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**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE  
EUROPEAN PARLIAMENT**

**on monitoring development of the rail market**

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# COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT

## on monitoring development of the rail market

### I. INTRODUCTION

1. In recent years railways in the European Union have undergone significant changes, triggered to a large extent by initiatives undertaken at European level. Starting in 2001, three packages of measures have been adopted with the aim of progressively opening up the rail market and increasing technical and operational harmonisation in the fields of rail interoperability and safety in order to create a European Railway Area (see Annex 1<sup>1</sup>).
2. A detailed description of the regulatory and institutional framework established by the first of these packages, along with an analysis of its impact on the rail transport market, were provided in the May 2006 report from the Commission<sup>2</sup>. This further review of development of the rail market builds on the findings of that report.
3. Continuous monitoring of the rail market is needed in order to assess the influence which the whole range of European policy measures are exerting on the rail market and to help to design new policy measures responding to the current and future needs of the rail sector.
4. In 2001 the Community rail legislation<sup>3</sup> already required the European Commission to monitor the technical and economic conditions on the rail transport market in the EU. It also imposed a duty on the Commission to report to the European Parliament and the Council on, amongst other things, development of the internal market in rail services, the framework conditions, the state of the infrastructure and use of access rights.
5. Finally, the need to monitor the rail market in the form of a *scoreboard* of the most relevant indicators on the internal market for rail transport services, in particular on its progressive opening-up to national and international competition, was reaffirmed in the 2006 Mid-Term Review of the Transport White Paper<sup>4</sup>.
6. This Communication on monitoring development of the rail market responds to this need. It provides a first statistical analysis of development of the rail market and lays the foundation for regular reporting.

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<sup>1</sup> This Communication on monitoring development of the rail market is accompanied by a Commission Staff Working Paper containing 23 annexes.

<sup>2</sup> COM(2006) 189 final, 3 May 2006.

<sup>3</sup> Section Va of Directive 2001/12/EC.

<sup>4</sup> COM(2006) 314 final, 22 June 2006.

## II. RAIL MARKET MONITORING SCHEME

7. To meet the monitoring requirements, in 2001 the Commission set up a Rail Market Monitoring Scheme (RMMS) consisting of publishing information on different aspects of the railway markets on the website<sup>5</sup> of the Directorate-General for Energy and Transport. This information is regularly updated and extended in order to encompass an even broader range of market development indicators.
8. The Commission is assisted in its monitoring tasks by a Working Group made up of experts from the national ministries and the rail industry. Between 2001 and 2007 eighteen meetings of the RMMS Working Group were held.
9. This review is based on the analysis submitted by the members of the RMMS Working Group, statistical sources available to the European Commission, recent studies<sup>6</sup> and the report on implementation of the first railway package (see above).
10. It focuses in particular on:
  - the regulatory and institutional framework created with a view to liberalising the rail market and strengthening the position of railways as a safe and environmentally friendly mode of transport;
  - development of the rail market in terms of freight and passenger transport performance, intermodal comparison and market-opening indicators;
  - the financial performance of the sector, including information on the capacity, state of play and utilisation rate of rail infrastructure and on development of the supply industry.
11. It has to be recognised that, for lack of quantitative data, this review of the market conditions cannot cover certain specific aspects of rail markets, such as the asset base of railway undertakings (rolling stock) or soft factors such as staff training.

## III. IMPLEMENTATION OF THE LEGAL AND INSTITUTIONAL FRAMEWORK

12. All the Member States with rail networks have formally implemented the Directives in the first railway package (see Annexes 2a and 2c). However, delays in transposition forced the Commission to open 56 infringement procedures, 12 of which resulted in court rulings (see Annex 3a). The national implementing measures for certain key provisions of the package are currently being examined<sup>7</sup>.
13. As some Member States have only partly transposed the second railway package in their national law (see Annexes 2b and 2c), the Commission started a further 55 infringement procedures, 18 of which ended with referral to the Court. Five of these

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<sup>5</sup> [http://ec.europa.eu/transport/rail/market/index\\_en.htm](http://ec.europa.eu/transport/rail/market/index_en.htm).

<sup>6</sup> The studies can be found on the following website:

[http://ec.europa.eu/transport/rail/studies/index\\_en.htm](http://ec.europa.eu/transport/rail/studies/index_en.htm).

<sup>7</sup> This exercise will lay the foundations for, among other things, the recasting of the Directives in the first railway package which is planned in 2008.

cases have already been withdrawn due to the final notification of the implementation measures, but the other 13 are still pending (see Annex 3b).

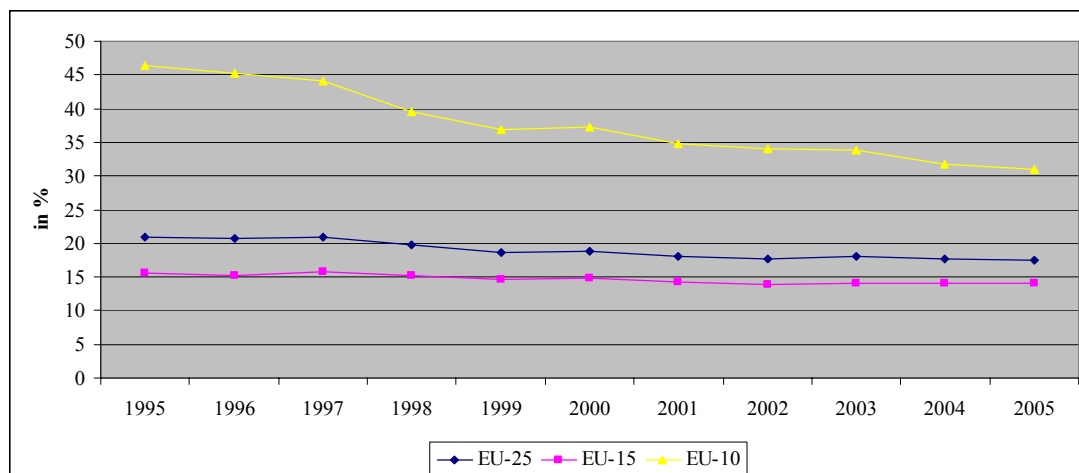
14. All the institutions required by the first and second railway packages have already been established in the Member States. They include national companies and bodies in charge of capacity allocation, entities responsible for issuing licenses, regulatory bodies, national safety authorities, investigation bodies and notified bodies (see Annexes 4, 5, 6 and 7).
15. It has to be said that, in the case of regulatory bodies, the data on the number of staff dealing with regulatory issues and the number of complaints handled in 2005 cast some doubt over their administrative capacity.
16. An in-depth analysis of transposition of the legislation on rail interoperability and safety is being carried out. According to its initial findings, implementation of the Safety and Interoperability Directives appears incomplete in some countries which have already formally transposed them. Moreover, delays in transposition of the second railway package are resulting in lack of legal certainty for players on the rail market. Even though the institutions required by this package have already been established in the countries concerned, the lack of a legal base for their activities appears to constitute a serious obstacle to proper functioning of the rail market.

#### **IV. PERFORMANCE OF THE EU RAIL TRANSPORT MARKET**

##### **IV.1. Position of rail transport in comparison with other modes**

17. Since 1970 rail has seen a steady decline in its share of the freight transport market, from 20% in 1970 (EU-15) to 8% in 2003 (EU-15) and 10% for EU-25 in 2005 (based on tonne-kilometres). Over the last decade this downward trend has slowed down, with just a 2% decrease in rail's market share between 1995 and 2005 (see Annex 8a).
18. Out of all modes of inland transport, rail took 17.4% of the EU freight market in 2005, with the figure in the "new" Member States more than twice as high as in EU-15 (30.9% v. 14%) (see Figure 1 and Annex 8c).

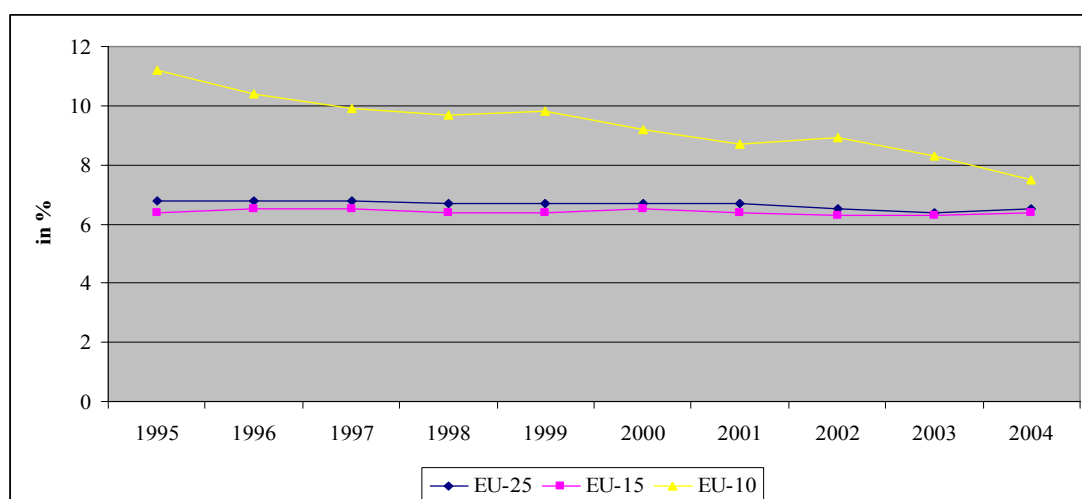
Figure 1: Share of rail in the inland freight transport markets in EU-25, EU-15 and EU-10 (1995-2005)



Source: Eurostat, UIC, EU Energy and Transport in Figures Statistical Pocketbook 2006, DG TREN estimates and national statistics

19. Likewise, in the case of passenger transport a decline has been observed over the last three decades, though less dramatic than for freight. Rail's share of the total passenger transport market decreased from 10.2% in 1970 to 6.3% in 2003 for EU-15 (in terms of passenger-kilometres). For EU-25 it stood at 5.8% in 2004 (see Annex 8b).
20. Taking into account only land transport modes, in 2004 passenger transport by rail accounted for 6.5% of the EU market. In EU-15 rail's market share has held steady at over 6% for the last decade. By contrast, in EU-10 it has fallen sharply, from 11.2% in 1995 to 7.5% in 2004 (see Figure 2 and Annex 8d).

Figure 2: Share of rail in land passenger transport markets in EU-25, EU-15 and EU-10 (1995-2004)



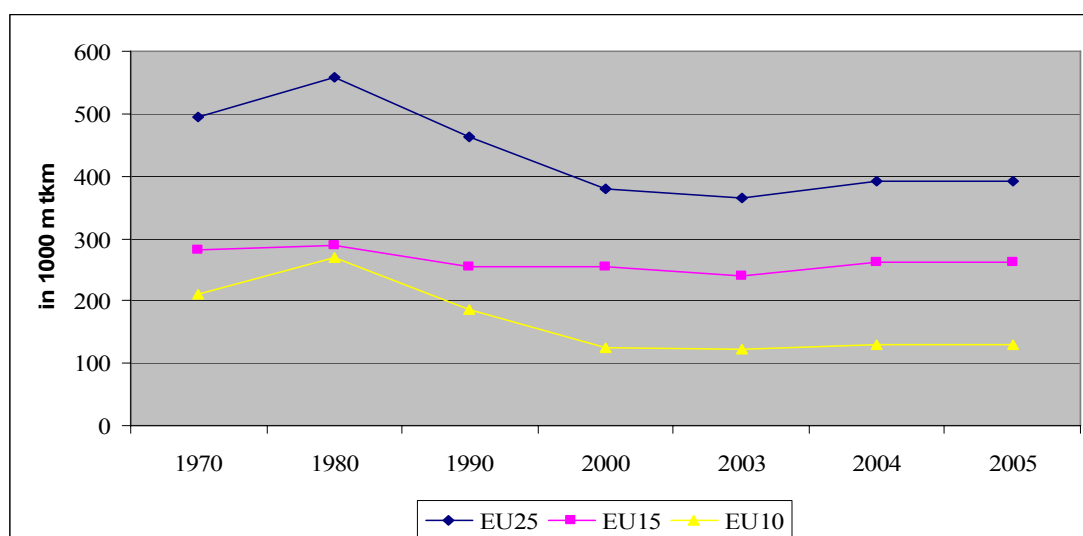
Source: Eurostat, UIC, DG TREN estimates and national statistics

21. The analyses of the relative share of rail freight in the transport market disregard the fact that rail cannot, by nature, provide short-distance door-to-door services. Consequently, current methods of assessing the contribution of different modes to provision of transport services show only part of the picture as regards the market share of rail transport. Commission staff are examining the feasibility of gathering data on the performance of various modes by distance class.
22. A pilot study on rail freight performance by distance conducted in 2006 by the Community of European Railways (CER) and the International Union of Railways (UIC) on a group of railway undertakings holding 20% of the rail freight market showed that the market share of rail compared with road is significantly higher for longer distances (> 150 km = 22%, > 300/325 km = 26% and > 500 km = 30% compared with 19% of the total traffic). On distances exceeding 150 km the average costs of moving goods by rail are usually lower than for transporting them by road (see Annex 22e).

#### IV.2. Trends in rail transport volumes and performance<sup>8</sup>

23. After years of steady decline, rail *freight* performance stopped to decrease in 2003 (see Figure 3)<sup>9</sup>. In the same year the first step to open the market for international rail freight services came into force.

Figure 3: Trends in rail freight transport performance in EU-25, EU-15 and EU-10 (1970-2005)



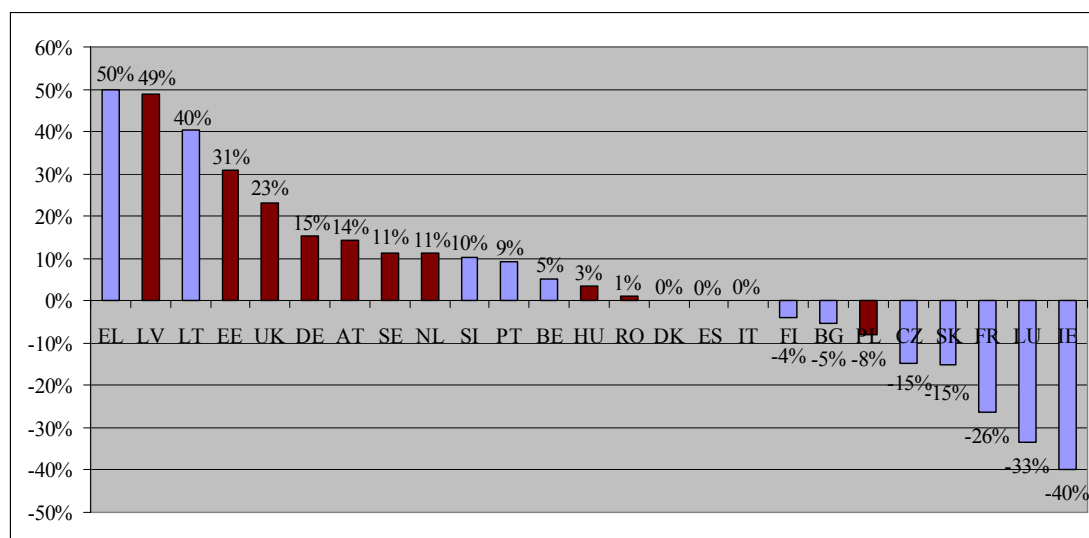
Source: EU Energy and Transport in Figures Statistical Pocketbook 2006, Table 3.2.5, Eurostat

24. Between 2000 and 2005 the EU witnessed a significant increase in rail freight performance in Member States where non-incumbent railway undertakings took the highest market shares (see Annex 9 and Figure 4 where those countries are marked dark).

<sup>8</sup> "Rail transport performance" means rail transport expressed in tonne-kilometres or passenger-kilometres.

<sup>9</sup> As Cyprus and Malta do not have railway networks on their territory, all references to EU-10 or "new" Member States in the chapters IVa-VIII are to be understood as excluding these two countries.

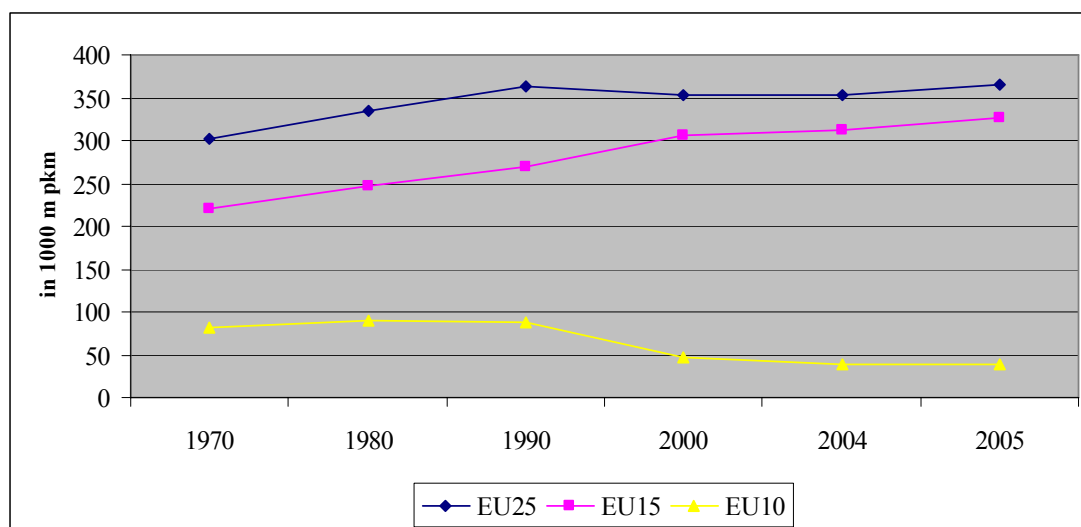
Figure 4: Change in rail freight transport performance 2000-2005



Source: EU Energy and Transport in Figures Statistical Pocketbook 2006, Table 3.2.5, Eurostat

25. In 2005 the goods most commonly transported by rail (expressed in tonne-kilometres) were solid mineral fuels (mostly carried by railway undertakings in EU-15), metals and petroleum products (transported, in particular, by EU-10 railways) (see Annex 11).
26. In 2006 rail freight transport performance in EU-25 increased by 3.7% as a result of growth in the "old" Member States (average increase of 5.7%), especially in Finland, Luxembourg and Germany, all of which recorded rises of over 10%. The biggest increase in tonne-kilometre terms was in the first quarter of 2006 compared with the same period of the previous year. In EU-10 an overall decrease of -0.5% in transport performance was observed during 2006. However, in Hungary (13.3%) and in the Slovak Republic (7.3%) the rail freight market developed dynamically (see Annex 10).
27. In the passenger sector, after a steady increase in rail transport performance between 1970 and 1990, in the following decade (1990-2000) a sharp rise was observed in the EU-15 countries accompanied by a heavy fall in EU-10 (see Figure 5). Since then, passenger transport performance has stabilised for EU-10 and has been increasing slowly but steadily in EU-15.

Figure 5: Trends in rail passenger transport performance in EU-25, EU-15 and EU-10 (1970-2005)



Source: EU Energy and Transport in Figures Statistical Pocketbook 2006, Table 3.3.7, Eurostat

28. Between 2000 and 2005 the highest increases in rail passenger transport performance were observed in Latvia (29%), Ireland (29%) and Belgium (20%). By contrast, the sharpest falls were seen in Lithuania (-33%), Estonia (-33%), Bulgaria (-31%) and Romania (-31%) (see Annex 9).
29. In 2006 both EU-15 and EU-10 showed comparable increases in rail passenger transport performance, averaging 3.3% for the whole EU. The most positive results were achieved during the second quarter of 2006 compared with the same period in 2005. The highest growth in passenger transport performance during 2006 was observed in Latvia (10.8%), Luxembourg (9.2%) and Sweden (7.3%). Rail passenger transport performance decreased in Lithuania (-4.3%) and Greece (-1.8%) (see Annex 10).
30. In 2005 the highest shares of *international traffic* out of total freight traffic (in terms of tonne-kilometres) were observed in Estonia (93%), Latvia (88%) and the Slovak Republic (86.5%). For passenger transport, international traffic took the highest shares in Luxembourg (24% of passenger-kilometres), Austria (17%) and Belgium (15%) (see Annex 12b which also presents information on the changes in rail transport performance over the period 2003-2005 for national and international services).

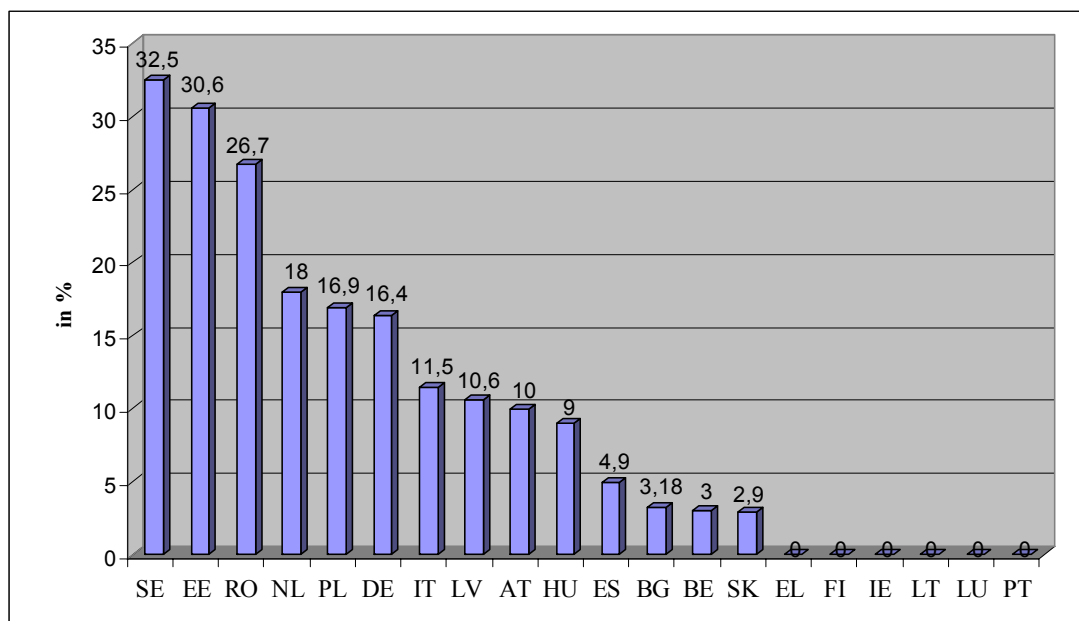
## V. OPENING OF THE RAIL MARKET

31. Over 700 licensed railway undertakings are operating on the EU railway market, about half of them in Germany (355), followed by 62 in Poland and 56 in the UK. Annex 14 gives an overview of the number of valid railway licences and safety certificates per Member State.
32. Figure 6 shows the total market shares of non-incumbent railway undertakings providing freight services. In terms of tonne-kilometres, non-incumbents took the



biggest market shares in Sweden (32.5%), Estonia (30.6%), Romania (26.7%), the Netherlands (18%), Poland (16.9%) and Germany (16.4%). In the case of passenger transport, non-incumbents gained the highest share of the market in Estonia (40%), Sweden (35.8%) and Latvia (10.1%)\*. Annex 13 shows the distribution of the market shares between the individual companies for EU-27.

Figure 6: Total market shares of non-incumbent rail freight operators in 2006



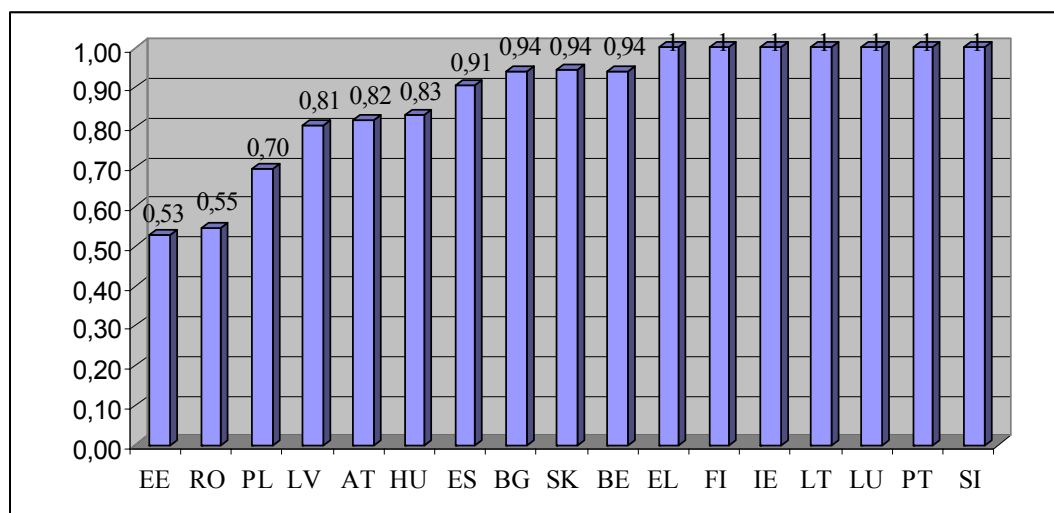
\* Data for CZ, DK, FR and UK not available; ES and PT: data for 2005; NL: data for 2003.

Source: 2007 RMMS questionnaire filled in by Member States in May/June 2007

33. As a proxy for measuring market opening, the Herfindahl-Hirschman Index (HHI)<sup>10</sup> estimates the degree of concentration in an industry and indicates the level of competition on the relevant market. The index can range from 0 if there are a large number of firms, indicating effective competition, to 1 for a single monopoly-holder.
34. Figure 7 presents the HHI for the rail freight and rail passenger transport markets in the EU Member States. For freight, the most open markets are in Estonia (0.53), Romania (0.55), Poland (0.7) and Latvia (0.8)\*. Monopolies are still holding on to the rail freight markets in Greece, Finland, France, Lithuania, Luxembourg, Portugal and Slovenia. It was not possible to calculate the HHI i.a. for Sweden, the Netherlands and Germany (which show a high market share for non-incumbent rail freight undertakings) because the data needed were not available. On the passenger side Estonia (0.48), Latvia (0.82), Poland (0.83) and Portugal (0.84) have the most open rail markets.

<sup>10</sup> HHI is defined as the sum of squares of the market shares of each individual firm in the sector.

Figure 7: Herfindahl-Hirschmann-Index for the national rail markets



\* Data for CZ, DE, DK, FR, IT, NL, SE and UK not available.

Source: 2007 RMMS questionnaire filled in by Member States in May/June 2007

## VI. PERFORMANCE OF RAILWAY UNDERTAKINGS

35. According to a study conducted, under the auspices of the RMMS Working Group, by the Community of European Railways (CER) on its 17 members<sup>11</sup>, between 1995 and 2004 employment in railway undertakings fell constantly with labour productivity increasing simultaneously. Over the last few years, however, the pace of reduction in the number of staff employed in the rail sector has slowed down. Job losses in the incumbents have been partly offset by job creation in newly established railway companies, even if no information is available yet on the quality of the new positions.<sup>12</sup> The numbers of staff employed in 2006 by the individual EU railway undertakings and infrastructure managers are shown in Annex 15.
36. Furthermore, the CER study shows a marked difference in the performance of railway undertakings in EU-15 and EU-10. In the "old" Member States, since 1995 the average debt-equity ratio of the railway companies has fallen below 1, meaning that their assets are predominantly financed by equity and not by debt. By contrast, in EU-10 the average debt-equity ratio has risen sharply from about 0.11 to 2.52. The weak financial situation of railway undertakings in the "new" Member States is mostly due to under-compensation for provision of public services, persisting liabilities of the companies to the State and economically unsustainable investments by some operators in recent years.

<sup>11</sup> CFL, CIE, CP, DB, FS, NSB, ÖBB, SNCF, VR, SBB (excluding ATOC/EWS and ASTOC), BDZ, CFR, CD, LG, MAV, PKP and SZ.

<sup>12</sup> Annexes to Report COM(2006) 189 final of 3 May 2006, p. 91.

37. Another study<sup>13</sup>, this time on the financial performance of railway undertakings and infrastructure managers with an annual turnover of at least €50 million, conducted at the request of the European Commission, showed that, in 2004, 61% of the 74 railway undertakings analysed<sup>14</sup> had a viability ratio higher than 1 which means that their operations were in principle generating profit. 24% of the railway companies had a negative return on equity, i.e. negative results from operations in relation to the equity capital of the undertaking. Out of the ten infrastructure managers, five had a viability ratio higher than 1 and five a negative return on equity (see Annex 16).
38. Quality of service remains rather disappointing, in particular for intermodal traffic. Punctuality statistics for international combined transport trains on major European corridors, compiled by the International Union of combined Road-Rail transport companies (UIRR), show a low level of punctuality in rail freight services (53% of trains had less than a 30-minute delay over their scheduled arrival time in 2006) plus instability over the last few years (see Annex 17).

## **VII. RAIL TRANSPORT INFRASTRUCTURE: CAPACITY, FINANCING AND SUPPLY INDUSTRY**

39. The total length of railway lines in the EU is approximately 215 000 km<sup>15</sup>. The Member States with the longest railway networks are Germany (34 122 km), France (29 246 km)<sup>16</sup> and Poland (22 156 km). The shortest networks are in Luxembourg (275 km) and Estonia (971 km of public network) (see Annex 18). Malta and Cyprus have no railway lines. Belgium and Luxembourg have the highest density of railway lines (122 and 106 m/km<sup>2</sup> respectively).
40. In 2006 the most intensive use of the network for freight transport (expressed as number of tonne-kilometres per kilometre of railway lines) was in the Baltic States (10.8 in Estonia, 7.4 in Latvia and 7.3 in Lithuania). In the case of passenger transport, the network was used most intensively in the Netherlands (5.3), UK (3.0) and Belgium (2.8) (see Annex 18).
41. In 2006 the European network included 4 919 km of high-speed railway lines located in Italy, France, Spain, Germany, Belgium and the UK. By 2009, 1 485 km of new lines allowing trains to travel faster than 250 km/h will be built on EU territory (see Annex 19).
42. In 2006 expenditure on infrastructure maintenance, in euro per kilometre of railway lines, was highest in the Netherlands (446 000), Luxembourg (173 000) and the UK (108 000). Renewal of the existing infrastructure was most intensive in the UK (260 000), Luxembourg (159 000) and Germany (117 000). New construction took the most resources per kilometre of lines in the Netherlands (464 000), Belgium (259 000), Luxembourg (245 000) and Greece (124 000). In general, the above-mentioned countries also plan heavy investment over the period 2007-2010 (see Annex 20).

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<sup>13</sup> ECORYS study: "Analysis of the financial situation of railway undertakings in the European Union", February 2006, [http://ec.europa.eu/transport/rail/studies/index\\_en.htm](http://ec.europa.eu/transport/rail/studies/index_en.htm).

<sup>14</sup> Including consolidated railway undertakings also performing infrastructure management functions.

<sup>15</sup> Single-track and double-track lines combined.

<sup>16</sup> The data for France are for 2004 and those for other countries are for 2006.

43. Systems for charging for use of rail infrastructure differ considerably between Member States. The share of infrastructure costs recouped from infrastructure charges ranges from 5% in Sweden to 100% in the Baltic States (see Annex 22). This depends mostly on the financial contributions by governments to infrastructure provision and on the efficiency of the infrastructure manager. The complexity and intensity of network use play a major role as well. In 2006 State contributions to infrastructure operation, maintenance, renewal and construction in EU-25 totalled about €14 billion, with the EU-10 countries adding up to only 3.6% of this sum (see Annex 21).
44. The design of some of the systems for charging for use of rail infrastructure allowing, for example, cross-transfers to passenger transport is endangering the competitiveness of rail services. The cross-transfer problem is most urgent in some of the "new" Member States, where high track access charges are accompanied by low infrastructure quality.
45. The current value of the rail supply market in western and eastern Europe<sup>17</sup> totals about €40 000 million (see Annex 23). 75% of the market is open to outside suppliers, i.e. is not served exclusively by railways' in-house capabilities. Access to the market is most limited in the fields of services and maintenance (51%) and infrastructure supply in eastern Europe (58%). By contrast, the markets for rail control and rolling stock are fully open to outside suppliers (100%).
46. In eastern Europe the market for rolling stock supply is expected to develop dynamically over the next decade (+8.2% per annum until 2015). Services related to infrastructure maintenance show the strongest growth potential in western Europe (2.6% per year over the same period) (see Annex 23).

## VIII. CONCLUSIONS

47. This report describes the main trends observed over the last few years on the rail market in the EU. The current state of reform of the European rail sector shows mixed results. However, this report confirms that the efforts to revitalise rail by developing a European Railway Area and increasing competition on the market are producing positive results.
48. The process of formally transposing the Community railway legislation has almost been completed. The institutions required by this legislation already exist in the Member States. Rail freight transport performance stopped declining in 2003, since when it has remained relatively stable. Good prospects are revealed by the latest (2006) data. Analysis of trends in rail transport performance over the last six years highlights that the countries with the highest scores on market opening are performing significantly better than those where the markets are fully dominated by incumbent railway undertakings. Although the conventional modal split data still indicate a slight decrease in rail's share of the freight market, initial estimates of the contribution by railways to goods transport over medium and long distances show

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<sup>17</sup> Western Europe = Austria, Belgium, Denmark, France, Germany, Greece, Italy, Netherlands, Spain, Sweden, Switzerland, UK; Eastern Europe = Czech Republic, Hungary, Poland, Romania, Turkey (2007 UNIFE study, see Annex 23).

high potential for the rail sector in this market segment. The process of reform is also creating new job opportunities with the potential of counteracting the steady contraction of the workforce of railway undertakings. Last but not least, the high demand for rolling stock forecast in eastern European countries over the next decade is creating favourable conditions for development of the rail supply industry.

49. On the other hand, a number of difficulties are still hampering development of rail services in the EU. The level of implementation of the regulatory framework differs considerably from one Member State to another. Some institutions are not yet fully operational. The problems may be due to a lack of staff or, as far as national Safety Authorities are concerned, be caused by the lack of a legal base for their activities, pending the transposition of the second railway package.
50. The degree of competition on the European rail market is still low, but steadily increasing as the regulatory framework for non-discriminatory access to infrastructure and for opening national and international rail freight services to competition is maturing. Nevertheless, there are still significant barriers to market integration at European level. These are, in particular, the lack of full technical interoperability and of a common approach to rail safety between the national railway networks, the relatively weak financial situation of railway undertakings, which is especially acute in the "new" Member States, and the high market entry costs in the rail sector related to the high fixed costs of market operations and significant administrative expenses for rolling stock acceptance, licensing procedures, etc. Furthermore, some Member States show an insufficient level of investment in the rail sector, particularly in maintenance and upgrading of rail infrastructure. Because until a few years ago almost all the rail markets in the EU were still dominated by national monopolies, sufficient incentives have not yet been introduced to increase quality of service considerably in the rail sector.
51. The Commission considers that regular updating of this report would allow continuous monitoring of the railway market based on comparable data. A number of issues not dealt with sufficiently in this report will be considered in future issues. Stronger support will be needed from the rail industry and national authorities, in the form of making data available, in order to make the analysis of development of the rail market as comprehensive as possible.