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Railway (De-)regulation in EU Member States and the Future of European Rail

Jan Scherp*

Introduction

For around 30 years railway transport has been in relative decline in comparison to other modes. This is particularly well illustrated by the development of rail freight. The European freight transport sector enjoyed vigorous growth in the last decade. The traffic performance rose by roughly 2.5 percent per annum outstripping growth in GDP by approximately 0.5 percentage points and thereby underlining the very high freight transport intensity of economic growth. However, the rail freight sector was unable to take part in this strong growth. Its share in the five transport modes (in the European Union of 15 member states before the last enlargement) fell from 21 percent in 1970 to about 8 percent in 2002. For passenger transport the trend was similar: rail's modal share dropped from 10.5 percent to around 6 percent over the same period.

Traditionally integrated, public monopoly companies provided rail transport services in Europe after the Second World War. Within this framework, the railway sector was unable to respond adequately to challenges such as the globalisation of transport logistics, the shift away from heavy industry towards a service and retail economy, in addition to the increase in car ownership and road building. Rail proved to be unable to take up the challenge of competing with other transport modes that had opened up to competition and became more flexible in adapting to a changing demand pattern. The need to reform the railway sector had grown as a result of the increasing financial problems of railway firms. Rail suffered additionally through the particularly strong public influence on railway management. It had to deal with many conflicting public interests (transport policy, labour policy and regional development) with few incentives for managers to meet market requirements.

At the end of the 1980s and in the 1990s some member states of the European Union started to restructure the railway sector and to reform the regulatory framework in order to open up rail markets. At the European Community level, the White Paper in 1996 on rail transport (European Commission 1996) laid down the strategic principles aimed at revitalising the railway sector in order to increase its competitiveness and attractiveness with customers. Ideally, the railway sector must be able to participate in transport growth by allowing railway firms to act as commercial entities at a European level. The Community Transport White Paper of 2001 (European Commission 2001) confirmed this approach and defined a political target of maintaining the 1998 rail modal share by the year 2010. In order to reach this target the Community rail policy aims at:

- Ensuring non-discriminatory market access and transparent market structures,
- Providing incentives for an efficient infrastructure use,
- Contributing to a sustainable financial restructuring of railway undertakings and infrastructure managers,
- Triggering a positive rail market development.

After the White Paper of 1996 the European Commission has launched, from the late 1990s onwards, legislative initiatives to integrate the rail service markets and aimed at developing a common European railway area. Key elements of this initiative are a gradual market opening of rail freight and international rail passenger services, promoting the interoperability of the various national systems through the gradual implementation of common technical specifications of interoperability including European technologies such as a common European Rail Transport Management System and train control system (ERTMS/ ETCS), and establishing a common approach to European rail safety.

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In the following sections this paper will briefly describe the European Community's approach to (de-) regulation of the railway sector. It will also highlight recent rail market developments which have been triggered by the regulatory changes and review the key European Community's regulatory provisions for the rail sector in the light of these developments and policy objectives. The paper finishes with addressing the future challenges that the European railway sector must face in order to successfully revitalise the European railway sector.

The European Community's approach to regulatory reform in order to revitalise the railway sector

A cornerstone of regulatory reform in the European Union is the opening and integration of the formerly closed monopoly railway markets. In freight transport, an open access approach was selected which enabled competition "on the tracks". In passenger transport the approach proposed by the European Commission was effectively two-pronged: open access for international services and regulated competition, for instance, for urban services through the tendering of franchises or public service contracts ("competition for the tracks"). Rail operations on the European infrastructure are a mix of passenger and freight traffic. In order to facilitate the creation of effective network opening and competition, the fragmented and multiple nationally integrated rail systems required infrastructure management to be separated from transport service provision. As a minimum, this separation must be done for the essential functions so as to ensure non-discriminatory network access such as capacity allocation and setting of track access charges. This fundamental choice should be kept in mind when compared to the North American or the Japanese approach. The North American rail system is predominantly freight oriented with very little passenger operations. A small number of integrated rail freight operators provide national services on often parallel, competing infrastructure and negotiate network access between each other, if required. In Japan, the majority of rail traffic is passenger transport provided by integrated regional monopoly operators.

In the European Union, the first milestones to be achieved to fully open and integrate the rail markets were the rail interoperability and rail infrastructure package directives of 2001. The three directives of the infrastructure package ("the first railway package"), 2001/ 12/EC (on the development of European railways amending Directive 91/440/EEC), 2001/13/EC (on railway licensing amending Directive 95/18/EC) and 2001/14/EC (on capacity allocation, railway infrastructure charging and safety certification), defined the access rights to use rail infrastructure for international freight services, the various conditions railway firms must fulfil to be able to benefit from the access rights, the independence of functions essential for ensuring non-discriminatory access and the possibilities of appeal that the market actors should have. The directive on interoperability of conventional rail systems (Directive 2001/16/EC) describes, similarly to the high-speed rail directive (Directive 96/48/EC), a process of technical harmonisation of the railway based on Technical Specifications for Interoperability.

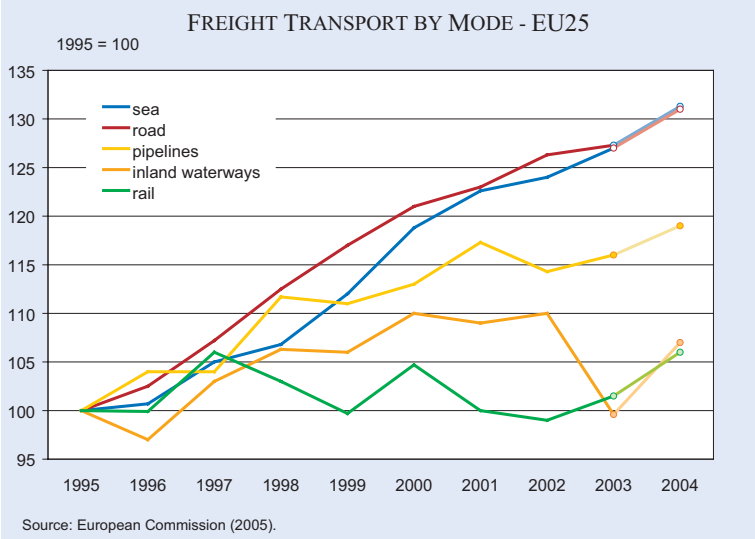
The regulatory reform continued through the adoption of a second legislative railway package in April 2004. The second package provided for full open access for all kinds of rail freight services, a common approach to European rail safety, extending the scope of the interoperability directives and the setting up of a European Railway Agency in Valenciennes (France). The ERA will drive forward the technical implementation of the EU safety and interoperability approach. In March 2004, the European Commission made proposals for the market opening of international rail passenger services, enhancing rail passenger rights and completing the interoperability legislation by extending it to a common licensing regime for train crews.

Recent rail market developments – can the policy targets be met?

It is certainly too early to draw any firm conclusions on the precise effects of the regulatory changes triggered by the EU rail directives of 2001, as most member states did not transpose them into national legislation until 2003 or later. However, some member states had already started to open up their rail markets in the early 1990s and thus some preliminary trends at least for rail freight can be identified.

The traffic performance of EU rail passenger transport has hardly changed in absolute terms between 2000 and 2003 in the enlarged European Union of 25 member states. The traffic performance remained around 345 billion passenger km per year. In the old member states (EU15) the share of high-speed rail passenger services rose from 19.4 percent (2000) to 23.1 percent in 2003. Whereas in 2004 the passenger transport in the EU15 rose by 0.5 percent, in the new

Figure 1



Source: European Commission (2005).

member states it dropped by ca. 7 percent reflecting the increasing importance of car driving in these rapidly developing economies. The traffic performance is best in countries where competition is the most developed such as the UK and Sweden, as well as France due to their development of high-speed services.

In rail freight transport the sought after modal shift has not yet been achieved. Figure 1 shows that the market has remained essentially flat since the mid-1990s. Traffic performance picked up recently, however. Between 2003 and 2004 it rose by 5.8 percent in the old member states (EU15) and by 4.4 percent in the enlarged Union (EU25).

Employment in railway firms in the EU15 dropped from ca. 1.3 million in 1990 to ca. 770,000 in 2000 due to declining market shares and restructuring of the railway sector. This included the subcontracting and outsourcing of certain rail related activities such as maintenance. In the enlarged EU25 the current employment level amounts to around 1.1 million of which roughly 65,000 are employed in new entrant and private railway undertakings (estimation based on European Foundation 2005). The pace of employment reduction has slowed down considerably in the last two to three years. Job losses in the incumbent railway firms have partly been compensated for by the creation of new jobs in new railway businesses.

Rail freight transport is increasingly becoming a European business. Currently, some 50 percent of rail freight services in the EU are international (imports, exports or transit). The share of international services varies greatly between smaller countries, where it is higher, and bigger member states, where it is lower due to the relatively higher importance of the domestic freight market. On some major European rail corridors such as the one between Rotterdam and Genoa, traffic performance has increased in recent years from around 5 percent to 10 percent (CER 2005). This growth has been realised mainly due to block train/shuttle train activities where the new entry of railway firms has so far been the strongest.

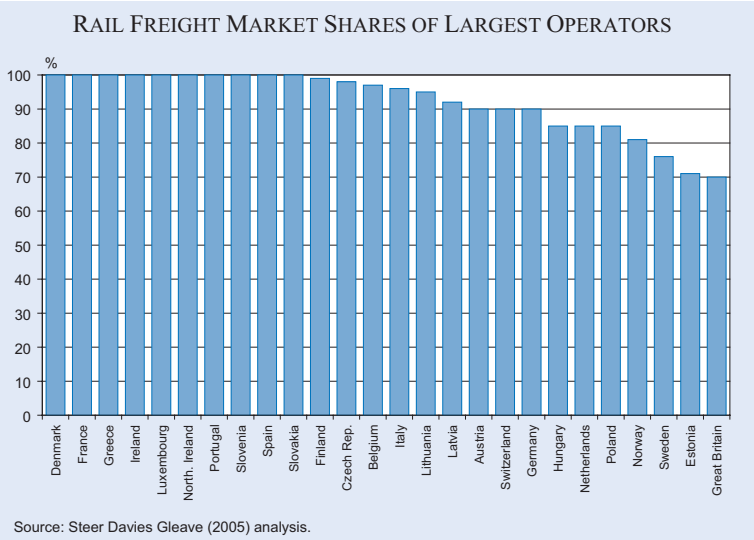
Rail freight price is strongly influenced by the prices used in related competing markets, such as road haulage. The evidence on price trends based on national data is not conclusive, although some anecdotal evidence points to a price-reducing effect on more open markets. In 2004, prices fell in Germany by ca. 9 percent and on the Rotterdam-Genoa corridor by 15 to 20 percent over the last three years. On more closed markets prices appear to have increased, for example, by an average of just over 2 percent annually in Belgium and in France by 8.5 and 18 percent in 2003 and 2004, respectively, compared with typical past increases of only 2-4 percent (Steer Davies Gleave 2005).

The opening of rail freight markets, based either on Community legislation or national initiatives, has resulted in increased market entry in recent years, although at a very modest scale. In 2003, new entrants had an estimated market share of around 3 to 4 percent in terms of turnover in the Community of 25.[1] Market entry was particularly strong in Germany, Sweden, the UK, the Netherlands, Italy, Poland and the Czech Republic. Many new entrants are small and operate in only one member state. An analysis of national markets shows that there remains a clearly dominant operator on every network (see Figure 2).

Since market opening a certain trend towards market concentration through mergers and acquisitions can be observed. Some rail freight operators have developed a European business strategy and positioned themselves in several national markets, for example the Railion group (in Germany, Netherlands, Den-

[1] Personal communication of the Secretary General of the European Rail Freight Association (ERFA) as representative of the interests of the new entry rail freight railway undertakings.

Figure 2



Source: Steer Davies Gleave (2005) analysis.

mark and Italy), Trenitalia in Italy and Germany (through acquiring a majority share in the private German company TX Logistik) and the Swiss SBB Cargo by setting up subsidiaries in Germany and Italy. Should the recent trend of historical operators entering into competition with each other be confirmed then this would have a significant impact on the level of competition on the European rail freight market. For instance, since December 2003, Railion and its Swiss partner BLS Cargo compete with SBB Cargo and its subsidiaries on the North-South corridor through Switzerland.

By entering into new alliances, new entrants are now in a position to provide competitive international services and to compete with national incumbents for such services. The "European Bulls" alliance set up by five new entrants in January 2005 is one example for this new trend. Faced with the high market share and relatively strong capital base of the national incumbents, new entrants often fight an uphill battle to establish a significant position on the market. They clearly require favourable market regulation and transparent, non-discriminatory framework conditions to succeed.

Reviewing the regulatory framework

The directives of the first railway package, which form the basic regulatory framework for rail transport in the Community, have been in place in most EU member states for more than two years. However, how the national regulatory framework functions and the administrative efficiency in implementing it vary from country to country. A key question of European regulation is whether the framework put into place is helping to achieve the desired political objectives. The following section will review the four key provisions of the Community legal framework in more detail: transparency as well as the independence of essential infrastructure management functions for non-discriminatory access (e.g. capacity allocation, setting of track access charges) for transport provision, access to rail service facilities, rail infrastructure charging, and the functioning of the regulatory body.

Separation of infrastructure management from rail service provision vs. integration

The directives of the rail infrastructure package contain a number of provisions requiring increased transparency on how rail activities are carried out and on their funding. This is in order to ensure a non-discriminatory market access for all railway firms and thus an effective market opening. Basically, three levels of separation are required:

- Accounting separation between infrastructure management and rail transport provision,
- Separation of accounts between rail passengers and rail freight activities disallowing any transfer of public compensation payments for public passenger services to freight transport activities,
- Independence of essential functions (e.g. infrastructure charging, capacity allocation, licensing and safety certification) from rail service operations.

Accounting separation between infrastructure management and rail transport provision, which was due already under Directive 91/440/EEC, has been implemented in almost all member states. Accounting separation between freight and passenger transport activities is gradually being introduced, although some member states need to make further progress. In order to ensure the independence of essential functions such as track access charging and train path allocation member states have put different institutional structures in place. Basically, there are three major variants: institutionally fully independent infrastructure managers, such as in the UK, Sweden and the Netherlands; independent infrastructure managers or allocation bodies that rely to a certain extent on the

expertise and staff of the historical railway firms such as in France, and legally and organisationally independent infrastructure mangers that are part of a railway holding structure, as in Germany, Poland, Italy and Belgium. There has been an intensive academic and political debate on the merits and disadvantages of separation. The outcome is still inconclusive in the absence of reliable, empirical evidence in the European context. However, it is clear that some minimum requirements must be fulfilled by infrastructure managers in order to ensure non-discriminatory network access.

Bodies or firms that are in charge of train path allocation and rail infrastructure charging must ensure that their institutional and procedural arrangements are inherently capable of guaranteeing the required independence. Criteria such as not having common board members with any railway firm, not having offices in the same building, being statutorily or contractually independent from holding companies or railway firms have to be fulfilled. Additionally, the arrangements must prove in practice that they assure the required independence, e.g. through the absence of substantiated complaints. If the results of this ongoing assessment are not satisfactory, legislative initiatives need to be considered for ensuring full independence, for instance, through institutional separation.

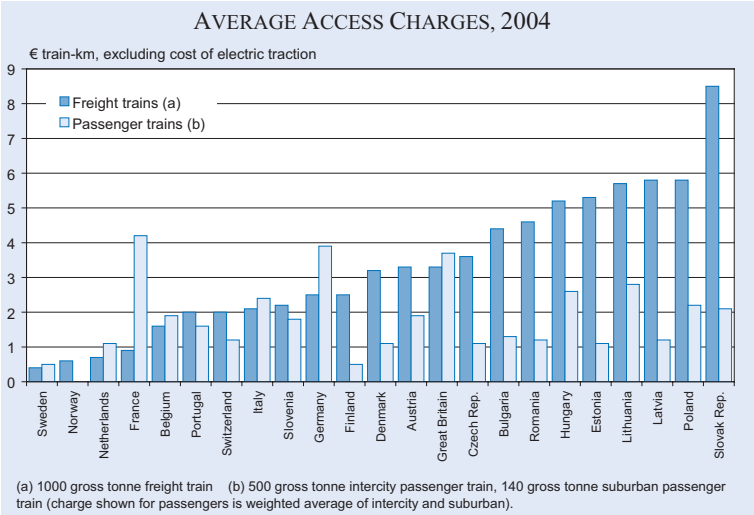
Non-discriminatory access to and charges for rail related services

Railway firms will not be able to make use of railway infrastructure unless they also have access to appropriately priced rail-related service facilities, such as terminals, maintenance workshops, shunting yards, refuelling points and driver training. There have been complaints by new entrants about the difficulties of obtaining access to such facilities. New entrants sometimes face incumbents who are effectively able to deny access to the facilities. This is because the national incumbent either retains strong ties to the infrastructure manager due to their historical relationship, or controls access to terminals by means of management or ownership. As to the charging framework for such rail-related services it is often unclear what is being charged for and whether the charges are fair and accurately reflect the costs incurred. In some countries the charges are not defined and are thus not transparent in particular for new entrants. Envisaged for 2006 is a Community-wide, thorough investigation of the access situation and charges for the use of rail-related services as well as the future capacities of service facilities with a view to proposing measures to lower these market entry barriers and to ensure dynamic development of rail services.

Charging for the efficient use of infrastructure

The right structure and level of rail infrastructure charges is a key to incentivising railway firms and infrastructure managers to efficiently use the rail network. The track access charge also contributes to the financing of the maintenance and development of the infrastructure. The EU Directive 2001/14/EC defines as a basic principle that the track access charge should be set at the cost that is directly incurred as a result of operating the train service. It also allows for adding other cost elements such as mark-ups which reflect the fixed cost elements of operating the network or reservation charges ensuring that operators use the paths they have requested. The general charging principles have been implemented very differently by member states leading to greatly varying structures and levels of charges as well as cost recovery rates across the Community (see Figures 3 and 4). This situation can lead to confusing or even conflicting incentives for international rail transport.

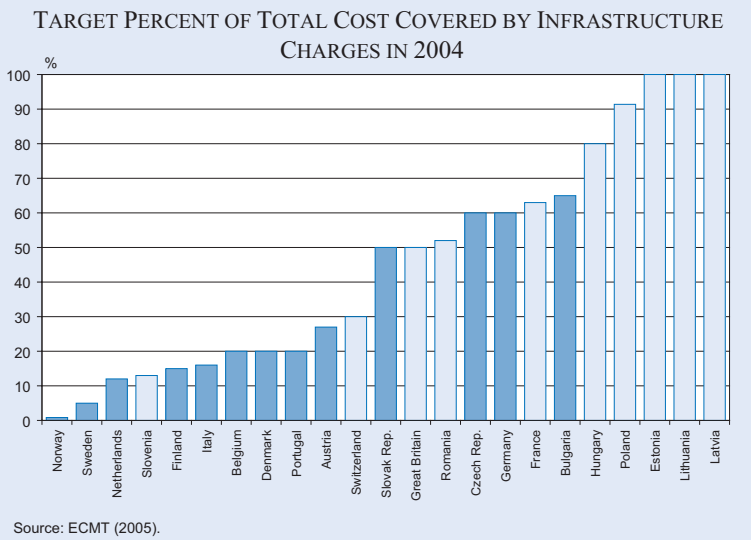
Figure 3



Baltic freight trains are much larger than elsewhere. Baltic access charges are not directly comparable with those in other countries and have been adjusted here. In Estonia, for example, a typical 3 145 tonne train is charged € 11 per train-km.

Source: ECMT (2005).

Figure 4



Source: ECMT (2005).

High levels of cost recovery gained as a result of the access charge can reduce the competitiveness in particular of rail freight traffic relative to other modes of transport. To avoid undesirable modal shift effects infrastructure managers should ensure that track access charges on major European corridors are set at levels that are consistent with the charges to be paid for alternative infrastructure, such as roads. Furthermore, if the infrastructure manager is entitled to recover all costs through access charges, there may be a reduced incentive to improve operational efficiency. It may be better to have a lower cost recovery objective focused only on the recovery of variable costs, which incentivises the infrastructure manager to control operating costs. This could be combined with a well-defined service contract to maintain and renew the network to a certain level of quality with key targets for efficiency and performance improvements. Designing such infrastructure service contracts is a delicate task. Whilst incentivising infrastructure managers to operate efficiently they should also ensure their financial stability by ensuring predictable direct financial support from the State or other sources.

Performance regimes effectively incentivising infrastructure managers and railway firms to avoid disruptions of the network (e.g. through applying a financial bonus-malus scheme) have been introduced only in a few member states such as the UK and Denmark. In view of ensuring efficient use of the rail infrastructure, including that for international services, member states should introduce incentivising performance regimes in line with implementation guidelines at the European level. This could be further developed by RailNetEurope, the Vienna based technical co-operation platform of rail infrastructure managers.

Effective regulation for enhanced competition

The regulatory body, to be set up according to Art 30 of Directive 2001/14/EC, has a key role in ensuring non-discriminatory access to rail infrastructure and service facilities as well as overseeing the development of competition on the rail service market. In some member states, the rail regulator is fully operational whereas in a few others it has not yet been set up or it is not yet completely operational. The existence of credible regulatory bodies which have the appropriate administrative capacity to act as an appeal body is necessary in order to actively promote market entry. Stakeholders often claim that the regulatory body should be fully independent, not only of infrastructure managers and railway firms but also of the State. Currently, in many cases the regulatory body either reports to a public authority or its functions are executed by a ministerial service. As the national rail operator and the infrastructure manager are generally owned by the State there may be a potential conflict of interest. Hence the merits of complete independence of the regulatory body from the State should be seriously evaluated.

Concluding remarks and outlook into the future

Although some railway firms have been successfully restructured through the establishment of commercially oriented rail services providers, the objective of market integration has not yet been fully achieved. In some member states significant market entry has occurred leading to a certain degree of competition on domestic rail transport markets and on a few European rail corridors such as the north-south corridors across the Alps. The targeted increases of rail traffic performance have not yet been reached, although a certain upward trend has been realised in rail freight from 2003 to 2004 and, in particular, in countries with open rail freight markets. In order to more effectively integrate the rail market and facilitate competition in the future, further efforts including regulatory initiatives in this area are required. More effective promotion of market entry requires independent management of infrastructure and service facilities, coherent and efficient price signals for

using this infrastructure as well as powerful and independent regulatory bodies.

Furthermore, in order to ensure a prosperous future for the railway sector, railway business must become simpler and less costly. For instance, lengthy and costly procedures to obtain a railway licence and a safety certificate are entry barriers that must be lifted in the future. Mutual recognition of testing routines for rolling stock is still problematic and non-transparent and diverging insurance requirements as well as the absence of a truly common European rail insurance market render the preparation of international freight services a difficult task. The gradual implementation of the safety directive and the growing role of the European Railway Agency (ERA) set up in 2005 are expected to help overcome some of these problems in the coming years. The ERA will act as a future network integrator through facilitating mutual exchange between the competent national authorities and enhancing an EU wide build-up of expertise in the field of interoperability and safety.

Likewise, more co-ordination is needed for the future development of an integrated European rail infrastructure that meets the needs of the market. The loosening of the formerly close relationship between rail services provision and infrastructure management requires the putting into place of appropriate mechanisms to co-ordinate the investment plans for infrastructure development with the future development of rail transport services, as expected by the various railway firms operating on the network. EU-wide co-ordination also needs suitable priority allocation rules applied coherently along European corridors in case of network saturation.

Currently, railway firms planning to provide seamless cross-border services are still obliged to use expensive multi-system locomotives to cater, for instance, for the various national train protection and traction energy systems. The technical market integration based on the implementation of the Technical Specifications for Interoperability (TSI) is likely to take many more years. The long investment cycles in the railway sector tend to delay the convergence of the national technical systems in view of establishing full interoperability. It is therefore important to start to invest in interoperable technologies when the old national systems have reached the end of their lifetime or where payback periods are sufficiently short to justify the investment. Typical examples are train traffic management and control systems in particular in new member states of the Community, and electronic data exchange systems, for instance, to enable cross-border tracking and tracing, and fleet management applications. The co-ordinated deployment of the European Rail Traffic Management System ERTMS/ETCS and the setting up of a European platform for electronic data exchange based on common, European specifications are challenges of the immediate future. The coherent implementation of such systems requires close co-operation between railway firms, infrastructure managers and public authorities.

The future economic and financial viability of the railway sector in particular in the new member states of the European Union is a major challenge. Although the financial restructuring of many historical railway firms in the old member states in the mid-1990s led to a reduction of their debt from € 130 billion to € 100 billion (NERA 2003), the growing shortage of public funds for the development and maintenance of the rail infrastructure constitutes a potential threat for the future development of the railway systems. These problems are particularly severe in many new member states. The finances of the railway systems are often completely out of balance, resulting in a vicious circle of insufficient investment and maintenance of the infrastructure leading to substandard transport services, falling demand for services, rising request for public support for socially desirable transport services and lower amounts of public funds available for infrastructure expenditure, etc. Hard choices need to be made in terms of defining a sustainable network size, and the solutions for its funding need to be found in order to put the railway systems on a sound financial footing.

The European Community intends to continue its support of the development of rail infrastructure and modernisation of rolling stock through its various funding mechanisms, such as the Trans-European Network (TEN), structural and cohesion funds. For the financial period 2007–13 the European Commission proposed that a four-fold increase of the budgetary means up to € 20 billion be made available for the TEN-Transport development.

The assessment of the European railway sector shows that there can be a prosperous future if the major challenges can be taken up successfully. These challenges are ensuring open and competitive rail service markets, bringing down market entry barriers and systems costs, making swift progress towards

a European network integration and successful delivery of a sustainable financial restructuring.

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