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

Fifth report on monitoring development of the rail market

{SWD(2016) 427 final}

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1. INTRODUCTION

The rail sector¹ makes a substantial contribution to the EU economy, directly employing about 900 000 people. Rail transport is also critical to the EU strategy for improving environmental performance of the transport sector, economic and social cohesion and connectivity within and between Member States.

This report is the fifth edition of rail market monitoring reports submitted by the Commission to the European Parliament and the Council pursuant to Article 15(4) of Directive 2012/34/EU² ('the Recast Directive'). The purpose of this report is to provide an overview of main developments in rail markets in the context of EU rail market policy objectives.³ It covers a broad range of topics such as the evolution of the internal market in rail services and services to be supplied to railway undertakings, the framework conditions including for public passenger transport services by rail, the state of the Union railway network, the utilisation of access rights, barriers to more effective rail services, infrastructure limitations and the need for legislation. A full analysis is presented in the accompanying staff working document.

This report is based on data and contributions from various sources, including Member States' responses to the rail market monitoring survey (RMMS), the statistical pocketbook 'EU transport in Figures',⁴ reports of the European Union Agency of Railways,⁵ Eurostat⁶ and various other resources. In July 2015, the Commission adopted an Implementing Regulation for rail market monitoring,⁷ establishing a new mandatory data collection mechanism which should lead to more consistent and coherent reporting in future.

2. THE STATE OF THE UNION RAILWAY NETWORK

The total **length of rail network** in 2014 was about 220 000 kilometres, which is about 2 % more than in 2009. Since 2009, 2 800 km of **electrified lines** have been added, while their proportion in all lines has increased by 1.6 percentage points. For the coming years Banedanmark (the Danish infrastructure manager) and Network Rail (the UK infrastructure manager) have launched large-scale projects for the electrification of major parts of their networks.

There are major differences between Member States in terms of **travel speeds**. Significant investment has been made to modernise the rail network in eastern Europe and to develop high speed lines in western Europe. The higher speeds have improved the attractiveness of rail for passengers. However, there are still regional passenger networks in eastern Europe where

¹ In this report 'rail sector' refers to railway undertakings and rail infrastructure managers.

² Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area, OJ L 343, 14.12.2012, p. 32.

³ In addition to rail *market* report, the European Union Agency for Railways publishes bi-annual reports on *safety* and *interoperability* performance of railways.

⁴ http://ec.europa.eu/transport/facts-fundings/statistics/pocketbook-2016_en.htm.

⁵ <http://www.era.europa.eu/Search/Key-Documents/Pages/Home.aspx>.

⁶ <http://ec.europa.eu/eurostat/web/transport/data/database>.

⁷ Commission Implementing Regulation (EU) 2015/1100 of 7 July 2015 on the reporting obligations of the Member States in the framework of rail market monitoring, OJ L 181, 9.7.2015, p. 1.

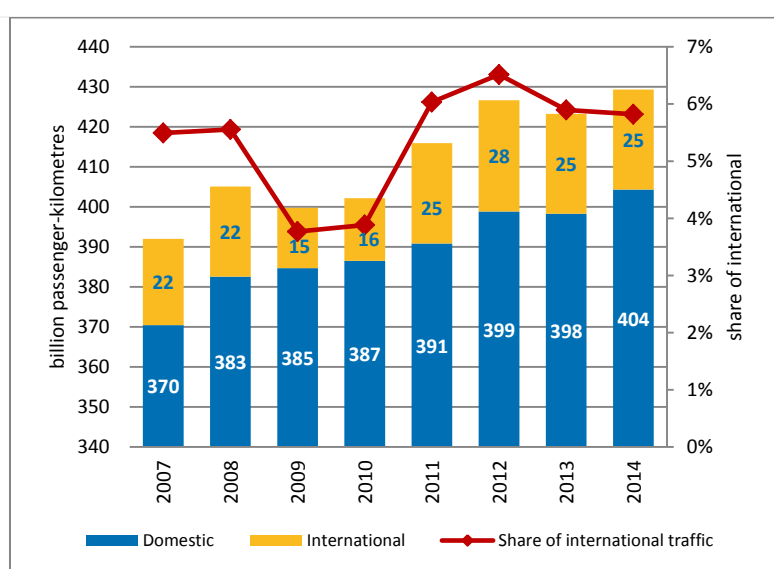
maximum permitted speed is 120 km/h or even less. As regards the travel speed of freight trains, in some national networks and international rail freight corridors it is 50-60 km/h. However for the most of international freight trains, especially in central and eastern Europe, the average speed is between 20 and 30 km/h. On some international routes freight trains run at an average speed of only around 18 km/h.⁸

3. THE EVOLUTION OF THE INTERNAL MARKET IN RAIL SERVICES

Despite an unfavourable economic climate since 2009, rail passenger volumes in terms of passenger-kilometres were hardly impacted. By contrast, rail freight volumes in tonne-kilometres dropped heavily in 2009, the low point of the economic crisis and have not yet fully recovered. Total passenger and freight train-kilometres have not increased.

Passenger traffic

Figure 1 – Evolution of rail passenger traffic volumes



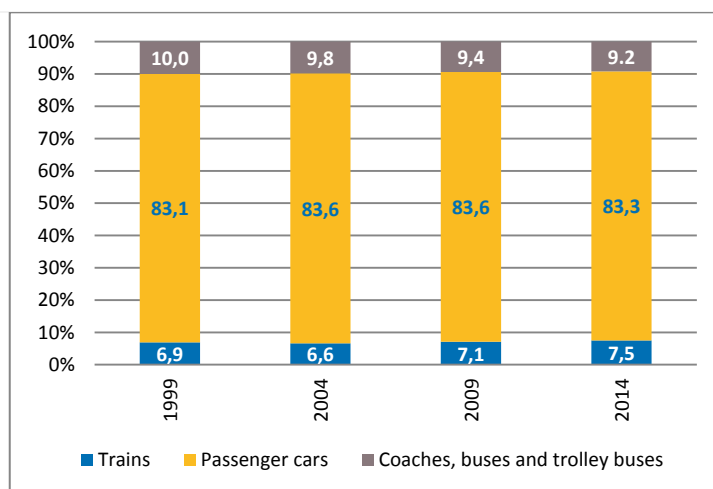
Source: RMMS

Passenger rail demand in the EU has increased between 2009 and 2014 by 30 billion passenger-kilometres, representing an average growth rate of 1.5 % per year. The largest relative increases were observed in the United Kingdom, the Czech Republic and Luxembourg, while during the same period in Croatia reported passenger traffic halved. About only 6 % of passenger traffic in 2014 was **international** and the number of international passenger-kilometres has been broadly constant since 2011.

⁸ The report of the European Court of Auditors 'Rail freight transport in the EU: still not on the right track'.

While traffic volumes have grown, the **modal share** of passenger rail in land transport in the EU has since 2009 shifted only by a half a percentage point from 7.1 % to 7.5 %. Behind this EU level average there are marked differences in the performance of individual Member States — strong improvement in the Netherlands and the United Kingdom and decline in Latvia, Slovenia, Bulgaria and Croatia.

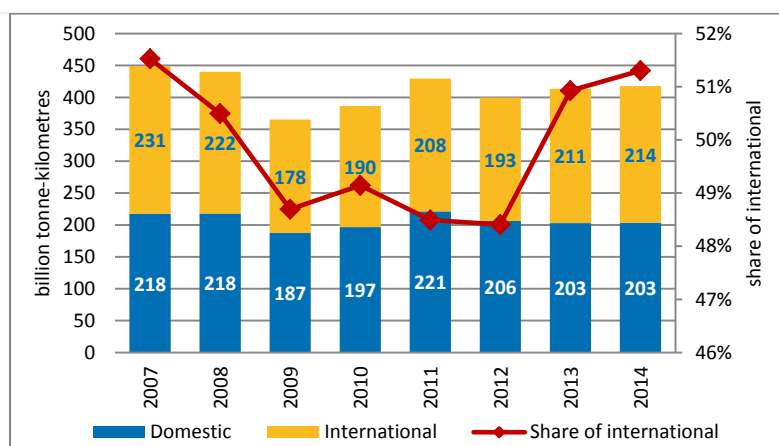
Figure 2 – Passenger land transport modal split (%)



Source: Statistical pocketbook 2016, Eurostat

Freight traffic

Figure 3 – Evolution of rail freight traffic volumes

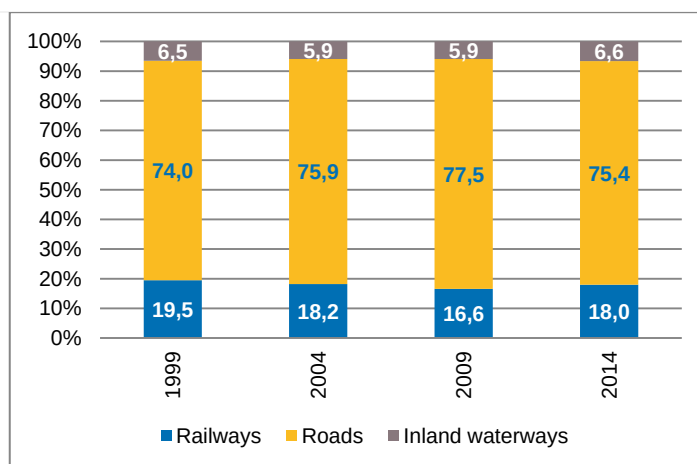


Source: RMMS

Outputs in tonne-kilometres, while still being 7 % lower than the 2007 peak levels, reached 417.6 billion tonne-kilometres in 2014 showing a 3 % average annual increase rate. More than 50 % of freight traffic in 2014 was **international**, giving rail freight a much stronger European dimension than is the case for passenger traffic.

In 2014 the **modal share** of rail freight in inland freight transport was 18 %, which is almost the same as 10 years ago. Similarly to passenger transport, there are widely diverging trends at the Member State level: the increase being strongest in Slovenia, Romania and Hungary. The total tonne-kilometres in comparison to 2009 have declined only in Croatia, Slovakia, Greece and Estonia.

Figure 4 – Freight land transport modal split (%)



Source: Statistical pocketbook 2016, Eurostat

4. SERVICES TO RAILWAY UNDERTAKINGS

The Recast Directive introduced a set of new rules for service facilities and rail related services with the aim to improve transparency on conditions and charges applied and to ensure non-discriminatory access for operators. The market of service facilities (stations, freight terminals, marshalling yards, train formation facilities, maritime and inland ports, etc.) is characterised by a large number of different owners and operators of various sizes.

Mapping and defining the facilities is an ongoing challenge for national regulatory bodies and for the Commission services. According to available RMMS data, in 2014 there were about:

- 30 000 passenger stations;
- 3600 freight terminals;
- 1700 marshalling yards;
- 28 500 storage sidings;
- 1300 maintenance facilities;
- 650 maritime and port facilities; and
- 650 refuelling facilities.

5. THE EVOLUTION OF FRAMEWORK CONDITIONS IN THE RAIL SECTOR

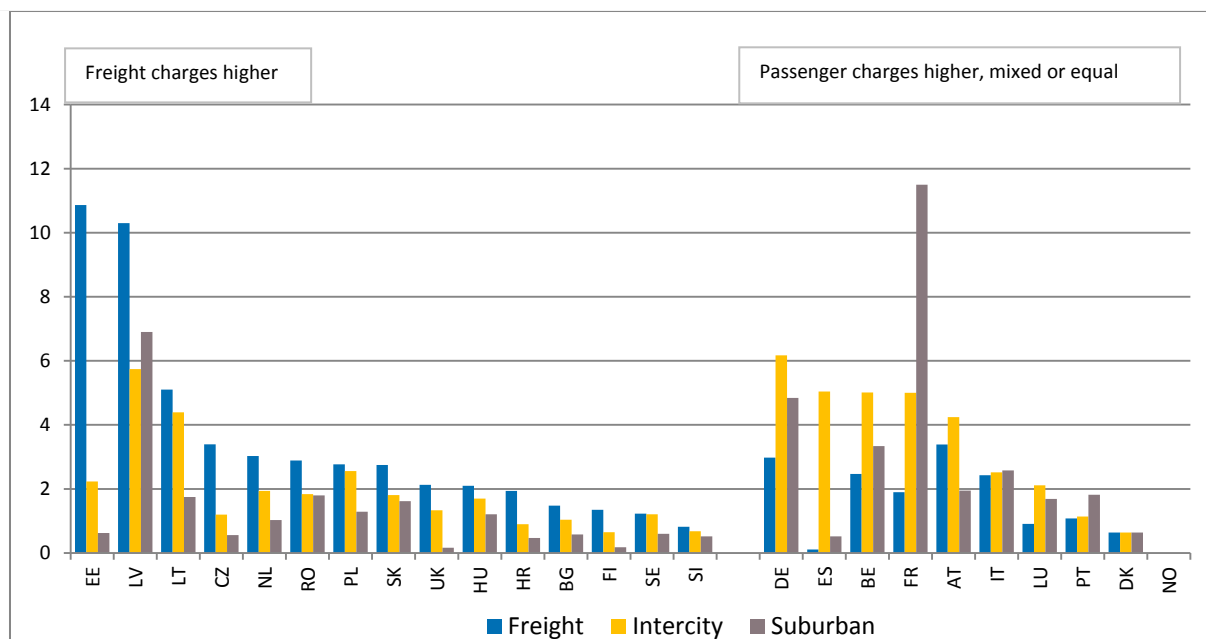
5.1. Infrastructure charging

The EU rail legislation aims to reduce the infrastructure charges at the best possible infrastructure quality with a three-pronged approach. Firstly, the modalities of calculating the direct costs of infrastructure use, being the basis for the minimum access package, have been harmonised in the new Implementing Regulation (EU) 2015/909⁹. Secondly, mark-ups can be applied on top of the direct cost charges only in segments being able to pay such higher charges. Thirdly, the infrastructure managers are encouraged to exploit the incentives inherent in certain charging components, such as scarcity, reservation, possession, environmental charges and performance schemes, to optimise the use of infrastructure.

As a result of this and other factors, the level and approach to charging may vary both within the charging scheme of one infrastructure manager as well as between Member States.

⁹ Commission Implementing Regulation (EU) 2015/909 of 12 June 2015 on the modalities for the calculation of the cost that is directly incurred as a result of operating the train service (Text with EEA relevance) OJ L 148, 13.6.2015, p. 17.

Figure 5 – Track access charges for different categories of trains (EUR per train-km, applicable 2016¹⁰)



Source: RMMS

Notes: HR, DE 2014 charges, LV arithmetic mean of 2015 min/max charges, EL, IE no data

Figure 5 illustrates the different **situations in Member States**. In most Member States charges for freight trains are higher than for passenger trains, but in Germany, Spain, Belgium, France, Luxembourg and Portugal the situation is the other way around. In Austria, Italy, Sweden and Denmark there are no big differences or the results are mixed. Freight charges in the Baltic States are particularly high, which is to some extent justified due to higher permitted axle-loads. The intercity charges in Belgium, Germany, Spain and France are relatively high because these include the charges for dedicated high speed lines. Suburban charges are most volatile (varying between EUR 0.17 in the United Kingdom and EUR 11.50 in France) because their levels depend on national approaches to public service contracts and rail financing. In France, for example, the regions themselves (rather than railway undertakings) pay the so-called '*redevance d'accès*' to the infrastructure manager for the rail services they provide under public service contracts. As regards the **evolution of charges**, the developments are mixed.

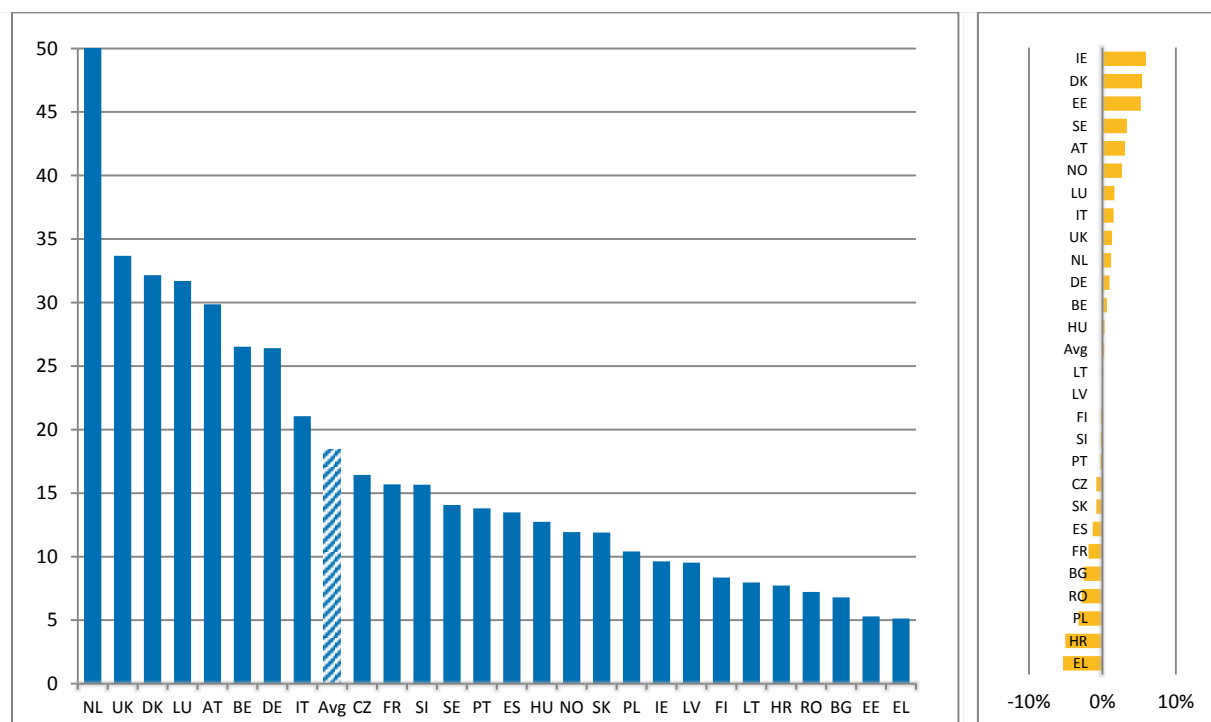
5.2. Capacity allocation and infrastructure limitations

In the United Kingdom, Luxembourg, Denmark, Austria, Belgium and Germany the network utilisation rates are about 60 % higher than the EU average. Beyond this, the Netherlands has by far the most saturated network running about 50 000 train-kilometres per each line-kilometre per year. In all these Member States rail demand continues to increase.

¹⁰

In the current RMMS, the Member States report the applicable track access charges two years ahead.

Figure 6 – Network utilisation rates (thousand train-km per line-km, 2014) and relative change since 2009



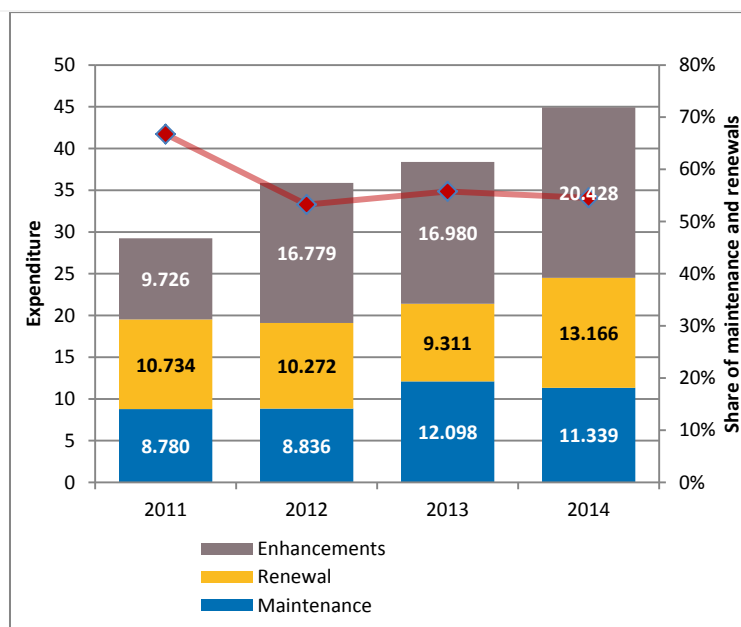
Source: Eurostat and Statistical pocketbook 2016 (based on UIC, IRG annual market monitoring reports, national statistics and estimates)

RMMS data for 2014 shows that 10 Member States had declared some parts of their network congested. To manage capacity in constrained conditions, infrastructure managers use scarcity charges and various priority rules. The Commission has specified the criteria for awarding and amending framework agreements to ensure optimal use of infrastructure in an implementing regulation in 2016.¹¹

¹¹ Commission Implementing Regulation (EU) 2016/545 of 7 April 2016 on procedures and criteria concerning framework agreements for the allocation of rail infrastructure capacity, OJ L 94, 8.4.2016, p. 1.

5.3. Infrastructure expenditure and funding

Figure 7 – Evolution of infrastructure expenditure and proportion of maintenance and renewal expenditure



Source: RMMS

Despite a popular perception of declining public support, **infrastructure expenditure has** constantly increased from EUR 29 billion in 2011 to EUR 45 billion in 2014. The maintenance expenditure has fluctuated, while investment into renewal and enhancements has continuously increased. At least EUR 7 billion (or 16 % of total expenditure) was spent on high speed lines. Maintaining the existing network, in order to uphold its safety and operational performance and to ensure reliable service, presents a constant and costly challenge to many infrastructure managers.

The total infrastructure expenditure was highest in the

United Kingdom and in France, where the infrastructure managers have to catch up with the years of under-investment having at the same time significant enhancements projects ongoing. In Germany, the infrastructure expenditure in 2014 also increased significantly.

The EU can co-finance or support rail investment projects through the Cohesion Fund, the European Regional Development Fund, the Connecting Europe Facility, the European Investment Bank and the European Fund for Strategic Investments. More than EUR 33 billion in grants under the current EU financial framework (2014-2020) has been allocated to rail investment.

5.4. Prices and quality of passenger services

Given the diversity of services and fares it is challenging to assess the **overall evolution of rail prices** at EU level. Fares applied to passenger services vary widely across Member States, ticket-types and booking horizons and are often regulated.

Overall, rail fares have increased relatively more quickly than in other modes (see Figure 8). However, there are examples where open access competition (e.g. in Austria, the Czech Republic, Germany, Italy and Sweden) has led to fare reduction on certain lines.

Having comparable **punctuality** data across the Member States remains a challenge. It seems that the best performing Member States have small passenger networks or low network utilisation rates. Punctuality may be hardest to maintain

on busy lines, particularly if they carry a mix of long-distance and regional passenger services and freight services. The punctuality of long-distance services tends to be worse than regional and local services. Regarding **reliability**, in western or central European Member States no more than 3 % of regional or 5 % of long-distance services were cancelled in 2014. Cancellation rates were higher in some eastern European Member States.

Regarding **safety**, rail remains one of the safest modes of transport. According to the European Union Agency for Railways ('the Agency') there were about 1000 rail fatalities in 2014 in Europe. Railway safety continued to improve between 2010 and 2014, with fatalities, serious injuries and significant accidents all decreasing. In 2013, the fatality risk for a rail passenger was 16 times lower than for a person travelling by car.

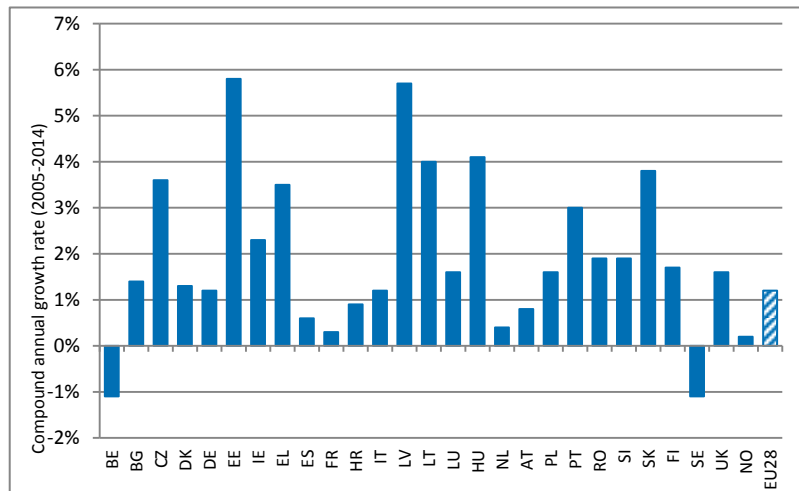
5.5. Rail transport services covered by public service contracts

More than two-thirds of passenger services in 2014 were operated under public service contracts, used mainly to serve regional and suburban lines. In most Member States public service obligation related compensation per train-kilometre was higher than EUR 5 and the total support provided was around EUR 20 billion. The proportion of the fare-box revenue in total revenue differs between more than 90 % in Lithuania, the Netherlands and the United Kingdom and less than 20 % in Hungary.

5.6. Licensing

The number of active railway undertakings varied in 2014 between 323 in Germany and 1 in Finland. Compared to 2013, the number of active railway undertakings was increasing in Poland, France, Germany and Hungary and had slightly decreased in Bulgaria and the Netherlands.

Figure 8 – Harmonised Index of Consumer Prices: rail transport compared to total transport



Source: Steer Davies Gleave study *Prices and Quality of Rail Passenger Services*, analysis of Eurostat's Harmonised Index of Consumer Prices

Fees for licensing can range from none to EUR 70 000, depending on Member State and content of application.¹² EU rail policies aim to:

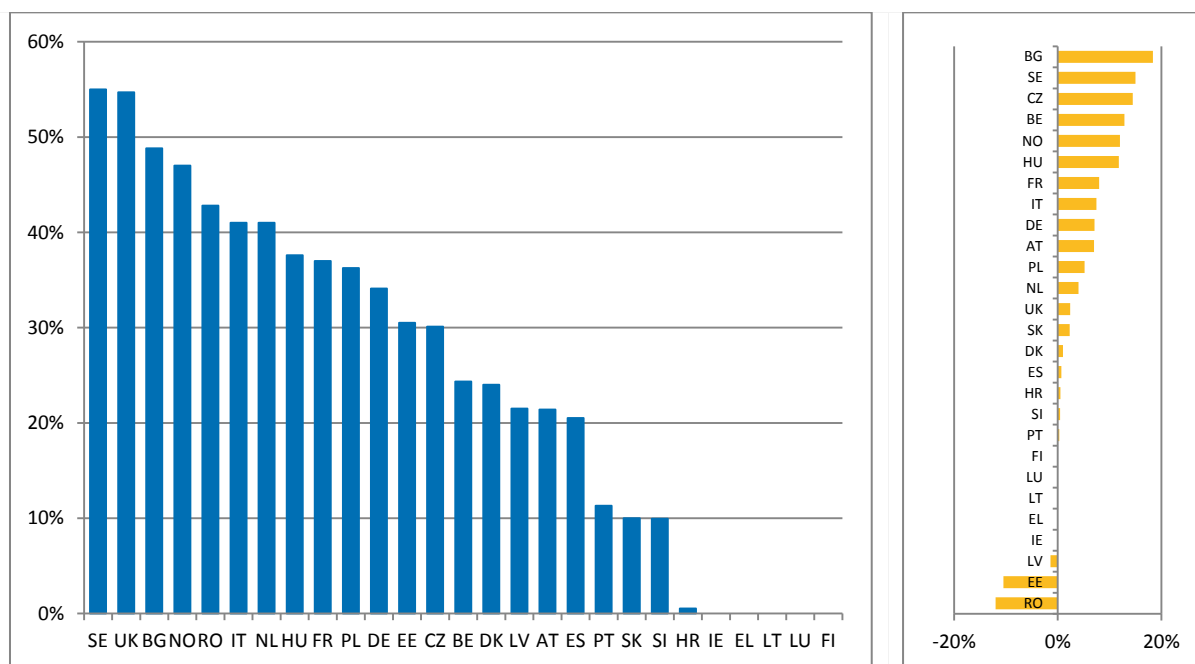
- curb the fees due for licensing;
- speed up the time-to-licence;
- increase transparency of valid licences; and
- ensure that accident cover is provided on market-conditions without discrimination.

To that end, it adopted an implementing act on licensing in 2015.¹³ Furthermore, the Fourth Railway Package proposes the creation of a one stop shop as a digital single entry point in Europe for vehicle authorisations and safety certifications. The aim is to simplify the procedures and ensure equal treatment for applicants across Europe. The Agency will also have a greater role in the process becoming an EU-wide authority for safety certification.

5.7. Degree of market opening and utilisation of access rights

Opening of the rail **freight market** in 2007 coincided with the economic crisis hitting freight transport services hard in all modes. Given that there has been a steady increase in the market share of competing rail operators almost in all Member States, it seems that the new entrants have coped relatively better with the challenges of the crisis. On average the market share of competing freight operators (15 % in 2006) had more than doubled by 2014. At the end of 2014, rail freight transport was 100 % in the hands of national incumbent still in Finland, Greece, Ireland, Lithuania and Luxembourg.

Figure 9 – Market share of competitors in the freight market (2014, % of tonne-kilometres) and evolution 2011-2014 (in percentage points)



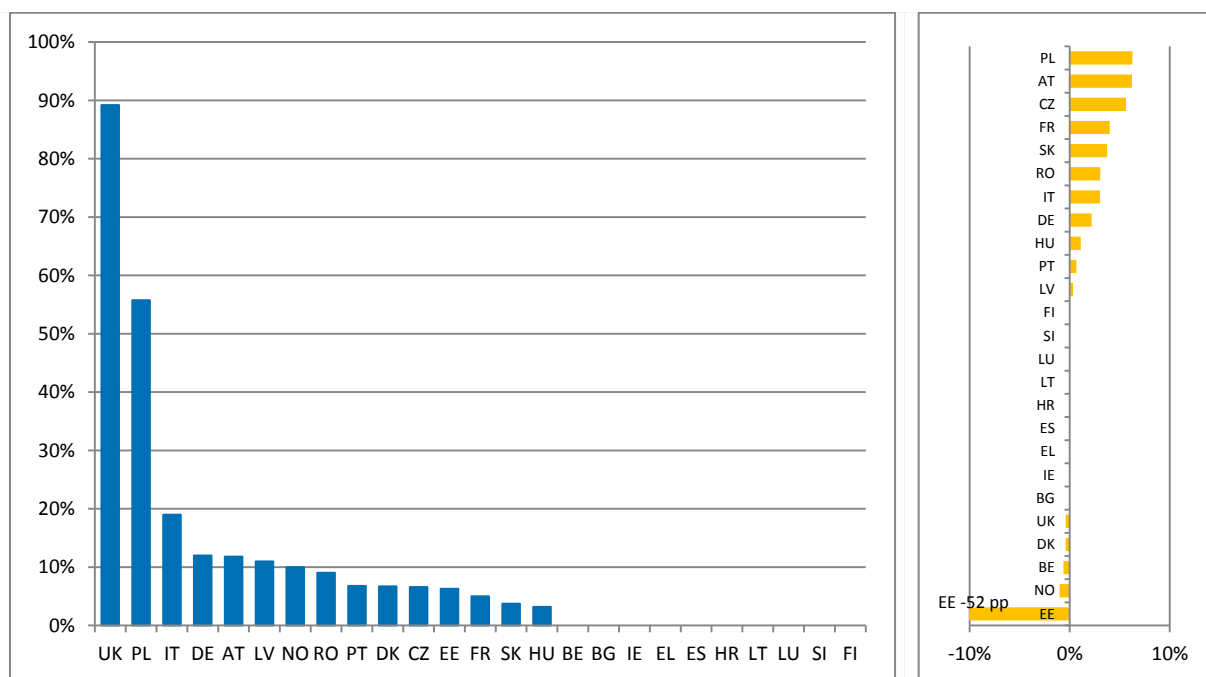
Source: RMMS, 2011- 2014 except SE (2010 data used for 2011), PT and SI (2012 data used for 2011), LU (2010 data used for 2011 and 2012 data for 2014), IT 2014 data from IRG Rail Annual Market Monitoring Report (2016)

¹² Impact assessment accompanying the proposal for a Regulation of the European Parliament and of the Council on the European Union Agency for Railways, SWD (2013) 8.

¹³ Commission Implementing Regulation (EU) 2015/171 of 4 February 2015 on certain aspects of the procedure of licensing railway undertakings, OJ L 29, 5.2.2015, p. 3.

Market shares of competitors in **passenger markets** are lower, given the different stage of market opening, being well below 20 % in all Member States except in Poland and the United Kingdom. Open access competition has developed in Austria, the Czech Republic, Germany, Italy, Slovakia, Sweden and the United Kingdom, with different degrees and results. At least in 15 Member States competing operators have entered the rail passenger markets.

Figure 10 – Market share of competitors in the passenger market (2014, % of p-km) and evolution 2011-2014 (in percentage points)



Source: RMMS, 2011-2014, except for IE (2013 data used for 2014), PT (2012 data used for 2011), LU (estimates) IT data from IRG Rail Annual Market Monitoring Report (2016); NL and SE confidential.

5.8. Development of employment and social conditions

According to the RMMS, at the end of 2014 about 900 000 people were employed by rail operators and infrastructure managers, the number of employees decreased by 4 % between 2009 and 2014. The workforce is predominately male and the proportion of workers over 40 is in many companies more than 50 %. Ageing is a particular concern in Spain, Greece, Finland and Italy.¹⁴ On the positive side, after long recruitment freezes, rail companies in many Member States have recently begun to recruit again. Secure employment, good salaries and career opportunities under positive corporate climate are today the most common elements referred to in Member States where the sector is considered attractive.

5.9. Funding of the railways and barriers to more effective rail services

The overall cost of the rail operations and infrastructure management in the EU in 2012 was around EUR 110 billion, of which 60 % was covered by passenger and freight revenue, 30 % by public subsidies to operations and network management, and the remainder by other sources of income.¹⁵ On average, the split between infrastructure and operator costs in national rail systems is approximately 30 %:70 %. Rolling stock fleet for both passenger and freight has been in decline since 2009. Passenger revenue has increased significantly, while total operating costs have remained broadly static in real terms.

¹⁴ UIC (2012).

¹⁵ Steer Davies Gleave analysis, 2014 data not available.

While almost everywhere the rail sector relies on public investment, the way funds are channelled, differs following two principal funding models.¹⁶ Some countries (e.g. the United Kingdom, Switzerland, the Netherlands, and Sweden) allot subsidies primarily to infrastructure managers and keep access charges low. Others (e.g. France, Belgium, and Germany) primarily subsidise transport services through public service contracts, while the infrastructure managers adopt higher access charges.

It is evident that the railway business is complex and multidimensional and comparison between national systems is often not meaningful. Nevertheless, there seems to be a broad consensus that the European railways have issues with cost, quality of services and market share. In most Member States various indicators are already used to monitor rail performance (e.g. in contractual agreements, performance schemes, public service contracts). However the challenge ahead is to agree, based on the sector's proposals, on harmonised measures across the EU. To this end several initiatives have been undertaken by the sector organisations in cooperation with Commission services to measure and benchmark performance (e.g. best practice benchmarking undertaken by PRIME¹⁷ and performance monitoring in rail freight corridors with the assistance of RailNetEurope).

6. IMPLEMENTATION OF THE LEGAL AND INSTITUTIONAL FRAMEWORK

As the final element of the rail market report, Article 15(4) of the Recast Directive requires the Commission to report on the need for further legislation. Accordingly, this section summarises the ongoing and planned Commission regulatory initiatives in the rail sector based on the analysis carried out in this report and its accompanying staff working document.

Over the past two decades, the European legislator has considerably developed the EU rail *acquis* encouraging **competitiveness** and **market opening**. The overarching idea has been that greater competition makes for a more efficient and customer-responsive industry. In parallel measures have been taken to improve the **interoperability** and **safety** of national networks and to encourage the development of an integrated rail system leading to a single European rail area, as outlined in the 2011 transport white paper.¹⁸

With the adoption and implementation of the Fourth Railway Package the period of structural changes in the railway sector should be concluded. The technical pillar of the Fourth Railway Package, which reviewed and optimised the regulatory framework on interoperability and safety and strengthened the role of the Agency, has been already adopted. The market pillar, safeguarding independence of rail infrastructure managers and increasing openness of the markets for domestic passenger services, is expected to be approved by the co-legislators by the end of 2016.

There have been positive developments in the rail market, such as increased passenger volumes and investment in infrastructure as well as gradual opening of national rail markets. It is nonetheless clear that at the current pace it will not be possible to reach the objectives set for rail sector in the 2011 transport white paper. Furthermore, the European Court of Auditors

¹⁶ Issue Paper *Solid Infrastructure Financing for an Efficient Rail System*, <http://www.inno-v.nl/wp-content/uploads/2015/03/24022015-Issue-Paper-pour-envoi.pdf>.

¹⁷ Platform of European Rail Infrastructure managers.
<https://webgate.ec.europa.eu/multisite/primeinfrastructure/en>.

¹⁸ White paper Roadmap to a Single European Transport Area — Towards a competitive and resource efficient transport system (COM(2011) 144).

notes in its report ‘Rail freight transport in the EU: still not on the right track’¹⁹ that the performance of rail freight transport in the EU remains unsatisfactory. Market opening has achieved uneven progress and a single European railway area is still a long way from being achieved.

In this context the focus of the Commission in the coming years will be on the implementation of existing legislation designed to bring about the desired performance improvements. The transposition and implementation of the Recast Directive is in its final stages, while the preparations for implementation of the technical pillar of the Fourth Railway Package have been launched. The Commission services work closely with the Agency, Member States, national regulatory bodies and rail stakeholders through forums such as the European Network of Rail Regulatory Bodies, PRIME and RU Dialogue to ensure that the Union legislation is implemented in the most efficient way and is understood by the sector.

The Commission services continue preparations for the implementing act on access to services and service facilities (Article 13 of the Recast Directive), the delegated act on scheduling rules (Annex VII of the Recast Directive), and have launched the revision of the Technical Specification of Interoperability on Noise,²⁰ Rail Passenger Rights Regulation²¹ and the Combined Transport Directive.²² In addition, the ongoing evaluations of the Rail Freight Regulation²³ and Train Drivers Directive²⁴ may lead to updates of these acts in the coming years.

Finally, there are ongoing actions addressing the challenges faced by the sector, including implementation of the TEN-T Guidelines, deployment of European Rail Traffic Management System, securing funding and financing for rail infrastructure projects, embracing opportunities provided by digital technologies and launching projects under Shift2Rail. Furthermore, the Commission services continue to engage with the sector in the areas of rail security, multimodality and a level playing field across the modes, including effective application of user pays/polluter pays principles.

¹⁹ <http://www.eca.europa.eu/en/Pages/NewsItem.aspx?nid=6971>.

²⁰ Commission Regulation (EU) No 1304/2014 of 26 November 2014 on the technical specification for interoperability relating to the subsystem ‘rolling stock — noise’, OJ L 356, 12.12.2014, p. 421.

²¹ Regulation (EC) No 1371/2007 of the European Parliament and of the Council of 23 October 2007 on rail passengers’ rights and obligations, OJ L 315, 3.12.2007, p. 14.

²² Directive 92/106/EEC of 7 December 1992 on the establishment of common rules for certain types of combined transport of goods between Member States, OJ L 368, 17.12.1992, p. 38.

²³ Regulation (EU) No 913/2010 of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight, OJ L 276, 20.10.2010, p. 22.

²⁴ Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of train drivers operating locomotives and trains on the railway system in the Community, OJ L 315, 3.12.2007, p. 51.