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Rail Liberalisation Index 2002

Comparison of the Status of Market Opening in the Rail Markets of the 15 Member States of the European Union, Switzerland and Norway

LiB-INDEX

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- Preface -

Concept and Methodology of the Rail Liberalisation Index

1.1 Purpose

Rail-bound passengers and freight transport belong to the network industries. These network industries (such as telecommunications, electricity, natural gas etc.) are characterised by the fact that any company wishing to compete in the downstream markets (e.g. telecommunications services, passenger and freight carriage on rail, electricity and natural gas supply to end customers) must either have its own network or access to existing networks.

As the duplication or multiplication of networks often entails problems (in economic terms, this is referred to as the phenomenon of subadditivity of networks), providing network access - whether on a basis of negotiation or enforced by regulation - is one way of creating competition in downstream markets.

For some time now, the European Union has pursued a market opening strategy for network industries which, from the point of view of the Single European Market, is intended to open up national networks and thus enable implementation of the Single Market in these sectors, too. In that respect, the Commission – followed by the Council and European Parliament – has opted for regulated network access, but also permits negotiated network access in special cases, such as the energy supply sector in Germany.

The aim of regulated – or negotiated – network access is to provide the competitors of the former monopolists (*incumbents*) with non-discriminatory access to the incumbents' networks. As the former monopolists also operate in the downstream markets themselves and use their own networks for that purpose (unless the network has already been separated), *non-discriminatory* access for newcomers to the markets means that these newcomers have to be able to use the networks on the same conditions as the network operators. This, in turn, means that the network operator actually has to promote its own competitors.

In order to avoid potential conflicts between the former monopolists and the newcomers separation of network and transport services on the networks is being proposed by some authors; they argue that this would be advisable for reason of competition. The problem that then follows lies in the potential loss of efficiency, resulting from the reduction or elimination of synergy effects between network and transport services on the network.

There is a continuum of solutions in separating the network and transport services on the network between total legal separation of the network and the network kept part of the integrated business of the former monopolist, separated from transport services by organisational means. Each of these solutions concerns the actual separation of the network, for example in the case of accounting separation. The underlying goal, however, is always to ensure de facto non-discriminatory network access without simultaneously losing synergy effects.

At present, the individual Member States of the European Union are obliged to transform the standards prescribed by Community Directives on liberalisation of the rail sector into national legislation. This also applies to the members of the European Economic Area (such as Norway). Switzerland – which is linked to the European Union through a number of bilateral agreements – is pushing ahead with rail liberalisation by means of independent national legislative and regulatory measures, paying due attention to compatibility with the provisions of Community legislation.

As all the aforesaid states on the one hand take their cue from, or are bound by, the provisions of Community legislation, but simultaneously have substantial leeway as regards national implementation, the legal and regulatory frameworks for the rail sector differ considerably in the member states of the European Union, in Norway and Switzerland. This is a good example of so-called regulatory competition, in which different national legal systems apply different instruments: a comparative examination of the way in which these instruments work enables us – amongst other things – to draw conclusions as to their usefulness and effectiveness. In contrast to legal unification, harmonisation of the relevant legal rules and regulatory instruments for liberalisation of the rail sector, which is the ultimate target of the European Union's endeavours in this respect, still permits the aforesaid national leeway.

This also enables the academic hypotheses as regards the superiority of one or the other liberalisation model to be tested in the light of actual developments. In the final analysis, it is not a question of whether certain liberalisation concepts prove theoretically superior – presupposing the respective premises in each case – but a question of whether, how and within what time scale these models would actually lead to liberalisation of the markets.

To enable such a comparison of different liberalisation approaches, it would appear advisable to conduct in-depth empirical research. That, however, would require substantial research activities and considerable time. The inherent risk of such an approach is that important practical decisions might have to be taken before the results of the comparative study were available. As liberalisation programmes are path-dependent, this could lead to a situation that even after the theoretical findings on the relative superiority or inferiority of a liberalisation concept were available, it would be very difficult to change from a path that had already been taken. Path dependency means that suboptimal solutions are preferable to optimal solutions in certain specific cases, as the cost of changeover is higher than the anticipated benefits.

In other words, while research findings founded on a sophisticated academic framework and which provide a comparison of the benefits of different national liberalisation concepts would be welcome in theory, in practical terms they might prove to be of little value.

In view of that situation, the Rail Liberalisation Index is an acceptable "compromise". Its task would then be to investigate the liberalisation status of the rail sector in the countries investigated in the study on the basis of empirical data collected over a precise period of time. The goal of the evaluation is therefore not to state an absolute degree of liberalisation, the determination of which would entail considerable methodological problems, but to establish the relative degree of liberalisation in the different countries.

A Rail Liberalisation Index has not only to indicate the general degree of openness of the rail sector for new competitors. It must also give a detailed presentation of the shortcomings of liberalisation and show how the different approaches of the countries concerned are actually reflected in the degree of openness of their markets.

If that objective is to be attained, it is vital to clarify the methodology of the Rail Liberalisation Index to ensure that its findings are not merely a list of individual results, which cannot be ordered into a comprehensive, overall structure. Mere factual findings about the strengths and weaknesses of the different liberalisation concepts cannot be sufficient if the Rail Liberalisation Index is to form a sound basis for the debate on how the different liberalisation approaches can best be continued. The Rail Liberalisation Index has to be seen as a heuristic means of improving the quality of the liberalisation debate.

1.2 Methodology

When analysing the openness of the markets for rail-bound passenger and freight transport in the countries included in the study, three different levels have to be distinguished, viz. (1) the level of the national legal framework, (2) the level of actually available access opportunities and barriers and (3) the level of market opening which has actually been achieved.

The first level (LEX Index) shows the existing legal framework (*law in the books*), the second level investigates the status of the actual access opportunities and barriers (ACCESS Index) (*law in action)*; again, legal questions are relevant here, but from a different point of view. The third level shows the success of market opening (COM Index). While the first and third levels are important, it is the second level which is crucial for market opening.

Although the methodology applied in the LEX Index and COM Index appears simple at first glance, the ACCESS Index has to ensure that the relative significance of the relevant access barriers is actually taken into account. The attention therefore has to be focussed on those methodological questions which have to be answered in order to get valid information on the actual access barriers.

Network industries – such as the rail sector – are characterised by specific market power phenomena. Market power does not simply result from market shares, access to superior technologies, from the vertical depth of a company or from economies of scale. In network industries, market power in downstream markets results first and foremost from the fact that bottlenecks exist in the downstream markets, and that control of these bottlenecks is the key to controlling the downstream markets. If access to a bottleneck is a prerequisite for competing in downstream markets – in the telecommunications sector, for instance, this means the service markets for local and long-distance calls, in the rail sector, passenger and freight transport, in energy markets, energy supply to end customers – the party which controls the bottleneck can also control which competitors are to be admitted to the downstream markets and the terms on which they can procure the facilities they require in order to compete. The network owner has market power on its own specific network. That is why any regulation aimed at opening the market begins by tackling these monopolistic bottlenecks. This is referred to as bottleneck regulation.

Any examination of the access opportunities to a market which is characterised by the existence of such monopolistic bottlenecks first has to identify the individual bottlenecks. Modern competition law (Section 19 (4) Sentence 4 Restrictive Practices Act [GWB]) uses the term “essential facilities”, which it defines as facilities on which companies seeking to join the market are dependent, and which they cannot reasonably be expected to produce themselves.

The first question when examining the accessibility of a market thus has to ask whether such essential facilities exist. Their existence indicates that a market is closed off. However, if there is nevertheless open access to the market – for example by means of effective regulation – the existence of essential facilities does not constitute an obstacle for companies seeking market access. This study, which aims to establish the actual market access opportunities, therefore examines those obstacles which still remain after regulation. It thus does not merely document the existence of monopolistic bottlenecks per se, but examines their effects in the light of the existing regulation. The degree of market openness or restrictivity thus established is an initial indicator of whether such bottlenecks exist in a market (if there are none, there is no need for regulation) and how they are regulated. From the point of view of companies seeking access to the market, the decisive factor is ultimately the obstacles with which they are confronted in actual practice when trying to gain access to the market.

Bottleneck regulation or antitrust legislation governing access to essential facilities (*essential facilities doctrine*) concentrate on those facilities to which access is vital for companies seeking access to the market, i.e. facilities which the companies cannot produce themselves. However, from the point of view of an analysis of the accessibility of a market, which in this case takes the form of the ACCESS Index, it is also relevant to establish whether there are obstacles which can in principle be overcome by newcomers, even though the measures required to do so would involve substantial costs. Such obstacles do not refer to “essential facilities” as defined above, although these obstacles are relevant in actual practice. In the rail sector, for instance, this could refer to repair facilities: if the competitors of the former monopolist have the chance to use these facilities, that is undoubtedly an advantage for the companies, although these repair facilities are not by definition “essential facilities”. Obstacles which are below the threshold of essential facilities are characterised by the fact that a newcomer would incur expenses which would prove of no value if it were to leave the market (problem of irreversible costs, or *sunk cost*). These costs are also of indirect relevance for market entry as the anticipated costs of leaving the market are a factor that affects the decision to join the market in the first place.

If the company seeking access to the market has to overcome various obstacles before it can successfully enter the market, we then distinguish between *absolute* and *relative* obstacles. Absolute obstacles are defined as those that cannot be overcome, even if the company were prepared to accept substantial extra expense; relative obstacles, on the other hand, are those which are ranked according to the costs required to overcome them. An example of this is time delays sustained by the railway undertaking (RU) in obtaining a licence: the delay entails direct and indirect costs for the undertaking because, amongst other things, it leads to uncertainty in future planning of materials and human resources. However, it does not constitute an insurmountable obstacle.

It cannot be the aim of the ACCESS Index to determine every conceivable obstacle and hindrance to market access and classify them according to cost categories. On the contrary, the ACCESS Index aims to assess the individual obstacles in terms of their relative importance. Rather than establishing the absolute degree of obstacles for a national market, it concentrates on comparing the different situations in the countries included in the study.

The methodology chosen here concentrates on a comparison of market access barriers. It deals with both market access barriers in the form of monopolistic bottlenecks, as well as those in the form of relative obstacles. It also considers market exit barriers insofar as they also prove to be market access barriers from the point of view of the company seeking access, because the costs are already incurred at the time of market entry.

The following examines the different determinants of the three-tier Rail Liberalisation Index. The continuous thread throughout this discussion is always the question of what significance individual factors have for companies which are fundamentally interested in gaining access to the market, but whose decision as to whether or not to join the market depends on the existence or non-existence of absolute obstacles and the extent to which relative obstacles would affect the costs of market entry. It is based on the hypothetical assumption that a company would assess the relative market access opportunities in various markets before reaching its decision. As all such considerations are in fact no more than theoretical constructs for determining the relative openness of markets, the practical value of such a procedure will only become apparent over the course of time, once experience has been acquired in the actual opening of markets for rail-bound passenger and freight transport in the countries covered by the study. At the moment, however, such experience is extremely limited, as market opening in many of these countries has only recently been initiated. In future updates of the Rail Liberalisation Index, that experience of market opening, which is presented in the COM Index, will be allocated a greater relative significance. At the present moment, however, the emphasis has to be on establishing market access opportunities, as presented in the ACCESS Index.

1 Management Summary

In the course of liberalising the European rail transport markets, the European Union has issued market opening Directives and proposed a regulatory framework aimed at harmonising competitive conditions (cf. Annex “Legislation”). However, the manner in which the member states actually implement market opening differs substantially and these differences in turn distort the competitive situation.
The current debate has as yet no recourse to comparative data on the status quo of liberalisation in the rail transport market in the countries of the EU. The Liberalisation Index (LIB Index) presented in this study is intended to provide an independent, transparent basis, which also has the capacity for future expansion.

The Liberalisation Index, which was developed by IBM Business Consulting Services in collaboration with Humboldt University, Berlin (Chair: Prof. Dr. Dr. Christian Kirchner), gives an overview of the opening status of the rail transport markets in each of the 15 EU Member States, Switzerland and Norway. When drafting the concept and throughout the research stage, the study adopted the stance of external railway undertakings[1] (External RUs): “What barriers exist for external railway undertakings seeking access to the markets in the individual countries?“

The findings are intended to enable a comparison of the liberalisation status in the countries included in the study. As the rail transport market is only now embarking on the liberalisation process, the focus is on the relative liberalisation progress which has been made in these countries, rather than seeking absolute results. The first Railway Package, which includes Directives 2001/12/EC, 2001/13/EC and 2001/14/EC, has to be transposed into national legislation by the Member States by March 2003.

The LIB Index consists of three individual indices, each of which analyses a partial aspect of the rail transport market:

- The LEX Index presents the legal framework for market access in the individual countries.
- The ACCESS Index compares the practical market access conditions and obstacles.
- The COM Index indicates market dynamics and the current market situation.

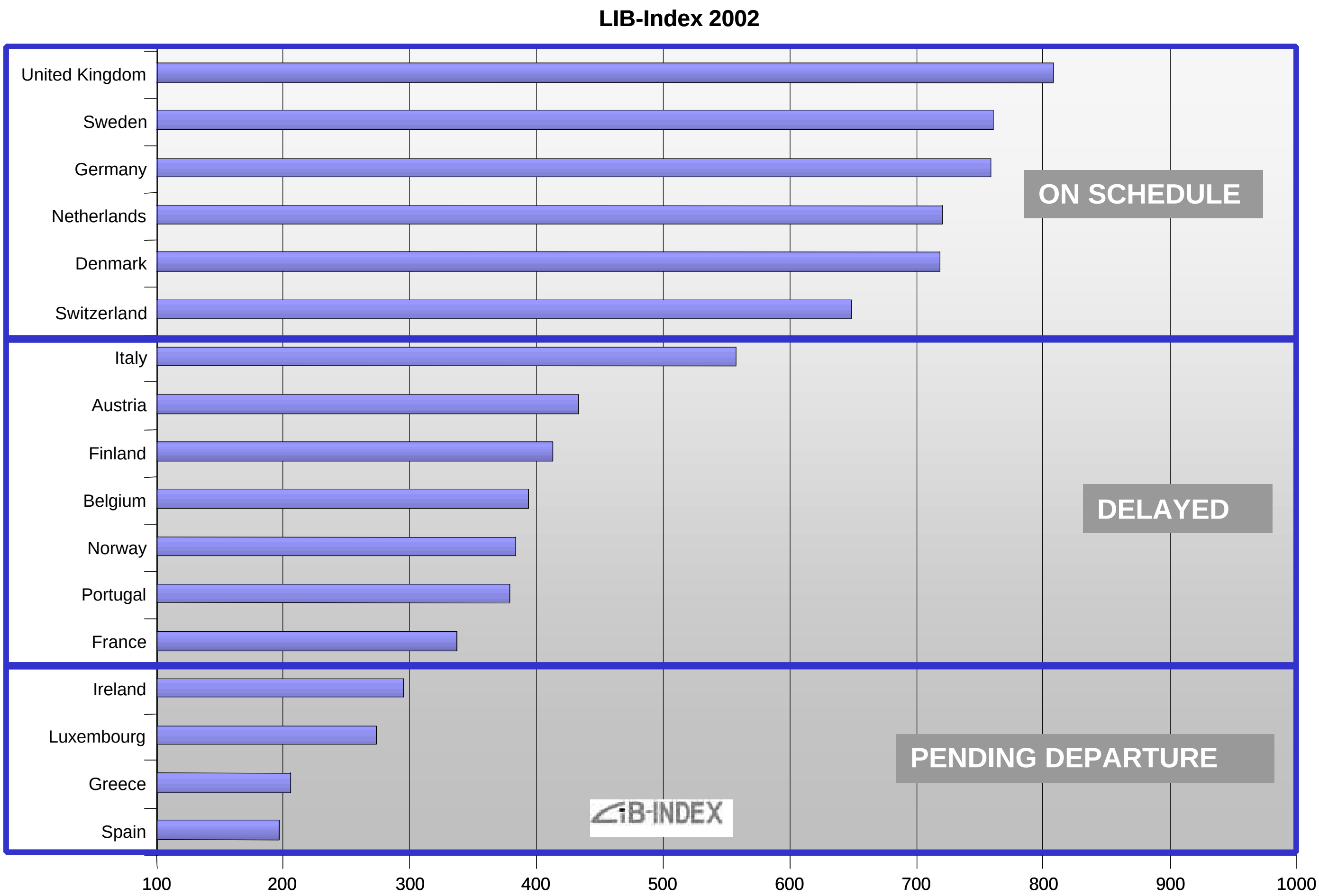
The findings of the study suggest a classification of the 17 countries into three groups according to their current market opening status.
The countries in the first group, comprising the United Kingdom, Sweden, Germany, the Netherlands, Denmark and Switzerland, have made considerable headway in opening up their markets. These countries obtained 600 and more points in the index calculation. The group is given the status "on schedule”. In these countries, there is already noticeable competition and the market access opportunities for External RUs are acceptable.

Market opening in the second group, which consists of Italy, Austria, Finland, Belgium, Norway, Portugal and France, is substantially lower than in the first group. The scores of these countries vary between 300 and 599 points. This group is given the status "delayed".

[1] *External RUs refers to all railway undertakings with the exception of the former monopolists (state-owned railways, public railways), e.g. CONNEX in Germany, RTC in Italy; this term would also apply to SNCF in Germany, DB AG in Spain.*

When considered as a whole, it appears that Ireland, Luxembourg, Greece and Spain have made virtually no efforts to initiate the liberalisation process, scoring between 100 and 299 points. This group is accorded the status "pending departure".

The findings of the LIB Index show that different approaches aimed at liberalising the market can lead to similar results. This is particularly obvious in the top group, which includes the United Kingdom, Germany and Sweden, the Netherlands and Denmark.



2 Liberalisation Index Concept

2.1 Purpose

The results of the study are aimed at compiling a "Rail Liberalisation Index " (LIB Index) which reflects liberalisation progress in the rail markets in Europe. The study initially examines the 15 EU Member States, Switzerland and Norway. There are plans to include those Central and Eastern European states that will soon become members of the European Union in possible future updates of the survey.

The LIB Index is compiled from the viewpoint of External RUs and how they judge the degree of market opening and competition intensity in all European countries. The Index is intended to provide an objective footing for the debate on competition on rail. This, in turn, was decisive in establishing the guidelines for the project: ensuring that the LIB Index is met with acceptance, that it is independent, easily comprehensible, transparent, and that it can be updated and extended as required.

Liberalisation indices with similar objectives have already been compiled for other liberalised, formerly state-owned sectors such as post and telecommunications. Several studies have also been published for the rail sector, dealing with market liberalisation and the implementation of Directives. However, this is the first study to apply consolidated, standardised criteria to the rail sector to obtain meaningful figures on liberalisation, market access, the implementation of EC Directives and market dynamics.

The questions investigated by the Index can be summed up under two central aspects:
Firstly: According to current findings, how easy is it from the point of view of an RU to become active on a certain national rail market?
Secondly, in the sense of reviewing the answer to the first question:
How strongly do the market developments reflect the actual market access conditions for External RUs?
The answer sought by the study is not the absolute, but the relative degree of liberalisation in the different countries.

2.2 Preliminary Questions of Methodology

Relative Assessment of the Individual National Status Quo
Liberalisation is effected in several phases. Among experts there are different opinions with regard to the point at which a national rail market is deemed fully liberalised. Each phase of market opening presents special competitive obstacles, the determinants of which have to be adequately taken into account in the Index.
The Index also pays due attention to the fact that it is a challenge in itself to compare the different circumstances in the individual countries on any detailed level. External RUs frequently have no access to – or have difficulty in obtaining – the full basis of information which is of relevance for their decision to invest. In that respect, the Index now provides a basis of national data which can serve as a valuable guideline for a company planning to join a market.

A period of two months was chosen as the period for researching access conditions, as new RUs also have to draw up their business plans within a reasonable time limit. From the point of view of External RUs, the need to conduct in-depth, expensive and time-consuming empirical research in order to obtain information about access to a rail network would in fact constitute an additional barrier.

In order to enable a quantitative assessment of the national situations, the access barriers identified in the study were rated on a points system which reflects the relative restrictiveness and the relative monetary expenditure required to overcome these barriers from the point of view of External RUs.

The Index does not contain any criteria which give a country the lowest number of points owing to insurmountable access obstacles for External RUs, as the Index is practically oriented and intended to point out the relative strengths and weaknesses.

Prioritisation of Certain Countries and Market Segments

Liberalisation in the 15 EU Member States, Norway and Switzerland is of different relevance for the creation of a Single European Market for rail transport and the establishment of Trans-European Networks (TEN). The countries to be examined were therefore allocated to two different priority classes when researching the data ("A countries" and "B countries"):

- "A countries" are defined as countries which are particularly significant for the realisation of TEN owing to their central location or market, or which are accorded special importance in the liberalisation debate. These "A countries" include Austria, Belgium, Denmark, France, Germany, Italy, Netherlands, Sweden, Switzerland and the United Kingdom.
- Consequently, the "B countries" are Finland, Greece, Ireland, Luxembourg, Norway, Portugal and Spain.

This study examines long-distance rail passenger transport, regional rail passenger transport and rail freight transport in the above countries. Urban passenger transport (inner city and suburban services) is excluded.

2.3 Liberalisation Index Structure

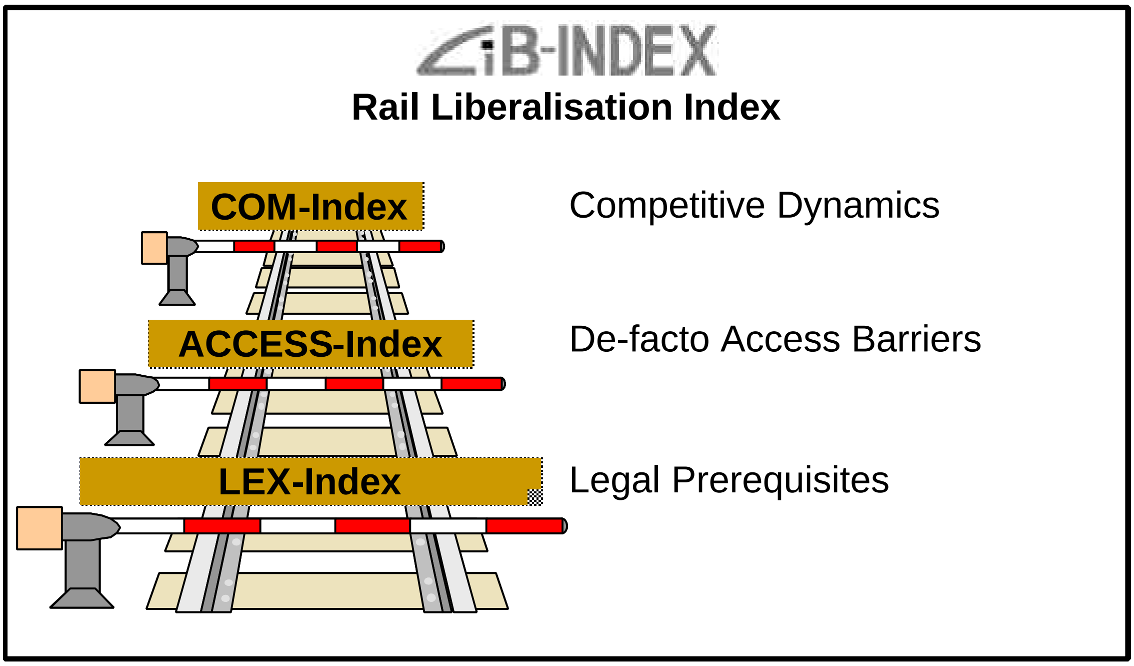
Once the scope of the survey has been established, the next question to be considered is which quantitative and qualitative competition determinants are to be established in order to obtain as accurate a picture as possible of the present degree of liberalisation of the market environment in the different countries.

Breakdown into Sub-Indices, Determinants and Sub-Criteria

The LIB Index has been drawn up from the point of view of External RUs seeking access to the networks. When determining market openness from that angle, there are three principal questions:

1. What is the legislative basis for External RUs in the target country?
2. What do the market access barriers and opportunities for External RUs look like in practice?
3. How dynamic/intense is the competition in the rail transport market?

These three aspects are presented in the form of three sub-indices, as shown in the following chart. The LEX Index deals with the first, the ACCESS Index with the second, and the COM Index with the third of these questions.



Each sub-index is made up of several different subject areas; these individual areas contain determinants, some of which have in turn been broken down into sub-criteria. The modular approach means that the heterogeneous determinant quantities can subsequently be adapted without having to reconsider the overall structure of the study.

The concept presented here therefore not only assesses the degree of legislative implementation (qualitative component) as well as the de facto competition which exists in the market (quantitative component), but also takes into account the expenditure and effort required by External RUs to enter the market. These three sub-indices LEX, ACCESS and COM are presented below.

First Sub-Index: the LEX Index

The first barrier which impedes competition from the point of view of External RUs is the national legislation. A company wishing to invest in the rail market has to be sure of a sound and transparent legislative basis before it can make any investment decision.

The study therefore first examines what progress has been made in transposing European Community law into national law and correct interpretation of the EC Directives to ensure non-discriminatory network access, i.e. "*Law in the Books*". This sub-index determines the extent to which the legal conditions are likely to fulfil the target of opening up the market to new competitors.

The date of reference for assessment was 1 October 2002. The data was sourced from national laws and statutory instruments, international studies and in-depth interviews with national authorities, infrastructure managers, the UIC, the EU Commission and interest groups.

Second Sub-Index: the ACCESS Index

The second obstacle which impedes competition from the RU point of view is the practical implementation of the existing liberalisation laws, i.e. the "*Law in Action*". This leads to a second index which classifies the individual countries according to the extent to which investments by External RUs in the rail business are admitted in practice, the extent to which market activities can be pursued in practice, and the RU-friendliness of the administrative processes.

The second sub-index consequently investigates the actual opportunities for entering the market and the de facto obstacles, as well as the time and financial outlay required by RUs to obtain a licence, apply for train paths and run operations. The length and complexity of the licensing process is determined on the basis of specific key figures.

When compiling the ACCESS Index, the authors of the study put themselves in the position of an External RU which has to go through all the necessary steps until it can actually participate in the market. It thus considers, for example, how many different authorities and departments are involved in the licensing process for the RU and what certification conditions they impose. With regard to train path requests, the lead time for a train path application, for example, was of interest. The study also examines the question of access to locomotive and wagon/coach pools, another important preliminary condition. A comparison of train path prices and the different train path pricing systems was another key parameter, which looked at whether the systems are single or multiple tier, if they have discount systems which discriminate against minor competitors, and the scope of performance included in the train path price.

Countries which pursue a policy of withholding information about network access arrangements are given a lower ACCESS Index value. As a general rule, failure to establish an ACCESS determinant was given the lowest possible score on the grounds that it was not possible to obtain the relevant information within a period of two months despite intensive and selective research (exception: questions 3.1a, b and c, cf. Data Sheet Annex).

The assessment of the administrative processes relating to licensing and network access refers to the period September 2001 – September 2002.
The data was collected primarily by interviewing the appropriate contacts at regulatory authorities, External RUs (where such existed), former state railways, licensing authorities and at bodies responsible for issuing safety certificates, as well as by evaluating the network access conditions as published by the infrastructure managers.

Third Sub-Index: the COM Index
The third set of questions examines market developments for External RUs to date, providing an ex-post assessment of liberalisation.

The determinants of the COM Index measure the actual degree of competition intensity on the basis of aggregate characteristics such as market concentration, modal split and growth dynamics. As far as possible, this Index distinguishes between the freight transport, local and long-distance passenger transport market segments. The higher the competition intensity, the more External RUs utilise the opportunities for market access. The COM Index can thus be construed as a supplementary indicator of access conditions. However, it must be pointed out that the determinants established here, such as trends in modal split and market share, are not based solely on the degree of liberalisation. The modal split, for instance, depends to a great extent on the framework conditions of the other modes, which are not the subject of this study. It should be noted that any assessment of the regime on the basis of market shares alone would be misleading, as these market shares are also largely dependent on the relative efficiency of the individual railway undertaking and the status of network effects. The crucial factor is ultimately the potential competition.
The above data was acquired from interviews, annual business reports and transport statistics material from the EU and the national authorities.

2.4 LEX Index Determinants

The LEX sub-index consists of five subject areas and twelve determinants, which are each shown in tabular form. The subject areas are:

- Market access pursuant to Directive 91/440/EEC as amended by Directive 2001/12/EC (status quo – excl. TERFN[2]) (L1)
- Further national access rights (L2)
- Organisational structures (L3)
- TERFN preparation status (L4) and
- Regulatory authority (L5)

Market access pursuant to Directive 91/440/EEC as amended by Directive 2001/12/EC (status quo – excl. TERFN) (L1)

The first complex contains a determinant which examines implementation of EC Directive 91/440 as amended by Directive 2001/12 on the basis of five sub-criteria.

L1.1 Access for International Groupings

Are there access and transit rights for international groupings in the Member States in which the associated RUs are domiciled, as well as transit rights in the other member states for cross-border transport services between the member states in which the associated railway undertakings are domiciled?

L1.2 Access for Cross-Border Intermodal Transport

Are access rights for the provision of transport services in cross-border intermodal transport for railway undertakings of other Member States guaranteed by law?

L1.3 Guaranteed Independent Status of the RUs

Are the railway undertakings guaranteed an independent status which ensures in particular that their assets, budget and accounting are separate from those of the state?

L1.4 Separation of Network/Transport Accounting

Does the state prescribe separate accounting for railway infrastructure (Network) and the actual provision of transport services (Transport)?

L1.5 Measures for Reducing Indebtedness

Has the Member State taken measures to reduce the railway undertakings' indebtedness in such a way as to ensure that the undertakings can be managed on a sound financial basis?

Further National Access Rights (L2)

The second complex consists of two determinants and takes a look at the national access rights which go beyond the provisions of Directive 91/440/EEC:

L2.1 Domestic Subsidiary with Network Access Option

Is it possible to establish a branch (subsidiary) with network access options?

[2] *Trans-European Rail Freight Network: European rail freight traffic network described in EC Directive 2001/12, which has to be open to External RUs by 15 March 2003.*

L2.2 Other Access Rights

Are there legally secured access options in the scope of “open access[3] “ for foreign RUs which go beyond the minimum requirements of Directive 91/440/EEC (e.g. North-South Freight Freeways)?

Organisational Structures (L3)

The third complex considers the currently existing organisational structures on the basis of two determinants:

L3.1 Vertical Separation

Which of the following models has been chosen and implemented by 1 October 2002 for the structural division / integration of network and transport services?

- Full institutional separation (including separation in terms of ownership rights)
- Organisational, accounting and legal separation of the divisions, as well as functional separation (network operator is independent of the RU with regard to essential functions as defined in Annex II of Directive 2001/12/EC – in particular train path prices and path allocation)
- Organisational, accounting and legal independence of these sectors
- Organisational, accounting and legal separation of infrastructure and transport, but procurement of business for essential network management functions by an RU
- Only accounting separation
- No separation

L3.2 Horizontal Separation

To what extent are the freight transport and passenger transport sectors independent and separate from each other in terms of accounting?

TERFN Preparation Status (L4)

The fourth complex analyses the status of preparation for implementation of the Trans-European Rail Freight Network (TERFN) in the individual countries on the basis of three determinants.

L4.1 Clear Definition of the National TERFN Network

Is there a consensus of opinion and clarity as regards definition of the national TERFN sector?

L4.2 Expansion of the TERFN Network

Will the scope of the national TERFN sector be extended beyond EU requirements?

L4.3 Existence of Special Problem Areas

Are there any special problem areas which affect national implementation of the TERFN requirements?

State Monitoring of Access Rights (L5)

Finally, the fifth complex examines the (state) regulatory / supervisory authority which monitors access to the rail network, its competencies and powers, on the basis of five determinants, some of which are broken down into further sub-criteria. In case of non-existence of any such regulatory authority, it is sufficient if said competences and powers are exercised by another independent body with equivalent functions.

[3] *Open access: External RUs have an independent, legally guaranteed entitlement to network access.*

L5.1 Regulatory Authority

Is there an independent regulatory authority as defined in Directive 2001/14/EC?

L5.2 Subject Matter of Regulation

- Does the competence of the regulatory authority encompass monitoring the network statement or the criteria contained therein (cf. Annex I of Directive 2001/14/EC)?
- Is it authorised to investigate allocation procedures and their results?
- Is the regulatory authority entitled to investigate charging schemes?
- Can the regulatory authority initiate investigations into the level or structure of the infrastructure fees which an RU has to or would have to pay?
- Can it investigate matters relating to the safety certificate and enforce and monitor the safety standards and regulations?
- Does an independent regulatory authority or other independent body monitor competition in the markets for rail service service markets?

L5.3 Regulatory Processes

Are the regulatory processes transparent?

L5.4 Transparency of the Regulation Criteria

Are the regulation criteria and methods transparent and logical?

L5.5 Powers of the Regulatory Authority

- Can the regulatory authority conduct investigations on request by an RU?
- Is the regulatory authority obliged to initiate investigations on request by an RU?
- Can the regulatory authority initiate investigations ex officio?
- Is the regulatory authority obliged to initiate investigations ex officio?
- Are the decisions of the regulatory authority legally binding upon the recipient?
- Does the regulatory authority have the power to order coercive measures to enforce its investigations or decisions?
- Does the regulatory authority have the power to impose fines (and if so, up to what amount)?

2.5 ACCESS Index Determinants

The ACCESS Index consists of six subject areas with 39 determinants, each of which is shown in tabular form. The subject areas are:

- Information barriers (A1)
- Licensing and safety certificate (A2)
- Interpretation leeway/access regime (A3)
- Network access and prerequisites (A4)
- Train path pricing system (A5)
- Access to service elements (A6)

Information Barriers (A1)

This subject area considers the first barrier to obtaining access to the network: access to all the required information. The more scant, unreliable and/or technically inconvenient the sources of information, the more effort is required for the RU to overcome this first obstacle.

A1.1 Process Duration for Procurement of Information

- How long does it take to identify responsible contacts for the processes of market access and issue of licences (admission as RU)?
- How long does it take for the complete written information in respect of market access and licence issue to be returned to the inquiring party?

A1.2 Quality of the Impersonal Provision of Information

- Is all information for market access available in impersonal form?
- In what form is the relevant information regarding market access available impersonally?
- How up to date is the impersonally provided information regarding market access (cf. above)?
- In what languages is the information for market access available on the Internet?
- What degree of process support is offered in respect of the impersonal provision of information?
- Is an instruction leaflet for all the necessary documents/requirements regarding market access provided?

A1.3 Quality of the Personal Provision of Information

- Is there at least one qualified contact in each country to answer questions of market access and issue of licences (admission as RU)?
- Is the security of transmitted data guaranteed by the recipient(s)?
- What language abilities do the qualified contacts have?
- Is supply of a complete instruction leaflet for all the necessary documents/requirements for market access (cf. above) possible through a qualified staff member?

Licensing and Safety Certificate (A2)

The second subject area examines the processes of licence issue in the different countries. The degree of liberalisation in this case is judged according to the degree of independence of the decision makers, the duration and quality of the licensing process, the recognition of licences issued by other countries, and the cost-benefit ratio of the licences issued. Most countries also demand a separate safety certificate; this is indicated by the determinant A2.12.

A2.1 Decision Makers regarding Issue of Licences

- How many different institutions or public authorities have to be contacted in order to be able to offer transport services?
- How independent is the relevant institution for the issue of licences (issue of permits)/concessions (where necessary) from the incumbent[4]?

A2.2 Duration of the Process for the issue of Licences

- How much time is required for the issue of licences in accordance with the legal requirements (admission as RU) after submission of the complete application documents?

[4] *Former monopolists or state-owned railways / public railways such as SNCF or DB AG*

A2.3 Scope of the Licence

What scope does the licence have in relation to the type of transport?

- What scope does a freight transport licence have?
- What scope does a passenger transport licence have?

A2.4 Recognition of Foreign Licences

Is there recognition of foreign European licences (15 EU, CH, N) ?

A2.5 Time Required for the Examination of Foreign European Licences

What is the legal period for examination of foreign European licences?

A2.6 Period of Validity of the Licence

- What is the period of validity of the issued licence (legal period of validity)?
- At what intervals of time are reviews of the licence required / prescribed?
- When do licences lose their validity if they have not been used?

A2.7 Required Amount of Insurance

What is the annual amount of insurance required for issue of a licence? (legal)

A2.8 Required Paid-Up Capital

What is the amount of paid-up capital required for issue of a licence? (legal)

A2.9 Licence Costs

What are the fees for issue of a licence?

A2.10 Additional Conditions for the Issue of Licences

Are there additional conditions for the issue of licences?

A2.11 Clarity Regarding Contacts

Have provisions been made to set up a clearly defined contact for the procedure of licence issue?

A2.12 Safety Certificate

- What is the time required for the provision of the required documents to obtain the safety certificate (as from the request)?
- How high is the degree of detail regarding the requirements for a safety certificate in a European comparison?
- How high are the costs (fees) for the issue of a safety certificate in a European comparison?
- How many authorities are involved in the issue of a safety certificate?
- Are the authorities involved in the issue of the safety certificate independent of the RUs, in particular of the incumbent?
- Are all criteria in the process for safety certificate issue transparent?
- What is the total amount of time required from submission of the documents to notification of the decision (safety certificate)?

- Are existing safety certificates of other EU member states accepted?
- Is the period of validity/term of the safety certificate limited?

Scope for Interpretation/Access Regime (A3)

The determinants in this subject area examine further prerequisites for network access and the scope for exploiting interpretation leeway which makes licence issue more difficult and can consequently be rated as potentially discriminating.

A3.1 Deviations from the Legally Prescribed Way / Scope for Interpretation

- Do deviations from the requirements of the European Directives exist in the practical implementation of the procedure for admission (issue of a licence)?
- Do deviations from national legislation exist in the practical implementation of the procedure for admission (issue of a licence)?
- Do obstacles exist in the course of the admission procedure (issue of a licence) which could be described as "arbitrary"?

A3.2 Access Regime after Licence Issue / Safety Certification

Does a licence grant direct market access or do obstacles to access have to be overcome (invitations to tender / concessions etc.)

- ... in freight transport?
- ... in long-distance passenger transport?
- ... in local passenger transport?

Network Access and Prerequisites (A4)

The fourth subject area deals with the prerequisites required for network access and train path allocation procedures, such as vehicle licensing and application for a train path. With the help of nine determinants, this subject area reveals the administrative differences between the operating wishes of a licensed RU and the actual train operations.

A4.1 Standardisation of Contract Terms and Conditions with Infrastructure Managers

How are the contractual relations to the network operator governed?

A4.2 Procurement of Traction Stock / Trailing Stock

Is there a market for rolling stock in the target country?

A4.3 Vehicle Approval

- What is the time required for the provision of the necessary documents/requirements for vehicle approval?
- What is the degree of detail required for vehicle approval in a European comparison?
- What are the costs (fees) for obtaining vehicle approval?
- What is the total period of time from submission of the application/documents to notification of the decision (approval) in a European comparison?
- How many interfaces are involved in the vehicle approval process?
- Are the parties involved in the process independent of the RU (especially of the incumbent)?
- Are all the criteria for decisions and examinations in the process for vehicle approval transparent?
- Are existing approvals of other EU Member States accepted?

A4.4 Personnel Procurement

Is it possible for External RUs to recruit qualified personnel in the target country?

A4.5 Existence of a Standard Procedure for Train Path Allocation

- Does a legally binding procedure for train path allocation exist?
- Is train path allocation regulated transparently by means of a procedure (criteria of allocation process)?

A4.6 Lead Time for Train Path Applications

How many months' lead time are required for a regular train path application?

A4.7 Non-Discriminatory Train Path Allocation Procedure

- Is the train path allocation process identical for all market participants?
- Is marketing non-discriminatory for all train paths within given formation priorities?
- Is there a transparent mechanism which applies if train path requests from several RUs lead to conflicts? If so, what are these mechanisms?

A4.8 Ad Hoc Requests for Train Paths

How flexible are ad hoc requests for train paths (feasibility, conformance with customer requirements, lead time required etc.) being handled (e.g. seasonal traffic)?

A4.9 Priority Scheduling Arrangements for the Incumbent

Are there priority scheduling arrangements for the incumbent in the course of operations (especially in case of operational disruptions, conflicts in case of delays)?

Train Path Pricing System (A5)

The fifth subject area rates the structure of the train path pricing system with the help of five determinants, some of which are broken down into sub-criteria. In addition to the absolute level of the train path prices for the three market segments examined, it also investigates what share of train paths are reserved "en bloc" as a precautionary measure by RUs, but not actually used. Experience has shown that this harbours substantial potential for discrimination, particularly on networks with high capacity utilisation, especially if the user fees for non-utilised train paths are subsequently refunded in full or to a large extent.

A5.1 Existence and Transparency of a Train Path Pricing System

- Is there an identical pricing system for facilities and train paths which applies to all market participants?
- Is the pricing system for facilities and train path published?
- Is the train path pricing system binding upon all participants?

A5.2 Share of Unused but Requested Train Paths

What is the share of unused train paths in relation to the total volume of requested train paths?

A5.3 Structure of the Train Path Pricing System

- Is the train path pricing system single or multiple tier?
- Is the train path pricing system linear, degressive or progressive?
- Does the train path pricing system permit discounts – if so, in what form?

A5.4 Level of Average Train Path Price

What is the average train path price

- ... in freight transport?
- ... in long-distance passenger transport?
- ... in local passenger transport?

A5.5 Costs of Cancelling Ordered Train Paths

What deduction is retained by the network operator when a reserved but unused train path is returned?

Access to Service Facilities (A6)

The sixth subject area looks at questions of further access facilitation for RUs, most of which refer to access to infrastructure-related services.

A6.1 Minimum Access Package pursuant to 2001/14, Art. 5, Annex II, Point 1

Do the RUs have non-discriminatory access to the following services:

- processing applications for the allocation of infrastructure capacities
- the right to use allocated capacities
- the use of running track points and junctions
- train control including signalling, regulation, dispatching and the communication and provision of information on train movements
- all other information required to implement or operate the services for which the capacity was allocated?

A6.2 Service Facilities pursuant to 2001/14, Art. 5 and Annex II, Point 2

Are the following services provided to RUs by the network operator without discrimination or on acceptable market conditions:

- use of electrical supply equipment for traction current where available
- refueling facilities
- passenger stations, their buildings and other facilities
- freight terminals
- marshalling yards
- train formation facilities
- storage sidings
- maintenance and other technical facilities?

A6.3 Additional Services pursuant to 2001/14, Art. 5 and Annex II, Point 3

Are the following services available to RUs:

- provision of traction current
- pre-heating of passenger trains
- provision of fuel, shunting, and all other services provided at the access service facilities mentioned above
- monitoring dangerous goods transports
- assistance in runinng abnormal trains?

A6.4 Ancillary Services pursuant to 2001/14, Art. 5 and Annex II, Point 4

Are the following services available to RUs:

- access to the telecommunication network
- provision of supplementary information
- technical inspection of rolling stock?

A6.5 Ensuring Passenger Information

Is passenger information at the station ensured for all RUs?

A6.6 Equality in the Issue of Train Numbers

Are train numbers issued on the basis of equality, i.e. the same number category for the same train category?

A6.7 Information Supply by the Network Operator

- Is all relevant route information (e.g. in case of construction projects) supplied to the RUs?
- Are unused train path capacities indicated on request or automatically?

A6.8 Incumbent's Clarification Body

Does the incumbent name a contact person to clarify any access and discrimination problems?

2.6 COM Index Determinants

The COM Index consists of eight determinants, which are grouped into three subject areas:

- Development of the modal split(C1)
- New RUs (C2)
- Accessible market (C3)

Development of the Modal Split (C1)

The determinants are:

C1.1 Development of the Modal Split in Freight Transport 1991-2000

How has the market share of rail freight transport – in terms of transport volume – developed in relation to the other transport modes?

C1.2 Development of the Modal Split in Passenger Transport 1991-2000

How has the market share of rail passenger transport – in terms of transport volume – developed in relation to the other transport modes?

New RUs (C2)

The three determinants permit conclusions to be drawn about market entries of External RUs.

C2.1 Licensed RUs (excl. Incumbent) in Relation to Network Length

How many railway undertakings with a valid licence (licensed as railway undertakings to run on the state-owned network) existed in 2002 (normalised over the length of the network)?

C2.2 Active RUs (excl. Incumbent) in relation to Network Length

How many railway undertakings were actually active on the state-owned network (normalised over the length of the network) in the year 2002?

C2.3 Active RUs (excl. Incumbent) vs. licensed RUs (incl. Incumbent)

What is the ratio between the number of active RUs and the number of RUs which hold a valid licence?

Accessible Market (C3)

C3.1 Market Share of External RUs in 2000/2001

How high was the relative market share of External RUs (in terms of tkm and pkm) in the following types of transport in percentage points?

- ... in freight transport
- ... in local passenger transport
- ... in long-distance passenger transport

C3.2 Average Market Share Growth of External RUs between 1997 and 2001

How high was the market growth of External RUs (in terms of tkm and pkm) in the following types of transport in percentage points?

- ... in freight transport
- ... in local passenger transport
- ... in long-distance passenger transport

C3.3 Share of Accessible Market in 2002

How high was the accessible market potential (in terms of train path km) for RUs in the following types of transport in 2002?

- ... in freight transport
- ... in local passenger transport
- ... in long-distance passenger transport

2.7 Index Calculation

This chapter explains the way in which the LIB Index is calculated. It also stipulates and gives reasons for the weighting factors applied.

Calculation Formula

The study covers a quantity of countries which are referred to as *e* in the following:

$$\mathrm{e} \in \{\mathrm{B, DK, D, FIN, F, GR, GB, I, IRL, L, N, NL, A, P, S, CH, E}\} \qquad (1)$$

The LIB Index breaks down into three sub-indices LEX, ACCESS and COM:

$$i \in \{LEX, \mathrm{ACCESS}, \mathrm{COM}\}, \qquad (2)$$

Each sub-index *i* contains a certain number of subject areas

$$\mathrm{TK} := \{1, ..., t, ..., \mathrm{T_i}\} = \{1,\ 2,\ 3, ...\}, \qquad (3)$$

which have to be dealt with in order to derive a statement; each subject area *t* in the sub-index *i* in turn contains a number of determinants

$$\text{DT:=}\ \{1,\ldots,d,\ldots,\mathrm{D}_{\mathrm{i,t}}\} = \{t.1,\ t.2,\ t.3,\ldots\} \tag{4}$$

Some of these determinants are broken down once again. The sub-criteria for the determinant *d* of the subject area *t* of the sub-index i are symbolised by the variable *s* and indicated with small letters:

$$\text{SK:=}\ \{1,\ldots,\mathrm{s},\ldots,\mathrm{S}_{\mathrm{i,t,d}}\} = \{a,b,c,\ldots\} \tag{5}$$

The LIB Index for each country *e* in the list results from the total of the weighted sub-index values,

$$\begin{aligned}\mathrm{LIBINDEX}(e) &:= \sum_{\mathrm{i}=1}^{3} \mathrm{SCORE}(i,e) \\ &= w_{LEX} \cdot LEX(e) + w_{ACCESS} \cdot ACCESS(e) + w_{COM} \cdot COM(e)\end{aligned} \tag{6}$$

where a maximum of ten points can be awarded and the sub-index weights have to add up to ten.

$$w_{LEX} + w_{ACCESS} + w_{COM} = 10 \tag{7}$$

The calculation rule of a sub-index $i \in \{LEX, \mathrm{ACCESS}, \mathrm{COM}\}$ for a country *e*
with the property vector **X** of the country

$$\mathbf{X}(e) = \{X_{i,t,d,s}(e)\} \quad , \tag{8}$$

whose elements always include scores of one to ten

$$X_{i,t,d,s} \in \{1,\ldots,10\}, \tag{9}$$

reads

$$SCORE(i,e) = \sum_{t=1}^{\mathrm{T_i}} w_{i,t} \cdot \sum_{d=1}^{\mathrm{D_{i,t}}} w_{i,t,d} \cdot \sum_{s=1}^{\mathrm{S_{i,t,d}}} w_{i,t,d,s} \cdot X_{i,t,d,s}(e) \tag{10}$$

The subject area weightings, with the total of ten, yield

$$\sum_{t=1}^{T_i} w_{i,t} = 10 \tag{11}$$

The determinant weights inside each of the subject areas are normalised to one

$$\sum_{d=1}^{D_{i,t}} w_{i,t,d} = 1 \tag{12}$$

as are the sub-criteria weightings below the determinant level:

$$\sum_{s=1}^{S_{i,t,d}} w_{i,t,d} = 1 \qquad (13)$$

The maximum number of points which can theoretically be awarded in the calculation model for the LIB Index as shown above is consequently 10*10*1*1*10 = 1000 points. The minimum theoretical score is 100 points.

Weighting of the Sub-Indices

Before the results for the individual countries were available, the weighting factors for the sub-indices and the determinants were specified on a basis of paired comparisons, conducted by a panel of experts comprising consultants from IBM Business Consulting Services (Travel & Transportation) and Prof. Dr. Dr. Christian Kirchner. The results are presented in the following chart and the grounds stated below:

LEX Index	25 %
ACCESS Index	50 %
COM Index	25 %

The ACCESS Index is of prime importance as it most strongly reflects the practical market access barriers. The ACCESS Index was consequently given by far the highest weighting in the overall index. The COM Index was accorded the same significance as the LEX Index within the three sub-indices, as it can only be proved on the basis of market data that market access is not just potentially possible, but actually takes place on a corresponding scale. This compensates for any specification errors or any incompleteness of the determinants selected. In the same way as the COM Index, the determinants of the LEX Index on their own are capable of revealing de-facto market access barriers only to a certain extent. Weighting thus reflects the importance of national laws as the basis for demanding access in the sense of the European concept of competition. Laws and statutory instruments are thus a necessary foundation, but not a sufficient condition for market access.

Dynamization of the Sub-Index Weightings

Liberalisation of the internal European railway markets is still in its infancy. As liberalisation progresses, the railways will undergo drastic changes over the coming years as they are faced with increasing competition. On the planned accession of ten Central and Eastern European states to the EU, existing market structures will presumably once again be challenged. In such a dynamic environment, it appears only logical to apply suitable weightings that correspond to the current stage of the liberalisation process. The modular concept of the three sub-indices means that the accents can be shifted from time to time by adapting these weightings.

In this still new market, the legislative conditions and administrative barriers (i.e. LEX and ACCESS) are the restricting factors, and therefore account for three quarters of the total weighting in the LIB Index. If the EU liberalisation policy continues and is implemented with the current intensity, the weighting of the LEX and ACCESS shares would have to be reduced and the COM Index would eventually become the key instrument of measurement.

Weighting in the LEX Index

The aforesaid panel of experts specified the following weightings regarding subject area and determinants:

Market access pursuant to Directive 91/440/EEC as amended by Directive 2001/12/EC (status quo – excl. TERFN) (L1)	10%
Further national access rights (L2)	25% divided as follows: L2.1: 60% L2.2: 40%
Organisational structures (L3)	25% divided as follows: L3.1: 80% L3.2: 20%
TERFN preparation status (L4)	10%
Regulatory authority (L5)	30% divided as follows: L5.1: 30% L5.2: 30% L5.3: 10% L5.4: 10% L5.5: 20%

Weighting in the ACCESS Index

The weights in the ACCESS Index at subject area and determinant level are as follows:

Information barriers (A1)	5% divided as follows: A1.1: 30% A1.2: 35% A1.3: 35%
Licensing and safety certificate (A2)	20 % divided as follows: A2.1: 18% A2.2: 8% A2.3: 2% A2.4: 9% A2.5: 2% A2.6: 4% A2.7: 2% A2.8: 2% A2.9: 2% A2.10: 8% A2.11: 3% A2.12: 40%
Scope for interpretation/ access regime (A3)	20% divided as follows: A3.1: 20% A3.2: 80%
Network access and prerequisites (A4)	20 % divided as follows: A4.1: 10% A4.2: 10% A4.3: 17% A4.4: 7% A4.5: 17% A4.6: 3% A4.7: 16% A4.8: 5% A4.9: 15%
Train path pricing system (A5)	20% divided as follows: A5.1: 30% A5.2: 5% A5.3: 20% A5.4: 35% A5.6: 10%
Access to service facilities (A6)	15% divided as follows: A6.1: 25% A6.2: 15% A6.3: 10% A6.4: 5% A6.5: 15% A6.6: 7% A6.7: 20% A6.8: 3%

The results for freight transport are included in the assessment of individual sub-determinants at 50 per cent, those of local and long-distance passenger transport at 25 per cent each.

Weighting in the COM Index

The overall weight of the COM Index is divided among the subject areas as follows:

Overall market development (C1)	10 % divided as follows: C1.1: 50% C1.2: 50%
New RUs (C2)	30% divided as follows: C2.1: 20% C2.2: 50% C2.3: 30%
Accessible market (C3)	60% divided as follows: C3.1: 50% C3.2: 30% C3.3: 20%

Here again, if it was possible to distinguish between scores, freight transport is included at 50 per cent, local and long-distance passenger transport at 25 per cent each.

3 Liberalisation Index 2002

3.1 Research

The Liberalisation Index was developed and researched over a period of two months (October to November 2002), with 29 November 2002 as the cut-off date for research.

The data for the LIB Index was collected by IBM Business Consulting Services consultants with proven expertise in the transport and strategy field. For the purposes of data collection, evaluation and source identification, the research team also had recourse to the European IBM Business Consulting Services network of railway experts. The data was collected on the basis of a questionnaire (available in German, English, French and Italian) which was derived from the determinants used in the concept (cf. Annex).

Persons with the appropriate competence at the ministries of transport, regulatory authorities, licensing and safety certification bodies, network operators, one-stop shops[5] and incumbents etc. in the individual countries were contacted and interviewed. The consultants also sought the opinions and experience of External RUs.

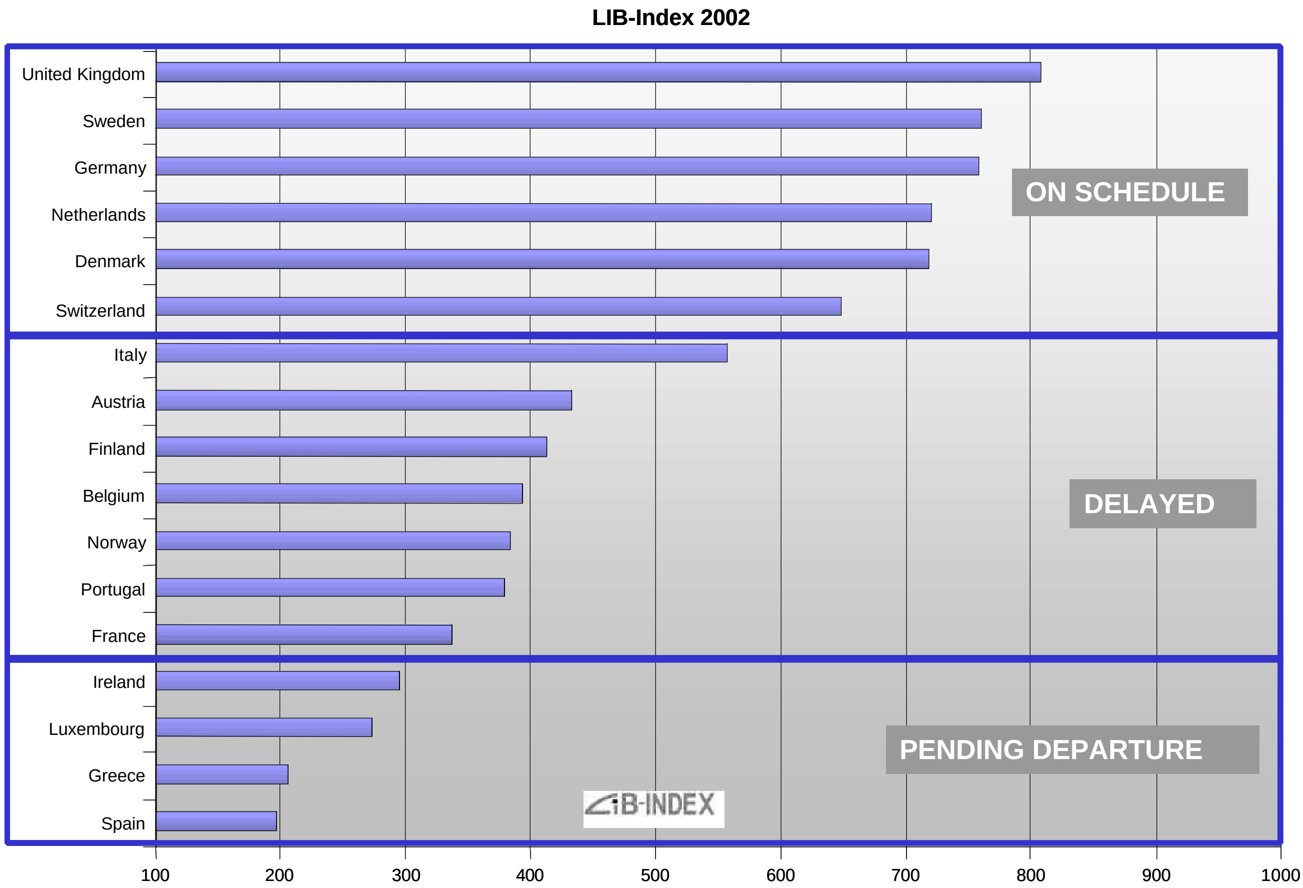
The existing specific national network access conditions were evaluated. Supranational data was collected, for instance, from UIC, the European Commission, the Community of European Railways and the World Bank. The annual reports and Internet presentations of the network operators and the incumbents were also analysed.

The acquired data was verified by means of recent scientific publications, further secondary sources and expert assessments. Paired comparisons and plausibility checks were also conducted to validate the data.

For certain determinants of the ACCESS Index, non-answers have also been included in the findings. The reason for this is that if it is not possible to obtain the relevant information about network access within a period of two months, despite intensive and selective research, such information is either not available to the general public or is subject to restrictive handling. This impedes the External RUs when drawing up their business plans.

[5] *Central contact point for all questions relating to the sale of train paths*

3.2 Findings of the LIB Index



As a result of the study, the current status of market opening in the 17 countries investigated can be allocated to three groups.

The countries in the first group, comprising the United Kingdom, Sweden, Germany, the Netherlands, Denmark and Switzerland, have made considerable headway in opening up their markets. These countries obtained 600 and more points in the index calculation. The group is given the status "on schedule”. In these countries, there is already noticeable competition and the market access opportunities for External RUs are acceptable.

Market opening in the second group, which consists of Italy, Austria, Finland, Belgium, Norway, Portugal and France, is substantially lower than in the first group. The scores of these countries vary between 300 and 599 points. This group is given the status "delayed".

When considered as a whole, it appears that Ireland, Luxembourg, Greece and Spain have made virtually no efforts to initiate the liberalisation process, scoring between 100 and 299 points. This group is accorded the status "pending departure".

At present, the United Kingdom has the most liberalised rail market in Europe. Its transport services are provided exclusively by External RUs. In 1993, the UK passed the Railway Act*,* which broke up British Rail into more than one hundred different companies.

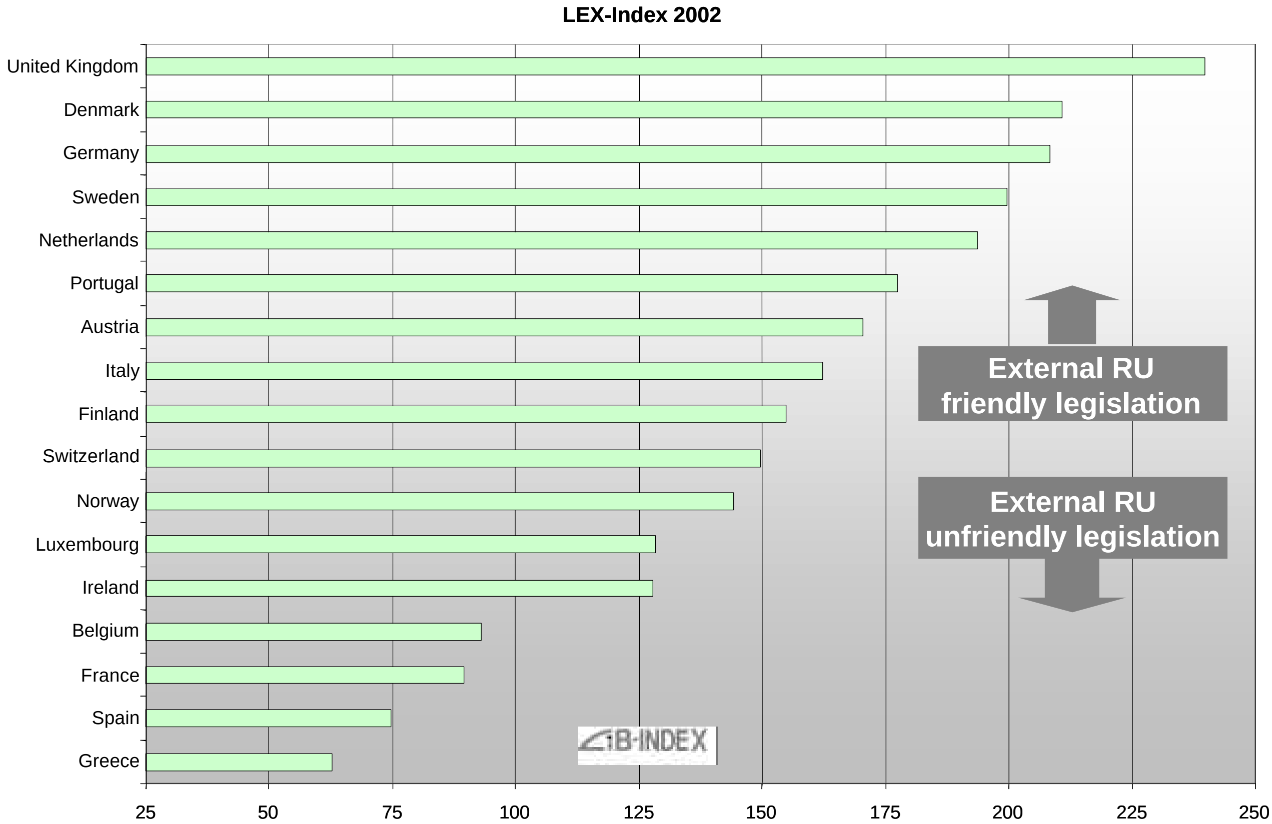
Sweden and Germany have also made good progress with liberalisation. The markets of these two countries are open to roughly the same degree, although they pursued different liberalisation strategies. Germany opted for an integrated rail concept, whereas Sweden effected full institutional separation of the state-owned railway from the infrastructure. It must be emphasised that at the relevant points the assessment of access conditions takes into account the discrimination potential resulting from the organisational structure of an incumbent. The fact that these three countries lead the field clearly shows that different regulatory models can be equally successful in achieving the ultimate goal.

In the past few years, the Netherlands and Denmark have also made considerable efforts to facilitate market access for External RUs. They have also reached a comparable liberalisation status and have a clear lead over Switzerland, which has also been allocated to the first group owing to its efficient processes in marketing freight train paths (the analysis was restricted to the SBB and BLS networks). On the other hand, new railways have practically no chance of access to the long-distance and regional passenger transport markets in Switzerland, whereas the other countries in the first group have opened these markets to new External RUs.

Of those allocated to the second group, Italy has opened its national rail network furthest by virtue of Act of Parliament No. 388 from the year 2000. Structures to enable market access for External RUs either already exist or are in the process of being established. Despite their significance for the Trans-European Networks (TEN), France and Austria are not included in the first group, as their market opening policies are comparatively restrictive. All other countries in the second and third groups also offer only restricted market access or no access whatsoever for External RUs.

An analysis of the sub-indices reveals the strengths and weaknesses of the individual countries in the liberalisation process.

3.3 Findings of the LEX Index



The greatest weight in the LEX Index was given to the subject area "Regulatory Authority" because of its fundamental importance in markets with former monopolists. State regulation of network access is most advanced in Germany, United Kingdom, Austria, Portugal, Denmark and Switzerland. The regulation processes and structures in these countries have already been established in order to regulate emerging competition and to ensure non-discriminatory access. The United Kingdom, Germany, Austria and Portugal have already set up a regulatory authority pursuant to EC Directive 2001/14. The other countries have either not yet established one or are in the process of establishing such a regulatory authority. Six different variants of the incumbents' vertical structures (network and transport) can be distinguished. Sweden, the Netherlands, United Kingdom, Denmark and Norway are the only countries to have effected vertical institutional separation of their state-owned railways as well as horizontal separation (separation of accounting for the passenger and freight segments).

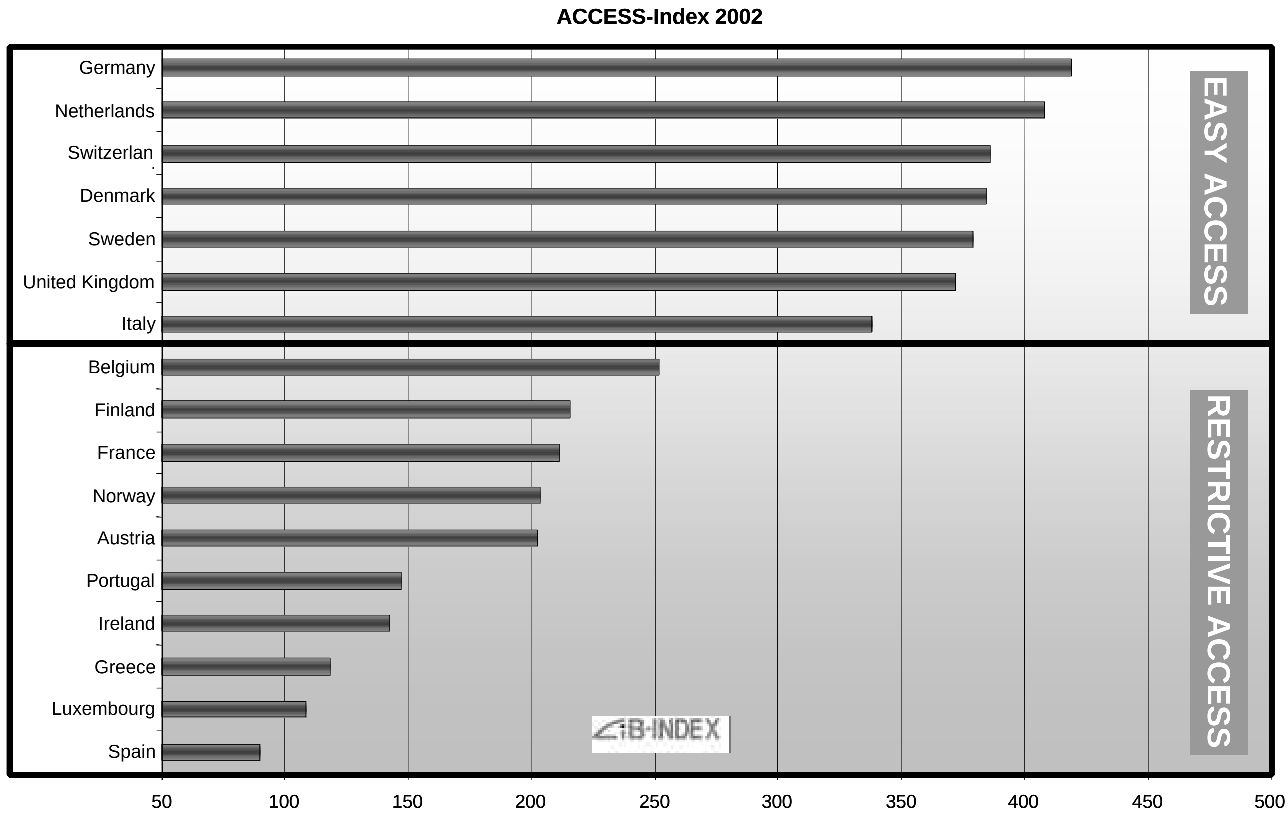
As regards access rights, the Netherlands, United Kingdom, Sweden and Germany have implemented national laws which are best suited to promoting competition and which go beyond the requirements of the EC Directives.

The differences in the LEX Index for the subject area "Market Access" are relatively small. All the countries examined have introduced statutory access and transit rights for international groupings and for cross-border intermodal transport. All the incumbents already have independent status and have separated their assets, budgeting and accounting from those of the state. All countries also prescribe separate accounting for the railway infrastructure (network) and the actual provision of transport services (transport). They differ only with regard to the steps they have taken to reduce indebtedness. For example, the debts of SNCF, the public railway in France, have not been assumed by the French government, but by RFF (Réseau Ferré de France, the French network operator). Nor has the Belgian government taken over the debts of the former state-owned railway.

In a comparison of European countries, Belgium, Switzerland and Portugal have made the least progress in preparing for TERFN. Switzerland is not expected to decide until next year whether or not to accede to TERFN.

In relation to the overall results of the LIB Index, Portugal and Austria are relatively well placed, as both these countries already have structures for regulating competition. However, these structures have not yet been applied as no competition exists to date, or in the case of Portugal is restricted to one External RU. Portugal has also effected vertical institutional separation of its state-owned railway and is therefore placed within the top third of the LEX Index, but like Austria loses ground because of the way it has organised practical market access.

3.4 Findings of the ACCESS Index



An Analysis of the absolute and relative access barriers reveals two different groups. The group which currently offers External RUs acceptable to good practical market access conditions is accorded the status "easy access". Germany and the Netherlands emerge as the access-friendliest countries in this group. The group also includes Switzerland (only freight transport on the BLS and SBB networks), Denmark, Sweden, the United Kingdom and Italy. The Italian network is managed by RFI, a company founded in July 2001. RFI issues the necessary train-path dependent safety certificates through its subsidiary CESIFER. The certification process is currently regarded as the main obstacle for External RUs in Italy.

The countries in the second group offer restrictive to insufficient practical market access conditions for External RUs. That group is accorded the status “restrictive access”. This second group includes Belgium, Finland, France, Norway, Austria, Portugal, Ireland, Greece, Luxembourg and Spain.

DB Netz AG, the network operator in Germany, has already created the most important prerequisites to enable network access for External RUs. A One Stop Shop Manager[6] serves as central contact to assist applicant RUs with all questions relating to the marketing of international train paths. Deutsche Bahn AG has also appointed a Competition Officer who can be contacted directly in case of complaints. As regards the determinant "Licence and Safety Certificate", Germany obtained the highest score as it does not demand a separate, restrictive safety certificate even though some aspects are already dealt with in the course of licence issue.

The most comprehensive and user-friendly information about network access is available in Germany, the United Kingdom, the Netherlands and Switzerland. The way a country handles such vital information can be seen as an initial indicator of the openness of its network. There is a significant disparity between the first and the second group with regard to the efficiency of their administrative processes, such as the issue of licences and safety certificates.

Whereas the countries in the first group all provide open access in the freight sector, they differ in respect of the access provided to passenger train paths.
Although Germany offers open access in the long-distance passenger transport sector, competition in this segment is as yet only developing slowly. This can perhaps be attributed to the high costs required to enter the market, especially for rolling stock, to the relatively high train path user fees, and to train path availability. In the United Kingdom and Sweden, RUs wishing to offer long-distance passenger transport services have to participate in tender procedures or acquire a concession. In all other countries, access to this market segment is even more restrictive. In Switzerland, long-distance passenger services are provided exclusively by Cisalpino (joint venture of SBB and Trenitalia), SBB and BLS and this is expected to remain the case until 2007.

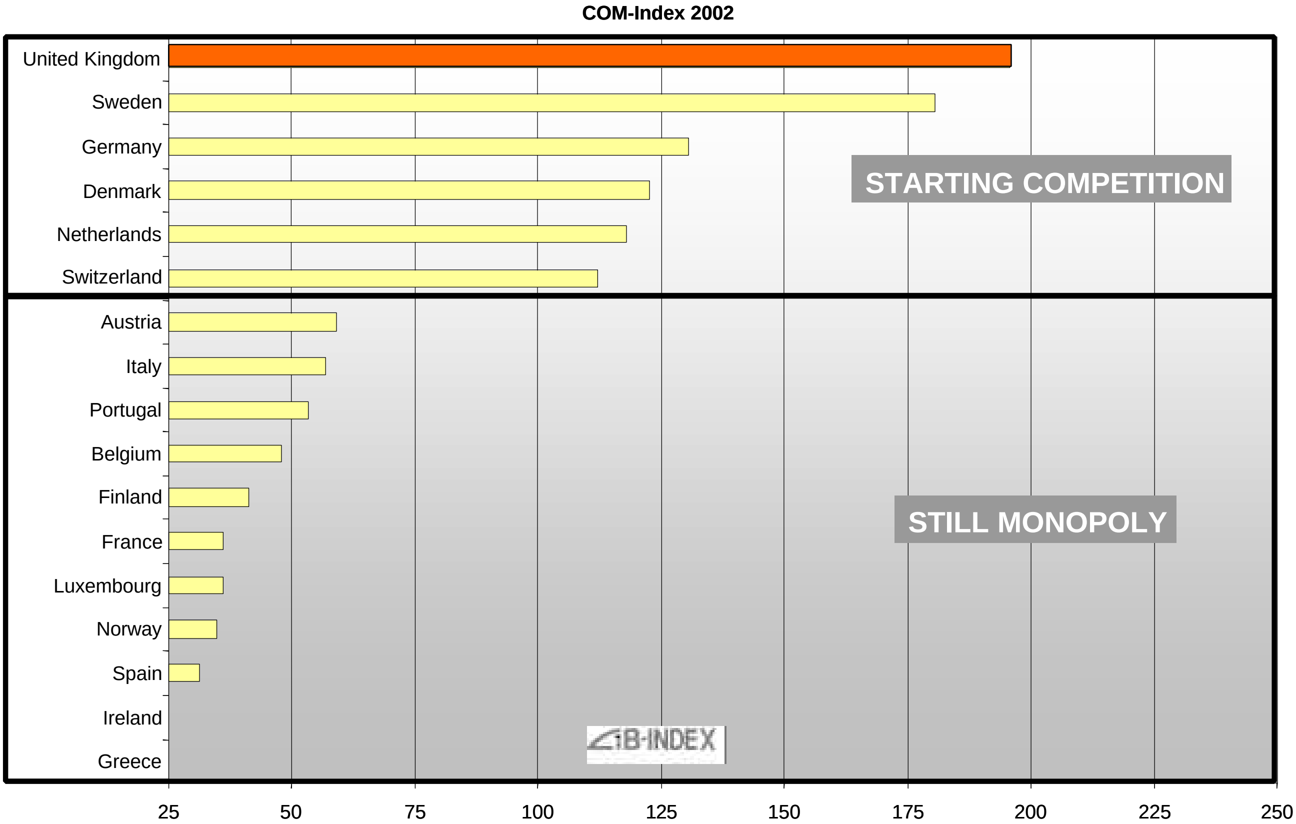
In the local passenger transport markets in Germany, the United Kingdom, Sweden, the Netherlands and Portugal, a certain proportion of the train paths is awarded by tender every year or irregularly, or is allocated in the form of concessions.

In contrast to the only slight divergence between the countries in the LEX Index, two distinct groups emerge in the ACCESS Index. The first group, which has only low market access barriers, differs consistently from the second group, with restrictive market access, in every single determinant of this sub-index. These countries have already acquired experience with External RUs and have consequently established the relevant processes. Countries such as Austria or Portugal have dropped from the top third of the LEX Index into the mid-range bracket owing to the practical obstacles. The middle-ranking countries do in fact have some structures and processes for market access, but these are practised only to a low extent if at all. In the countries of the bottom third, such structures and processes hardly exist or do not exist at all.

The following COM Index largely confirms the previous findings of the LEX and ACCESS Index.

[6] *Contact for all questions dealing with the sale of train paths*

3.5 Findings of the COM Index



The COM Index assesses the competitive situation in the individual countries on the basis of aggregated market factors in the three areas "Market trends of the modal split ", "External RUs" and "Accessible market ". Wherever possible, it distinguishes between the market segments freight transport, local passenger transport and long-distance passenger transport.

The COM Index reveals two highly distinct groups. Following the characteristics of the COM Index, this Index distinguishes between “starting competition” and "still monopoly”.

The United Kingdom plays a special role in this case, as there is no longer any incumbent, but only External RUs. In the other countries in the first group, there is already emerging competition. Sweden is the clear leader in this group, a position which can be attributed first and foremost to the relatively high market share of External RUs. Sweden is then followed by Germany, Denmark, the Netherlands and Switzerland, which exhibit comparatively small differences.

All the other countries have only very little competition in their rail transport markets or none at all. An evaluation of the COM Index puts the following countries in this group: Austria, Italy, Portugal, Belgium, Finland, France, Luxembourg, Norway, Spain, Ireland and Greece.
In Italy, there are three External RUs, which have the necessary train path-dependent safety certificate, active on the RFI network (Rete Ferroviaria Italiana, the Italian network operator). However, they account for only a marginal share of the market. The other RUs which exist in Italy and Austria are not a consequence of liberalisation, but have already existed for some time or offer rail services on their own networks. Portugal gave the only existing new RU priority treatment over the incumbent in the only invitation to tender conducted to date.

4 National Summaries

The following pages contain the summaries of the countries investigated in the summary in alphabetical order. The summaries take an in-depth look at the national particularitites of the LEX, ACCESS and COM Indices.

4.1 Austria

On the basis of the overall results, Austria is allocated to the group "delayed".

LEX Index

The Basic Directive 91/440/EEC and also Directive 95/18/EC have largely been implemented. Access to the network is theoretically possible for all railway undertakings licensed in Austria and, to a certain extent, also for foreign RUs. ÖBB is wholly owned by the state. It is run as an integrated railway undertaking with separate accounting and separate management of the network and operations divisions. Successful financial rehabilitation has not been achieved to date.

ACCESS Index

ÖBB has a contact point for "external" network access (OSS Manager). Train path access is granted through the ÖBB infrastructure division. In practice, the incumbent's passenger transport enjoys priority treatment. The train path pricing system was in a state of upheaval for several years after its introduction. The fixed component, which proved to be an access barrier for newly founded RUs, has meanwhile been reduced to zero. The train path price is based on the marginal costs and thus no longer constitutes an access barrier compared with the other European countries.
The main obstacles for competition are that concessions are issued on a reciprocity basis, the extensive safety regulations, the absence of a market for licensed rolling stock, and the time-consuming and expensive alternative of obtaining a new vehicle licence.

COM Index

To date there have been no invitations to tender for rail transport services. Passenger transport is awarded in full to ÖBB, the federal Austrian railway, in a discretionary procedure, so that there is practically no competition.
There are four private domestic railway undertakings active on the ÖBB network, with a negligible share of the total rail transport volume. These RUs are not really new, but have been in operation for years or in some cases even decades. Approx. 25 years ago, for example, Stern&Hafferl received a licence for joint use of a section of Westbahn. One special feature of the Austrian market is the Raab-Ödenburg-Ebenfurter railway, which is jointly owned by the Hungarian and Austrian states and has offered cross-border services for decades. The one real innovation is that the VOEST Group has now obtained a railway licence and currently operates one freight train per day. Locomotion is the first market newcomer to specialise in international freight transit across the Brenner Pass. LKE, a subsidiary of Graz-Köflacher Eisenbahn, has also commenced operations. DB Regio (Germany) operates a short regional route in the border area – Außerfernbahn – on the basis of a twelve-month licence.

Conclusion

Austria ranks in the European midfield in terms of liberalisation of its rail network. Although network access would theoretically be possible in many cases, it is in practice largely dependent on licence issue by the Ministry of Transport and the market dominance of the incumbent. Neither freight nor passenger trains can run on the ÖBB network without obtaining individual permission in each case. The measures introduced have as yet failed to generate any noticeable admission of External RUs to the market and have thus also not led to any stimulation of competition.

4.2 Belgium

On the basis of the overall results, Belgium is allocated to the group "delayed".

LEX Index

Owing to Belgium's geographical size, no distinction is made between local and long-distance passenger transport. By and large, Directive 91/440/EEC has already been transposed into national legislation. Cabotage is not permitted for External RUs. Belgium has effected organisational and accounting separation between infrastructure operations and the provision of rail transport services within the holding structure of Société National des Chemins de Fer Belges (SNCB). In order to satisfy the Maastricht criteria, the Belgian government has not to date assumed the debts of SNCB. The clarification body for rail transport questions is the directorate-general "Surface Transport" in the "Federal Public Mobility and Transport Services". Belgium is only obliged to offer access to feeder lines pursuant to TERFN on a minimum of 20 km by 15 March 2004 and on 40 km one year later.

ACCESS Index

There are no major problems as regards obtaining information about network access.

The term of validity of a licence – 5 years – is comparatively low compared with the European average, as is the 3-year term of validity for a safety certificate. Train path prices are not provided in detail nor distinguished according to type of transport. The Ministry of Transport stated the level of train path prices at 1.2 to 2.5 euro/train km. Owing to the lack of train path price differentiation, no exact value can be calculated for the costs of "reserved but unused train paths ". Belgium is a member of BELIFRET, a freightway which is run as a cooperation between the Belgian SNCB, Italian FS, French RFF and SNCF, and Spanish RENFE.

COM Index

In 2000, Dillen en le Jeune Cargo NV – DLC was the first freight transport enterprise to acquire a licence in Belgium and now offers freight transport services for Belgium, Germany, Netherlands, Switzerland and Austria. Owing to difficulties in obtaining the safety certificate and personnel recruitment problems, the company was not able to commence operations until April 2002. The general rule of revoking licences which are not used within the first six months was not applied to Dillen en le Jeune Cargo NV – DLC. In 2001, Intercontainer-Interfrigo (ICF) acquired a licence for international freight transport, but does not as yet operate in the market.

Conclusion

Cabotage is not permissible for External RUs in Belgium, and it appears unlikely that the Belgian government will create the necessary legislative provision before 2008. The two External RUs which have obtained a licence in Belgium for international freight transport show that initial structures and processes for liberalisation are present.

4.3 Denmark

On the basis of the overall results, Denmark is allocated to the group "on schedule“.

LEX Index

The requirements of Directive 91/440/EEC as amended by Directive 2001/12/EC (excl. TERFN) are consistently satisfied. Further access rights are granted to railway undertakings beyond the requirements of the Directive. In the freight transport sector, open access has been possible for companies established in Denmark since 1998. Denmark also participates in the cooperation "North-South Freight Freeway". Local passenger transport is assigned to private railways, some of which operate with their own infrastructure, on the basis of five-year contracts. Contract awarding is largely discretionary; only in two cases were the contracts put out to tender. In 2002, the first tender procedure was effected for a long-distance passenger route.

The railway infrastructure manager (Banestyrelsen) is completely independent of the incumbent Danske Statsbaner (DSB). The same applies to the former freight and passenger transport segments of DSB. Freight transport was transferred to the independent international alliance Railion. The preparations for the Trans-European Rail Freight Network give reason to assume that Directive 2001/12/EC will be implemented in full by 15 March 2003.

As regards competition regulation, the Ministry of Transport has set up a "Complaint Board". According to a statement by the Ministry of Transport, the "Complaint Board" already satisfies the requirements of Directive 2001/14/EC. However, in line with a assessment of Mr. Jan Scherp,[7] Principal Administrator, European Commission (DG TREN), that statement is not deemed sufficient, especially since no written confirmation has been submitted by the Ministry of Transport. The Ministry of Transport believes that its authority in regulatory matters applies throughout the entire range of subject matters requiring regulation and that it is vested with the necessary powers as defined in the questionnaire for the LEX Index.

ACCESS Index

All the necessary information for market access is available on the Internet and/or personally. Impersonal information is available almost exclusively in Danish, but the staff of most of the institutions concerned speak English.

The institutions responsible for issuing licences and safety certificates and for vehicle licensing (Banestyrelsen and Jernbanetilsynet) are independent of the incumbent. The costs of a licence, a safety certificate and of the necessary ancillary services are within the bottom third in a comparison of European countries. Licences are issued independently of the type of transport concerned. The essential prerequisite for licence issue is the safety certificate required for network access. According to the Railway Inspectorate (Jernbanetilsynet), all applications for a licence have so far been approved. Foreign licences issued on the basis of Directive 95/18/EC are accepted without restriction. All information on market access derives from the institutions responsible, it was not possible to obtain verification of these statements, for example from External RUs.

In the Danish market, access to rolling stock is possible, as DSB is obliged to make rolling stock available to its competitors on the basis of leasing agreements. Licences are issued free of charge for the companies' own vehicles, no separate fee is payable. There is a standardised, non-discriminatory procedure for the allocation of infrastructure capacity. Capacity is priced on the basis of a standard pricing system. In addition to kilometre-based prices, the train path price also takes the use of bridges into account. Depending on the route length concerned, these fees for bridge use can account for a large proportion of the total train path price.

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[7] *Scherp, Rail International 10/2002, p. 2 (p. 9)*

According to a statement by the Ministry of Transport, access to service facilities pursuant to Annex II of Directive 2001/14/EC is already guaranteed in full. However, this information, too, was not confirmed in writing by the Ministry of Transport. All statements on train path access derived from the institutions responsible. It was not possible to have these statements verified by External Rus in Denmark , as they did not participate in the study.

COM Index

In terms of transport volume, rail transport in Denmark has declined against road transport over the past few years. However, the decrease is less pronounced than in other European states: freight transport (-11%), passenger transport (-9%).

Of the total licences issued for network access, 17 are currently actively used. In the past, licences lapsed because companies had merged or filed a petition in bankruptcy. At present, 16 railway undertakings (incl. DSB) are active in the market, with some operating their own infrastructure.

In the freight transport market, Railion Denmark A/S, which is regarded as the incumbent within the context of this study, currently has a market share of approx. 95%. Thus, there have been no major shifts in market shares over the past few years. In the passenger transport sector, DSB still holds a market share of approx. 96%. This will change as from 2003, as the company ARRIVA has won an invitation to tender against DSB. The freight transport market is subject to open access as far as the state-owned network is concerned. Local passenger transport services have been awarded to private railways since 1988. Contract award is primarily discretionary. The first invitation to tender for long-distance passenger transport in the year 2000 covered approx. 15% of the entire operating capacity of DSB.

Conclusion

The Danish legal system is geared to competition. DSB does not enjoy any special status. DSB is in fact obliged to allow competitors to use its rolling stock. 15% of DSB train kilometres were awarded to ARRIVA in 2000, despite the fact that DSB had submitted the better bid. This attitude on the part of the Danish government clearly indicates its determination to increase competition. However, it is unlikely that this situation will also apply to the local passenger transport sector in the near future, as responsibility for putting contracts out to tender lies with the regional authorities.

4.4 Finland

On the basis of the overall results, Finland is allocated to the group "delayed".

LEX Index

Although the requirements of Directive 91/440/EEC as amended by Directive 2001/12/EC (excl. TERFN) are satisfied, according to the Finnish Rail Administration the steps taken to reduce indebtedness have as yet failed to lead to a sound financial basis. Further access rights do exist, as it is in principle possible to establish a company with network access option or to use of the North-South Freight Freeways. Only cabotage is ruled out by law. Horizontal separation of transport services and infrastructure management has been effected. There is a management contract with the incumbent VR for certain services which are currently under the responsibility of the infrastructure manager. Passenger and freight transport do not have separate accounting and are amalgamated in one company (VR-Ltd.).

In view of the preparations for the Trans-European Rail Freight Network, is can be assumed that Directive 2001/12/EC will be fully implemented by 15 March 2003. Beyond the network defined in the Annex to the Directive, there are plans to provide access to the entire network, which is managed by the Finnish Rail Administration. However, access to ports is still considered to be a problem.

Finland has not yet established a regulatory authority which satisfies the requirements of Directive 2001/14/EC, but the necessary legislation is to be enacted in early 2003. According to the Ministry of Transport, there are at present no other independent authorities that deal with regulatory questions of the rail market.

ACCESS Index

Of the information necessary or helpful for market and network access, only very little is available in English on the Internet. The personal provision of information is much better, as most staff members speak fluent English.

The statements on processing times, validity and conditions of licences and safety certificates are largely theoretical, as VR-Ltd. practically enjoys a monopoly at this point. The Finnish Rail Administration failed to answer roughly half the questions concerning licences and safety certificates. However, the Finnish Rail Administration confirmed that in practice there is no deviation from the requirements of European Directives and/or national legislation.

The Finnish Rail Administration further confirmed that it is in principle possible for foreign vehicles to obtain a licence. The train path allocation process, according to Finnish Rail Administration, is standardised and non-discriminatory. However, VR-Ltd. is also the only railway undertaking in operation on the state-owned rail network. No information was supplied as regards train path prices. It was not possible to state the extent to which the requirements of Annex II of Directive 2001/14/EC are satisfied.

COM Index

In terms of transport volume, rail-bound freight transport has enjoyed a slight growth compared to road transport over the past few years. In the passenger transport sector, however, the rail mode has decreased slightly.
VR Ltd. currently holds a monopoly on the Finnish network. According to the Ministry of Transport, however, the market is theoretically open to External RUs. The low attractiveness of the market is quoted as the reason for the absence of competition. According to the Finnish Railway Statistics compiled by the Finnish Rail Administration, one private RU operates on a route length of 11 kilometres, holding a marginal market share. The Ministry of Transport states that there are no External RUs in Finland. The market share of the incumbent VR, in terms of transport volume, is thus almost 100% of freight transport and 100% of passenger transport.

Conclusion

Finland currently offers External RUs market access opportunities which theoretically go beyond the extent that is compulsorily prescribed by the EU. However, severe information barriers in conjunction with a relatively low market attractiveness are the reason that there is as yet no competition worth mentioning. According to the Ministry of Transport, the transposition of the first Railway Package into national legislation is to be used as an opportunity to liberalise some sectors of the market to an even greater extent than that required by EU law .

4.5 France

On the basis of the overall results, France is allocated to the group "delayed".

LEX Index

France has fulfilled the obligations of Directive 91/440/EEC as amended by Directive 2001/12/EC. Société National des Chemins de Fer Francais (SNCF) is the sole provider of freight and passenger transport. Infrastructure management and the provision of rail transport services have been separated. RFF (Réseau Ferré de France) has been given sovereignty over the infrastructure. RFF is responsible for construction, operation and maintenance of the national rail infrastructure. However, in operational terms, these processes are handled by SNCF in the capacity of an RFF contractor on the basis of a management contract. SNCF pays user fees to RFF for the use of the infrastructure.

The French government has not taken over the debts of SNCF. Instead, these debts were assumed by the French network operator, RFF. There are clear plans as to which routes are to be allocated to the Trans-European Rail Freight Network. However, access to the ports is regarded as a problem. There is as yet no regulatory authority pursuant to 2001/14/EC, but according to the Ministry of Transport, it is to be expected under the new legislation by March 2003.

ACCESS Index

According to the Ministry of Transport, it has issued regulations governing licence issue and safety certification for External RUs. However, the Ministry of Transport further confirms that so far it has been unable to acquire any experience in licence issue processes, as no External RU has yet applied for a licence in France. Furthermore, the Ministry expresses its willingness to recognise other safety certificates, provided that the standards of the other European country in question correspond to its own. France distinguishes between two cases in respect of the issue of safety certificates: (1) licensing of new technology by SNCF and/or (2) safety certificate for a new RU seeking access to the French rail network. External RUs can apply to a "One Stop Shop" for licence issue and safety certificate by contacting the Ministry of Transport. The RFF train path pricing system has been published and is available on the Internet. Energy and other expenses are not included when calculating the train path price and have to be paid for separately.

COM Index

In terms of transport volume, the French rail market decreased by 17% in freight transport and 4% in passenger transport compared with road transport (1991-2000). No new competitors are active on rail and only BELIFRET partners are granted a limited access right for freight transport. Foreign competitors complain that the French market is closed off.

Conclusion

SNCF is still the only railway undertaking which operates in the freight and passenger transport markets. International freight transport for partner companies is possible only within the scope of Directive 91/440/EEC or by means of agreements such as BELIFRET (freightway). France intends to implement the Directives of the first Railway Package by March 2003. However, according to the Ministry of Transport, the market for cabotage will remain closed.

4.6 Germany

On the basis of the overall results, Germany is allocated to the group "on schedule".

LEX Index

With the implementation of the German rail reform, the former state railways DB and DR were joined to form Deutsche Bahn AG, relieved of their debts and managed according to private-enterprise criteria from then on. The Federal *Laender* deploy regionalisation funds to ensure continuous financing of local passenger transport.

DB AG is an integrated railway undertaking. Separation of infrastructure and operations has been effected in organisational, legal and accounting terms. The public limited companies for passenger transport, freight transport, network/infrastructure and station management operate within the framework of a holding whose sole shareholder is the Federal Republic of Germany.

Parallel to the execution of the rail reform, Directive 91/440/EEC for non-discriminatory network access was implemented in its entirety, and other legal regulations which go beyond the scope of the Directive were introduced at national level (General Railway Act (AEG) and Railway Infrastructure Usage Regulations (EIBV)). According to these instruments, all RUs established in Germany are entitled to use the public rail network. In addition to the cases covered by Directive 91/440/EEC, RUs from other Member States also have access rights subject to reciprocity.

ACCESS Index

DB Netz AG has created the conditions to enable network access for External RUs. It ensures open access on the basis of the “General Conditions concerning the Usage of DB Netz AG Railway Infrastructure“ (ABN), by means of a single-tier train path pricing system, a standard infrastructure usage contract and a number of other supporting processes. An OSS Manager is available as central contact, and the standardised access conditions are documented in detail in a manual for customers. DB has also appointed a Competition Officer, to whom complaints can be addressed directly by any External RUs that believe themselves to be the target of discrimination or unfair competition by DB.

One of the main obstacles quoted by RUs seeking to obtain a rail licence are the bureaucratic difficulties encountered at the ministries in the Federal *Laender*. These applicants report that there is as yet no harmonisation of legislation at Federal Land level. On the one hand, the Free State of Thuringia, for example, has still not enacted railway legislation at *Land* level. Baden-Württemberg, on the other hand, demands a “permit” from the ministry as an additional prerequisite in addition to the licence for railway operations. These issues do not affect DB, as DB is governed solely by the Federal authorities. Transport companies can circumvent the complicated licensing process by taking over existing railway undertakings.

The German authorities do not demand a separate safety certificate to date. Some of these aspects are already dealt with as part of the licensing procedure.

From the point of view of newcomers, the procurement of rolling stock has proved difficult in some respects in the past. External RUs have repeatedly demanded the right to use DB rolling stock which was still licensed. DB, on the other hand, takes the stance that these demands for decommissioned traction stock and passenger coaches to be sold at market prices constitute an unlawful intervention in DB’s ownership rights. In the meantime, however, a market for new and used rolling stock has gradually evolved in Germany. The approval of new construction series or foreign vehicles can be very time-consuming and involve considerable expense.

COM Index

The German rail transport market has the highest number of independent RUs in Europe. The freight transport market in particular has enjoyed substantial new impetus following reorganisation. Numerous companies, some of which are spin-offs from international logistics enterprises or foreign state railways, have been given a licence to use the German network. Examples are Connex Cargo Logistics, HUPAC, Rhenus-Keolis, SBB Cargo, Rail4Chem Eisenbahnverkehrsgesellschaft mbH, ITL Eisenbahngesellschaft Dresden and Karsdorfer Eisenbahngesellschaft.

Regional passenger transport is open to non-federal and foreign bidders on the basis of invitations to tender and direct contract awards and is already operated successfully by such on certain routes. These include subsidiaries of Connex Regiobahn, Nord-Ostsee-Bahn and Ostmecklenburgische Eisenbahngesellschaft, as well as S-Rail Europe, a subsidiary of SBB. Due to the long terms of these transport contracts in some cases, only a certain percentage of the market is accessible per annum.

There is as yet only little competition in the long-distance sector, although DB AG has reduced its train kilometres in long-distance transport year for year. So far, there is only one daytime and one seasonal night-train service run by External RUs.

Conclusion

The Federal Republic of Germany, situated at the intersection of the most important continental traffic routes, holds a leading position in liberalisation of the rail transport market in Europe. Competition is already practised in all segments. It is noticeable that some of the companies thrusting their way into the German rail market come from countries that do not grant German RUs comparable access rights and which in some cases have actually refused to grant licences.
In view of the high costs of entering the market, especially for rolling stock for high-speed transport, the comparatively high train path user fees, and train path availability on routes with high capacity utilisation, there is only little competition as yet in the long-distance sector.

4.7 Greece

On the basis of the overall results, Greece is allocated to the group "pending departure".

LEX Index

Directives 91/440/EEC, 95/18/EC and 95/19/EC have been transposed into national legislation. Nevertheless, the incumbent OSE (Hellenic Railways Organisation) is still responsible for infrastructure management. The Ministry of Transport and the incumbent OSE are currently making efforts to rehabilitate OSE.

Directives 2001/12/EC, 2001/13/EC and 2001/14/EC are currently being transposed into national law. In that context, Greece has been granted exemptions with regard to the implementation of some articles. The Ministry of Transport grants licences for international passenger and freight transport, but not for national passenger and freight transport. There is no regulatory authority for the rail market in Greece. At the moment, the Ministry of Transport monitors and decides on such matters.

ACCESS Index

The Greek government still exerts a strong influence on the rail market in Greece. For example, the Ministry of Transport has the power to decide on licence issue to External RUs, to stipulate end-customer prices and train path prices (based on proposals by OSE) and procedures for safety certification. There are no empirical figures available for market access for External RUs.

There are severe information barriers for market access in Greece, so that market access is very difficult or fraught with doubt from this aspect alone. Neither the incumbent nor the Ministry of Transport have published the conditions and prerequisites for market access. Nor is there a transparent train path pricing system.

COM Index

There is no competition on the Greek rail market.

Conclusion

Owing to its geographical position, as well as the lack of progress in liberalisation from the legislative point of view and in actual practice, Greece is an unattractive rail market for External RUs.

4.8 Ireland

On the basis of the overall results, Ireland is allocated to the group "pending departure".

LEX Index

On transposition of Directives 91/440/EEC, 95/18/EC and 95/19/EC into national legislation, Ireland created the political and legal framework for liberalisation pursuant to the European requirements. According to the Ministry of Transport, there are currently no administrative processes which support the legal framework, as there is no demand for this and none is expected. Regulatory tasks are currently handled by the Ministry of Transport. The railway undertaking Iarnród Éireann belongs to the state-owned enterprise Córas Iompair Éireann (CIE).

ACCESS Index

In view of the implementation of the EC Directives, the Ministry of Transport believes that it would theoretically be possible for European railway undertakings to offer transport services, but no inquiries have been received to date. The low interest in market access can presumably be attributed to the special features of the Irish rail market:

- island location
- small railway network
- technical circumstances (e.g. different gauge from the majority of other EU Member States)

These special characteristics are also the grounds for the exemptions granted to Ireland by the European Commission in respect of the periods for implementation of the Directives in the first Railway Package.

COM Index

According to a statement by Iarnród Éireann, a comparison of the figures for 2000 and 2001 reveals the following increases for the rail market in terms of transport volume: 7% in long-distance passenger transport and 17.7% in local transport (Dublin and suburbs). There are currently no RUs other than the state-owned railway undertaking.

Conclusion

Ireland has a special position owing to its geographical situation and therefore closed-off rail market. Although the Irish Ministry of Transport states that the Irish rail market is open to all RUs, there is currently no competition at all on the Irish market. Its insular nature and special rail characteristics (track gauge, small network of approx. 1960 km) mean that only few RUs are expected to find this market attractive enough to seek market access.

4.9 Italy

On the basis of the overall results, Italy is allocated to the group "delayed".

LEX Index

Legally regulated market access in Italy consists of the following four elements:

1. International combined freight transport
2. International passenger transport in association with local RUs
3. Principle of reciprocity
4. Railway undertakings with an extended licence

The first two points are based on EC Directives and therefore do not constitute a special feature. The principle of reciprocity means that RUs from other EU states are granted network access provided that Italian RUs are shown to be granted the same rights in the applicant's home country.

RUs with an extended licence generally have the option of offering their services in all market segments, provided that adequate train path capacities are available. This means that in theory, the entire network and all market segments are open (Act of Parliament 388 of 23 December 2000).

Market regulation is to be handled by the Ministry of Transport (MIT). According to a statement by the MIT, the corresponding department is currently being set up.

ACCESS Index

Italian RUs have network access to the RFI network if they have the aforesaid extended licence and the required safety certificate. There are more than 27 Italian RUs that have a licence. However, most of these undertakings do not have the necessary safety certificate and the necessary licence extension to enable them to offer their services on the RFI network. The safety certificate is train-path dependent and, together with personnel recruitment, constitutes the major obstacle to market access in the opinion of the RUs and according to current studies. It was not possible to identify the train path marketing processes in the course of this study.

COM Index

Many Italian RUs are not a result of emergent liberalisation, but have already existed for some time and offer their services on their own networks. The market shares of External RUs operating on the RFI network are still marginal.

Conclusion

At the time of research, the legal conditions for market entry for External RUs were sufficient. However, network access still proves difficult in practice, as the relevant processes are not consistently transparent.
The extent to which the market will use the legal basis to its advantage and whether Trenitalia, RFI and CESIFER will ensure non-discriminatory procedures may well become apparent in the course of 2003, as many External RUs are willing to join this market and make use of the legal framework which has been created.

4.10 Luxembourg

In terms of the overall results of the LIB Index, Luxembourg is allocated to the group "pending departure".

LEX Index

Owing to the geographical size of the country, Luxembourg does not distinguish between local and long-distance passenger transport. Directive 91/440/EEC has been transposed into national legislation. Passenger transport services are currently provided exclusively by Chemin de Fer Luxembourg (CFL). Freight transport has been transferred to EuroLuxCargo (wholly owned subsidiary of CFL, founded in 1997). The separation of infrastructure management and the provision of transport services has been effected under the overall management of CFL. Like Belgium, Luxembourg is merely obliged to provide feeder lines (TERFN) on a minimum of 20 km by 15 March 2004, and to expand these to 40 km one year later. Moreover, Luxembourg does not have to establish a regulatory authority until 31 August 2004.

ACCESS Index

As no information on market access was provided by either the Ministry of Transport or CFL, and there are no active External RUs that could be asked, the answers given refer in most cases only to BELIFRET.

COM Index

In comparison with road transport in Luxembourg between 1991 and 2000, freight transport dropped by 32% and passenger transport increased by 24% in terms of transport volume. Only the members of BELIFRET are permitted to use the stipulated freight transport routes. There are no External RUs operating in the market.

Conclusion

Luxembourg still has monopolist structures. These structures are expected to change only slowly over the coming years, as Luxembourg does not have to implement some sections of the EC Directives in the first Railway Package until much later than other EU states.

4.11 Netherlands

On the basis of the overall results, the Netherlands are allocated to the group "on schedule".

LEX Index

The Dutch government began to liberalise rail transport as early as 1991. Since then, it has created a legal and administrative framework which now enables External RUs to operate in the Dutch market. The Dutch government has largely transposed the requirements of Directives 91/440/EEC, 95/18/EC and 95/19/EC into national legislation. Freight transport is liberalised and there is open access to the entire network designated for that purpose. The incumbent Nederlandse Spoorwegen (NS) has an exclusive licence for long-distance passenger transport until 2015, while regional services are awarded on the basis of tenders. A new Railway Act, which has already been submitted to parliament as a bill, is intended to transpose the remaining requirements from previous Directives as well as the new elements pursuant to the first Railway Package into national legislation by 1 January 2004.

Within the structure of the Competition and Regulatory Authority (NMA), a regulatory authority for rail traffic (Transport Chamber) is currently being established as defined in Directive 2001/14/EC: at present, this takes the form of a task force and does not have the necessary powers. Differences of opinion between the parties involved are currently being clarified either directly with Railned or in court, on the basis of the Dispute Resolution Procedure (Appendix to Terms and Conditions of Railned 1997 - cf. Network Statement 2003).
The following Acts provide the legal foundation:

- Act on Passenger Transport 2000
- Railway Act of 25 April 2002 (expected to come into force at the end of 2003)
- Concession Act of 25 April 2002 (expected to come into force at the end of 2003)
- Bill of user charges for the use of railway infrastructure 1999 (Staatsblad, Bulletin of Acts and Decrees 457 of 2 November 1999)
- Regulation for user charges for the railway infrastructure 1999 (Netherlands Government Gazette 247 of 23 December 1999)

ACCESS Index

Infrastructure management is handled by three organisations (Railned, NS Verkeersleiding and NS Railinfrabeheer), which have been independent of the incumbent NS and responsible for the sectors of network access, capacity management, safety, train protection, infrastructure management, railway construction and maintenance since 1996. The Ministry of Transport will take over the safety sector (safety certification, vehicle licensing etc.) with effect as from 1 January 2003.

The Netherlands currently distinguishes between three different types of network access:

1. Licence for freight transport in the Netherlands pursuant to the open access provisions
2. Concessions for public passenger transport in the domestic Dutch market (regional traffic) including the route sections up to the national borders, and
3. Licence for "occasional traffic" with passenger trains (private domestic passenger services); here, there is a provision similar to that in the freight transport sector governing passenger trains which are not classified as a "public service".

Of the 32 regional lines, 25 are currently put out to tender by the Ministry of Transport – and subsequently by the regional authorities. The train path pricing system for freight and passenger transport has very simple and clear structures. The user fees for train path usage are very low in comparison with the other European countries. They will be raised to a price of 0.93 euros per train path kilometre in stages, by 2005 for passenger transport and by 2007 for freight transport. That price does not include the cost of electric current or diesel. Station fees are also charged separately for passenger trains.

COM Index

The Dutch market has competition in the freight and local passenger transport markets. In addition to a few maintenance and bus companies, 14 RUs had a valid licence for the provision of transport services on the Dutch rail market in 2001. Connex and Lovers Rail have withdrawn from the market. A total of 32 regional lines are put out to tender. The incumbent NS currently operates on 22 regional lines.

Conclusion

The Dutch market is liberalised in the freight and local passenger transport segments. The incumbent's exclusive licence for long-distance passenger transport constitutes a market entry barrier for other RUs.

4.12 Norway

On the basis of the overall results, Norway is allocated to the group "delayed".

LEX Index

The requirements of Directive 91/440/EEC as amended by Directive 2001/12/EC (excl. TERFN) have been consistently satisfied and are documented in licensing regulations and/or parliamentary resolutions. The measures introduced to reduce the debts of NSB, however, have not achieved a sound financial basis. With the exception of the North-South Freight Freeway agreements, railway undertakings are not granted any further access rights beyond the requirements of Directive 91/440/EEC. Foreign railway undertakings do not have any legal basis for establishing a company with a network access option. Rail transport services are not put out to public tender.

Full separation between infrastructure management and the provision of rail transport services has been effected by disincorporation of the Norwegian Rail Administration. The transport sectors of the incumbent have also been separated in accounting terms. Both market segments are served by the independent companies NSB and CargoNet.

In view of the preparations for the Trans-European Rail Freight Network, full implementation of Directive 2001/12/EC is expected by 15 March 2003. However, access to the ports and terminals is still problematic, as these are owned by the local port authorities or by CargoNet. The Norwegian Rail Administration, however, claims that non-discriminatory access to the ports will be guaranteed and that there will be sufficient independently managed terminals.

So far, no independent regulatory authority as defined in Directive 2001/14/EC has been established. Some of the required regulatory functions are already handled by the relatively independent Railway Inspectorate at present.

ACCESS Index

Although the necessary information for market access is available from the Internet, it is only available in Norwegian. This barrier is deliberately maintained, as the institutions prefer to have personal contact. The staff members of most institutions speak good English.
Statements on processing times, terms of validity and requirements of licences and safety certificates are largely theoretical, as NSB currently has a monopoly status. Licences are not issued for certain types of transport and/or market segments, but individually. In addition to the requirements for licence issue, there are further requirements for network access, which have to be rated as restrictive. These result from the Norwegian Railway Act and several other regulations. For instance, a licence can only be issued in conjunction with a concession, but the latter do not de facto exist, as rail transport services are not put out to public tender.

Foreign vehicles can be licensed free of charge. Although the responsible bodies are independent of the incumbent, the decision criteria are not transparent. According to the information obtained, there is a legally binding train path pricing system, but the responsible institution failed to supply an average train path price. The average train path price of € 14.4 established in the course of this study derives from an interview with experts.
The capacity allocation procedure is not without problems. Access to service facilities pursuant to Annex II of Directive 2001/14/EC is already guaranteed in parts.

COM Index

In terms of transport volume, rail-bound freight transport has lost substantial shares (-41%) in recent years compared with road transport. However, the rail mode has succeeded in increasing its share of passenger transport. Apart from the incumbent, there are no External RUs with a valid licence operating in the Norwegian market. NSB and CargoNet handle almost 100% of all rail transport. With the exception of the special ore railway, Malmtrafikk AS, which links Sweden with the Norwegian port of Narvik on the basis of “historic rights”, and the NSB subsidiary Flytoget, there are no other railways.

Conclusion

The current legislative situation in Norway means that the incumbent NSB enjoys special protection. According to the information given, the first Railway Package is to be implemented without restriction. However, no additional liberalisation efforts are expected beyond these requirements.

4.13 Portugal

On the basis of the overall results, Portugal is allocated to the group "delayed".

LEX Index

The Portuguese government has fully transposed European Directives 91/440/EEC and 95/18/EC into national legislation. Rede Ferroviária Nacional (REFER) is an infrastructure manager that is independent of the incumbent, while the Instituto Nacional do Transporte Ferroviário (INTF) is an independent regulatory authority for rail transport. Some initial measures have been introduced for implementation of the Directives of the first Railway Package. The market is open to international freight and passenger transport. For the national market, the state invites tenders for certain routes according to demand.

ACCESS Index

Information barriers (train path allocation process, requirements for vehicle licensing, etc.) and lack of experience in market entry by other RUs are characteristic features of the Portuguese rail market. In the only invitation to tender to date, the only External RU, Fertagus, was given priority treatment over the incumbent.

The practical division of tasks and responsibilities between REFER, the incumbent Caminhos de Ferro Portugueses (CP), INTF and the Ministry of Transport has not been implemented consistently and the procedures and structures are thus difficult for External RUs to identify. In addition to the specific arrangements for future contractual terms and conditions, there is still much that requires clarification between CP and REFER with regard to infrastructure user fees. Train path prices are not transparent. The train path prices which have been used for evaluation purposes in this study are the result of an expert assessment (IBM and INTF).

COM Index

Apart from the incumbent CP – despite the relatively low capacity utilisation of the rail network – there is only one other RU (Fertagus) active on the state network, offering regional services.
In Portugal, road transport has a particularly prominent market position, which increases the competitive pressure from coaches and truck transport and thus appears to be one of the reasons for the low degree of competition on rail.

Conclusion

The Portuguese regulatory framework appears to have made good progress in respect of questions of liberalisation. However, this has to be severely qualified owing to the lack of transparency for External RUs and the difficulties in actually achieving network access.

4.14 Spain

On the basis of the overall results, Spain is allocated to the group "pending departure".

LEX Index

Spain has transposed the Directives 91/440/EEC, 95/18/EC and 95/19/EC into national legislation. Separation of infrastructure management and the provision of rail transport services has only been effected for the existing network under the overall management of RENFE, while Gestor de Infraestructuras Ferroviarias (GIF), a newly founded network operator, is responsible for newly built lines. Implementation of the requirements for the Trans-European Rail Freight Network pursuant to Directive 2001/12/EC is especially problematical in Spain, as a different track gauge is used here. Several questions could not be finally clarified, so that the results do not stand up to further scrutiny. There is as yet no regulatory authority. The necessary regulatory functions are currently exercised by the Ministerio de Fomento. The Spanish government plans to complete transposition of the Directives of the first Railway Package on time by 15 March 2003.

ACCESS Index

The ACCESS Index was drawn up on the basis of telephone interviews with the French-speaking representatives of the Ministerio de Fomento and RENFE. According to internal plausibility considerations, however, practically none of the answers stand up to closer scrutiny. Until today, neither a safety certificate nor a licence has been issued to External RUs.

COM Index

Between 1991 and 2000, the rail mode suffered losses of 20% in freight transport, and as high as 25% in passenger transport (in terms of transport volume) compared with road transport. In Spain, the two state-owned railways are Ferrocarriles de Vía Estrecha (FEVE), a narrow-gauge railway in the north of Spain, and Red Nacional de los Ferrocarriles Españoles (RENFE) a broad-gauge railway which operates throughout the country. In addition, there are several other companies (also owned by the state) active in the local transport sector. These companies (Autonomias) are allocated to the different regions. As they operate primarily in the urban and suburban sector, these companies were not taken into account in the study.

Conclusion

The Spanish government plans to liberalise its rail-related regulatory framework by March 2003 and thus reduce or eliminate the high access barriers which still exist for External RUs. However, it is expected that only the minimum requirements of the Directives of the first Railway Package will be implemented.

4.15 Sweden

On the basis of the overall results, Sweden is allocated to the group "on schedule".

LEX Index

The requirements of Directive 91/440/EEC as amended by Directive 2001/12/EC (excl. TERFN) are consistently satisfied. RUs are also granted further access rights beyond the requirements of the Directive. In the freight transport sector, open access has been granted since 1996 to RUs established in Sweden. Responsibility for inviting tenders for local passenger transport services was assigned to the local authorities back in 1988. Since 1993, unprofitable long-distance passenger routes of SJ have been put out to tender. The Swedish government has also joined the North-South Freight Freeway co-operation.

The railway infrastructure company Banverket (incl. the Rail Traffic Administration) is totally independent of the incumbent (SJ / GreenCargo). Also, the former freight and passenger transport segments of SJ are now independent from each other. SJ now handles passenger transport only, while freight transport is the responsibility of GreenCargo.

Preparations for the Trans-European Rail Freight Network give reason to assume that full implementation of Directive 2001/12/EC can be expected by 15 March 2003. However, there are problems with regard to the ports and individual industrial railways, which are either in private ownership or owned by the local authorities.

There is as yet no regulatory authority as defined in Directive 2001/14/EC. The Railway Inspectorate is to be given that function within the scope of new legislation as from 15 March 2003. According to the Ministry of Transport, some regulatory functions are already handled by other independent institutions.

ACCESS Index

All the necessary information for market access is provided via the Internet or in person. Impersonal information is also available in English. The staff members at most of the institutions speak English.

According to the Swedish Railway Inspectorate, licences from other EU Member States are recognised. This also applies to the EFTA states Norway and Switzerland. The time required to process the issue of licences and safety certificates varies greatly, according to the information given, and can take anything from one day to 90 days. Once granted, licences are valid for an unlimited period. The financial expenditure required to obtain a licence or safety certificate is located in the bottom third of the costs charged in all the European countries.

Sweden has a market for rolling stock, which can be leased or purchased. According to a statement by the Swedish Railway Inspectorate, no major problems are anticipated with regard to the licensing of foreign vehicles, although the decision criteria are not always transparent. The train path pricing system is standardised for all market players. The body responsible for capacity allocation points out itself, however, that in case of dispute, socio-economic questions take precedence over the principles of non-discrimination. The train path prices for freight transport vary according to the use of bridges. The average train path price for a route using the Öresund Bridge, for example, is € 0.881/train path km, whereas a route without bridge use costs only € 0.369 /train path km. Even so, in a comparison of European countries, the higher train path price is still in the bottom third. According to the Swedish Railway Inspectorate, access to service facilities pursuant to Annex II of Directive 2001/14/EC is already guaranteed for the most part. Private RUs also have an adequate supply of information in terms of product planning and passenger information, according to a statement by the Rail Traffic Administration.

COM Index

In terms of transport volume, rail-bound freight transport has suffered a slight decline compared with road transport over the past few years. In the passenger transport sector, however, the rail mode succeeded in achieving an enormous growth (+48 %) between 1991 and 2000.

In 2001, there were 28 valid licences and 25 railway undertakings were active on the state network. In the freight transport sector, GreenCargo still has a dominant position despite the open access provisions. The market share of External RUs in this segment has increased slightly. At 40.1%, the share of External RUs in passenger transport was already relatively high in 1998. That share has increased further to 45.8% by today. Local passenger transport services have been put out to tender by the regional Country Public Transport Authorities since 1988. The first invitation to tender for long-distance passenger transport was in 1993 and involved approx. 30% of the (partly unprofitable) SJ routes.

Conclusion

Sweden initiated a comprehensive market liberalisation process at an early stage (1988). This is one of the reasons why so many External RUs are active in the Swedish market. Only few train kilometres are put out to tender in long-distance passenger transport, and only those which SJ believes cannot be operated at a profit.

4.16 Switzerland

On the basis of the overall results, Switzerland is allocated to the group "on schedule".

LEX Index

Switzerland has open access provisions in the freight transport market for Swiss RUs. According to the Federal Ministry of Transport (BAV) and the OSS, RUs from EU Member States that do not have a registered office in Switzerland will also have these network access options as from 2003. Local passenger transport requires a concession, long-distance passenger transport will remain closed to External RUs until 2007. Switzerland is currently not obliged to participate in TERFN and is expected to decide next year on whether or not to accede. Competition is governed by an independent Competition Commission and an Arbitration Commission. There is no specific rail regulatory office.

ACCESS Index

The Swiss network consists of several network segments: the SBB network with approx. 2000 kilometres of track and the BLS network with approx. 250 kilometres, as well as a further 2750 kilometres on the networks of other private railways. This study concentrates on the SBB network and the BLS network.

Marketing of BLS and SBB train paths for freight transport is coordinated by a joint One Stop Shop (OSS). Domestic RUs are entitled to open access in the freight transport sector. Information and administrative processes are efficient and transparent. The train path prices, which currently still differ in terms of structure and level, are to be harmonised in the course of next year. According to the currently valid price lists, BLS prices are subsidised to a greater extent by BAV than the SBB prices (contribution margins are assumed in full for combined and freight transport without a concession).

Freight transport is liberalised to a great extent and as a general rule, all Swiss railway undertakings can offer their services through the open access procedures. At present, long-distance passenger transport is provided only by SBB, BLS and Cisalpino. This market will remain closed to other RUs until 2007. Scheduled regional transport (regular-interval traffic) requires a concession. The local authorities and cantons are the major ordering parties in this market segment. Access to this market can only be described as restrictive, as the government intends to continue its cooperation with the existing local RUs on grounds of quality, according to a statement by the OSS. Invitations to tender for regional services do not as yet play any significant role, but it can be assumed that the debate on invitations to tender alone resulted in a decrease of between two and five per cent in SBB train path prices.

COM Index

It is difficult to compare Switzerland with the other EU states as several private railways have always operated in this country, so that the 10 RUs operating on the SBB and BLS networks can not be regarded as a consequence of liberalisation. The same is true of the 13% market share of External RUs in passenger transport. The open access provisions in the freight transport market led to a concentration and restructuring process amongst the Swiss railways. Despite open access and advanced liberalisation in this segment, SBB still holds a market share of 94%.

Conclusion

In view of its exemplary processes for market access in freight transport, Switzerland is ranked in the top liberalisation group. The other market segments, however, are still highly restrictive and access for External RUs is difficult or impossible.

4.17 United Kingdom

On the basis of the overall results, the United Kingdom is allocated to the group "on schedule".

LEX Index

The British railway system was privatised during the rail reform in the United Kingdom (Railway Regulations 1992, Railway Act 1993 and Railway (Amendment) Regulations 1994) and the Directives 91/440/EEC, 95/18/EC, 95/19/EC were transposed into national legislation.

Full separation of transport operations and infrastructure management results from the privatisation of Railtrack, which was effected in 1996. Railtrack acted as infrastructure manager on the basis of a network licence which had been issued in 1994 and was extended in 1997. Railtrack was consequently responsible, amongst other things, for the maintenance, renewal and ongoing development of the rail network. On 3 October 2002, Railtrack was taken over by Network Rail and thus returned to the public sector. The Office of the Rail Regulator (ORR) is currently in the process of modifying the network licence. The Train Operating Companies (TOC) enter into "Access Agreements" with Railtrack, which also specify the train path prices to be paid, amongst other things.

The "Access Agreements" are supervised by the ORR. The ORR is obliged to prevent discriminatory practices and also reviews the user fees regularly. One of the main aims is to enable train path prices to be planned in good time for the following regulation period (5 years). There is open access in the freight transport sector, i.e. any provider with a licence, safety case and network access (Access Agreement) is entitled to offer freight transport services. Passenger transport requires a concession. Rail traffic development is the responsibility of the Strategic Rail Authority (cf. also Strategic Plan and Freight Strategy of the SRA), while the Rail Regulator monitors practical implementation of the legislative provisions.

ACCESS Index

In the passenger transport sector, the TOCs are awarded franchises (concessions) which are currently valid for a term of 7-10 years. These concessions are awarded by the Strategic Rail Authority (SRA) and include provisions which specify the state subsidies, how these will be reduced over the course of time, and a Passenger Service Requirement (PSR), which specifies for example train frequency, maximum journey times etc.

The passenger transport companies obtain their licences from the ORR. A safety certificate (Safety Case), which is issued by the Health and Safety Executive (HSE), is a prerequisite for network access and obtaining a licence.

Network access is granted in conjunction with a train path pricing system monitored by the Rail Regulator: the system breaks down into variable and (high) fixed components and has comparatively restrictive effects on the liberalisation questions examined in this study.

The freight transport market can apply to the SRA for freight grants, which are intended to attract a greater share of freight transport from road to rail.

COM Index

Rail services are provided exclusively by private companies. Transport services in the passenger transport sector are currently provided by 25 TOCs, passenger transport operating companies and a few passenger transport operators which are not classified as TOCs (Heathrow, London Transport TEC etc.). Ten TOCs offer long-distance passenger transport, ten TOCs provide regional passenger transport and ten TOCs operate in the Greater London Area and South-West. Freight transport is currently handled by 5 private companies. The two largest of these are English, Welsh and Scottish Railway (EWS) and Freightliner Limited. An assessment of all transport modes reveals an increase of 2.4% in transport volume (from 2000-01 to 2001-02, 6.8% in long-distance passenger transport), although there has been no change in the number of journeys (Passenger Journeys) and revenues (Passenger Revenue based on fares in 1999-00) compared with the preceding year.

Conclusion

At present, the United Kingdom has probably the most liberalised rail market in Europe. Transport services are provided exclusively by private enterprises.

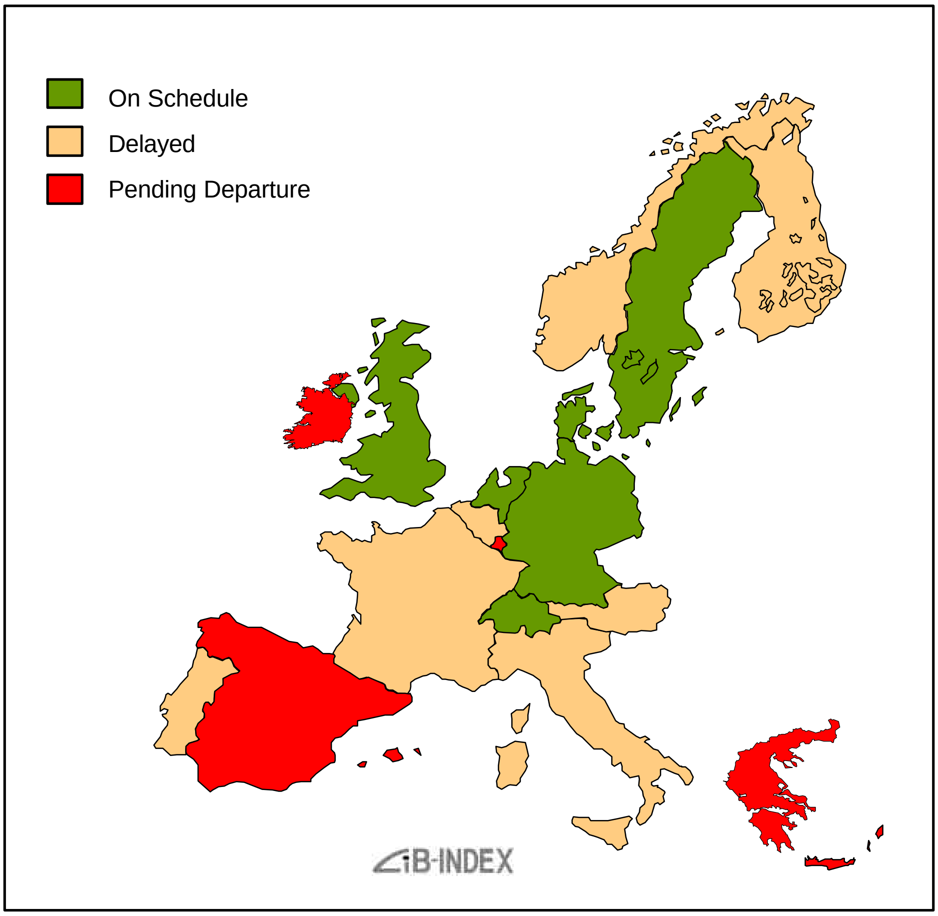
As regards market accessibility, the simultaneous issue of all franchises shows room for improvement, as that arrangement means that the market remains closed to other RUs throughout the term of these franchises.

The plans of the Strategic Rail Authority (SRA) for passenger transport are currently aimed at reducing the number of franchises and thus also of TOCs in future. At the same time, the franchise terms are to be extended to between 15 and 20 years. The aim of these changes is to improve quality, but in practice it will restrict potential access for newcomers.

Thanks to the open access which exists in the freight transport market and the national plan to obtain an 80% increase in freight transport over the next 10 years, this market segment currently has the greatest access potential.

5 Conclusions and Prospects

The Rail Liberalisation Index is an instrument for measuring the degree of market openness of the rail transport markets in Europe. The Index is not only the first of its kind for the rail transport sector, but also stands out clearly from corresponding instruments in other sectors due to the wealth of detail it includes. Both the specific information relating to the individual countries and the weighting of the findings are transparently presented. The broad spectrum (LEX, ACCESS, COM) of the determinants examined and the enormous data quantities evaluated permit findings which are so stable that even a change in any individual weightings would have no significant effects on the core statements.



The findings of the Rail Liberalisation Index clearly demonstrate that liberalisation of the rail market is still in its infancy in most of the countries investigated. At the same time, however, it shows that there are already substantial differences in the degree of liberalisation progress achieved by the individual countries and that the countries investigated by the study can be allocated to three distinct groups. In the countries in the leading group *"on schedule"* competition in the rail market is already developing. In this group, which includes the United Kingdom, Sweden, Germany, the Netherlands, Denmark and Switzerland, market opening has been achieved with similar success despite different approaches. In the countries in the other two groups, "*delayed* " (Italy, Austria, Finland, Belgium, Norway, Portugal and France) and *"pending departure"* (Ireland, Luxembourg, Greece and Spain), market entry for newcomers is still fraught with severe problems or, owing to the restrictions stated, completely impossible.

The wealth of detail means that the Index can clearly identify the problem areas that exist in the individual countries. This is also where the study has its greatest potential, both at the level of national rail transport policies, and for the rail policies of the EU. In that context, the Index can provide an impulse for the necessary improvements at national level, and simultaneously provide the EU with a basis for demanding concrete measures from those states which are lagging behind with liberalisation.

Apart from the study's relevance for the political decision-makers, it also provides a sound and useful source of information for RUs in Europe.

Regular updating of the Index would be advisable, as some major changes in the national legal frameworks are to be anticipated in the course of the forthcoming implementation of the Infrastructure Package. By making due allowance for the provisions imposed by Community law, the Index would continue to provide detailed information on the extent to which the countries concerned satisfy their obligations. Regular updates of the Index would also indicate amongst other things the relative dynamics of the national liberalisation processes. The scope for such updates is one of the reasons why a modular structure was chosen for the Index, as it can easily be adapted to future developments and requirements of the rail transport market without jeopardising the concept as a whole. Such an adjustment can be effected by amending the questionnaire, or by modifying the relative weighting of the determinants or sub-indices in relation to each other. In concrete terms, for example, this could mean increasing the weight of the COM Index in relation to that of the LEX Index. Whereas now, at a relatively early stage of the liberalisation process, the meaningfulness of the market data is limited, this will change in the same way as the fundamental legal framework shown in the LEX Index gradually becomes a matter of course. A supplementary investigation of price, quality and efficiency developments would also be a conceivable instrument for assessing the effects of national reforms.

It would appear advisable to establish the LIB Index as a standard instrument which is accepted throughout Europe, as this is the first study to provide an independent and meaningful comparison of the degrees of openness of the various rail transport markets; the Index is suitable for a variety of uses, and also has future viability. Its alignment with the *Rail Market Monitoring Scheme* of the EU Commission, on the one hand, coupled with the independence of the authors on the other hand, ensure that the necessary scientific and practical conditions have been met.

6 Annex

6.1 Institutions and Enterprises

The following table lists the most important authorities and institutions which contributed to the collection of data.

Austria

Institution / Enterprise	Department
Schienen-Control GmbH (Regulatory Authority)	Regulatory Authority
Österreichische Bundesbahn (ÖBB, Incumbent)	Directorate-General / Department Controlling OSS Manager
Bundesministerium for Verkehr, Innovation and Technologie (Minstry of Transport, Innovation and Technology)	N/A
Dr. Lansky, Law Practice, Vienna	N/A
Wiener Lokalbahn (RU)	Management
Stern-Verkehr GmbH (RU)	N/A
Raab-Oedenburg-Ebenfurter-Eisenbahn (GySEV, RU)	Management

Belgium

Institution / Enterprise	Department
Société National des Chemins de Fer Belges (SNCB, Incumbent)	OSS Network, National Representatives / B-Rail
Ministre de la Mobilité et des Transports (Ministry of Transport)	Cabinet de la Vice-Première Ministre, Cellule RAIL / Conseiller
Dillen en Le Jeune (RU)	N/A
Intercontainer-Interfrigo (ICF, RU)	N/A (Basel, Switzerland)

Denmark

Institution / Enterprise	Department
Jernbanetilsynet (Railway Inspectorate)	Regler og godkendelser (Regulations and statutory instruments)
Banestyrelsen (Infrastructure Manager)	Market Management, Train Path Management
Danske Statsbaner (DSB, Incumbent)	Marketing & information

Finland

Institution / Enterprise	Department
Finnish Rail Administration (Ratahallintokeskus, Infrastructure Manager)	Legal Matters
Ministry of Transport and Communications (Ministry of Transport)	Senior Adviser, Railways and Aviation

France

Institution / Enterprise	**Department**
Réseau Ferré de France (RFF, Infrastructure Manager)	Direction du réseau ferré, Service Capacité et Tarification
IBM Business Consulting Services	Rail Transport Experts
Société National des Chemins de Fer Francais (SNCF, Incumbent)	Dir. Strategy
Principaux services du ministère en charge des transports terrestres (Ministry of Transport)	Licensing Authority

Germany

Institution / Enterprise	**Department**
DB Netz AG (Infrastructure Manager)	OSS Manager
NetLogTX (RU)	N/A
Connex-Gruppe (RU)	N/A
ITL Dresden (RU)	N/A
Karsdorfer Eisenbahngesellschaft (RU)	N/A
Rhenu/Keolis (RU)	N/A
Eisenbahnbundesamt (Federal Railway Office)	N/A
Deutsche Bahn AG (DB, Incumbent)	Competition Officer
IWW University Karlsruhe (Research Institute)	Economists
Mehr Bahnen, Vereinigung für Wettbewerb im Schienenverkehr e.V. (Interest Group)	N/A

Greece

Institution / Enterprise	**Department**
Hellenic Railways Organisation (OSE, Incumbent)	Infrastructure Management / Head of International Affairs Department
Ministry of Transportation and Communications (Ministry of Transport)	N/A
University of Piraeus	Department of Industrial Management

Ireland

Institution / Enterprise	**Department**
Department of Transport (Ministry of Transport)	Public Transport (Regulatory Affairs) Division
Iarnród Éireann (Incumbent)	N/A
Competition Authority	Regulated Markets Division

Italy

Institution / Enterprise	Department
Ministero dei Trasporti e Navigazione (Ministry of Transport)	Licences and Regulation
Rete Ferroviaria Italiana (RFI, Infrastructure Manager)	Direzione
CESIFER (Safety Certificate Issuing Body)	N/A
Rail Traction Company Spa (RU)	Direzione
Interjet Srl (RU)	Direzione

Luxembourg

Institution / Enterprise	Department
Chemin de Fer Luxembourg (CFL, Incumbent)	OSS Network / National representatives Directeur
Ministère des Transports (Ministry of Transport)	Inspecteur principal
Deutsche Bahn AG (DB, RU)	DB Representative Belgium/Luxembourg, Vehicle Licensing

Netherlands

Institution / Enterprise	Department
Railned (Infrastructure Manager)	Infrastructure Management / Account Manager
NS Railinfrabeheer (Infrastruction Construction Company)	Railway Construction and Maintenance
Nederlandse Spoorwegen (NS, Incumbent)	Holding / Business Development Marketing and Communication
Ministry of Transport, Public Works and Water Management (Ministry of Transport)	N/A
Nederlandse Mededingingsautoriteit (NMA, Competition and Regulatory Authority)	Transport Chamber
Dutch Embassy, Berlin	Transport Department / Transport Council

Norway

Institution / Enterprise	Department
Jernbaneverket (Norwegian Rail Administration, Infrastructure Manager)	Train Path Management
Statens Jernbanetilsyn (Railway Inspectorate)	N/A
Ministry of Transport and Communications	N/A

Portugal

Institution / Enterprise	Department
Rede Ferroviária Nacional (REFER, Infrastructure Manager)	Director of Commercial Management
Instituto Nacional do Transporte Ferroviário (INTF, Regulatory Authority)	Board Advisor on International Relations
Caminhos de Ferro Portugueses (CP, Incumbent)	Communication Department

Spain

Institution / Enterprise	Department
Ministerio de Fomento (Ministry of Transport)	N/A
Red Nacional de los Ferrocarriles Españoles (RENFE, Incumbent)	OSS Network, National Representative
Deutsche Bahn AG (DB, RU)	Pauckner-Gruppe, Madrid

Sweden

Institution / Enterprise	Department
Järnvägsinspektionen (Swedish Railway Inspectorate)	Licence Issue (incl. Safety Certificates)
Banverket (Swedish National Rail Administration, Infrastructure Manager)	Marketing Department Rail Traffic Administration
Ministry of Industry, Employment and Communications	Railways Division

Switzerland

Institution / Enterprise	Department
Bundesamt für Verkehr (BAV)	BAV Division Manager
One-Stop-Shops of BLS and SBB	OSS

United Kingdom

Institution / Enterprise	Department
Strategic Rail Authority (SRA)	N/A (Website)
Office of the Rail Regulator (ORR, Regulatory Authority)	Manager Government and Regulatory Relations
Health & Safety Executive (HSE)	HM Railway Inspectorate
Department of Transport (Ministry of Transport)	International Railways Branch
Railtrack / Network Rail (Infrastructure Manager)	Rolling Stock Acceptance Board, Dispute Resolution, Freight Business Analyst,
Freightliner Ltd. (RU)	Director of Strategy
Office for National Statistics	National Statistics Customer Enquiries
Railtrack Freight Commercial (Infrastructure Manager, Freight Transport)	N/A (Website)

GB Railways Plc (RU)	N/A
The Go-Ahead Group Plc (RU)	N/A
National Express Group Plc (RU)	Commercial Director
Sea Containers (RU)	N/A
Stagecoach Holdings Plc (RU)	N/A
Virgin Trains (RU)	Executive Director Operations & HR
Association of Train Operating Companies	N/A

6.2 Bibliography

Austria

- Klugar/Hotz (2002) "The Network Division of ÖBB and Access to Rail Infrastructure"
- Schienen-Control GmbH (2002) Brochure, Vienna
- Ministry of Transport (2001) "Amendment to Railway Act", Vienna
- Laws and statutory instruments:
  Federal law gazette for the Republic of Austria, 26 April 2002 Part 1
  Federal law gazette for the Republic of Austria, 9 January 1998 Part 1
  Federal law gazette for the Republic of Austria, 30 April 1996 Part 63
  Federal law gazette for the Republic of Austria, 19 August 1999 Part 1
  Federal law gazette for the Republic of Austria, 21 December 2001 Part 1

Belgium

- Société National des Chemins de Fer Belges-SNCB (2001) "Rapport Annuel 2001"
- Ministry of Transport *"Manual for the Acquisition of a Licence as Railway Undertaking and for the Issue of Safety Certificates"*
- Laws and statutory instruments*: http://just.fgov.be/index_de.htm*

Denmark

- Danske Statsbaner (2001) "Annual Report for the Year 2001"
- Land, Flemming and Richter, Vibeke (2001) "Current Problems of Railway Legislation VII", Jernbanetilsynet (Danish Railway Inspectorate)
- Statistics Denmark / Danish Ministry of Transport (2002) "Key Figures of Transport 2002"
- Statistics Denmark / Danish Ministry of Transport (2001) "Key Figures of Transport 2001"
- Laws and statutory instruments (1/2): http://www.banestyrelsen.dk/visArtikelOgLinks.asp?artikelID=137
- Laws and statutory instruments (2/2): http://www.jernbanetilsynet.dk/Dokument/godkendelser.htm

Finland

- Finnish Rail Administration (1999) "The Finnish Railway Statistics 1999"
- Finnish Rail Administration (2002) "Finlands Järnvägsstatistik"
- Finnish Rail Administration (2001) "Annual Report 2001"
- VR-Group Ltd. (2001) "Annual Report 2001"
- Laws and statutory instruments: http://www.finlex.fi/

France

- Société National des Chemins de Fer Francais-SNCF (2001) *"Annual Report 2001"*
- Laws and statutory instruments*: http://www.legifrance.gouv.fr/*

Germany

- Bihn, Friedhelm (2001) Railway Undertakings Manual ("Handbuch der Verkehrsunternehmen")
- DB Netz AG (2002) Customer Manual, ("Kundenhandbuch") Frankfurt am Main
- DB Netz AG (2002) "DB Netz AG - Service Provider to Railway Operators" (Presentation)
- Deutsche Bahn AG (2001) Report of the Competition Officer ("Wettbewerbsbericht"), Berlin
- Deutsche Bahn AG (2002) Facts and Figures ("Zahlen und Fakten") , Berlin
- DB Netz AG: http://www.dbnetz.de
- Laws and statutory instruments: http://www.bundesanzeiger.de

Greece

- Paravantis (2001) "Railroads in Greece: History, Characteristics and Forecasts", University of Piraeus
- National Statistical Service of Greece (2002) " Greece in figures 2002"

Ireland

- Córas Iompair Éireann (2001) "Group Annual Report and Financial Statement 2001"
- Iarnród Éireann (2001) "Annual Report 2001"
- "Statutory Instrument No. 204 of 1996 European Communities (Access to Railway Infrastructure) Regulations 1996"
- "Statutory Instrument No. 238 of 1999 European Communities (Licensing of Railway Undertakings) Regulations 1999"
- "Statutory Instrument No. 281 of 1999 European Communities (Allocation of Railway Infrastructure Capacity and Charging of Infrastructure Fees) Regulations 1999"
- "Statutory Instrument No. 118 of 2002 European Communities (Interoperability of the Trans-European High-Speed Rail System) Regulations 2002"
- Laws and statutory instruments: *http://www.irlgov.ie/tec/legislation/transport/translegis.htm*

Italy

- Italian Network Operator: *http://www.Rfi.it*
- Italian Transport Statistics : *http://www.Federtrasporto.it*
- Ministry of Transport: *http://www.Trasportinavigazione.it*
- Safety Certificates in Italy: *http://www.Cesifer.it*

Luxembourg

- Société National des Chemins de Fer Luxembourgeois-CFL (2001) *"Rapport Annuel 2001"*
- Laws and statutory instruments*: http://www.legilux.lu/*

Netherlands

- Nederlandse Spoorwegen, NS (2001) *"Annual Report 2001"*
- Railned (2003) *"Network Statement 2003" (incl. Terms and Conditions of Railned 1997, Model Access Agreement 1997 and Dispute Resolution Procedure 1997)*
  Railned Railway Safety (2002) "Requirements for safety management systems for train operators"
- Railned Railway Safety (2002*) "The safety certificate for train operators: requirements, criteria, process"*
  Railned Spoorwegveiligheid (1998) *"Railway Safety Admission Requirements Rolling Stock"*
- Ministry of Transport (*2002) "Passenger Transport Act 2002", forecast*
- Ministry of Transport (2000) *"Railway and Concession Act"*
- Ministry of Transport (2000) *"Passenger Transport Act 2000"*

Norway

- Norwegian Rail Administration (2001) *"Annual Report for the Year 2001"*
- Statens Jernbantilsyn (2001) *"Årsrapport 2001"*
- Laws and statutory instruments*: http://www.sjt.no/Hva_styrer/Lover.htm*

Portugal

- Caminhos de Ferro Portugueses, CP (2000) *"Report and Accounts 2000"*
- Ministry of Transport (1995), *legal texts "Decreto do Presidente da República - No. 67/95; Decreto-Lei No.252/95; Decreto-Lei No.60/2000"*
- Instituto Nacional do Transporte Ferroviário-INTF (2002) *"Corporate Presentation"*
- Rede Ferroviária Nacional, REFER (2002) *"Corporate Presentation"*

Spain

- RENFE (2001) "Annual Report 2001"

Sweden

- Banverket (2001) "Annual Report 2001"
- Banverket (2001) "The Swedish Rail Sector"
- Green Cargo (2001) "Annual Report 2001"
- SIKA-Institute (2001) "Transport and Communications. Yearbook 2000/2001"
- SIKA-Institute (1998) "The Swedish transport sector today"
- SJ AB (2001) "Annual Report 2001"
- Swedish Railway Inspectorate (2001) "Annual Report 2001"
- Swedish National Rail Administration (2001) "Annual Report 2001"
- Laws and statutory instruments: *http://www.jit.se/juridik/lagbok.html*

Switzerland

- Bundesamt für Verkehr Switzerland: *http://www.Bav.admin.ch*
- SBB Switzerland: http://www.Sbb.ch
- BLS Switzerland: *http://www.Bls.ch*
- Laws and statutory instruments: http://www.admin.ch/ch/d/sr/74.html#742

United Kingdom

- Health & Safety Executive-HM Railway Inspectorate (2002*) "Railway Safety Case Assessment Part 1, 2, 3"*
- Office of the Rail Regulator (2001) *"Review of Freight Charging Policy-Final Conclusion"*
- Office of the Rail Regulator (2000) *"Periodic Review of Railtracks Access Charges"*
- Office of the Rail Regulator (1995) *"Guidance on licensing of operators of railway assets",* 3rd edition
- Office of the Rail Regulator (1995) *"Passenger Licence granted to Anglia Railways Train Service Ltd."*
- Office of the Rail Regulator (1995) "Passenger Licence granted to Intercity Westcoast Ltd."
- Railtrack (2002) "The Railtrack Track Access Conditions"
- Railtrack (2002) "Network Management Statement "
- Strategic Rail Authority (2002) "Annual Report 2001-2002"
- Strategic Rail Authority (2002) "National Rail Trends 2001-02"
- Laws and statutory instruments: http://www.railways.dft.gov.uk/index.htm#legislation

Supranational Bibliography

- CNT - Conseil National des Transports (2000/2001) "Bulletins of the Observatory on Transport Policies and Strategies in Europe"
- economiesuisse (2002) "Verkehrspolitik der Europäischen Union - Die Wiederbelebung der Eisenbahn"
- European Commission (1999) "SORT-IT Strategic Organisation and Regulation in Transport"
- European Commission (2001) "Questionnaire - Member State contributions to the topical non-papers of the Working Group on Market Access"
- European Commission (2002) "Methodik der horizontalen Bewertung von Dienstleistungen von allgemeinem wirtschaftlichem Interesse"
- Giventis (2001) "Proposal for the Development of the Conceptual and Organisational Aspects of a Community Rail Market Monitoring Scheme"
- Improverail / European Commission (2001) "State of the Art in Railway Infrastructure Capacity and Access Management"
- Pfand, Carlo (2002) "Trennungsphilosophie der Europäischen Union - Segen oder Fluch", LITRA, Bern
- Prognos AG (2000) "Netzzugang und Trassenpreisbildung im westeuropäischen Schienenverkehr", Basel
- Prognos AG (2002) "European Transport Report 2002", Basel
- Scherp, Jan (2002) „Der neue Rahmen für den Zugang zur Eisenbahninfrastruktur in der EU“ in: Rail International – Schienen der Welt, October 2002, P. 2ff.
- Union International des Chemins de fer (UIC) (2000) "Zeitreihen der Bahnen 1970-1999"

6.3 Legislation

The standards and evaluations of the following European legislation formed part of the basis for drafting the concept of the Rail Liberalisation Index:

- Article 81, 82 EC
- Regulation (EEC) No. 1017/68 applying rules of competition to transport by rail, road and inland waterway
- Regulation (EEC) No. 1191/69 on action by Member States concerning the obligations inherent in the concept of a public service in transport by rail, road and inland waterway
- Regulation (EEC) No. 1893/91 amending Regulation (EEC) No. 1191/69 on action by Member States concerning the obligations inherent in the concept of a public service in transport by rail, road and inland waterway
- Directive 91/440/EEC on the development of the Community's railways
- Directive 95/18/EC on the licensing of railway undertakings
- Directive 95/19/EC on the allocation of railway infrastructure capacity and the charging of infrastructure fees (no longer in force)
- Directive 96/48/EC on the interoperability of the trans-European high-speed rail system
- Directive 2001/12/EC amending Council Directive 91/440/EEC on the development of the Community's railways
- Directive 2001/13/EC amending Council Directive 95/18/EC on the licensing of railway undertakings
- Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification
- Directive 2001/16/EC on the interoperability of the trans-European conventional rail system

6.4 Internet Links

European Commission
www.europa.eu.int/comm/transport/rail/index/index_de.html

Community of European Railways
www.cer.be

LITRA Information Service for Public Transport
www.litra.ch

The North-South Freight Freeways
www.freightfreeways.com

Rail Pages
www.railpages.com

United Nations Economic Commission for Europe
www.unece.org

Union International des Chemins de fer
www.uic.asso.fr

X-Rail Info Database
www.x-rail.net

6.5 Abbreviations

A	Austria
Art.	Article
B	Belgium
CH	Switzerland
D	Germany
DK	Denmark
E	Spain
EC	European Community
EEC	European Economic Community
EFTA	European Free Trade Association
EU	European Union
F	France
FIN	Finland
GR	Greece
I	Italy
IRL	Ireland
L	Luxembourg
N	Norway
NL	Netherlands
No.	Number
OSS	One Stop Shop
P	Portugal
pkm	passenger kilometre
RU	railway undertaking
S	Sweden
TEN	Trans-European Network
TERFN	Trans European Rail Freight Network
tkm	tonne kilometre
TOC	Train Operating Company
UIC	Union International des Chemins de fer
UK	United Kingdom
vs.	versus

6.6 Questionnaires

QUESTIONNAIRE
LEX INDEX

Reference Date for the Investigation:

1.10.2002

No.	Determinants	Question	Answer	Comments
L1	**Directive 91/440/EEC as amended by Directive 2001/12/EC**			
L1.1	**Market Access (Status Quo – Without TERFN)**			
L1.1a	Market access (status quo – without TERFN)	Are there access and transit rights for international groupings in the Member States, in which the associated railway organisations are domiciled, as well as transit rights in the other Member States for cross-border traffic services between the Member States, in which the associated railway companies are domiciled?	❑ Yes ❑ Yes, with the following restrictions: ________________________ ________________________ ❑ No	
L1.1b	Market access (status quo – without TERFN)	Are access rights for the delivery of transport services in cross-border combined transport goods services for railway organisations of other member states guaranteed by law?	❑ Yes ❑ Yes, with the following restrictions: ________________________ ________________________ ❑ No	
L1.1c	Market access (status quo – without TERFN)	Is a status of independence of the railway company guaranteed, by which particularly the assets, the budget and accounting are separated from those of the state?	❑ Yes ❑ No	
L1.1d	Market access (status quo – without TERFN)	Is a separate accounting for the railway infrastructure manager and the delivery of traffic services required?	❑ Yes ❑ No	
L1.1e	Market access (status quo – without TERFN)	Have measures for the reduction of indebtedness of the railway companies been undertaken in such a way, that management on a sound financial basis is possible?	❑ Yes, no excessive indebtedness according to insolvency laws without state subsidy ❑ Yes, but so far the measures have not resulted in a financially healthy basis ❑ No	

No.	Determinants	Question	Answer	Comments
L2	**Further National Access Rights**			
L2.1	**Domestic subsidiary with option for network access**	Does a possibility exist for establishing a branch (subsidiary) with options for network access?	❑ Yes ❑ No	
L2.2	**Other access rights**	Are there legally assured access possibilities in the "Open Access Procedure" for foreign train operating companies, which exceed the minimum requirements of Directive 91/440 (for example North-South Freight Freeways)?	❑ Yes, the following: ______________________________ ______________________________ ❑ No	

No.	Determinants	Question	Answer	Comments
L3	**Organisational Structures**			
L3.1	**Vertical separation**	Which of the following models has been chosen and implemented by 1/10/2002 for the structural division/ integration of infrastructure management and transport services delivery?	❑ Complete institutional division (including legal separation of proprietorship) ❑ Organisational, accounting and legal independence of the divisions as well as functional separation and independence of the infrastructure manager in essential functions according to annex II of Directive 2001/12 (especially infrastructure charging principles and allocation of infrastructure capacity) from the transport service delivery departments ❑ Organisational, accounting and legal independence of the departments ❑ Organisational, accounting and legal separation of the divisions of infrastructure management and transport delivery service with business commission of essential functions of infrastructure management by the transport delivery service department ❑ Only accounting separation ❑ No separation	
L3.2	**Horizontal separation**	Are the transport segments of freight traffic and passenger traffic independent from each other and separated in accounting terms?	❑ Yes, balance sheet separation ❑ Yes, no balance sheet separation, but separation of the accounts ❑ No, no separation at all	

No.	Determinants	Question	Answer	Comments
L4	**TERFN (Trans-European Rail Freight Network)**			
L4.1	**Extent of Preparation for the Trans-European Rail Freight Network**			
L4.1a	Extent of preparation for the Trans-European Rail Freight Network	Are there clarity and uniform views regarding the definition of the national TERFN-sector?	❑ Yes, defined segments can be described completely and are documented by the authorities ❑ No	
L4.1b	Extent of preparation for the Trans-European Rail Freight Network	Is the extent of the national TERFN-sector being widened over and above the EU requirements?	❑ Yes, in the following manner: ____________________________ ____________________________ ❑ No, but requirements according to TERFN are completely covered ❑ No, requirements according to TERFN are not being implemented completely	
L4.1c	Extent of preparation for the Trans-European Rail Freight Network	Are there any particular problem areas in the national implementation of the TERFN requirements?	❑ No problem areas ❑ Yes, problem areas are existing ❑ Access to ports, ❑ Access to terminals, ❑ Capacity bottlenecks, ❑ Others (which)? __________________________	

No.	Determinants	Question	Answer	Comments
L5	**State Monitoring of Network Access**			
L5.1	**Regulatory authority**	Is there an independent regulatory body in the meaning of Directive 2001/14?	❑ Yes, the legally and organisationally independent institution is ________________ ❑ No	
L5.2	**Subject of Regulation**			
L5.2a	Subject of regulation	Does the competence of the regulatory body include the examination of the user conditions of the railway tracks, respectively the criteria of it (see annex I of the Directive 2001/14)?	❑ yes, namely ❑ the nature of the infrastructure ❑ the charging principles and tariffs ❑ capacity allocation criteria ❑ the procedure for application for allocation of capacity ❑ the requirements regarding the applicant ❑ the schedule of the application and allocation processes ❑ the principles of the coordination process ❑ the procedure and criteria in cases of excess track demand ❑ use restrictions of tracks ❑ conditions, by which the previous utilisation of capacity is taken into account for the allocation process ❑ additional / others: ________________ ❑ no, none	
L5.2b	Subject of the regulation	Can the allocation procedure and its outcome be subject of investigations?	❑ Yes ❑ No	

No.	Determinants	Question	Answer	Comments
L5.2c	Subject of the regulation	Are investigations in respect of the charging scheme possible?	❑ Yes ❑ No	
L5.2d	Subject of the regulation	Can the regulatory body carry out investigations regarding the level or structure of infrastructure fees, which a train operating company has to pay or would have to pay?	❑ Yes ❑ No	
L5.2e	Subject of the regulation	Are investigations regarding the safety certificates as well as the enforcement and monitoring of the safety standards and safety rules possible?	❑ Yes ❑ No	
L5.2f	Subject of the regulation	Does an independent regulatory body or other independent body monitor the competition in the rail service markets?	❑ Yes ❑ No	
L5.3	Regulatory processes	Is the procedure of regulation transparent?	❑ Yes ❑ No	
L5.4	Transparency of the regulation criteria	Are the criteria and methods of the regulation transparent andcomprehensible ?	❑ Yes ❑ No	
L5.5	**Powers of the Regulatory Body**			
L5.5a	Powers of the regulatory **body**	<u>Can</u> the regulatory body carry out investigations at the request of a train operating company?	❑ Yes ❑ No	
L5.5b	Powers of the regulatory **body**	Is the regulatory body <u>obliged</u> to carry out investigations at the request of a train operating company?	❑ Yes ❑ No	
L5.5c	Powers of the regulatory **body**	<u>Can</u> the regulatory body start investigations ex officio (without third party application)?	❑ Yes ❑ No	
L5.5d	Powers of the regulatory **body**	<u>Must</u> the regulatory body start investigations ex officio (without third party application)?	❑ Yes ❑ No	
L5.5e	Powers of the regulatory **body**	Are the decisions of the regulatory body legally binding for the addressee?	❑ Yes ❑ No	

No.	Determinants	Question	Answer	Comments
L5.5f	Powers of the regulatory **body**	Does the regulatory body have the possibility to enforce the implementation of its investigations or decisions?	❑ Yes ❑ No	
L5.5g	Powers of the regulatory **body**	Does the regulatory body have the ability to issue penalties and if so, up to what amount)?	❑ Yes, up to the following amount: ________________________T€ ❑ No	

QUESTIONNAIRE
ACCESS INDEX

Reference Period for the Investigation:
September 2001 – September 2002

No.	Determinants	Question	Response / Answers	Result / Comments
A1	**Information Barriers**			
A1.1	**Process Duration for Procurement of Information**			
A1.1a	Process duration for pro-curement of information	How long does it take to identify responsible contacts for the processes of ▪ Market access ▪ Issue of licences (Admission as TOC)?	❑ Hours / Days	
A1.1b	Process duration for pro-curement of information	How long does it take for the complete, written information to be returned in respect of ▪ Market access ▪ Issue of licences	❑ Hours / Days	
A1.2	**Quality of the Impersonal Provision of Information (Internet, Written Documents)**			
A1.2a	Quality of the impersonal provision of information	Is all information for the market access available in imper-sonal form?	❑ Yes namely by: ❑ Access regime ❑ Issue of licence ❑ Invitations to tender ❑ Issue of concessions ❑ Track booking ❑ Additional: ____________ ❑ None	

No.	Determinants	Question	Response / Answers	Result / Comments
A1.2b	Quality of the impersonal provision of information	In what form is the relevant information regarding market access available impersonally?	❑ In the following form: ❑ Brochures ❑ Internet ❑ Other: __________________ ❑ No	
A1.2c	Quality of the impersonal provision of information	How up to date is the impersonally provided information regarding market access (see above)?	❑ Up to date ❑ Out of date	
A1.2d	Quality of the impersonal provision of information	In what languages is the information for the market access available on the Internet?	❑ Local language ❑ Local language + 1 EU-working language ❑ Local language and more than one EU-working language	
A1.2e	Quality of the impersonal provision of information	What degree of process support is offered in respect of the impersonal provision of information?	❑ Direct (Download) ❑ Indirect (on written request) ❑ Neither	
A1.2f	Quality of the impersonal provision of information	Is an instruction leaflet for all the necessary documents/ requirements regarding market access provided?	❑ Yes, namely by: ❑ Access regime ❑ Issue of licence ❑ Invitations to tender ❑ Issue of concessions ❑ Track booking ❑ Additional: __________________ ❑ No	

No.	Determinants	Question	Response / Answers	Result / Comments
A1.3	**Quality of the Personal Provision of Information**			
A1.3a	Quality of the personal provision of information	Is there at least one qualified contact in each country regarding the following questions • Market access • Issue of licences (admission as TOC)	❑ Yes ❑ No	
A1.3b	Quality of the personal provision of information	Is the security of transmitted data guaranteed by the recipient(s)?	❑ Yes ❑ No	
A1.3c	Quality of the personal provision of information	What language abilities do the qualified contacts have?	❑ Local language ❑ Local language + 1 EU-working language ❑ Local language and more than one EU-working language	
A1.3d	Quality of the personal provision of information	Is procurement of a complete instruction leaflet for all the necessary documents/ requirements for the market access (see above) possible through a qualified staff member?	❑ Yes, namely by: ❑ Access regime ❑ Issue of licence ❑ Invitation to tender/ issue of concessions ❑ Track booking ❑ Additional: ________________ ❑ No	

No.	Determinants	Question	Response / Answers	Result / Comments
A2	**Licensing and Safety Certificate**			
A2.1	**Decision Makers regarding Issue of Licences**			
A2.1a	Decision makers regarding issue of licences	How many different institutions or public authorities have to be contacted in order to be able to offer transport services?	❑ Number	
A2.1b	Decision makers regarding issue of licences	How marked is the degree of independence of the relevant institution for the issue of licences (issue of permits), concessions (where necessary) of the incumbent?	❑ Formally and factually independent ❑ Formally independent ❑ Dependent	
A2.2	**Duration of the process for the issue of licences**	How much time is required for the issue of licences in accordance with the legal requirements (admission as TOC) after submission of the complete application documents?	❑ Months	
A2.3	**Scope of the Licence**			
A2.3a	Scope of the licence	What scope does the licence have in relation to the type of traffic?	❑ Freight traffic ❑ Passenger traffic ❑ Both	
A2.3b	Scope of the licence	What scope does a freight traffic licence have?	❑ Complete network ❑ Part of the network	
A2.3c	Scope of the licence	What scope does a passenger traffic licence have?	❑ Long distance- and regional traffic ❑ Long distance traffic ❑ Regional traffic	

No.	Determinants	Question	Response / Answers	Result / Comments
A2.4	**Recognition of foreign licences**	Is there recognition of foreign European (EU 15, CH, N) licences?	❑ Yes, unlimited ❑ Yes, only for the following countries: ________________ ❑ Yes, limited (list additional requirements) ❑ No	
A2.5	**Time required for the Examination of foreign Licences**	What is the legal period for examination of foreign European licences?	❑ Period: ________________	
A2.6	**Period of Validity of Licence**			
A2.6a	Period of validity of Licence	What is the period of validity of the issued licence? (legal period of validity)	❑ Period: ________________ ❑ Unlimited	
A2.6b	Period of validity of licence	In what intervals of time are examinations of the licence required/ prescribed?	❑ Please state examination intervals: ________________	
A2.6c	Period of validity of Licence	When do licences lose their validity if they have not been used?	❑ Please state period: ________________	
A2.7	**Required amount of insurance**	What is the annual amount of insurance required for the issue of a licence? (legal)	❑ T€	
A2.8	**Required paid-up capital**	What is the amount of paid-up capital required for the issue of a licence? (legal)	❑ T€	
A2.9	**Licence costs**	What are the fees for the issue of a licence?	❑ T€	

No.	Determinants	Question	Response / Answers	Result / Comments
A2.10	**Additional conditions for the issue of licences**	Are there additional conditions for the issue of licences?	❑ Yes, the following: ____________________ ❑ No	
A2.11	**Clarity regarding contacts**	Have provisions been made to set up a clearly defined contact for the procedure of licence issue (e.g. one-stop shop)?	❑ Yes ❑ No	
A2.12	**Safety Certificate**			
A2.12a	Safety certificate	What is the time required for the provision of the required documents to obtain the safety certificate (as from the request)?	❑ Days / weeks	
A2.12b	Safety certificate	How high is the degree of detail regarding the requirements for a safety certificate in a European comparison?	❑ High ❑ Medium ❑ Low	
A2.12c	Safety certificate	How high are the costs (fees) for the issue of a safety certificate in a European comparison?	❑ T €	
A2.12d	Safety certificate	How many authorities are involved in the issue of a safety certificate?	❑ Number	
A2.12e	Safety certificate	Are the authorities involved in the issue of the safety certificate independent of the TOC, in particular of the incumbent?	❑ Yes, factually and formally ❑ Yes, formally ❑ No	

No.	Determinants	Question	Response / Answers	Result / Comments
A2.12f	Safety certificate	Are all criteria for decisions and examinations of the process for the issue of safety certificates transparent?	❑ Yes, documents available ❑ No, no documents available	
A2.12g	Safety certificate	What is the total amount of time required from submission of the documents to notification of the decision (safety certificate)?	❑ Days / weeks	
A2.12h	Safety certificate	Are existing safety certificates of other EU member states accepted?	❑ Yes, from all ❑ Yes, only from the following: ______________________ ❑ No	
A2.12i	Safety certificate	Is the period of validity/ term of the safety certificate limited?	❑ Yes, for _______years ❑ No	

No.	Determinants	Question	Response / Answers	Result / Comments
A3	**Scope for Interpretation and Access Regime**			
A3.1	**Deviations from the Legally Prescribed Way / Scope for Interpretation**			
A3.1a	Deviations from the legally prescribed way / scope of interpretation	Do deviations from the requirements of the European guidelines exist in the practical implementation of the procedure for admission (issue of a licence)?	❑ Yes, the following ❑ No	
A3.1b	Deviations from the legally prescribed way / scope of interpretation	Do deviations from national legislation exist in the practical implementation of the procedure for admission (issue of a licence)?	❑ Yes, the following ❑ No	
A3.1c	Deviations from the legally prescribed way / scope of interpretation	Do obstacles exist in the context of the procedure for admission (issue of a licence) which could be described as "arbitrary"?	❑ Yes, the following ❑ No	
A3.2	**Access regime after issue of a licence**	Does a licence grant direct market access or do other obstacles to access have to be overcome (invitations to tender/ concessions etc)?	❑ Yes, „open access" ❑ No, additionally invitations to tender, concessions, franchises are necessary ❑ No, further obstacles to access: ________________	

No.	Determinants	Question	Response / Answers	Result / Comments
A4	**Network Access and Prerequisites**			
A4.1	**Standardisation of the contract terms and conditions with infrastructure operators**	How are the contractual relations to the network operator governed?	❑ Listing (Number of the required agreements, standard contract for network access, transparency of the business conditions)	
A4.2	**Procurement of traction stock/ trailing stock**	Is there a market for rolling stock in the target country?	❑ Yes, purchasing ❑ Yes, rental / leasing ❑ No	
A4.3	**Vehicle Approval (test case: foreign tractive vehicle according to UIC standard)**			
A4.3a	Vehicle approval	What is the time required for the provision of the necessary documents/ requirements for vehicle approval?	❑ Days / weeks	
A4.3b	Vehicle approval	What is degree of detail required for vehicle approval in a European comparison?	❑ High ❑ Medium ❑ Low	
A4.3c	Vehicle approval	What are the costs (fees) for obtaining vehicle approval?	❑ T€	
A4.3d	Vehicle approval	What is the total period of time from submission of the application/ documents to notification of the decision (approval) in a European comparison?	❑ Days / weeks	

No.	Determinants	Question	Response / Answers	Result / Comments
A4.3e	Vehicle approval	How many interfaces are involved in the vehicle approval process?	❑ Number	
A4.3f	Vehicle approval	Are the parties involved in the process independent of the TOC (especially incumbents)?	❑ Yes, factually and formally ❑ Yes, only formally ❑ No	
A4.3g	Vehicle approval	Are all the criteria for decisions and examinations of the process for vehicle approval transparent ?	❑ Yes, documents available ❑ No	
A4.3h	Vehicle approval	Are existing approvals of other EU Member States accepted?	❑ Yes, from all ❑ Yes, only from the following:__________________ ❑ No	
A4.4	**Hiring of personnel**	Is it possible for third party TOCs to hire qualified personnel in the target country?	❑ Yes ❑ No ❑ Difficult	
A4.5	**Existence of a Standard Procedure for Train Path Allocation**			
A4.5a	Existence of a standard procedure for train path allocation	Does a legally binding procedure for train path allocation exist?	❑ Yes ❑ No	
A4.5b	Existence of a standard procedure for train path allocation	Is the train path allocation regulated transparently by means of a procedure (criteria of the train path allocation process)?	❑ Yes (documents) ❑ No	

No.	Determinants	Question	Response / Answers	Result / Comments
A4.6	**Lead time for train path application**	How many months of lead time are required for the regular train path application?	❑ Months	
A4.7	**Non-Discriminatory Train Path Allocation Procedure**			
A4.7a	Non-discriminatory train path allocation procedure	Is the process of train path allocation identical for all market participants?	❑ Yes (Documents) ❑ No	
A4.7b	Non-discriminatory train path allocation procedure	Are all train paths being marketed free of any discrimination within given formation priorities in the process of train path allocation?	❑ Yes ❑ No	
A47c	Non-discriminatory train path allocation procedure	Is there a transparent mechanism which applies if train path requests from several TOCs lead to conflicts? If so, what are these mechanism?	❑ Yes, which mechanism: (Price, date of registration, order volume, network effects, connection security, other) ❑ No	
A4.8	**Ad hoc requests for train paths**	How flexibly are ad hoc requests for train paths being handled (e.g. seasonal traffic)?	❑ High ❑ Medium ❑ Low	
A4.9	**Priority regulations incumbent**	Are there priority regulations at the disposal of the incumbent?	❑ Yes ❑ No	

No.	Determinants	Question	Response / Answers	Result / Comments
A5	**Existence and Transparency of a Train Path Pricing System**			
A5.1	**Existence and transparency of a train path pricing system**			
A5.1a	Existence and transparency of a train path pricing system	Is there an identical pricing system for facilities and train paths which applies to all market participants?	❑ Yes ❑ No	
A5.1b	Existence and transparency of a train path pricing system	Is the pricing system for facilities and train paths published?	❑ Yes ❑ No	
A5.1c	Existence and transparency of a train path pricing system	Is the pricing system binding upon all participants?	❑ Yes ❑ No	
A5.2	**Share of unused train paths**	What is the share of unused train paths in relation to the total volume of requested train paths?	❑ In % of total track-km	
A5.3	**Structure of the Train Path Pricing System**			
A5.3a	Structure of the train path pricing system	Is the train path pricing system single or multiple tier?	❑ One level ❑ Several levels	
A5.3b	Structure of the train path pricing system	Is the train path pricing system linear, degressive or progressive?	❑ Linear ❑ Degressive ❑ Progressive	
A5.3c	Structure of the train path pricing system	Does the track pricing system permit discounts?	❑ None ❑ Volume dependent ❑ Time dependent (Early booking)	

No.	Determinants	Question	Response / Answers	Result / Comments
A5.4	**Level of Average Train Path Price**			
A5.4a	Level of average train path price	What is the average train path price in freight traffic?	❑ €/Track- km	
A5.4b	Level of average train path price	What is the average train path price in long-distance passenger traffic?	❑ €/Track- km	
A5.4c	Level of average train path price	What is the average train path price in local passenger traffic?	❑ €/Track- km	
A5.5	**Costs of cancelling requested train paths**	What deduction is retained by the network operator when a reserved but unused train path s returned	❑ €/Track- km	

No.	Determinants	Question	Response / Answers	Result / Comments
A6	**Minimum Access Package and Track Access to Service Facilities**			
A6.1	**Minimum access package pursuant to 2001/14, Art. 5 and Annex II, point 1**	Do the TOCs have non-discriminatory access to the following services? a) The processing of applications for infrastructure capacity; b) The right to use allocated capacity; c) Use of running track points and junctions; d) Control of trains including signalling, regulation, dispatching and the communication and provision of information on train movement; e) All other information required to implement or operate the service for which capacity has been allocated.	❑ Yes ❑ No Reply for each service!	
A6.2	**Service facilities pursuant to 2001/14, Art. 5 and Annex II, point 2**	Are the following services provided to TOCs free of discrimination by the network operator or under acceptable market conditions? a) Use of electrical supply equipment for traction current , where available b) Refuelling facilities; c) Passenger stations, their buildings and other facilities; d) Freight terminals; e) Marshalling yards; f) Train formation facilities; g) Storage sidings h) Maintenance and other technical facilities.	❑ Yes, by the network operators ❑ Yes, alternative provision by other service providers (acceptable market conditions) ❑ No Reply for each service!	

No.	Determinants	Question	Response / Answers	Result / Comments
A6.3	**Additional services pursuant to 2001/14, Art. 5 and Annex II, point 3**	Are the following services available to TOCs a) Traction current; b) Pre-heating of passenger trains; c) Provision of fuel, shunting, and all other services provided at the access service facilities mentioned above; d) Control of transport of dangerous goods e) Assistance in running abnormal trains?	❑ Yes offered by the network operators ❑ Yes, own supply ❑ Yes, alternative provision by other service providers ❑ No <u>Reply for each service!</u>	
A6.4	**Ancillary services pursuant to 2001/14, Art. 5 and Annex II, point 4**	Are the following services available to TOCs? f) Access to telecommunication network; g) Provision of supplementary information; h) Technical inspection of rolling stock.	❑ Yes, voluntary provision by the network operators ❑ Yes, own supply ❑ Yes, alternative provision by other service providers ❑ No <u>Reply for each service!</u>	
A6.5	**Ensuring information for passengers**	Is passenger information at the station ensured for all TOCs?	❑ Yes, ❑ Arrival / departure ❑ Platform / track ❑ Indication of carriage positioning ❑ Deviation thereof ❑ No	
A6.6	**Equality in the issue of train numbers**	Are train numbers issued on the basis of equality? (Same train category same number category)	❑ Yes ❑ No	

No.	Determinants	Question	Response / Answers	Result / Comments
A6.7	**Conduct of the Network Operator with regard to Information**			
A6.7a	Conduct of the network operator with regard to information	Is all information relating to tracks that is relevant to the transport offer supplied to the TOCs?	❑ Yes, without restrictions ❑ Yes, with the following restrictions: ____________________ ❑ No	
A6.7b	Publication of unused train path capacities	Are unused train path capacities publicised automatically or on request?	❑ Yes, without prompting ❑ Yes, on request ❑ No	
A6.8	**Office of the incumbent for access- and discrimination problems**	Is there a contact person at the incumbent to clarify any access- and discrimination problems?	❑ Yes ❑ No	

C1 Development of the Modal Split

C1.1 Development of the modal split in rail freight transport

How has the market share of rail freight transport developed in relation to other transport modes in terms of transport volume?

1991	2000	Change
100		%

C1.2 Development of the modal split in rail passenger transport

How has the market share of rail passenger transport developed in relation to other modes of transport in terms of transport volume?

1991	2000	Change
100		%

C2 New RUs 2002

C2.1 Licensed RUs (excl. incumbent) in relation to network length

How many railway undertakings with a valid licence (licensed as railway undertakings to run on the state-owned network) existed in 2002 (normalised over the length of the network)?

No. of Licensed RUs	Network Length [km]	No. of Licensed RUs / Network Length

C2.2 Active RUs (excl. incumbent) in relation to network length

How many railway undertakings were actually active on the state-owned network in 2002 (normalised over the length of the network)?

No. of Active Rus	Network Length [km]	No. of Active RUs / Network Length

C2.3 Active RUs (excl. incumbent) in relation to licensed RUs (incl. incumbent)

What is the ratio between the number of active RUs and the number of RUs which hold a valid licence?

No. of Active RUs	No. of Licensed RUs	No. of Active RUs / No. of Licensed RUs

C3 Accessible Market

C3.1 Market share of External RUs in 2000/2001

How high was the relative market share of External RUs (in tkm or pkm) in the following types of transport, expressed in percentage points?

C3.1a ... in freight transport

Year	**Total Transport Volume Freight Transport** [in tkm]	**Transport Volume Incumbent** [in tkm]	**Share of Incumbent** [%]	**Share of External RUs** [%]
2000				
2001				

C3.1b ... in long-distance passenger transport

Year	**Total Transport Volume Long-Distance Passenger Transport** [in pkm]	**Transport Volume Incumbent** [in pkm]	**Share of Incumbent** [%]	**Share of External RUs** [%]
2000				
2001				

C3.1b ... in local passenger transport

Year	**Total Transport Volume Local Passenger Transport** [in pkm]	**Transport Volume Incumbent** [in pkm]	**Share of Incumbent** [%]	**Share of External RUs** [%]
2000				
2001				

C3.2 Growth in market shares of External RUs from 1997 to 2001 in percentage points (tkm/pkm)

How high was the market growth of External RUs (tkm/pkm) in the following types of transport, expressed in percentage points?

C3.2a ... in freight transport

Year	**Share of External RUs** [%]	**Change in % vs. Reference Year**
1997		- / -
2001		

C3.2b ... in long-distance passenger transport

Year	Share of External RUs [%]	Change in % vs. Reference Year
1997		- / -
2001		

C3.2c ... in local passenger transport

Year	Share of External RUs [%]	Change in % vs. Reference Year
1997		- / -
2001		

C3.3 Share of accessible market per market segment (train path kilometres) in 2002

How high was the accessible market potential (in train path kilometres) for RUs in the following types of transport in 2002?

C3.3a ... in freight transport

Total Freight Transport Market	Accessible market share for freight transport [Share of train path kilometres]		
	open access	concession issued	not accessible
	%	%	%

C3.3b ... in long-distance passenger transport

Total Long-Distance Passenger Transport Market	Accessible market share for long-distance pass. transport [Share of train path kilometres]		
	open access	concession issued	not accessible
	%	%	%

C3.3c ... in local passenger transport

Total Local Passenger Transport Market	Accessible market share for local passenger transport [Share of train path kilometres]		
	open access	concession issued	not accessible
	%	%	%

6.7 Data Sheet

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Criterion	Weighting	1	2	3	4	5	6	7	8	9	10
L1 Directive 91/440/EEC as amended by Directive 2001/12/EC	**1,00**										
L1.1a Access for international groupings	0,30	no		strong restrictions		restrictions		minor restrictions			yes
L1.1b Access for cross-border intermodal transport	0,30	no		strong restrictions		restrictions		minor restrictions			yes
L1.1c Guaranteed independent status of the RUs	0,15	no									yes
L1.1d Separation of network/transport accounting	0,15	no									yes
L1.1e Measures for reducing indebtedness	0,10	no				yes, but					yes
L2 Further National Access Rights	**2,50**										
L2.1 Domestic subsidiary with network access option	0,60	no			restrictive			reciprocity			yes
L2.2 Other access rights	0,40	no					limited reciprocity	reciprocity	access to one market segment	access to two market segments	access to all market segments
L3 Organisational Structures	**2,50**										
L3.1 Vertical separation	0,80	none	accounting separation	management contract w/ RU for essential functions		org./accouting/legal separation			org./acc./legal/functional separation		full institutional separation
L3.2 Horizontal separation	0,20	none					accounting separation				balance sheet separation
L4 TERFN Preparation Status	**1,00**										
L4.1a Clear definition of national TERFN sector	0,30	no				under discussion					clear
L4.1b Expansion of national TERFN sector	0,40	no TERFN		less than obliged to		exactly as obliged to			little more than oblged to		a lot more than obliged to
L4.1c Existence of special problem areas	0,30	ports + terminals + capacity + more	problems with other important areas	ports + terminals + capacity	ports + terminals	ports or terminals + capacity	ports or terminals		capacity	problems with other negligible areas	none

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Criterion	Weighting	1	2	3	4	5	6	7	8	9	10
L5 State Monitoring of Access Rights	**3,00**										
L5.1 Regulatory authority	0,30	no									yes
L5.2 Subject matter of regulation	0,30										
L5.2a Monitoring of network statement	*0,30*	0-2	3	4	5	6	7	8	9	10	10+
L5.2b Allocation procedure and result	*0,15*	no									yes
L5.2c Charging schemes	*0,15*	no									yes
L5.2d Level/structure of infrastructure fees	*0,15*	no									yes
L5.2e Safety certificate and safety standards	*0,10*	no									yes
L5.2f Competition in rail service markets	*0,15*	no									yes
L5.3 Regulatory processes	0,10	no				partly					yes
L5.4 Transparency of regulation criteria	0,10	no				partly					yes
L5.5 Powers of regulatory authority	0,20										
L5.5a Can investigate on RU request	*0,05*	no									yes
L5.5b Obliged to investigate on RU request	*0,15*	no									yes
L5.5c Can investigate ex officio	*0,05*	no									yes
L5.5d Obliged to investigate ex officio	*0,15*	no									yes
L5.5e Decisions binding	*0,30*	no									yes
L5.5f Power to order coercive measures	*0,20*	no									yes
L5.5g Power to impose fines	*0,10*	no			yes, minor						yes, major

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Criterion	Weighting	1	2	3	4	5	6	7	8	9	10
A1 Information Barriers	0,50										
A1.1 Process duration	0,30										
A1.1a Contact identification	*0,30*	> 5 days		3-5 days		2 days		1 day			up to 0.5 days
A1.1b Return of written information	*0,70*	no return or more than 2 months		up to 2 weeks		up to 1 week					up to 1 days
A1.2 Quality of impersonal provision of information	0,35										
A1.2a Market access information available in impersonal form	*0,30*	none		some				much			all
A1.2b Form of impersonal information	*0,05*	none					brochures		partly brochures, partly Internet		Internet
A1.2c Impersonal information up-to-date	*0,30*	old				partly					up-to-date
A1.2d Languages	*0,20*	national language						national language = EU working language	national language + 1 EU working language	national language + >1 EU working language	all EU working languages
A1.2e Process support	*0,05*	none				indirect					direct (download)
A1.2f Instruction leaflet	*0,10*	no		on some issues				on many issues			yes
A1.3 Quality of personal provision of information	0,35										
A1.3a Qualified contact for market access and licence issue	*0,40*	no									yes
A1.3b Security of transmitted data	*0,20*	no						doubted by RU			yes
A1.3c Languages of contact	*0,30*	national language						national language = EU working language	national language + 1 EU working language	national language + >1 EU working language	all EU working languages
A1.3d Instruction leaflet from contact	*0,10*	no		on some issues				on many issues			yes
A2 Licence and Safety Certificate	2,00										
A2.1 Decision makers	0,18										
A2.1a Number of institutions/authorities to be contacted	*0,30*	3		2-3		2		1-2			1
A2.1b Independence of body from incumbent	*0,70*	dependent		formally independent							formally and factually independent
A2.2 Duration of issue process	0,08	6 months and longer	up to 5 months	up to 4 months		up to 3 months		up to 2 months			1 month
A2.3 Scope of licence	0,02										
A2.3a Scope regarding type of transport	*0,20*	restrictive	freight transport or passenger transport	with limitations							both
A2.3.b Scope of freight transport licence	*0,45*	part of the network									complete network
A2.3.c Scope of passenger transport licence	*0,35*	long-distance or local passenger transport									both
A2.4 Recognition of foreign licences	0,09	no				limited +additional requirements			certain countries with minor limitations	EU 15	EU 15 + CH + N
A2.5 Examination period for foreign European licences	0,02	up to 6 months or longer	up to 5 months	up to 3 months		up to 1 month			up to 1 week		up to 1 day

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Criterion	Weighting	1	2	3	4	5	6	7	8	9	10
A2.6 Period of licence validity	0,04										
A2.6a Legal period of validity	*0,35*	up to 5 years		up to 10 years		up to 15 years			up to 25 years		unlimited
A2.6b Regular review of licence	*0,35*	= 1 year		< 2 years		< 3 years		< 4 years		< 5 years	= 5 years
A2.6c Expiration period if unused	*0,30*	6 months				12 months			24 months		none
A2.7 Required insurance amount	0,02	up to 80 Mio EUR or more	up to 70 Mio EUR	up to 60 Mio EUR	up to 50 Mio EUR	up to 40 Mio EUR	up to 30 Mio EUR	up to 20 Mio EUR	up to 10 Mio EUR	up to 5 Mio EUR	none
A2.8 Required paid-up capital	0,02	up to 45 000 EUR or more	up to 40 000 EUR	up to 35 000 EUR	up to 30 000 EUR	up to 25 000 EUR	up to 20 000 EUR	up to 15 000 EUR	up to 10 000 EUR	up to 5 000 EUR	none
A2.9 Licence costs	0,02	up to 10 000 EUR or more		up to 7 500 EUR		up to 5 000 EUR		up to 2 500 EUR	up to 1 000 EUR	up to 500 EUR	none
A2.10 Additional conditions for issue of licence	0,08	restrictive			minor restrictions			not restrictive			none
A2.11 Clearly defined contact person	0,03	no									yes
A2.12 Safety certificate	0,40										
A2.12a Time required for provision of necessary documents from body	*0,10*	> 14 days	> 12 days	> 10 days	> 8 days	> 6 days	> 4 days	> 3 days	> 2 days	> 1 day	= 1 day
A2.12b Detail level of certificate requirements	*0,05*	high				medium					low
A2.12c Safety certificate costs	*0,05*	up to 10 000 EUR or more		up to 6 000 EUR			up to 3 000 EUR		up to 1 000 EUR		none
A2.12d Number of bodies involved	*0,10*	more than 4		4	3-4		3	2-3	2	1-2	1
A2.12e Independence of body from incumbent	*0,20*	no		formally independent							formally and factually independent
A2.12f Transparency of criteria	*0,20*	no						yes, but no documents available			yes, with documents available
A2.12g Decision period	*0,15*	up to 100 days or longer	up to 90 days	up to 80 days	up to 70 days	up to 60 days	up to 50 days	up to 50 days	up to 30 days	up to 20 days	up to 10 days
A2.12h Recognition of foreign safety certificates	*0,10*	no						yes, but only certain		EU 15	EU 15 + CH + N
A2.12i Limitation of validity	*0,05*	< 5 years				< 10 years			< 15 years		none

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Criterion	Weighting	1	2	3	4	5	6	7	8	9	10
A3 Scope for Interpretation/Access Regime	**2,00**										
A3.1 Deviations / scope for interpretation	0,20										
A3.1a Practical deviations from requirements of Directives	*0,35*	yes, restrictive					only a little restrictive				no
A3.1b Practical deviations from requirements of national legislation	*0,35*	yes, restrictive					only a little restrictive				no
A3.1c Arbitrary obstacles	*0,30*	yes, restrictive					only a little restrictive				no
A3.2 Direct market access with licence or existence of other obstacles	0,80										
A3.2a ...regarding freight transport	*0,50*	no, other obstacles				no, concession/franchise necessary					yes, open access
A3.2b ...regarding long-distance passenger transport	*0,25*	no, other obstacles				no, concession/franchise necessary					yes, open access
A3.2c ...regarding local passenger transport	*0,25*	no, other obstacles				no, concession/franchise necessary					yes, open access
A4 Network Access and Prerequisites	**2,00**										
A4.1 Standardisation of contract terms and conditions with infrastructure manager	0,10	many individual negotiations	individual negotiations							more than one standard contract	one standard contract
A4.2 Market for rolling stock in target country	0,10	no						yes, purchasing			yes, renting/purchasing
A4.3 Vehicle approval (foreign tractive vehicle acc. to UIC-norm)	0,17										
A4.3a Time required for provision of necessary documents from body	*0,15*	> 14 days	> 12 days	> 10 days	> 8 days	> 6 days	> 4 days	> 3 days	> 2 days	> 1 day	= 1 day
A4.3b Detail level of approval requirements	*0,05*	high				medium					low
A4.3c Approval costs	*0,05*	up to 150 000 EUR or more		up to 75 000 EUR		up to 50 000 EUR		up to 25 000 EUR	up to 10 000 EUR		none
A4.3d Decision period	*0,10*	up to 10 months or longer	up to 9 months	up to 8 months	up to 7 months	up to 6 months	up to 5 months	up to 4 months	up to 3 months	up to 2 months	up to 1 month
A4.3e Number of bodies involved	*0,10*	> 4		4			3		2		1
A4.3f Independence of body from incumbent	*0,20*	no		formally independent							formally and factually independent
A4.3g Transparency of criteria	*0,20*	no						yes, but no documents available			yes, with documents available
A4.3h Recognition of foreign vehicle approvals	*0,15*	no						yes, but only certain			yes, all
A4.4 Recruitment of qualified personnel	0,07	no		difficult					to a certain extent		yes
A4.5 Standard procedure for train path allocation	0,17										
A4.5a Existence of legally binding procedure for train path allocation	*0,40*	no									yes
A4.5b Transparent criteria for train path allocation process	*0,60*	no						yes, but no documents available			yes, with documents available
A4.6 Lead time for train path allocation	0,03	up to 10 months or longer	up to 9 months	up to 8 months	up to 7 months	up to 6 months	up to 5 months	up to 4 months	up to 3 months	up to 2 months	up to 1 month

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Criterion	Weighting	1	2	3	4	5	6	7	8	9	10
A4.7 Non-discriminatory train path allocation procedure	0,16										
A4.7a Train path allocation process identical for all	*0,30*	no						yes, but no documents available			yes, with documents available
A4.7b Non-discriminatory marketing for all train paths	*0,30*	no								yes, but with socio-economic considerations	yes
A4.7c Transparent mechanism for conflicting requests	*0,40*	no				partly					yes
A4.8 Flexibility regarding ad hoc requests	0,05	low					medium				high
A4.9 Priority scheduling arrangements for the incumbent	0,15	yes								by train type (if exclusivity of incumbent)	no
A5 Train Path Pricing System (TPPS)	**2,00**										
A5.1 Existence and transparency of a TPPS	0,30										
A5.1a Existence of a uniform facility and train path pricing system	*0,40*	no									yes
A5.1b Publication of facility and train path pricing system	*0,20*	no				partly					yes
A5.1c Pricing system binding upon all participants	*0,40*	no									yes
A5.2 Share of unused but requested train paths [%]	0,05	> 25	> 22	> 19	> 16	> 13	> 10	> 7	> 4	> 1	=< 1
A5.3 Structure of the TPPS	0,20										
A5.3a Is the TPPS single or multiple tier	*0,50*	multiple tier		two tier			two tier as well as variable price				single tier
A5.3b Is the TPPS linear, degressive or progressive	*0,20*	degressive								linear	progressive
A5.3c Discounts	*0,30*	volume and time dependent		for use of track-sustaining rolling stock	volume dependent			time dependent			none
A5.4 Average Train Path Price	0,35										
A5.4a ...for freight transport	*0,50*	>=6	<6	<5	<4	<3	<2	<1,5	<1	<0,75	<0,5
A5.4b ...for local passenger transport	*0,25*	>=4,5	<4,5	<4	<3,5	<3	<2,5	<2	<1,5	<1	<0,5
A5.4c ...for long-distance passenger transport	*0,25*	>=10	<10	<8	<7	<6	<5	<4	<3	<2	<1
A5.5 Charges for reserved but unused train paths	0,10	0-1%	<1-5%	<10%	<20%	<50%	<60%	<70%	<80%	<90%	<=100%

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Criterion	Weighting	1	2	3	4	5	6	7	8	9	10
A6 Access to Service Facilities	**1,50**										
A6.1 Minimum access package pursuant to Directive 2001/14 Annex II, point 1	0,25	no		1 x yes	2 x yes		3 x yes		4 x yes		yes, to all
A6.2 Service facilitites pursuant to Directive 2001/14 Annex II, point 2	0,15	no	1 x yes	2 x yes	> 2 x yes		> 4 x yes		> 6 x yes		yes, to all
A6.3 Additional services pursuant to Directive 2001/14 Annex II, point 3	0,10	no		1 x yes	2 x yes		3 x yes		4 x yes		yes, to all
A6.4 Ancillary services pursuant to Directive 2001/14 Annex II, point 4	0,05	no			1 x yes			2 x yes			yes, to all
A6.5 Passenger information at the station ensured for all RUs	0,15	no		yes, 1 / 4		yes, 2 / 4			yes, 3 / 4		yes, all
A6.6 Equality in train number issue	0,07	no									yes
A6.7 Information supply by infrastructure manager	0,20										
A6.7a Supply of all relevant route information to RUs	*0,85*	no		very limited				not entirely			yes, without restrictions
A6.7b Indication of unused train path capacities	*0,15*	no					yes, on request				yes, without prompting
A6.8 Clarification body of incumbent	0,03	no									yes

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Criterion	Weighting	1	2	3	4	5	6	7	8	9	10
C1 Market Development	**1,00**										
C1 .1 Development of the modal split in freight transport (rail share)	0,50	<-30	<-25	<-20	<-15	<-10	<-5	-5 bis 4,999	<+5	<+10	>=+10
C1.2 Development of the modal split in passenger transport (rail share)	0,50	<-30	<-25	<-20	<-15	<-10	<-5	-5 bis 4,999	<+5	<+10	>=+10
1991=100 compared with the rail share in 2000 (Prognos data)											
C2 New RUs 2002	**3,00**										
C2.1 Licensed RUs in relation to network length (multiplied by 10 000)	0,20	0	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	>80
C2.2 Active RUs (excl. incumb.) in relation to network length (multiplied by 10 000)	0,50	0	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	>80
C2.3 Active RUs (excl. incumb.) in relation to RUs with a valid licence (incl. incumbent)	0,30	0-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%
C3 Accessible Market	**6,00**										
C3.1 Market share of External RUs in 2000/2001	0,50										
C3.1 a ...in freight transport	*0,50*	0-1%	>1%	>3%	>5%	>7%	>10%	>20%	>30%	>40%	>50%
C3.1b ...in long-distance passenger transport	*0,25*	0-1%	>1%	>3%	>5%	>7%	>10%	>20%	>30%	>40%	>50%
C3.1c ...in local passenger transport	*0,25*	0-1%	>1%	>3%	>5%	>7%	>10%	>20%	>30%	>40%	>50%
C3.2 Average market share growth of External RUs from 1997 to 2001 in percent	0,30										
C3.2a ...in freight transport	*0,50*	0-1%	>1%	>2%	>3%	>4%	>5%	>6%	>7%	>8%	>9%
C3.2b ...in long-distance passenger transport	*0,25*	0-1%	>1%	>2%	>3%	>4%	>5%	>6%	>7%	>8%	>9%
C3.2c ...in local passenger transport	*0,25*	0-1%	>1%	>2%	>3%	>4%	>5%	>6%	>7%	>8%	>9%
C3.3 Share of accessible market in 2002	0,20										
C3.3a ...in freight transport	*0,50*	<1%	1-4%	5-10%	11-20%	21-30%	31-40%	41-50%	51-70%	71-90%	91-100%
C3.3b ...in long-distance passenger transport	*0,25*	<1%	1-4%	5-10%	11-20%	21-30%	31-40%	41-50%	51-70%	71-90%	91-100%
C3.3c ...in local passenger transport	*0,25*	<1%	1-4%	5-10%	11-20%	21-30%	31-40%	41-50%	51-70%	71-90%	91-100%

6.8 National Findings

LIB Index
Overview Results by Country

	Belgium	Denmark	Germany	Finland	France	Greece	United Kingdom	Ireland	Italy	Luxembourg	Netherlands	Norway	Austria	Portugal	Sweden	Switzerland	Spain
Criterion	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
L1 Directive 91/440/EEC as amended by Directive 2001/12/EC	**9,10**	**9,50**	**9,50**	**9,50**	**10,00**	**9,50**	**10,00**	**9,10**	**9,50**	**10,00**	**10,00**	**9,50**	**9,50**	**9,50**	**10,00**	**10,00**	**9,50**
L1.1a Access for international groupings	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00
L1.1b Access for cross-border intermodal transport	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00
L1.1c Guaranteed independent status of the RUs	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50
L1.1d Separation of network/transport accounting	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50
L1.1e Measures for reducing indebtedness	0,10	0,50	0,50	0,50	1,00	0,50	1,00	0,10	0,50	1,00	1,00	0,50	0,50	0,50	1,00	1,00	0,50
L2 Further National Access Rights	**16,00**	**23,00**	**22,00**	**21,00**	**7,00**	**2,50**	**23,00**	**16,00**	**17,50**	**22,00**	**23,00**	**7,50**	**12,00**	**16,00**	**23,00**	**21,00**	**2,50**
L2.1 Domestic subsidiary with network access option	6,00	6,00	6,00	6,00	2,40	0,60	6,00	6,00	4,20	6,00	6,00	0,60	2,40	6,00	6,00	6,00	0,60
L2.2 Other access rights	0,40	3,20	2,80	2,40	0,40	0,40	3,20	0,40	2,80	2,80	3,20	2,40	2,40	0,40	3,20	2,40	0,40
L3 Organisational Structures	**7,00**	**25,00**	**15,00**	**20,50**	**9,00**	**4,50**	**25,00**	**7,00**	**21,00**	**9,00**	**25,00**	**25,00**	**11,00**	**20,50**	**25,00**	**9,00**	**9,00**
L3.1 Vertical separation	1,60	8,00	4,00	8,00	2,40	1,60	8,00	1,60	6,40	2,40	8,00	8,00	2,40	8,00	8,00	1,60	1,60
L3.2 Horizontal separation	1,20	2,00	2,00	0,20	1,20	0,20	2,00	1,20	2,00	1,20	2,00	2,00	2,00	0,20	2,00	2,00	2,00
L4 TERFN Preparation Status	**2,20**	**8,00**	**7,40**	**8,00**	**6,80**	**5,60**	**8,80**	**7,40**	**6,50**	**7,40**	**7,40**	**6,20**	**7,40**	**4,80**	**6,80**	**1,00**	**5,90**
L4.1a Clear definition of national TERFN sector	1,50	3,00	3,00	3,00	3,00	3,00	3,00	3,00	1,50	3,00	3,00	3,00	3,00	3,00	3,00	0,30	3,00
L4.1b Expansion of national TERFN sector	0,40	2,00	2,00	3,20	2,00	2,00	4,00	2,00	3,20	2,00	2,00	2,00	2,00	1,20	2,00	0,40	2,00
L4.1c Existence of special problem areas	0,30	3,00	2,40	1,80	1,80	0,60	1,80	2,40	1,80	2,40	2,40	1,20	2,40	0,60	1,80	0,30	0,90
L5 State Monitoring of Access Rights	**3,00**	**18,93**	**29,46**	**3,00**	**3,00**	**3,00**	**29,19**	**11,64**	**10,35**	**3,00**	**12,14**	**9,48**	**28,29**	**20,28**	**15,14**	**18,93**	**3,00**
L5.1 Regulatory authority	0,30	0,30	3,00	0,30	0,30	0,30	3,00	0,30	1,50	0,30	1,50	0,30	3,00	3,00	0,30	0,30	0,30
L5.2 Subject matter of regulation	0,30	2,19	3,00	0,30	0,30	0,30	3,00	1,38	0,66	0,30	0,71	1,38	2,55	2,10	1,79	2,91	0,30
L5.2a Monitoring of network statement	*0,30*	*0,30*	*3,00*	*0,30*	*0,30*	*0,30*	*3,00*	*0,30*	*1,50*	*0,30*	*0,30*	*0,30*	*1,50*	*0,90*	*0,30*	*2,70*	*0,30*
L5.2b Allocation procedure and result	*0,15*	*1,50*	*1,50*	*0,15*	*0,15*	*0,15*	*1,50*	*1,50*	*0,15*	*0,15*	*0,15*	*1,50*	*1,50*	*1,50*	*0,15*	*1,50*	*0,15*
L5.2c Charging schemes	*0,15*	*1,50*	*1,50*	*0,15*	*0,15*	*0,15*	*1,50*	*1,50*	*0,15*	*0,15*	*0,15*	*1,50*	*1,50*	*1,50*	*1,50*	*1,50*	*0,15*
L5.2d Level/structure of infrastructure fees	*0,15*	*1,50*	*1,50*	*0,15*	*0,15*	*0,15*	*1,50*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*1,50*	*1,50*	*1,50*	*1,50*	*0,15*
L5.2e Safety certificate and safety standards	*0,10*	*1,00*	*1,00*	*0,10*	*0,10*	*0,10*	*1,00*	*1,00*	*0,10*	*0,10*	*0,10*	*1,00*	*1,00*	*0,10*	*1,00*	*1,00*	*0,10*
L5.2f Competition in rail service markets	*0,15*	*1,50*	*1,50*	*0,15*	*0,15*	*0,15*	*1,50*	*0,15*	*0,15*	*0,15*	*1,50*	*0,15*	*1,50*	*1,50*	*1,50*	*1,50*	*0,15*
L5.3 Regulatory processes	0,10	1,00	1,00	0,10	0,10	0,10	1,00	1,00	0,50	0,10	1,00	0,10	1,00	0,10	0,50	1,00	0,10
L5.4 Transparency of regulation criteria	0,10	1,00	1,00	0,10	0,10	0,10	1,00	1,00	0,50	0,10	0,10	0,10	1,00	0,10	1,00	1,00	0,10
L5.5 Powers of regulatory authority	0,20	1,82	1,82	0,20	0,20	0,20	1,73	0,20	0,29	0,20	0,74	1,28	1,88	1,46	1,46	1,10	0,20
L5.5a Can investigate on RU request	*0,05*	*0,50*	*0,50*	*0,05*	*0,05*	*0,05*	*0,50*	*0,05*	*0,50*	*0,05*	*0,50*	*0,50*	*0,50*	*0,50*	*0,50*	*0,50*	*0,05*
L5.5b Obliged to investigate on RU request	*0,15*	*1,50*	*1,50*	*0,15*	*0,15*	*0,15*	*1,50*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*1,50*	*0,15*	*1,50*	*1,50*	*0,15*
L5.5c Can investigate ex officio	*0,05*	*0,50*	*0,50*	*0,05*	*0,05*	*0,05*	*0,50*	*0,05*	*0,05*	*0,05*	*0,50*	*0,50*	*0,50*	*0,50*	*0,50*	*0,05*	*0,05*
L5.5d Obliged to investigate ex officio	*0,15*	*1,50*	*1,50*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*1,50*	*0,15*	*1,50*	*0,15*	*0,15*
L5.5e Decisions binding	*0,30*	*3,00*	*3,00*	*0,30*	*0,30*	*0,30*	*3,00*	*0,30*	*0,30*	*0,30*	*0,30*	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*0,30*
L5.5f Power to order coercive measures	*0,20*	*2,00*	*2,00*	*0,20*	*0,20*	*0,20*	*2,00*	*0,20*	*0,20*	*0,20*	*2,00*	*2,00*	*2,00*	*2,00*	*0,20*	*0,20*	*0,20*
L5.5g Power to impose fines	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*1,00*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,40*	*1,00*	*0,10*	*0,10*	*0,10*
Result LEX Index :	**37,30**	**84,43**	**83,36**	**62,00**	**35,80**	**25,10**	**95,99**	**51,14**	**64,85**	**51,40**	**77,54**	**57,68**	**68,19**	**71,08**	**79,94**	**59,93**	**29,90**

LIB Index
Overview Results by Country

Criterion	Belgium	Denmark	Germany	Finland	France	Greece	United Kingdom	Ireland	Italy	Luxembourg	Netherlands	Norway	Austria	Portugal	Sweden	Switzerland	Spain
	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
A1 Information Barriers	**3,85**	**3,57**	**4,20**	**2,56**	**3,19**	**1,59**	**4,74**	**2,03**	**3,75**	**2,60**	**4,88**	**3,04**	**3,04**	**1,69**	**3,27**	**4,28**	**1,96**
A1.1 Process duration	1,53	1,68	1,95	1,68	1,53	0,48	3,00	0,84	1,26	1,11	3,00	0,87	1,26	0,69	0,84	1,95	1,11
A1.1a Contact identification	*3,00*	*2,10*	*3,00*	*2,10*	*3,00*	*0,90*	*3,00*	*2,10*	*2,10*	*3,00*	*3,00*	*1,50*	*2,10*	*0,90*	*2,10*	*3,00*	*3,00*
A1.1b Return of written information	*2,10*	*3,50*	*3,50*	*3,50*	*2,10*	*0,70*	*7,00*	*0,70*	*2,10*	*0,70*	*7,00*	*1,40*	*2,10*	*1,40*	*0,70*	*3,50*	*0,70*
A1.2 Quality of impersonal provision of information	2,89	2,31	3,36	0,35	1,91	0,35	3,29	0,35	3,05	1,75	3,36	2,24	2,26	0,35	2,94	3,33	0,35
A1.2a Market access information available in impersonal form	*3,00*	*2,10*	*3,00*	*0,30*	*0,30*	*0,30*	*3,00*	*0,30*	*3,00*	*0,90*	*3,00*	*2,10*	*2,10*	*0,30*	*2,10*	*3,00*	*0,30*
A1.2b Form of impersonal information	*0,30*	*0,50*	*0,50*	*0,05*	*0,40*	*0,05*	*0,50*	*0,05*	*0,50*	*0,50*	*0,50*	*0,50*	*0,50*	*0,05*	*0,50*	*0,50*	*0,05*
A1.2c Impersonal information up-to-date	*3,00*	*3,00*	*3,00*	*0,30*	*3,00*	*0,30*	*3,00*	*0,30*	*2,40*	*1,50*	*3,00*	*3,00*	*1,50*	*0,30*	*3,00*	*3,00*	*0,30*
A1.2d Languages	*1,60*	*0,20*	*1,60*	*0,20*	*1,40*	*0,20*	*1,40*	*0,20*	*1,60*	*1,60*	*1,60*	*0,20*	*1,40*	*0,20*	*1,60*	*1,80*	*0,20*
A1.2e Process support	*0,25*	*0,50*	*0,50*	*0,05*	*0,25*	*0,05*	*0,50*	*0,05*	*0,50*	*0,40*	*0,50*	*0,50*	*0,25*	*0,05*	*0,50*	*0,50*	*0,05*
A1.2f Instruction leaflet	*0,10*	*0,30*	*1,00*	*0,10*	*0,10*	*0,10*	*1,00*	*0,10*	*0,70*	*0,10*	*1,00*	*0,10*	*0,70*	*0,10*	*0,70*	*0,70*	*0,10*
A1.3 Quality of personal provision of information	3,29	3,15	3,08	3,08	2,94	2,35	3,19	2,87	3,19	2,35	3,40	2,98	2,56	2,35	2,77	3,29	2,45
A1.3a Qualified contact for market access and licence issue	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*
A1.3b Security of transmitted data	*2,00*	*2,00*	*1,40*	*2,00*	*2,00*	*0,20*	*2,00*	*2,00*	*2,00*	*0,20*	*2,00*	*2,00*	*0,20*	*0,20*	*0,20*	*2,00*	*0,20*
A1.3c Languages of contact	*2,70*	*2,70*	*2,40*	*2,70*	*2,10*	*2,40*	*2,10*	*2,10*	*2,40*	*2,40*	*2,70*	*2,40*	*2,40*	*2,40*	*2,70*	*2,70*	*2,70*
A1.3d Instruction leaflet from contact	*0,70*	*0,30*	*1,00*	*0,10*	*0,30*	*0,10*	*1,00*	*0,10*	*0,70*	*0,10*	*1,00*	*0,10*	*0,70*	*0,10*	*1,00*	*0,70*	*0,10*
A2 Licence and Safety Certificate	**11,47**	**13,34**	**17,54**	**8,69**	**12,21**	**7,94**	**12,74**	**10,10**	**10,64**	**3,79**	**14,46**	**8,95**	**7,24**	**7,31**	**11,68**	**15,69**	**4,70**
A2.1 Decision makers	0,76	1,53	1,53	0,92	1,80	1,80	1,64	1,80	1,80	0,40	1,31	0,43	1,80	0,65	0,54	1,80	1,53
A2.1a Number of institutions/authorities to be contacted	*2,10*	*1,50*	*1,50*	*3,00*	*3,00*	*3,00*	*2,10*	*3,00*	*3,00*	*1,50*	*0,30*	*0,30*	*3,00*	*1,50*	*0,90*	*3,00*	*1,50*
A2.1b Independence of body from incumbent	*2,10*	*7,00*	*7,00*	*2,10*	*7,00*	*7,00*	*7,00*	*7,00*	*7,00*	*0,70*	*7,00*	*2,10*	*7,00*	*2,10*	*2,10*	*7,00*	*7,00*
A2.2 Duration of issue process	0,40	0,56	0,40	0,24	0,56	0,08	0,24	0,08	0,32	0,40	0,40	0,40	0,08	0,24	0,40	0,40	0,08
A2.3 Scope of licence	0,11	0,20	0,20	0,20	0,02	0,02	0,20	0,02	0,20	0,02	0,14	0,20	0,20	0,02	0,20	0,09	0,02
A2.3a Scope regarding type of transport	*0,40*	*2,00*	*2,00*	*2,00*	*0,40*	*0,20*	*2,00*	*0,20*	*2,00*	*0,20*	*2,00*	*2,00*	*2,00*	*0,20*	*2,00*	*0,60*	*0,20*
A2.3.b Scope of freight transport licence	*4,50*	*4,50*	*4,50*	*4,50*	*0,45*	*0,45*	*4,50*	*0,45*	*4,50*	*0,45*	*4,50*	*4,50*	*4,50*	*0,45*	*4,50*	*0,45*	*0,45*
A2.3.c Scope of passenger transport licence	*0,35*	*3,50*	*3,50*	*3,50*	*0,35*	*0,35*	*3,50*	*0,35*	*3,50*	*0,35*	*0,35*	*3,50*	*3,50*	*0,35*	*3,50*	*3,50*	*0,35*
A2.4 Recognition of foreign licences	0,81	0,90	0,72	0,81	0,09	0,09	0,09	0,90	0,81	0,45	0,90	0,45	0,09	0,81	0,90	0,81	0,09
A2.5 Examination period for foreign European licences	0,02	0,16	0,04	0,02	0,02	0,02	0,02	0,02	0,02	0,02	0,02	0,06	0,02	0,02	0,06	0,20	0,02
A2.6 Period of licence validity	0,17	0,29	0,26	0,17	0,25	0,04	0,34	0,04	0,29	0,04	0,40	0,29	0,39	0,17	0,40	0,30	0,04
A2.6a Legal period of validity	*0,35*	*3,50*	*1,75*	*3,50*	*3,50*	*0,35*	*3,50*	*0,35*	*3,50*	*0,35*	*3,50*	*3,50*	*3,50*	*0,35*	*3,50*	*1,05*	*0,35*
A2.6b Regular review of licence	*3,50*	*3,50*	*1,75*	*0,35*	*2,45*	*0,35*	*3,50*	*0,35*	*3,50*	*0,35*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*0,35*
A2.6c Expiration period if unused	*0,30*	*0,30*	*3,00*	*0,30*	*0,30*	*0,30*	*1,50*	*0,30*	*0,30*	*0,30*	*3,00*	*0,30*	*2,70*	*0,30*	*3,00*	*3,00*	*0,30*
A2.7 Required insurance amount	0,20	0,10	0,14	0,02	0,20	0,02	0,02	0,02	0,20	0,02	0,16	0,02	0,02	0,02	0,12	0,04	0,02
A2.8 Required paid-up capital	0,12	0,02	0,20	0,02	0,20	0,02	0,20	0,02	0,20	0,02	0,20	0,02	0,02	0,02	0,20	0,20	0,02
A2.9 Licence costs	0,20	0,18	0,18	0,02	0,20	0,02	0,02	0,02	0,06	0,02	0,20	0,20	0,02	0,02	0,20	0,14	0,02
A2.10 Additional conditions for issue of licence	0,56	0,80	0,80	0,80	0,80	0,80	0,32	0,08	0,32	0,08	0,32	0,08	0,08	0,08	0,32	0,80	0,08
A2.11 Clearly defined contact person	0,30	0,03	0,30	0,03	0,30	0,30	0,30	0,03	0,30	0,03	0,30	0,30	0,30	0,03	0,30	0,30	0,03
A2.12 Safety certificate	2,10	1,90	4,00	1,10	1,66	0,76	2,98	2,02	0,80	0,40	2,88	2,02	0,60	1,58	2,20	2,76	0,40
A2.12a Time required for provision of necessary documents from body	*0,40*	*0,80*	*1,00*	*0,10*	*0,10*	*0,10*	*1,00*	*1,00*	*0,10*	*0,10*	*1,00*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*
A2.12b Detail level of certificate requirements	*0,05*	*0,05*	*0,50*	*0,05*	*0,05*	*0,05*	*0,05*	*0,50*	*0,05*	*0,05*	*0,25*	*0,05*	*0,05*	*0,05*	*0,25*	*0,25*	*0,05*
A2.12c Safety certificate costs	*0,50*	*0,40*	*0,50*	*0,05*	*0,50*	*0,05*	*0,05*	*0,05*	*0,15*	*0,05*	*0,50*	*0,50*	*0,15*	*0,05*	*0,05*	*0,40*	*0,05*
A2.12d Number of bodies involved	*0,80*	*1,00*	*1,00*	*1,00*	*1,00*	*1,00*	*1,00*	*1,00*	*1,00*	*0,10*	*1,00*	*1,00*	*0,10*	*0,80*	*1,00*	*0,80*	*0,10*
A2.12e Independence of body from incumbent	*0,60*	*2,00*	*2,00*	*0,60*	*2,00*	*0,20*	*2,00*	*2,00*	*0,20*	*0,20*	*2,00*	*2,00*	*0,60*	*2,00*	*0,60*	*2,00*	*0,20*
A2.12f Transparency of criteria	*2,00*	*0,20*	*2,00*	*0,20*	*0,20*	*0,20*	*2,00*	*0,20*	*0,20*	*0,20*	*2,00*	*0,20*	*0,20*	*0,20*	*2,00*	*2,00*	*0,20*
A2.12g Decision period	*0,75*	*0,15*	*1,50*	*0,15*	*0,15*	*0,15*	*0,75*	*0,15*	*0,15*	*0,15*	*0,30*	*0,60*	*0,15*	*0,15*	*0,90*	*1,20*	*0,15*
A2.12h Recognition of foreign safety certificates	*0,10*	*0,10*	*1,00*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*	*0,10*
A2.12i Limitation of validity	*0,05*	*0,05*	*0,50*	*0,50*	*0,05*	*0,05*	*0,50*	*0,05*	*0,05*	*0,05*	*0,05*	*0,50*	*0,05*	*0,50*	*0,50*	*0,05*	*0,05*
A3 Scope for Interpretation/Access Regime	**5,60**	**12,80**	**17,44**	**5,60**	**5,60**	**5,60**	**16,00**	**5,60**	**12,80**	**5,60**	**14,40**	**4,52**	**2,00**	**6,48**	**15,44**	**12,80**	**5,60**
A3.1 Deviations / scope for interpretation	2,00	2,00	1,72	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	1,46	0,20	1,64	1,72	2,00	2,00
A3.1a Practical deviations from requirements of Directives	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*0,35*	*3,50*	*3,50*	*3,50*	*3,50*
A3.1b Practical deviations from requirements of national legislation	*3,50*	*3,50*	*2,10*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*3,50*	*0,35*	*3,50*	*2,10*	*3,50*	*3,50*
A3.1c Arbitrary obstacles	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*0,30*	*0,30*	*1,20*	*3,00*	*3,00*	*3,00*
A3.2 Direct market access with licence or existence of other obstacles	0,80	4,40	7,00	0,80	0,80	0,80	6,00	0,80	4,40	0,80	5,20	0,80	0,80	1,60	6,00	4,40	0,80
A3.2a ...regarding freight transport	*0,50*	*5,00*	*5,00*	*0,50*	*0,50*	*0,50*	*5,00*	*0,50*	*5,00*	*0,50*	*5,00*	*0,50*	*0,50*	*0,50*	*5,00*	*5,00*	*0,50*
A3.2b ...regarding long-distance passenger transport	*0,25*	*0,25*	*2,50*	*0,25*	*0,25*	*0,25*	*1,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*1,25*	*0,25*	*0,25*
A3.2c ...regarding local passenger transport	*0,25*	*0,25*	*1,25*	*0,25*	*0,25*	*0,25*	*1,25*	*0,25*	*0,25*	*0,25*	*1,25*	*0,25*	*0,25*	*1,25*	*1,25*	*0,25*	*0,25*
A4 Network Access and Prerequisites	**10,20**	**16,48**	**17,25**	**11,82**	**7,13**	**2,92**	**17,45**	**2,00**	**12,70**	**3,56**	**16,11**	**5,76**	**6,30**	**10,55**	**13,04**	**16,70**	**2,28**
A4.1 Standardisation of contract terms and conditions with infrastructure manager	0,20	1,00	1,00	1,00	0,10	0,10	0,90	0,10	1,00	0,10	0,90	0,20	0,10	0,90	1,00	0,90	0,10
A4.2 Market for rolling stock in target country	1,00	1,00	1,00	0,10	0,10	0,10	1,00	0,10	0,90	0,10	1,00	0,10	0,70	0,70	1,00	1,00	0,10
A4.3 Vehicle approval (foreign tractive vehicle acc. to UIC-norm)	0,68	1,28	1,09	0,75	0,86	0,63	1,24	0,17	0,57	0,95	1,45	0,77	0,48	0,90	0,77	1,03	0,17
A4.3a Time required for provision of necessary documents from body	*0,15*	*1,50*	*0,60*	*0,15*	*0,15*	*0,15*	*1,05*	*0,15*	*0,15*	*0,15*	*1,20*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*
A4.3b Detail level of approval requirements	*0,25*	*0,25*	*0,05*	*0,05*	*0,05*	*0,05*	*0,25*	*0,05*	*0,05*	*0,25*	*0,05*	*0,05*	*0,05*	*0,05*	*0,50*	*0,25*	*0,05*
A4.3c Approval costs	*0,35*	*0,50*	*0,40*	*0,05*	*0,50*	*0,05*	*0,35*	*0,05*	*0,10*	*0,05*	*0,40*	*0,50*	*0,10*	*0,05*	*0,50*	*0,40*	*0,05*
A4.3d Decision period	*0,10*	*0,90*	*0,50*	*0,10*	*1,00*	*0,10*	*0,50*	*0,10*	*0,30*	*0,50*	*0,80*	*0,70*	*0,10*	*0,10*	*0,70*	*0,10*	*0,10*
A4.3e Number of bodies involved	*0,80*	*0,80*	*0,60*	*1,00*	*0,60*	*1,00*	*1,00*	*0,10*	*1,00*	*1,00*	*1,00*	*0,80*	*0,60*	*0,80*	*0,80*	*1,00*	*0,10*
A4.3f Independence of body from incumbent	*0,20*	*2,00*	*2,00*	*0,60*	*0,60*	*2,00*	*2,00*	*0,20*	*0,20*	*0,60*	*2,00*	*2,00*	*0,60*	*2,00*	*0,60*	*2,00*	*0,20*
A4.3g Transparency of criteria	*2,00*	*1,40*	*1,20*	*1,40*	*2,00*	*0,20*	*2,00*	*0,20*	*1,40*	*2,00*	*2,00*	*0,20*	*0,20*	*2,00*	*0,20*	*2,00*	*0,20*
A4.3h Recognition of foreign vehicle approvals	*0,15*	*0,15*	*1,05*	*1,05*	*0,15*	*0,15*	*0,15*	*0,15*	*0,15*	*1,05*	*1,05*	*0,15*	*1,05*	*0,15*	*1,05*	*0,15*	*0,15*
A4.4 Recruitment of qualified personnel	0,21	0,21	0,56	0,21	0,07	0,07	0,70	0,07	0,21	0,07	0,70	0,21	0,21	0,70	0,70	0,21	0,21
A4.5 Standard procedure for train path allocation	1,70	1,70	1,70	1,39	0,17	0,17	1,39	0,17	1,70	0,17	1,70	0,44	0,17	1,39	1,39	1,70	0,17
A4.5a Existence of legally binding procedure for train path allocation	*4,00*	*4,00*	*4,00*	*4,00*	*0,40*	*0,40*	*4,00*	*0,40*	*4,00*	*0,40*	*4,00*	*2,00*	*0,40*	*4,00*	*4,00*	*4,00*	*0,40*
A4.5b Transparent criteria for train path allocation process	*6,00*	*6,00*	*6,00*	*4,20*	*0,60*	*0,60*	*4,20*	*0,60*	*6,00*	*0,60*	*6,00*	*0,60*	*0,60*	*4,20*	*4,20*	*6,00*	*0,60*
A4.6 Lead time for train path allocation	0,27	0,03	0,12	0,03	0,27	0,03	0,09	0,03	0,09	0,03	0,06	0,09	0,30	0,03	0,18	0,06	0,03

LIB Index
Overview Results by Country

Criterion	Belgium	Denmark	Germany	Finland	France	Greece	United Kingdom	Ireland	Italy	Luxembourg	Netherlands	Norway	Austria	Portugal	Sweden	Switzerland	Spain
Criterion	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
A4.7 Non-discriminatory train path allocation procedure	0,59	1,02	1,46	0,88	0,45	0,16	1,60	0,16	1,28	0,16	1,60	0,42	0,74	0,45	0,83	1,60	0,16
A4.7a Train path allocation process identical for all	*3,00*	*3,00*	*3,00*	*2,10*	*2,10*	*0,30*	*3,00*	*0,30*	*3,00*	*0,30*	*3,00*	*0,30*	*0,30*	*2,10*	*2,10*	*3,00*	*0,30*
A4.7b Non-discriminatory marketing for all train paths	*0,30*	*3,00*	*2,10*	*3,00*	*0,30*	*0,30*	*3,00*	*0,30*	*3,00*	*0,30*	*3,00*	*0,30*	*0,30*	*0,30*	*2,70*	*3,00*	*0,30*
A4.7c Transparent mechanism for conflicting requests	*0,40*	*0,40*	*4,00*	*0,40*	*0,40*	*0,40*	*4,00*	*0,40*	*2,00*	*0,40*	*4,00*	*2,00*	*4,00*	*0,40*	*0,40*	*4,00*	*0,40*
A4.8 Flexibility regarding ad hoc requests	0,30	0,50	0,50	0,05	0,05	0,05	0,30	0,05	0,45	0,05	0,50	0,50	0,30	0,05	0,50	0,50	0,05
A4.9 Priority scheduling arrangements for the incumbent	0,15	1,50	1,20	1,50	1,50	0,15	1,50	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	1,35	0,15
A5 Train Path Pricing System (TPPS)	**15,42**	**17,72**	**14,82**	**9,84**	**8,88**	**4,16**	**8,52**	**2,00**	**12,94**	**2,00**	**17,22**	**5,88**	**15,00**	**2,00**	**19,92**	**13,20**	**2,00**
A5.1 Existence and transparency of a TPPS	2,70	3,00	3,00	2,46	3,00	1,38	3,00	0,30	3,00	0,30	3,00	1,38	3,00	0,30	3,00	3,00	0,30
A5.1a Existence of a uniform facility and train path pricing system	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*0,40*	*4,00*	*0,40*	*4,00*	*4,00*	*4,00*	*0,40*	*4,00*	*4,00*	*0,40*
A5.1b Publication of facility and train path pricing system	*1,00*	*2,00*	*2,00*	*0,20*	*2,00*	*0,20*	*2,00*	*0,20*	*2,00*	*0,20*	*2,00*	*0,20*	*2,00*	*0,20*	*2,00*	*2,00*	*0,20*
A5.1c Pricing system binding upon all participants	*4,00*	*4,00*	*4,00*	*4,00*	*4,00*	*0,40*	*4,00*	*0,40*	*4,00*	*0,40*	*4,00*	*0,40*	*4,00*	*0,40*	*4,00*	*4,00*	*0,40*
A5.2 Share of unused but requested train paths [%]	0,50	0,45	0,40	0,05	0,15	0,05	0,05	0,05	0,40	0,05	0,05	0,05	0,35	0,05	0,50	0,40	0,05
A5.3 Structure of the TPPS	1,96	1,96	1,96	1,96	0,74	0,20	0,32	0,20	0,38	0,20	1,96	1,06	1,60	0,20	1,96	1,96	0,20
A5.3a Is the TPPS single or multiple tier	*5,00*	*5,00*	*5,00*	*5,00*	*0,50*	*0,50*	*0,50*	*0,50*	*0,50*	*0,50*	*5,00*	*0,50*	*5,00*	*0,50*	*5,00*	*5,00*	*0,50*
A5.3b Is the TPPS linear, degressive or progressive	*1,80*	*1,80*	*1,80*	*1,80*	*0,20*	*0,20*	*0,20*	*0,20*	*0,20*	*0,20*	*1,80*	*1,80*	*1,80*	*0,20*	*1,80*	*1,80*	*0,20*
A5.3c Discounts	*3,00*	*3,00*	*3,00*	*3,00*	*3,00*	*0,30*	*0,90*	*0,30*	*1,20*	*0,30*	*3,00*	*3,00*	*1,20*	*0,30*	*3,00*	*3,00*	*0,30*
A5.4 Average Train Path Price	2,45	2,45	1,75	0,35	0,35	0,35	0,79	0,35	2,19	0,35	3,50	0,35	2,45	0,35	3,50	1,14	0,35
A5.4a ...for freight transport	*3,00*	*3,00*	*2,50*	*0,50*	*0,50*	*0,50*	*1,00*	*0,50*	*3,50*	*0,50*	*5,00*	*0,50*	*3,00*	*0,50*	*5,00*	*1,00*	*0,50*
A5.4b ...for local passenger transport	*1,75*	*2,50*	*1,75*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*1,50*	*0,25*	*2,50*	*0,25*	*1,75*	*0,25*	*2,50*	*1,00*	*0,25*
A5.4c ...for long-distance passenger transport	*2,25*	*1,50*	*0,75*	*0,25*	*0,25*	*0,25*	*1,00*	*0,25*	*1,25*	*0,25*	*2,50*	*0,25*	*2,25*	*0,25*	*2,50*	*1,25*	*0,25*
A5.5 Charges for reserved but unused train paths	0,10	1,00	0,30	0,10	0,20	0,10	0,10	0,10	0,50	0,10	0,10	0,10	0,10	0,10	1,00	0,10	0,10
A6 Access to Service Facilities	**3,80**	**13,07**	**12,66**	**4,70**	**5,21**	**1,50**	**15,00**	**6,77**	**14,82**	**4,20**	**14,60**	**12,62**	**6,99**	**1,50**	**12,57**	**14,60**	**1,50**
A6.1 Minimum access package pursuant to Directive 2001/14 Annex II, point 1	0,25	2,50	2,50	0,25	0,25	0,25	2,50	0,25	2,50	0,25	2,50	2,50	0,25	0,25	1,50	2,50	0,25
A6.2 Service facilitites pursuant to Directive 2001/14 Annex II, point 2	0,15	1,50	1,50	0,15	0,15	0,15	1,50	0,15	1,50	0,15	1,50	0,90	0,15	0,15	1,50	1,50	0,15
A6.3 Additional services pursuant to Directive 2001/14 Annex II, point 3	0,10	1,00	1,00	0,10	0,10	0,10	1,00	0,10	1,00	0,10	1,00	1,00	0,10	0,10	0,80	1,00	0,10
A6.4 Ancillary services pursuant to Directive 2001/14 Annex II, point 4	0,05	0,50	0,50	0,05	0,05	0,05	0,50	0,05	0,50	0,05	0,50	0,35	0,05	0,05	0,35	0,50	0,05
A6.5 Passenger information at the station ensured for all RUs	0,15	0,75	1,20	0,75	1,50	0,15	1,50	1,50	1,50	0,15	1,50	1,20	1,50	0,15	1,50	1,50	0,15
A6.6 Equality in train number issue	0,07	0,70	0,07	0,07	0,70	0,07	0,70	0,70	0,70	0,07	0,70	0,70	0,70	0,07	0,70	0,70	0,07
A6.7 Information supply by infrastructure manager	1,73	1,73	1,37	1,73	0,69	0,20	2,00	1,73	1,88	2,00	2,00	1,73	1,88	0,20	1,73	1,73	0,20
A6.7a Supply of all relevant route information to RUs	*8,50*	*8,50*	*5,95*	*8,50*	*2,55*	*0,85*	*8,50*	*8,50*	*8,50*	*8,50*	*8,50*	*8,50*	*8,50*	*0,85*	*8,50*	*8,50*	*0,85*
A6.7b Indication of unused train path capacities	*0,15*	*0,15*	*0,90*	*0,15*	*0,90*	*0,15*	*1,50*	*0,15*	*0,90*	*1,50*	*1,50*	*0,15*	*0,90*	*0,15*	*0,15*	*0,15*	*0,15*
A6.8 Clarification body of incumbent	0,03	0,03	0,30	0,03	0,03	0,03	0,30	0,03	0,30	0,03	0,03	0,03	0,03	0,03	0,30	0,30	0,03
Result ACCESS Index :	**50,35**	**76,98**	**83,90**	**43,20**	**42,21**	**23,71**	**74,44**	**28,50**	**67,64**	**21,76**	**81,66**	**40,77**	**40,56**	**29,53**	**75,92**	**77,26**	**18,04**
C1 Market Development	**4,50**	**5,50**	**6,00**	**7,00**	**5,50**	**1,00**	**8,50**	**1,00**	**4,50**	**5,50**	**6,00**	**5,00**	**4,50**	**5,50**	**8,00**	**5,00**	**3,50**
C1 .1 Development of the modal split in freight transport (rail share)	1,00	2,50	1,50	3,50	2,00	0,50	3,50	0,50	2,50	0,50	3,50	0,50	3,00	5,00	3,00	1,50	2,00
C1.2 Development of the modal split in passenger transport (rail share)	3,50	3,00	4,50	3,50	3,50	0,50	5,00	0,50	2,00	5,00	2,50	4,50	1,50	0,50	5,00	3,50	1,50
C2 New RUs 2002	**8,70**	**25,80**	**19,50**	**3,00**	**3,00**	**3,00**	**15,30**	**3,00**	**6,90**	**3,00**	**17,40**	**3,00**	**13,20**	**8,70**	**14,40**	**19,50**	**3,00**
C2.1 Licensed RUs in relation to network length (multiplied by 10 000)	0,40	1,60	1,00	0,20	0,20	0,20	0,60	0,20	0,40	0,20	1,20	0,20	0,40	0,40	0,60	1,00	0,20
C2.2 Active RUs (excl. incumb.) in relation to network length (multiplied by 10 000)	1,00	4,00	2,50	0,50	0,50	0,50	1,50	0,50	1,00	0,50	2,50	0,50	1,00	1,00	1,50	2,50	0,50
C2.3 Active RUs (excl. incumb.) in relation to RUs with a valid licence (incl. incumbent)	1,50	3,00	3,00	0,30	0,30	0,30	3,00	0,30	0,90	0,30	2,10	0,30	3,00	1,50	2,70	3,00	0,30
C3 Accessible Market	**6,00**	**17,70**	**26,70**	**6,60**	**6,00**	**6,00**	**54,60**	**6,00**	**11,40**	**6,00**	**23,85**	**6,00**	**6,00**	**7,20**	**49,80**	**20,40**	**6,00**
C3.1 Market share of External RUs in 2000/2001	0,50	1,25	1,50	0,50	0,50	0,50	5,00	0,50	0,50	0,50	1,50	0,50	0,50	0,63	4,50	1,25	0,50
C3.1 a ...in freight transport	*0,50*	*1,50*	*1,50*	*0,50*	*0,50*	*0,50*	*5,00*	*0,50*	*0,50*	*0,50*	*1,00*	*0,50*	*0,50*	*0,50*	*4,50*	*2,00*	*0,50*
C3.1b ...in long-distance passenger transport	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*2,50*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*2,25*	*0,25*	*0,25*
C3.1c ...in local passenger transport	*0,25*	*0,75*	*1,25*	*0,25*	*0,25*	*0,25*	*2,50*	*0,25*	*0,25*	*0,25*	*1,75*	*0,25*	*0,25*	*0,50*	*2,25*	*0,25*	*0,25*
C3.2 Average market share growth of External RUs from 1997 to 2001 in percent	0,30	0,45	1,35	0,30	0,30	0,30	3,00	0,30	0,30	0,30	1,28	0,30	0,30	0,38	2,40	1,05	0,30
C3.2a ...in freight transport	*0,50*	*1,00*	*2,00*	*0,50*	*0,50*	*0,50*	*5,00*	*0,50*	*0,50*	*0,50*	*1,50*	*0,50*	*0,50*	*0,50*	*5,00*	*3,00*	*0,50*
C3.2b ...in long-distance passenger transport	*0,25*	*0,25*	*0,50*	*0,25*	*0,25*	*0,25*	*2,50*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*1,50*	*0,25*	*0,25*
C3.2c ...in local passenger transport	*0,25*	*0,25*	*2,00*	*0,25*	*0,25*	*0,25*	*2,50*	*0,25*	*0,25*	*0,25*	*2,50*	*0,25*	*0,25*	*0,50*	*1,50*	*0,25*	*0,25*
C3.3 Share of accessible market in 2002	0,20	1,25	1,60	0,30	0,20	0,20	1,10	0,20	1,10	0,20	1,20	0,20	0,20	0,20	1,40	1,10	0,20
C3.3a ...in freight transport	*0,50*	*5,00*	*5,00*	*1,00*	*0,50*	*0,50*	*0,50*	*5,00*	*0,50*	*5,00*	*0,50*	*5,00*	*0,50*	*0,50*	*0,50*	*5,00*	*5,00*	*0,50*
C3.3b ...in long-distance passenger transport	*0,25*	*1,00*	*2,50*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*1,00*	*0,25*	*0,25*
C3.3c ...in local passenger transport	*0,25*	*0,25*	*0,50*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,25*	*0,75*	*0,25*	*0,25*	*0,25*	*1,00*	*0,25*	*0,25*
Result COM Index :	**19,20**	**49,00**	**52,20**	**16,60**	**14,50**	**10,00**	**78,40**	**10,00**	**22,80**	**14,50**	**47,25**	**14,00**	**23,70**	**21,40**	**72,20**	**44,90**	**12,50**

Rail Liberalisation Index 2002
Overview Index

	LEX Index		ACCESS Index		COM Index		LIB Index
Weighting	2,5		5		2,5		
	Result	Weighted	Result	Weighted	Result	Weighted	Result
Spain	29,90	**74,75**	18,04	**90,18**	12,50	**31,25**	**196,18**
Greece	25,10	**62,75**	23,71	**118,53**	10,00	**25,00**	**206,28**
Luxembourg	51,40	**128,50**	21,76	**108,79**	14,50	**36,25**	**273,54**
Ireland	51,14	**127,85**	28,50	**142,48**	10,00	**25,00**	**295,33**
France	35,80	**89,50**	42,21	**211,07**	14,50	**36,25**	**336,82**
Portugal	71,08	**177,70**	29,53	**147,63**	21,40	**53,50**	**378,83**
Norway	57,68	**144,20**	40,77	**203,84**	14,00	**35,00**	**383,04**
Belgium	37,30	**93,25**	50,35	**251,73**	19,20	**48,00**	**392,98**
Finland	62,00	**155,00**	43,20	**216,01**	16,60	**41,50**	**412,51**
Austria	68,19	**170,48**	40,56	**202,82**	23,70	**59,25**	**432,54**
Italy	64,85	**162,13**	67,64	**338,22**	22,80	**57,00**	**557,34**
Switzerland	59,93	**149,83**	77,26	**386,28**	44,90	**112,25**	**648,35**
Denmark	84,43	**211,08**	76,98	**384,89**	49,00	**122,50**	**718,46**
Netherlands	77,54	**193,84**	81,66	**408,32**	47,25	**118,13**	**720,29**
Germany	83,36	**208,40**	83,90	**419,52**	52,20	**130,50**	**758,42**
Sweden	79,94	**199,84**	75,92	**379,62**	72,20	**180,50**	**759,96**
United Kingdom	95,99	**239,98**	74,44	**372,19**	78,40	**196,00**	**808,17**

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