budgeting and accounting procedures from those of the state,
- open access to the network is legally guaranteed for rail freight transport companies in all countries,
- access to *essential facilities* is legally guaranteed in all countries, and
- all countries have set up a regulatory body.

Separation of infrastructure and operations

With regard to the separation of infrastructure and operations – one of the determinants of the subject area "Organisational structures of the incumbents" that accounts for 25 per cent of the LEX Index (five per cent in the LIB Index) – there are still models in Europe that vary quite significantly. The degree of separation extends from purely accounting separation to a complete ownership separation of infrastructure and operations.

There is full ownership separation in the areas of infrastructure and operations in the following twelve countries: Bulgaria, Denmark, Spain, Finland, Greece, Great Britain, the Netherlands, Norway, Portugal, Romania, Sweden and Slovakia.

In Austria, Belgium, Germany, Estonia, Italy, Latvia, Lithuania and Poland, there is functional, organisational, accounting and legal separation. In Hungary, there is organisational, accounting and legal separation, but no functional separation.

In France and the Czech Republic, although there is organisational, accounting and legal separation in the areas of operations and infrastructure, key train path management tasks, such as train path allocation, are delegated back to the *incumbent*.

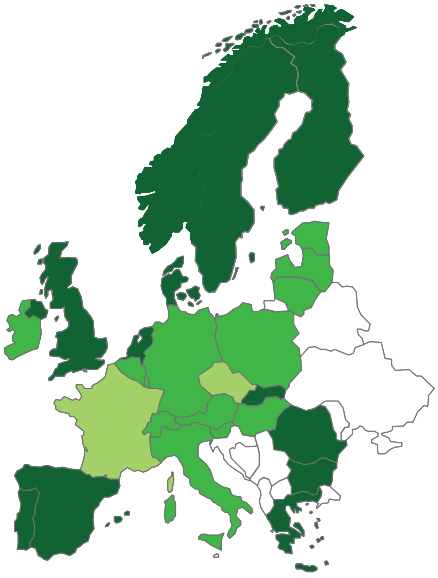
In Switzerland, Luxembourg, Ireland and Slovenia, operations are separated from the infrastructure for accounting purposes only.

Whereas there were seven countries in 2007 that separated infrastructure and operations for accounting purposes only, the number was down in 2011 to just four countries: Switzerland, Ireland, Luxembourg and Slovenia.

A simplified presentation of the separation models is shown below:

Models of separation between operations and infrastructure in Europe

	Separation model (complete ownership separation of infrastructure manager): BG, DK, ES, FI, GR, NL, NO, PT, RO, SE, SK, GB
	Integration Model (legally and functionally separated infrastructure manager, located within a holding company that also owns at least one RU): AT, BE, CH***, DE, EE**, HU***, IE, IT, LT**, LU**, LV**, PL*, SI**
	Hybrid model (independent infrastructure manager that has delegated specific tasks back to the incumbent as part of an agency agreement) CZ, FR



* Separation of the infrastructure manager from the incumbent is planned.
** Integrated infrastructure manager with specific tasks (e.g. train path allocation) were transferred to the railway authority.
*** CH, HU: integrated infrastructure manager with a separate train path allocation body

Figure 8

Most countries maintain separate balance sheets for freight and passenger transport. Only accounting separation exists in Spain, Finland, France, Greece, Ireland and Italy. Whereas in 2007 Portugal and Belgium separated the two areas for accounting purposes only, separate balance sheets have been in use in Portugal since 2009 and in Belgium since 2011 after independent rail freight transport companies were set up.

Market opening

Open access is legally guaranteed for domestic and foreign rail freight transport undertakings in each of the countries examined. Differences exist in granting permission for cabotage services in passenger transport, which can currently be restricted in eight countries.

In the examination of the legal access regime in rail passenger transport for national RUs, a distinction has been made between passenger transport services provided on the basis of public service contracts and those on a purely commercial basis. The access regimes in Europe are still very different. There are countries in which the rail passenger transport market is completely closed to external national RUs (both for services provided on a purely commercial basis and services provided under a public service contract). These include Belgium, Spain, Finland, France and Ireland. While this segment was still completely closed in Greece, Luxembourg and Norway in 2007, external RUs there, as a basic principle, now have the possibility of providing purely commercial rail passenger services. In this segment, external RUs, however, are currently active only in Germany, Denmark, Great Britain, Italy and Sweden. In Austria and the Czech Republic, for example, external RUs are scheduled to enter the segment in this market later in 2011, so that

there will be competition in these two countries in both purely commercial rail passenger services also.

Purely commercial international passenger services with cabotage are rarely seen at the moment in Europe. The first services of this kind are provided by Deutsche Bahn, Austrian State Railways and LeNORD between Germany, Austria and Italy and the service between Denmark and Sweden offered by the Swedish *incumbent* SJ with cabotage between Copenhagen and Odense.

Although a number of countries have legally guaranteed open access for national RUs for passenger services provided on a purely commercial basis, in practice, however, this must often take place in competition with nation-wide services provided under a public service contract, or is not possible because the routes are used for services provided exclusively under a public service contract. This category includes Bulgaria, Greece, Poland, Romania, Slovenia, Hungary, Slovakia and the Baltic states.

The following graphic provides an overview of the countries in which purely commercial rail passenger services are possible, are already provided actively or where this market is closed to external RUs:

Purely commercial rail passenger services in Europe

	Market closed for commercial national rail passenger services.
	Open access, but no external RUs providing commercial national rail passenger services .
	Open access with external RUs providing commercial national rail passenger services.
	AT and CZ: commencing end of 2011, external RUs providing purely commercial national rail passenger services.

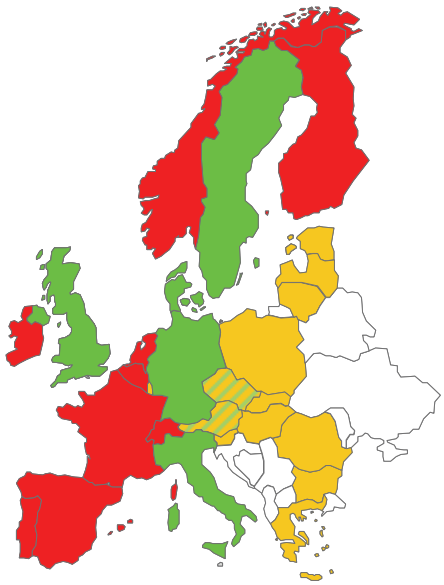


Figure 9

A clear distinction is evident for most Eastern European countries where, according to the law, the market is open to purely commercial rail passenger services, but external RUs are not yet active in this segment due to its lack of attractiveness.

Exclusive rights to purely commercial passenger services in Sweden had until 2010 been reserved, with a few exceptions such as chartered and night trains, to the *incumbent*, *SJ*. Since 1 October 2010, these services can be provided by all domestic and foreign RUs.

Whereas in 2007, neither Ireland nor Greece granted access rights to foreign RUs for rail passenger services, access has been open for international rail passenger services in both countries since 2011.

The analysis of market access regime shows how important it is to analyse the market that is actually accessible in practice, and not simply the legal options available for awarding contracts. From a legal point of view, formal tenders are possible for passenger services provided under a public service contract, in practice, however, most contracts are awarded directly. In addition, the law in some countries permits the provision of purely commercial rail passenger services, but only under stringent limitations. In Norway, for example, this is possible only in cities, suburbs and only for RUs providing services on their own infrastructure and not on routes served by NSB.

Organisation of the regulatory bodies

Although each country has set up a regulatory body, substantial differences exist in the extent of regulation provided, the contactability and the powers of the individual institutions. Whereas in 2007 approximately half of European countries only could order penalties, a total of 20 regulatory bodies now have such powers. In 19 countries, the regulatory bodies can impose fines. However, the extent and amount of the penalties and fines vary quite considerably. For 13 regulatory bodies, appeals against the decision of the regulatory body have a suspensive effect only (Austria, Bulgaria, Germany, Denmark, Estonia, Greece, Great Britain, Italy, Hungary, Latvia, Portugal, Sweden and Slovenia). In the case of five regulatory bodies, specialised expertise and decision-making responsibility are not provided from one source. In most of these cases, the transport minister or another public institution must decide – with the risk that regulatory issues are not completely free of political influence.

The regulatory bodies in Europe can be divided into three categories: special regulatory bodies, regulatory bodies within a railway authority and regulatory bodies within a ministry. While the model of the *special regulatory body* is the strongest form in terms of its powers and independence from the state and the infrastructure manager, regulatory bodies within a ministry can be considered the weakest form. Some countries have independent regulatory bodies under the ministry of transport. This is e.g. the case in Belgium, Denmark and Italy. As these bodys have own budgets and are independent from the ministries' instructions by law, these countries were not assigned to the group "ministry" but "special regulatory authority". With the exception of Sweden, all countries in the top group (*Advanced)* have an special regulatory body, which is also not in charge of safety issues. In Sweden, the regulation of the railway sector is carried out by the cross-sectoral transport authority, which is also responsible for issuing safety certificates, *Transportstyrelsen*.

Organisation of regulatory bodies for rail transport in Europe

	Special Regulatory Body: AT, BE**, DE, DK, GR, FR, IT***, LU, NL*, GB
	Regulatory Body within a Railway Authority: BG, CH, CZ, FI**, HU, LV, NO, PL, PT**, SE**, SK
	Regulatory Body within a Ministry: EE*, ES, IE, LT*, RO, SI****

* Regulatory tasks performed by national Competition Authorities.
** Regulatory Body for various modes of transport
*** Regulator URSF is an independent authority reporting to the Ministry of Transport.
**** Reorganisation in a special regulatory body planned for April 2011.

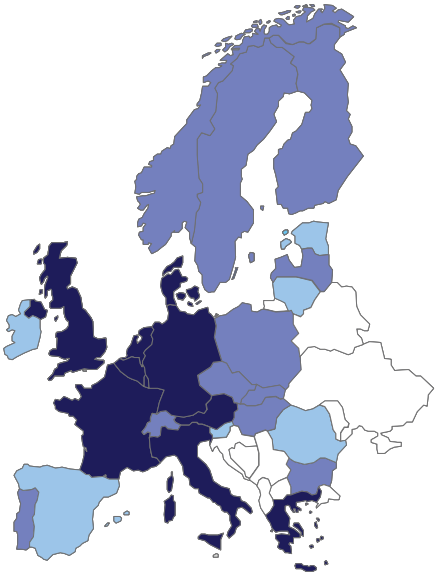


Figure 10

A significant improvement in the LEX Index of more than 100 points was achieved by Ireland, Luxembourg, Greece, Bulgaria, Estonia, Denmark and Sweden. These countries improved primarily in terms of rail regulation in the country, market access or the organisational structures of the incumbent.

Details of all aspects of the LEX Index are included in the country reports or transnational overviews in Annexes V and VI.

5.1.2. ACCESS Index results

The ACCESS Index, which accounts for 80 per cent of the overall index, analyses, evaluates, compares and aggregates the practical market access conditions of the individual countries. The subject areas examined in the ACCESS Index are as follows:

- information barriers (duration of process required to obtain information, quality of personal and non-personal information provided relating to access regime, train path allocation, operating licence, safety certificate and rolling stock homologation),
- administrative barriers (licensing, issuing of safety certificates and the rolling stock homologation process),
- operational barriers (track access conditions, infrastructure charging system, other operational facilities and services),
- the accessible market and the kind of terms and conditions of contract awards in 2009, and
- access to sales services in passenger transport.

In the ACCESS Index, information barriers are given a weight of five per cent, administrative barriers 20 per cent, operational barriers 45 per cent, the accessible market 25 per cent and sales services in passenger transport 5 per cent. Here, again, the higher is the ranking of a country, the lower the barriers analysed.

The median of the ACCESS Index has increased from 675 points in 2007 to 708 points. Once again, it is lower than the median of the LEX Index, which increased from 777 points in 2007 to 803 points. This means that, in the ACCESS Index, 50 per cent of the countries have achieved 708 points or more and in the LEX Index 50 per cent of the countries have 803 points or more. In addition, the values of the countries in the LEX Index are on average 102 points above the values of the ACCESS Index.

With a few exceptions (Ireland, Slovenia and Switzerland), all countries have a higher score in the LEX Index than in the ACCESS Index. This would suggest that the legal requirements overall are more advanced and that the de facto market access conditions for external RUs in most countries are not as pronounced and developed as the legal requirements.

Sweden, Great Britain, Germany and Denmark lead in both the ACCESS Index and the overall index. These countries achieved more than 800 points in the ACCESS Index (with 799 points, the Netherlands are only just below the 800 points mark). This means they have the most favourable de facto market access conditions for external RUs. All of these countries have a relatively high number of external RUs and many years of experience with competition on rail. A detailed analysis of the wide range of parameters collected shows that - as in 2007 - no particular similarities can be identified in terms of the practical aspects of market access. Sweden, for example, has the lowest average infrastructure charges in freight and passenger transport. Germany and Great Britain on average have the highest infrastructure charges for passenger transport in Europe. In freight transport, a train path kilometre at 5.44 euros in Denmark is more than twice as expensive as in Germany (2.46 euros per train path kilometre). The fees charged for issuing licences and safety certificates also vary considerably. While no fees are required for issuing licences in Sweden and Great Britain, licences cost around 5,000 euros in Germany. In Denmark and Germany, fees for issuing a safety certificate are charged according to the workload involved, whereas in Great Britain and Sweden, no fee is required.

Ireland also came in last in this Index with 467 points, more than 100 points behind Spain, which is ranked next to last.

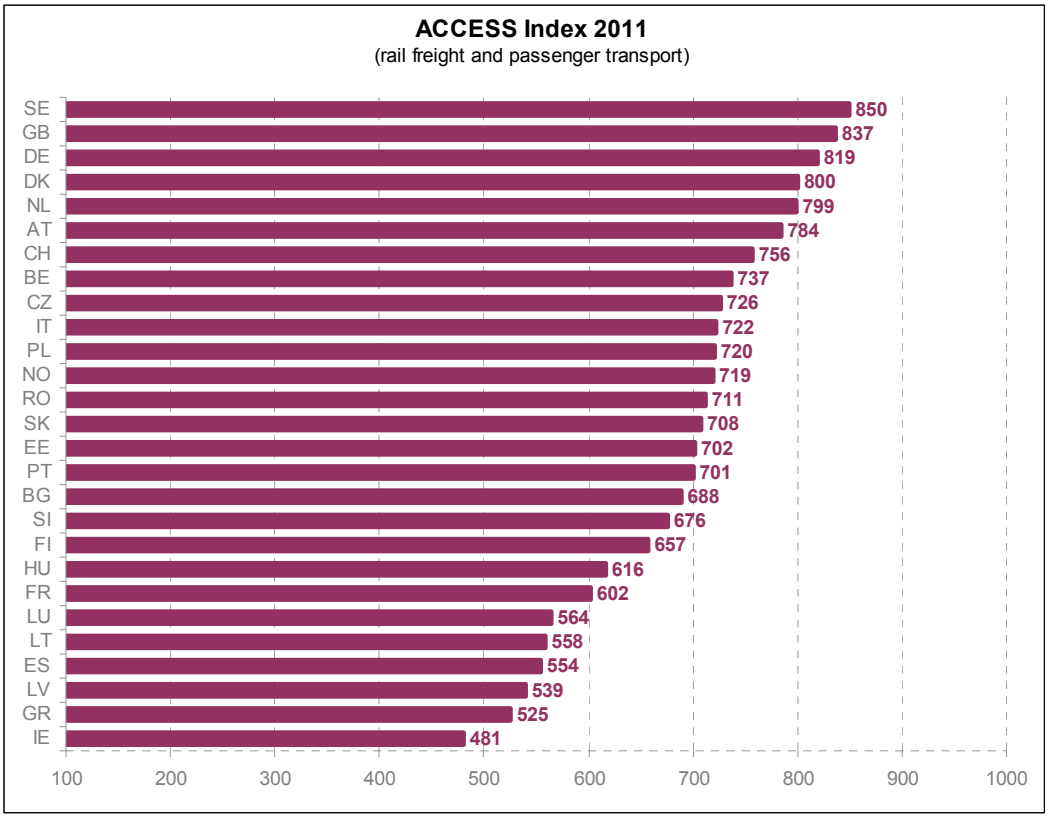


Figure 11

In the analysis of the information barriers in a country, the willingness to provide information is also tested. This aspect is one of the first indicators of how open the relevant authorities in a country are to external RUs seeking access. There are also countries, however, that provide very comprehensive information, but only have a medium degree of market opening.

Switzerland, followed by Belgium, Sweden, Ireland and Germany provides the most comprehensive information in the shortest space of time. In Luxembourg, Bulgaria, Greece and Romania, obtaining information on the network access process required the most amount of time. Almost all authorities provided English-speaking contacts. Most countries publish their network statement as specified in Article 3 of Directive 2001/14/EC. In some cases, however, current versions are only available in the language of the country concerned. In 2006/2007, the Estonian incumbent *Eesti Raudtee* published its network statement once only in English. Since that date, updated versions have only been published in Estonian. Ireland had published no network statement on the cut-off date for the study (January 1st 2011). All that is available is a brief document on infrastructure access (*Access Charging and Performance Regime*), which is available for download from the incumbent's website.

In a European comparison, the issuing of licences, safety certificates and rolling stock homologation certificates (subject area “Administrative barriers”) is carried out most effectively in Sweden, Switzerland, Austria and Great Britain. Spain, Greece and Latvia achieved the worst score in this category, indicating that processes in these countries are time-consuming, costly and bureaucratic.

The legally prescribed time required to issue a licence is limited to one month in four countries only (Lithuania, Romania, Estonia, Slovenia). An analysis of the empirical values supplied by the RUs for this study reveals that the statutory period for the issuing of licences in both market segments (rail freight and passenger transport) is complied with in nine countries only.

With the exception of Switzerland and Estonia, the issuing of a licence in Europe takes at least two months. According to the information supplied by the RUs for this study, the statutory period for the issuing of safety certificates in both market segments (rail freight and passenger transport) is observed in 10 countries. However, the four-month period specified for issuing the Part B Safety Certificate is observed in a total of 17 countries. Only in seven countries (Switzerland, the Netherlands, Germany, Denmark, Belgium, Great Britain) is a Part A Safety Certificate that has been issued in other European Member States accepted without further examination.

With regard to rolling stock homologation – as was the case in 2007 – Romania stands out as a positive example, as do Sweden, Switzerland and Great Britain. The statutory period specified for issuing applications, by comparison with other countries, is very short. The period required for completing the homologation of a regional diesel traction vehicle in Romania is just 30 days, compared with about 120 days in Sweden and Germany.

The operational barriers for external RUs in a European comparison are lowest in the Netherlands, Norway, Belgium and Denmark, and highest in countries such as Greece, Ireland, Lithuania and Latvia, for example. The most striking improvement in this subject area was achieved by Belgium, which in 2007 was still one of the countries with the highest operational barriers. Access to various facilities and services at that time was considered difficult, while it now tends to be classified as unproblematic and non-discriminatory.

Hungary is the only European country with a non-linear infrastructure charging system (the longer the train path, the more favourable the infrastructure charge per kilometre). All other countries have linear infrastructure charging systems with a uniform infrastructure charge per train path kilometre.

Whereas in 2007, Spain and to some extent Poland were the only countries to grant quantity discounts (based on the number of train paths ordered), the infrastructure charging systems in Bulgaria, Latvia, Slovenia and Slovakia now include such discounts as well (quantity discounts are no longer granted in Spain). Discounts for early bookings are granted in Bulgaria, Hungary and Lithuania. Only seven European infrastructure managers reduce train path charges for poor performance, whereas a performance regime has been established in 14 countries to improve quality.

The average infrastructure charge[17] varies significantly from country to country. Even in the case of infrastructure charges for freight and passenger transport, there are in some cases considerable differences. The charges for rail freight transport are most favourable in Spain, Sweden and Greece. In these three countries, one train path kilometre for a specimen train costs less than one euro. In Norway, there is only a charge for freight shipments with a permissible axle load of over 25 tonnes and for using the line between Etterstad and Gardermoen. For all other shipments and routes, there is no charge. The highest charges for using the rail infrastructure are in Ireland and Latvia, where a train path kilometre for rail freight services costs more than nine euros.

The picture is very much the same in rail passenger transport - in Norway, there are no charges for using the infrastructure in this segment, whereas in Spain and Slovenia, the cost for a specimen train is less than one euro per train path kilometre for both long-distance and regional passenger services. The highest charges, at over six euros per train path kilometre for long-distance services, are found in Great Britain, France and Germany. In regional transport, Great Britain, Latvia and Italy are the countries with the highest charges for using the rail infrastructure at over four euros per train path kilometre.

As in 2007, cancellation fees are charged in just under half of the countries examined when train paths are cancelled. In Denmark, Luxembourg, France, Belgium and Lithuania – depending on the lead time – they can amount to as much as 100 per cent of the infrastructure charges.

The three previously analysed subject areas are of practical significance only in that section of the national rail market that is accessible to competitors in the first place. This means that if sections of the national market are inaccessible to external RUs, then the degree of accessibility of the national rail market will automatically drop as a result. For this reason, the subject area "Accessible market in 2009“ is dealt with in the ACCESS Index and is given a weighting of 25 per cent in the sub-index (20 per cent in the LIB Index). In this subject area, the terms and conditions of contract awards are evaluated that are predominantly used in practice.

In rail freight transport, open access exists in all countries. By contrast, the percentage of the market that is actually accessible to external RUs in passenger transport continues to vary quite significantly from country to country. In Germany, *open access* for commercial passenger transport services exists on both long-distance and local transport. The latter is likely to be of theoretical relevance only, since RUs would then be required to provide their commercial services in competition with services provided under a public service contract, which is unlikely to make financial sense. Sweden and Great Britain – to be joined by Germany in future – are currently the only countries in which public service contracts (with few exceptions) are awarded by means of formal invitations to tender. In Great Britain, the operator of the respective route is guaranteed exclusivity. In addition to transport contracts awarded directly on the basis of negotiation, the majority of contracts in the Netherlands and Poland provided under a public service contract are also awarded on the basis of formal invitations to tender. Since October 2010, the market for purely commercial passenger transport services Sweden has been opened. The Swiss parlia-

[17] Details of the basis for calculation used for infrastructure charges are included in Chapter 4.4.2 on page 43.

ment is currently deliberating on whether invitations to tender should be anchored in Swiss law (second rail reform 2.2). When existing concessions expire, the intention is also to have the possibility of issuing formal invitations to tender for transport contracts. In 2009, the entire national rail passenger transport market (public service and commercial) was closed to external RUs in a total of five countries: Spain, Finland, France, Ireland and Luxembourg.

The subject area "Sales services in passenger transport" analyses the accessibility of sales facilities for external RUs. In eight European countries, it is not possible for external RUs to rent space in stations to set up their own ticket sales offices. In seven countries, external RUs have no access to existing sales channels. To date, non-discriminatory access to the existing sales channels is only possible in Denmark, the Czech Republic and Portugal.

5.2. COM Index results

The COM Index, which has not been included in the LIB Index for conceptual reasons, is designed to reflect the competitive dynamics in the rail transport markets. The development and level of rail's share of the *modal split* (20 per cent)[18], the number of external RUs in relation to the network length (20 per cent) and the market share held by external RUs (60 per cent) are consolidated in this index.

Closer examination of the LIB Index and the COM Index reveals that the countries with the highest scores in the LIB Index also achieved the highest number of points in the COM Index. With a correlation coefficient of 0.84, the two indices also show a high degree of interdependence. This would indicate that *law in the books* and *law in action* are an increasingly important factor in market opening and in increasing the attractiveness of the markets.

Great Britain once again has by far the highest score in the COM Index. Following the liberalisation of the rail market and since the *incumbent* was split up in 1994, competition has increased rapidly. It should be pointed out, however, that one of the main reasons for Great Britain's high score in the COM Index is the high market share of external RUs. This has been included in the index calculation with a weighting of 100 per cent, since the *incumbent* was split up into a large number of smaller companies in the course of the rail reform.

In the COM Index, Great Britain is followed by the Netherlands, Denmark, Estonia and Germany, which also exhibit increasing competition and have achieved a further increase in their ratings compared with the LIB Index 2007 (all achieved over 600 points). Estonia is the only country scoring over 600 points in the COM Index that has not been assigned to the top *Advanced* group, but is assigned to the *On Schedule* group. This is due to the

[18] Unless otherwise noted, the percentage change in the *modal split* refers to the period from 2001 to 2008 for freight transport and passenger transport. Information on the level of the *modal split* refers to 2008. Source: Eurostat and IBM analyses.

extremely high *modal split* in rail freight transport (48 per cent) and the high number of external rail freight operators (57 per cent).

By contrast, there is no competition at all in Ireland, Greece, Latvia, Luxembourg and Finland, and there are only initial signs of competition beginning to appear in Spain, Slovenia and Slovakia[19].

In the current analysis, the spread is also greater in the COM Index than in the indices described earlier. This suggests that competition is increasing at very different rates in the countries examined. Furthermore, all countries included in the top group of the LIB Index also occupy top places in the COM Index and *vice versa*.

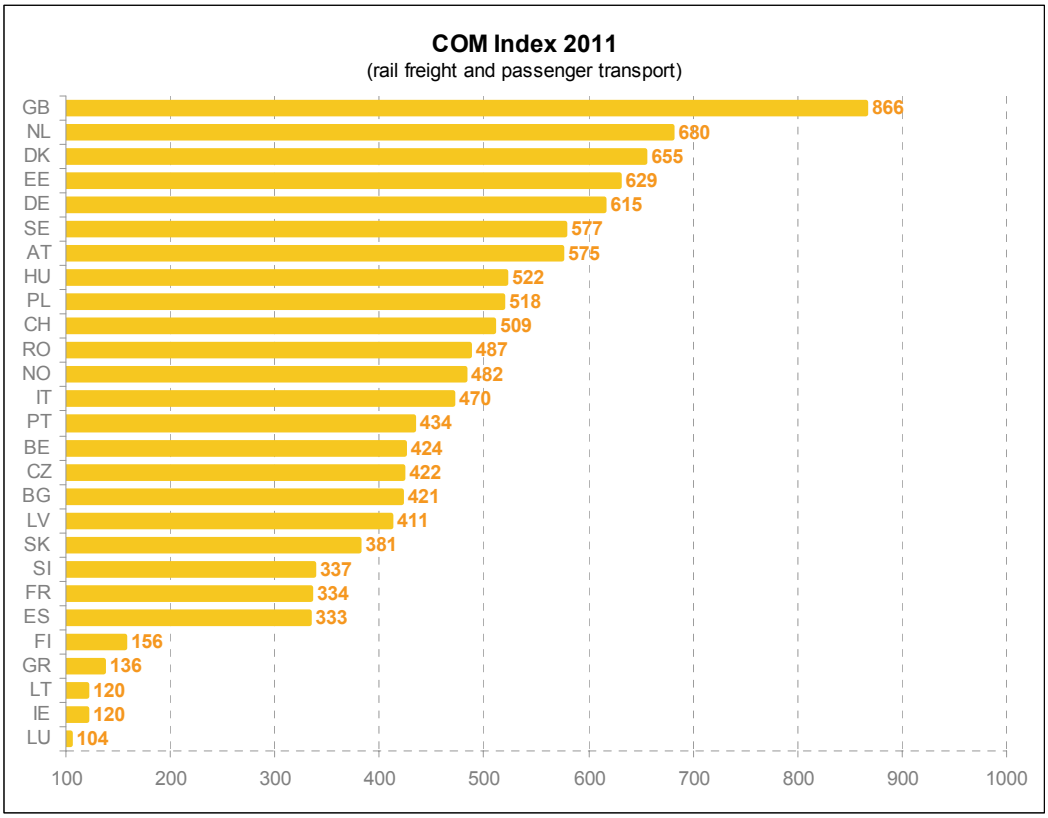


Figure 12

With regard to the development of rail's *modal split* in freight transport from 2001 and 2008, a positive trend can be seen in nine countries. The *modal split* in rail freight has risen in the last few years, for example, in Austria, Great Britain, Belgium, Germany, Denmark, Greece, Finland, Italy and the Netherlands. The highest growth rate in this period was reported in the Netherlands, with an increase of 59 per cent – albeit proceed-

[19] Based on the subject area C.III National market shares of external RUs

ing from a relatively low level[20]. In all other countries rail's share of the total rail freight transport volume has decreased.

Rail's share of the *modal split* in freight transport is highest in Latvia (61.3 per cent), followed by Estonia (44.7 per cent), Lithuania (41.9 per cent) and Switzerland (38.9 per cent). The lowest levels are in Ireland (less than one percent), Luxembourg (2.5 per cent), Greece (2.7 per cent), Spain (4.1 per cent) and the Netherlands (5.4 per cent). Middle-ranking countries include Slovenia (17.8 per cent), Bulgaria (19 per cent) and Romania (20.5 per cent). The European average was 17.9 per cent in 2008.

In passenger transport, rail's share of the *modal split* increased in a total of 16 countries between 2001 and 2008, whereas in the same period examined for the LIB Index 2007, only eight countries reported positive growth. This indicates that rail transport is becoming increasingly attractive in many countries. Rail's share in passenger transport is now no longer over ten per cent in Hungary and Switzerland[21] alone, but also in Austria and France. All other countries have a share of between one and ten per cent.

Overall, it can be seen that the share of rail passenger transport in the total rail freight transport volume was down in all Eastern European countries between 2001 and 2008, whereas increasing in all other European countries – with the exception of Greece.

Finland, Greece, Ireland, Lithuania and Luxembourg are the only countries to date in which external RUs are not active. While Slovenia in 2007 was also included in this group, external RUs have been providing rail freight services there for some years. The largest number of external RUs by far are active in Germany. As a result of the rail reform, there is no longer an *incumbent* in Great Britain; this means that every RU has been classified as external (cf. Chapter 4 regarding the methodological drawbacks of using this as an indicator of competition). This is also the case for rail freight transport in Denmark, Hungary and the Netherlands, where the freight transport division of the *incumbent* was sold.

In almost all countries, external RUs increased their share of the rail freight transport market by more than nine percent between 2006 and 2009[22]. In the LIB Index 2007, this was predominantly to be seen only in the leading countries of the overall index. Apart from the 100 per cent market share resulting from the sale of the incumbent or rail reform in Great Britain, the Netherlands, Denmark and Hungary, external RUs have the largest share of the rail freight market in Sweden (45 per cent), Estonia (30 per cent) and Romania (26 per cent). These high market shares can be seen as evidence for successful liberalisation of the rail freight transport market.

In 13 EU Member States, there are no external RUs active in the rail passenger transport market, while the number of external RUs in the purely commercial passenger transport market is far smaller than in rail passenger services provided under a public service con-

[20] In 2008, the Netherlands saw a *modal split* share of 5.4 per cent in rail freight transport.

[21] Cf. LIB Index 2007

[22] Share of transport services in tonne kilometers.

tract. In rail passenger services provided under a public service contract, external RUs have the largest market share in Great Britain (100 per cent), Poland (77 per cent), Estonia (55.3 per cent) and Sweden (45 per cent)[23]. In Germany, the market share of external RUs increased to 12 per cent in 2009. A market share of over ten per cent is also found in Italy[24] and the Netherlands.

Comparing the COM Index results in terms of market share and the number of active external RUS with the organisational model of the regulatory bodies and that of the infrastructure managers, it can be seen that, in countries that have a special regulatory body with greater powers and more independence, there is more competition than in those countries where the regulatory body is incorporated in a ministry or railway authority.

Comparison of models of regulatory bodies and infrastructure managers in Europe

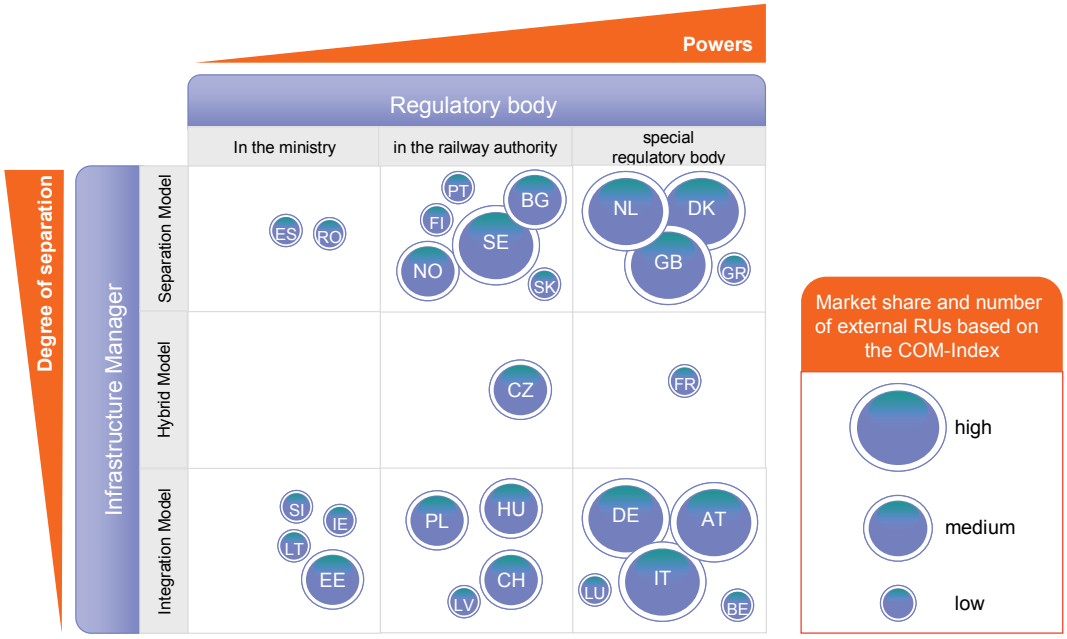


Figure 13

5.3. LIB Index Results - Rail Freight Transport

The rankings in the Liberalisation Index for rail freight transport are calculated by excluding all specific passenger transport questions from the weighting altogether and giving a weighting of 100 per cent to the specific freight transport questions. The weighting given

[23] Share of transport services in passenger kilometers.

[24] Including RUs owned by regional authorities.

to all other determinants that are not specific to a transport mode remains unchanged and is included as for the LIB Index.

If the groups are broken down as in the overall LIB Index, a total of 14 countries are now assigned to the *Advanced* group and 13 countries to the *On Schedule* group. There are now no countries in the *Delayed* group. A statistical analysis of the distribution of points demonstrates that the liberalisation process in the rail freight transport market has made considerable progress. The average score is 803 from a total of 1,000 possible points, with a median of 806.[25] The differences between the European countries are also much less marked than in the case in rail passenger transport. The standard deviation, for example, an indicator of the spread of values, covers just 68 points in the *liberalisation index for rail freight transport*, but covers 117 points in the *liberalisation index for rail passenger transport.* In all the countries examined, legally guaranteed open access is now provided for both domestic and foreign rail freight companies.

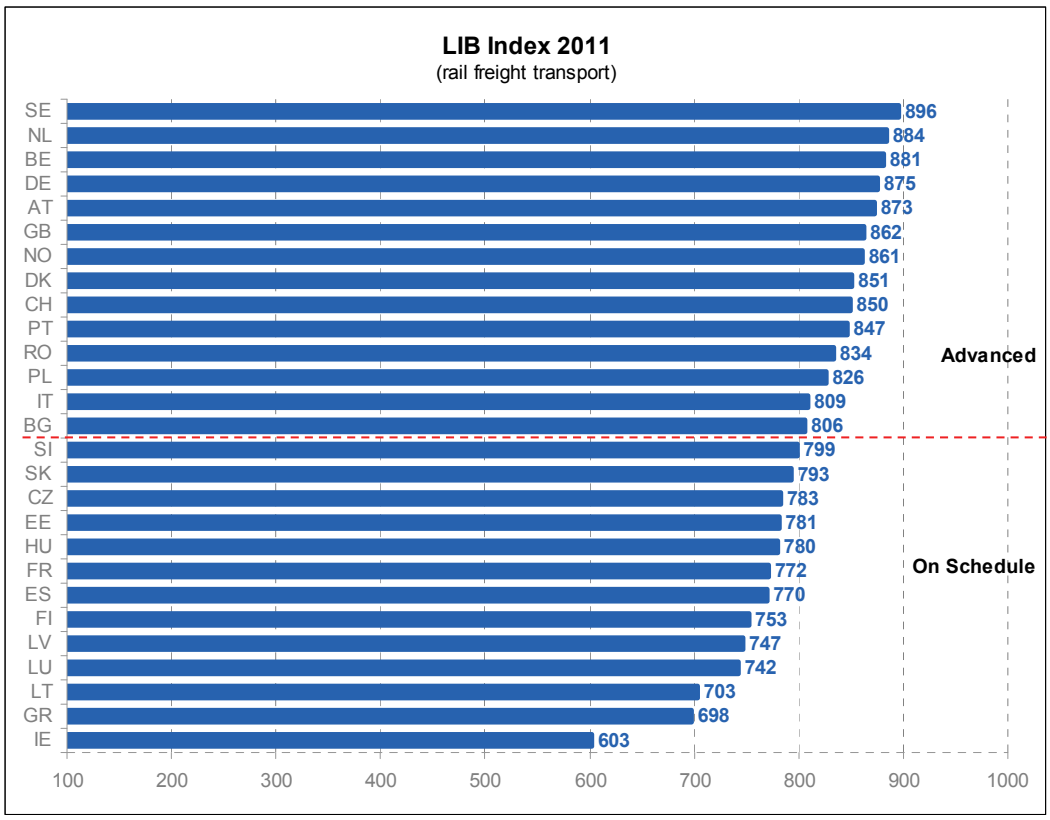


Figure 14

The rail freight transports market in Europe continues to be dominated by companies that operate on an international scale. These are firstly subsidiaries of the *incumbent*, and

[25] This means that 50 per cent of the countries have received 806 points or more from a possible 1,000.

secondly external RUs that are active in more than one country and predominantly serve attractive niche markets (*cherry picking*).

While new, external RUs are able to focus on niche markets and due to their size offer the benefit of flexibility, it is quite a challenge for the *incumbents* to adapt to the changing market situation. Many RUs have been very successful at this in countries in the top group (*Advanced*). While the German *incumbent*, Deutsche Bahn, has continuously expanded its international activities in the last few years (most recently in Great Britain, France and Poland), the freight subsidiary of the *Austrian State Railways* acquired the Hungarian rail freight *incumbent MÁV Cargo* (now *Rail Cargo Hungaria*) in December 2008. Since March 2011, the entire shareholding of the German freight operator *TX Logistik* was acquired by the Italian *incumbent* Trenitalia*, a*fter Trenitalia had already acquired a 51 per cent shareholding in the company in 2005. It is noticeable that it is the RUs in countries in the bottom group (*Delayed*) in particular that are now having to deal with what in some cases are severe profitability problems.

5.4. LIB Index Results – Rail Passenger Transport

The rankings in the Liberalisation Index for rail passenger transport are calculated by giving all the specific freight transport questions the weighting zero. All other weightings that are not related to a specific transport segment remain unchanged and are included with the same weighting as in the general *Rail Liberalisation Index*.

In the rail passenger transport segment, there are only four countries (Sweden, Great Britain, Germany and Denmark) in the *Advanced* group, fourteen countries in the *On Schedule* group and nine countries, in *Delayed* group. This is a significant difference to the results obtained from the LIB Index for rail freight transport, in which no country is included in the third group. This shows that the liberalisation process in the rail passenger transport market has made far less progress than is the case in the rail freight transport market. The average score is 656 points from a total of 1,000 possible points and the median is 668.[26] Although the median and the average in rail passenger services reveals an improvement compared with the LIB Index for 2007, these scores are still significantly lower than in the case of rail freight transport. This is illustrated in the pair comparison between rail freight transport and rail passenger transport on page 70. The standard deviation in the *liberalisation index for rail passenger transport* is 117 points and is significantly higher than in the *liberalisation index for rail freight transport* (difference of 49 points).

These results illustrate that liberalisation in rail passenger transport overall has progressed much more slowly than in rail freight transport. They also show that there are considerable differences in terms of the progress made in liberalisation in the individual countries.

Germany, Sweden, Great Britain and Denmark in both the *liberalisation index for rail passenger transport* as in the *liberalisation index for rail freight transport* have achieved a

[26] This means that 50 per cent of the countries have received 668 or more from a total of 1,000 possible points.

score of *over* 800 points and are thus included in each mode of transport in the *Advanced* group.

In the examination of the legal access regime in rail passenger transport for national RUs, a distinction has been made between rail passenger transport services provided on the basis of a public service contract and those on a purely commercial basis.[27] Access regimes continue to vary quite significantly in Europe as is shown in the following.

The provision of passenger transport services on a purely commercial basis by external RUs– due to exclusive concessions, for example – is not possible in the following countries at the moment: Belgium, Switzerland, France, Finland, Ireland, Spain, the Netherlands, Norway and Portugal.

In Germany, Denmark, Italy, Sweden and Great Britain *open access* exists for national RUs for passenger transport services provided on a purely commercial basis and in these countries external RUs are already active in this market segment.

There are also numerous countries, in which the market for purely commercial rail passenger transport services is also open by law, but at the moment no external RUs are active in this segment. These countries include Bulgaria, Greece, Hungary, Estonia, Latvia, Lithuania, Luxembourg, Poland, Romania, Slovenia and Slovakia. In Austria and in the Czech Republic, which are also included in this category, external RUs have announced that they intend to launch purely commercial rail passenger transport services before the end of 2011.

The analysis of market access regimes shows how important it is, in addition to considering the legal options available for awarding contracts (*law in the books*), to examine the market that is actually accessible in practice (*law in action*). From a legal point of view, competitive tendering is permissible for passenger transport services provided under a public service contract, in practice, however, the direct award of contracts may be more common.

All transport contracts in Sweden, Great Britain, the Netherlands, and now – as a result of a decision by the *Federal Court of Justice* –in Germany are put out to formal tender.

In the following countries the provision of passenger transport services under a public service contract are reserved for the national *incumbents* as a result of existing transport contracts or legal provisions: Belgium, Bulgaria, Spain, Finland, France, Ireland, Luxembourg, Norway and Slovenia.

International rail passenger transport services, in accordance with Directive 2007/58/EC, are open in most countries. However, some countries reserve the right to impose restrictions on cabotage possibilities.

[27] See the glossary on page 209 for definitions of services provided on a purely commercial basis and services provided under a public service contract.

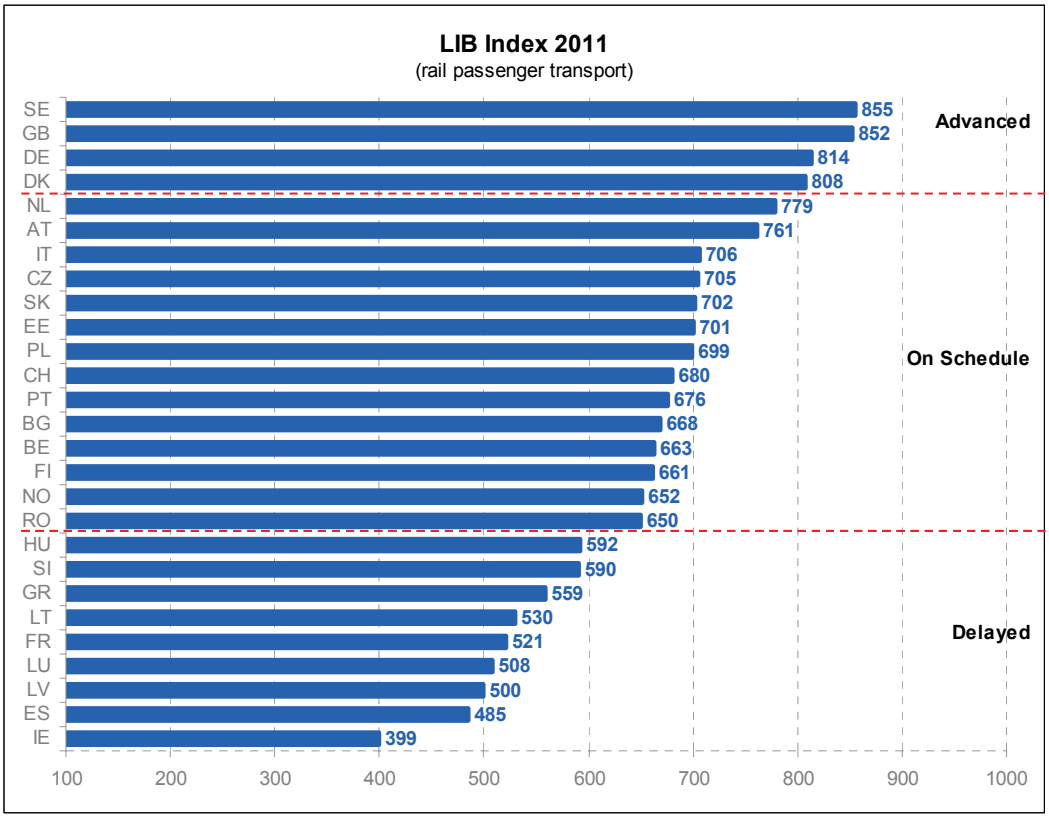


Figure 15

A new aspect in the present LIB Index is the examination of the use of transparency provisions in procurement law in accordance with Regulation (EC) No 1370/2007. Of the 27 countries included in the survey, 15 specific measures designed to make this regulation effective have been implemented to date.

The average infrastructure charge[28] for a specimen train operating rail passenger services varies considerably in the various countries: on long-distance rail passenger services, the lowest charges are reported in Bulgaria, Slovenia, the Czech Republic, Estonia, Spain, Finland, Greece and Norway and vary between one and two euros. The highest charges at over five euros per train path kilometre on long-distance services are levied in France, Great Britain, Latvia and Germany. On local transport services, Great Britain, Italy and Latvia are countries in which over 4.50 euros per train path kilometre are the highest charges levied for using the rail infrastructure.

In most of the countries examined, external RUs are permitted to rent space in passenger stations for their own ticket sales offices. This is not the case, however, in Spain and Italy. As the provision of rail passenger services on a purely commercial basis is still in its in-

[28] Details of the composition of a standard train are given in Chapter The ACCESS Index4.4.2 on page 43.

fancy, there are currently – with the exception of Italy – virtually no empirical values available.

This also applies to the access to sales facilities in rail passenger transport, such as the use of existing sales channels, RU-independent sales platforms or the sales channels of transport associations or orderers. The Czech Republic, Portugal, Denmark and Great Britain are the only countries at the moment in which all sales facilities in rail passenger transport are available to external RUs as a matter of course with no restrictions.

A direct comparison of the LIB Indices for rail freight and rail passenger transport shows quite clearly that all the countries examined have seen much greater progress in rail freight transport than in rail passenger transport. Only the six leading countries in the *Advanced* group show approximately the same high level in both rail passenger and rail freight transport. This means that the top countries in the LIB Index for rail passenger transport are also the best countries in the LIB Index overall.

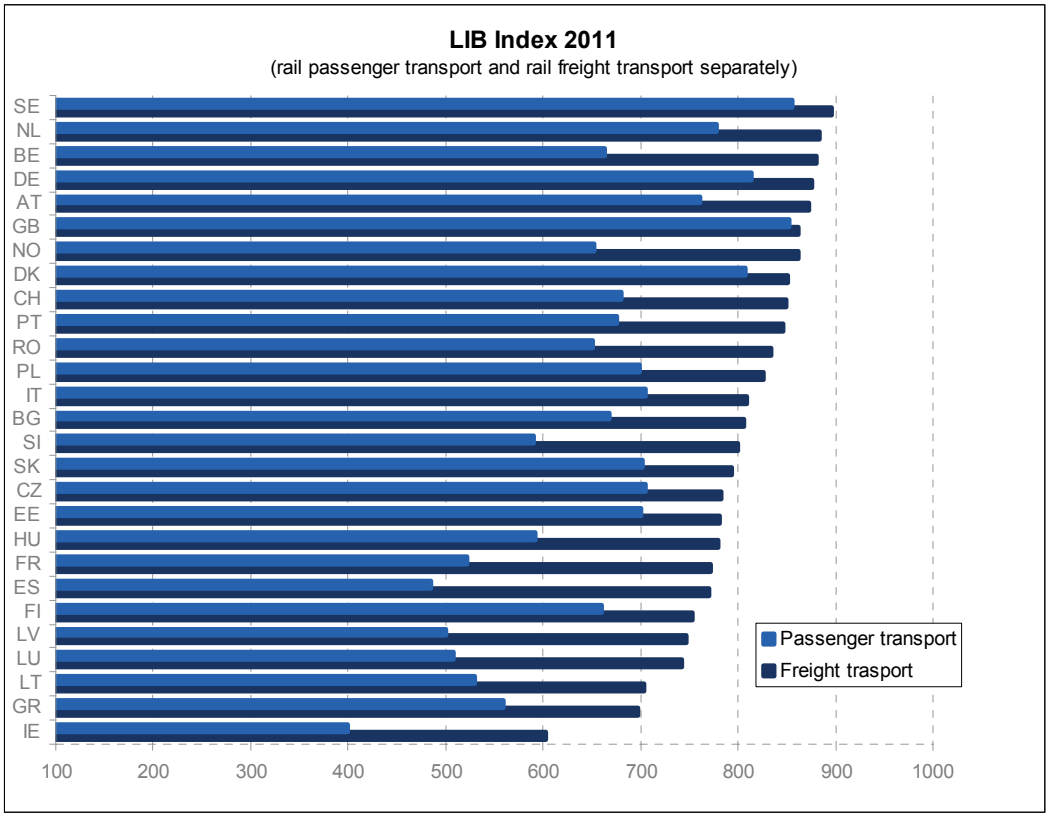


Figure 16

6. Country Reports

6.1. AT – Austria

In contrast to 2007, Austria now belongs to the Advanced group. With 806 points, the country is in the first group.

LEX Index

Organisational structures of the incumbent

ÖBB Holding AG is organised as follows: *ÖBB-Personenverkehr AG, Rail Cargo Austria AG* and *ÖBB-Infrastruktur AG*. The infrastructure and operational divisions come together under the umbrella of a holding, with organisational, accounting, legal and functional separation between the two divisions. Separate balance sheets are drawn up for the rail freight and passenger operators.

Regulation of market access

There is open access to both rail freight transport and purely commercial passenger transport for foreign RUs with regard to cross-border services, including providing cabotage services. However, access to cross-border services and national segments of cross-border routes pursuant to Directive 2007/58/EC may be restricted where this would compromise the economic equilibrium of transports provided under a public service contract. This is stipulated by law in Section 56 et seq. of the Austrian Railways Act

Domestic RUs have open access to rail freight transport and purely commercial passenger transport. Hitherto, public service contracts for passenger transport have been awarded directly without negotiations for transport services that have to be provided in the framework of the Austrian law on the organisation of local and regional public passenger transport and which cannot be operated on commercial lines. A new agreement between the infrastructure manager *Schieneninfrastruktur Dienstleistungsgesellschaft mbH* and *ÖBB Personenverkehr AG* regarding public service contracts will contain an opening clause for formal tendering of services in the public transport network.

According to the regulatory authority, the *Schienen-Control GmbH* (SCG), Regulation 1370/2007/EC has been fully transposed. Non-discriminatory access to other service facilities is documented in Austria for all licensed RUs.

Powers of the regulatory authority

The regulatory tasks are performed by two regulatory authorities, *Schienen-Control GmbH* (SCG*)* and the *Schienen-Control Kommission* (*SCK*).

SCG is also the management body for SCK, and its tasks[29] include monitoring the market and exchanging information with foreign regulatory authorities. SCG has also been set up

[29] A detailed overview of the tasks and powers of SCG and SCK is provided in the LIB Index 2007.

as the public arbitration board for passenger rights and final customer complaints. The website of the regulatory authority SCG regularly publishes annual reports providing an overview of its activities.

The SCK is an appeal body (with judges) pursuant to Article 133 line 4 of the *Federal Constitutional Law* and attached to the SCG. Its tasks include supervision of competition in connection with access to rail infrastructure and other services, appeal decisions and taking decisions regarding complaints about train path allocations and RUs.

In the case of complaints, the SCG has to initiate investigations and can also take action ex officio. Objections to decisions by the regulatory authority have no suspensive effect. Responsibility for taking decisions and functional powers are held by the same body at the SCG. The powers of the regulatory authority SCG and SCK are restricted insofar as they cannot order coercive measures or impose fines. The powers of the regulatory authorities in Austria merely include taking ex post decisions. According to the interviewed RUs, legal appeal proceedings take between three and six months.

The regulatory authorities SCG and SCK are independent, railway-specific authorities. In recent years, 119 investigations were initiated, with decisions taken in only four cases. According to the SCG, most proceedings were resolved in amicable agreement between the parties affected by the complaint, without needing a formal decision by the regulatory authority.

ACCESS index

Information barriers

It is easy to identify personal contacts for obtaining information about market access and a licence in Austria. All the relevant information and documents regarding the Austrian rail infrastructure are published on the Internet by the competent institutions. The corresponding documents are available in German and English. The network statement for 2011 is also published in a bilingual version on the website of the infrastructure manager *ÖBB-Infrastruktur AG*.

Administrative barriers

By law, applications for operating licences must be processed by the Austrian *Federal Ministry of Transport, Innovation and Technology (BMVIT)* within three months. Experience indicates that this period is met. The operating licences are valid for both rail freight and passenger transport, with the indication that the validity of special licences for transporting special goods depends on the application and on the transport licence. Operating licences are valid for an indefinite period of time and have to be reviewed every five years. They become invalid after six months if no review takes place. The licences for rail freight and passenger transport services are valid throughout the entire infrastructure. The fee for issuing an operating licence in Austria amounts to EUR 490, which is a small amount on a European comparison.

The licensing process in Austria is transparent and described in the Railway Act. The insurance coverage required by law currently amounts to EUR 10 million. Operating li-

cences issued in the European Economic Area or in Switzerland are recognised in Austria.

Safety certificates are also issued by the *BMVIT*. They are valid for five years. The legal period for dealing with applications is three months, but according to the interviewed RUs, this deadline is not always met. As with the operating licences, safety certificates are valid for the whole network. However, a greater degree of detail is stipulated in respect of requirements. According to the *SCG*, the six-month period pursuant to Section 73 (1) of the *General Administrative Procedures Act* (*AVG*) is not met for issuing Part B of the safety certificate. The fee for issuing the safety certificate amounts to EUR 10,000.

The BMVIT also deals with the homologation of rolling stock. The legal processing period is 180 days, but in most cases a decision is made already after 60 days. Here again, the information and documents to be submitted are very detailed. Experience indicates that the total costs without measuring procedures and survey ranges from EUR 50,000 to EUR 150,000. The homologation of rolling stock from other EU Member States and from Switzerland is recognised in Austria. The awarding process is described in the Railway Act.

Operating barriers

Train path allocation is non-discriminatory in Austria; the corresponding procedure is carried out by the infrastructure managers *ÖBB -Infrastruktur* and *Schieneninfrastruktur-Dienstleistungsgesellschaft SCHIG*. The infrastructure manager *ÖBB-Infrastruktur* is the allocation body for the railway infrastructure of ÖBB and Raaberbahn. The service company *SCHIG* is responsible for train path allocation for the remaining railway infrastructure operators in Austria in addition to ÖBB.

The lead time for ordering standard train paths is eight months, applications for ad hoc train paths can also be submitted at any time.

The contractual relationships between RU and infrastructure manager are stipulated in standard agreements. Framework agreements can be concluded. The train path allocation process is clearly explained in the network statement. This also applies to the mechanisms for resolving conflicts. Path-specific information which is relevant for the application is provided in full on request. According to the infrastructure manager and SCHIG, Austria does not make any use of the possibilities for restricting cabotage pursuant to Directive 2007/57/EC.

The infrastructure charging system is explained uniformly in the form of a product catalogue on the website of *ÖBB-Infrastruktur AG*. It has a linear structure and does not grant any discounts for large volumes or early bookings.

The average charge per train path kilometre for a standard train[30] is

- EUR 2.39 for rail freight transport
- EUR 3.20 for long-distance passenger transport and
- EUR 3.15 for regional passenger transport

[30] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

This is average on a European comparison.

If up to 25 per cent of the train paths are cancelled from an annual order, 50 per cent of the train path charge is levied as cancellation fee from the affected RU, otherwise the RU is invoiced with 100 per cent of the train path charge. However, according to an interviewed RU, these cancellation fees only apply to regular-interval passenger services under a public service contract.

In Austria, no reservation charges are levied when ordering train paths, nor do the charges differ for standard and ad hoc train path orders. It is currently not possible to reduce the infrastructure charges in case of faulty performance. Since the last timetable change as of 12 December 2010, Austria has introduced a performance regime as incentive system to improve quality, which is published in the current network statement.

Non-discriminatory access to other service facilities and services is warranted in Austria by both the infrastructure operator and other service providers; according to the interviewed RUs, this functions perfectly. Access to maintenance facilities is ensured at usual market conditions by the infrastructure manager and also by other companies such as *Logistik Services GmbH* (*LogServ*). The new RU *WestBahn* is currently setting up its own maintenance facility in Linz in cooperation with *Voestalpine*.

The average station charge amounts to

- EUR 4.65 for stopping at the central station of a city and
- between EUR 1.53 and EUR 2.40 for stopping at the central station of a small town.

Austria has a uniform, binding traction current charging system which includes remuneration for recovered energy. The transmission of electricity from alternative providers is also possible. Access to ancillary services, such as the telecommunications network and the provision of additional information, is warranted by the infrastructure manager. In terms of access to the control centres, Austria offers either local workplaces or access through the Internet.

Austria has a market for purchasing or leasing used rolling stock, but the range of available traction units is very restricted. The interviewed RUs rate the possibilities for training and recruitment as positive. In this context, it helps that Austria recognises the European train driver's licence.

RUs are permitted to lease appropriate sites in the Austrian passenger stations to sell tickets. In addition, RU-independent sales platforms and sales channels of the transport associations can also be used.

Accessible market

In Austria, up to now transport agreements were awarded directly without negotiations to both ÖBB and also to some external RUs. On 3 February 2011, the *Schieneninfrastruktur Dienstleistungsgesellschaft mbH* (SCHIG) as representative of the Republic of Austria concluded a public services contract on behalf of the BMVIT with *ÖBB-Personenverkehr AG* for passenger transport services on defined lines that cannot be operated on a purely commercial basis. This agreement also has an opening clause so that in future, services in the public transport network can be put up for tender, something which according to the

SCG is supposed to take place in the next few years. However, no concrete dates are available yet.

There is open access to purely commercial rail freight and passenger transport. While several external RUs have been offering rail freight services in Austria for years, competition is currently just becoming established in purely commercial passenger transport. As from December 2011, the external RU *WESTbahn*, founded in November 2008 as a subsidiary of *Rail Holding AG*, will be providing purely commercial services on the Vienna-Salzburg route in competition to the incumbent *ÖBB*. A framework agreement was concluded with the infrastructure manager ÖBB-Infrastruktur on 30 June 2009 regarding the allocation of infrastructure capacities for the period 2011 to 2016, thus ensuring that the project can be implemented in timetable-related terms.

At the moment, *WESTbahn* criticises the reputedly inappropriately high payment made by the state to the incumbent *ÖBB* for the provision of transport services under a public contract, which is said to distort competition and put external RUs at a disadvantage. As the long-distance route from Vienna to Salzburg can be operated at a profit, it was taken out of the services package under a public contract. *WESTbahn* argues that the payments from the state should then also be reduced accordingly; as this is not the case, this aspect is seen as an intolerable subsidy for *ÖBB*.

COM Index

At the moment, altogether about 18 external RUs are active in Austria on the ÖBB network.

In rail freight transport, the market share of external RUs in terms of traffic performance in tonne-kilometres has grown between 2006 and 2009 from 12 per cent to altogether 17 per cent. In rail passenger transport, the market share of external RUs in terms of traffic performance in passenger-kilometres is currently still about 10 per cent. However, up to now there has been practically no competition between the railways operating for the most part on their own infrastructure, and the rail passenger operators of ÖBB. Besides ÖBB, purely commercial rail passenger transport in Austria is currently only provided by the RU *City Air Terminal Betriebsgesellschaft m.b.H. (CAT)* founded at the end of February 2002. *CAT* is a Joint Venture of Vienna Airport and ÖBB. As described above, *WESTbahn* is planning its market entry for the current year.

The modal split of rail in freight transport amounted to 29.6 per cent in 2001 and has increased meanwhile to 37.4 per cent. Apart from the Baltic States, this is a top value on a European comparison. The modal split of rail in passenger transport has also increased, from 9.7 per cent in 2001 to 11.1 per cent in 2008.

Conclusion

In recent years, Austria has taken important steps towards opening the railway market. Open access applies to the provision of purely commercial national and international rail transport services, and access to specialist personnel and used rolling stock is easier than in 2007. With altogether 803 points, Austria has moved up into the first Advanced group. External RUs find favourable access prerequisites in Austria, the processes and decisions are transparent and comprehensible, both in applying for licences and safety certificates, and in train path allocation procedures. However, passenger transport services under a public contract are still awarded directly without negotiation, which hinders competition in this segment. Moreover, certain interviewed external RUs fear preferential treatment for the incumbent *ÖBB* in direct awards for passenger transport services or in the amount of payments received for passenger services under a public contract.

One indication that competition is taking off in purely commercial rail passenger transport regards the start-up of the RU *WESTbahn* in December 2011 in competition to the rail passenger services provided by the incumbent *ÖBB* and *CAT*, which will be offering purely commercial rail passenger transport on the route between Vienna Airport and the city centre. In rail freight transport, external RUs have continued to expand their market share in recent years. The rail modal split of rail has also increased considerably in recent years.

Sources

Interviews with representatives of the following institutions or companies:

- Federal Ministry of Transport, Innovation and Technology
- ÖBB-Holding AG
- Schienen-Control GmbH
- Schieneninfrastruktur-Dienstleistungsgesellschaft mbH

A total of five external RUs were contacted.

Documents or websites:

- Website of Österreichische Bundesbahnen: www.oebb.at
- Website of Schienen-Control GmbH: www.scg.gv.at
- Annual reports of Schienen-Control GmbH
- Network Statement 2011
- Report from the Commission to the Council and the European Parliament on monitoring development of the rail market
- SCG Annual Report 2009
- SNCF joins WESTbahn: www.wienerzeitung.at
- Salzburger Nachrichten 20.10.2010: New WESTbahn sues the Republic

6.2. BE – Belgium

In 2007, Belgium was allocated to the group On Schedule. In 2011, Belgium still belongs to this group and even leads it.

LEX Index

Organisational structures of the incumbent

The infrastructure and operations divisions of the incumbent *Societe Nationale des Chemins de fer Belges S.A. (SNCB)* are separated from each other in organisational, accounting and legal terms. However, the infrastructure manager *Infrabel S.A.* and the railway undertaking SNCB are both joined under the umbrella of the SNCB Holding[31].

On 1 February 2011, a new company was founded, *SNCB Logistics S.A.,* to handle all rail freight activities. This means that the freight and passenger operations are now separated in organisational, legal, accounting and balance-sheet terms.

Regulation of market access

There is open access in rail freight transport for international groupings and for intermodal transport pursuant to Directive 91/440/EEC. Domestic RUs also have open access to rail freight transport.

Open access also applies to cross-border passenger services. However, it is possible to restrict this access pursuant to Directive 2007/58/EC. This was transposed into national law on 19 May 2009 by the royal decree amending the law dated 4 December 2006 on using the railway infrastructure.

Up to now, both purely commercial passenger services and those under a public service contract are not liberalised and therefore closed to external RUs. The incumbent SNCB has a monopoly and is awarded all transport contracts directly without negotiation.

Powers of the regulatory authority

The regulation tasks are performed by the regulatory authority *Dienst Regulering van het Spoorwegvervoer en van de Exploitatie van de Luchthaven Brussel-Nationaal*.[32] Its powers are described in Article 62 of the law dated 4 December 2006. Decisions and annual reports are published on the authority's website, providing an overview of its activities. Its regulatory tasks include examination and approval of the network statement, investigation of infrastructure allocation procedures and charges, as well as monitoring competition. The regulatory authority is obliged to initiate investigations in response to complaints and can also take action ex officio.

[31] respectively Nationale Maatschappij der Belgische Spoorwegen (NMBS)

[32] Service de Régulation du Transport ferroviaire et de l'Exploitation de l'Aéroport de Bruxelles-National

An objection has no suspensive effect unless lodged against a decision of the control body to levy a fine. However, the Supreme Court can decide ex officio or in response to a duly justified application from the parties to suspend the contested decision.[33]

While the independent regulatory authority in existence since December 2006 comes under the Ministry of Transport (*Service public fédéral Mobilité et Transports*) in organisational terms, there is no hierarchic line of authority. A more autonomous statute is being strived for in the near future. The authority has the possibility of ordering coercive measures and imposing fines of up to EUR 100,000 per day (up to maximum EUR 2 million or maximum 3 per cent of the annual revenues of the affected company or institution). It can also take ex-ante and ex-post decisions. According to information from the Ministry of Transport, legal appeal proceedings take about two months.

In recent years, the regulatory authority conducted four investigation procedures. In one case, a decision was taken regarding violation of a regulatory right. The regulatory authority DRS works on a cross-sector basis: as well as Belgian's railway sector, it is also responsible for regulating operations at Brussels National Airport. It currently has nine employees, two of whom deal solely with regulatory issues on the railway sector.

The EU Commission doubts the actual independence of Belgian's railway authorities from the incumbent SNCB. Apparently, employees of both authority for railway safety, the *Service de Sécurité et d'Interopérabilité des Chemins de Fer* (SSICF) and the accident investigation body are said to have the possibility of returning to the incumbent SNCB at any time. In the framework of the current EU infringement proceedings, the EU Commission sees this aspect as non-fulfilment of the neutrality requirements pursuant to Directive 2004/59/EC.

In February 2011, *Crossrail Benelux* submitted a complaint to the European Commission. The complaint criticises the fact that *SNCB Logistics* is not completely independent of the *SNCB Holding.* According to *Crossrail Benelux,* the incumbent still has extensive advantages over external RUs so that fair competition is not warranted. The holding is said to provide *SNCB Logistics* with rolling stock and office facilities free of charge. While still employed by the holding, employees who are apparently transferred to the subsidiaries could be moved back to other divisions of SNCB in the event of economic bottlenecks, which would lead to considerable cost advantages. Independent external RUs would not have these advantages.

ACCESS index

Information barriers

As a rule, it does not take long to identify personal contacts for obtaining information about market access and licence; this is said to be uncomplicated by the interviewed RUs. All the relevant information and documents relating to access to Belgian rail infrastructure is published on the Internet by the competent institutions. The documents are available in English, French, Dutch and in some cases also German. The network statement is published on the website of the infrastructure manager *Infrabel*.

[33] cf. Article 66/2 of the law dated 4 December 2006 on the use of the railway infrastructure.

Administrative barriers

Applications for operating licences are issued by the Ministry of Transport within the legal period of three months. The issued licenses are valid for both rail freight and passenger transport. They are valid throughout the entire infrastructure. Operating licences from other EU Member States are recognised in Belgium. They are valid for an indefinite period of time, but have to be re-examined every five years. The coverage of the insurance required by law amounts to EUR 50 million in freight transport and EUR 70 million in passenger transport. The fee for issue of a licence amounts to about EUR 500.

Safety certificates are issued by the *Service de Sécurité et d'Interopérabilité des Chemins de Fer* (SSICF). These are issued within the legal period of three months. They apply to both freight and passenger transport, but only on the specifically ordered train paths. The period for issuing Part B of safety certificates is met. Safety certificates are valid for a period of three years. Safety certificates become invalid after one year in Belgium. According to the Ministry of Transport, the fee for issuing the safety certificate amounts to EUR 5000 for Part A and between EUR 2000 and EUR 20,000 for Part B, depending on the transport service and sector (an RU wanting to operate both rail freight and passenger services has to pay double). This makes Belgium the country in the European Union with the highest costs for issuing a safety certificate.

Applications for homologation of rolling stock are processed by the SSICF in cooperation with the only designated body in Belgium, *Belgorail S.A.*. Initially the technical inspections are conducted by *Belgorail* and summarised in an evaluation report. Homologation is then issued by the SSCIF. The legal period for homologation of rolling stock in Belgium can take up to 120 days. The degree of detail in respect of the requirements is rated as medium. According to the Ministry of Transport, the total costs for homologation of rolling stock amount to maximum EUR 12,000 (not including tests and evaluation by *Belgorail*). Safety certificates from other EU countries are only accepted in cases of mutual recognition. The Belgian SSICF actively promotes mutual recognition, but at the moment a corresponding agreement only exists with France. Agreements with Germany and Luxembourg are to be signed officially by mid 2011. According to the Ministry of Transport, Belgium has a transparent process for the homologation of rolling stock. Belgium does not demand a declaration of intended line use, but the infrastructure manager *Infrabel* is involved in the evaluation phase.

Operating barriers

Train path allocation is carried out by the infrastructure manager *Infrabel*. For rail freight transport, the contractual relationships between RU and infrastructure manager are regulated in the form of a standard agreement. By contrast, individual agreements are concluded on the passenger transport segment. Framework agreements can also be concluded. The lead time for ordering standard train paths is eight months, applications for ad hoc train paths can be submitted at any time. According to the Ministry of Transport, the network statement provides clear explanations of the transparency and uniformity of train path allocation. This also applies to the mechanisms for resolving conflicts. Path-specific information which is relevant for the application is provided in full. Restriction of access for cabotage pursuant to Directive 2007/58/EC is possible in Belgium.

The infrastructure charging system in Belgium is uniformly explained in the network statement. It has a linear structure and does not grant any discounts for large volumes or early booking discounts.

The average charge per train path kilometre for a standard train[34] is

- EUR 2.21 for rail freight transport
- EUR 4.50 for long-distance passenger transport,
- EUR 3.00 for regional passenger transport, and
- EUR 10.28 on the high-speed line.

This is average in a European comparison.

Train path cancellations result in the following costs for the RU:

- cancellations more than two months before departure: 0 per cent of the infrastructure charges
- between two months and one month before departure: 15 per cent of the infrastructure charges
- between one month and three days before departure: 30 per cent of the infrastructure charges
- one day before departure: 100 per cent of the infrastructure charges

In Belgium, reservation charges are levied for ordering train paths, amounting for example to EUR 57.34 per standard train path in the 2011 timetable period. The train path charges for standard and ad-hoc train paths are the same and cannot be reduced in case of faulty performance. However, according to the Ministry of Transport a performance regime has been put in place as an incentive system with bonus/penalty regulations.

Non-discriminatory access to other service facilities and services is warranted in Belgium. However, RUs currently criticise the very restricted refuelling possibilities in Belgium. The whole country is said to have only one single fuel station for diesel traction units.

The average station charge amounts to

- EUR 59.49 for stopping at the central station of a city
- EUR 5.95 for stopping at the station of a small town.

Belgium has a standard traction current charging system, but this does not have a consumption-oriented structure. Up to now, RUs have no possibility of buying traction current from any other company than the infrastructure manager. However, from January 2012 traction current will be charged in a new system based on actual consumption according to electricity meters.

In contrast to the LIB Index 2007, the interviewed RUs meanwhile rate the training and recruiting possibilities in Belgium as positive.

[34] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

Accessible market

There is open access to the rail freight transport segment in Belgium. By contrast, up to now passenger transport services under a public service contract have been awarded directly to the incumbent *SNCB*. Belgium has no open access to purely commercial passenger transport.

As a basic principle, RUs are allowed to lease appropriate sites in the passenger stations to enable them to set up their own ticket outlets.

COM Index

6 external RUs are active in rail freight transport (*Crossrail Benelux NV, Railtraxx BVBA, Trainsport AG, Diilen & Le Jeune Cargo NV, Captrain Belgium B.V., CMI Traction)*.

Some external RUs are active in cross-border transport, but mainly in cooperation with SNCB (Thalys International, Eurostar).

Rail freight transport's share of the modal split increased between 2001 and 2008 from 10.4 per cent to altogether 12.8 per cent. On the passenger segment, the rail share of the modal split improved from 6.2 per cent to 7.2 per cent.

The market share of external RUs in terms of traffic performance in tonne-kilometres is about ten per cent in rail freight transport. Altogether this share nearly doubled in the period between 2006 and 2009. As described above, the market share of external RUs in rail passenger services in terms of traffic performance in passenger kilometres is still zero per cent.

Conclusion

Compared to the last issue of the LIB Index in 2007, since 1 February 2011 Belgium has introduced total separation in accounting terms between passenger and freight transport with the incumbent *SNCB.* Nevertheless, an RU is currently decrying discriminatory support of the logistics division by the holding. While the legal prerequisites have been created for open access to the market, nevertheless the Belgian market has still developed at a much slower rate than in other neighbouring European countries. On the one hand, there is still no access to the national rail passenger transport market for external RUs. As a result, no external RU is active on the rail passenger market apart from the incumbent. On the other hand, access to essential facilities is not easy and the charges for issuing safety certificates tend to be on the high side. Even so, the number of active RUs in rail freight transport has doubled compared to the LIB Index 2007. Their market share meanwhile comes to just about ten per cent. In comparison, their market share in 2006 was still only five per cent, indicating that in Belgium too, opening the market has led to greater competition on the rails.

Sources

Interviews with representatives of the following institutions or companies:

- Infrabel S.A. – Direction Accès au Réseau (infrastructure manager)
- Service de Régulation du Transport ferroviaire et de l'Exploitation de l'Aéroport de Bruxelles-National
- Service Public Fédéral Mobilité et Transports
- Service de Sécurité et d'Interopérabilité des Chemins de Fer
- Vossloh AG
- SNCB/NMBS (incumbent)

A total of five external RUs were contacted.

Documents or websites:

- Website of the Service Public Fédéderal Mobilité et Transports: www.mobilit.fgov.be
- Website of Infrabel: www.infrabel.be
- Network Statement 2011
- Press Release Crossrail Benelux files complaint with the European Commission
- Railcargo Information Netherlands: www.railcargo.nl

6.3. BG – Bulgaria

As in 2007, Bulgaria is once again allocated to the second group, *On Schedule*. However, the country has improved from 14th to 11th position.

LEX Index

Organisational structures of the incumbent

Complete vertical separation between the railway infrastructure and actual operations is documented in the Railway Transport Law and was implemented in Bulgaria in 2002. The rail freight and rail passenger divisions are separated in accounting terms: the incumbent *Blagarski Dargavni Geleznizi EAD* (BDZ) combines the subsidiaries *BDZ - Tovarni Prevozi EOOD* and *BDZ - Patnicheski Prevozi EOOD* under a holding structure; these companies are responsible for rail freight respectively passenger operations. The infrastructure is managed separately from the incumbent by the *National Railway Infrastructure Company* NRIC.

Regulation of market access

Foreign RUs have free access to the rail freight market. Open access is also granted for foreign RUs on the passenger segment, although Article 41 of the National Railway Law stipulates that this may be restricted where it would compromise the economic equilibrium of transports provided under a public service contract.

Domestic RUs have open access to the market for rail freight and purely commercial passenger transport. Since 2009, tendering procedures are possible for transport agreements for passenger services under a public service contract, but no use has been made of this hitherto. Bulgaria complies with the transparency requirements of Regulation (EC) No 1370/2007. Free access to other service facilities is anchored in the National Railway Law.

Powers of the regulatory authority

The *Railway Administration Executive Agency* is the regulatory authority which has been in existence since 2007 as an independent institution specifically for the railways and currently has 13 full-time employees. Its remit includes examination of the network statement, investigation of infrastructure allocation procedures and charges, as well as monitoring competition. In contrast to 2007, a transparent description of the tasks and powers of the authority is meanwhile available. According to the regulatory authority, an annual report is supposed to be published on its official website, but could not be found in spite of extensive research by IBM. In recent years, the regulatory authority in Bulgaria has initiated 26 investigation procedures. Altogether four decisions were taken. The regulatory authority is obliged to initiate investigations in response to complaints; it can but does not have to take action ex officio. The authority's decisions are legally binding; legal action against such decisions does not have a suspensive effect. While the authority cannot order coercive measures, it can impose fines up to a sum of EUR 15,000. It is further entitled to make both ex ante and ex post decisions. The non-discriminatory nature of

both the processes and also the results of timetable complication are examined. Legal appeal procedures take about two months.

ACCESS index

Information barriers

According to the interviewed RUs, it is difficult to obtain information about market access and the issuing of operating licences in Bulgaria. It can take several months until all detailed information is available for entering the market. All basic information and documents for access to the infrastructure are published on the websites of the corresponding institutions in both Bulgarian and English. The current network statement is published on the website of the infrastructure manager *NRIC* in Bulgarian and English.

Administrative barriers

The *Railway Administration Executive Agency*, which is also entrusted with the functions of the regulatory authority, is responsible for issuing both operating licences and safety certificates as well as for the homologation of rolling stock.

Pursuant to the statutory regulations, applications for operating licences must be processed within three months. The interviewed RUs indicated that this deadline is met in rail freight transport. No empirical values are available for passenger transport. Operating licenses are valid for both rail freight and passenger transport. They are valid for the whole Bulgarian network; on request, they can also be issued just for sub-networks. The licences are valid for an indefinite period of time and have to be re-examined every five years. The fee for issuing the licences for the whole network in rail freight transport is equivalent to EUR 15,000, and EUR 6250 for sub-networks. In passenger transport, the fee for issuing a licence for the whole network is equivalent to EUR 12,500 and EUR 5000 for a sub-network. Licences issued in other EU countries are recognised in Bulgaria and examined within three months. Article 42 of the railway law standardises the requirements for transparency in the licence issuing process.

Safety certificates are valid for five years. The legal period for dealing with applications is four months, which is met according to the regulatory authority. The degree of detail in respect of the requirements is high. The safety certificates are valid for the whole infrastructure, referring to both freight and passenger transport. Safety aspects arising from the general Part A are examined again in Bulgaria if the certificate was issued in another EU Member State. The issuing fee is the equivalent to EUR 3270. All those interviewed rated the process for issuing the safety certificates as transparent.

The legal period for dealing with applications for the homologation of rolling stock in Bulgaria is 60 days, which is met according to the interviewed RUs. As for issuing safety certificates, here again the degree of detail in respect of the requirements for the homologation of rolling stock is high. The maximum fee for issue of a homologation amounts to the equivalent of EUR 768. Homologation of rolling stock issued in other European countries is recognised in Bulgaria. As part of the homologation of rolling stock, the RU is expected to make a declaration about the intended line utilisation.

Operating barriers

Agreements between the RU and the infrastructure operator *NRIC* are normally concluded in the form of a standard agreement. Framework agreements can also be concluded. The process for train path allocation and the mechanisms for resolving conflicts are published in transparent form in the network statement. The lead time for applications for a regular train path is eight months. Applications for ad hoc train paths can be submitted at any time. Path-specific information which is relevant for the application is provided in full on request.

The infrastructure charging system is explained in the network statement. It is linear in structure but includes a provision for discounts for large volumes. On the other hand, it does not grant discounts for early bookings.

The average charge per train path kilometre for a standard train[35] is

- EUR 3.50 for rail freight transport
- EUR 2.00 for long-distance passenger transport and
- EUR 0.80 for regional passenger transport

which is on average in a European comparison. Reservation charges are also levied in connection with train path applications amounting to the equivalent of EUR 0.25 per train path.

Cancellation fees are not levied for cancelling train paths before departure. The charges for regular and ad-hoc train paths are the same. At the moment, no reduction in infrastructure charges is possible in case of faulty performance by the infrastructure manager, nor is there any performance regime aimed at improving quality.

Non-discriminatory access to other service facilities and services is only partly guaranteed in Bulgaria by the infrastructure manager or other service providers. One interviewed RU complained of difficulties regarding access to stabling sidings and train formation facilities. Access to maintenance facilities is offered by various providers on the market.

The traction current charging system in Bulgaria has a linear structure. There are no remuneration provisions for recovered energy. Nor is the transmission of electricity possible. Used rolling stock can be both purchased and leased.

Recruiting and training in Bulgaria is estimated as easily possible by those interviewed.

According to the regulatory authority, external RUs are permitted to lease appropriate sites in the passenger stations to enable them to set up their own ticket outlets and to use the sales facilities of the *BDZ*. However, hitherto this aspect is purely theoretical because no external RUs have been active up to now on the Bulgarian infrastructure.

Accessible market

External RUs have free access to the market in Bulgaria for both rail freight transport and for purely commercial passenger transport. In 2009, a tender was held for operating national passenger transport under a public service contract, for which only the incumbent

[35] Details of the basis for calculation used for infrastructure charges are included in Chapter 4.4.2 on page 43.

BDZ submitted a bid. A transport agreement with a term of 15 years was concluded with the incumbent in 2010. As there will not be any further tenders in this market segment in the near future, it does not constitute an appropriate area of activity for external RUs. The transparency provisions pursuant to Article 7 of Regulation (EC) No 1370/2007 are not met at present.

COM Index

The rail share of the modal split decreased drastically in recent years in both freight and passenger transport. In rail freight transport, the share declined from 36.7 per cent to just 20.5 per cent between 2001 and 2008. In passenger transport, the share decreased in the same period from 6.5 per cent to 4.1 per cent.

The following external RUs are active in rail freight transport:

- Bulgarian Railway Company (BRC)
- Bulmarket
- Gastrade
- Unitranskom
- DB Schenker Rail Bulgaria
- Express Service LTD

In spite of the open market, on the passenger transport segment there is still no external RU active on the Bulgarian infrastructure in addition to the incumbent. In rail freight transport, the market share of external RUs in terms of traffic performance in tonne-kilometres increased dramatically in the period between 2006 and 2009 from a good 3 per cent to meanwhile just about 29 per cent.

Conclusion

Most legal prerequisites for opening the market have been created in Bulgaria. Success is apparent particularly in rail freight transport where numerous external RUs have become established in recent years despite the shrinking rail share in the freight transport market. The situation is different with regard to passenger transport, where the incumbent *BDZ* still has a monopoly. This is not likely to change in the medium term in view of the recently concluded public service contract for rail passenger services.

Compared to the European average, only very little investment is made in the railway infrastructure, which is in urgent need of refurbishment. There are grounds to doubt whether the significance of the railway will increase in Bulgaria in the near future.

Sources

Interviews with representatives of the following institutions or companies:

- National Railway Infrastructure Company NRIC
- Bulgarian Ministry of Transport
- Railway Administration Executive Agency
- Bulgarian Railway Company
- BDZ (Incumbent)

A total of three external RUs were contacted.

Documents or websites:

- Network statement
- Website of the Bulgarian railway authority www.railbg.com
- Website of the Bulgarian infrastructure manager www.rail-infra.bg
- Website of the Bulgarian Ministry of Transport www.mtc.government.bg

6.4. CH – Switzerland

Switzerland is in the group *On Schedule*, as it was in 2004 and 2007.

LEX Index

Organisational structures of the incumbent

The rail freight and rail passenger transport divisions of both incumbents, *Schweizerische Bundesbahn* (SBB) and *BLS AG,* have separate balance sheets from the other corporate divisions. *BLS AG* consists of *BLS*, *BLS Cargo*, *BLS Netz* and *BLS Bus*. *SBB* is structured as four divisions: passenger transport, freight transport (*SBB Cargo*), infrastructure and real estate. At the beginning of 2011, its international freight transport business was hived off into the subsidiary *SBB Cargo International*[36].

The Swiss Railway Act prescribes organisational and accounting separation, but not legal separation of infrastructure and operations. Whilst infrastructure and operations are only separate in terms of organisation and accounting at *SBB*, the infrastructure of *BLS AG* was completely hived off into *BLS Netz AG* with effect from 1 January 2009. There has also been organisational and legal separation at the national RU and infrastructure manager *Schweizerische Südostbahn (SOB)* since 1 January 2011.

The allocation of train paths in Switzerland is the responsibility of an independent allocation body *Trasse Schweiz AG*. Although it acts independently, it is owned by *SBB*, *BLS*, *SOB* and *Verband öffentlicher Verkehr VöV*, each of which holds equal shares, and is therefore owned by the infrastructure managers. Its principal tasks further include non-discriminatory timetable preparation, the resolution of conflicts of infrastructure use, and optimising infrastructure use and processes. *Trasse Schweiz* also ensures non-discriminatory access. Its remit includes neither infrastructure management nor fixing infrastructure charges, which is the responsibility of the Ministry of Transport, *Bundesamt für Verkehr (BAV).* The organisation is funded from the charges of the infrastructure managers whose infrastructure it allocates. A group of experts is currently investigating how rail infrastructure in Switzerland can be reorganised over the coming years. Its findings, together with proposals for implementation, are to be presented by 2012.

Regulation of market access

European rail freight operators have open access in Switzerland. Passenger transport is restricted for foreign RUs, as it was in 2007: only transit and charter traffic, pursuant to Directive 91/440/EEC, is possible. The legal regulations concerning this restriction are documented in the law on the carriage of passengers and the regulation on infrastructure access. According to information supplied by *BAV* (as at 30 January 2009), liberalisation of the passenger transport market is not currently under discussion.

All regional passenger transport is provided under public service contracts. The degree of financing provided by the canton and the Swiss Confederation for regional passenger transport depends on the canton's financial situation, the size of its population and the

[36] This is a joint subsidiary with *Hupac AG* (stakeholding of 25 per cent).

existing rail infrastructure. As a rule, franchises for regional passenger transport are awarded for a term of ten years[37].

The entire long-distance passenger transport contracts are awarded as franchises, but must be operated on a purely commercial basis. The term of the franchise depends on the investments made by the RU and consequently varies between eight and 20 years[38]. According to *BAV*, one tender procedure was launched as part of a pilot project, but was prematurely discontinued.

The Swiss parliament is currently debating whether to enact a law governing tenders for rail transport (Rail Reform 2.2). This would mean that transport contracts could be formally put out to tender after expiry of the existing franchises. Tender procedures are already common practice in the bus transport market.

Access to additional services is enshrined in the Swiss Railway Act (EBG) and Infrastructure Access Regulation (NZV). Although maintenance facilities belong to the transport sector according to Swiss law, they are offered by numerous private companies (such as Stadler Winterthur AG and other RUs).

Powers of the regulatory authority

Regulation is the responsibility of *Bundesamt für Verkehr* (BAV) and the independent Railway Arbitration Committee *Schiedskommission im Eisenbahnverkehr* (SKE). Monitoring infrastructure allocation is based on an agreement between *SKE*, *Trasse Schweiz AG*, *SBB*, *BLS* and *SOB*. *SKE* monitors all standard-gauge networks of these infrastructure managers as well as those of the port railways of Basel-Stadt and Basel-Landschaft. The powers of the regulatory authority are transparent and its decisions are legally binding, according to *BAV*. Procedures in case of legal proceedings and sanctions are clear, but not specified in separate regulations.

SKE has dealt with three proceedings since it was founded. After careful investigation, it declared that it was not the competent authority in one of these cases, as the case referred to a tram network. In the other two cases, the parties reached an agreement within the course of the "briefing phase", so that the complaints were withdrawn. Accordingly, *SKE* has not as yet issued any formal rulings.

The rail regulator is obliged to initiate investigations on request by an RU and is also entitled to do so ex officio. The same body is responsible for decisions and the provision of expertise. The authority can make ex-ante decisions in case of conflicts concerning access to infrastructure and calculation of the charges.

Following the recast of the Railway Act in 1996 and the first rail reform as from 1999, the individual packages of the second rail reform were presented as from 2005. *BAV* defines the principal objective of the second rail reform as follows: "The principal objectives of the second rail reform are to raise the efficiency of public transport and to safeguard an effi-

[37] There are exceptions in respect of the use of double-deck trains, where the franchises are valid for a term of 15 years.

[38] For example, the franchise for the Zurich-Geneva line ("Jurafuss") does not expire until 2019, as this involves tilting trains which had to be purchased specially for this line.

cient rail system by means of a better cost-benefit ratio in the use of public funds.“. The reform breaks down into four packages:

- recast of öV-Erlasse[39] (in force since 1 January 2010),
- second stage of the second rail reform (about to be put to the vote in parliament)
- reorganisation of infrastructure financing
- and pension funds.

ACCESS Index

Information barriers

The identification of contacts and the provision of requested information is rated as very uncomplicated by all parties interviewed. When researching this study, IBM also received all requested information very quickly. Both the non-personal and personal provision of information can be rated as very good. All information is up-to-date and usually available in four languages (German, French, Italian and English). The network statement 2011 can be downloaded in three languages. As in 2007, Switzerland again performs best as regards information barriers.

Administrative barriers

Licences, safety certificates and the homologation of rolling stock are issued by *BAV.* The legally prescribed period for issuing licences in Switzerland is three months and compliance with that period is usual. Licences are valid for a period of ten years and do not have to be reviewed during that time. The verification of licences issued by other EU Member States normally takes one day.

Insurance is compulsory in both freight and passenger transport and, with a minimum insured sum of the equivalent of EUR 77.8 million, is comparatively high. The fees for the issue of a licence vary between EUR 535 and EUR 2000.

Safety certificates are issued within one month. They are valid for both freight and passenger transport and valid for a maximum of two years. Safety certificates issued by other EU Member States do not have to undergo any additional examination. Their issue costs between EUR 2000 and EUR 3330. The process for issuing safety certificates is rated as transparent.

There are no statutory regulations governing the time allowed for the homologation of rolling stock in Switzerland. As a rule, the procedure is completed within one month. The fee for the homologation of electric multi-system locomotives for freight transport and regional diesel multiple units for passenger transport amount to EUR 330 plus a charge levied on the basis of the time required. Homologation certificates issued by other EU Member States are recognised. There is a cross-acceptance agreement with France, Belgium and Luxembourg, and with Germany for local border traffic. An agreement for full

[39] Decrees concerning public transport.

cross-acceptance is currently being negotiated with Austria, the Netherlands, Italy and Germany.

Operating barriers

As in 2007, the infrastructure access conditions did not contain any discriminatory elements. The allocation of infrastructure is uniform and transparent. The lead time for applications for a regular train path is eight months. Catalogues for freight transport train paths on the north-southbound corridors are published eleven months before the new timetable comes into force. Applications can also be submitted for ad hoc train paths. The remaining available infrastructure capacities for freight transport on the north-southbound corridors (Gotthard and Lötschberg-Simplon line) are currently announced routinely every two months. Information about available infrastructure capacities on the remaining rail freight and rail passenger networks is provided on request.

In 2010, the share of train paths which were ordered but not used amounted to 4.8 per cent in the rail freight sector and 0.8 per cent in the rail passenger sector, which is low in a European comparison. The charging system for infrastructure and service facilities is uniform and published in the catalogues of *SBB*, *BLS* and *SOB*. According to the interviewees, the infrastructure charge can be calculated easily on the basis of the factors train weight, length of journey and the additional services used. The average charge per train path kilometre for a standard train[40] in Switzerland is equivalent to

- EUR 4.50 for rail freight transport,
- EUR 4.83 for long-distance passenger transport, and
- EUR 2.40 for regional passenger transport,

Additional charges are levied for the use of certain tunnels and nodes. Almost all additional services are provided by the infrastructure manager concerned. Freight terminals and stabling sidings are provided by the infrastructure managers as well as alternative providers, maintenance facilities on the other hand are available solely from alternative providers. External terminal providers are obliged by law to offer their terminals on a non-discriminatory basis.

In contrast to 2007, when it was only possible to lease used rolling stock, it is now also possible to purchase used rolling stock. A sales brochure can be downloaded from the *SBB* website.

The interviewed institutions made conflicting statements about the options for renting sites in stations for companies to set up their own ticket sales outlets. However, some time ago *BLS* was not permitted to open a ticket office at Berne central station. As *SBB* sells tickets for the entire public transport range at its own ticket office in Berne station, it believed that there was no need for *BLS* to have a ticket office of its own. However, no complaint was filed in that respect.

[40] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

Accessible market

Transport contracts are awarded directly and without negotiation procedures. In 2009, 100% of the contracts for passenger transport were awarded directly. The first franchises for regional passenger transport will expire in 2019, and in 2015 for long-distance passenger transport.

SBB has an exclusive franchise for the provision of long-distance rail passenger transport on purely national routes. Until 2009, *Cisalpino AG* (a joint venture of *SBB* and the Italian incumbent *Trenitalia*) and *Lyria* (a company belonging to the French incumbent *SNCF* with registered office in Paris and in which *SBB* holds a 26-per cent minority share*)* were the only two providers of purely commercial international rail passenger transport in Switzerland. *Cisalpino AG* was disbanded with effect from 13 December 2009. Since then, international transport between Switzerland and Italy has again been handled by the parent companies themselves. Lyria offers international transports between Switzerland and France. Following inauguration of the high-speed *Rhin-Rhône* line, the journey between Basel and Paris by TGV is scheduled to take just three hours as from December 2011.

COM Index

According to analyses conducted by the Swiss Federal Statistical Office (BfS), the modal split for rail freight decreased from 41.5 per cent to 38.9 per cent between 2001 and 2008. The share of rail passenger transport, on the other hand, rose from 13.3 per cent to 16 per cent during that same period. There are currently 21 RUs (exclusive of the incumbent) licensed to operate on the 5035 km long rail network (7 are active in freight transport, 14 in the passenger transport market). It should be noted that all the RUs which are active in the rail passenger market were awarded the franchises directly, without negotiation procedures. External RUs account for a market share of approx. 32 per cent of rail freight transport in Switzerland.

Switzerland is a very attractive market for rail freight transport. On 1 October 2008, *DB Schenker* increased its stake in *BLS Cargo* from 20 to 45 per cent. In 2008, *BLS Cargo* succeeded in increasing its performance by 10 per cent, in terms of tonne-kilometres, despite the economic crisis and closed the year with total earnings of approx. EUR 132 million.

Conclusion

Whereas Switzerland achieves a good overall score in the ACCESS Index, with 756 points, it ranks in one of the bottom places in the LEX Index. This is primarily attributable to the lack of separation between infrastructure and operations, the still restricted powers of the regulatory authorities (amongst other things, no right to impose or order coercive measures or fines) and because of the still highly restricted access to the passenger transport market. On adoption of Rail Reform 2.2, it will be possible to put transport contracts out to tender in future. As the first franchises will not expire until 2015, the rail passenger market in Switzerland can still be regarded as closed until then.

Sources

Interviews with representatives of the following institutions or companies:

- Bundesamt für Verkehr
- Trasse Schweiz AG
- Schweizerische Bundesbahn
- DB Schenker Rail
- BLS Cargo

A total of 2 external RUs were contacted.

Documents or websites:

- Diverse Eurailpress articles: www.eurailpress.de
- One article in Berner Zeitung dated 30.11.2010
- Website of BLS: www.bls.ch
- Website of SBB: www.sbb.ch
- Website Schweizerische Eidgenossenschaft: http://www.admin.ch
- Website of Trasse Schweiz AG: www.trasse.ch/de
- Website of Railways Arbitration Commission: www.ske.admin.ch
- Website of BAV: www.bav.admin.ch
- Website of Verband öffentlicher Verkehr: www.voev.ch
- Network Statement of SBB Infrastruktur 2011

6.5. CZ – Czech Republic

The Czech Republic is allocated to the group On Schedule. It thus belongs in the second group, as was already the case in the LIB Index 2007.

LEX Index

Organisational structures of the incumbent

According to the Act of Parliament No. 77/2002 Coll. dated 5 February 2002, in the Czech Republic the infrastructure manager *Správa železniční dopravní cesty (SZDC)* was separated completely from the incumbent *České dráhy (ČD)* as of 1 January 2003. However, the operation and maintenance of the infrastructure still lies in the hands of the incumbent *ČD* in the framework of an agency agreement. At the end of October 2010, the Czech Minister of Transport Vit Barta told the press that he is considering a merger of the railway undertaking (ČD) with the infrastructure manager (SZDC) in one single structure similar to that of DB AG. His priority in doing so is geared to controlling the railway system from a single source and reducing the number of different organisations within the overall system. On 1 December 2007, the rail freight and passenger sectors were separated from each other in legal, accounting and organisational terms. Since then, the incumbent's rail freight transport services have been provided by the subsidiary ČD Cargo.

Regulation of market access

There is open access for foreign rail freight operators. On the passenger segment, foreign RUs have free access to infrastructure for cross-border services, including cabotage rights. The domestic market is open for both rail freight and also purely commercial passenger services. However, up to now public service contracts for passenger services have been mainly awarded directly without negotiations.

According to the regulatory authority *Drážní úřad*, the transparency requirements pursuant to Regulation (EC) No 1370/2007 are met to the full in the Czech Republic.

External RUs are warranted access to other service facilities, such as traction current and maintenance facilities.

Powers of the regulatory authority

The regulatory tasks are performed by the railway authority *Drážní úřad* , which comes under the Ministry of Transport but is politically independent and also functions as safety authority. The regulatory authority operates only on the railway sector and currently has five employees.

The annual reports of the regulatory authority are published regularly on its website and provide information about its activities: the reports indicate that the authority deals primarily - almost exclusively - with safety issues.

Its remit comprises examination of the network statement, investigation of infrastructure allocation procedures and charges, as well as monitoring competition.

The regulatory authority is obliged to initiate investigations in response to complaints and says that it can take action ex officio. Its powers include just taking ex post decisions.

The regulatory authority has the possibility of ordering coercive measures and imposing fines up to a total amount equivalent to about EUR 12,000. According to information supplied by the interviewed RUs, experience shows that legal appeal proceedings take about three months. An objection to a decision by the *Drážní úřad* has a suspensive effect. Appeals are lodged with the Ministry of Transport.

In the last five years, the regulatory authority conducted five investigation procedures, resulting in two decisions.

In 2004, the EU Commission initiated infringement proceedings against the Czech Republic for inadequate implementation of the first railway package. Criticism includes among others that the powers of the regulatory authority are inadequate, the charges for using the rail infrastructure are not set by the infrastructure manager and no performance regime has been implemented hitherto as an incentive system for enhancing quality.

ACCESS index

Information barriers

According to the interviewed RUs, the identification of personal contacts for obtaining information about market access and a licence takes about three days. All relevant information about access to the Czech infrastructure is published on the internet by the corresponding institutions and is available in Czech and English. The network statement for 2011 is published on the website of the infrastructure manager and is also available in both languages.

Administrative barriers

Applications for operating licences must be processed by the railway authority *Drážní úřad* within the legal period of two months. However, the interviewed RUs indicate that this deadline is rarely met. The issued licenses are valid for both rail freight and passenger transport. They are valid for an indefinite period of time and do not have to be re-examined. The licences for rail freight and passenger transport services are valid for the whole Czech infrastructure. The charges for issuing operating licences amount to the equivalent of EUR 402. Operating licences issued in other EU countries are recognised in the Czech Republic, but only after a lengthy examination period. The interviewed RUs rated the licence issuing process in the Czech Republic as transparent.

Safety certificates are also issued by the *Drážní úřad.* The legal period for issuing safety certificates is two months, and this is met according to the interviewed RUs. The degree of detail in respect of the requirements is rated as average. The safety certificates valid for the whole infrastructure apply to both rail freight and passenger transport. The period for issuing Part B of safety certificates is rarely met according to the interviewed RUs. The period for examining the general Part A of safety certificates from other EU Member States is about two months. In the Czech Republic, the safety certificate is valid for five years. The fee for issuing the safety certificate is the equivalent of EUR 40, which is a

small amount in a European comparison. The process for issuing the certificates is deemed to be transparent in general.

Applications for homologation of rolling stock are also processed by the *Drážní úřad*. The three month period allocated by law for processing applications for the homologation of rolling stock is not met according to the interviewed RUs. The degree of detail in respect of the requirements is rated as medium. The total costs amount to up to EUR 1200. Homologation of rolling stock issued in other EU Member States is recognised in the Czech Republic, with the legal examination period lasting about one month. However, experience gained by the interviewed RUs indicates that this procedure is likely to take up to six months. Some RUs miss the necessary transparency in the corresponding process. The RUs have to submit a declaration of intended line utilisation as additional information for homologation of rolling stock.

Operating barriers

In the Czech Republic, train paths are allocated by the infrastructure manager *Správa železniční dopravní cesty* (SZDC). Normally a standard agreement is concluded between the RU and the infrastructure manager. This is an improvement compared to the LIB Index 2007, where individual agreements were still the rule. It is possible to conclude framework agreements.

The network statement gives a transparent description of the mechanisms for resolving conflicts and the uniformity of train path allocation. However, competitors indicate that the mechanism for resolving conflicts shows preferential treatment to ČD by giving priority to transport services serving the general interest which are primarily operated by ČD.

The lead time for applications for a regular train path is eight months. Applications for ad hoc train paths can also be submitted. Performance-related charges are levied in addition to the train path charges.

The infrastructure charging system has a linear structure and is explained in the network statement.

The average charge per train path kilometre for a standard train[41] is

- EUR 4.30 for rail freight transport
- EUR 1.40 for long-distance passenger transport, and
- EUR 0.90 for regional passenger transport

Different reservation charges are levied depending on when the reservation is made. Reservations made before 10 April of a year amount to the equivalent of 60 cents per rail path for the scheduled timetable; after this date, the equivalent of EUR 1 is to be paid for every train path when making a reservation. In addition, different charges are levied for standard and ad-hoc train paths. The Czech Republic does not have a performance regime at present.

[41] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

Non-discriminatory access to other service facilities and services is warranted in the Czech Republic by the infrastructure operator and other service providers; according to the interviewed RUs, this functions perfectly. For example, access to maintenance facilities is assured by both the incumbent *CD* and also by the alternative provider *Voith*. Access to the operating centres is not warranted in the Czech Republic.

The Czech Republic's traction current charging system includes discounts for large volumes. According to the interviewed RUs, remuneration provisions are available for recovered energy. Traction current can be procured either from the incumbent *České Dráhy* or from the energy utility *ČEZ*.

In contrast to the LIB Index 2007, a domestic market for used rolling stock has emerged in the meanwhile. Traction stock is available for both purchase and leasing, passenger carriages and freight wagons are only available for purchase up to now.

The European train driver's licence is only recognised after examination by the regulatory authority *Drážní úřad*.

According to the regulatory authority, as a basic principle it is possible to lease appropriate sites in passenger stations for setting up own ticket outlets. In addition, the incumbent's sales facilities can also be used.

Accessible market

Up to now in the Czech Republic, public service contracts for rail passenger services have been mainly awarded directly. In addition, the incumbent *CD* has the exclusive right to operate passenger services under a public service contract through to 2013. However, according to the interviewed RUs the transparency provisions pursuant to Article 7 of Regulation (EC) No 1370/2007 are met.

As already in 2007, there is open access to rail freight transport in the Czech Republic. RUs have open access to purely commercial passenger transport.

COM Index

By 2009 there were meanwhile 40 external RUs actively involved in rail freight transport. Six RUs offer passenger transport services in the Czech Republic. As from 2011, the RU RegioJet plans purely commercial high-speed train services on the line Prague (Praha) - Ostrava in competition with the incumbent *CD.* The entrepreneur Leos Novotny recently announced similar plans for December 2012.

The rail share of the modal split decreased drastically in recent years in both freight and passenger transport. In rail freight transport, it decreased from 30.1 per cent to altogether 23.3 per cent in the period between 2001 and 2008. In the same period, the rail share in passenger transport fell from 8.3 per cent to 7.1 per cent.

According to the railway authority *Drážní úřad*, the market share of external RUs in terms of traffic performance in tonne-kilometres for rail freight increased from 11.1 per cent in 2006 to 18 per cent in 2009. In the passenger services sector, the incumbent *České dráhy* accounts for 99 per cent of the market in terms of traffic performance; with regard

to purely commercial passenger services, there were no active competitors through to 2010.

Conclusion

The Czech Republic has fulfilled important framework conditions and requirements for non-discriminatory access on the rails. For example, it now grants open access for foreign RUs in the passenger transport sector. Despite extensive powers, the regulatory authority appears to be weak, due among others to inadequate staffing. In addition, objections to decisions taken by the regulatory authority have a suspensive effect.

The rail share of the modal split has decreased considerably in recent years. Relatively little is invested in the railway infrastructure.

Sources

Interviews with representatives of the following institutions or companies:

- Railway authority *Drážní úřad*
- Infrastructure manager *Správa železniční dopravní cesty*
- *České dráhy* (incumbent)
- Ministry of Transport - Railway Directorate

A total of five external RUs were contacted.

Documents or websites:

- Network Statement 2011
- Website of the railway authority: www.du-praha.cz
- Website of the incumbent: www.cd.cz
- Website of the infrastructure manager: www.szdc.cz
- Website of the Ministry of Transport: www.mdcr.cz
- Eisenbahn Revue 2/2011

6.6. DE – Germany

As in the previous issues of the LIB Index, Germany is in the first group. This is the Advanced group.

LEX Index

Organisational structures of the incumbent

There is organisational, accounting, legal and functional separation between infrastructure and operations in Germany. The incumbent *Deutsche Bahn AG* combines the following subsidiaries under the umbrella of a holding[42]: The transport companies[43] DB Schenker Rail AG (freight transport), DB Regio AG (regional passenger transport), DB Fernverkehr AG (long-distance passenger transport) and the infrastructure companies DB Netz AG (railway infrastructure), DB Energie GmbH (traction current supply) and DB Station&Service AG (passenger stations). There is also comprehensive separation between freight and passenger service operators.

At the moment, EU infringement proceedings are taking place against the Federal Republic of Germany, among others because the European Commission is concerned about the inadequate independence of the infrastructure manager from the incumbent.

Regulation of market access

There is comprehensive open access to both rail freight and passenger transport. Domestic and foreign RUs have open access to rail freight transport markets. Domestic RUs also have open access to the entire rail passenger transport market, including both long-distance and regional services. RUs licensed abroad have open access to cross-border long-distance passenger services, including the possibility of providing cabotage. The access prerequisites are stated in the Section 14 of the General Railway Act (AEG), as amended on 19 May 2009.

Long-distance passenger transport on a purely commercial basis is provided by means of free access to the infrastructure. Regional passenger transport is ordered by the contracting entities; the service agreements are awarded both directly, by negotiations, and through formal tendering procedures. Transport agreements do not entail any exclusivity so that here in principle, open access is also possible. On 8 February 2011, the Federal Supreme Court decided that direct awards of public contracts for passenger transport services will only be permitted under a few special prerequisites so that in future, it can be presumed that there will be formal tendering procedures for practically all passenger transport services under a public contract. Germany has implemented the transparency provisions of Regulation (EC) No 1370/2007.

[42] Only the major subsidiaries have been listed in the interest of clarity.

[43] The transport companies *DB Schenker Rail*, *DB Regio* and *DB Fernverkehr* are organised in *DB Mobility & Logistics AG*, a "sub-holding" of *Deutsche Bahn AG*.

Powers of the regulatory authority

The Federal Network Agency for Electricity, Gas, Telecommunication, Post and Railway (BNetzA) has been responsible for regulation of the railway sector since 2006 and monitors non-discriminatory access to the railway infrastructure. The BNetzA is an independent, cross-sector authority. At present it has a workforce of about 2600 employees, with about 50 in the department for railway regulation.

The website of the regulatory authority regularly publishes the annual reports, providing an indication of its activities. The regulatory remit of the BNetzA includes examining the network statement and initiating investigations of infrastructure allocation procedures and charges. The regulatory authority is obliged to initiate investigations in response to complaints; in addition, it can take action ex officio. Decisions by the BNetzA are immediately effective. An objection has no suspensive effect. Responsibility for taking decisions and functional powers are both held by the regulatory authority in Germany. The BNetzA has the possibility of ordering coercive measures up to EUR 500,000. However, it is not empowered to impose fines. It can take ex-ante and ex-post decisions. In addition, the BNetzA examines both the processes and the results of train timetable scheduling. According to the BNetzA, legal appeal proceedings take between 15 days and 24 months.

Since 2006, the regulatory authority has initiated around 600 investigations and taken about 150 decisions.

ACCESS index

Information barriers

According to the interviewed RUs, the identification of personal contacts for obtaining information about market access and a licence is very quick and uncomplicated. All the relevant information and documents relating to access to German rail infrastructure are published on the Internet by the various institutions. The current version of the corresponding documents is available in German and partly also in English. The network statement for 2011 has been published in both German and English on the website of the infrastructure manager *DB Netz* AG.

Administrative barriers

Issuing licences and safety certificates and the homologation of rolling stock are the responsibility of the Federal Railway Office (*Eisenbahn-Bundesamt* EBA).

The legal period for processing applications for operating licences is three months. According to one RU, this period is frequently delayed by one month. The issued licenses are valid for both rail freight and passenger transport. These are valid for up to 15 years. There is no legal requirement for regular review. Operating licences have unlimited validity in Germany. The fee for issue of an operating licence amounts to EUR 5000. The issuing process is described in transparent and uniform fashion in the General Railway Act on the EBA website. Operating licences issued in another EU Member State or in Switzerland are recognised in Germany.

Safety certificates are valid for a period of five years. The legal period for processing applications is four months, which has always been met hitherto according to the interviewed RUs. As for the operating licences, the safety certificates are valid for the whole infrastructure; on request, safety certificates can also be issued for a sub-network. The degree of detail in respect of requirements for safety certificates tends to be high. According to an interviewed RU, individual process steps are queried in detail, or demands are made for example for precise verification of the number of audits or consultations that have been held. The period for issuing safety certificate Part B is met, safety aspects from the general Part A are not examined. According to the EBA, foreign safety certificates are not examined. If no transport services are provided, the safety certificate becomes invalid after one year. The fees for issuing the safety certificate in Germany are calculated according to the workload involved. Information about the process is available on the EBA website.

The legal period for issuing homologation of rolling stock is 120 days. High demands are made in terms of the degree of detail, which in the past has caused delays in some cases when issuing homologation of rolling stock. The working party "Optimising the homologation of rolling stock" under the auspices of the Federal Ministry of Transport, Building and Urban Affairs adopted the "*Rolling Stock Manual*" on 1 March 2011 to eliminate problems in the homologation process. Manufacturers, operators, supervisory and licensing authorities were involved in the process to resolve uncertainties and obstacles in the existing regulations. This guide for measures to optimise the production and homologation process for rolling stock now makes the homologation process predictable and reliable for everyone involved. Apart from surveys, trials or tests, the overall costs can amount to EUR 120,000. In terms of homologation of rolling stock from other EU Member States, some certificates are recognised. For example, the *Memorandum of Understanding* signed with Austria, the Netherlands, Italy and Switzerland in 2007 is still in force. A declaration from an RU regarding line utilisation is required in Germany.

Operating barriers

According to the interviewed RUs, train path allocation in Germany is a non-discriminatory process. The lead-time for applications for a regular train path is eight months. Applications for ad hoc train paths can be submitted at any time.

The contract relationships between the RUs and the infrastructure manager *DB Netz* take the form of a standard agreement. Framework agreements can be concluded. The transparency and uniformity of train path allocation is clearly explained in the network statement. This also applies to the mechanisms for resolving conflicts. Path-specific information which is relevant for the application is provided in full on request. Germany has no restrictions on providing cabotage in international services.

The infrastructure charging system is published on the website of the infrastructure manager. It has a linear structure and does not grant any discounts for large volumes or early bookings.

The average charge per train path kilometre for a standard train[44] is

[44] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

- EUR 2.46 for rail freight transport
- EUR 5.00 for long-distance passenger transport
- EUR 4.10 for regional passenger transport
- EUR 8.29 on high-speed lines

and is thus average on a European comparison.

The following charges are levied for train path cancellations:

- EUR 0.00 two months before departure
- EUR 25.00 one month before departure
- EUR 50.00 twenty four days before departure.

Together with the cancellation fees that are calculated as a percentage of the infrastructure charge, a workload remuneration for train path formation is also required. This amounts to EUR 80.00. For an infrastructure charge below EUR 80.00, it is due in the amount of the nominal train path charge.

No reservation charges are levied in Germany when ordering train paths; the charges are the same for standard and ad hoc train paths. In addition, infrastructure charges can be reduced in case of faulty performance. A performance regime is anchored in the train path charging system as an incentive system for improving quality with bonus/penalty regulations.

Non-discriminatory access to other service facilities and services is warranted in Germany by the infrastructure manager *DB Netz* and also by alternative providers. However, there are currently complaints from external RUs who feel that they are at a disadvantage in terms of access to stabling sidings and marshalling yards. According to one interviewed RU, access to maintenance facilities is warranted at acceptable market conditions by alternative providers such as vehicle manufacturers or other RUs.

The average station charge amounts to

- EUR 44.07 for stopping at Berlin central station
- between EUR 2.58 and EUR 7.78 for stopping at the central station of a small town.

The station charging system was criticised in December 2009 by the regulatory authority *BNetzA* and subsequently revised by the infrastructure manager. Some of the station charges have therefore been greatly changed since 1 January 2011. For example, the charge for stopping at Berlin central station is now EUR 14.69.

Germany has a uniform, binding traction current charging system that offers remuneration for recovered energy. The traction current charging system includes discounts for large volumes. While the transmission of electricity is possible, up to now no RU has purchased traction current from alternative providers. Access to ancillary services, such as the telecommunications network or the provision of additional information, is warranted by the infrastructure manager *DB Netz* or alternative providers. In terms of access to the control centres, Germany offers either local workplaces or also virtual access possibilities.

As a basic rule, in Germany it is possible to purchase or lease used rolling stock. However, there is at present only a very restricted offer of used passenger coaches at present. There are good possibilities for training and recruiting specialist personnel. The European train driver's licence is recognised in Germany.

External RUs have access to appropriate sites in the passenger stations to operate their own ticket outlets. The sales channels of the incumbent *DB* can be used to a limited extent; in addition, there is access to RU-independent sales platforms and the sales channels of the transport associations.

Accessible market

Hitherto in Germany, public service contracts for rail passenger transport were awarded either directly in the framework of negotiations with several bidders or in formal tendering procedures. On account of the above-mentioned decision by the *Federal Supreme Court*, in future formal tendering procedures will be the rule. The transparency provisions pursuant to Article 7 of Regulation (EC) No 1370/2007 are met.

In 2009, formal tendering procedures were held for 64 per cent of public service contracts for passenger transport services, 18 per cent were awarded directly without negotiation and 18 per cent in the framework of negotiations with several bidders.

COM Index

The high degree of liberalisation in the German rail market is reflected in the number of licensed and active RUs. Of the 353 licensed RUs in Germany, 247 are currently active. Many incumbents of other EU Member States are already active on the German infrastructure in both freight and passenger transport, either directly or with subsidiaries. These include for example Keolis as subsidiary of SNCF, Abellio as subsidiary of the Dutch NS or Vias with participation of the Danish DSB.

In rail freight transport, the market share of external RUs in terms of traffic performance in tonne-kilometres in 2009 amounted to 25 per cent. In passenger transport under a public service contract, this was about 12 per cent in terms of traffic performance in passenger kilometres. Although there has been open access to purely commercial long-distance passenger transport for years in Germany, the market share of external RUs in 2009 was still practically zero. This could change in the next few years with new external RUs entering this market segment. For example, starting from autumn 2011 the company *locomore rail / HKX* plans to offer purely commercial passenger services between Hamburg and Cologne. The market share of external RUs in rail freight transport increased between 2006 and 2009 from 16.4 per cent to altogether 24.6 per cent. In the same period, the share of external RUs in passenger transport increased from 8.9 per cent to altogether 12.1 per cent.

According to Eurostat, the modal split of rail in freight transport increased between 2001 and 2008 from 18.6 per cent to 22.2 per cent. In passenger transport, the share increased from 7.6 per cent to 8.6 per cent in the same period.

Conclusion

As in the previous years, Germany is well placed at the front of the LIB Index. However, it has swapped its second position with Sweden.

It is quite clear that Germany has made further progress with liberalisation compared to the LIB Index 2007. The overall rail market has been open for many years now so that meanwhile more than 350 RUs are licensed in addition to the incumbent *DB*. The *Bundesnetzagentur* has taken about 150 decisions, indicative of independent and active regulation. It transpires that the organisation of the railway market with the infrastructure and operation divisions combined under the umbrella of the *DB* Group is not detrimental to the positive development of the competition conditions in the market.

Following the decision by the *Federal Supreme Court* on 8 February 2011, it can be expected that the prescribed formal tendering practice for passenger transport under a public service contract will result in greater competition on the rails. This will be further enhanced by the attempts of some external RUs to become active on the purely commercial long-distance passenger market.

Sources

Interviews with representatives of the following institutions or companies:

- Federal Ministry of Transport, Building and Urban Affairs
- Bundesnetzagentur
- Deutsche Bahn AG
- Eisenbahn-Bundesamt
- Veolia Verkehr GmbH
- Mofair e.V.

A total of eleven external RUs were contacted.

Documents or websites:

- Website of the Bundesnetzagentur: www.bundesnetzagentur.de
- Website of the Federal Ministry of Transport, Building and Urban Affairs www.bmvbs.de
- Website of the Federal Railway Office: www.eba.bund.de
- Group website of Deutsche Bahn AG www.db.de
- Report from the Commission to the Council and the European Parliament on monitoring development of the rail market
- Network statement of DB Netz AG for 2011

6.7. DK – Denmark

In this year's Index, Denmark has moved up into the first group, *Advanced*; in 2007, Denmark was still allocated to the second group, *On Schedule.*

LEX Index

Organisational structures of the incumbent

There have been no changes in the organisational structures in Denmark since the Liberalisation Index 2007. There is complete vertical separation between the infrastructure manager *Banedanmark* and operations. The incumbent *Danske Statsbaner* (DSB) handles only passenger transport and thus satisfies the requirements of full horizontal separation. In 2001, the freight transport division was sold to the *Deutsche Bahn* subsidiary *Railion* (now *DB Schenker Rail*).

Regulation of market access

Domestic and foreign railway undertakings have open access to the Danish rail freight transport market. In June 2010, Denmark was again ordered to initiate national measures[45] to transpose Directive 2007/58/EC. The Danish parliament is currently debating the transposition of Directive 2007/58/EC into national law. However, the Swedish incumbent *SJ* already offers international rail passenger transport in national sub-networks. Regulation (EC) No 1370/2007, on the other hand, has already been fully transposed. Access to other service facilities (such as traction current and refuelling services) is documented in the *Railway Act* and notifications *No. 168* of 3 March 2009 for freight terminals and *No. 560* of 21 June 2000 in respect of stations.

Powers of the regulatory authority

The new regulatory authority *Jernbanenaevnet* replaced the old regulatory authority *Jernbaneklagenævn* on 1 July 2010. Its remit includes in particular monitoring competition, the allocation of infrastructure and ensuring passenger rights (in contrast to the former authority, which was merely a body affiliated to the Ministry, only convened as necessary and dealt solely with complaints).

The powers are documented in *Railway Act No. 1249* (November 2010) and *Executive Order No. 1127* of 24 September 2010. The regulatory authority is not subject to political influence. Information is available on its website, but only in Danish.

Pursuant to *Railway Act §24 d, Jernbanenaevnet* is authorised to demand all the information it requires for its work from all RUs which are active in Denmark. If an RU fails to comply with such a request, the authority is entitled to order coercive measures in the form of penalties or up to four months' imprisonment (*Railway Act §22* Paragraph 2). It is not, however, entitled to impose fines. Decisions of the regulatory authority are immediately legally valid. Objections have no suspensive effect. To date, there have been no

[45] This refers primarily to transposition into national law.

proceedings and consequently no decisions in that connection. Nor are any empirical values available regarding the legal certainty of ex-ante decisions.

Denmark is one of the countries against which the European Commission initiated infringement proceedings in August 2009 owing to insufficient transposition of Directives 1991/440/EEC and 2001/14/EC. The charges referred to the insufficient influence of the regulatory authority, the disproportionately high infrastructure costs (or alternatively lack of verification of whether the charges are sustainable in the market) and the absence of a performance regime. Denmark reacted to the Commission's charges by establishing *Jernbanenaevnet* and also introduced a performance regime with effect from 1 January 2011[46]. When conducting this study, IBM could not identify any structural changes in the infrastructure charging system compared with the charges stated in 2007.

ACCESS Index

Information barriers

The interviewed RUs state that obtaining both personal and non-personal information in Denmark is uncomplicated. All information is available on the Internet in Danish, and most is also available in English. The network statement is also available in both these languages. The contacts at all relevant institutions speak both Danish and English.

Administrative barriers

The issue of licences, safety certificates and homologation of rolling stock is the responsibility of the railway authority *Trafikstyrelsen*. It normally takes three months for a licence to be issued. Licences are valid for both freight and passenger transport. Licences issued by other EU Member States are recognised after a verification period of four months, which is long in comparison with other countries. Licences in Denmark are valid for an indefinite period of time and have to be reviewed every five years. The fee for issue of a licence amounts to an equivalent of approx. EUR 1,500.

Safety certificates are normally issued within two to three months in Denmark. They are valid for five years throughout the entire rail network. General Part A of safety certificates issued by other EU Member States is recognised without further examination. The fee for issue of a safety licence amounts to an equivalent of approx. EUR 3,700, the total sum varies depending on the work required.

There is no legal regulation governing the maximum period for processing applications for the homologation of rolling stock. The empirical values are between 21 and 42 days. The degree of detail regarding the requirements is rated as high. According to one RU, the total costs amount to a minimum of EUR 30,000.

Operating barriers

According to the interviewed RUs, no operating barriers exist. Access to all services is regarded as non-discriminatory. Train path allocation is standardised and transparent.

[46] Cf. also Network Statement 2011, 6.3 Performance Scheme

The share of ordered but unused train paths in 2009 amounted to ten per cent in the rail freight sector and five per cent in passenger transport. A cancellation fee of 100 per cent of the infrastructure charges is levied for the cancellation of train paths less than seven days before their scheduled use.

The infrastructure charges are published annually by the infrastructure manager. According to various RUs, the calculation process is simple. Additional charges are levied for crossing the Öresund and Storebælt Bridges, during peak times and on special sub-networks. Crossing the Öresund Bridge currently costs between EUR 720 and EUR 820, crossing the Storebælt Bridge between EUR 260 and EUR 310.

Whilst Denmark levies an average infrastructure charge of EUR 5.44 for a standard freight train[47], the use of infrastructure for regional passenger transport is comparatively inexpensive, with an average charge of EUR 0.28 for a standard train. However, as stated above, additional charges are levied for the use of certain elements and lines, which raises the infrastructure charges. The station charges for a stop in a city such as Copenhagen amount to approx. EUR 14, a stop in a small town costs between EUR 3 and EUR 6.

Access to other service facilities is rated as non-discriminatory, as it was in the Liberalisation Index 2007. Most services are provided by the infrastructure manager. Ancillary services, such as access to the telecommunications network or the provision of additional information, are also handled by *Banedanmark*. Technical inspections are available from external providers. Access to operation control centres is possible in Denmark

Whilst the recruitment and training of specialist personnel was still regarded as very difficult in the LIB Index 2007, the situation has meanwhile improved and is now rated as easier. The interviewees named *DSB*, *Arriva*, *DB Schenker Rail* and other external RUs as companies which provide training.

Accessible market

Transport contracts for the passenger market in Denmark are both formally put out to tender and also awarded directly without a negotiation process. In 2009, 22 per cent of the contracts for passenger transport provided under a public service contract were put out to tender and 78 per cent awarded directly.

On 24 February 2010, the European Commission announced EU Decision *C 41/08* in which it demanded the introduction of a new mechanism for the reimbursement of costs in respect of transport contracts between the Danish Ministry and the incumbent *DSB*. In September 2008 the European Commission initiated investigations, as there was reason to suspect that the total state aids and the contractually agreed payments overcompensate for the actual costs sustained by *DSB* in connection with the existing the transport contracts.

There was complete open access to the freight transport market in 2009. The operation of purely commercial passenger transports is also possible in Denmark. On 11 October

[47] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

2010, the Swedish incumbent *SJ* launched purely commercial passenger services on the route between Stockholm - Copenhagen and Odense.

COM Index

The modal split for rail in Denmark improved in freight transport from 8.2 per cent to 8.7 per cent between 2001 and 2008, and in passenger transport from 9 per cent to 9.4 per cent. Compared with other EU Member States, the current figures for both rail freight and passenger transport are still low.

The market share of external RUs in the rail freight market in Denmark is 100 per cent, because an incumbent no longer exists after the sale of *DSB Goods* to *Railion* (now *DB Schenker Rail Scandinavia A/S*).[48] *DB Schenker Rail Scandinavia A/S* has existed since 2007 as a joint venture between the German freight operator *DB Schenker Rail GmbH* and the Swedish company *Green Cargo AB* and now provides the majority of Danish rail freight services.

The rail passenger market is dominated by the incumbent *DSB*. The share of external RUs in the market for passenger transport provided under a public service contract (measured in passenger-kilometres) amounted to 9 per cent in 2008. Apart from the incumbent, various small private railways also offer passenger transport in Denmark, of which *Arriva Tog A/S* is the largest external RU. Its subsidiary *Arriva Skandinavien A/S* operates primarily routes in Central and Western Jutland. Since October 2010, the Swedish incumbent *SJ* has operated purely commercial passenger transport between Copenhagen and Odense.

There has also been a sharp increase in transit traffic in Denmark in recent years. 75 per cent of transit traffic refers to freight transport between Germany and Sweden. The greater part of performance is provided by the Swedish rail freight operator *Hector Rail,* which announced in February 2010 that it had operated more than 1000 trains between Duisburg and Malmö in just one month. There has also been a through connection between Niebüll and Esbjerg since 12 December 2010.

In December 2008, the Danish Ministry published a plan entitled *Sustainable transport – better infrastructure*. This aims to ensure long-term, environment friendly planning processes for the transport sector of the future. One of the core objectives stated by the Ministry is to create more reliable and safer rail infrastructure.

Conclusion

Compared with only an upper midfield position in the LIB Index 2007, Denmark now ranks first in the middle group this year. Its former weaknesses were the low powers of the regulatory authority, which have meanwhile been clearly defined and significantly improved. However, as *Jernbanenaevnet* has existed for less than twelve months, it has not yet acquired significant experience.

[48] It should be noted that this expansion of the market share does not constitute an increase in competition, but is attributable solely to the sale of *DSB Goods* to *Railion*.

There has been virtually no change in Denmark's position in the ACCESS Index. As in the LIB Index 2007, the access conditions are rated as very RU-friendly. The procurement of information, the issue of licences, safety certificates and homologation of rolling stock are all comparatively simple. The country ranks fifth in the ACCESS Index.

Denmark's allocation to the Advanced group is largely due to the improvements in the LEX Index. The share of tenders in the passenger transport sector provided under a public service contracts remains low, as already stated in the previous Index. It remains to be seen to what extent the powers of the regulatory authority, which are now prescribed by law, will affect future competition in the passenger transport market.

Sources

Interviews with representatives of the following institutions or companies:

- Trafikstyrelsen
- Arriva Skandinavien A/S
- DB Schenker Rail DK
- Danish State Railways (Danske Statsbaner)
- Ministry of Transport and Energy

A total of 4 external RUs were contacted.

Documents or websites:

- Network Statement 2011
- Website of incumbent: www.dsb.dk
- Website of infrastructure manager: www.bane.dk
- Website of incumbent: www.bane.dk
- Website of Hector Rail: www.hectorrail.com
- Diverse Eurailpress articles: www.eurailpress.de

6.8. EE – Estonia

As already in the LIB Index 2007, Estonia is in the second group, *On Schedule*. The country has improved by a few points compared to the last study.

LEX Index

Organisational structures of the incumbent

Estonia's incumbent is the RU *Eesti Raudtee*; following the complete privatisation of Estonia's railway operations in 2001, since 2007 the company is once again wholly state-owned[49]. On 14 January 2009, the subsidiaries *AS EVR Infra* (infrastructure) and *AS EVR Cargo* (freight) were founded; since then, they have operated under the holding *AS Eesti Raudtee* (Estonian Railways Ltd.). Infrastructure and operations are separated from each other in organisational, accounting, legal and functional terms. As in 2007, further separation is still in the planning stage. The incumbent performs only rail freight transport services on Estonia's infrastructure.

Besides *AS EVR Infra's* infrastructure, the infrastructure manager *Edelaraudtee Infrastruktuuri* operates a second rail network in Estonia. *Edelaraudtee Infrastruktuuri* is a subsidiary of the external RU *Edelaraudtee AS* which provides a large proportion of long-distance passenger services under a public service contract in Estonia.[50] The infrastructure of *AS EVR Infra* covers about 800 kilometres and that of *Edelaraudtee Infrastruktuuri* about 300 kilometres.

Regulation of market access

There is open access for all RUs in rail freight transport. Furthermore, RUs have open access to cross-border and purely commercial passenger services. This is anchored by law in the Estonian Railways Act. Passenger transport services under a public service contract in Estonia are awarded both in negotiation and in formal tendering procedures. At the moment, the state-owned *Elektriraudtee Ltd*[51] has exclusive rights valid through to 2015 for providing rail passenger transport services on the electrified rail network in Estonia.

Powers of the regulatory authority

Estonia's competition authority (*Konkurentsiamet)* was founded on 1 January 2008 with three divisions: *Competition Division*, *Railways and Communications Regulatory Division* and *Energy and Water Regulatory Division*. The *Railways and Communications Regulatory Division* is the regulatory authority responsible for the railway sector. On publication of the 2007 LIB Index, regulatory powers had still been completely in the hands of the Estonian *Ministry of Economic Affairs and Communication*. In cases of discrimination,

[49] cf. LIB-Index 2007, p. 116

[50] Edelaraudtee AS was hived off the incumbent and sold to a private investor.

[51] The RU operates rail passenger services in the greater Tallinn area. The electrified rail network covers 131.6 kilometres.

according to the Railways Act the petitioner can now contact either the Estonian competition authority or the Ministry.

The powers of the regulatory authority are laid down in transparent form in the Statutes of the Estonian Competition Authority. The approach for procedures and sanctions is stipulated by law in the Estonian Railways Act. The Estonian competition authority examines the network statement, monitors competition and investigates infrastructure allocation procedures. It is also responsible for regulating prices. Annual reports are published on the authority's website.

The regulatory authority is obliged to initiate investigations on application and can take action ex officio. Decisions are legally binding and do not have a suspensive effect. Coercive measures can be ordered and fines imposed. The authority can also take ex-ante and ex-post decisions.

ACCESS index

Information barriers

Obtaining relevant information in Estonia can be rated as simple. All necessary information is provided on the internet in English and partly also in Russian. It is easy to find details of the corresponding personal contacts. Experience shows that the personal contacts also speak English.

Licences are issued by the Estonian competition authority, distinguishing between freight and passenger transport licences. By law it takes one month to issue a licence. Licences issued in other EU Member States are recognised after an examination taking about one month. In Estonia, issued licences are valid for an indefinite period of time and cost the equivalent of EUR 1917 for passenger transport and EUR 3835 for rail freight. The coverage of the insurance required by law currently amounts to the equivalent of EUR 1,197,000.

Administrative barriers

The *Technical Surveillance Authority (Tehnilise Järelvalve amet)* was founded in 2008. The previous authorities *Communications Board*, *Railway Inspectorate* and the *Technical Surveillance Inspectorate* have been merged in the new authority. The *Technical Surveillance Authority* is responsible for issuing safety certificates and homologation of rolling stock.

Safety certificates have to be issued within one month in Estonia. They refer to all of Estonia's infrastructure and are valid for a period of five years for either rail freight or passenger transport. The fee for issue of a safety certificate amounts to the equivalent of EUR 639.

Experience indicates that it takes one to two months to obtain homologation of railway vehicles. No fees are charged for issuing homologation. Estonia recognises homologation of rolling stock issued by other EU Member States insofar as the corresponding country

uses a gauge of 1520 millimetres. In the EU, this refers to the Baltic countries of Latvia and Lithuania together with Finland.

Operating barriers

Experience indicates that access to the Estonian network is essentially non-discriminatory. Network statements for the two infrastructure managers are only available in Estonian[52]. The process for train path allocation and the mechanisms for resolving conflicts are stipulated in the Railways Act.

Train path allocation and stipulation of the infrastructure charges for both infrastructure managers is carried out by the *Technical Surveillance Authority.* According to the authority, the levied charges are based on the actually incurred costs together with a so-called "justified profit share". The levied usage charges must cover the costs of the infrastructure manager to the full. The infrastructure charges are therefore adjusted on a monthly basis by the *Technical Surveillance Authority* referring to forecasts for probable infrastructure usage. An overview of the fixed and variable costs of the two infrastructure managers is published on the authority's website. The average charge per train path kilometre for a standard train[53] in rail freight transport currently amounts to about EUR 7 on *EVR Infra*'s network, compared to about EUR 10 on *Edelraudtee*'s network.

Accessible market

In 2009, both regional and long-distance passenger transport services under a public service contract were awarded directly. About 55.3 percent of services were awarded through negotiation. There was open access to rail freight and purely commercial passenger transport services. However, RUs offering purely commercial passenger services compete with RUs that provide services under a public service contract on the whole infrastructure. Purely commercial rail passenger transport is conducted at present solely in international transport services with Russia.

COM Index

The railway accounts for a comparatively high modal split of freight transport in Estonia. The share declined between 2001 and 2008 from 68.6 per cent to 44.7 per cent. The rail share of passenger services saw a moderate increase from 1.9 per cent in 2005[54] to 2.1 per cent in 2008.

In 2009, 56.6 percent of Estonia's rail freight services were provided by external RUs. In addition to the incumbent *Eesti Raudtee*, other external RUs operating rail freight services on the infrastructure of *AS EVR Infra* are *Westgate Transport OÜ, Estonian Railway Services AS* and *AS Spacecom*.

[52] In 2006/2007, Eesti Raudtee published its network statement in English just once. Since then, the updated versions have always only be published in Estonian.

[53] Details of the basis for calculation used for infrastructure charges are included in Chapter 4.4.2 on page 43.

[54] No figures are available for Estonia for 2001.

While 44.7 per cent of rail passenger services in 2009 were provided by the state RU *Elektriraudtee*, the external RU *Edelaraudtee* provided 55.3 per cent. *Edelaraudtee* provides its services on both its own infrastructure and on that of *AS EVR Infra*. Other Estonian RUs in rail passenger transport are *GoRail* and *EVR Ekspress*, offering purely commercial international passenger services between Estonia and Russia.

Estonia published the Transport Development Plan 2006-2013 which features various improvements in quality and capacity on the railway sector. Estonia is also involved in implementing the trans-European *Rail Baltica* line.

Conclusion

In 2009, Estonia implemented separation between infrastructure and operations of the state-owned *Eesti Raudtee* under the umbrella of a holding in order to comply with the requirements of Directive 2001/12/EC. The country reorganised the structure of the authorities responsible for the railway sector by setting up the Estonian competition authority and the *Technical Surveillance Authority*. Estonia has seen a great improvement in the LEX Index through the organisational separation of the incumbent and with the new regulatory authority.

Even so, market entry barriers are apparent on the railway market. While information is readily available about licences, safety certificates and homologation of rolling stock, obtaining information about access to train paths constitutes a hindrance to international RUs as all information is only available in Estonian. No experience has been gained in recent years about issuing safety certificates and the homologation of rolling stock.

Most rail freight and passenger transport services are provided by external RUs. The number of external RUs in rail freight transport is relatively high with 13 active companies. By contrast, the number of external RUs in rail passenger transport is relatively low. National rail passenger services are provided primarily by *Edelaraudtee* and *Elektriraudtee Ltd*. Even so, this year once again Estonia has reached a high number of points in the COM Index.

Sources

Interviews with representatives of the following institutions or companies:

- Ministry of Economic Affairs and Communications
- Technical Surveillance Authority
- Estonian competition authority

A total of three external RUs were contacted.

Documents or websites:

- Website of the Estonian railway www.evr.ee

- Website of Elektriraudtee www.elektriraudtee.ee
- Website of the Estonian competition authority www.konkurentsiamet.ee
- Website of the Technical Surveillance Authority www.tja.ee
- Website of the Estonian Ministry for Economics and Telecommunication www.mkm.ee
- Website of the RU Edelaraudtee www.edel.ee

6.9. ES – Spain

Spain is one of the six countries in the delayed group.

LEX Index

Organisational structures of the incumbent

There have been no organisational changes to the railways in Spain since 2007. The Spanish railway law *Ley 39/2003*[55] of 17 November regulates the corresponding organisational structures. The state and incumbent, the infrastructure and operations are completely separated. Infrastructure management in Spain is performed by the *Administrador de Infraestructuras Ferroviarias (*ADIF*)*. The state-owned ADIF comes under the Spanish Ministry for Public Works and Transport (*Ministerio de Fomento)*.

The established railway undertaking *Renfe Operadora* provides both rail freight and passenger transport services. It is broken down into the business units *Servicios de Mercancías y Logística* (freight), *Viajeros* (passenger transport) and *Fabricatión y Mantenimiento* (maintenance). Rail freight and passenger transport are separate from each other in accounting terms.

Regulation of market access

The Spanish rail freight market is completely liberalised with open access for domestic and foreign RUs. Since 1 January 2010, purely commercial cross-border rail passenger transport is also possible in Spain. Legal provisions are stipulated in the railway law *Ley 39/2009* and in section 2 of the *Ley 15/2009*[56]. Pursuant to *Ley 16/1987*[57], national rail passenger services are operated only by the incumbent *Renfe Operadora* and are thus closed to competition.

Powers of the regulatory authority

The regulation authority in Spain is the *Comité de Regulacíon Ferroviaria* (CRF)[58], which is part of the Ministry of Transport. It is responsible for warranting non-discriminatory access to the railway infrastructure and for solving conflicts between the ADIF and RUs.

The regulatory is obliged to initiate investigations on application and can take action ex officio. Objections to decisions by the CRF have a suspensive effect. Coercive measures can be ordered and fines imposed. The CRF can take both ex-ante and ex-post decisions. In the end, final decisions are taken by the Minister of Transport so that there are grounds to doubt the political independency of the CRF.

[55] Railway law 39/2003

[56] Law 15/2009 on the operation of land transport services

[57] Law 16/1987 on planning land transport services

[58] Statutory principles: *Ley 39/2003* (Sections 82 et seq.) and the ordinance *REAL DECRETO 2387/2004* Sections 138 et seq.

In 2009, the European Commission took action against Spain in the framework of infringement proceedings regarding inadequate implementation of Directives 1991/440/EEC and 2001/14/EC. In particular, criticism was expressed regarding the inadequate independence between the state, incumbent and infrastructure manager. Other points of criticism referred to the insufficient powers of the regulatory authority and the lack of a performance regime.

ACCESS index

Information barriers

The network statement is published by the infrastructure management ADIF. Together with the actual access conditions, it also contains a description of the infrastructure together with other information about Spain's railway sector. The Ministry's website is currently only available in Spanish. Only some of the personal contacts at the relevant institutions speak English.

Administrative barriers

The access conditions to Spain's infrastructure are stipulated in Articles 58 - 97 of the *Reglamento del Sector Ferroviario* (*RSF)*. Licences are issued by the *Ministerio de Fomento*. According to the ordinance *FOM/2872/2010*, the legal period for issuing licences is three months. An operating licence applies to either rail freight or passenger services. Applications for rail freight licences also have to state whether dangerous or perishable goods are to be transported. Issued licences are valid for an indefinite period and have to be reviewed at least[59] every five years. It takes three months to examine licences issued in other EU Member States. In Spain, the following insurance cover[60] is needed to be issued an operating licence:

- Liability insurance for personal injury with coverage of at least EUR 900,000, EUR 600,000 or EUR 300,000 per accident (depending on the licence)
- Insurance for infrastructure damage with coverage of at least EUR 6 million
- Insurance for train damage with coverage of at least EUR 18 million
- Insurance for third party damage with coverage of at least EUR 1.5 million
- Insurance for third parties (not passengers) in the event of physical injury or death with coverage of at least EUR 900,000

Some insurance companies double the required minimum coverage for dangerous goods transports.

Safety certificates and homologation of rolling stock is issued by the *CRF*. As this body comes directly under the Ministry, it is only independent in formal terms. Interviewed RUs criticised the practical effects experienced with regard to this relationship of dependence,

[59] An earlier review may become necessary if there is a risk of non-compliance with the legal requirements. In addition, an earlier review also becomes necessary in the event of structural and legal changes to the RU.

[60] stipulated in *REAL DECRETO 810/2007*

together with preferential treatment for the incumbent *Renfe Operadora*[61]. The legal principles for issuing safety certificates are laid down in the *REAL DECRETO 810/2007*. The legal period for issuing the certificates is four months. Experience indicates that this period is not met. The degree of detail in respect of the requirements is rated as high. Safety certificates are valid for five years. The validity covers only the allocated lines. Safety certificates issued in other EU Member States are recognised and examined within three to four months. The issuing fee amounts to EUR 10,000.

The regulations regarding the homologation of rolling stock are stipulated in the *Ley del Sector Ferroviario (LSF)* and in the ordinance *FOM/233/2006*. The homologation of rolling stock must be issued within three months. The charges levied for multiple high-speed units and electric multi-system locomotives in freight transport amount to EUR 1910.36 plus EUR 106.13 per wagon. A fee of EUR 3183.91 is levied for regional diesel multiple units in passenger transport.

Operating barriers

Train path access for rail freight services in Spain is non-discriminatory. No experience is available about access to passenger transport on account of the closed market.

The allocation of train paths is presented in transparent form by the ADIF in the network statement. The lead time for applications for a regular train path is six months, which is a short period of time compared to other EU Member States. Train path availability is communicated on request by the infrastructure manager. In 2009, the share of unused train paths in rail freight transport was about 30 per cent. No information is currently available about unused train paths in passenger transport.

The train path charging system merely encompasses the right to use the allocated infrastructure capacity. Spain's train path charging system knows neither discounts for large volumes nor early booking discounts. The average charges per train path kilometre for a standard train[62] are

- between EUR 0.20 and EUR 0.40 in rail freight and passenger transport
- between EUR 7.50 and EUR 9.50 on high-speed lines.

Reservation fees are added to the train path charge, calculated on the basis of a variable scheme according to the type of rail transport and the booked time window.

Non-discriminatory access to service facilities and services is warranted by the ADIF or other service providers. External providers of maintenance services in Spain include for example *Alstom* or *Talgo.* Additional and auxiliary services are also offered in non-discriminatory terms,

In principle it is possible to purchase and lease used rolling stock in Spain, but the range available is currently very small because the Spanish infrastructure is a broad gauge

[61] cf. also LIB-Index 2007, p. 123

[62] Details of the basis for calculation used for infrastructure charges are included in Chapter 4.4.2 on page 43.

network with a gauge of 1676 mm[63] so that the market is restricted to the Iberian Peninsula.

Spain has two independent driving schools where specialist personnel can be recruited and trained, according to information provided by an RU.

The European train driver's licence is recognised in Spain pursuant to the *Orden FOM/2872/2010*.

Accessible market

Spain offers 100 per cent free access only to the rail freight market. By law (see LEX Index), national passenger transport services are operated solely by the incumbent *Renfe Operadora* so that this market is thus closed for external RUs.

COM Index

The rail share of the modal split for freight transport declined sharply between 2001 and 2008, decreasing from 6.8 per cent to 4.1 per cent. By contrast, an increase from 5.1 per cent to a share of 5.5 per cent was observed in passenger transport.

Private RUs are currently not active on the passenger transport market in Spain so that *Renfe Operadora* has a 100 per cent market share in this segment. Although municipal/state-owned railway undertakings exist parallel to *Renfe Operadora* (in the Basque country (Euskotren), in Catalonia (FGC), in Valencia (FGV) and on the Balearic Islands (SFM on Majorca)) these only provide services on their own regional networks. The share of the five active external RUs in rail freight transport accounted for five per cent in 2008, although it must be said that this market was only opened to private companies in 2006.

ADIF published the strategic plan 2006-2010 aiming for the strategic expansion of Spain's railway infrastructure. The main focus was placed on extending the country's high-speed network. ADIF invested altogether EUR 23.4 billion over a period of five years. Spain meanwhile has a high-speed network covering a length of 2665 kilometres. The aim is for this to be expanded to a total length of 10,000 kilometres by 2020.

Conclusion

Spain shows relatively poor performance in all indexes (LEX, ACCESS and COM). The reasons for this lie primarily in the fact that the market for national rail passenger services is still closed. No empirical values are therefore available for market access in this segment. There is open access to rail freight transport for domestic and foreign RUs. However, experience with access to the Spanish infrastructure reveals various hindrances. The process for issuing safety certificates and homologation of rolling still remains difficult. In addition, there are the technical restrictions with the Spanish wide gauge network which is incompatible with the normal gauge network in Central Europe, thus exacerbating continuous international rail transport.

[63] apart from the high-speed lines with a gauge of 1435 mm (normal gauge)

The railway authority CRF is controlled directly by the Spanish Ministry of Transport. It is doubtful whether the necessary independence from political influence applies in this case.

In the past, Spain has invested large amounts in expanding its high-speed lines. Further expansion is also planned for the next few years. Most of the rail freight transport and all rail passenger services are provided by *Renfe Operadora*.

Sources

Interviews with representatives of the following institutions or companies:

- DB Schenker Rail

A total of three external RUs were contacted.

Documents or websites:

- Various articles by Eurailpress www.eurailpress.de
- Network Statement 2010
- ADIF website: www.adif.es
- Website of the Ministerio de Fomento: www.fomento.es
- Website of RENFE Operadora: www.renfe.es

6.10. FI – Finland

Finland has undergone further improvement compared to 2007 and is still in the second group On Schedule.

LEX Index

Organisational structures of the incumbent

Infrastructure and operations are completely separated in Finland. This separation is anchored in the national law *Laki Valtionrautateiden muuttamisesta osakeyhtiöksi 20/1995*[64].

On 1 January 2010, the former railway infrastructure manager *Finnish Rail Administration (RHK)* merged with parts of the *Maritime Administration* and *Road Administration* to become the *Finnish Transport Agency (Liikennevirasto)*.

The subsidiaries of the state-owned *VR Group* perform both rail freight and rail passenger transport services. The divisions are separated in accounting terms. Also as of 1 January 2010, the *VR Group* holding restructured its business units to better comply with the requirements resulting from the economic crisis. The incumbent organised itself into five units: *Passenger Services (VR), Logistics (VR Transpoint), Track Construction and Maintenance (VR-Track Ltd), Catering and Restaurants (Avecra Ltd)* and *Telecommunications Services (Corenet Oy)*.

Regulation of market access

Market access for external RUs is stipulated in Finland's *Railway Act 555/2006*. External RUs have open access to cross-border services in rail freight and passenger transport, with the possibility to restrict cabotage. This applies to all transport services between Finland and other EU Member States, but not to services between Finland and neighbouring Russia.

Domestic RUs only have open access to rail freight transport. As already in 2007, purely commercial domestic passenger rail services and domestic passenger rail services coming under a public service contract are performed solely by the incumbent *VR* with no access for external RUs.

Amendments to Finland's *Railway Act* and various railway-related ordinances are planned for spring 2011. Among others, the intention is to create the prerequisites for implementation of Regulation (EC) No 1370/2007. No further information was available when this LIB Index went to print.

Powers of the regulatory authority

Since 2010, the competent regulatory authority in Finland is the *Transport Safety Agency (TraFi).* It is responsible for the regulation and supervision of the whole transport sector. With regard to the railway sector, the *TraFi's* main activities focus on examining infra-

[64] This refers to the *Act on the Incorporation of the Finnish State Railways (20/1995)*

structure charges and charges for railway-relevant services, regulating access to the infrastructure and monitoring the market.

The powers of the *TraFi* are transparent and the approach it takes to procedures and sanctions is presented in comprehensible form on its website. In contrast to its predecessor organisation, the new regulatory authority examines the network statements and initiates investigations into infrastructure allocation procedures and charges.

The authority is *obliged* to initiate investigations on application and *can* take action ex officio. Objections to its decisions have a suspensive effect. The *TraFi* can order coercive measures and impose fines. It also examines processes and results involved in the distribution of infrastructure capacities and in drawing up infrastructure charges.

Altogether, the remit and powers of the regulatory authority are much clearer than in 2007. This applies particularly to its new powers to examine the network statements and allocation procedures and to its authority to order coercive measures.

ACCESS index

Information barriers

The provision of information in Finland can be rated as very good. All relevant information is usually made available on the Internet in Finnish, Swedish and English. The network statements are also published in these three languages. Furthermore, the *Finnish Transport Agency* also offers external RUs the so-called *Access Guide for Railway Undertakings*[65]; it explains which steps are necessary to offer freight transport services on Finland's infrastructure. As no external RUs are active in Finland up to now, no experience has been gained with regard to issuing licences and safety certificates.

Administrative barriers

Operating licences are issued by the Ministry of Transport and Telecommunication (*Liikenne- ja viestin-täministeriö)*. The legal period for issuing such licences is three months. Issued licences apply to both rail freight and rail passenger transport. However, special licenses apply for special transports and for the historical and heritage railways. The charge for issuing licences amounts to about EUR 1000. They are valid for an indefinite period of time, but have to be re-examined every five years. The coverage of the insurance required by law in Finland amounts to EUR 66 million.

The *TraFi* issues safety certificates and homologation of rolling stock. The awarding processes are presented in transparent form in Finland's *Railway Act*. It takes four months to issue safety certificates in Finland. Part A of Safety certificates are valid for Finland's whole infrastructure for a period of five years. Safety certificates issued in other EU Member States are recognised. However, no experience has been gained up to now in how long the corresponding examination takes. The issuing fees are charged at an hourly rate which currently amounts to around EUR 140 per hour.

[65] The document has not been updated since 2006. However, no major changes have taken place since then so that the described procedures are still up to date.

The legal processing time for the homologation of rolling stock is three months in Finland and is charged at an hourly rate of EUR 140. Homologation of rolling stock from other EU Member States is only partly recognised. Additional tests are necessary on account of the Russian gauge of 1520 mm which is used in Finland.

Operating barriers

Up to now, no external RUs are active in Finland. No experience is therefore available regarding non-discriminatory access to train paths or other service facilities and services pursuant to Annex II of Directive 2001/14/EC.

The allocation of train paths in Finland is a transparent, uniform process. Here the Finnish infrastructure operator has developed an application (*LIIKE*) with which RUs can download information about current train path occupation. The lead-time for applications for a regular train path is eight months; applications for ad hoc train paths can also be submitted. The infrastructure charging system is explained in the network statement of the infrastructure manager. The average charge per train path kilometre for a standard train[66] in rail freight transport currently amounts to EUR 2.26, EUR 1.06 in long-distance passenger transport and EUR 0.38 in regional passenger transport. No reservation charges are levied in connection with train path applications.

Non-discriminatory access to essential facilities is assured by the infrastructure manager *Finnish Transport Agency*.

Accessible market

Rail freight operators have open access to the national market. The market for domestic rail passenger transport is reserved for the incumbent *VR*.

COM Index

Finland's infrastructure covers altogether 8816 kilometres, of which 3067 are electrified.

The rail freight traffic performance of the incumbent *VR* in 2009 amounted to 8.87 million tonne-kilometres. The rail share of the modal split improved between 2001 and 2008 from 24.4 per cent to altogether 26.5 per cent.

In rail passenger transport, the traffic performance of *VR* amounted to 3.88 million passenger-kilometres in 2009. In this market segment, the rail share of the modal split increased between 2001 and 2008 from 4.8 per cent to altogether 5.4 per cent.

According to the infrastructure manager, the annual infrastructure maintenance costs amount to about EUR 145 million. About 70 per cent of the maintenance work is offered for tender[67]. The maintenance schedule for work to be performed between 2009 and 2018 can be downloaded from the website.

[66] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

[67] Here the Finnish Transport Agency has published a brochure: "Become a service provider or contractor in Finland's rail network"

Conclusion

Finland lies in the lower section of the ranking in all three indices (LEX, ACCESS, COM). The rather low number of points in the LEX Index comes from the hitherto limited access possibilities for external RUs in passenger transport. Compared to 2007, Finland's improvement refers only to the far greater powers and wider remit of the regulatory authority. The largest deficit in the ACCESS Index consists in the lack of experience regarding access to service facilities. Such experience is not available because of *VR's* monopoly. The lack of external RUs also results in the poor performance in the COM Index. In this section, Finland has only gained points by increasing the rail share in the modal split.

Sources

Interviews with representatives of the following institutions or companies:

- Ministry of Transport and Communications
- VR Group

Documents or websites:

- Website of the VR Group www.vrgroup.fi
- Website of the infrastructure manager *Finnish Transport Agency*: portal.liikennevirasto.fi/sivu/www/en
- Website of the regulatory and safety authority *Finnish Transport Safety Agency* www.trafi.fi
- Website of the Ministry for Transport and Communication: www.mintc.fi
- Access Guide for Railway Undertakings issued by Finnish Rail Administration 2006
- Finnish Railway Statistics 2010
- Network Statement 2011

6.11. FR – France

In the current study, France has moved up into the middle group On Schedule so that for the first since the LIB Index has been drawn up, it is no longer in the last group. It has overtaken the neighbouring countries of Spain and Luxembourg together with the Baltic countries of Latvia and Lithuania with regard to liberalisation progress.

LEX Index

Organisational structures of the incumbent

The independent infrastructure manager *Reseau Ferré de France* (RFF) gives France organisational, accounting, legal and functional separation between infrastructure management and the incumbent *Société Nationale de Chemins de Fer* (SNCF). However, as already explained in the 2007 Index, the RFF still transfers major infrastructure management tasks to SNCF. The infrastructure management tasks performed by SNCF include among others the construction of new infrastructure and the operation of maintenance and refuelling facilities[68]. Access to service facilities is regulated by the law *décret n° 2003-194*.

The tasks involved in operative train path allocation and operations management are also performed by a separate department of SNCF: *Direction de la Circulation ferroviaire (DCF)*. The DCF was created by amendment of the law *n° 82-1153 d'orientation des transports intérieurs* as of 1 January 2010 and has been given additional independence stipulations[69]. This is intended to warrant non-discriminatory performance of essential functions. However, it is controlled by the RFF. This clearly reveals the dependency between the infrastructure manager and SNCF.

The incumbent *SNCF* comprises five organisational units: *SNCF Proximités* (regional transport), *SNCF Voyages* (long-distant transport), *SNCF Geodis* (freight and logistics), *SNCF Infrastructure* (infrastructure) and *SNCF Gares & Connexions* (station management). Rail freight and passenger transport are separated in accounting terms at SNCF. At present, there are not two separate balance sheets.

The business unit *SNCF Geodis* encompasses all activities of *Fret SNCF* together with all European rail freight subsidiaries. In February 2010, SNCF introduced the new brand *Captrain* which pools internationally purchased business units under a brand name.

Regulation of market access

The rail freight market in France is completely open since April 2006. Access is regulated in the national law (*article 2 décret n° 2003-194).* Rail passenger transport is still restricted. Passenger services under a public service contract are performed entirely by the incumbent SNCF (Articles L2121-2 and L2121-4 Code des transports). External RUs have no possibility of providing purely commercial services in national passenger trans-

[68] Network Statement 2010

[69] cf. Article 1, law No. 2009-1503 dated 8 December 2009.

port. Cross-border passenger services are granted access with restricted cabotage. (Article *L 2121-12* Code des transports).

France makes full use of the restriction possibilities stipulated in Directive 2007/58/EC for cross-border passenger services.

Powers of the regulatory authority

On 1 December 2010, the *Autorité de régulation des activités ferroviaires* (ARAF) replaced the previous regulatory authority *Mission de contrôle des activités ferroviaires* (MCAF) and has been responsible for regulating rail transport since then (national law: *n° 2009-1503*). The ARAF is deemed to be a politically independent authority pursuant to *article L. 2131-1*. Its powers and approach are transparent and published on the ARAF website. The powers of the authority are stipulated in the national law *Article L. 2133-6 Code des transports*.

The ARAF has far broader authority than its predecessor organisation. In contrast to the former MCAF, the ARF has to initiate investigations when a complaint is submitted. Objections to its decisions do not have a suspensive effect unless the decision comes with a fine. The authority has the powers to take final decisions, may order coercive measures and impose fines up to 5 per cent of the revenue or up to EUR 375,000 in case of recurrence.

The ARAF can take both ex-ante and ex-post decisions. The legal certainty of ex-ante decisions is warranted.

In the annual reports for 2005 and 2006, the former MCAF demanded simplification of the train path allocation process and an improvement in cost transparency for the use of essential facilities[70]. This demand has been partly met in founding the DCF (see above) and in publication of an extensive network statement by RFF.

By creating the new regulation authority, France has reacted adequately to the infringement proceedings initiated by the EU Commission for inadequate implementation of the first railway package.

ACCESS index

Information barriers

According to various railway undertakings, in France it is very difficult to identify personal contacts and to obtain information about market access and licences. In some cases, it takes longer than seven working days before there is any feedback of information.

The network statement is published on the RFF website. However, unfortunately the current and new versions for 2011 and 2011 of the *Document de référence du réseau* (DRR) are currently only available in French. Only the old 2010 version is available in English.

[70] cf. Country Report France, Liberalisation Index 2007

Administrative barriers

Experience gained by various interviewed RUs indicated that licences are always issued by the French Ministry of Transport in the legal period of three months. Licences from other EU Member States and from Switzerland are recognised without additional examination.

The legal capital contribution demanded from rail passenger operators amounts to EUR 1.5 million, which is a very large amount in an international comparison. The minimum capital contribution for freight transport has been reduced to EUR 50,000 to reduce the market entry barriers for small rail freight operators.

Safety certificates and homologation of rolling stock are issued by the *Etablissement public de sécurité ferroviaire* (EPSF). The legal period for issuing both documents is four months and experience indicates that this is met for rail freight transport. No empirical values are available for passenger transport. Safety certificates are valid for five years.

However, homologation of rolling stock by the EPSF is not sufficient. It has to be supplemented by line-related homologation issued by RFF on the basis of a series of tests. The tests in turn are conducted by SNCF. During the study, it transpired that the homologation processes can sometimes be very complex. One RU stated that the total costs for homologation of rolling stock amount to between EUR 200,000 and EUR 500,000.

Information is provided in French and English on the authority website.

Operating barriers

External RUs perceive access to train paths and other service operations as partly discriminatory. This includes the right to use allocated infrastructure capacities, the usage of points and branch lines, the provision of further information and access to maintenance facilities. The reasons for these access barriers are seen for the most part in the large influence held by SNCF. For example, there is also a ruling that grants scheduled trains run by SNCF priority over delayed trains from other railway undertakings.

The lead time for allocating train paths amounts to nine months in France. The network statement provides transparent documentation of the uniformity of the procedure, the mechanisms for resolving conflicts and the train path charging system. The average charges per train path kilometre for a standard train[71] in 2010 were

- about EUR 2.14 for freight transport. The actual infrastructure charge demanded by RFF is actually EUR 4.30[72]. However, half of this is covered by the state and paid directly to RFF to take account of the viability of rail freight transport.
- about EUR 7.50 for long-distance passenger transport.
- and EUR 2.50 for regional passenger transport.

[71] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

[72] cf. page 53, *Rapport d'information sur l'avenir du fret ferroviaire, M. Francis Grignon pour la commission de l'économie, du développement durable et de l'aménagement du territoire du Sénat*, 20 October 2010.

In addition, discussions have been triggered by the French railway tax IFER. The new taxation that was introduced at the start of 2010 is charged every year on all rail vehicles travelling on the French infrastructure, regardless of the distance actually covered in France. The applicable rate depends on the type and utilisation of the vehicles (e.g. EUR 35,000 for the driving unit of a high-speed train, EUR 30,000 for a diesel locomotive, EUR 10,000 for every single coach of a high-speed train or EUR 4,800 for other passenger coaches). This taxation is practically cost-neutral for the incumbent *SNCF*, as trade tax was simultaneously abolished in France so that the two forms of taxation practically neutralise each other. However, as far as foreign railway companies are concerned this contradicts existing double tax conventions. Following fierce protests from neighbouring European countries and in order not to jeopardise the progress being made in regional cross-border rail transport, for 2010 the financial amendment law granted exemption for part of regional cross-border rail passenger services from the IFER assessment basis.

COM Index

In 2009 there were 16 licensed RUs in France, including 13 private RUs. This includes rail freight operators, construction companies and companies operating border services. The market share for external RUs in rail freight transport increased continuously from 0.5 per cent in 2006 to 16.6 per cent in 2009 (based on tonne-kilometres).

The rail share of the modal split in freight transport was 19 per cent in 2001 and deteriorated to 15.9 per cent in 2008. By contrast, there was a clear improvement in passenger transport where the rail share of the modal split increased from 8.5 per cent in 2001 to 10.1 per cent in 2008.

Conclusion

In setting up the ARAF, France has created important prerequisites for non-discriminatory access and fair competition on the rails. There are still reports of discrimination in freight transport, which is said to be caused primarily by the large influence SNCF holds on the infrastructure. Cross-border passenger transport is exacerbated by cabotage restrictions. National passenger transport is still completely closed. The regulatory authority will have to deal intensively with issues such as these.

In comparison the LIB Index 2007, France has improved its position by moving into the On Schedule group; however, it remains on the lower positions compared to countries with more progressive market opening. The reasons for this consist in the national rail passenger transport market that is still completely closed, the way in which SNCF discriminates against external RUs and the partly difficult conditions met on trying to obtain homologation of rolling stock.

Sources:

Interviews with representatives of the following institutions or companies:

- Ministère de l'écologie, du développement durable, des transports et du logement
- Euro Cargo Rail SAS
- Veolia Transport
- Vossloh AG

A total of five external RUs were contacted.

Other sources:

- RFF website: www.rff.fr
- SNCF website: www.sncf.fr
- Network statement 2010 of RFF
- Ministry website: www.developpement-durable.gouv.fr
- ARAF website: www.regulation-ferroviaire.fr
- EPSF website: www.securite-ferroviaire.fr
- Various Eurorailpress articles: www.eurorailpress.de
- Articles in Deutsche Verkehrszeitung

6.12. GB – Great Britain

In 2011, Great Britain ranks in second position. This therefore puts it in the *Advanced* group.

LEX Index

Organisational structures of the incumbent

According to the British *Department for Transport* (DfT), there have been no major changes in legislation since the last issue of the LIB Index 2007. The DfT is responsible for the strategic alignment and development of the railway sector. Following the reform of the railway sector in 1994, Great Britain no longer has an incumbent. The former incumbent *British Rail* was split up into more than 100 companies. Since then, infrastructure and operations are completely separated.

At the end of 2009, the British government commissioned a study entitled "*Rail Value for Money*" to obtain a critical assessment of the costs and efficiency of the British rail sector. In their interim report, the authors detected considerable potential for further efficiency. To tap into this potential, the authors are of the opinion that changes are necessary in the organisation structure between the RUs and the infrastructure manager. The discussed proposals for change extend from purely informal cooperation through to complete vertical reintegration. The final results of the study with the authors' recommendations are expected by the early summer 2011.

Regulation of market access

Domestic and foreign railway undertakings have full, open access to the British market for rail freight and passenger services. Directive 2007/58/EC was transposed as of 1 June 2009 with the *Railways Infrastructure Regulations 2009*[73]. Passenger services under a public service contract are awarded in tender procedures with extensively exclusive rights (franchising).

In January 2011, the DfT announced a reorganisation of the franchise system for rail transport. The key issues to be addressed by the reform will include individual adjustment of franchises and binding obligations regarding service quality and train utilisation.

Access to other service facilities was stipulated in the *Railways Regulations 2005* in the framework of implementing the first railway package.

Powers of the regulatory authority

The regulatory authority in Great Britain is the *Office of Rail Regulation* (ORR). The *Railways and Transport Safety Act 2003* established the ORR in replacement of the *Rail Regulator* which had existed since 1993. The remit of the OMM covers both economic and safety-related functions. The economic functions are documented in the *Railways Act*

[73] The Railways Infrastructure (Access and Management) (Amendment) Regulations 2009

1993. Safety-related powers are anchored in the legal texts of the *Railways Act 2005* and the *Health and Safety at Work etc Act 1974*.

The ORR has very extensive powers. The authority's decisions are binding by law. Objections to its decisions have no suspensive effect. It can also order coercive measures (with no exact stipulation of the amount) and impose fines of up to 10 per cent of the revenues. The British regulatory regime which is strict in a European comparison also stands out with detailed monitoring of the performance of *Network Rail* on the basis of complicated KPI systems.

The ORR website provides very extensive information. It is possible to download information for example about the British rail market and about safety and market regulation, together with various publications. In addition, the ORR clearly shows the contents of the three EU railway packages and how these were then transposed into national law.

ACCESS index

Information barriers

The quality of information provided by impersonal and personal contacts is rated as good by the interviewed organisations. While documents on the internet are only provided in English, interviewed organisations indicated that personal contacts at the relevant institutions spoke up to four languages.

Administrative barriers

The ORR is responsible for issuing licences, safety certificates and homologation of rolling stock. The legal period for issuing an operating licence is three months. It applies to either rail freight or passenger services. It is valid for an indefinite period of time and for the whole infrastructure. The coverage of the insurance required by law amounts to about EUR 182.5 million[74]. Licences from other EU Member States are recognised. According to the *Association of Train Operating Companies* (ATOC)[75] it takes up to twelve weeks to examine foreign licences. The charges for issuing operating licences amount to the equivalent of EUR 295.

The legal period for issuing a safety certificate is five months. However, one interviewed RU indicated that this period is not always met. Safety certificates for freight transport are valid for the whole infrastructure. As far as passenger transport is concerned, safety certificates are only valid for the regional areas where the specific RU provides the transport services. Safety certificates are valid for a period of five years. No fees are charged for issuing the certificates.

Homologation of rolling stock can take up to four weeks. According to one RU, the degree of detail required for safety certificates in Great Britain is relatively low in a European comparison. The fees charged result from the time factor and the scope of the required

[74] The clear difference to the LIB Index 2007 comes from the exchange rate. In British currency the sum is 155 million British pounds.

[75] The ATOC is an interest group for British rail passenger operators.

procedures. There is currently no experience available regarding homologation of rolling stock from other EU Member States. According to the ATOC, the requirements are transparent and can be downloaded from the website of the *Rail Safety & Standard Board*.

Operating barriers

Operation, maintenance and development of the British rail infrastructure lies in the hands of the infrastructure manager *Network Rail*. According to *Network Rail*, it is responsible for the operation and upkeep of 32,200 kilometres of rail infrastructure, 40,000 bridges and tunnels, 18 central stations and 2500 smaller stations.

The interviewed RUs described train path access as non-discriminatory. The allocation procedure is said to be transparent and uniform. One important set of regulations for British rail transport is the so-called *Network Code.* This document drawn up by *Network Rail* is part of every agreement regarding access to the British rail infrastructure. Key issues addressed by the *Network Code* include dealing with changes that occur (working timetable, railway vehicles, access rights, etc.), setting up *performance monitoring* and instructions for how to proceed in the event of environmental damage or operational disruptions. This document also describes the mechanism for resolving conflicts.

As already indicated in 2007, *Network Rail* is frequently criticised for various flaws in quality. While train punctuality in the 2006/2007 timetable period was 88.1 per cent (10.05 million minutes of delay), punctuality was improved in the 2008/2009 period to 90.8 per cent (8.9 million minutes of delay).

One frequent point of criticism mentioned by the interviewed RUs consists in the capacity bottlenecks occurring on the infrastructure, resulting among others on the delays described above.

The current version of the network statement (2012) can be downloaded from *Network Rail*'s website. While the infrastructure charges are presented on the *ORR* website, the calculation method involved is rather complicated because of the various different components comprising the infrastructure charge. In the network statement, *Network Rail* describes nine different types of charges which then form the basis for calculating the actual infrastructure charge. The average charge per train path kilometre for a standard train[76] in Great Britain lies between EUR 7 and EUR 9 per kilometre and is comparatively high, as in previous years. There is no stipulated price for stopping at British stations. According to *ATOC*, the charge is calculated as a percentage share of the maintenance costs for the station based on the number of stops made by a RU.

Other service facilities and services together with additional and ancillary services are provided in non-discriminatory fashion according to the interviewed RUs. Facilities and services are provided by the infrastructure manager or alternative providers. There is also easy access to travel information media in stations or independent rail transport information devices.

The ORR is a strong regulatory authority with extensive powers. In 2009, altogether 25 so-called *Improvement Notices* and 13 *Prohibition Notices* were issued. In addition, fines

[76] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

were imposed amounting to altogether about EUR 81,000[77]. In November 2010, the *ORR* imposed a high fine equivalent to EUR 3.5 million on *Network Rail*. The infrastructure manager was reproached for licence infringement with regard to introducing the new planning system ITPS[78].

Great Britain has a functioning market for used rolling stock for purchasing and also leasing. The providers include among others *Angel Trains*, *Porterbrook or HSBC Rail*.

Accessible market

In 2009, all public service contracts for passenger rail services were offered in formal tender procedures. The winners receive a *franchise* agreement that assures exclusive rights for operation of the route. *Franchise* agreements cover about 98 per cent of passenger services. The remaining passenger services are provided on a purely commercial basis with open access, including for example the line between London Heathrow Airport and London-Paddington station. The tickets of all *ATOC* members are sold under the brand name *National Rail* at all *Network Rail's* stations and are valid for all RUs[79]. RUs that are not members of ATOC can use independent sales channels or set up their own ticket sales facilities.

COM Index

Great Britain's largest rail freight operator *English, Welsh and Scottish Railways* (EWS) was taken over in 2007 by *Deutsche Bahn AG* and has been operating since 1 January 2009 under the name *DB Schenker Rail (UK)*. Together with *DB Schenker Rail (UK)*, *Freightliner Ltd* also has a large market share. Moreover, small companies such as *Direct Rail Services* (DRS) and *First GB Railfreight* also operate on the rail freight market. According to Eurostat, the rail share of the modal split in freight transport increased from 10.6 per cent in 2001 to 13.4 per cent in 2008. There was also an increase in the rail share of the modal split for passenger transport. This increased from 5.3 per cent in 2001 to 6.8 per cent in 2008.

In 2007, the British government announced a programme for upgrading the rail infrastructure equivalent to EUR 7.06 billion. By far the largest investment refers to upgrading the *Thameslink* line[80]. *Network Rail* states that the upgrading work aims to boost the capacity of the line by 300 per cent. The main progress in this project through to 2012 consists in opening two additional stations (Blackfriars and Farringdon).

Once again in 2011, Great Britain is the country with the largest number of points in the COM Index. As in 2007, this comes from the high rating in the category *national market shares of external RUs*. All corresponding questions received the full number of points as

[77] The total amount is low compared to last year. In 2008, the sum of imposed fines was the equivalent to just about EUR 1.7 million.

[78] Integrated Train Planning System

[79] All ATOC members use a uniform fare system.

[80] The Thameslink line is a 225 km railway line with 50 stops from Bedford via London to Brighton.

there is no longer any incumbent in Great Britain since the railway reform in the early 1990s.

Conclusion

The results of this year's Index reveal that despite its early liberalisation, Great Britain has been overtaken by Sweden and only achieved second place, lagging seven points behind.

Institutions and associations such as the *ATOC* or *Rail Freight Group* (RFG) constantly provide impetus for optimising the railway market. As already in the LIB Index 2007, the associations see the lack of capacity as the major problem. The extensive investment programmes aim to expand and improve capacities and infrastructure quality.

The pending reform of the franchise system is said to have great potential. The reform should bring the agreements better in line with passenger needs and accelerate the implementation of improvements. ATOC also expects that appropriate implementation will generate large cost savings.[81]

Great Britain has a highly influential regulatory authority in the ORR. Current decisions repeatedly verify that the ORR uses its extensive powers to a considerable extent.

Sources

Interviews with representatives of the following institutions or companies:

- Association of Train Operating Companies – ATOC
- Department for Transport
- DB Schenker Rail UK
- NetworkRail

A total of seven external RUs were contacted.

Documents or websites:

- Various Eurailpress articles: www.eurailpress.de
- ORR website www.orr.gov.uk
- Website of the Rail Safety & Standards Board www.rgsonline.co.uk
- Network Rail website: www.networkrail.co.uk
- Website of the Deparment for Transport: www.dft.gov.uk
- Network Statement 2012

[81] A detailed comment on the franchise reform is available on the organisation's website: http://www.atoc.org/clientfiles/File/publicationsdocuments/Cost_savings_final.pdf

- Website and various publications of the ATOC: www.atoc.org
- ORR Annual Report 2009-10

6.13. GR – Greece

In 2011, Greece belongs to the third group, as it did in 2004 and 2007. Since 2007, this has been the Delayed group.

LEX Index

Organisational structures of the incumbent

After numerous reorganisation measures, *Organismos Sidirodromon Ellados (OSE),* which was originally planned as a holding company, is now the infrastructure manager in Greece. The original infrastructure manager *EDISY S.A.* was integrated in *OSE* in 2010. The amalgamation is documented in *Article 2, Paragraph 2, Law No. 3891/10*. *OSE* is fully owned by the state.

The incumbent *TrainOSE S.A.,* which provides both rail freight and passenger transport services in Greece, is also wholly owned by the Greek state. Although *TrainOSE* and *OSE* are two independent companies, there is a high degree of interdependence. Owner of the rolling stock, for example, is not the incumbent *TrainOSE,* but the infrastructure manager *OSE*. There is currently no holding structure (as might be expected in view of the name), under which the infrastructure manager and incumbent are united in Greece.

Regulation of market access

Pursuant to *Article 9 of Presidential Decree PD 41/05*, foreign RUs have open access to international transport in both the rail freight and passenger sectors.

According to information supplied by the Greek Ministry of Transport, domestic RUs have open access to rail infrastructure for the operation of both rail freight and passenger transport. Under the current legal framework, transport contracts for passenger services provided under a public service contract can be awarded directly or in formal tender procedures. Greece satisfies the transparency requirements of Regulation (EC) No 1370/2007, which are additionally enshrined in *Article 12 "Assignment of Public Service Obligations"* of *Law No. 3891/10*.

Powers of the regulatory authority

Until autumn 2010, the Greek Ministry of Transport was the regulatory authority as defined in Directive 2001/14/EC. Since November 2010, the regulatory tasks have been performed by the newly established and independent *Railway Regulatory Authority (*RAS*)*. The *RAS* examines parts of the network statement and is entitled to initiate investigations in connection with allocation procedures, charging procedures and the level or structure of infrastructure charges. It is also responsible for monitoring competition. As it was only recently founded, the regulatory authority has to date not acquired any experience, nor has it initiated any investigation proceedings. It is currently recruiting employees. The independence of the regulatory authority as an independent administrative authority has been enshrined in *Paragraphs 1 and 2, Article 22 of Law No.* 3891/10.

The *RAS* is obliged to initiate investigations in response to complaints and is entitled but not obliged to act ex officio. Objections to decisions of the regulatory authority do not have a suspensive effect. It is entitled to order coercive measures and to impose fines up to 15 per cent of the annual revenues of the RU concerned. The regulatory authority is entitled only to issue ex post decisions. The *RAS* is an autonomous institution which acts independently of the infrastructure manager and the Ministry.

The *RAS* was established in response to the criticism levied by the EU Commission about the lack of independence and insufficient powers of the regulatory authority in the infringement proceedings against Greece.

ACCESS Index

Information barriers

The identification of contacts for obtaining information about market access and a licence is rated as uncomplicated, although no experience is available from private RUs. The relevant information and documents concerning access to Greek rail infrastructure is only available in parts on the Internet and is published primarily in Greek. The network statement is also published in English on the website of the infrastructure manager, but dates back to the year 2007 and is thus out of date.

Administrative barriers

The Ministry of Transport is responsible for issuing operating licences, safety certificates and the homologation of rolling stock.

Applications for operating licences have to be processed within three months pursuant to the statutory regulations. However, no empirical values are available as no newcomer has as yet completed that process. Operating licences are valid for both rail freight and passenger transport. They are valid for an indefinite period of time and have to be reviewed every five years. RUs are obliged by law to take out insurance for a minimum of EUR five million. The fee for issue of a licence in Greece is EUR 50,000. The issue of licences is also subject to additional conditions which are documented in Articles 43-47 and Annex II of PD 41/05 and Decision 167/07. Operating licences issued by other EU Member States are recognised in Greece.

The legally prescribed period for the issue of a safety certificate is four months. As is the case with operating licences, however, no empirical values are available owing to the absence of competition. The Ministry of Transport rates the degree of detail of the requirements as average. Safety certificates are valid only on ordered train paths, but cover both rail freight and passenger transport. Safety certificates in Greece are valid for a period of five years. The fee for issue of a safety certificate can be as high as EUR 30,000. Transparency of the issuing process is documented in *Ministerial Decision AS.4.2/26697/2422*.

No empirical values are available regarding the homologation of rolling stock in Greece owing to the absence of competition.

Operating barriers

Contracts between the RUs and the infrastructure manager are normally concluded in the form of an individual agreement. It is also possible to conclude framework agreements. According to the Ministry of Transport, the mechanisms for resolving conflicts are explained transparently in Article 29, PD 41/05 and in the network statement. The lead time for applications for a regular train path is 15 months. Path-specific information which is relevant for the application is provided in full on request. The infrastructure charging system in Greece has a linear structure and grants neither discounts for large volumes nor for early bookings. The average infrastructure charge per train path kilometre for a standard train[82] is EUR 0.65 per train path kilometre for both passenger and freight transport, which is very low in a European comparison. As no external RUs are as yet active on the Greek rail network, no empirical values are available about cooperation between the infrastructure manager and external RUs.

According to the Ministry of Transport, access to additional services – such as the provision of fuels or pre-heating passenger trains – is available solely from the infrastructure manager.

Accessible market

Pursuant to *Article 12, Law 3891/10*, transport contracts in Greece can be awarded directly or in formal tender procedures. To date, however, all contracts have been awarded to the incumbent *TrainOSE*, as no other RUs are active in Greece. The transparency requirements of Article 7 of Regulation (EC) No 1370/2007 are also satisfied.

There has been open access to both rail freight transport and purely commercial passenger transport in Greece since 2006. However, no other RU is as yet active in that market segment apart from the incumbent.

COM Index

In Greece, rail has traditionally played only an insignificant role for both freight and passenger transport. The modal split for rail freight transport rose from 2.3 per cent to 2.7 per cent between 2003[83] and 2008. The already low share of the modal split for rail passenger transport has continued to decline, falling from 1.9 per cent to just 1.3 per cent during that same period. No external RUs are active in Greece.

Conclusion

In Greece, rail plays only an insignificant role, which is clearly substantiated by the modal shares of less than 2 per cent in passenger transport and less than 3 per cent in the

[82] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

[83] No figures are available for Greece for 2001, the year chosen as standard reference year for the other countries.

freight transport market. Apart from the incumbent *TrainOSE,* there are still no other RUs active in Greece.

Nevertheless, the company has recently initiated numerous steps to liberalise the market. The most important developments are the establishment of an independent regulatory authority at the end of 2010, which is to monitor open access to rail infrastructure, and the reorganisation of the infrastructure manager *OSE* and the incumbent *TrainOSE*. However, there is as yet no horizontal separation of passenger and freight transport inside *TrainOSE*.

Sources

Interviews with representatives of the following institutions or companies:

- OSE S.A.
- Ministry of Transport and Communications (YME)
- TrainOSE

Documents or websites:

- Network Statement 2007
- Website of Ministry of Transport: www.yme.gr
- Website of incumbent: www.ose.gr

6.14. HU – Hungary

Hungary is again allocated to the second group, On Schedule, as it was in 2007. This year, however, the country has improved by 13 points.

LEX Index

Organisational structures of the incumbent

The rail reform in Hungary began in 1993 with the transformation of the Hungarian state railway *Magyar Államvasutak Reszvenytarsasagot* (MÁV) into a joint stock company and the accounting, organisational and legal separation of the infrastructure and operations divisions. However, no separate balance sheets are drawn up for the two different divisions. While infrastructure management forms a part of the MÁV Holding, passenger transport is the responsibility of the subsidiary *MÁV START*. There is horizontal separation of freight and passenger transport at *MÁV*: in December 2008, the former *MÁV Cargo* was taken over by *Rail Cargo Austria*, the freight transport division of Ö*sterreichische Bundesbahnen*, and has operated under the name *Rail Cargo Hungaria* since March 2010.

The second incumbent in Hungary is *GYSEV (Raab-Oedenburg-Ebenfurter Eisenbahn,* now *Raaberbahn*), which not only provides freight and passenger transport services, but also manages rail infrastructure in the west of Hungary and east of Austria. 61 per cent of the shares in *GYSEV* are owned by the Republic of Hungary, 33.3 per cent by the Republic of Austria, and 5.7 by the *Strabag SE* company. The organisational form is similar to that of MÁV: passenger transport operations are separate from infrastructure management only in terms of accounting and organisation; rail freight transport is provided by the subsidiary *GYSEV CARGO Zrt.*.

In 2004, the independent infrastructure allocation body VPE (*Vasúti Pályakapacitáselosztó Kft.*) was founded as a government body to ensure equal treatment regarding the use of rail infrastructure. In 2008, *VPE* also took over timetable compilation from the two incumbents in the passenger sector, *MAV* and *GYSEV,* to avoid discrimination of other RUs. The remit of *VPE* also includes preparation and publication of the network statement and fixing the infrastructure charges. The core tasks handled by the infrastructure divisions of the incumbents include infrastructure development, operation, maintenance and facilities management.

Regulation of market access

Für Schienengüterverkehrsunternehmen existiert in Ungarn *Open Access* nach dem *Act. no. CLXXXIII of 2005* und dessen Anpassung mit *Act LXXVI of 2008*. Im Schienenpersonenverkehr haben ausländische EVU freien Zugang für grenzüberschreitende Verkehre. Die Umsetzung der Richtlinie 58/2007/EG ist im *Legal act: Törvény, number: 2009/XLVI* verbrieft.

Rail freight operators have open access in Hungary pursuant to *Act. No. CLXXXIII of 2005* and its amendment in *Act LXXVI of 2008.* In the rail passenger market, foreign RUs

have open access to international transports on a reciprocity basis. The transposition of Directive 58/2007/EC is documented in the *Legal act: Törvény, number: 2009/XLVI*.

Domestic RUs have open access to the purely commercial passenger transport market. To date, the public service contracts for passenger transport have been awarded directly. No empirical data is available on the transposition of Regulation (EC) No 1370/2007. Open access to other service facilities in Hungary is documented in *Act No. CLXXXIII of 2005*.

Powers of the regulatory authority

In July 2008, the *Hungarian Rail Office* (HRO) was replaced by the national transport authority *Nemzeti Közlekedési Hatóság (NKH)*. The new regulatory authority NKH monitors the work of the infrastructure allocation body VPE, which reports to the NKH at quarterly intervals. The remit of the regulatory authority in Hungary includes examination of the network statement, conducting investigations concerning allocation procedures and infrastructure charging, and monitoring competition. The entire powers of the NKH are enshrined in the Hungarian railway act, *Act No. CLXXXIII of 2005*.

The regulatory authority has existed since 2007 and is responsible for various transport modes. In addition to Hungarian rail transport, it also regulates road transport, shipping and aviation. It is obliged to initiate investigations on request by an RU and can also act ex officio. Objections to the decisions of the NKH do not have a suspensive effect. The NKH is authorised to order coercive measures amounting to up to EUR 4000. It is also entitled to impose fines amounting to two per cent of the annual revenues of the RU concerned. It is further entitled to make both ex ante and ex post decisions. It examines both the processes and the outcome of working timetable compilation. According to information supplied by one interviewed RU, legal appeal proceedings take less than one month.

ACCESS Index

Information barriers

The identification of contacts for obtaining information about market access and a licence is uncomplicated in Hungary. According to the RUs interviewed, only parts of the relevant information for access to the Hungarian rail network are published. The network statement for 2011 is published on the official website of VPE in Hungarian and English. All contacts at the allocation body speak English as well as Hungarian.

Administrative barriers

Applications for operating licences, safety certificates and homologation of rolling stock are also processed by the NKH.

The legally prescribed period for processing an application for an operating licence is two months, but one interviewed RU stated that compliance with that period is rare and that applications tend to take three months in practice. Operating licences are valid for both rail freight and passenger transport and can optionally be valid for the entire network or sub-networks. Operating licences issued by other EU Member States are recognised in

Hungary. Operating licences are valid for an indefinite period of time but have to be reviewed every five years. Licences become invalid after six months if no transport operations have been provided during that time. The fee for issue of an operating licence in Hungary is equivalent to EUR 9000; licences for a sub-network cost approx. EUR 92. The interviewed RUs stated that the issuing process is transparent.

The legal period for granting safety certificates in Hungary is three months. The interviewed RUs stated that the degree of detail in respect of the requirements is high. Safety certificates are valid for a period of five years. The costs of issue amount to approx. EUR 7200. However, the interviewed RUs complained that the allocation process is not sufficiently transparent in this sector.

The period allowed by law for processing applications for the homologation of rolling stock is 30 days. According to an RU, the requirements for the homologation of rolling stock in Hungary are higher than in most other EU Member States. The fees for the issue of a homologation certificate amount to approx. EUR 678. However, homologation certificates issued by other EU-Member States are recognised in Hungary. The allocation procedure is described as transparent.

Operating barriers

The contractual relations between RU and infrastructure manager are governed by a standard contract. It is possible to conclude framework agreements. The train path allocation process and the mechanisms for resolving conflicts are transparent and published in the network statement. The lead time for applications for a regular train path is eight months. Applications can also be submitted for ad hoc train paths. Path-specific information which is relevant for the application is provided in full on request.

In contrast to most other EU Member States, the infrastructure charging system in Hungary does not have a linear structure, but works on a declining scale, so that the longer the route, the lower the infrastructure charge rate. It also grants discounts for early bookings.

According to the infrastructure allocation body VPE, the average charge per train path kilometre for a standard train[84] on MAV infrastructure is

- EUR 2.70 for rail freight transport,
- EUR 2.05 for long-distance passenger transport, and
- EUR 2.80 for regional passenger transport.

Reservation fees for ordering train paths amount to EUR 1.78, both for regular and ad hoc applications. No reduction in infrastructure charges is permitted in case of faulty performance by the infrastructure manager. A performance regime has meanwhile been established as an incentive to improve quality.

Non-discriminatory access to other service facilities and services is fundamentally guaranteed in Hungary. However, the interviewed RUs stated that access to freight terminals and maintenance facilities was discriminatory in some cases.

[84] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

A standardised station charging system is published in the network statement. The average station charge is as follows:

- stop at Budapest main station: EUR 12.50 and a
- stop at a station in a small town: EUR 7.25.

The facility charging system for Hungarian infrastructure is also published in the network statement. Additional services are provided only by the infrastructure managers *MÁV* and *GYSEV*.

The traction current charging system in Hungary does not include provisions for deducting costs for recovered energy, nor any provisions for the transmission of electricity from alternative providers.

Although a market for the purchase and/or leasing of used traction stock and freight wagons exists in Hungary, the availability of passenger coaches is very limited.

VPE rates the scope for the training and recruitment of specialist personnel as positive. The European train driver's licence is recognised in Hungary.

RUs are permitted to lease appropriate sites in the Hungarian stations to enable them to set up their own ticket outlets. They can also use the sales platforms of the incumbent MÁV.

Accessible market

To date, public service contracts for passenger transport In Hungary have been awarded directly without negotiation procedures.

There is open access to rail freight transport, as was already the case three years ago. To date, only national RUs are active in the purely commercial passenger transport market.

COM Index

The modal split for rail declined in both the freight and passenger sectors between 2001 and 2008. During that period, the share of rail freight transport declined from 28.1 per cent to 20.6 per cent, rail passenger transport from 13.3 per cent to 12.3 per cent.

26 external RUs are currently licensed in Hungary, 20 of which actively provide rail transport.

As the *ÖBB* subsidiary *Rail Cargo Austria* has taken over the former incumbent *MÁV Cargo*, the market share of external RUs in the rail freight sector, in terms of traffic performance in tonne-kilometres, was well above 90 per cent[85] in 2009. At present, passenger transport in both the purely commercial and public service contract sector is provided exclusively by the incumbents *MÁV* and *GYSEV*.

[85] It should be noted that this expansion of the market share does not constitute an increase in competition, but is attributable solely to the sale of MÁV Cargo.

Conclusion

In the course of liberalising its rail market, Hungary has introduced an independent train path allocation body, VPE, in order to ensure non-discriminatory access to rail infrastructure. The rail market in Hungary is also monitored by the regulatory authority NKH. The rail freight transport market has been open for several years so that 20 RUs are meanwhile active in that segment in Hungary. Despite liberalisation of the purely commercial passenger transport market, there are still no external RUs active in that segment in Hungary apart from the incumbents MÁV and GYSEV. As the public service contracts for passenger transport are still awarded directly, no competition has arisen in that segment.

Sources

Interviews with representatives of the following institutions or companies:

- Győr-Sopron-Ebenfurti Vasút Részvénytársaság / Raaberbahn AG
- National Transport Authority NKH
- Ministry of Transport
- VPE
- MAV

A total of five external RUs were contacted.

Documents or websites:

- Website of National Transport Authority: www.nkh.hu
- Website of infrastructure allocation body: VPE: www.vpe.hu
- Network Statement 2011
- Report from the Commission to the Council and the European Parliament on monitoring development of the rail market

6.15. IE – Ireland

As in all previous publications of the LIB Index, Ireland is allocated to the third group and is thus once again in the Delayed group.

LEX Index

Organisational structures of the incumbent

The Irish incumbent *Iarnród Éireann* is a subsidiary of the holding *Córas Iompair Éireann*, which provides not only rail transport but also bus services through its two subsidiaries *Átha Cliath* and *Bus Éireann*.

As well as operating rail freight and passenger services, the incumbent also manages the whole Irish infrastructure. The infrastructure costs are itemised separately in the annual report pursuant to Directive 91/440/EC. Rail freight and passenger transport are separate from each other in accounting terms.

Regulation of market access

Ireland transposed Directive 2007/57 EC into national law with *S.I. No. 55 of 2010*. Since 1 January 2010, all domestic and foreign RUs have the possibility of offering cross-border rail passenger services in Ireland. Cabotage is also possible on international routes. Open access for RUs exists for rail freight transport as already mentioned in the LIB Index 2007. National rail passenger transport is still reserved by law for the incumbent *Iarnród Éireann*.

Non-discriminatory access to essential facilities is stipulated by law in *S.I. No. 55 of 2010*

Powers of the regulatory authority

Under an exemption valid until 15 March 2008, Ireland was not obliged to establish a regulatory authority pursuant to Directive 2001/14/EC. In spite of this extended implementation period, Ireland still does not have an independent regulatory authority today. However, the Ministry of Transport is responsible for monitoring competition and also acts as a body for registering complaints and can be contacted in any cases of discrimination. Up to now there is no transparent presentation of the regulatory powers or any documentation of the approach taken for procedures and sanctions.

In 2009, the European Commission took action against Ireland in the framework of infringement proceedings regarding inadequate implementation of Directives 1991/440/EEC and 2001/14/EC. The charges refer to the infrastructure charges that are not cost-related, inadequate incentives for reducing infrastructure costs and the lack of a performance regime. On its website, *Iarnród Éireann* states that *S.I. No. 55 of 2010* has introduced an appropriate structure for the infrastructure charges and also a performance regime. A detailed description of these changes is also contained in the report *Access Charging and Performance Regime* published on the Ministry website.

In addition, on 6 January 2011 the Irish Ministry published a law on *Rail Passengers Rights and Obligations* in order to comply better with the requirements of Regulation (EC) No 1371/2006 regarding passenger rights.

ACCESS index

Information barriers

The incumbent's website still does not provide any extensive network statement. While *Iarnród Éireann* has drawn up a network statement for 2011, it has not been published. Only the twelve-page document *Access Charging System & Performance Regime* gives restricted information about train path access in Ireland. According to the incumbent, further information is made available by e-mail on request. IBM gained positive experience during the study with regard to contactability and feedback of information from relevant institutions.

Administrative barriers

Operating licences are issued by the Irish Ministry of Transport (*Department for Transport, DfT)*. The corresponding requirements are stipulated by law in the statutory instrument *S.I. No. 537 of 2003*. The legal issuing period is three months. Licences issued in other EU Member States are recognised. Up to now, no experience has been gained regarding how long it takes to issue licences and examine those from other EU Member States. Licences are valid for an indefinite period and have to be reviewed every five years. The licence becomes invalid within six months if it is not used. The charges for issuing a licence are levied individually according to the time factor involved.

The issuing of safety certificates and homologation of rolling stock is the responsibility of the *Railway Safety Commission* (RSC)[86]. The corresponding statutory regulations are contained in the *Railway Safety Act 2005* and in the statutory instrument *S.I. No. 61 of 2008*[87]. In Ireland, safety certificates are issued within three months. They are meanwhile valid for five years. According to the RSC, some inspection certificates from other EU Member States are recognised. On the other hand, homologation of rolling stock is only recognised from Northern Ireland. The legal examination period for homologation of rolling stock issued in Northern Ireland is 122 days.

Operating barriers

Iarnród Éireann is still the only RU providing rail transport services in Ireland so that there are no empirical values regarding non-discriminatory access for external RUs.

The lead-time for applications for a regular train path in Ireland is eight months. The train path charging system is uniform and can be consulted on *Iarnród Éireann*'s website. There are no discounts for large volumes at present, but thought is currently being given

[86] The RCS is a specific railway body within the *National Safety Authority* (NSA).

[87] This statutory instrument transposes Directive 2004/49/EG (railway safety) into national law.

to introducing such discounts. *Iarnród Éireann* currently levies the following charges per train path kilometre for a standard train[88]:

- EUR 9.41 for rail freight transport,
- EUR 4.93 for regional passenger transport and
- EUR 2.97 for long-distance passenger transport

In addition, a reservation charge of 5 per cent of the infrastructure charge is levied together with a non-recurring registration charge per timetable period amounting to EUR 750.

According to *RSC, Iarnród Éireann* is the only training company and at the same time the only source for recruiting specialist personnel in Ireland. The statutory instrument *S.I. No. 399 of 2010* recognises the European train driver's licence pursuant to Directive 2007/59/EC.

Accessible market

External RUs have open access to the rail freight sector in Ireland, but not to the passenger market, with the exception of cross-border services. At present, all rail freight and passenger transport services are provided by the incumbent *Iarnród Éireann*.

COM Index

Compared to other RU Member States, the railway now no longer plays any real role in freight transport in Ireland. According to Eurostat, the rail share of the modal split fell from 4 per cent in 2001 to just 0.6 per cent in 2008. There was a marginal increase in passenger services from 3.2 per cent in 2001 to altogether 3.4 per cent in 2008. All rail transport services are provided by *Iarnród Éireann*. There are currently no external RUs.

In November 2005, Ireland published the state investment strategy *Transport 21* with a plan to expand the transport infrastructure between 2006 and 2015. On the railway sector, this large-scale project includes not only expanding the national infrastructure but also improving quality and enhancing efficiency. Various projects have already been concluded on the rail sector, including for example opening the line between Mallow and Midleton (*Cork Commuter Rail project)* in July 2009 together with the four-track upgrade of the Heuston-Hildare Line (*Kildare Rail Project)* between Cherry Orchard and Hazlehatch. The scope of investment involved in the *Transport 21* strategy is set at altogether EUR 34 billion. EUR 12 billion had already been invested by the end of 2010.

Conclusion

Ireland comes in last place in both the LEX and ACCES indexes. The position in the LEX index comes primarily from the still poor organisational structures of the regulatory authority and the closed national passenger transport market. While the Ministry performs

[88] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

certain regulatory tasks, the lack of competence regarding specific powers and the lack of any organisational separation means that the requirements made of an independent regulatory authority are not fulfilled. There is still no external RU operating in Ireland. The weak performance in the ACCESS Index therefore comes from a lack of experience with regard to administrative or operative barriers.

In 2010, Ireland transposed various EU Directives from the first, second and third railway package into national law by means of the *S.I. No. 55 of 2010* and the *S.I. No. 399 of 2010*. Up to now, it has not been possible to detect any practical implications from the updated legislation. External RUs have still not applied for any licences, safety certificates or train paths.

Sources

Interviews with representatives of the following institutions or companies:

- Department of Transport
- Iarnród Éireann
- Rail Safety Commission (RSC)

Documents or websites:

- Business report Córas Iompair Éireann 2009
- Business report Iarnród Éireann 2009
- Website of Transport 21 www.transport21.ie
- Website of the Department for Transport www.transp.ie
- Website of Iarnród Éireann www.irishrail.ie
- Website of the Railway Safety Commission www.rsc.ie

6.16. IT – Italy

Italy is allocated to the group On Schedule in 2011. This means that it is still in the second group, as in 2007, but the number of points it has achieved has improved considerably compared to the LIB Index 2007.

LEX Index

Organisational structures of the incumbent

Infrastructure and operations are separated in Italy in organisational, accounting, legal and functional terms. The infrastructure manager *Rete Ferroviaria Italiana S.p.A* (RFI) and the transport operator *Trenitalia S.p.A* both come under the umbrella of the *Ferrovie dello Stato S.p.A* holding (FS). Rail freight and passenger transport are separate from each other in accounting terms but do not have separate balance sheets.

Regulation of market access

Both foreign and domestic RU have open access to the rail freight market. This ruling is documented in the *Decreto Legislativo Nr. 188* dated 8 July 2003. As far as passenger transport is concerned, foreign RUs have open access for cross-border services. However, it is possible for access to cross-border services to be limited pursuant to Directive 2007/58/EC if this is detrimental to the economic equilibrium of passenger services under a public service contract. This is documented in *Decreto Legislativo Nr.* 99 dated 23 July 2009, Articles 58 and 59. Italy makes use of this restriction; the corresponding criteria are stipulated by the regulatory authority URSF (*Ufficio Regolamentazione del Servizio Ferroviario*).

Domestic RUs have open access to the market for providing passenger services, as already described in the LIB Index 2007. Public service contracts for passenger services are awarded directly and also offered in tendering procedures. Non-discriminatory access to all other service facilities pursuant to Directive 2001/14/EC Annex II is regulated in Italy in the *Decreto Legislativo Nr. 188* Article 20 a) to f) of July 2003.

Powers of the regulatory authority

The regulatory authority URSF (*Ufficio Regolamentazione del Servizio Ferroviario*) has been in existence for seven years and is a sub-division of the Italian Ministry of Transport. The URSF is responsible only for the railway sector; the authority has its own staff (currently ten employees), its own premises and own budget. Even so, in the framework of the current infringement proceedings initiated against Italy regarding inadequate implementation of the first railway package, the EU Commission is of the opinion that the authority is not sufficiently independent of the incumbent *Trenitalia* and the infrastructure manager *RFI*. The URSF does not publish an annual report at present.

It is easy to contact the regulatory authority URSF. Its remit comprises examination of the network statement, investigation of infrastructure allocation procedures and charges, as

well as monitoring competition. The regulatory authority is obliged to initiate investigations in response to complaints; it can but does not have to take action ex officio. Objections to URSF decisions have no suspensive effect.

In contrast to the LIB Index 2007, the regulatory authority can meanwhile order coercive measures up to EUR 500,000 and impose fines up to an amount of EUR 1 million. In recent years, the regulatory authority conducted and resolved ten investigation procedures.

ACCESS index

Information barriers

It is easy to identify personal contacts for obtaining information about market access and a licence in Italy. All the relevant information and documents relating to access to Italian rail infrastructure is published on the Internet by the various institutions. The corresponding documents are available primarily in Italian. The current network statement is also only published in Italian on the website of the infrastructure manager RFI (Prospetto informativo della rete, PIR). According to RFI, work is currently in progress on an English version.

Administrative barriers

Pursuant to the statutory regulations, applications for operating licences must be processed by the Ministry of Transport within three months. The interviewed RUs confirm that this deadline is met. The issued operating licenses are valid for both rail freight and passenger transport. They are valid for an indefinite period of time and have to be re-examined every five years. They are valid throughout the entire Italian infrastructure. The charge levied for issue of a licence amounts to EUR 5980. The same amount is demanded for the review after the fifth year. In the event of organisational changes to the RU, an amount of EUR 2820 is charged. The coverage of the insurance required by law currently amounts to EUR 50 million. According to an interviewed RU, there are currently plans to double the insurance amount in future. As far as the provision of this liability insurance is concerned, Italy currently has a monopoly situation with only one Italian insurance company offering a corresponding product at present.

Operating licences issued in other EU Member States are recognised in Italy without any further examination.

Safety certificates are issued by the national authority for railway safety *Agenzia Nazionale Sicurezza Ferrovie (ANSF)*. Safety certificates are valid for a period of five years. The legal period for dealing with applications is four months, but according to experience gained by the interviewed RUs, this deadline is frequently not met. The safety certificates are only valid for ordered train paths. The degree of detail in respect of requirements when issuing safety certificates is rated as high in a European comparison. The period for issuing Part B of safety certificates is met. Safety certificates become invalid after one year. The fee for issuing the safety certificate amounts to EUR 30,000. In contrast to the

LIB Index 2007, the interviewed RUs meanwhile rated the process for issuing safety certificates as transparent.

Homologation of rolling stock is also dealt with by the *ANSF*. There is no legal stipulation for the corresponding processing time in Italy, but the interviewed RUs indicated that homologation of rolling stock takes three to four months. The overall costs for homologation of rolling stock amount to up to EUR 60,000. According to an interviewed RU, homologation of rolling stock from other EU Member States is not recognised without separate examination.

Operating barriers

Train path allocation is carried out in Italy by the infrastructure manager *RFI*. The lead time for ordering standard train paths is eight months; applications for ad hoc train paths can be submitted at any time, according to the infrastructure manager.

The contractual relationships between the RUs and the infrastructure manager are based on a standard agreement; framework agreements can also be concluded. The transparency and uniformity of train path allocation is clearly explained in the network statement. This also applies to the mechanisms for resolving conflicts. Offer-relevant route information is made available without any restrictions, according to *RFI*. The RU is not required to make a declaration on line utilisation.

The infrastructure charging system in Italy is explained in uniform fashion in the *Decreto Ministeriale* DM43T/2001 and its amendment. It has a linear structure and does not grant any discounts for large volumes or early booking discounts.

The average charge per train path kilometre for a standard train[89] is

- EUR 2.70 for rail freight transport
- EUR 2.70 for long-distance passenger transport and
- EUR 5.00 for regional passenger transport
- EUR 12.50 on the high-speed line.

The charges are therefore high in a European comparison.

Train path cancellation is free of charge for RUs up to five days before departure; after this, cancellation charges of EUR 30 are levied.

No reservation charges are levied in Italy when ordering train paths; the charges are the same for standard train path procedures and for ad hoc procedures. It is currently not possible to reduce the infrastructure charges in case of faulty performance. On the other hand, the infrastructure charging system does include a performance regime.

The interviewed RUs rated access to other service facilities and services as partly discriminatory and difficult. Traction current supply facilities may be used through the infrastructure manager *RFI*. Refuelling facilities are only partly accessible and fuel supplies are not automatically warranted. According to the interviewed RUs, access to freight terminals is also limited in some cases. An ordinance issued by the Italian Prime Minister on

[89] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

9 July 2009 allows the infrastructure manager to sell any marshalling yards not deemed to be essential facilities to the incumbent *FS* and its subsidiaries. This means that external RUs only have non-discriminatory access pursuant to Directive 2001/14/EC to 71 facilities; interviewed external RUs felt that this was inadequate.

In December 2009, the infrastructure manager RFI gave the external RU *DB Schenker Rail Italia* only six weeks advance notice of being prohibited from using the Alessandria marshalling yard. The reason given was construction work at a terminal for hinterland traffic at the port of Genoa. An official complaint submitted by DB Schenker Rail Italia to the Italian competition authority was rejected.

Italy has a uniform, binding, linear traction current charging system with no remuneration for recovered energy. The transmission of electricity from alternative power suppliers into the traction current network is not possible at present.

External RUs are meanwhile able to purchase or lease used rolling stock. According to the incumbent *Trenitalia,* there are meanwhile good possibilities for training and recruiting specialist personnel, which constitutes an improvement in the situation compared to the LIB Index 2007. Furthermore, the European train driver's licence is recognised in Italy.

Up to now, it has not been possible for external RUs to lease appropriate sites in the passenger stations to enable them to set up their own ticket facilities. Österreichische Bundesbahnen (*ÖBB*) and Deutsche Bahn (DB*)* were recently refused corresponding permission. The RU *Arenaways* has also had similar experience. The companies are therefore forced to sell tickets for customers in Italy solely through the Internet, in the trains or outside the stations.

Just before purely commercial operation of the international route between Munich and Verona began with the external RUs *DB, ÖBB* and *LeNord*, the infrastructure manager *RFI* refused the company *Ferrovie Nord Milanol* cabotage on the Italian side. Passenger trains are not supposed to be allowed to stop between the Brenner border station and the terminus station because of an apparently detrimental effect on the economic equilibrium of regional passenger services operated under a public service contract. Apart from the section of line between Verona and Venice, this prohibition has meanwhile been temporarily suspended until the court hearing has reached a final decision. There are also reports of impediments in train path allocation and in access to the major stations and traffic hubs.

The external RU *Arenaways* reports that the infrastructure manager *RFI* has prohibited interim stops on the Milan-Turin line for the RU's purely commercial passenger service as this was said to compete with the passenger services performed by the *Incumbent Trenitalia* under a public service contract. Accordingly, trains could only stop at four instead of the planned 14 stations.

Accessible market

In Italy, public service contracts for passenger transport services are awarded both directly without negotiations and also offered in formal tendering procedures. According to the incumbent *Trenitalia*, the contracting entity can decide which procedure to choose.

The transparency provisions pursuant to Article 7 of Regulation (EC) No 1370/2007 are currently met. There is open access to purely commercial passenger transport.

COM Index

According to the Ministry of Transport, in Italy there are currently 30 external RUs operating on the overall infrastructure, including 14 providing passenger services. As from the end of 2011, the RU *Nuovo Transporto Viaggiatori S.p.A* (*NTV*) founded in December 2006 will be the first private RU to offer purely commercial high-speed services in competition with the incumbent *Trenitalia*, under the brand name *Italo*. The intention is to offer services between Milan and Turin, and from Rome to Venice and Bari.

Between 2006 and 2009, the external RUs in the rail freight market expanded their market share in terms of traffic performance in tonne-kilometres from 12 per cent to 20 per cent. With regard to public service contracts for passenger services, the market share of private RUs was hitherto less than one per cent in terms of traffic performance in passenger-kilometres. On adding state-owned external RUs offering regional passenger services, the market share of external RUs comes to about 10 per cent. In spite of open access, no RUs were involved in purely commercial passenger transport in 2009. As described above, since April 2010 *Arenaways* is the first RU offering purely commercial rail passenger services. From December 2011, NTV will be starting to operate high-speed train services in Italy. It is expected that the share of external RUs will see strong growth in this market segment in the next few years.

Rail freight transport's share of the modal split increased between 2001 and 2008 from 10.6 per cent to altogether 11.7 per cent. The rail share of passenger transport also increased over the same period from 5.4 per cent to 5.7 per cent.

Conclusion

Compared to the LIB Index 2007, Italy has undertaken many positive measures to liberalise the railway market. The decision powers of the regulatory authority URSF were enhanced, so that it is now able to order and impose coercive measures and fines. In addition, open access is granted to external RUs in purely commercial rail passenger transport on a national and international basis (albeit with restrictions). The appeal of this market is clearly revealed by the strong growth in the market share of external RUs in rail freight transport and by the new market players *DB*/*ÖBB*/*LeNord* in international transport together with *Arenaways* and *NTV* (from December 2011) in national rail passenger transport.

The situation is impaired by various complaints from external RUs about hindrance to market access in both rail freight and passenger transport, such as restricted access to essential facilities, the restriction of cabotage services or reports of irregularities in train path allocation.

Sources:

Interviews with representatives of the following institutions or companies:

- Ministero delle Infrastrutture e dei Trasporti
- Rete Ferroviaria Italiana (infrastructure manager)
- Trenitalia S.p.A. (incumbent)
- Ufficio Regolamentazione del Servizio Ferroviário (regulatory authority)

A total of five external RUs were contacted.

Documents or websites:

- Website of the infrastructure manager: www.rfi.it
- Website of the incumbent: www.trenitalia.it
- Website of the RU www.ntvspa.it
- Website of the Ministry of Transport: www.infrastruttureetrasporti.it
- Network Statement 2011
- Report from the Commission to the Council and the European Parliament on monitoring development of the rail market
- SNCF joins WESTbahn: www.wienerzeitung.at
- Arenaways website www.arenaways.com
- Eisenbahn-Revue 1/2011

6.17. LT – Lithuania

Although Lithuania 2007 had succeeded in moving up into the On Schedule group in 2007, various delays were identified when researching the LIB Index 2011 which have put the country back into the third group, Delayed.

LEX Index

Organisational structures of the incumbent

Lithuania began to liberalise its rail market in 2004. In the course of transposition of the first and second railway packages in 2006, the incumbent *Lietuvos geležinkeliai* (LG) was changed into a holding structure, which breaks down into the three divisions of freight transport, passenger transport and infrastructure. There is accounting, organisational and legal separation of the three divisions and separate balance sheets are published on the *LG* website.

As stated in the LIB Index 2007, Lithuania planned to transfer the rail infrastructure into a separate state-owned company at the beginning of 2008. However, this has still not been effect. In January 2011, the Lithuanian Ministry of Transport and Communications again announced its intention of hiving off the infrastructure division from *LG* and, in a second step, of separating the rail passenger and rail freight transport sectors.

Regulation of market access

Access to Lithuanian rail infrastructure is specified in the *Railway Transport Code*[90]. Pursuant to Article 28, every RU is entitled to access to public rail infrastructure provided it has a valid licence and a valid safety certificate. Domestic and foreign RUs thus have open access to the rail freight and passenger markets. Directive 2007/58/EC was transposed into national law in the course of the Lithuanian rail reform *Žin. 2004, No. 61-2182; 2010, No. 159-7204*.

Transport contracts in the passenger transport sector which is provided under a public service contract in Lithuania are awarded to the incumbent *LG* on a discretionary basis. As a fundamental principle, external RUs have the opportunity of offering purely commercial passenger transport services. However, the discretionary award to the incumbent constitutes a very high market entry barrier, as the company is to date the only RU to offer nationwide passenger transport services in Lithuania, so that RUs wishing to enter the market are able to offer services only in competition with the incumbent on lines which are already served.

Access to service facilities is governed by the *Rules on Rail Infrastructure Capacity Allocation (Governmental Act No 611/2006)*[91].

[90] Lt: *Geležinkelių transporto kodekso patvirtinimo*

[91] Lt: *DĖL viešosios geležinkelių infrastructūros pajėgumų skyrimo taisyklių patvirtinimo*

Powers of the regulatory authority

Certain changes to regulation have been effected in the course of the current Lithuanian rail reform. In case of complaints, RUs no longer contact the Lithuanian Ministry of Transport and Communications, but the Lithuanian *Competition Council*[92]. This applies particularly in case of complaints which refer to decisions issued by the infrastructure manager, the allocation of infrastructure capacities, and charging systems. All other regulatory activities are the responsibility of the *State Railway Inspectorate* (VGI)[93]. Its remit includes monitoring compliance with safety standards, promoting competition on rail, approving the network statement, and promoting improvements in the rail sector. Whereas the powers of the *Competition Council* are published in full on its website and states the wording of the relevant legislation, there is no transparent documentation of the powers of the *VGI*. The *VGI* reports directly to the Lithuanian Ministry of Transport and Communications, so that its political independence can be regarded as doubtful.

The following statements about the regulatory remit refer to the *Competition Council.* The authority is obliged to initiate investigations on request by any RU which believes it has suffered discrimination, and is entitled to do so ex officio. Objections to its decisions have a suspensive effect. The powers of the regulatory authority can be regarded as severely restricted, as it is neither entitled to order coercive measures nor to imposed fines. It has not as yet been able to acquire any practical experience in the rail sector.

Infringement proceedings were also initiated against Lithuania by the European Commission in 2009 owing to insufficient transposition of Directives 1991/440/EEC and 2001/14/EC. Amongst other things, the charges referred to the lack of a performance regime and diverse weak points as regards the regulatory authority, which was accused of having insufficient power to monitor the market and being too strongly under the influence of the Ministry.

ACCESS Index

Information barriers

The individual competences and contact addresses of the competent institutions are listed in the network statement of the infrastructure manager *LG*, which is available in Lithuanian and in English. The first point of contact for a newcomer is the *VGI*, which is responsible for issuing licences, safety certificates and the homologation of rolling stock. Although extensive information is available on the authority's website, it is only available in Lithuanian, as was the case in the LIB Index 2007.

Administrative barriers

The legally prescribed period for the issue of licences is one month. There are no up-to-date empirical values available about compliance with that period. In the LIB Index 2007, the Lithuanian Ministry of Transport stated that non-compliance with the prescribed period was common. Licences are valid for an indefinite period of time and are reviewed every five years. The licence fee amounts to an equivalent of EUR 300.

[92] Lt: *Lietuvos Respublikos konkurencijos taryba*

[93] According to: *Valstybinė geležinkelio inspekcija*

Safety certificates have to be issued within four months. Again, the empirical values indicate that the prescribed period is exceeded. Safety certificates are valid for an indefinite period of time and have to be reviewed every five years. If an RU has not been active on the rail network for more than six months, the safety certificate ceases to be valid. The fee system has a complicated. For example, the *VGI* has drawn up comprehensive price lists which state different fees for individual components and types of safety certificate.

Certificates for the homologation of rolling stock have to be issued within a period of four months in Lithuania. There are currently no empirical values available about compliance with that period. Homologation certificates issued by other EU Member States have been recognised since 1 July 2007.

The network statement of the infrastructure manager promises non-discriminatory access to Lithuanian infrastructure. However, as the incumbent *LG* is the only RU in Lithuania, no experience regarding access to infrastructure has yet been acquired by external RUs.

Operating barriers

The infrastructure charging system in Lithuania is uniform. The infrastructure charges are documented in the network statement. Since 15 June 2010, the infrastructure manager has granted discounts for both large volumes and early bookings, and accordingly is awarded lower points in this category than in the LIB Index 2007. The average charge per train path kilometre for a standard train[94] is

- EUR 6.85 for rail freight transport,
- EUR 5.50 for long-distance passenger transport, and
- EUR 3.45 for regional passenger transport.

If a train path is cancelled less than seven days before departure, the full infrastructure charge is payable.

Accessible market

There is 100 per cent open access to rail freight transport in Lithuania. Transport contracts for passenger transport provided under a public service contract are awarded on a discretionary basis to the incumbent *LG*. External RUs have the opportunity of offering purely commercial passenger transport in competition with the incumbent. However, no external RU has as yet made use of that option.

COM Index

According to Eurostat, the share of rail in Lithuania has declined in both freight and passenger transport in recent years. The modal split for rail in the freight transport market dropped from 48.3 per cent in 2001 to 41.9 per cent in 2008. Rail passenger transport meanwhile plays virtually no significant role at all in Lithuania, and the modal split fell from 2.5 per cent in 2002 to just 1 per cent in 2008.

[94] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

According to *LG,* the company carried 42.7 million tonnes of freight in 2009. Its rail freight division suffered a decline of 26.6 per cent between 2008 and 2009. The passenger transport division carried a total of 4.4 million passengers in 2009 and also suffered a 13.6 per cent decline in revenues.

On 15 September 2003, the four countries of Poland, Lithuania, Latvia and Estonia agreed on the fundamental technical parameters for the trans-European *Rail Baltica* line to enable international rail transport between the Baltic countries and the rest of the European Union. In December 2010, they agreed on the basic route layout *Tallinn – Pärnu – Riga – Bauska – Panevezys – Kaunas – Warsaw*. Construction of the Lithuanian section began in July 2010 and is scheduled for completion by December 2013. The national investments in the Lithuanian section of the line amount to EUR 196.8 million.

Conclusion

Lithuania has achieved only one of the lower rankings in all three Indices (ACCESS, LEX, COM). The modal split for rail has decreased again over the last few years in both the rail freight and passenger sectors. There are still no external RUs active in the Lithuanian rail market.

The latest rail reform measures transferred the regulatory powers of the Ministry to the *Competition Council*. The *State Railway Inspectorate* also handles certain regulatory tasks, in addition to issuing licences, safety certificates and the homologation of rolling stock. Market entry barriers exist amongst other things in that the allocation of competences is not transparent and that important information is still available only in Lithuanian.

Sources

Interviews with representatives of the following institutions or companies:

- Ministry of Transport and Telecommunications
- Competition Council of the Republic of Lithuania
- Incumbent Lietuvos geležinkeliai

Documents or websites:

- Diverse Eurailpress articles: www.eurailpress.de
- One article by Logistics Finland, dated 25.01.2011 www.logisticsturku.fi
- Network Statement 2010-2011 / 2011-2012
- Website of Lithuanian railway: www.litrail.lt
- Website of State Railway Inspectorate: www.vgi.lt
- Website of Ministry of Transport and Telecommunications: www.transp.lt
- Website of Competition Council of the Republic of Lithuania: www.konkuren.lt
- Website of TEN-T Executive Agency: tentea.ec.europa.eu

6.18. LU – Luxembourg

As in 2007, Luxembourg once again belongs to the third Delayed group.

LEX Index

Organisational structures of the incumbent

The national company of the Luxembourg railways (*Societé Nationale des Chemins de Fer Luxembourgeois – CFL*) is the incumbent in Luxembourg. The infrastructure and operation divisions are only separated in accounting terms. Separate balance sheets have been drawn up for freight and passenger transport since 2006. The rail network is owned by the Grand Duchy of Luxembourg and is operated by CFL on the basis of a contract for the procurement of business.

Regulation of market access

All RUs have open access to rail freight transport. In passenger transport, Directive 2007/58/EC has been transposed for the operation of cross-border services. Cabotage can be restricted in the framework of the Directive. This is documented in the *Mémorial Luxembourgeois A, No: 135* / 2010.

Up to now, public service contracts for passenger transport have been awarded directly to CFL. There is currently no purely commercial passenger transport in Luxembourg, although there is open access in principle.

Non-discriminatory access to other service facilities is prescribed in the *Reglement grand-ducal du 13 octobre 2006*.

Powers of the regulatory authority

Since September 2010, the *Institut Luxembourgeois de Régulation (ILR)* is the regulatory authority for the rail sector in Luxembourg. The ILR is a clear improvement as regulatory authority. It is comparable with the German *Bundesnetzagentur* in that it is also responsible for regulation of the telecommunication, post and energy markets. Its powers are published in the network statement. An annual report is published regularly on the ILR website. Its remit includes examination of the network statement and investigation of infrastructure allocation procedures and charges. Competition is monitored by Luxembourg's competition authority *Conseil de la Concurrence*.

ACCESS index

Information barriers

It is easy to identify personal contacts by phone for obtaining information about market access and a licence in Luxembourg. Together with Luxembourgish and French, the personal contacts usually also speak English and German. However, the network statement

is only published in French. In contrast to other European countries, the publication of relevant information on the Internet is rather meagre. While the personal contacts speak French, German and English in addition to Luxembourgish, most online information is published only in French.

Administrative barriers

Pursuant to Mémorial A n° 169, the Luxembourg railway authority *Administration des Chemins de Fer* (ACF) has been responsible for issuing operating licences, safety certificates and the homologation of rolling stock since 2009.

The legal period for processing applications for operating licences by the ACF is three months. The licences apply to both freight and passenger transport on the whole infrastructure. Operating licences issued in other EU Member States are recognised in Luxembourg. The issued licences are valid for an indefinite period of time and have to be reviewed every five years. The issuing fee amounts to EUR 4000.

As for the operating licences, the legal period for issuing safety certificates is three months. They are valid for the whole infrastructure, but are issued either for freight or for passenger transport. Safety certificates are valid for five years and the issuing fee amounts to EUR 4000. With regard to safety certificates issued in other EU countries, some test certificates of Part A of the safety certificate are recognised.

Experience indicates that it takes about three months for the homologation of rolling stock. The fees are invoiced according to the workload involved.

Operating barriers

Non-discriminatory access to services such as train control and the usage of points and branch lines is regulated in the network statement. Individual agreements are concluded between the RU and the infrastructure manager. Framework agreements can also be concluded. The transparency and uniformity of train path allocation is documented in the network statement. The lead-time for applications for a regular train path is eight months; applications for ad hoc train paths can also be submitted.

The infrastructure charging system in Luxembourg is uniformly documented in the network statement. It has a linear structure and does not grant any discounts for large volumes and early bookings.

The average charge per train path kilometre for a standard train[95] is

- between EUR 2.00 and EUR 3.00 for rail freight transport
- between EUR 2.00 and EUR 3.00 for long-distance passenger transport and
- between EUR 2.5 and EUR 3.00 for regional passenger transport

which is on average on a European comparison.

The costs for cancelling train paths depend on the lead-time. For example, only a flat-rate administration charge is levied for cancellations up to 30 days before the scheduled departure. The charges for cancellations made less than 30 days before departure are then

[95] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

graduated up to the full amount of the train path charge for cancellations less than three days before departure. The charges are the same for standard train path procedures and for ad hoc procedures. Train path charges can be reduced in case of faulty performance. A performance regime to improve quality is documented in the network statement.

It costs EUR 2.88 to stop at a station. This charge applies to all stations in Luxembourg, regardless of the size.

While non-discriminatory access to other service facilities and services is warranted in Luxembourg, up to now no experience has been gained in this respect given the lack of any competition in terms of external RUs.

Station and facility charges are published in uniform fashion in the network statement.

Used traction units, passenger coaches and wagons can be either purchased or leased with corresponding offers published on the website of the incumbent *CFL*.

According to the network statement, Directive 2007/57/EC has been transposed, possibilities for training specialist personnel are available.

Accessible market

As already in 2007, there is open access to rail freight transport in the Luxembourg. Purely commercial international rail passenger services are possible in the framework of Directive 2007/58/EC, although operation of passenger services under a public service contract is hitherto reserved for the incumbent *CFL*.

COM Index

The modal split of rail decreased drastically in recent years in both freight and passenger transport. Between 2001 and 2008, it decreased from 6.5 per cent to 2.5 per cent in rail freight transport; for passenger transport it fell in the same period from 5.1 per cent to 4.3 per cent.

There is still no external RU active in the national market in Luxembourg so that up to now there has been no change to the monopoly position of the incumbent *CFL* .

Conclusion

In setting up the railway authority ACF and assigning the regulatory tasks to the regulatory authority ILR in 2009, Luxembourg has taken important steps towards opening the market. As a result, Luxembourg shows a clear improvement compared to the LEX Index 2007. However, the market is still dominated by the incumbent *CFL* that has a monopoly position through the lack of external RUs. Therefore, no experience is available regarding open access to the market in Luxembourg. As in the last LIB Index, the country is still in the Delayed group.

Sources

Interviews with representatives of the following institutions or companies:

- CFL (incumbent)
- Ministry of Transport
- Railway authority *Administration des chemins de fer*
- Regulatory authority *Institut Luxembourgeois de Régulation*

Documents or websites:

- Network Statement 2011
- Website: www.legilux.public.lu
- Website of the incumbent www.cfl.lu
- Website of the regulatory authority www.ilr.lu
- Website of the railway authority www.railinfra.lu

6.19. LV – Latvia

Owing to the increasingly stringent requirements in the course of ongoing liberalisation in Europe, Latvia has only been allocated to the third group, Delayed, in this year's LIB Index. Whilst the country ranks in the midfield of the LEX Index, it achieved only one of the lowest rankings in the ACCESS Index, as no empirical values are available from external RUs and the conditions of access, such as high infrastructure charges, rank relatively poorly in an international comparison.

LEX Index

Organisational structures of the incumbent

As in the LIB Index 2007, Latvia has transposed all the Directives of the first and second railway packages into national law. The largest railway companies in Latvia are the state holding *Latvijas dzelzceļš* (LDz) inclusive of its subsidiaries, and the company *AS Pasažieru vilciens,* which is responsible for operating passenger transport. The latter was hived off from the *LDz Holding* in October 2008, but is still owned by the state. Five subsidiaries currently operate under the umbrella of the *LDz Holding:*

- *LDz Apsardze* (railway safety),
- *LDz Infrastructūra Ltd* (infrastructure),
- *LDz* Cargo (freight),
- *LDz Ritošā Sastāva Serviss* (rolling stock maintenance) and
- *LatRailNet* (infrastructure allocation).

There is organisational, accounting, legal and functional separation of infrastructure and operations. After the subsidiary was hived off, *LDz* remained active only in the international passenger transport sector, which has been handled by *LDz Cargo* in cooperation with *L-Ekspresis Ltd*[96] since 1 March 2009. With effect from 1 January 2011, an infrastructure allocation division, *LatRailNet,* was founded as part of the *LDz* holding.

Regulation of market access

Foreign RUs have open access to rail freight and international passenger transport. Latvia transposed Directive 2007/58/EC into national law in the legal ordinance *MK noteikumi No.854*. However, the country still restricts access to those passenger transports which have the principal objective of carrying passengers between two stations in different EU Member States. It is also entitled to refuse access if it would jeopardise the economic equilibrium of the national passenger transport market.

Domestic RUs have open access to rail freight and purely commercial passenger transport. Transport contracts for passenger transport provided under a public service contract have to date been awarded directly to the state-owned *AS Pasažieru vilciens*.

[96] L-Ekspresis Ltd is owner of the passenger coaches

Power of the regulatory authority

Latvian rail regulation has one distinguishing feature: in addition to the Latvian regulatory authority *State Railway Administration,* there is also another institution, the *Public Utilities Commission*, which handles additional regulatory tasks in the passenger transport sector. The remit of the *State Railway Administration* is documented in the *Railway Act,* in accordance with Directive 2001/14/EC. The tasks of the *Public Utilities Commission* include the fixing of charges, monitoring technical, quality and environmental aspects, as well as out-of-court settlement of disputes.

The powers of the regulatory authorities in Latvia are transparent and clear. However, it is doubtful whether the regulatory authorities are independent of political influence, as both the *State Railway Administration* and the *Public Utilities Commission* are directly answerable to the Latvian Ministry of Transport. They are obliged to initiate investigations in response to a complaint and can also do so ex officio. Their decisions are legally binding, but objections do not have a suspensive effect.

ACCESS Index

Information barriers

Most of the information about entering the Latvian railway market is available on the websites of the relevant institutions. The greater part of the information is provided in Latvian, English and Russian. The network statement is published on the website of the infrastructure manager *LDz Infrastructūra* in Latvian and English.

Administrative barriers

The issue of licences, which are valid for a period of five years in Latvia, breaks down into two parts. Whereas operating licences for rail freight transport are issued by the *State Railway Administration*, the *Public Utilities Commission* issues the operating licences for passenger transport. The statutory regulations concerning the issue of licences are specified in the government ordinances *No.4 (05.01.1999) - "The regulations of licensing of railway operators"* and *No.664 (30.08.2005) - "The regulations of licensing of public utilities"*. Licences issued by other EU Member States are recognised in Latvia.

In contrast to the LIB Index 2007, safety certificates are meanwhile issued only by the *State Railway Technical Inspection* without any involvement of the incumbent *LDz.* The issuing process is specified in Latvian government ordinance *No.168 (10.03.2008)*[97]. Licences are valid for a period of five years.

The homologation of rolling stock is the responsibility of the *State Railway Technical Inspection*. Some test certificates issued by neighbouring countries are also recognised in Latvia.

Operating barriers

The infrastructure charges are fixed by the *Public Utilities Commission* at annual intervals. The calculation is based on the infrastructure costs notified to *LDz*. The average

[97] "The procedure and criteria for issuing, suspending and revoking of safety certificates A and B parts"

charge per train path kilometre for a standard train[98] is EUR 9.55 for rail freight transport and between EUR 4.77 and EUR 5.71 for passenger transport.

The infrastructure charging system has a linear structure. Since 1 January 2011, infrastructure allocation has no longer been the responsibility of the infrastructure manager, but is done by *LatRailNet*, a newly established subsidiary of the *LDz Holding*. In addition to infrastructure allocation, *LatRailNet* is also responsible for fixing infrastructure charges.

Accessible market

There is open access to rail freight transport in Latvia. In 2009, transport contracts for passenger transport provided under a public service contract were awarded solely to *AS Pasažieru vilciens*, so that this market is currently closed to external RUs. In 2009, there was open access to the purely commercial passenger transport market. The only RU active in that sector is *LDz Cargo,* which provides international passenger transports in cooperation with *L-Ekspresis*.

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In addition to the incumbent *LDz,* two external RUs, *A/s Baltijas Ekspresis* and *A/s Baltijas Tranzita,* are active in the rail freight transport market. In 2009, the external RUs accounted for 22 per cent of traffic performance in this sector, which was twice as high as the figure in the LIB Index 2007. Passenger transport is almost entirely in the hands of the incumbents *AS Pasažieru vilciens (*national passenger transport) and *LDz* (international passenger transport). The external RU *Gulbene-Aluksne Railway* is also active in Latvia, but provides only passenger transport on a narrow-gauge line.

The modal split for rail in the freight transport sector decreased from 72.6 per cent to 61.3 per cent between 2001 and 2008. Its share in the passenger transport market fell from 8 per cent to 5.3 per cent during the same period.

In recent years, Latvia has made numerous investments in upgrading and modernising its national rail infrastructure. A list of the most important projects is contained in the *LDz* annual report. Latvia is also involved in the implementation of the trans-European *Rail Baltica* line.

Conclusion

In 2007, Latvia implemented the institutional separation of operations and infrastructure and in 2008 transferred the subsidiary responsible for passenger transport into an independent company. Since then, Latvia has had two incumbents. Two authorities, which are independent of the incumbent, are responsible for regulation, the issue of licences, safety certificates and homologation of rolling stock. As it has transposed the relevant EU Directives into national law, Latvia has now achieved a position in the midfield of the LEX Index.

[98] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

No new RUs have joined the Latvian rail market since the external RU *Starptautiskie pasažieru pārvadājumi* left the market in 2006.

Sources

Interviews with representatives of the following institutions or companies:

- State Railway Administration
- Incumbent LDz

Documents or websites:

- 2009 *LDz* Annual Report
- Network Statement 2011
- Website of Public Utilities Commission: www.sprk.gov.lv
- Website of State Railway Administration: www.vda.gov.lv
- Website of incumbent: www.ldz.lv
- Website of incumbent: www.pv.lv
- Website of Latvian Ministry of Transport: www.sam.gov.lv

6.20. NL – Netherlands

The Netherlands are allocated to the Advanced group in 2011, which means that the country is again in the first group, as in 2007.

LEX Index

Organisational structures of the incumbent

Complete separation of the infrastructure manager *ProRail* from the incumbent *Nederlandse Spoorwegen (*NS*)* took place in 2001. NS with its subsidiary *Strukton* merely performs construction and maintenance activities on behalf of *ProRail*. Separate balance sheets are drawn up for rail freight and passenger transport. In 2000, the freight division of NS was sold to the *Deutsche Bahn* subsidiary *Railion*, today *DB Schenker Rail*.

Regulation of market access

There is completely open access to the rail freight transport market. Foreign RUs have open access to cross-border services for purely commercial passenger transport. Cabotage services can also be offered; however, in passenger transport this is associated with the possibility granted to the corresponding authorities to restrict access pursuant to Directive 2007/58/EC. Access conditions are stipulated in Sections 27 and 57 of the Dutch *Railways Act*.

Public service contracts for passenger transport are awarded only on the basis of formal tenders. The tenders are sometimes for integrated bus and rail contracts. The situation is completely different for long-distance passenger transport. Here the market is closed to competitors until 2015, as the incumbent *NS* was awarded an exclusive franchise to operate city connections which are not under a public service contract (this covers about 90 per cent of the total rail infrastructure in terms of passenger-kilometres).

Powers of the regulatory authority

The regulatory tasks are performed by the independent regulatory authority *Nederlandse Mededingingsautoriteit (*NMa*)*. As well as regulating railway transport (and also the energy market) in the Netherlands, the NMa is also the country's national competition authority. Its website regularly publishes an annual report that provides information about its activities. Besides examination of the network statement, the regulatory tasks in the Netherlands also include investigation of infrastructure allocation procedures and charges, as well as monitoring competition.

In the case of complaints, the NMa must initiate investigations, while it can but does not have to take action ex officio. However, legal action against NMa decisions has a suspensive effect. Responsibility for taking decisions and functional powers are held by the same body at the NMa. The regulatory authority has been in existence for seven years and has the possibility of ordering coercive measures and imposing fines. These can amount to ten per cent of the annual revenues of the affected company. For example, in August 2008 a fine amounting to EUR 826,000 was imposed on the infrastructure man-

ager *ProRail* for repeated violation of the national Railways Act. It is further entitled to make both ex ante and ex post decisions. Legal appeal proceedings against decisions by the NMa take about six weeks.

Between 2007 and 2009, altogether 28 investigations were initiated by the regulatory authority, which acted ex officio in 16 cases. According to the NMa, more than 90 per cent of the investigations resulted in decisions based on violation of the regulatory law. Altogether the NMa currently has a workforce of about 370 employees, with seven involved exclusively in regulation of the rail market.

ACCESS index

Information barriers

According to the interviewed RUs, the identification of personal contacts for obtaining information about market access and a licence is easy and uncomplicated. All the relevant information and documents relating to access to the Dutch rail infrastructure are published on the Internet by the competent institutions. The corresponding documents are provided in both Dutch and English, particularly the current network statement.

Administrative barriers

Operating licences in the Netherlands are issued by the *Inspectie Verkeer en Waterstaat (*IVW*)*. Pursuant to the statutory regulations, corresponding applications must be processed by the Ministry of Transport within three months. The interviewed RUs confirm that this deadline is met. The issued operating licenses are valid for both rail freight and passenger transport on the whole Dutch infrastructure. They are valid for an indefinite period of time, but have to be reviewed every five years. The licences are issued free of charge. The interviewed RUs rated the licence issuing process as being very transparent. The insurance coverage required by law currently amounts to EUR 10 million. Operating licences issued in other EU Member States together with Switzerland and Norway are recognised in the Netherlands.

Together with operating licences, the *Inspectie Verkeer en Waterstaat* (IVW) also issues safety certificates. These are valid for three years. The legal period for processing applications is three months. The interviewed RUs indicated that this deadline is also met. The safety certificates are valid throughout the entire rail network. The degree of detail in respect of requirements for issuing safety certificates tends to be high on an European comparison. The period for issuing safety certificate Part B is met, safety aspects from the general Part A are not examined explicitly. Safety certificates in the Netherlands become invalid after one year if no transport services have been performed in this period. The fee for issuing the safety certificate amounts to EUR 30,000. As already in the last issue of the Liberalisation Index in 2007, the interviewed RUs criticised the transparency of the process for issuing safety certificates.

The IVW is also responsible for deciding on applications for homologation of rolling stock. The legal processing period of eight weeks is frequently not met according to the interviewed RUs. Homologation can take up to two years in exceptional cases. Here again,

the interviewed RUs rated the degree of detail in respect of the requirements as relatively high. The overall costs (capital costs, certificates, expert reports, tests, time factor etc.) can amount to more than EUR 3400. The *Memorandum of Understanding* for mutual recognition of the homologation of rolling stock signed in June 2007 with Switzerland, Austria, Germany and Italy is still in force. The interviewed RUs reported that there is room for improvement in the transparency of the process for issuing homologation of rolling stock, particularly with regard to the two Notified Bodies (a body which has been appointed to assess the compliance of the rail asset with the relevant technical standards) in the Netherlands *Lloyds* and *Kema*.

Operating barriers

Apart from the *Betuweroute,* train path allocation in the Netherlands is carried out by the infrastructure manager *ProRail*. The lead-time for standard train path allocation is five months which is very short on a European comparison. Applications for ad hoc train paths can be submitted at any time.

Contractual relationships between the RUs and the infrastructure manager usually consist of several standard agreements. Framework agreements can be concluded in the Netherlands. The transparent, uniform process of train path allocation is clearly presented in the network statement. This also applies to the mechanisms for resolving conflicts. Path-specific information which is relevant for the application is provided in full. The competent authorities may make use of the possibilities for restricting access to cabotage passenger services if this jeopardises the economic equilibrium of transports provided under a public service contract.

The infrastructure charging system in the Netherlands is explained in detail in the network statement. It has a linear structure and does not grant any discounts for large volumes or early bookings.

The average charge per train path kilometre for a standard train[99] is

- EUR 2.01 for rail freight transport
- EUR 1.74 for long-distance passenger transport and
- EUR 1.10 for regional passenger transport
- EUR 41.53 on high-speed lines

The charges are therefore relatively low on a European comparison.

No cancellation charges are levied for train path cancellations. Nor are any reservation charges levied for train path applications; the charges for standard train paths and ad hoc train path orders are the same. A performance regime is implemented with a bonus/penalty system. The bonus/penalty payments are settled at the end of a year.

Non-discriminatory access to other service facilities and corresponding service provision is warranted in the Netherlands by the infrastructure manufacturer or other service providers; according to the interviewed RUs, the system functions perfectly. Access to addi-

[99]Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

tional facilities, for example for preheating passenger trains, fuel provisioning etc. is ensured either by the infrastructure manager or by other providers.

The average station charge amounts to

- EUR 6.77 for stopping at the central station of a city and
- between EUR 2.63 and EUR 4.38 for stopping at the central station of a small town.

Train path allocation for the *Betuweroute,* which is used exclusively by rail freight transport between the port of Rotterdam and Zevenaar on the Dutch/German border, is carried out by the infrastructure manager *Keyrail*. A special ruling applies on this line; in contrast to the rest of the Dutch infrastructure, the train path charge levied for use of the *Betuweroute* is not calculated by weight but based solely on the number of train-kilometres. The network statement for *Keyrail* is currently only available in Dutch.

There is a uniform, binding traction current charging system in the Netherlands which is prepared by the cooperative *Vivens (Verenigd Inkoop en Verbruik van Energie op het Nederlandse Spoorwegnet)*. At present, there are no provisions for recovered energy or for the transmission of electricity. Besides electricity, Vivens also coordinates fuel sales and the altogether 19 refuelling possibilities owned by various RUs.

In contrast to the last issue of the LIB Index, there is meanwhile a market in the Netherlands for purchasing and leasing used rolling stock. The interviewed RUs rate the possibilities for training and recruitment as positive. The European train driver's licence is recognised. There are different wage models for remuneration of the train drivers which are reflected in differences in the wage levels between RUs and the incumbent.

External RUs are allowed to lease appropriate sites in the passenger stations for setting up their own ticket outlets. In addition, the sales channels of the incumbent *NS* can also be used.

Accessible market

While there is open access in rail freight transport, long-distance passenger transport is reserved to the incumbent *NS* through to 2015 on the basis of an exclusive franchise. The private RUs are currently making great efforts to prevent renewed direct award of the corresponding services. Similarly, domestic transport on the new high-speed line *HSL Zuid* which has connected Schiphol Airport with Antwerp in Belgium since the end of 2009 is reserved for a consortium called High Speed Alliance (consisting of *NS* and the airline *KLM*) in a 15-year franchise so that there is no open access to this service.

While up to a few years ago, public service contracts for passenger transport were freely awarded in the Netherlands, these are now subject to formal tender proceedings. Meanwhile 15 per cent of the transport contracts are awarded by tender proceedings. As a result, since 2003 several external RUs have succeeded in entering the market, including *Arriva* (meanwhile part of the *Deutsche Bahn* Group), *Veolia*, *Connexxion* and *Syntus* (a Joint Venture between the incumbent *NS* and a subsidiary of the French incumbent *(SNCF*).

COM Index

The following external RUs are active in regional rail passenger transport:

- Arriva
- Syntus, a Joint Venture between the incumbent NS and Veolia Transdev
- NoordNed
- Veolia, and
- Euro-Express-Traincharter B.V., a provider of special seasonal passenger trains.

Compared to the nine RUs in 2007, meanwhile 26 RUs are active on the rail freight segment in the Netherlands. This increase is also reflected in the strong growth in the market shares of external RUs: in rail freight transport, the competitors forged ahead with considerable expansion of their market share in the last three years with regard to traffic performance (in tonne-kilometres), reaching about 45 per cent in 2009.

In passenger transport under a public service contract, the market share of external RUs in terms of passenger-kilometres was about 12 per cent. The exclusive franchise granted to NS means that at present, no external RUs are active in purely commercial passenger services. The franchise covers 90 per cent (in terms of passenger-kilometres) of the total rail infrastructure.

The modal split of rail freight transport increased considerably from 3.4 per cent in 2001 to 4.9 per cent in 2008. By contrast, the rail share in passenger transport only saw moderate growth over the same period of time from 9.4 per cent in 2001 to altogether 9.7 per cent in 2008. These developments show that measures were taken in the Netherlands to considerably enhance the appeal of the rail sector compared to other means of transport.

Conclusion

In recent years, further steps have been taken in the Netherlands to continue opening the rail market. There is open access for international rail transports, and rail passenger transport under public service contracts is subject to formal tendering procedures. However, purely commercial passenger transport remains closed to competitors through to 2015 on account of the exclusive franchise granted to the incumbent *NS*. The regulatory authority *NMa* that has been in existence for seven years safeguards equal access to the rail infrastructure. Together with the good regulatory aspects, the relatively low practical market access barriers also contribute to the considerable increase in the number of active RUs offering freight transport services. Instead of the nine RUs in 2006, there are meanwhile 26 RUs operating on the rail freight segment. As in the last issue of the LIB Index, the Netherlands are still in the first Advanced group.

Sources

Interviews with representatives of the following institutions or companies:

- Ministry of Transport - Railway Directorate
- Office of Transport Regulation (NMa)
- *Nederlandse Spoorwegen* (incumbent)
- *ProRail* (infrastructure manager)
- *DB Schenker Rail Nederland*

A total of eight external RUs were contacted.

Documents or websites:

- Website of the regulatory authority: www.nmanet.nl
- Website of the licensing authority: www.ivw.nl
- Website of the infrastructure manager: www.prorail.nl
- Website of the infrastructure manager: www.keyrail.nl
- Website of the energy service provider: www.vivens.info
- Website of the consulting company www.railcargo.nl
- Network Statement 2011

6.21. NO – Norway

As in 2007, Norway is in the middle of the second On Schedule group.

LEX Index

Organisational structures of the incumbent

There is complete separation of infrastructure and operations (vertical separation) and of rail freight and passenger transport (horizontal separation). The incumbent has been divided into an infrastructure manager (*Jernbaneverket*), a rail freight operator (*CargoNet AS*) and a rail passenger operator NSB (*Norges Statsbaner).*

Regulation of market access

Nearly all passenger transport services under a public service contract are performed by the Norwegien incumbent *Norges Statsbaner (NSB)*. In 2005 the hitherto sole tender for regional public transport was won by the NSB subsidiary *NSB Gjøvikbanen AS* (formerly *NSB Anbud AS)*. According to the Norwegian Ministry for Transport, the contracts with NSB will expire in autumn 2011. However, no basic changes are planned to the access regime for the national market, so that in future, new contracts will again be awarded directly to the incumbent *NSB*, its subsidiaries or the state-owned *Flytoget AS*[100]. Open access is possible to a restricted extent for international transport services. This is stipulated in paragraph 2-1 of Norway's licensing regulations.

Pursuant to paragraph 2-2 of the licensing regulations, external RUs can also provide passenger services in Norway under the following conditions: [101]

- RUs providing transport services only in towns, suburbs or on their own infrastructure not belonging to the state rail infrastructure
- on lines that are no longer operated by the state-owned NSB for economic reasons
- operation of heritage railways.

In this framework, the Norwegian municipality of Hordaland[102] held a tender in 2008 to operate the town railway *Bybanen*[103] over altogether eleven kilometres of line. In April 2009, the joint venture company *Fjord1 Partner AS* won the tender over its competitors *NSB AS*, *Tide Bane AS* and *Veolia Transport Norge AS*.

In freight transport, the incumbent is the Norwegian company *CargoNet AS*, which emerged from hiving off the freight transport division *NSB Goods* from Norway's state-owned railway in 2002. The company shares are held by NSB with 55 per cent and the Swedish rail freight operator *Green Cargo AB* with 45 per cent.

[100] *Flytoget AS* is a state-owned RU that provides passenger services in the greater Oslo area between Drammen and the airport.

[101] cf. Network Statement 2011.

[102] conducted by the Norwegian Skyss authority.

[103] The 11km line runs between Byparken und Nesttun.

The Norwegian Ministry of Transport states that the following laws have been modified in 2009 in the light of new EU regulations and directives:

- Amendment to the Railways Act with regard to Regulation (EC) No 1371/2007 and Directive 2007/59/EC
- Amendment to the licensing regulations[104] with regard to implementing Directive 2007/58/EC and
- Amendment to the allocation regulations[105] with regard to implementing Directive 2007/58/EC.

Non-discriminatory access to other service facilities is stipulated in the allocation regulations *(Fordelingsforskriften)*.

Powers of the regulatory authority

Since 1 January 2009, the Norwegian Railway Authority *Statens Jernbanetilsyn (*SJT*)* has acted as the regulatory authority. Up to this point in time, tasks such as monitoring the market and accepting complaints regarding the railway market were performed by the Ministry of Transport.

Transfer of the regulatory competence has only slightly changed the actual powers of the regulatory authority. The SJT is now *obliged* to initiate investigations on application and *can* take action ex officio. Both ex-ante and ex-post decisions are possible. According to the Ministry, objections to decisions still have a suspensive effect. Coercive measures can be ordered and fines imposed.

ACCESS index

Information barriers

Information about access to the Norwegian infrastructure can be obtained from the website of the Ministry, the Railway Authority or the infrastructure operator *Jernbaneverket (JBV)*. Corresponding legal texts are available in English, although not always in the latest version. All personal contacts speak English.

Administrative barriers

The SJT issues licences, safety certificates and homologation of rolling stock. It does not levy any issuing fees. Legal provisions are contained in the licensing regulations *Lisensforskriften.* The legal period for issuing licences is three months. The licences are valid either for freight or passenger transport. Licenses issued in other states of the European Economic Area or Switzerland are recognised in Norway. According to the Norwegian Insurance Scheme, the coverage of the insurance required by law amounts to 4500G[106],

[104] Regulations on licensing, safety certification and access to the national railway network, and on safety authorisation to operate railway infrastructure.

[105] Regulations on the Allocation of Railway Infrastructure Capacity and the Levying of Charges for the Use of the National Railway Network.

[106] The National Insurance Scheme is defined with reference to a base value (G). This amounted to NK 72,881 (EUR 9396) on 1 January 2010.

which is the equivalent to EUR 42.3 million. No statutory minimum capital contribution is demanded by law.

Safety certificates must be issued by the Norwegian Railway Authority within four months. The issued certificate is valid for five years, but becomes invalid if not used in the year after which it was issued. Examination intervals are stipulated individually by the SJT, depending on the risk rating of the RU.

The homologation of rolling stock and commissioning authorisation must be issued within three months. There are currently no empirical values available regarding the homologation period and compliance with the process.

The network statement of the infrastructure manager JBV is also published in English. It provides transparent presentation of the train path allocation process and the mechanisms for resolving conflicts. The lead time for applications for a regular train path is eight months.

Operating barriers

In Norway, infrastructure charges are only levied for freight transport with a permissible axle load of more than 25 tonnes and for utilisation of the line between Etterstad and Gardermoen. Discounts are granted for neither large volumes nor early booking. Charges are also not levied for stopping at passenger stations, with the exception of the Gardermoen line.

Most service facilities and services are provided by the infrastructure manager *Jernbaneverket*. Maintenance facilities are provided by external service providers, such as *Mantena*, *Mitrans* or *Norsk Togteknikk*. Passenger stations and buildings are meanwhile partly owned by the NSB subsidiary *ROM Eiendom AS*.

According to the Ministry and JBV, there is no performance regime. Norway tested certain models in 2007, 2008 and 2009 but is still working at an appropriate solution.

Specialist personnel can be recruited and trained in the Norwegian Railway School *Norsk Jernbaneskole* founded in 2005.

Accessible market

Public service contracts for passenger services are awarded directly. As described above, all passenger services under a public service contract are currently operated by NSB or its subsidiaries. Purely commercial passenger transport is only possible on the Norwegian infrastructure to a very limited extent[107] - mainly just on lines that can no longer be operated economically by the incumbent. By contrast, there is open access to rail freight transport.

[107] cf. "LEX Index".

COM Index

According to Statistics Norway *(Statistisk sentralbyrå),* traffic performance in rail freight transport amounted to 3.7 billion tonne-kilometres in 2009. In addition to the incumbent CarboNet, the following rail freight undertakings operate on the Norwegian infrastructure[108]: *Cargolink AS, Green Cargo AB, Hector Rail AB, Malmtraffic AS, Peterson Rail AB, Railcare Tåg AB, Tågåkeriet i Bergslagen AB* and *TX Logistik AB*. Besides *CargoNet*, *Malmtraffik AS* is the largest rail transport provider. Together, both companies account for about 90 percent of total traffic performance in 2009. The rail freight share of the modal split fell between 2001 and 2008 from 16 per cent to 15 per cent.

In 2009, the Norwegian state railway NSB performed 2.7 billion passenger kilometres. By contrast, other RUs together only performed 382 million passenger kilometres. The rail share of the modal split scarcely changed in passenger transport. There was a marginal increase in the above-named period from 5 per cent to 5.1 per cent.

In spring 2009, the Norwegian Ministry of Transport published the *National Transport Plan 2010 – 2019.* The contents address the development of the transport infrastructure in Norway. This looks at both renewing and upgrading the rail infrastructure and at moving freight transport from the road to the rails and sea. In November 2009, the Ministry claimed to be investing the equivalent of EUR 500 million every year in the rail infrastructure. The country has thus increased its investment for the 4,114 km network by 25 per cent.

Conclusion

Access to rail passenger transport in Norway is still practically closed. As there are no plans to amend the corresponding laws in the near future, it can be expected that NSB will continue to operate passenger services essentially on its own in the next few years. Norway therefore only offers a market for rail freight transport. As the market for rail passenger services has been closed hitherto, this puts the significance of Europe's only free passenger train paths in perspective. While the LIB Index 2007 still revealed no growth in transport services by external RUs, positive changes have meanwhile emerged.

In spite of regulatory powers being transferred to the SJT, no major changes have taken place regarding further liberalisation of Norway's rail transport market.

Norway's National Transport Plan is setting clear signals for making greater use of the railway. While current legislation also opens access to external RUs for rail freight transport, as far as passenger transport is concerned it is primarily the incumbent *NSB* and its subsidiaries which will profit from the anticipated increase in the rail share of the modal split.

[108] This refers to Norwegian's main infrastructure, without secondary and private lines.

Sources

Interviews with representatives of the following institutions or companies:

- Norwegian Ministry for Transport and Telecommunication
- Norwegian National Rail Administration *Jernbaneverket*

Documents or websites:

- Statistics Norway (*Statistisk sentralbyrå)*
- Network Statement 2011/2012
- Website of the Norwegian Railway Authority www.sjt.no
- Website of the Norwegian infrastructure manager www.jernbaneverket.no
- Website of the incumbent www.nsb.no
- Website of the RU www.cargonet.no
- Website of the RU www.ofotbanen.no
- Website of the Norwegian government www.regjeringen.no

6.22. PL – Poland

As already in the LIB Index 2007, Poland is in the second group, On Schedule.

LEX Index

Organisational structures of the incumbent

The infrastructure and operations divisions of the incumbent *Polskie Koleje Panstwowe S.A.* (PKP) are today separated in organisational, accounting, legal and functional terms. Full separation of infrastructure and operations is planned in Poland in the next few years. No exact date had been stipulated on going to print. The freight transport and passenger transport divisions are the responsibility of *PKP Cargo S.A* and *PKP Intercity Sp.z.o.o.* respectively. At the start of 2009, PKP's regional transport subsidiary was taken over by Poland's Voivodships and operates meanwhile in competition to the incumbent. The infrastructure manager in Poland is *PKP PLK S.A.*

Regulation of market access

Open access for RUs in the rail freight transport sector has been possible since 2006. International passenger transport services can also be offered in the framework of the open access regime. However, in Poland access to national segments of cross-border services pursuant to Directive 2007/58/EC may be restricted where this would compromise the economic equilibrium of transports provided under a public service contract.

The market for purely commercial passenger transport is open for domestic RUs. Public service contracts for passenger transport are awarded both directly and through competitive tendering procedures. According to the Polish Ministry of Transport, the transparency regulations of Regulation (EC) No 1370/2007 are heeded.

Powers of the regulatory authority

The regulatory tasks pursuant to Directive 2001/14/EC are performed by the Polish Railway Authority *Urząd Transportu Kolejowego* (UTK), which also functions as the safety authority. Its remit includes examination of the network statement, investigation of infrastructure allocation procedures and charges, as well as monitoring competition. The UTK does not publish an annual report at present. The regulatory authority is obliged to initiate investigations in response to complaints; it can but does not have to take action ex officio. Legal action against UTK decisions has a suspensive effect. Coercive measures and fines can be imposed up to two per cent of the annual revenues of the RU concerned. It is further entitled to make both ex ante and ex post decisions. According to information supplied by the interviewed RUs, legal appeal proceedings take about twelve months. The UTK has a workforce of altogether 176 employees, including 20 who are responsible for railway regulation. No information is available at present about the number of investigation procedures and decisions taken in recent years by the UTK and whether these were positive or negative.

ACCESS index

Information barriers

According to the interviewed RUs, the identification of personal contacts for obtaining information about market access and a licence is easy and uncomplicated in Poland. All relevant information and documents relating to access to Polish rail infrastructure are published on the Internet by the corresponding institutions. However, most documents are only available in Polish. The network statement for 2011 has been published in both Polish and English on the website of the infrastructure manager.

Administrative barriers

In addition to regulating the railway market, the Polish railway authority UTK is also responsible for issuing licences and safety certificates as well the homologation of rolling stock.

The legal period for processing applications for operating licences is three months. The interviewed RUs in Poland complained that this period for issuing licences is frequently not met, indicating that the procedure is more likely to take twelve months instead. Under penalty of fines, the UTK staff are expected to complete the procedures within the stated period of time, but this is often not possible. The suspensive effect of additional details and requirements is the only way to avoid the fines, which often prolongs the procedures.

Operating licenses are valid for both rail freight and passenger transport. They are valid for an indefinite period of time but have to be reviewed every one to two years. They are valid throughout the entire infrastructure. The fee for issue of a licence amounts to the equivalent of EUR 1750. The interviewed RUs rated the licence issuing process in Poland as transparent. The insurance coverage required by law amounts to the equivalent of around EUR 10 million. Operating licences issued in other EU Member States are recognised in Poland in some case.

Safety certificates are valid for a period of five years. The legal period for dealing with applications is three months, which the interviewed RUs again indicated is scarcely met. As with the operating licences, safety certificates are valid for the whole infrastructure. According to the interviewed RUs, the degree of detail in respect of the requirements for safety certificates is average on a European comparison. On the other hand, the period for issuing Part B of safety certificates is met. It takes about 90 days to examine safety certificates from other EU countries. Safety certificates become invalid after one year in Poland. The fee for issue of a safety certificate amounts to the equivalent of EUR 5000. The allocation process for safety certificates is explained on the website of the UTK and is rated as transparent by the interviewed RUs.

The two month period allocated by law for processing applications for the homologation of rolling stock is again not met according to the interviewed RUs. It can take up to six months before an application for the homologation of rolling stock is processed. The RUs indicated that the degree of detail in respect of requirements is average on a European comparison. The transparency of the process for the homologation of rolling stock is mainly rated as positive by the interviewed RUs. The overall costs (capital costs, certifi-

cates, expert reports, tests, time factor etc.) can amount to up to EUR 25,000. A declaration from an RU regarding line utilisation is not required in Poland.

Operating barriers

Train path allocation is carried out by the infrastructure manager *PKP PLK S.A*. The lead time for applications for a regular train path is six months. Applications for ad hoc train paths can be submitted at any time.

Agreements between the RU and the infrastructure operator are normally concluded in the form of a standard agreement. Framework agreements can also be concluded. According to the Ministry of Transport, both the transparency and the uniformity of train path allocation is warranted. This also applies to the mechanisms for resolving conflicts. Path-specific information which is relevant for the application is provided in full on request.

The infrastructure charging system in Poland is explained in detail in the network statement. Early booking discounts are not granted, but there are provisions for discounts for large volumes. The charges are graduated according to train path and rolling stock weight. Additional charges play a significant role. All basic and additional charges are described in detail on the website of *PKP PLK S.A*.

The average charge per train path kilometre for a standard train[109] is

- EUR 3.21 for rail freight transport
- EUR 3.77 for long-distance passenger transport and
- EUR 1.65 for regional passenger transport

which is on average in a European comparison.

Reservation charges are levied when ordering train paths. The charges for regular and ad-hoc train paths differ. No provision exists in Poland for any reduction in infrastructure charges in case of faulty performance by the infrastructure manager, although a performance regime has been included in the train path charging system in order to improve the quality of service.

Non-discriminatory access to other service facilities and services is only partly guaranteed in Poland. For example, open access to maintenance facilities and refuelling facilities is not guaranteed.

In contrast to most other European countries, the station charging system in Poland is based on how long trains remain in the stations. According to the Ministry of Transport, the average station charge is EUR 0.27 per minute, regardless of whether the train has stopped at a station in a city or small town, so that this is a low level on a European comparison if it is presumed that trains do not remain at a station for more than five minutes.

Access to additional facilities, for example for preheating passenger trains, fuel provisioning etc. is ensured either by the infrastructure manager or by other providers.

[109] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

Poland has a standard, binding, linear traction current charging system. There are no remuneration provisions for recovered energy; the transmission of electricity from alternative providers is possible.

The lack of trained specialist personnel makes recruitment difficult in Poland according to an interviewed RU. However, the European train driver's licence is recognised in Poland. As far as remuneration of train drivers is concerned, there are clear differences between the wage structure used by the incumbent and external RUs.

External RUs are permitted to lease appropriate sites in the passenger stations to enable them to set up their own ticket outlets, but they have no access to the incumbent's sales facilities.

Accessible market

Up to now, most public service contracts for passenger transport were awarded directly, but Poland now has many EU-wide formal tendering procedures where services are awarded in competition. Arriva for example won a tender for its passenger transport services (10-year contract in the Kujawsko-Pomorskie Voivodship).

External RUs have open market access to both freight transport and purely commercial passenger transport in Poland.

COM Index

The modal split of rail in Poland has declined again in recent years as a result of the great increase in road and air transport. The decline applies to both freight and passenger transport. The rail share of the market for passenger transport fell from 6.9 per cent to 6.2 per cent between 2006 and 2008 and from 29.4 per cent in freight transport to a level of what is now 24 per cent. According to the Ministry of Transport, at present 40 external RUs are active in Poland, primarily in freight transport. Only one private RU, Arriva, provides passenger transport services under a public service contract. The other rail passenger operators are owned by the state or municipal authorities.

In rail freight transport, the market share of external RUs in terms of traffic performance in tonne-kilometres in 2009 was just about 30 per cent. External RUs saw a considerable growth in their market shares between 2006 and 2009. The market share increased from about 18 per cent in 2006 to about 30 per cent in 2009.

The share of external RUs in Poland has grown considerably since the regional transport provider *Przewozy Regionalne* was hived off from the PKP Holding and has meanwhile reached a level of 71 per cent[110]. *Przewozy Regionalne* accounts for 43.6 per cent and the also regionally owned *Koleje Mazowieckie* accounts for 20.4 per cent. Together, the two subsidiaries of the incumbent PKP covered a market share of about 29 per cent. However, when looking at the non-state-owned RUs, the market share of private RUs is only about five per cent. Although the market for purely commercial passenger transport

[110] cf. UTK statistics for the 3rd quarter 2010, December 2010

is open in Poland, up to now no external RU is active on this segment. Accordingly, the market share in this sector is zero.

Conclusion

Despite a declining share for the railway in the overall freight transport market, in recent years external RUs have increased their market share. In particular the former PKP subsidiary *Przewozy Regionalne,* meanwhile owned by the regional districts (Voivodships), frequently acts in competition to the incumbent. This can definitely be taken as a sign of functioning liberalisation on this market segment. However, as with the LIB Index 2007, RUs report that market access is exacerbated by a frequent failure to keep to the deadlines set for issuing licences and safety certificates. In addition, the partly restricted access to essential facilities also constitutes a barrier. On the other hand, they also indicate that previous restrictions to international freight transports at the German/Polish frontier no longer exist.

Sources

Interviews with representatives of the following institutions or companies:

- Railway authority Urząd Transportu Kolejowego (UTK)
- Incumbent PKP PR
- Ministry of Transport - Railway Directorate

A total of five external RUs were contacted.

Documents or websites:

- Network Statement 2011
- Website of the railway authority: www.utk.gov.pl
- Website of the incumbent: www.pkp.pl
- Website of the infrastructure manager: www.plk-sa.pl
- Website of the Ministry of Transport: www.mi.gov.pl

6.23. PT – Portugal

As in the LIB Index 2007, Portugal is allocated to the second group, On Schedule. The country performed slightly better than in the last Index.

LEX Index

Organisational structures of the incumbent

Portugal began the liberalisation of its rail market in 1997. Since then, there has been complete separation between the state and the incumbent and between infrastructure and operations. *Rede Ferroviária Nacional* (REFER) acts as an independent infrastructure manager pursuant to *Decreto-Lei n^{o}* 104/97. The incumbent *Comboios de Portugal* (CP)[111] is responsible for passenger transport, its subsidiary *CP Carga S.A.* has been responsible for rail freight since 2009. The breakdown of the incumbent into individual companies is governed by *Decreto-Lei n^{o} 137-A/2009*.

Regulation of market access

The legal regulations for the rail sector are specified in the Portuguese Railway Act *Decreto-Lei n^{o} 270/2003,* re-enacted in *Decreto-Lei n^{o} 231/2007* which also guarantees non-discriminatory access to service facilities.

The amendment *Decreto-Lei n^{o} 231/2007* provides for open access to rail freight transport, pursuant to Directive 2004/51/EC. Directive 2007/58/EC was transposed into national law by *Decreto-Lei n^{o} 20/2010*. Since then, it has been possible for RUs to offer purely commercial international rail passenger transport. In respect of access to international transport, Portugal exercises the restriction options of Directive 2007/58/EC, and the provision of cabotage transports is not permitted.

The Portuguese Railway Act allows national external RUs to operate both rail freight and purely commercial rail passenger transport. Apart from the incumbent *CP,* however, the Portuguese company *Travessia do Tejo Transportes SA (Fertagus)* is to date the only external RU which offers rail passenger services in Portugal[112]. It operates the route between *Lissabon Roma-Areeiro* and *Setúbal* under a franchise. The legal basis for the franchise is provided by *Decreto-Lei nº 78/2005.*

Powers of the regulatory authority

The *Ministério das Obras Públicas, Transportes e Comunicações* is responsible for drawing up guidelines for the development of the rail sector in Portugal.

The regulatory authority for rail transport in Portugal is the *Unidade de Regulação Ferroviária* (URF), which is integrated in the structures of the transport authority *Instituto da Mobilidade e dos Transportes Terrestres* (IMTT). *URF* is a rail-specific, functionally

[111] Until 28 October 2004, the incumbent operated under the name "*Caminhos de Ferro Portugueses*"

[112] Operation is based on a franchise agreement between Fertagus and the Portuguese government of 22 June 1999, which was renegotiated with effect from 8 June 2005.

independent unit, whose remit includes the economic and technical regulation of rail transport. The powers of the authority are documented in the Railway Act and in *Decreto-Lei nº 147/2007 art. 13*.

The regulatory authority has existed since 2007 and has dealt with eight proceedings since it was founded, issuing a total of four decisions to date. *URF* currently has four employees.

The powers of *URF* are specified in the Portuguese Railway Act, *Decreto-Lei nº* 433/82, re-enacted in *Decreto-Lei nº* 244/95, and *Decreto-Lei nº 142/2007*. *URF* is obliged to initiate investigations on request and is also entitled to do so ex officio. Its decisions are legally binding. Objections have no suspensive effect. The authority can make ex-ante decisions and is also authorised to impose fines up to a level of EUR 44,800.

In October 2009, the European Commission initiated infringement proceedings against Portugal for the insufficient transposition of Directives 1991/440/EEC and 2001/14/EC. Amongst other things, the country was accused of having insufficient independence between the infrastructure manager and the state, and of not having installed a performance regime.

ACCESS Index

Information barriers

The identification of contacts and information can be rated as easy. According to one interviewed RU, the provision of requested information takes a comparatively long time. Although most of the relevant information and documents are available on the Internet, most are only available in Portuguese[113]. One interviewed RU stated that despite the improved legal framework, the high degree of bureaucracy of the competent authorities constitutes a severe market entry barrier.

Administrative barriers

Licences, safety certificates and the homologation of rolling stock are issued by *IMTT.* The maximum period prescribed by law for issuing licences is three months and compliance with that period is usual. Operating licences in Portugal are optionally valid for rail passenger or rail freight transport. There are a total of eight different types of licences. Licences for both freight and long-distance passenger transport are valid throughout the entire network, whereas licences issued for regional passenger transport are valid only on the sub-network concerned. Operating licences are valid for a period of five years. Licences issued by other EU Member States are recognised in Portugal and verified within a few days. Insurance is compulsory and the minimum insured sum is EUR 10 million. Compared with other EU Member States, licence issue is comparatively expensive in Portugal, with a licence for rail freight for the entire network costing between EUR

[113] This applies in particular to the websites of IMTT/URF and of the Portuguese Ministry. The scope of information in any English versions which are available is reduced to a minimum.

37,500 and EUR 50,000, and a licence for rail passenger transport costing between EUR 50,000 and EUR 70,000[114].

Although the legally prescribed period for issue is three months, safety certificates are normally issued within one month. The degree of detail in respect of the requirements is rated as high. Verification of safety certificates issued by other EU Member States takes between 30 and 90 days. The fee for issue amounts to EUR 5000. Safety certificates are valid for a period of five years.

The homologation of rolling stock takes four months for electric multi-system locomotives for freight transport and regional diesel multiple units. The costs of homologation of rolling stock in Portugal amount to EUR 1500 per vehicle unit. Only homologation certificates issued in Spain are recognised in Portugal. This is because the rail infrastructure of both countries has the same gauge (1668 mm). The issuing process is transparent and published on the *IMTT* website.

Operating barriers

Access to Portuguese rail infrastructure is regarded as non-discriminatory. The allocation procedures and mechanism for resolving conflicts are transparent and clear and are published in the network statement[115] of the infrastructure manager *REFER*. The lead time for applications for a regular train path is eight months. The infrastructure charging system is defined in the Portuguese Railway Act and in *Regulamento 21/2005*. The average charge for a standard train[116] is between EUR 1.21 and EUR 2.01 per train path kilometre, the average station charge is EUR 1.73. The cancellation fees are relatively high: for example, RUs have to pay 10 per cent of the infrastructure charge if the train path is cancelled before the timetable comes into force. That percentage rises in increments, reaching 100 per cent if the train path is cancelled two weeks before the scheduled use.

Access to additional and ancillary services is rated as non-discriminatory. In Portugal, traction current can be obtained from external providers such as *EDP*, *ENDESA* or *IBERDROLA*. Since 2009, access to maintenance facilities has been provided not only by the infrastructure manager, but also by a joint venture founded by *Siemens* and *EMEF*[117].

Accessible market

Portuguese law envisages both tender procedures and discretionary award of contracts for rail passenger transport. The only line put out to tender so far is operated by the external RU *Fertagus* on the basis of an exclusive franchise. The contracts for all other lines were awarded directly to the incumbent. However, there is 100 per cent open access to the rail freight market.

[114] Freight transport sub-network: EUR 25,000 to EUR 35,000. Passenger transport sub-network: EUR 25,000 to EUR 50,000.

[115] This is currently available in English only for 2010.

[116] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

[117] EMEF is a subsidiary of the incumbent CP.

COM Index

Over the last few years, Portugal has suffered a decrease in rail passenger and rail freight transport. The modal split for rail freight fell from 6.7 per cent to 6.1 per cent between 2001 and 2008, the modal split for rail passenger transport from 4.4 per cent to 4.1 per cent in the same period.

Takargo - Transporte de Mercadorias S.A. is the only external RU apart from *CP Carga S.A.* which offers rail freight services in Portugal. As stated above, the only external RU in the rail passenger market is *Fertagus*, which operates regional rail passenger services across the river Tejo in the Greater Lisbon Area on the basis of a franchise. *Fertagus'* market share in terms of total traffic performance (passenger kilometres) amounted to approx. 9.3 per cent in 2009.

The entire *REFER* network had a total length of 2789 kilometres in 2009. Broad-gauge tracks with a gauge of 1668 mm make up 93.3 per cent of the network.

Conclusion

Portugal is allocated to the upper segment of the second group, On Schedule, of this year's LIB Index. Whereas the country performs well in the LEX Index compared with other EU Member States, it reaches only a midfield position in the ACCESS and COM Indices. The high score awarded in the LEX Index is attributable in particular to the vertical and horizontal separation of the organisational structures and the extensive powers of the regulatory authority. *Takargo* is the only external RU active in the national rail freight market apart from *CP Carga S.A*. Although formal tender procedures are possible for rail passenger transport under Portuguese law, none have as yet been conducted, apart from award of the franchise to *Fertagus*. Access to the market for rail passenger transport thus remains difficult, as in the LIB Index 2007.

Sources

Interviews with representatives of the following institutions or companies:

- Instituto de Mobilidade & Transportes Terrestres / Unidade de Regulação Ferroviária
- Transportes Sul do Tejo, SA (TST) / Arriva
- Fertagus
- Incumbent CP

A total of 2 external RUs were contacted.

Documents or websites:

- Diverse Eurailpress articles: www.eurailpress.de
- Network Statement 2010

- Eurostat statistics
- Website of IMTT: www.imtt.pt
- Website of URF: www.urf.imtt.pt
- Website of infrastructure manager REFER: www.refer.pt
- Website of Comboios de Portugal: www.cp.pt

6.24. RO – Romania

In 2011, Romania is allocated to the second group, On Schedule, as it was in 2007.

LEX Index

Organisational structures of the incumbent

In Romania, the incumbent *SNCFR* was split up into the following companies in 2003: *CFR Infrastructura S.A* (infrastructure manager), *CFR Marfa S.A.* (rail freight transport) and *CFR Calatori S.A.* (passenger transport). Accordingly, infrastructure is completely separate from operations. Full institutional and balance-sheet separation of the rail freight and passenger transport divisions is documented in *Emergency Ordinance 12/1998*.

Regulation of market access

Pursuant to *Government Decision 155/2005,* foreign and domestic rail freight operators have open access to Romanian rail infrastructure.

The transposition of Directive 58/2007/EC was effected by means of *Government Decision No. 812/2005*, which means that foreign passenger transport undertakings have open access to Romanian rail infrastructure for the operation of international transports.

The Romanian market for purely commercial passenger transport is open. In the market for passenger transport provided under a public service contract, the transport contracts are awarded in the form of invitations to tender, pursuant to *Emergency Ordinance OG 12/1998* concerning Romanian railway transport, as amended in 2004. Open access to other service facilities is explained in *Government Ordinance OG 89/2003*.

Powers of the regulatory authority

The regulatory authority in Romania is the Railway Supervision Council which was founded in 2003. It consists of up to seven experts who are appointed by the Minister of Transport for a term of four years. The Minister of Transport also has the right to remove these experts from office. The Council is chaired by the secretary of state who is responsible for railway transport. The powers of the regulatory authority are clearly documented in *Government Ordinance OG 89/2003*. Annual reports are published on the website of the Rail Supervision Council. although the most recent version dates back to 2007. The regulatory remit includes in some parts examination of the network statement, investigations regarding allocation procedures and infrastructure charging, and monitoring competition.

The regulatory authority is obliged to initiate investigations in response to complaints, but is not entitled to initiate investigations ex officio. Objections to a decision of the regulatory authority have a suspensive effect. Although it is entitled to order coercive measures pursuant to *OG 89/2003*, there are to date no provisions governing the level of such measures. Pursuant to *Government Decision 812/2005,* the regulatory authority in Romania is entitled to impose fines amounting to an equivalent of between EUR 1300 and 6300. One RU stated that court appeal proceedings take up to three months. Both the

processes and the outcome of compilation of the working timetable are examined by the regulatory authority.

ACCESS Index

Information barriers

According to the interviewed RUs, the identification of contacts for obtaining information about market access and a licence is difficult in Romania. For example, it can take up to 30 days for information to be provided. Most of the relevant information and documents relating to access to Romanian rail infrastructure are published on the Internet by the competent institutions. The information is available in Romanian and usually also in English. One positive experience when seeking information was that the national Romanian laws are all published and are available in full in English. The network statement which is published on the Internet is also available in both languages on the website of the infrastructure manager *CFR Infrastructura*. However, as it was published in December 2006, it appears likely that the information it contains is outdated.

Administrative barriers

Applications for operating licences, safety certificates and the homologation of rolling stock are processed by the Romanian Railway Authority (AFER).

The Romanian Railway Licensing Body (RRLB) is part of the AFER and is responsible for granting operating licences. One RU stated that the legally prescribed period for granting a licence is approx. one month, but that it can take up to two months in practice. Operating licences are valid for both rail freight and passenger transport throughout the entire Romanian rail network. Operating licences issued by other EU Member States are recognised in Romania. Operating licences are valid for a period of five years and have to be reviewed after one year. Unused licences cease to be valid after six months. The fee for issue of an operating licence is equivalent to approx. EUR 2000.

The Romanian Railway Safety Authority (RRSA) is part of the AFER and is responsible for the issue of safety certificates. The legally prescribed period for the issue of a safety certificate is four months, but in practice, they are frequently issued after two months. According to information supplied by the interviewed RUs, the degree of detail in respect of the requirements is moderate. Safety certificates are valid for both rail freight and passenger transport. The validity applies only to ordered train paths. The Romanian Railway Safety Authority recognises Part A of safety certificates issued by other Member States without further examination. Safety certificates in Romania are valid for a period of two years and have to be reviewed every year. The fees for the issue of a safety certificate amount to an equivalent of between EUR 750 and 1500.

The RRSA is also responsible for the homologation of rolling stock. According to the interviewed RUs, the legally prescribed period for the homologation of rolling stock is approx. one month, and experience has shown that that period is normally observed in practice. Homologation certificates issued by other EU Member States are also recog-

nised in Romania. The transparency of the allocation procedure is documented in *TMO 342/1999* and *290/2000*.

Operating barriers

Infrastructure access in Romania is governed by *Ordinance No. 89/2003* and handled by the infrastructure manager *CFR Infrastructura*. The contractual relations between RUs and infrastructure manager are negotiated individually. It is possible to conclude framework agreements. The train path allocation process and the mechanisms for resolving conflicts are published in the network statement. According to *CFR Infrastructura* the lead time for applications for a regular train path is six months. Applications can also be submitted for ad hoc train paths.

The infrastructure charging system in Romania is standardised and published in the network statement. It has a linear structure and grants neither discounts for large volumes nor for early bookings.

The average charge per train path kilometre for a standard train[118] is

- EUR 3.27 for rail freight transport,
- EUR 2.22 for long-distance passenger transport, and
- EUR 1.85 for regional passenger transport.

Cancellation fees for the cancellation of train paths prior to departure are graded as follows:

- up to the 30th day before departure: approx. EUR 0.06 per kilometre,
- up to one day before departure: approx. EUR 0.12 per kilometre,
- on the day of departure: EUR 0.18 per kilometre.

No reservation charges are levied in Romania in connection with train path applications, but differences apply as regards the charges for regular and ad-hoc train paths. A reduction in infrastructure charges is possible in case of faulty performance by the infrastructure manager in Romania, but no performance regime exists as yet as incentive.

Access to other service facilities and services in Romania is governed solely by the infrastructure manager *CFR Infrastructura.*

The station and facilities charging systems are published in the network statement. The traction current charging system in Romania has a linear structure and does not include remuneration for recovered energy. Nor are there any provisions for the transmission of electricity from alternative providers.

A market for the purchase and/or leasing of used traction stock exists in Romania. The scope for the training and recruitment of specialist personnel is rated positively and the European train driver's licence is recognised in Romania.

[118] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

RUs are permitted to lease appropriate sites in the Romanian stations to enable them to set up their own ticket outlets. They can also use RU-independent sales platforms.

Accessible market

External RUs have open access to the rail freight market. The transport contracts for passenger transport provided under a public service contract are put up for tender every four years. As a result, the incumbent CFR has meanwhile lost market shares to external RUs, such as *Regio Trans* or *Transferoviar,* in the course of individual tenders. However, the incumbent *CFR Calatori* still accounts for a share of more than 98 per cent of the passenger transport market.

COM Index

There are currently 24 external RUs active in Romania, four of which offer rail passenger services.

In the rail freight market, external RUs – in terms of traffic performance in tonne-kilometres in 2009 – meanwhile account for a market share of approx. 50 per cent. In the case of passenger transport provided under a public service contract, the share in 2009 was less than 2 per cent.

Between 2001 and 2008 the modal split for rail declined in both the freight and the passenger transport sectors. Whereas rail still had a share of 43.1 per cent of freight transport in 2001, by 2008 the figure had dropped to 19 per cent. Over the same period, the share of passenger transport was halved from 15.5 per cent to 7.6 per cent.

Conclusion

All the *CFR* companies are currently making substantial losses. There are plans to sell the freight operator *CFR Marfa* by mid-2011. Even the high market share of external RUs in the freight sector could not reverse the declining importance of rail in the Romanian transport market. External RUs report urgent need for investments in the rail infrastructure, which are however currently not being made. In the rail passenger transport market, external RUs have to date only acquired a market share of less than 2 per cent; however, they have only been active in this market segment for a very short time. The powers of the regulatory authority, which is affiliated to the Ministry of Transport, are comparatively limited and it is doubtful whether its employees are politically independent as long as they are appointed and dismissed directly by the Minister.

Sources

Interviews with representatives of the following institutions or companies:

- AFER: International Cooperation Department
- CFR Călători S.A.
- CFR Infrastructură S.A.
- CFR Marfa S.A.
- Ministry of Transports, Constructions and Tourism

A total of six external RUs were contacted.

Documents or websites:

- Emergency Ordinance 12/1998
- Government Decision 812/2005
- Website of AFER: www.afer.ro
- Website of regulatory authority: www.afer.ro
- Website of the Ministry of Transport: www.mt.ro
- Website of the RU www.transferoviar.ro
- Website of the incumbent www.cfr.ro
- 2007 Annual Report of the Railway Supervision Council
- Report from the Commission to the Council and the European Parliament on monitoring development of the rail market
- Network Statement 2006

6.25. SE – Sweden

Sweden has moved up into first place and has overtaken Germany and Great Britain since the LIB Index 2007.

LEX Index

Organisational structures of the incumbent

In the sub-category "Organisational structures of the incumbent", Sweden was again given full points, as in 2007. The established RUs in Sweden are independent of the state. Infrastructure and operations were already fully separated in 1988 (vertical separation). Rail freight and rail passenger transport are handled by two independent companies (horizontal separation).

The RUs which evolved from the former state railway – *SJ AB* (passenger transport) and *Green Cargo AB* (rail freight transport) – are still wholly owned by the state. Until 2010, *Banverket,* which specialised in rail transport, acted as infrastructure manager for the Swedish rail network. With effect from 1 April 2010, that organisation was transferred to the new authority *Trafikverket*, which is responsible not only for the management of rail infrastructure, but also for aviation, shipping and road transport.

Regulation of market access

Domestic and foreign RUs have open access to Swedish rail infrastructure, with one restriction in force on the line between Stockholm Arlanda airport and Stockholm central railway station, where the RU *A-Train* has an exclusive franchise until 2040 for operation of the Arlandaexpress[119]. The restriction is clearly specified in the network statement[120]. With few exceptions, such as charter and night trains, *SJ AB* had sole rights for the operation of purely commercial passenger transport until 2010. Since 1 October 2010, all domestic and foreign RUs are entitled to operate such transports. Formal public tender procedures are conducted by the individual regions in Sweden for passenger transport provided under a public service contract.

The transport authority *Rikstrafiken* (National Public Transport Agency), which was responsible for conducting tender procedures for long-distance passenger transport, was incorporated in the infrastructure manager *Trafikverket* with effect from 1 January 2011.

Access to other operating services is governed by Article 23 of the Swedish Railway Act *(Järnvägslagen)*.

Sweden has transposed the first and second railway packages into national law. Directive 2007/58/EC was enshrined in the Swedish *Railway Act (2004:519)* by virtue of legal act *Lag, number: 2009:694* with effect from 1 October 2010 and in the Swedish *Rail Regula-*

[119] The Arlandaexpress line was constructed between 1995 and 1999 and was financed almost exclusively by private investors. Since 2004, A-Train AB has been in the hands of the Australian Macquarie Group.

[120] Network Statement 2011: Chapter 2.2.2

tion (2004:526) by virtue of legal act *Förordning number: 2009:692*. The third railway package, on the other hand, has not as yet been fully transposed[121].

Powers of the regulatory authority

The Swedish railway agency JVS *Järnvägsstyrelsen* (Swedish Rail Agency) was transferred to the newly established body *Transportstyrelsen* (Swedish Transport Agency) on 1 January 2009. Again, its responsibility is not restricted to the rail sector, but also covers aviation, shipping and road transport. The *Railway Department* of the *Swedish Transport Agency* is responsible for the regulation, issue of licences, safety certificates and the homologation of rolling stock, as well as supervision of the rail sector.

The powers of the regulatory authority in Sweden are specified by law and its procedures in case of sanctions are transparent and clear. However, the decisions that have been issued are currently only available in Swedish in the authority's website.

The powers of *Transportstyrelsen* in respect of the rail sector are equivalent to those of the former regulatory authority. It examines all aspects of the network statement pursuant to Annex I of Directive 2001/14/EC. Pursuant to Section 11, Paragraph 2 of the Swedish Railway Act, its decisions are immediately enforceable. *Transportstyrelsen* can make both ex-ante and ex-post decisions. The authority is entitled to order coercive measures and to impose fines. It also examines the timetable compilation processes and the outcome (or the working timetable) as well as the charging systems.

Since 31 May 2009, *Transportstyrelsen* has published *Järnvägsstyrelsens trafikföreskrifter* (JFT), a manual which is separate from the *Swedish Rail Regulation* and contains the provisions that apply to the Swedish rail network. The manual is intended to inform the railway industry about changes in legislation and make it easier for them to apply the rules and regulations in practice.

The European Commission also initiated infringement proceedings against Sweden for insufficient transposition of Directives 1991/440/EEC and 2001/14/EC. The country was accused of not preparing separate profit and loss statements for operations and infrastructure management nor introducing a performance regime.

ACCESS Index

Information barriers

The provision of information in Sweden can be rated as good. Contacts are easy to identify and all relevant information is available on the Internet. The availability in different languages varies according to website: *Trafikverket* provides the most important informa-

[121] The Ministry of Transport stated that the European train driver's licence is still not recognised (so that Directive 2007/59/EC has not been transposed). The Ministry did not state whether Regulation (EC) No 1370/2007 had been transposed.

tion in 14 languages. The *Transportstyrelsen* website is in Swedish, with some parts also available in English[122]. Telephone contacts speak English and Swedish.

Administrative barriers

Licences, safety certificates and homologation of rolling stock are all issued by *Transportstyrelsen*. The applicable regulations and application forms can be downloaded from its website.

The legally prescribed period for granting operating licences is three months and is usually observed. Operating licences are valid for both rail freight and passenger transport. They are valid for an indefinite period of time and need not be reviewed. Operating licences issued by other Member States are recognised, verification takes approx. one month. Liability insurance is compulsory, with a minimum insured sum of the equivalent of EUR 34.3 million. There is no legally prescribed paid-up capital contribution, nor are fees charged for the issue of licences.

It takes three months for a safety certificate to be issued. Safety certificates are valid for the entire Swedish network and for a period of five years. A period of around 15 days is required for the verification of Part A of safety certificates issued by other Member States. The homologation of rolling stock takes 4 months. Homologation certificates issued by other EU Member States are recognised in part. Again, *Transportstyrelsen* does not charge fees for the issue of safety certificates or the homologation of rolling stock

Operating barriers

According to the latest information, there is non-discriminatory access to all services in the freight and passenger transport sectors. The contractual relationship between RUs and infrastructure manager is governed by individual agreements, according to the Swedish *Ministry of Enterprise, Energy and Communications*.

The network statement can be downloaded in English and Swedish from the *Trafikverket* website and gives a transparent description of the infrastructure allocation process. The lead time for applications for a regular train path is six months, which is relatively short compared with other EU Member States.

It is very difficult to calculate the average infrastructure charge in Sweden. The basic charge in Sweden is very low, amounting to an equivalent of between EUR 0.03 and EUR 0.19 per train path kilometre. The actual charges, however, are substantially higher as a result of various additional costs. For example, the infrastructure manager levies a special charge for passenger transport, a track charge, an accident charge and an emission charge. An equivalent of EUR 320 is charged for crossing the Öresund Bridge in each direction. Since 2011, a flat-rate congestion charge amounting to an equivalent of EUR 19 has been charged for crossing the cities of Stockholm, Gothenburg and Malmö[123]. No reservation charge is levied in connection with train path applications.

[122] The website provides extensive information (in Swedish) about national laws and transposition of the three railway packages into Swedish law. The latest version (2008/2009) of the annual sectoral analysis can also be downloaded from the site.

[123] This special charge is levied between 7:00-9:00 h and between 16:00-18:00 h on working days.

The charging system for service facilities is published transparently in the network statement. Service facilities are provided either by the infrastructure manager or by alternative providers on a non-discriminatory basis. Maintenance facilities are also offered by external providers such as *Alstom* or *Bombardier*. Ancillary and additional services, with the exception of monitoring dangerous goods transports, are available in the Swedish rail market. RUs also have access to most passenger information media.

According to information supplied by the Swedish Ministry, a market for used rolling stock exists in Sweden, so that traction stock, passenger coaches and freight wagons can be purchased or leased from the incumbent *SJ*. However, newcomers complain about the insufficient availability of locomotives in the purely commercial passenger transport market.

As stated above, the Directives of the third railway package have not yet been completely transposed into Swedish law. The European train driver's licence pursuant to Directive 2007/59/EC, for example, is not yet recognised.

Accessible market

Transport contracts are formally put out to tender in Sweden. As these essentially refer to transport contracts which guarantee exclusive rights, competition in the passenger transport sector primarily takes place for the market[124]. The Swedish Ministry has restricted access to the line between Stockholm Central and Arlanda Airport. According to *SJ,* purely commercial, inter-regional passenger transport is theoretically open to all RUs, but is de facto operated by only very few passenger transport companies owing to capacity bottlenecks. *SJ* operates 90 per cent of all inter-regional passenger transport.

At the end of 2009, the Danish state railway *DSB*[125] won several tenders for passenger transport provided under a public service contract. Since 12 December 2010, it has operated the regional shuttle services in Western Sweden as well as various routes which formed part of the Krösatåg tender[126]. *DSBFirst Sverige AB* has also operated trains across the Öresund between Denmark and Sweden in cooperation with its Danish affiliate *DSB* since 11 January 2009. The German DB subsidiary *DB Regio Sverige AB* also won a tender for a volume of 3.3 million train kilometres[127] for a ten-year period at the end of 2009.

At the end of 2010, the Finnish infrastructure manager *VR Track* won a tender conducted by *Trafikverket* for the maintenance of diverse lines, involving a volume of approx. EUR 90 million. The contract begins on 1 June 2011 and will run for 5 years.

[124] Cf. LIB Index 2007, p. 194

[125] Including subsidiaries of DSB

[126] The tender was won by the DSB subsidiary DSB Småland AB. The tender is valid as from December 2010 for a period of 8 years.

[127] As from December 2010: 3.8 million train kilometres

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The modal split for rail in Sweden suffered a slight decline of three per cent between 2001 and 2008. However, in 2008 it still accounted for a share of 35.3 per cent and is thus still above the average for the other EU Member States. In the passenger transport sector, on the other hand, the modal split increased from 8 per cent to 9.3 per cent in 2008.

The incumbent *Green Cargo AB* has a market share of approx. 44 per cent, which means that external RUs can be assumed to have a share of 56 per cent. The market share of external RUs in the passenger sector is approx. 45 per cent for transport provided under a public service contract and approx. ten per cent in the purely commercial passenger transport sector.

Other major rail freight operators in Sweden are *CargoNet AB, Malmtrafik i Kiruna AB*, *Hector Rail AB* and *TGOJ Trafik AB*. 30 per cent of all the RUs which are active in Sweden regularly provide passenger transport services. Important companies in addition to the state railway *SJ* are *Stockholmståg KB, A-Train AB (Arlanda Express), Veolia Transport Sverige AB, Svenska Tågkompaniet* and *Arriva Tåg AB.*

Conclusion

Access to the Swedish market is noticeable for its simplicity. There is completely open access to the freight and passenger transport markets. Formal tender procedures are conducted for all passenger transport provided under a public service contract. The exclusive rights of *SJ* to perform purely commercial passenger transport have been revoked, so that access is now restricted only on the line between Stockholm central railway station and Arlanda airport.

Access to Swedish infrastructure can be rated as very simple. Moreover, no fees are charged for the issue of operating licences, safety certificates or the homologation of rolling stock.

Non-discriminatory access to additional services is guaranteed by a strong regulatory authority with far-reaching powers. The market shares of external RUs are above average in comparison with other EU Member States. Rail also has a high share of the modal split in Sweden.

Sweden reorganised the powers of its regulatory authority by implementing organisational changes to its infrastructure management and regulatory processes. Observations of the current market situation have not revealed any negative effects of these structural changes on the railway market. Access and the provision of transport services remain simple and consequently make Sweden an attractive market for external RUs.

Sources

Interviews with representatives of the following institutions or companies:

- Swedish Transport Agency
- Incumbent SJ AB
- Incumbent Green Cargo AB
- Ministry of Enterprise, Energy and Communications

A total of five external RUs were contacted.

Documents or websites:

- Network Statement 2011
- Diverse publications of Transportstyrelsen
- Diverse Eurailpress articles: www.eurailpress.de
- Website of Arlandexpress: www.arlandaexpress.com
- Website of infrastructure manager: www.trafikverket.se
- Website of Swedish transport agency: www.transportstyrelsen.se
- Website of Swedish incumbent: www.sj.se
- Website of rail freight operator: www.greencargo.com
- Website of information department: www.samtrafiken.se
- Website of transport undertaking: www.hectorrail.com
- Website of national transport authority: www.rikstrafiken.se
- Website of Ministry: www.sweden.gov.se
- Website of transport undertaking: www.veolia-transport.se

6.26. SI – Slowenia

In 2011, Slovenia is again allocated to the second group, On Schedule, as it was three years ago.

LEX Index

Organisational structures of the incumbent

On 28.12.2010, the Slovenian parliament enacted a law to restructure the railway market, which involved reorganisation of the incumbent *Slovenske železnice (SZ)* as a holding structure with three subsidiaries (freight transport, passenger transport and infrastructure). Like the organisational structure in Switzerland, certain infrastructure functions (train path allocation and fixing of infrastructure charges) are to be assigned to a government body. Reintegration of the separated railway is intended to achieve cost optimisation and a better market presentation. To date, infrastructure and operations have been separated only in accounting terms.

Regulation of market access

In Slovenia, foreign rail freight operators have open access to rail infrastructure. This also applies to passenger transport for the operation of international transports, although an option exists for restricting access to international transports and national segments of international transports pursuant to Directive 2007/58/EC where this would compromise the economic equilibrium of transports provided under a public service contract.

Domestic RUs have open access in the rail freight sector and in purely commercial passenger transport. External RUs currently do not have access to passenger transport which is provided under a public service contract, which is reserved for the incumbent *SZ*. Access to other service facilities in Slovenia is guaranteed and published in the *Railway Transport Act*.

Powers of the regulatory authority

A rail regulatory authority was set up in 2007 and forms part of the Ministry of Transport. Pursuant to the recast of the Slovenian Railway Act, the regulatory authority is to be hived off from the Ministry as from April 2011 and amalgamated with the Department of Postal and Electronic Communications. The powers of the regulatory authority are explained on the official website of the Ministry of Transport. At present, no annual report is published. The scope for contacting the regulatory authority in Slovenia can be rated as impeccable. The contacts at the authority speak both English and German.

The regulatory remit includes examination of the network statement, investigation of infrastructure allocation procedures and charges, as well as monitoring competition.

In recent years, the regulatory authority has initiated nine investigation procedures, and has issued decisions in eight of these cases. According to information supplied by the regulatory authority, six of these decisions were positive. The regulatory authority is obliged to initiate investigations in response to complaints, but can also take action ex

officio. Objections to its decisions do not have a suspensive effect. However, the regulatory authority in Slovenia is neither authorised to order coercive measures nor to impose fines. It is, however, entitled to make both ex ante and ex post decisions. The regulatory authority also examines both the processes of working timetable compilation and the final outcome.

ACCESS Index

Information barriers

The identification of contacts for obtaining information about market access and a licence is uncomplicated in Slovenia. All the relevant information and documents relating to access to Slovenian rail infrastructure is published on the Internet by the competent institutions. The relevant documents are available in Slovenian and English. The network statement for 2011 has also been published in two languages on the website of the infrastructure manager.

Administrative barriers

Applications for operating licences, safety certificates and the homologation of rolling stock are processed by the Slovenian railway authority, *Javna agencija za zelezniski promet Republike Slovenije (AZP)*.

Pursuant to the statutory regulations, the issue of a licence in Slovenia should take a maximum of one month. There are no empirical values available on the time actually required for the issue of a licence. Operating licences are valid for both rail freight and passenger transport throughout the entire rail network. Operating licences issued by other EU Member States are also recognised in Slovenia, and the examination of these licences takes approx. one month. Operating licences issued in Slovenia are valid for an indefinite period of time, but have to be reviewed at five-year intervals. According to information supplied by the incumbent SZ, the fee for issue of a licence is EUR 1418. The transparency regulations relating to licence issue are documented in the "*Decree on the qualification procedure for the licensing of railway undertakings, the withdrawal of a licence or extension of its validity, and the notification procedure of foreign licensing authorities, 2007".*

The legal period for granting safety certificates in Slovenia is three months. According to SZ, the degree of detail in respect of the requirements is comparatively high. Safety certificates are valid for the whole network and apply to both rail freight and passenger transport. The Slovenian railway authority recognises Part A of safety certificates issued by other Member States without further examination. A safety certificate issued in Slovenia is valid for five years. The costs of issue – as for the issue of an operation licence – are EUR 1418. The allocation process is published transparently in the *Railway Transport Act, amend. 2009*.

The period allowed by law for processing applications for the homologation of rolling stock is 30 days. According to AZP, the degree of detail in respect of the requirements is high. The fee for the homologation of rolling stock is low, at EUR 35.50. According to the

infrastructure manager, homologation certificates issued by other EU-Member States are recognised in Slovenia. However, according to information supplied by one interviewed RU, the procedure is not very transparent.

Operating barriers

The contractual relations between infrastructure manager and RU are governed by a standard contract. It is possible to conclude framework agreements. The train path allocation process and the mechanisms for resolving conflicts are published in the Decree on Path Allocation and in the network statement. The lead time for applications for a regular train path is eight months. Applications can also be submitted for ad hoc train paths in Slovenia. Path-specific information which is relevant for the application is provided in full on request.

The infrastructure charging system in Slovenia is published in the network statement. It has a linear structure; it does not grant discounts for early bookings, but includes a provision for discounts for large volumes.

The average charge per train path kilometre for a standard train[128] is

- EUR 1.12 for rail freight transport,
- EUR 0.67 for long-distance passenger transport, and
- EUR 0.45 for regional passenger transport,

which is very low in a European comparison.

Cancellation fees are as follows:

- less than six hours before departure: 100 per cent of the infrastructure charges,
- less than two days before departure: 50 per cent of the infrastructure charges,
- no fees are payable for cancellations made more than two days before departure.

No reservation charges are levied in Slovenia in connection with train path applications, but the charges for regular and ad-hoc train paths differ. No reduction in infrastructure charges is permitted in case of faulty performance by the infrastructure manager. No performance regime aimed at improving quality exists as yet.

Access to other service facilities and services in Slovenia is governed primarily by the infrastructure manager. Refuelling facilities are also ensured by alternative providers such as *Petrol*. RUs have to sign a separate agreement with the railway authority AZP for the use of freight terminals and maintenance facilities.

The station and facilities charging systems are published in the network statement. The traction current charging system in Slovenia has a linear structure. There are no remuneration provisions for recovered energy. There are currently no provisions for the transmission of electricity from alternative providers in Slovenia.

A market for the purchase and/or leasing of used traction stock and freight wagons exists in Slovenia. The availability of passenger coaches is however very limited at present.

[128] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

The scope for the training and recruitment of specialist personnel is rated positively.

Accessible market

External RUs have open access to both the rail freight sector and the purely commercial passenger market in Slovenia. The operation of passenger transports under a public service contract is permitted only by the incumbent SZ.

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The modal split for rail freight transport in 2001 amounted to 27 per cent. By 2008, that share had fallen to 17.8 per cent. In the passenger transport segment, the modal split amounted to 2.9 per cent in 2001 and remained constant up to 2009.

In rail freight transport, the market share of external RUs in terms of traffic performance in tonne-kilometres in 2009 was seven per cent; to date, no external RUs are active in the passenger transport.

According to AZP, two undertakings in addition to the incumbent *SZ* have received licences to operate rail freight transport:

- *Adria Transport organizacija in izvajanje zelezniskih prevozov d.o.o (ADT)*, which was founded as a joint venture of *Graz-Köflacher Bahn and Busbetrieb GmbH* and the port of *Koper*
- and the Slovenian port operating company *Luka Koper*.

However, only *ADT* is active on the Slovenian rail network. The company offers hinterland transports from the Mediterranean port of Koper to Austria and Romania.

Conclusion

External RUs have open access to rail freight and purely commercial passenger transport in Slovenia. The market for passenger transport services provided under a public service contract, on the other hand, is still closed to external RUs; these services are permitted only by the incumbent *SZ*. To date, only one external RU (ADT) is active in the Slovenian freight transport market. However, that operator has succeeded in achieving a market share of seven per cent since it was founded in 2005. The resolved reorganisation of the incumbent *SZ* is intended to achieve a reduction in costs and raise the attractiveness of rail. These are necessary steps to curb a further decline in rail's share of the modal split, especially in the freight transport segment.

Sources

Interviews with representatives of the following institutions or companies:

- Ministry of Transport
- Public Agency for Rail Transport of the Republic of Slovenia
- Slovenske železnice (SŽ)

A total of two external RUs were contacted.

Documents or websites:

- Network Statement 2011
- Report from the Commission to the Council and the European Parliament on monitoring development of the rail market
- Ministry of Transport: www.mzp.gov.si
- RU ADT www.adria-transport.com
- RU Luka Koper www.luka-kp.si

6.27. SK – Slovakia

This year, Slovakia is in the second group On Schedule as already in 2007. However, the country has undergone clear improvements so that Slovakia has moved up within this group from eight to fourth place.

LEX Index

Organisational structures of the incumbent

There has been separate ownership of infrastructure and operations in Slovakia since 2002. Vertical separation of the divisions is explained in the national railway laws Nr. 258/1993, 513/2009 and 514/2009. While operation of the infrastructure is warranted by *Železnice Slovenskej republiky* (ŽSR), up to 2005 the company *Železničná spoločnosť Slovensko, a.s.* (ŽSSK) was responsible for operations. This company was replaced in 2005 by two independent companies with separate balance sheets, on the one hand *Železničná spoločnosť Slovensko, a.s.* (ŽSSK) and on the other *Železničná spoločnosť Cargo Slovakia, a.s* (ŽSSK Cargo), which are responsible for rail passenger transport and rail freight transport respectively.

Regulation of market access

In cross-border transport services, foreign RUs have open access both on the rail freight sector and also for purely commercial passenger transport. This is documented in the national ordinances 109/2005 and 514/2009. Directive 58/2007/EC has been transposed into national law.

Domestic RUs also have open access to the national market for rail freight and purely commercial passenger services. Up to now, passenger transport services under a public service contract have been awarded directly to the incumbent. The transparency regulations of Regulation (EC) No 1370/2007 are heeded.

According to the infrastructure manager ŽSR, non-discriminatory access to other service facilities is documented in ordinance 513/2009.

Powers of the regulatory authority

The tasks of the regulatory authority pursuant to Directive 2001/14/EC are performed by the railway authority *Úrad pre reguláciu železničnej dopravy (*ÚRŽD*)* which has been in existence since 2006. Its remit includes examination of the network statement, investigation of infrastructure allocation procedures and charges, as well as monitoring competition. The ÚRŽD is an independent, railway-specific organisation.

The regulatory authority is obliged to initiate investigations in response to complaints; it can but does not have to take action ex officio. An objection to a decision by the ÚRŽD has a suspensive effect. It can order coercive measures up to an amount of EUR 3000 and impose fines of up to EUR 30,000. Ex ante and ex post decisions are possible. According to information supplied by the interviewed RUs, experience shows that legal appeal proceedings take between 12 and 36 months.

ACCESS index

Information barriers

It is easy to identify personal contacts for obtaining information about market access and a licence in Slovakia. In addition to the Slovakian language, all personal contacts speak English and frequently also German. However, information and documents regarding access to the Slovakian infrastructure are only partly published on the internet by the corresponding institutions, thus making it harder to obtain information. The network statement for 2011 has been published in both Slovakian and English on the website of the infrastructure manager ŽSR.

Administrative barriers

In addition to regulating the railway market, the railway authority ÚRŽD is also responsible for issuing licences and safety certificates as well the homologation of rolling stock.

Applications for operating licences have to be processed within the legal period of three months, which has been met up to now according to the interviewed RUs. Operating licenses are valid for the entire national infrastructure for both rail freight and passenger transport. They are valid for an indefinite period of time and have to be re-examined every five years. The fee for issue of a licence amounts to around EUR 500. However, the interviewed RUs criticise the lack of transparency in the process for issuing licences. Operating licences issued in another EU Member State or in Switzerland are recognised in Slovakia.

The legal period for processing applications for safety certificates is four months; according to the interviewed RUs, this is frequently not met. The safety certificate is valid for five years and applies to the whole infrastructure. The degree of detail in respect of the requirements is average in a European comparison. Part A of safety certificates issued in another EU member State or in Switzerland is subject to additional examination. However, no experience has been gained up to now in how long this takes. Safety certificates become invalid after one year. A fee of approximately EUR 100 is charged. By act of *Section 88 (2)* of the railway law No*. 513/2009,* the safety authority has to draw up and publish a list of the necessary requirements and documents needed for issuing a safety certificate.

By law, homologation of rolling stock should be issued within two months, but no empirical values are currently available regarding compliance with this deadline. The charges amount to about EUR 100, which is a very small amount in a European comparison. Homologation of rolling stock issued in other EU Member States and in Switzerland is recognised in Slovakia. However, the interviewed RUs criticise the lack of transparency in the issuing process.

Operating barriers

The infrastructure manager ŽSR is responsible for train path allocation. Agreements between the infrastructure manager and the RU are concluded in the form of individual agreements. By contrast, in most other Member States standard agreements are con-

cluded. Framework agreements can be concluded. The transparency provisions for the mechanisms for resolving conflicts are anchored in ordinance No. 513/2009. The lead time for ordering standard train paths in Slovakia is 10 months, applications for ad hoc train paths can be submitted at any time. Path-specific information which is relevant for the application is provided to the RU in full on request.

The calculation of infrastructure charges is regulated in a uniform manner on the official website of the infrastructure manager ŽSR and in ordinance No. 654/2005. Discounts for large volumes are granted in Slovakia. According to information provided by the infrastructure manager ŽSR, the average charges per train path kilometre for a standard train[129] amount to

- EUR 10.30 for rail freight transport
- EUR 2.06 for long-distance passenger transport, and
- EUR 0.86 for regional passenger transport

No reservation charges are levied when ordering train paths, although the charges do differ for standard and ad hoc train path orders. There are currently no possibilities for reducing the train path charges for faulty performance in Slovakia, nor is there a performance regime. However, the state has concluded a performance agreement with the infrastructure manager that stipulates defined KPIs and fines in the event of non-compliance with previously defined targets.

Non-discriminatory use of essential facilities is safeguarded as a rule by the infrastructure manager ŽSR. Furthermore, other companies offer the use of their freight terminals, storage sidings and maintenance facilities.

A uniform, transparent station pricing system is anchored in ordinance No. 654/2005. According to the infrastructure manager ŽSR, the average station charge amounts to about EUR 0.52 for stopping at a central station, regardless of whether this is in a city or small town. A facilities charging system is documented in ordinance No. 3/2010. In contrast to the Liberalisation Index 2007, where both station and facility charges were already covered by the infrastructure charges, there are now separate charging systems for stations and facilities.

The traction current charging system is linear in structure. No remuneration is made for recovered energy. Nor is the transmission of electricity possible. Non-discriminatory access for external RUs to all travel information media is explained in ordinance No. 513/2009. Slovakia has a market for purchasing or leasing used rolling stock. The recruiting and training of specialist personnel is possible.

Accessible market

In Slovakia, passenger transport services under a public service contract are awarded directly at present; however, formal tendering procedures should also be possible at the latest as from 2012, according to information provided by the infrastructure manager

[129] Details of the composition of a standard train are given in Chapter 4.4.2 on page 43.

ŽSR. The transparency provisions pursuant to Article 7 of Regulation (EC) No 1370/2007 are met in Slovakia.

External RUs have open market access to both freight transport and purely commercial passenger transport in Slovakia.

COM Index

The rail share of the modal split in Slovakia has continued to decrease in recent years. The decline applies to both freight and passenger transport. The share in freight transport fell from 42.4 per cent in 2001 to 23.4 per cent in 2008. In passenger transport, the rail share of the modal split fell from 8 per cent to 6.5 per cent in the same period.

According to the infrastructure manager ŽSR, there are altogether 27 external RUs operating in Slovakia, mainly providing rail freight services. In spite of the 27 licensed external RUs, their market share in rail freight transport only accounted for four per cent in 2009 in terms of traffic performance in tonne-kilometres. Although there is open access to the market for purely commercial passenger transport in Slovakia, up to now no external RU is active in this segment. Only the incumbent *ŽSSK* is active on the market for passenger transport services under a public services contract.

Conclusion

There is separate ownership of infrastructure and operations in Slovakia. Rail freight undertakings have open access to the Slovakian infrastructure. Transport agreements for passenger transport services under a public services contract are currently still awarded exclusively to the incumbent *ŽSSK*, but formal tendering procedures are to be introduced by 2012. The infrastructure charges for rail freight transport are relatively high in a European comparison. Hitherto, external RUs have only a small market share of four percent of traffic performance in rail freight transport. The rail share of the modal split has also declined in recent years. However, Slovakia has created the necessary framework conditions for liberalising the railway sector in recent years, resulting in the country's clear improvement in the LIB Index compared to 2007. The main point of criticism brought up by the interviewed RUs is the lack of transparency in issuing operating licences and safety certificates.

Sources

Interviews with representatives of the following institutions or companies:

- ÚRŽD – Úrad pre reguláciu železničnej dopravy
- Ministry of transport, posts and telecommunications
- ŽSR – Železnice Slovenskej republiky
- ŽSSK Cargo – Železničnú spoločnosť Cargo Slovakia, a.s.

A total of four external RUs were contacted.

Documents or websites:

- Network Statement 2011
- Website of the infrastructure manager: www.zsr.sk
- Website of the railway authority: www.urzd.sk
- Website of the Ministry for Transport, Post and Telecommunications: www.telecom.gov.sk

7. Multi-Country Sources

- Eurostat (several online statistics)
- „Europäische Bahnen 2011“, EurailPress, Hamburg 2011
- „Insurance of Railway Undertakings”, European Commission, Brussels 2006
- Website of the European Commission http://ec.europa.eu/transport/rail/index_en.html
- Website of the European Rail Agency http://www.era.europa.eu/public/Safety/licences/Default.aspx
- Website of Rail Net Europe www.railneteurope.com
- „Rail Liberalisation Index 2007“, IBM Global Business Services, Berlin 2007
- „Memorandum of Understanding on the implementation of approval procedures for rolling stock and cross-acceptance of approval procedures of the competent supervisory authorities between the Netherlands, Germany, Switzerland, Austria and Italy”, Luxemburg 2007
- Documentation „Symposium Wettbewerb & Regulierung im Eisenbahnsektor“, Berlin 2011
- „Impact Assessment Study on Amendments to the Rail Access Legislation in the Framework of the Recast of the 1st Railway Package”, PWC et al. 2009
- “Impact Assessment” Accompanying Document to the proposal for a Directive of the European Parliament and of the Council Establishing a Single European Railway Area (Recast)” (SEC(2010))
- „Study on Regulatory Options on Further Market Opening in Rail Passenger Transport”, EVERIS 2010
- „Analyzing the Perspectives for Intramodal Competition in the Railroad Industry – the Case of Long-Distance Passenger Transport” ESMT 2009
- “Evaluation of the Common Transport Policy (CTP) of the EU from 2000 to 2008 and analysis of the evolution and structure of the European transport sector in the context of the long-term development of the CTPCharges for the Use of Rail Infrastructure” Steer Davies Gleeve 2009
- “Best practice guide for railway network statements”, NEA et al. 2010
- “Railway Access Charges in the EU”, Thompson Galenson and Associates 2008

8. Glossary

External RU	Railway undertaking which has entered the rail market in the course of liberalisation and offers rail transport services (usually in addition to the incumbent).
Incumbent	(Former) state undertaking which had a market-dominant position prior to liberalisation.
Open access	RUs have access to a national rail market which is not restricted by any rights of individual undertakings.
Purely commercial transport	Rail transport services provided by an RU on its own initiative and without any support from the state.
RU	Railway undertaking: a company which provides rail transport services.
Transport under a public service contract	Rail transport services ordered by the state in the form of transport contracts and for which the public purse normally provides subsidies or compensates for losses sustained from the provision of these transport services.

AT	Austria	IE	Ireland
BE	Belgium	IT	Italy
BG	Bulgaria	LT	Lithuania
CH	Switzerland	LU	Luxembourg
CZ	Czech Republic	LV	Latvia
DE	Germany	NL	Netherlands
DK	Denmark	NO	Norway
EE	Estonia	PL	Poland
ES	Spain	PT	Portugal
FI	Finland	RO	Romania
FR	France	SE	Sweden
GB	Great Britain	SI	Slovenia
GR	Greece	SK	Slovakia
HU	Hungary		

9. IBM Contacts

Please contact the following IBM employees if you have any questions, suggestions or comments:

Kai Bartheidel

Account Partner Travel & Transportation
IBM Global Business Services
Phone +49 (0) 7034 15 5914
Mobile +49 (0) 172 2657963
E-Mail bartheidel@de.ibm.com
IBM Deutschland GmbH
IBM-Allee 1
71139 Ehningen
Germany

Ingo Winkler

Senior Managing Consultant
IBM Global Business Services
Phone +49 (0) 69 66 45 20 74
Mobile +49 (0) 175 5820985
E-Mail ingo.winkler@de.ibm.com
IBM Deutschland GmbH
Wilhelm-Fay-Strasse 30-34
65936 Frankfurt am Main
Germany