

Eleventh Annual Market Monitoring Working Document

April 2023



Table of Contents

Table of Contents.....	2
List of country abbreviations and regulatory bodies.....	4
Table of Figures	5
1. Introductory remarks	7
2. Characteristics of the railway network.....	9
2.1. Total route length.....	10
2.2. Electrified route length.....	11
2.3. High-speed route length.....	12
2.4. ETCS-enabled route length.....	12
2.5. Main infrastructure managers' share of route length.....	13
2.6. Network usage intensity.....	14
2.7. Network usage intensity on electrified and non-electrified routes	15
2.8. Infrastructure managers' expenditures.....	16
3. Track Access Charges paid for the minimum access package.....	19
3.1. Track Access Charges per train-km paid for the minimum access package.....	20
3.2. Total Track Access Charge volume in European countries.....	21
3.3. Track Access Charges from railway undertakings and from public subsidies	21
3.4. Track Access Charges for passenger and freight services	22
4. Railway undertakings and European rail traffic	26
4.1. Railway undertakings.....	27
4.2. Total rail traffic	28
5. The rail freight market.....	29
5.1. Rail freight market size	30
5.2. Market shares of freight railway undertakings	32
5.3. Economic performance of freight railway undertakings.....	33
6. The rail passenger market.....	35
6.1. Rail passenger market size	36
6.2. National and international passenger traffic.....	38
6.3. Share of PSO and non-PSO services	39
6.4. Market shares of passenger railway undertakings.....	41
6.5. Economic performance indicators of passenger railway undertakings	42

Abstract of regulatory decisions in 2021.....45

List of country abbreviations and regulatory bodies

Country	Country abbreviation	Participating regulatory bodies
Austria	AT	Schiene-Control GmbH
Belgium	BE	Regulatory Body for Railway Transport and for Brussels Airport Operations
Bulgaria	BG	Railway Administration Executive Agency
Czech Republic	CZ	Transport Infrastructure Access Authority
Croatia	HR	HAKOM
Denmark	DK	Jernbanenaevnet
Estonia	EE	Estonian Competition Authority
Finland	FI	Finnish Rail Regulatory Body
France	FR	Autorité de Régulation des Transports
Germany	DE	Bundesnetzagentur
Greece	EL	Regulatory Authority for Railways
Hungary	HU	Rail Regulatory Body
Ireland	IE	Commission for Railway Regulation
Italy	IT	Autorità di Regolazione dei Trasporti
Kosovo*	XK*	Railway Regulatory Authority
Latvia	LV	State Railway Administration
Lithuania	LT	Communications Regulatory Authority of the Republic of Lithuania
Luxembourg	LU	Institut Luxembourgeois de Régulation
Netherlands	NL	Autoriteit Consument & Markt
Norway	NO	Statens jernbanetilsyn
Poland	PL	Urząd Transportu Kolejowego
Portugal	PT	AMT - Autoridade da Mobilidade e dos Transportes
North Macedonia	MK	Railway Regulatory Agency
Romania	RO	Consiliul Național de Supraveghere din Domeniul Feroviar
Serbia	RS	Directorate for Railways
Slovakia	SK	Transport Authority
Slovenia	SI	AKOS
Spain	ES	Comisión Nacional de los Mercados y la Competencia
Sweden	SE	Transportstyrelsen
Switzerland	CH	Rail Transport Commission (RailCom)
United Kingdom	UK	Office of Rail and Road

Kosovo (XK)*: This designation is without prejudice to positions on status and is in line with UNSCR 1244 (1999) and the ICJ Opinion on the Kosovo declaration of independence.

Table of Figures

Figure 1 - Evolution of total route length (in km and in %) between 2020 and 2021	10
Figure 2 - Electrified route length (in km and in % of the total route length) in 2021	11
Figure 3 – High-speed route length from 2012 to 2021	12
Figure 4 - ERTMS/ETCS-enabled route length in 2021	13
Figure 5 - ERTMS/ETCS-enabled route share of total route length in 2021	13
Figure 6 - Main infrastructure managers' share of total route length in 2021	14
Figure 7 - Network usage intensity in 2021	15
Figure 8 – Network usage intensity on electrified routes (electrified train-km only)	16
Figure 9 – Network usage intensity on non-electrified routes	16
Figure 10 – Infrastructure managers' expenditures	17
Figure 11 – Infrastructure managers' expenditures per route-km	17
Figure 12 – Share of infrastructure manager's expenditures on maintenance, renewal and investment	18
Figure 13 - Track access charges paid for the Minimum Access Package in 2021	20
Figure 14 - Total track access charges for the Minimum Access Package per country in 2021	21
Figure 15 - Share of total track access charges for the Minimum Access Package	22
Figure 16 - Share of TAC paid by railway undertakings for passenger and freight services in 2021	23
Figure 17 - Track access charges paid per train-km for passenger and freight services in 2021	24
Figure 18 - Track access charges paid per train-km for PSO and Non-PSO services in 2021	25
Figure 19 - Number of active railway undertakings (total and per service) in 2021	27
Figure 20 - Rail traffic and breakdown between passenger and freight services in 2021	28
Figure 21 - Rail freight traffic in 2021 and change since 2019	30
Figure 22 - Freight traffic load in 2021	31
Figure 23 - Freight traffic load change over five years	31
Figure 24 - Market shares of freight railway undertakings in 2021 (based on train-km)	32
Figure 25 - Market shares of freight railway undertakings in 2021 (based on net tonne-km)	33
Figure 26 - Freight railway undertakings' revenues per train-km and net tonne-km in 2021	34
Figure 27 - Rail passenger traffic in 2021 and evolution between 2019 and 2021	36
Figure 28 - Passenger-km per inhabitant in 2021	37
Figure 29 - Number of passenger-km per train-km in 2021	37
Figure 30 - Number of passenger-km per train-km in 2021 – PSO services	38
Figure 31 - Number of passenger-km per train-km in 2021 – non-PSO services	38
Figure 32 - National and international passenger traffic 2021	39

Figure 33 - Share of PSO and Non-PSO services in 2021 (based on train-km)	40
Figure 34 - Share of PSO and Non-PSO services in 2021 (based on passenger-km)	40
Figure 35 - Market shares of passenger railway undertakings in 2021 (based on passenger-km)	41
Figure 36 - Market shares of passenger railway undertakings in 2021 (based on train-km)	42
Figure 37 - Passenger railway undertakings' revenues per train-km and per passenger-km in 2021	43
Figure 38 - Passenger railway undertakings' PSO revenues from fares in 2021 per passenger-km	44
Figure 39 - Breakdown of passenger railway undertakings' PSO revenues between fares and compensations in 2021	44

01

Introduction



Participating countries



*Kosovo (XK): This designation is without prejudice to positions on status and is in line with UNSCR 1244 (1999) and the ICJ opinion on the Kosovo declaration of independence.

This working document complements the eleventh IRG-Rail Market Monitoring Report¹. It provides additional context to support the results presented in the main report and more detailed analysis on the developments across monitored countries.

Structure of the working document

The structure of this document follows that of the Main Report, with chapters on the characteristics of the railway network (Chapter **Erreur ! Source du renvoi introuvable.**), Track Access Charges (Chapter 3), railway undertakings and European rail traffic (Chapter 4) before analysing the rail freight (Chapter 5) and the rail passenger (Chapter 6) markets.

The Working Document also includes a summary of main regulatory decisions taken in each country in 2021 (Chapter 7).

All data provided in tables and figures within this Working Document are available on the IRG-Rail website².

¹ The eleventh IRG-Rail Market Monitoring Report can be found [here](#).

² The data are available [here](#).

02

Characteristics of the railway network



2.1. Total route length

Total route length across the monitored countries was approximately 234,000 km in 2021.

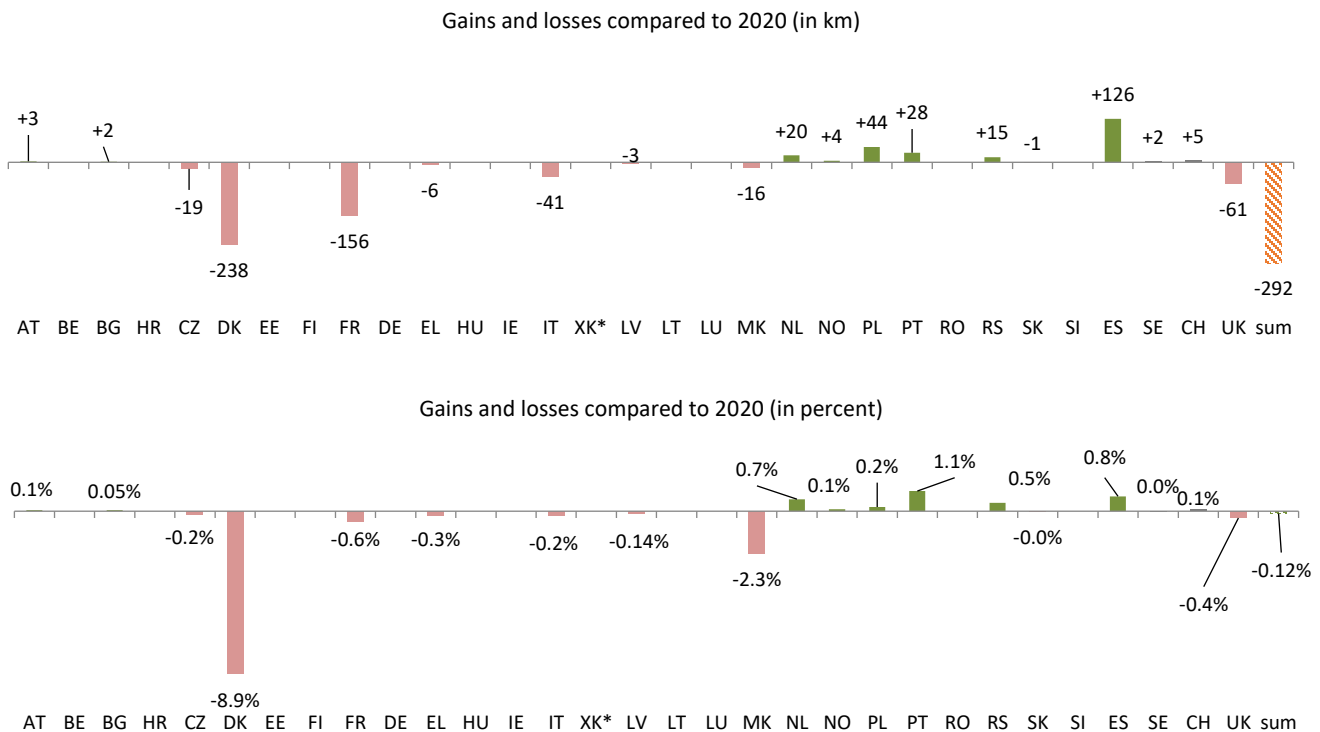
Compared to 2020, ten countries reported an increase in total route length. Most notable was the increase in Spain (+126 km in total route length). This was due to the development of additional high-speed routes. The largest increase in relation to total route length was reported in Portugal (+1%).

On the other hand, nine countries reported a decrease in total route length (Czech Republic, Greece, Denmark, France, Italy, Latvia, Republic of North Macedonia, Slovakia and the UK).

Denmark reported the largest decrease in relation to total route length (-9%). This can be compared with 2020 when Denmark reported a relatively large increase of route length (+6%). The changes in route length between 2020 and 2021 can be explained by the fact that some routes were closed due to temporary capacity restrictions and data is only reported for routes in operation.

France reported the second largest decrease in total route length (-156 km). This is part of a historical trend of decreasing route length in France (the total route length in France dropped for about -1,080 km between 2015 and 2021), decided by the infrastructure manager and which mainly concerns the oldest tracks of the network (73 years old on average in 2021) not used for passenger activities.

FIGURE 1 - EVOLUTION OF TOTAL ROUTE LENGTH (IN KM AND IN %) BETWEEN 2020 AND 2021

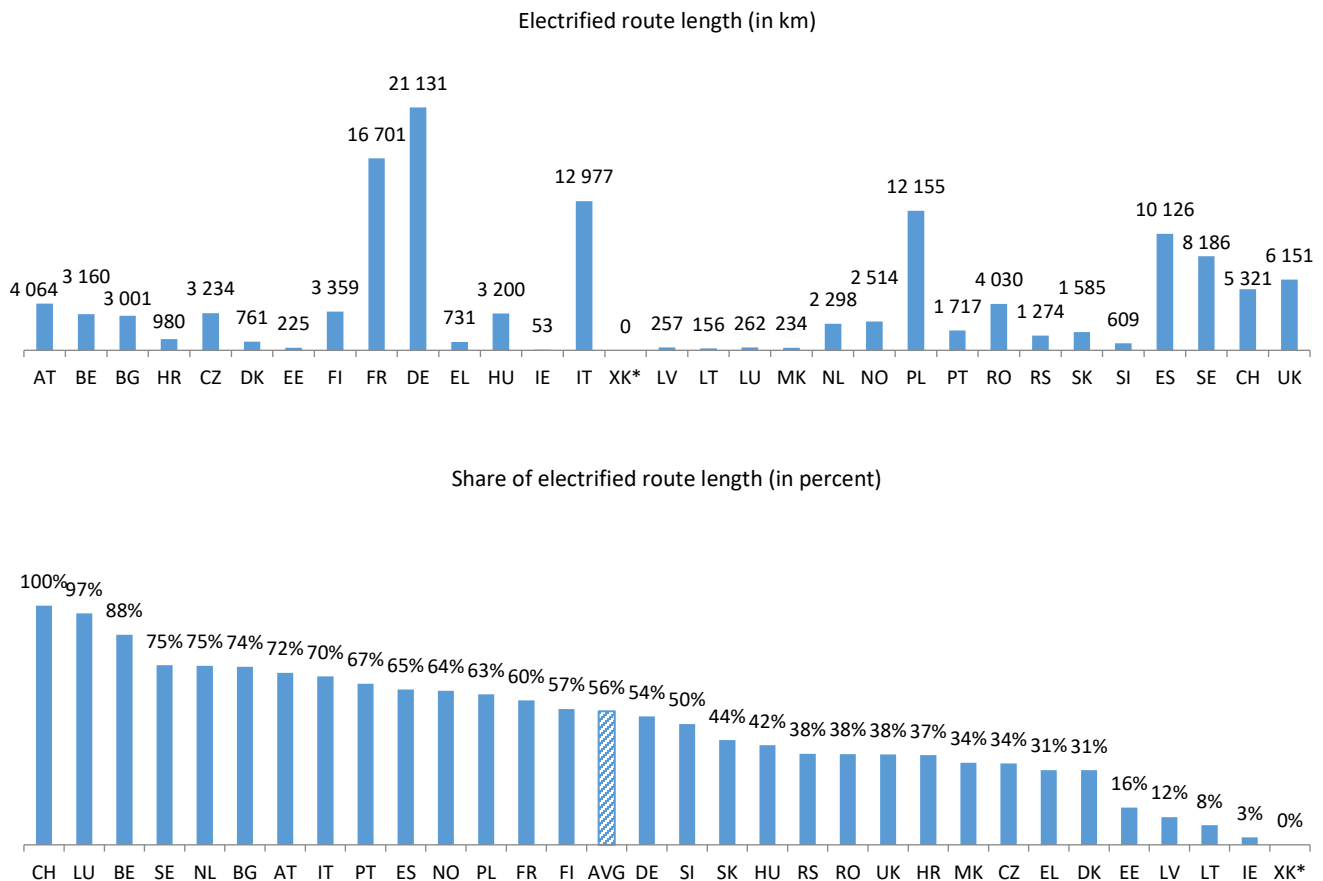


2.2. Electrified route length

In 2021, 56% of the total railway network in participating countries was electrified. This proportion has gradually been increasing in recent years. The level of electrification of the railway network varies significantly between monitored countries. Switzerland is the only country with a fully electrified network, while Kosovo has the only European network where no tracks are electrified. Eight countries have a railway network where 70% or more of the tracks are electrified. Top three are Switzerland (100%), Luxembourg (97%) and Belgium (88%). In seven of the monitored countries, the level of electrification is below a third of the total railway network. This is the case in Denmark, Estonia, Ireland, Kosovo, Lithuania, Latvia and Greece.

Compared to 2020, some countries show an increase in the length of electrified route length in 2021. This was the case especially in terms of network length in Poland (+209 km), Germany (+189 km), Spain (+172km) and Bulgaria (+130 km, representing a more significant proportion increase of +3 percentage points than for the other countries), Hungary (+89 km), France and Italy (+41 km each).

FIGURE 2 - ELECTRIFIED ROUTE LENGTH (IN KM AND IN % OF THE TOTAL ROUTE LENGTH) IN 2021



2.3. High-speed route length

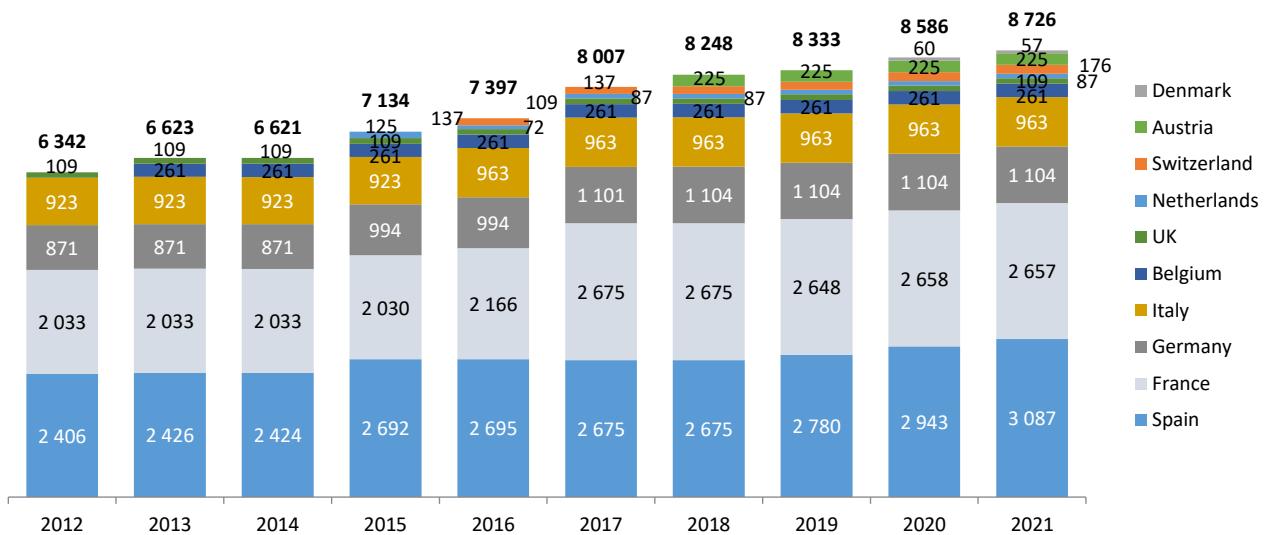
Another indicator of the ongoing development of the European railway network is the expansion of high-speed lines. Among the monitored countries, ten countries have reported featuring dedicated high-speed lines as defined in the European Commission's Implementing Regulation 2015/1100.

France and Spain have the longest high-speed lines. Together they run approximately two-thirds of the total high-speed lines in all monitored countries. Spain is the only country where a new high-speed line was completed in 2021 (+144 km, representing an increase of +5% of the Spanish high-speed network).

The total high-speed route length increased by almost +2% between 2020 and 2021 and has been gradually growing during recent years.

FIGURE 3 – HIGH-SPEED ROUTE LENGTH FROM 2012 TO 2021

(in km per country)



2.4. ETCS-enabled route length

ERTMS/ETCS (European Rail Traffic Management System/European Train Control System) network compatibility is an indicator for the degree of interoperability across European rail networks. In 2021, 16 countries reported ETCS-enabled routes. Luxembourg has the highest share of ERTMS/ETCS-enabled route length (98%), followed by Switzerland (74%) and Belgium (73%).

Besides these three countries, there are only three more countries with a share of ERTMS/ETCS-enabled route length higher than 10%: Denmark, Slovenia and Spain. Denmark showed the largest increase of ERTMS/ETCS-enabled route length, from 6% in 2020 to 13% in 2021.

FIGURE 4 - ERTMS/ETCS-ENABLED ROUTE LENGTH IN 2021

(in km per country)

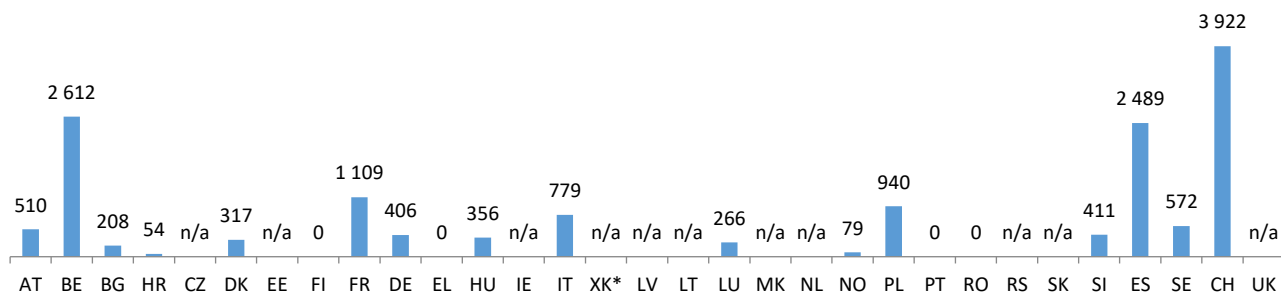
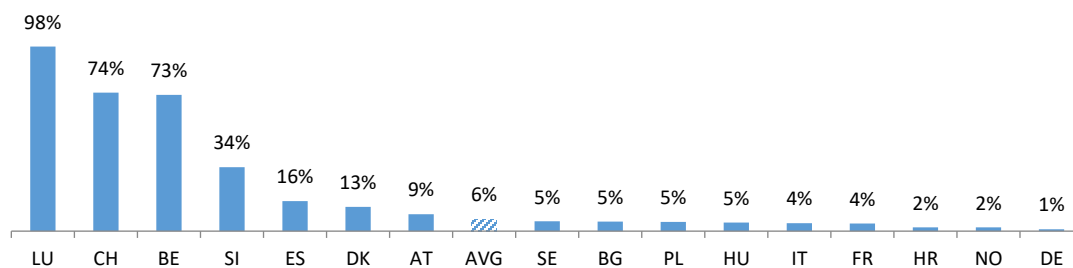


FIGURE 5 - ERTMS/ETCS-ENABLED ROUTE SHARE OF TOTAL ROUTE LENGTH IN 2021

(in percent)



2.5. Main infrastructure managers' share of route length

In 2021, the main infrastructure managers in the monitored countries administrated 94% of the total route length on average. This share slightly increased compared to 2020 (when it was 93%) but is the same as in 2019.

The main infrastructure manager administrates the entire network in 17 countries. Overall, the share of the main infrastructure manager typically does not change much from year to year. In seven countries the share is 90% or higher, but still below 100%. In three countries the share is 80% or lower: Switzerland (61%), Kosovo (76%) and Denmark (80%). This is explained in Switzerland by the regional organization of railroads, and in Denmark by several regional or international railways connected to the main infrastructure and managed by other infrastructure managers than the main infrastructure manager Banedanmark. Despite being one of the countries with the lowest share, the share of the main infrastructure manager in Denmark has increased by +4 percentage points compared to 2020.

FIGURE 6 - MAIN INFRASTRUCTURE MANAGERS' SHARE OF TOTAL ROUTE LENGTH IN 2021

(in percent)



2.6. Network usage intensity

Network usage intensity is an indicator of the overall occupancy of the railway network, as it measures the number of train-km per route-km per day for freight and passenger services. Since the measure is done for the whole country, it does not account for how usage can vary between different regions within a country.

The network usage intensity suffered a significant decrease in 2020 due to significantly less trains being operated but started to recover in 2021. For passenger services, the average usage was 42 train-km per route-km per day in 2021. In almost all countries the network usage intensity for passenger services increased or remained the same compared to 2020. The only exceptions were Lithuania and Finland, where the network usage intensity for these services decreased slightly. For Finland this happened because passenger traffic did not reach normal levels at any point during the year, in comparison with a high level of network utilization during the first quarter of 2020. For Lithuania, different kinds of restrictions were imposed especially during the first half of 2021, for example limited numbers of passengers on local trains and inter-city movement controls.

The rail network was predominantly used for passenger services in almost all monitored countries. The network usage intensity for these services was highest in the Netherlands, followed by Switzerland, Denmark and the UK. Despite the COVID-19 pandemic having a larger impact on passenger services than on freight services, passenger services continued to dominate the network usage. The recovery for passenger services that could be observed in many countries in 2021 led to close or even higher levels of network usage intensity than before the pandemic:

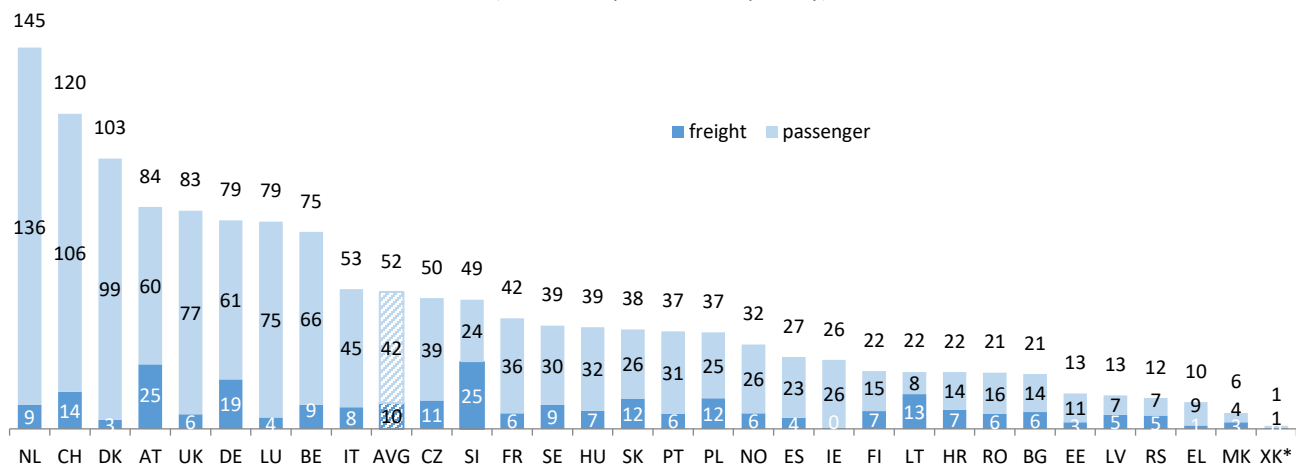
- 9 countries reported higher levels of passenger traffic in 2021 in comparison with 2019, in particular Denmark, Hungary, Poland and Slovenia all had a net increase of above +5%;
- 13 other countries reported a network usage for passenger services between 90% and 100% of 2019 levels;
- 9 countries reported a passenger traffic below 90% of 2019 levels: Finland and Croatia (89% each), Ireland (86%), Lithuania and United Kingdom (83% each), North Macedonia (80%), Spain (78%), Greece (74%) and Kosovo (70%).

Since freight services were less affected by the pandemic, the changes per country were rather small. An average of 9 train-km per route-km per day was roughly the same in 2019, 2020 and 2021. The network usage intensity for these services was the highest in Austria, Slovenia and Germany. In comparison with 2019, 17 countries reported a usage intensity for freight services above 99% of 2019 levels and ten additional countries were at more than 90% of 2019 levels.

Similar to previous years, Slovenia and Lithuania were the only countries where the network was more intensively used by freight services than by passenger services.

FIGURE 7 - NETWORK USAGE INTENSITY IN 2021

(in train-km per route-km per day)



2.7. Network usage intensity on electrified and non-electrified routes

A new indicator that has been collected for this report is the network usage intensity on electrified and non-electrified routes. To clarify, this indicator is derived from the volume of electrified train-km and does not exactly equal the total usage intensity on electrified and non-electrified routes, since non-electrified trains (mainly diesel trains) may also be operated on electrified routes. Therefore the “network usage intensity on electrified routes” may be interpreted as an underestimated value, whereas the “network usage intensity on non-electrified routes” may be interpreted as an overestimated value. 21 IRG-Rail members were able to provide this indicator.

The results show that the electrified network usage intensity is higher in all monitored countries. Indeed, in all but two countries (Lithuania and Luxembourg) the usage intensity for electrified routes is at least twice that of non-electrified routes. In several countries the differences are even bigger, with a network usage several times higher on the electrified routes. Possible reasons explaining this difference may be the more efficient capacity management on electrified routes due to their technical equipment (which allows for higher volumes of traffic) or the type of rolling stock and traction energy used for rail activities per country. A correlation can also be assumed between the electrification of the railway network and the higher level of traffic observed (or expected) on these routes.

The most extreme example of a much higher use of electrified than non-electrified network usage is Sweden where the network usage intensity is 17 times higher on the electrified than on the non-electrified part of the network. This can be explained by the fact that all major lines with high traffic intensity are electrified and that prices for traction electricity in Sweden have historically been much lower than prices for diesel fuel.

FIGURE 8 – NETWORK USAGE INTENSITY ON ELECTRIFIED ROUTES (ELECTRIFIED TRAIN-KM ONLY)

(in train-km per route-km per day)

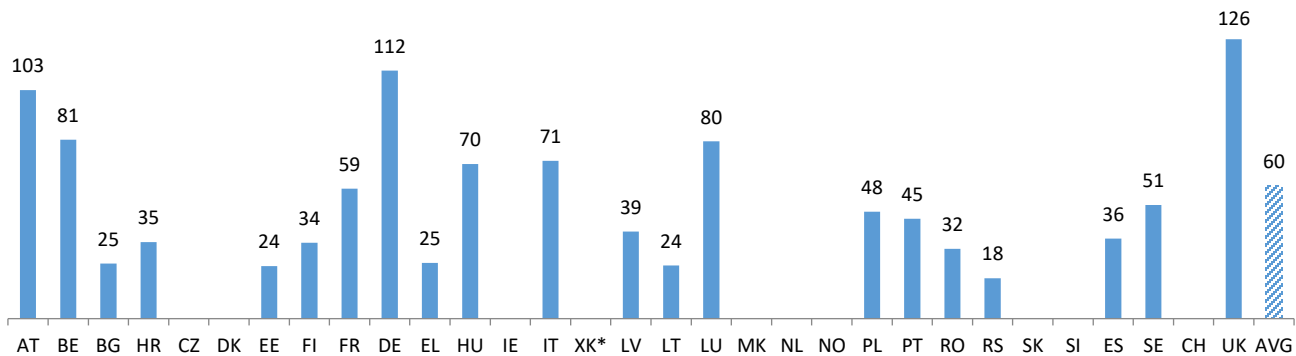
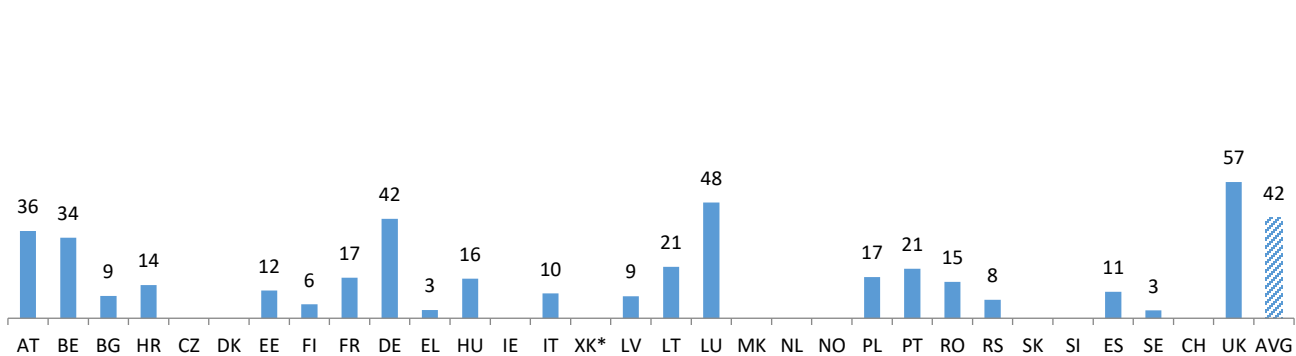


FIGURE 9 – NETWORK USAGE INTENSITY ON NON-ELECTRIFIED ROUTES³

(in train-km per route-km per day)



2.8. Infrastructure managers' expenditures

This year's data collection also contains a question regarding the IMs' expenditures on maintenance, renewals and investment on the network. The definitions used are the same as the ones used in the European Commission's

³ As mentioned in the introduction of this paragraph, this indicator is computed as the ratio of total non-electrified train-km over the non-electrified route length. As non-electrified train-km may partly be operated on the electrified network, this indicator must be interpreted as an overestimated value.

Implementing Regulation 2015/1100, with the exception that investments in this report comprises both upgrades and new infrastructure⁴.

25 IRG-Rail members responded to this question. Of these countries, the highest level of IM's expenditures was reported from Germany, followed by France. This is related to the fact that these two countries have the longest networks.

However, the length of the network doesn't seem to be the only determinant for the IMs' expenditures. Calculated per route-km, Luxembourg is the country with the highest level of IM's expenditure on its infrastructure, followed by the Netherlands and Norway.

FIGURE 10 – INFRASTRUCTURE MANAGERS' EXPENDITURES

(in million Euro)

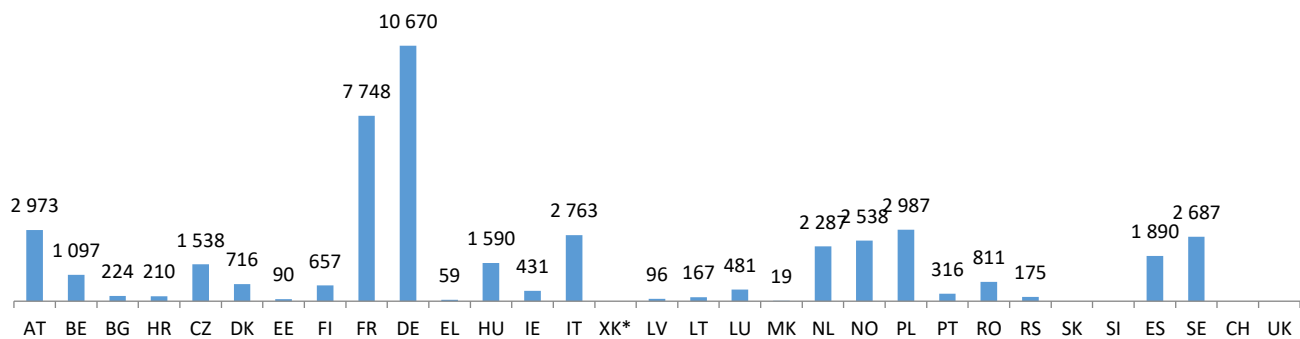
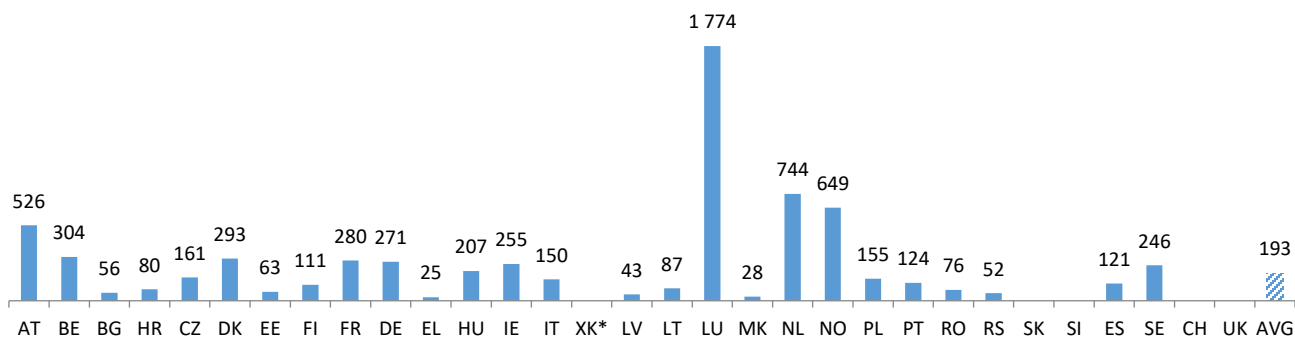


FIGURE 11 – INFRASTRUCTURE MANAGERS' EXPENDITURES PER ROUTE-KM

(in thousand Euro)



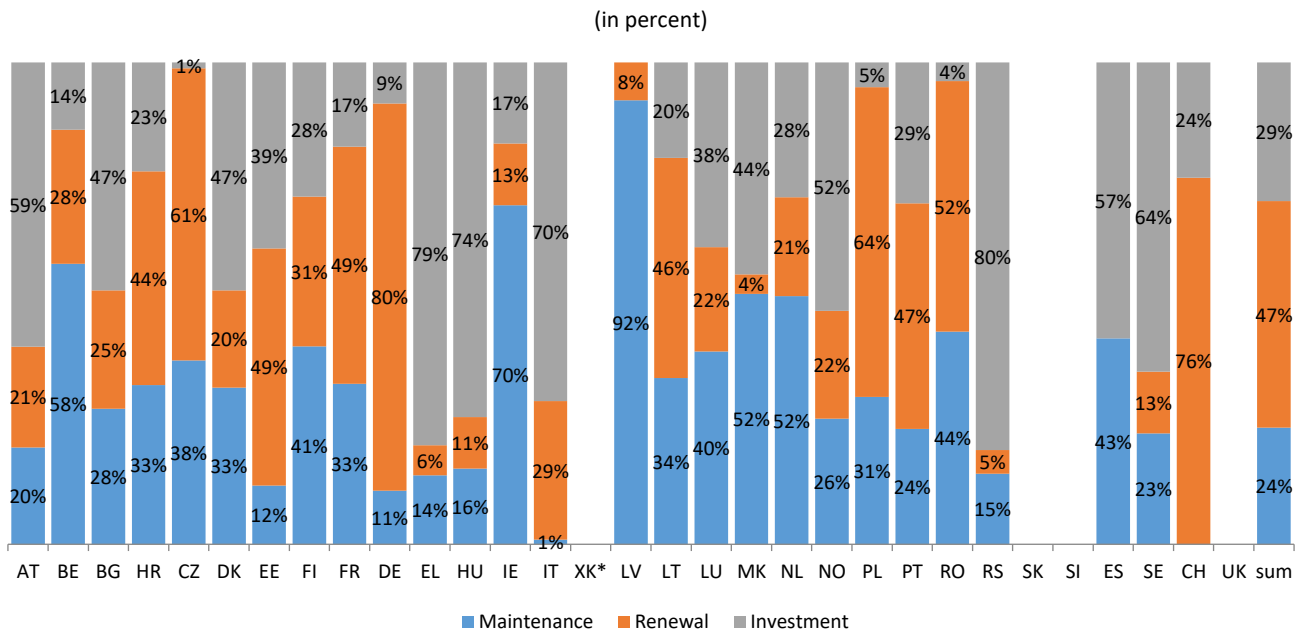
⁴ As precised in the referred regulation, "Maintenance" expenditures comprise non-capital expenditure that the infrastructure manager carries out in order to maintain the condition and capability of the existing infrastructure. "Renewal" expenditures are capital expenditure on a major substitution work on the existing infrastructure which does not change its overall performance. "Investments-Upgrade" are capital expenditure on a major modification work of the infrastructure which improves its overall performance, and "Investments-New infrastructure" are capital expenditure on the projects for construction of new infrastructure installations.

The proportion of the total expenditure which is spent on maintenance, renewals and investment (new infrastructure) respectively varies substantially between the countries. On average, just below 50% is spent by infrastructure managers on renewals and the rest is split more or less evenly between maintenance and investment.

The differences between countries may be explained by numerous reasons. Some countries have older networks that historically have not been well maintained, thus they are in need of more maintenance and renovations. High-speed lines are usually more expensive to build than conventional lines, meaning that countries investing in these kind of lines might need to spend higher amounts. The differences in the usage intensity of the network can also explain why some countries have more expensive maintenance and renewal costs. Among the countries showing the biggest expenditures per route-km, Luxembourg, the Netherlands, Austria, Belgium and Denmark also rank as the countries with the highest level of usage intensity.

Another reason might be related to specific infrastructures (tunnels, bridges, level crossings, safety systems) or specific systems (safety systems, trackside equipments required for train control systems such as ERTMS). This would require more investments and maintenance than the sole construction and maintenance of the railway network.

FIGURE 12 – SHARE OF INFRASTRUCTURE MANAGER'S EXPENDITURES ON MAINTENANCE, RENEWAL AND INVESTMENT



03

Track Access Charges paid
for the minimum access package



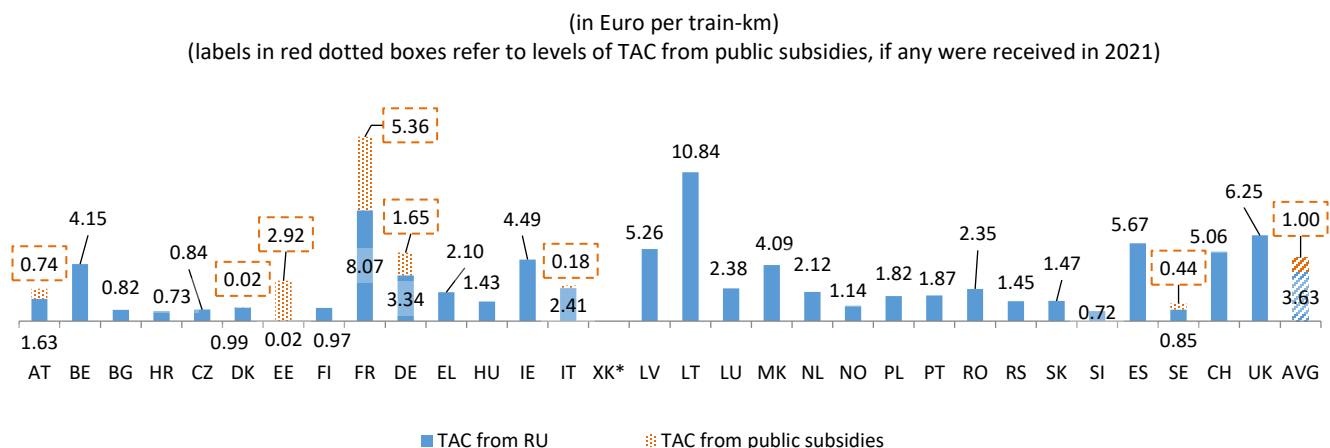
3.1. Track Access Charges per train-km paid for the minimum access package

The average level of Track Access Charges (TAC) per train-km paid by railway undertakings or by means from public funds, continued to vary widely across European countries. Based on Regulation (EU) 2020/1429, several governments expanded their subsidies for TAC to alleviate the negative impact of the COVID-19 pandemic on railway undertakings. Based on this Regulation, subsidies were allowed as TAC-repayments, TAC-reductions or TAC-suspensions.

In 2021, railway undertakings in six countries paid less than €1 per train-km. On the other hand, railway undertakings in Lithuania paid on average nearly €11 per train-km. In France, including subsidies, TAC reached more than €13 per train-km. The European average TAC, without subsidies, fell from €3.76 in 2020 to €3.62 in 2021. The European average of total TAC per train-km including subsidies amounted to €4.63 Euro.

There are several factors for the wide variation in TAC between countries: reasons include differences in the implementation of Directive 2012/34/EU (referring to the costs that are passed through by the IMs), the level of mark-ups and different charging approaches for passenger and freight services as well as different COVID-19 pandemic-related subsidisation schemes⁵. As a result, Figure 13 cannot necessarily be used for direct comparisons between countries.

FIGURE 13 - TRACK ACCESS CHARGES PAID FOR THE MINIMUM ACCESS PACKAGE IN 2021⁶



⁵ IRG-Rail published several papers regarding charging practices in Europe. Details regarding the structure and variations of TAC levels observed in European countries can be found in the paper 'Review of charging practices for the minimum access package in Europe' (2020), available [here](#).

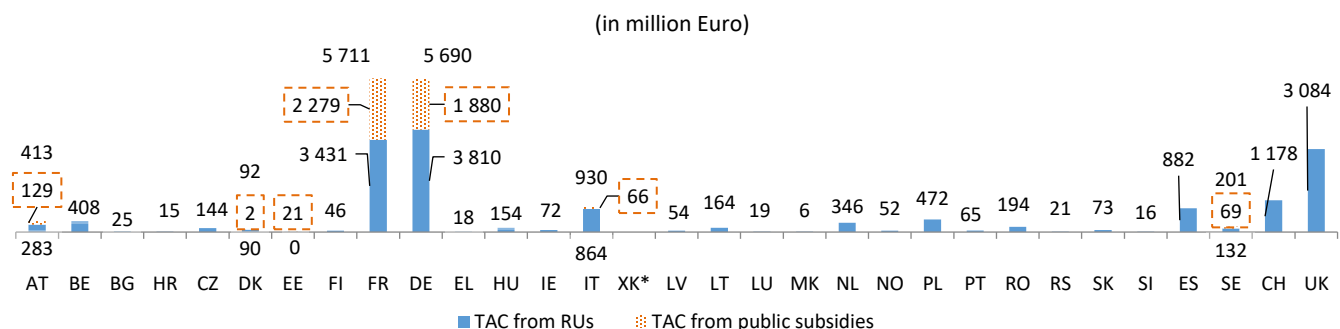
⁶ The average value in this graph differs from the one in the Main Report since the sample is different. This one includes all available data for 2021 (29 countries) while in the Main Report it includes only the countries which provided data for the 2017-2021 period (26 countries).

3.2. Total Track Access Charge volume in European countries

The total amount of TAC in Europe added up to €20.5 billion in 2021, which was 6% more than the year before. This predominantly results from the increase in train-kilometres. More than 50% of the overall European TAC volume was generated in Germany and France. Adding the UK, Switzerland, Italy, Spain, Poland and Austria, 90% of the European TAC volume is covered by those eight countries. The remaining 21 countries accounted for just 10% of the total TAC (Figure 14).

The specific total TAC in a country result from the combination of the level of charges per train-km and the volume of train-km provided. For example, countries like Germany, France, the UK, Switzerland and Spain show both a high volume of train-km and a high level of TAC. On the contrary, countries like Sweden or the Czech Republic show a high number of train-km but have a low level of TAC per train-km and are therefore ranked in the middle part of the TAC volume graph.

FIGURE 14 - TOTAL TRACK ACCESS CHARGES FOR THE MINIMUM ACCESS PACKAGE⁷ PER COUNTRY IN 2021



3.3. Track Access Charges from railway undertakings and from public subsidies

The TAC from public subsidies further increased between 2020 and 2021, mainly as a consequence of measures introduced and expanded by governments to reduce the financial impact of the COVID-19 pandemic on railway undertakings. The share of TAC from public subsidies⁸ of total TAC approached 30% in 2021 compared to 14% to 15% between 2017 and 2019.

Seven countries contributed to this development: Austria, Denmark, Estonia, France, Germany, Italy and Sweden (Figure 15). In Austria, France, Germany, Italy and Sweden both passenger and freight TAC were subsidized, while Denmark only supported freight TAC. Estonia's government granted nearly all TAC in 2021. There might be other

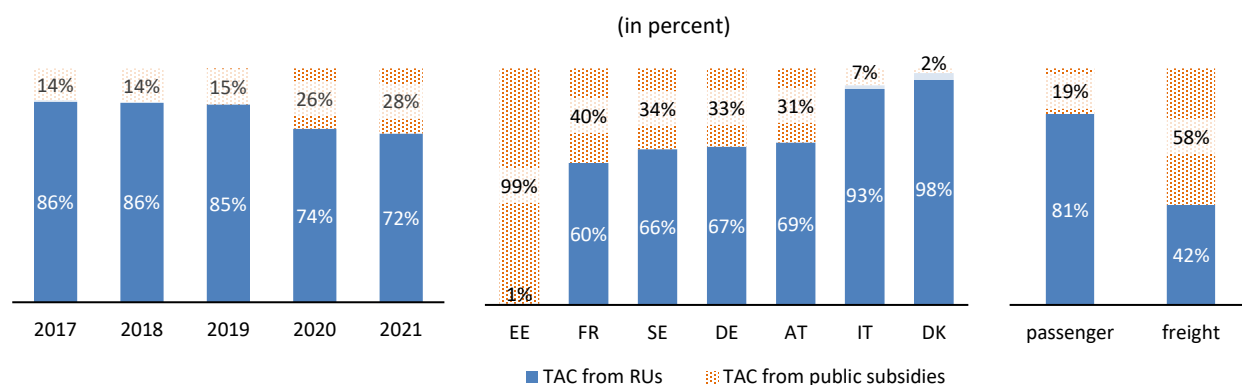
⁷ Please note that the total TAC is a proxy of the sum of TAC from railway undertakings and TAC from public subsidies. Other subsidisation schemes such as direct State aids to the infrastructure managers (applied in particular in the context of the COVID-19 outbreak) in compensation of discounts applied to the TAC may be excluded from this indicator.

⁸ As mentioned in section 3.1 other possible subsidisation schemes, among which possible temporary State aids to the infrastructure managers and TAC discounts adopted in view of the COVID-19 outbreak, are excluded from this indicator.

countries whose governments funded parts of TAC via direct or indirect COVID-19 financial support measures, but data were not available at this level.

While more than 80% of TAC for passenger services were generated by railway undertakings, this share was, in 2021, nearly fifty-fifty for freight charges. This is due to the fact that national subsidy schemes primarily focus on the freight sector. In Germany, for example, in 2021 freight TAC were almost completely funded by the state, which had an enormous impact on the European average due to the size of the German market. This will change back in 2022, after subsidies in several countries will either be scaled down or even be completely phased out. In 2019 the ratio of TAC generated by railway undertakings accounted for 89% of total TAC for passenger services, and 76% of total TAC for freight services.

FIGURE 15 - SHARE OF TOTAL TRACK ACCESS CHARGES FOR THE MINIMUM ACCESS PACKAGE FROM RAILWAY UNDERTAKINGS AND FROM PUBLIC SUBSIDIES DEVELOPMENT FROM 2017 TO 2021, AND 2021 SHARE PER COUNTRY⁹ AND SERVICE



3.4. Track Access Charges for passenger and freight services

Figure 16 shows that there are substantial differences between countries in the share of TAC paid by railway undertakings for freight services and for passenger services. In nearly half of the countries the share of charges collected from passenger services is close to or above 90%.

Alongside with the higher share of passenger services compared with freight services, the charges per train-km for passenger services are typically higher than those for freight services. On the contrary, there are eight countries where more than half of the TAC are paid for freight services – especially in the Baltic states with more than 90% share of freight TAC. However, data for 2021 may be influenced by pandemic-related measures, such as TAC reimbursements or TAC reductions applied differently to passenger and freight services.

⁹ Countries for which TAC partially comes from public subsidies.

FIGURE 16 - SHARE OF TAC PAID BY RAILWAY UNDERTAKINGS FOR PASSENGER AND FREIGHT SERVICES IN 2021¹⁰

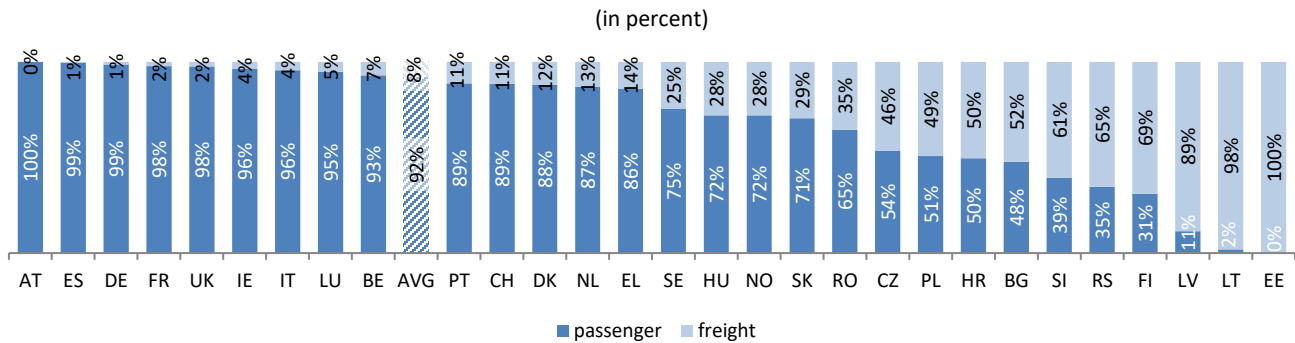


Figure 17 presents the TAC per train-km paid by railway undertakings for passenger and for freight services. The figure again reveals large differences between countries, as well as differences between freight and passenger services within individual countries.

Railway undertakings paid €4.13 on average per passenger train-km, which is 2% less than in 2020. Although passenger TAC increased in 13 countries compared with 2020, the decline in twelve countries with high passenger traffic volumes offset this development on an average level. Eight countries reported a decrease of more than -5% in their average passenger TAC from railway undertakings per train-km compared with the previous year: Austria, Belgium, Germany, Ireland, Latvia, the Netherlands, Norway and Switzerland.

For freight services, the TAC paid by railway undertakings decreased more than that for passenger services. With an average of €1.48 in 2021 and €1.65 in 2020, this equals a drop of 10%. In twelve countries, charges in 2021 were higher than in 2020, but conversely a decrease was observed in 16 countries. In some countries, freight TAC was either fully or almost completely funded by the state in 2021. This was the case in Austria, Estonia and Germany. Large decreases were also seen in Ireland (-31%), Italy (-15%), Latvia (-14%), Spain (-14%), Switzerland (-12%) and Lithuania (-11%).

¹⁰ The average value in this graph differs from the one in the Main Report since the sample is different: this one includes all the available data for 2021 while in the Main Report it includes only the countries which provided data for the 2017-2021 period.

FIGURE 17 - TRACK ACCESS CHARGES PAID PER TRAIN-KM FOR PASSENGER AND FREIGHT SERVICES IN 2021¹¹

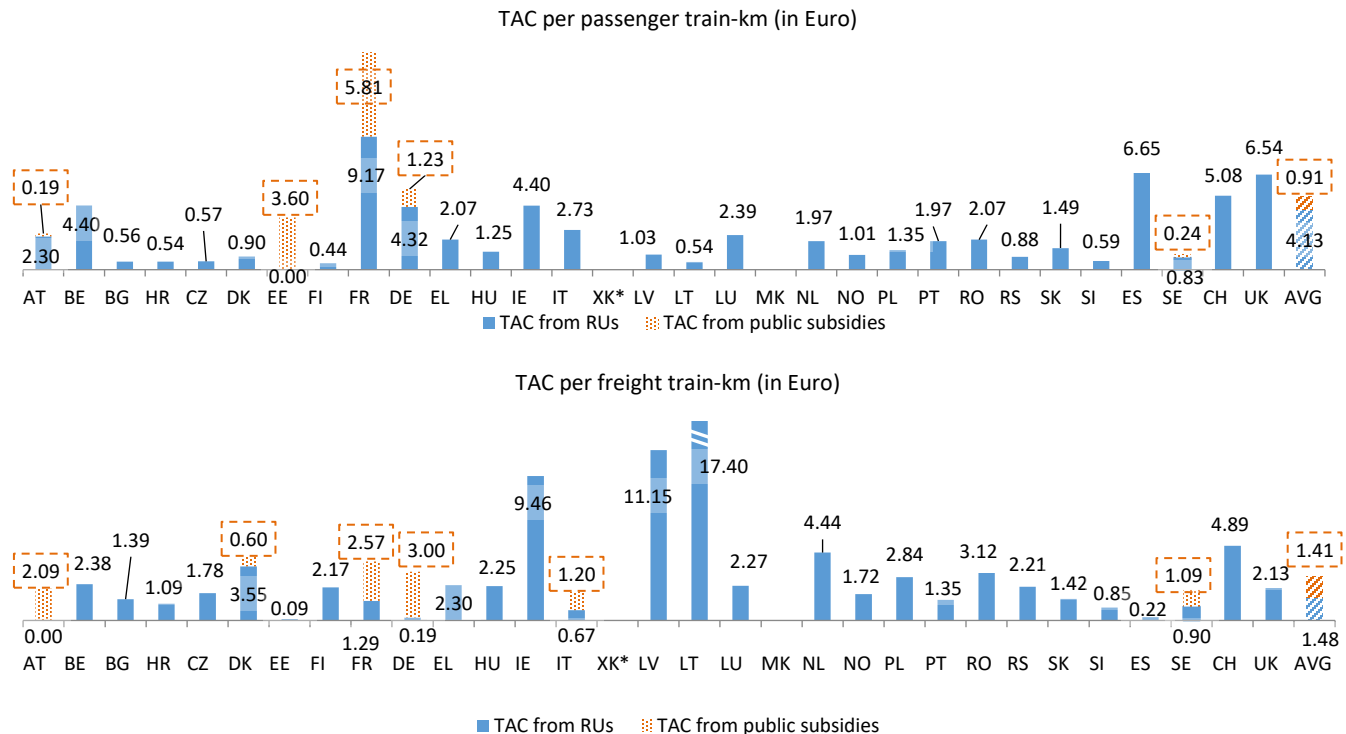
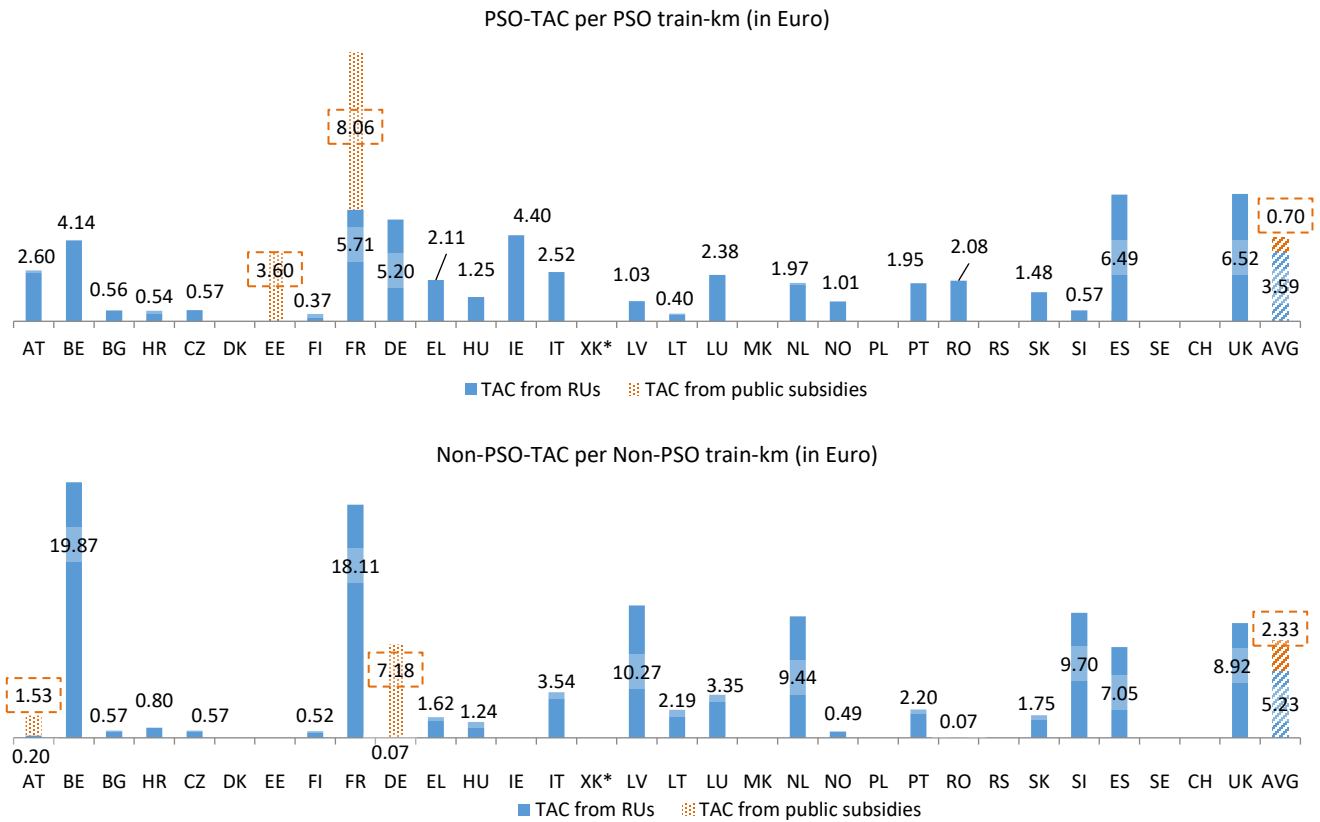


Figure 18 presents the TAC per train-km paid by railway undertakings for PSO and non-PSO passenger services. The figure again reveals differences between countries. Regarding PSO services we can observe that for six countries the level of TAC from RUs is significantly above the average level of €3.59 per train-km: Belgium, France, Germany, Ireland, Spain and the UK, whereas for the majority of other countries, the level of TAC is close to or below €2 per train-km. The variance of TAC however is even greater for non-PSO services, as the level of total TAC (including subsidies) is above €7 per train-km for eight countries (in the case of France and Belgium RUs pay on average more than €18 per train-km), whereas ten countries reported a level of TAC for non-PSO services below €2 per train-km.

¹¹ The average value in this graph differs from the one in the Main Report since the sample is different: this one includes all the available data for 2021 while the one in the Main Report it includes only the countries which provided data for the 2016 -2020 period.

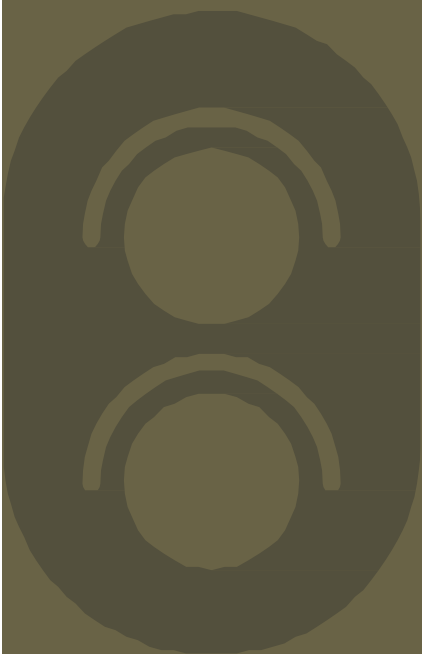
FIGURE 18 - TRACK ACCESS CHARGES PAID PER TRAIN-KM FOR PSO AND NON-PSO SERVICES IN 2021¹²



¹² The average value in this graph differs from the one in the Main Report since the sample is different: this one includes all the available data for 2021 while the one in the Main Report it includes only the countries which provided data for the entire 2017-2021 period.

04

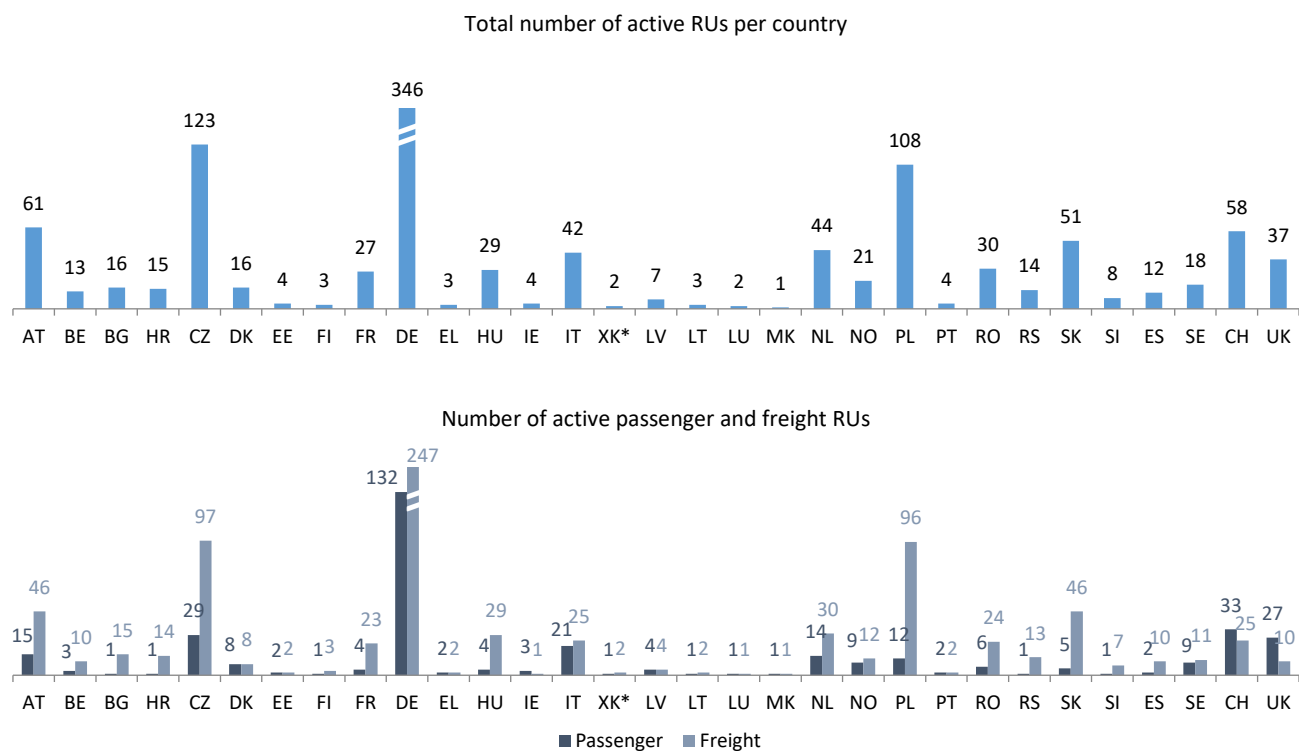
Railway undertakings and European rail traffic



4.1. Railway undertakings

The number of active railway undertakings in IRG-Rail member countries varies widely due to several factors including historic national developments, degree of market opening, barriers to market entry or the number of mergers. North Macedonia, for example, has only one active railway undertaking that offers both passenger and freight services, indicating a highly concentrated market. In contrast, Germany has 346 active railway companies offering passenger and/or freight services, indicating a highly competitive market. This was also the case in Czech Republic (123) and Poland (108).

FIGURE 19 - NUMBER OF ACTIVE RAILWAY UNDERTAKINGS (TOTAL AND PER SERVICE) IN 2021



For most members (21), the number of active railway undertakings operating freight services exceeded the number operating passenger services. Only Ireland, Switzerland and the United Kingdom have an opposite situation. This may be due to the fact that, for most countries, the market liberalization *de facto* is much more advanced for rail freight traffic than it is for rail passenger traffic, as the deadline for the EU liberalization *de jure* of the rail markets¹³ was effective in January 2007 for freight services but more than ten years later for domestic passenger services¹⁴. It should be noted that there are companies that operate both passenger and freight services, therefore the sum of active passenger and freight railway undertakings is not necessarily equal to the total number for each country.

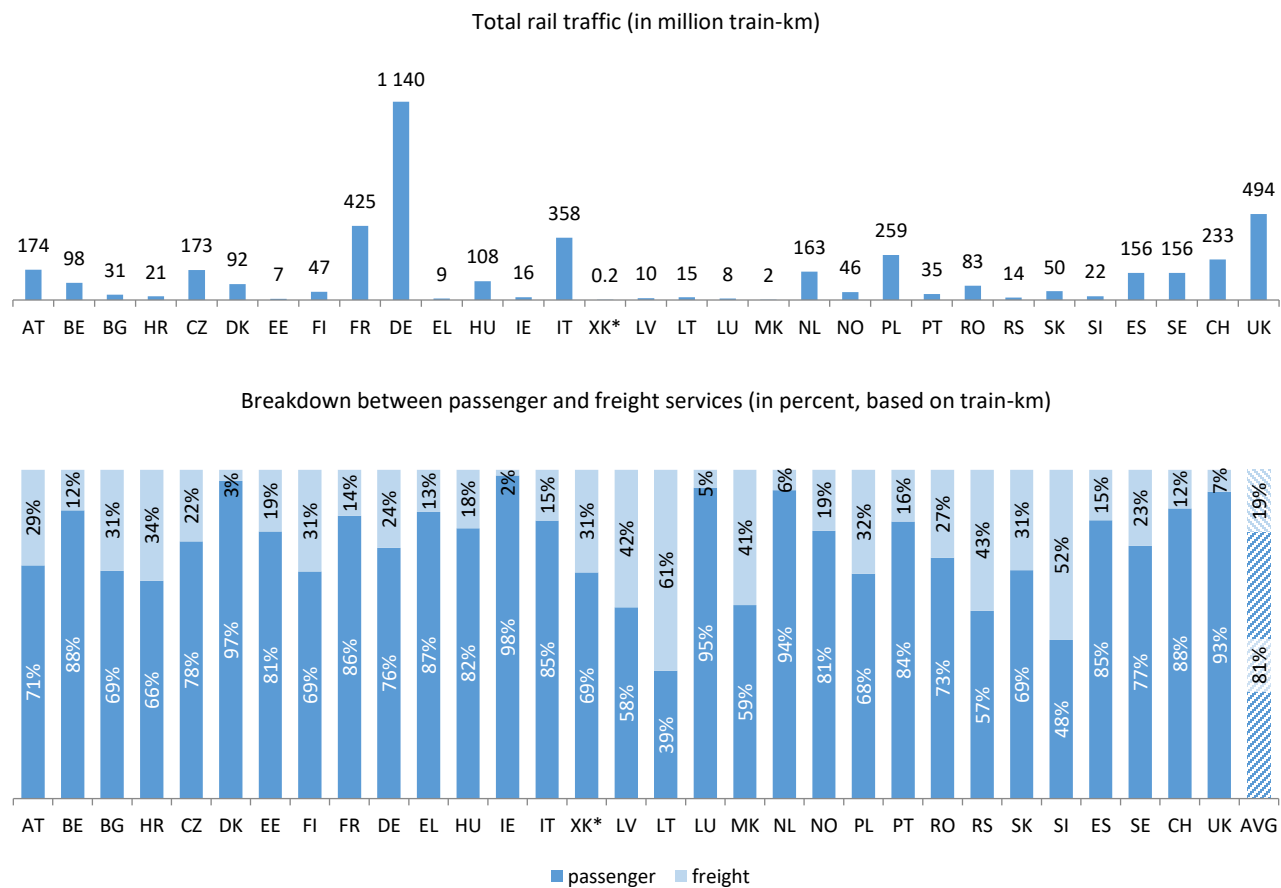
¹³ according to the Directive 2004/51/EC of the second railway package. This Directive was repealed by Directive 2012/34/EU establishing a single European railway area.

¹⁴ in December 2020 (for non-PSO services) and in December 2023 (for the award of new PSO contracts).

4.2. Total rail traffic

In 2021, a total of 4.41 billion train-km was reported by member countries. This was an increase of +7% on the 4.12 billion train-km reported in 2020. However, this still remained -4% lower than the 4.58 billion train-km reported in 2019. Among all member countries, Germany had the highest share of the total traffic (26%), followed by the UK (11%), France (10%) and Italy (8%). Together, these four countries made up over half of the overall European rail traffic.

FIGURE 20 - RAIL TRAFFIC AND BREAKDOWN BETWEEN PASSENGER AND FREIGHT SERVICES IN 2021



In 2021, passenger services accounted for 81% of total traffic (in train-km), while freight traffic made up the remaining 19%. However, the split between passenger and freight traffic varied substantially among member countries. For example, passenger services accounted for 98% of all rail traffic in Ireland, while Denmark, Luxembourg, the Netherlands and the United Kingdom all reported that passenger traffic made up more than 90% of total traffic. In contrast, passenger traffic made up just 39% of total rail traffic in Lithuania. Meanwhile, Lithuania and Slovenia were the only other member countries where the share of freight traffic exceeded that of passenger traffic.

05

The rail freight market



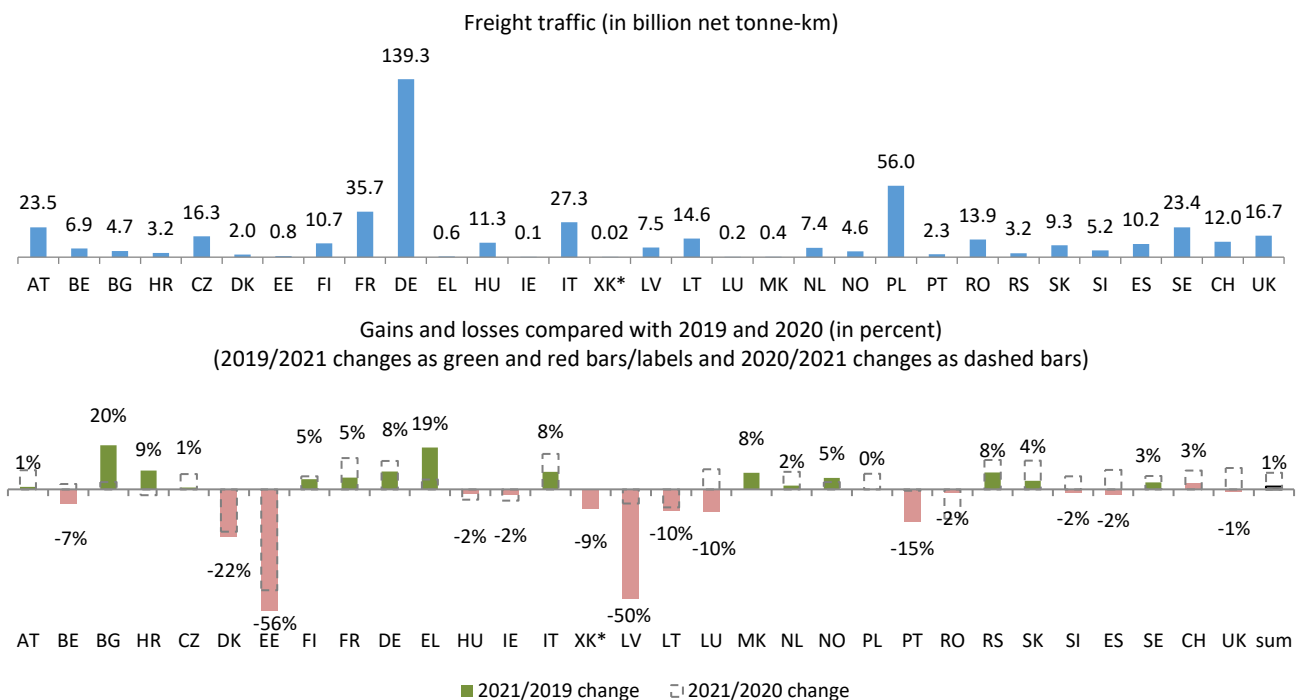
5.1. Rail freight market size

In 2021, the global rail freight market in IRG-Rail member countries amounted to 466 billion net tonne-km. This is an increase (+8%) compared with 2020, and + 1% compared with 2019. The German rail freight market was the largest with 139.3 billion net tonne-km (30% of the global freight market in IRG-Rail member countries). The Polish and French rail freight market ranked second and third, respectively, individually representing 12% and 8% of the market and cumulatively together with Germany half of the European rail freight traffic in tonne-km.

Most IRG-Rail members reported an increase in demand for rail freight services in 2021 in comparison with 2019, offsetting the drop observed in 2020 related to the economic downturn during the COVID-19 pandemic. Bulgaria and Greece experienced the biggest increases since 2019 (+20% and +19% in tonne-km respectively). This confirms a long-term trend observed for these two countries that can partly be explained, in the case of Greece, by the improved economic situation of the country.

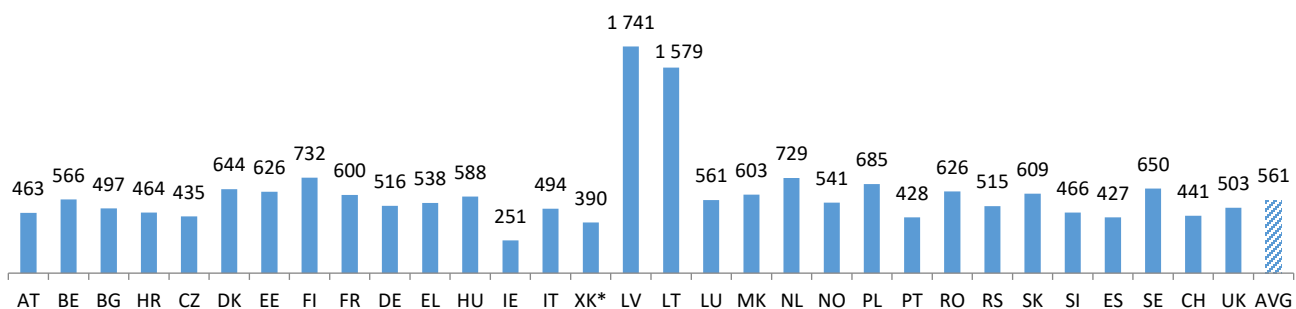
Latvia and Estonia reported the biggest decreases in rail freight traffic (-50% and -56%) since 2019. These significant decreases for the Baltic states may be due to the decisions of Russia and Belarus to redirect the flow of transit cargo from the seaports of Baltic countries to Russian ports or other alternative freight routes. In January 2021, the Russian Ministry of Transport officially announced that most of the transit cargo transported through the Baltic countries' seaports would be redirected to alternative routes from 2022-2023.

FIGURE 21 - RAIL FREIGHT TRAFFIC IN 2021 AND CHANGE SINCE 2019



As in previous years, Lithuania and Latvia reported the highest freight load factor (the number of tonne-km per freight train-km, see Figure 22), whereas Spain, for example, reported a relatively low load factor. This can be explained by structural factors: in Baltic states, the conditions of rail infrastructure and station access roads have been designed to accommodate longer trains (combined with a broad-gauge infrastructure (1520mm)). In Spain on the other hand shorter and lighter trains adapted to the topography of the land (steep slopes) are used and freight traffic is dominated by intermodal transport.

FIGURE 22 - FREIGHT TRAFFIC LOAD IN 2021
(in tonne-km per freight train-km)



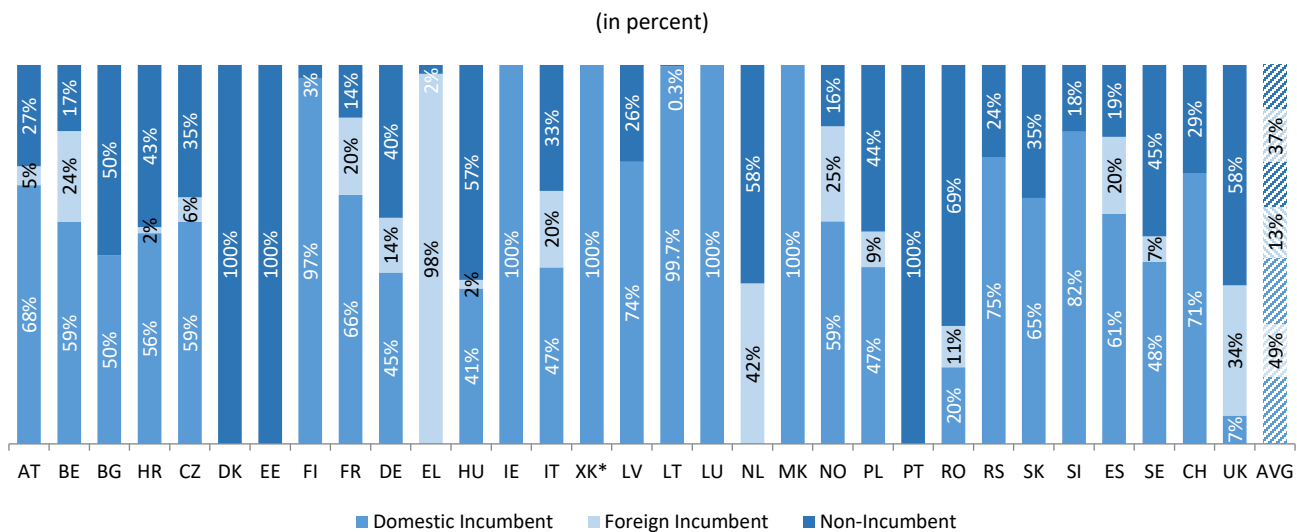
Significant changes regarding the average load per train since 2017 can be observed in Figure 23. In most countries the load factor increased by about +10% or even more. In Greece and in Norway in particular the load factor increased by +30% and +40% respectively: in Greece this is related to the market entry of a new freight railway undertaking with a higher load factor. In Norway this increase may be related to changes in the freight market over the last five years in relation to the type of freight services proposed (showing a decline of the intermodal traffic) and the type of goods carried (increase in the volume of timber and iron ore-trains). On the contrary, Estonia reported a sharp decrease in the load factor from about 1,300 tonne-km per train-km in 2017 (and stable between 2017 and 2020) to 626 in 2021.

FIGURE 23 - FREIGHT TRAFFIC LOAD CHANGE OVER FIVE YEARS
(total change of the load factor between 2017 and 2021, in percent)

5.2. Market shares of freight railway undertakings

The two figures below show the market shares of three categories of freight railway undertakings (domestic incumbents, foreign incumbents and non-incumbents), considering freight train-km and net tonne-km, respectively. In 19 countries, the majority share of the freight market measured in freight train-km was operated by domestic incumbents. This was the case for 17 countries in terms of tonne-km. In 2021, domestic incumbents represented 49% of the traffic (in train-km as in net tonne-km) on a global average. This represents a drop of 3 percentage points for train-km and 4 percentage points for tonne-km, each compared to 2019.

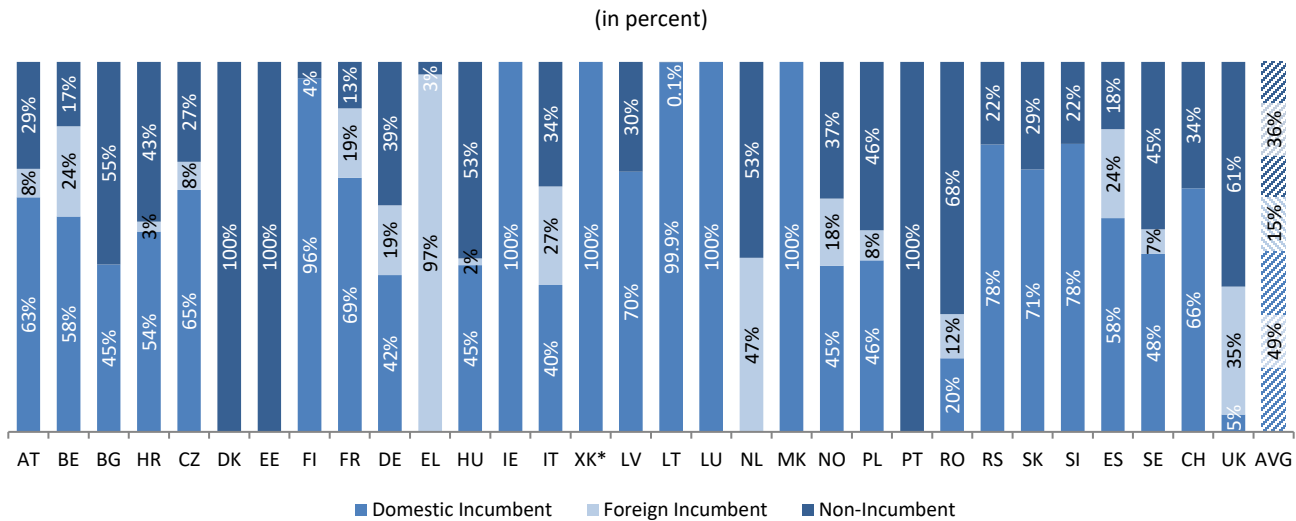
FIGURE 24 - MARKET SHARES OF FREIGHT RAILWAY UNDERTAKINGS IN 2021 (BASED ON TRAIN-KM)



In 2021, four countries (Ireland, Kosovo, Luxembourg and North Macedonia) continued to show a monopoly situation for the domestic incumbent in their rail freight market. On the other hand, rail freight transport was exclusively operated by non-incumbents in Denmark, Estonia and Portugal. Bulgaria, Hungary, the Netherlands, Romania and the UK reported market shares of non-incumbents equal to or above 50%.

More specifically, in 2021 there was an increase in the share of competitors (foreign incumbents and non-incumbents) for freight tonne-km in 17 countries compared to 2019.

FIGURE 25 - MARKET SHARES OF FREIGHT RAILWAY UNDERTAKINGS IN 2021 (BASED ON NET TONNE-KM)



5.3. Economic performance of freight railway undertakings

In 2021, on the supply side, the average revenue per freight train-km was €20.79¹⁵. It remained relatively stable in comparison with 2019 (+0.2%). The highest revenue per freight train-km (€61.35) was, as in previous years, recorded for Luxembourg. This can be explained by the very limited domestic market and country size as well as by the absence of new market entrants.

The total revenue of freight railway undertakings considered for this section comes, in a great majority of countries, from direct revenue of railway undertakings only, and partially from public subsidies for five countries: Austria (13% of the revenue), France (6%), Serbia (6%), Italy (5%) and Germany (<1%).

Significant increases in freight revenue per train-km between 2019 and 2021 were reported by Norway (+35%) and Kosovo (+30%). On the contrary, the revenue per freight train-km dropped significantly in Ireland (-52%). Overall, there was a decrease in freight revenue per train-km in 9 out of the 23 countries that reported data for both years.

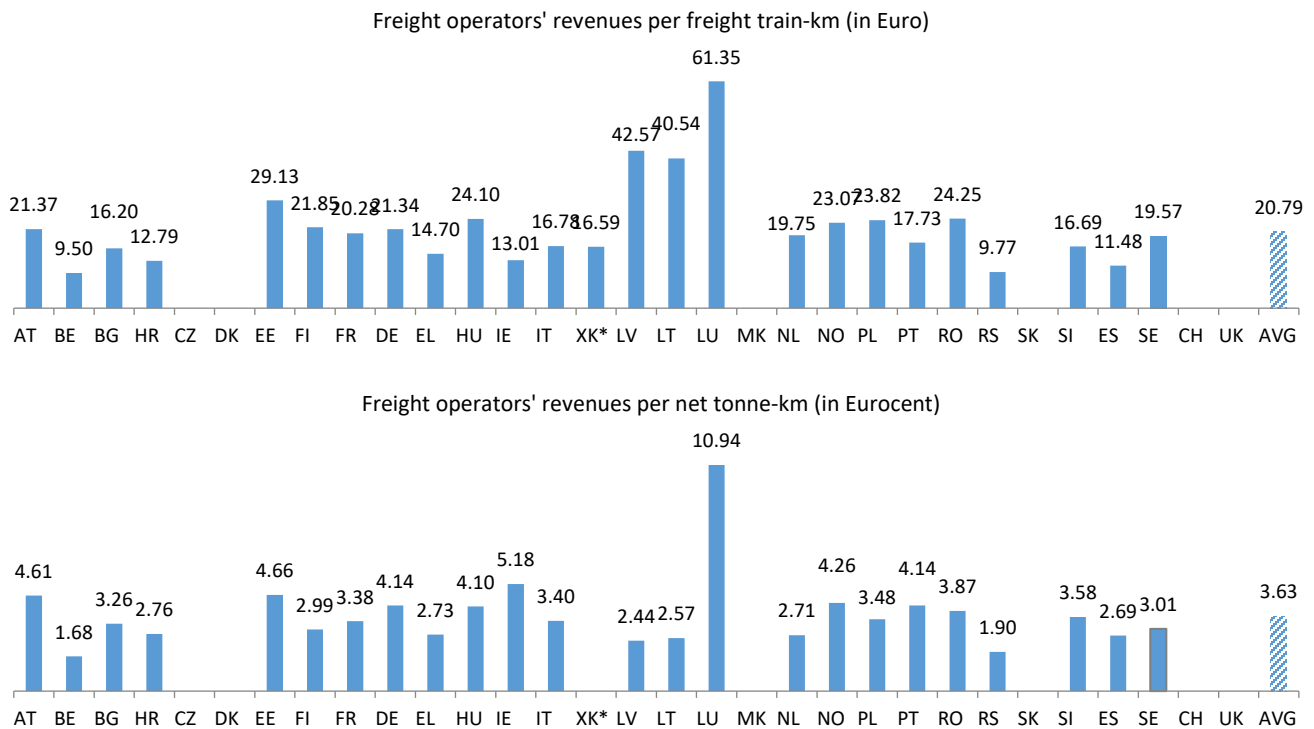
On the demand side, freight revenue per net tonne-km was 3.63 Eurocent on average in 2021, down 1% from 2019. The lowest revenue per net tonne-km (1.78 Eurocent) was recorded for Belgium and the highest in Luxembourg (10.94 Eurocent). Compared to 2019, there were 13 countries that experienced a slight fall in revenue per net tonne-km, among which the biggest one was observed in Belgium (-6,5%). However, some countries showed large increases as well, for example Estonia (+83.5%), Portugal (+32%), Norway (+30%), Latvia (+20%) and Hungary (+16%). In Norway, the observed increase in revenue per train-km is consistent with the increase in revenue per tonne-km. The large increase in revenue per tonne-km observed in Estonia (from 2.54 Eurocent to

¹⁵ Value computed on the more complete panel of reporting countries for 2021 (25 countries). The difference with the statistic mentioned in the Main Report is explained by the reduced panel of countries included for the historical period of five years presented (20 countries).

4.66 Eurocent) did not compensate however the decrease of the load factor, leading to a global decrease in revenue per train-km.

Specific caution should be exercised when reading the revenue of railway undertakings and benchmarking levels and changes per country. All financial indicators are presented in Euro for all countries, but without inflation adjustment, which could partially explain the changes observed in countries. Besides regarding freight services, the type of goods transported may be quite different across countries. Indeed, heavier trains can especially be found in some countries where the most common goods transported are iron ore or coal, while lighter trains prevail in countries with a high share of intermodal transport. The typology of goods transported by freight services per country may consequently affect the average indicator of revenue per net tonne-km. In addition, railway undertakings may use different approaches to calculate the transport costs they charge their clients (giving more emphasis to the weight of goods or to the transport distance), which alters the calculation of freight revenue crucially.

FIGURE 26 - FREIGHT RAILWAY UNDERTAKINGS' REVENUES PER TRAIN-KM AND NET TONNE-KM IN 2021



06

The rail passenger market



6.1. Rail passenger market size

In 2021, the total passenger-km across 31 countries was 303 billion. France had the biggest rail passenger market followed by Germany, the UK and Italy. Together these four countries represent nearly 60% of the market across the reported countries. Most of the countries reported an increase in passenger traffic in 2021 compared with the previous year. The total increase across all monitored countries was +15%. The largest increase (in relative terms) occurred in Spain, where passenger traffic grew by +47%. There were also notable increases in Slovenia, France, Lithuania and the UK.

However, this annual increase in passenger traffic has to be analysed in the light of the impacts of the COVID-19 pandemic, which caused sharp decreases of passenger traffic in 2020 in all European countries and continued to partially affect rail passenger transport in European countries in 2021. As shown in Figure 27, the largest catch-up of 2019 levels was observed in 2021 in Bulgaria, Slovenia, France, Croatia, Estonia, Poland and Romania with 2021/2019 increases above -30% (i.e. 2021 levels above 70% of 2019 levels). Despite the strong 2020/2021 rebound, passenger traffic in Spain and in the UK still appears to be below 60% of their level prior to the COVID-pandemic.

On the other hand, 6 countries reported reductions in passenger traffic for another year (Latvia, Slovakia, Belgium, Germany, Denmark and Sweden). In comparison with 2019, 5 countries reported levels of passenger traffic still cut by half in 2021: Ireland, Italy, North Macedonia, Slovakia and the UK.

FIGURE 27 - RAIL PASSENGER TRAFFIC IN 2021 AND EVOLUTION BETWEEN 2019 AND 2021

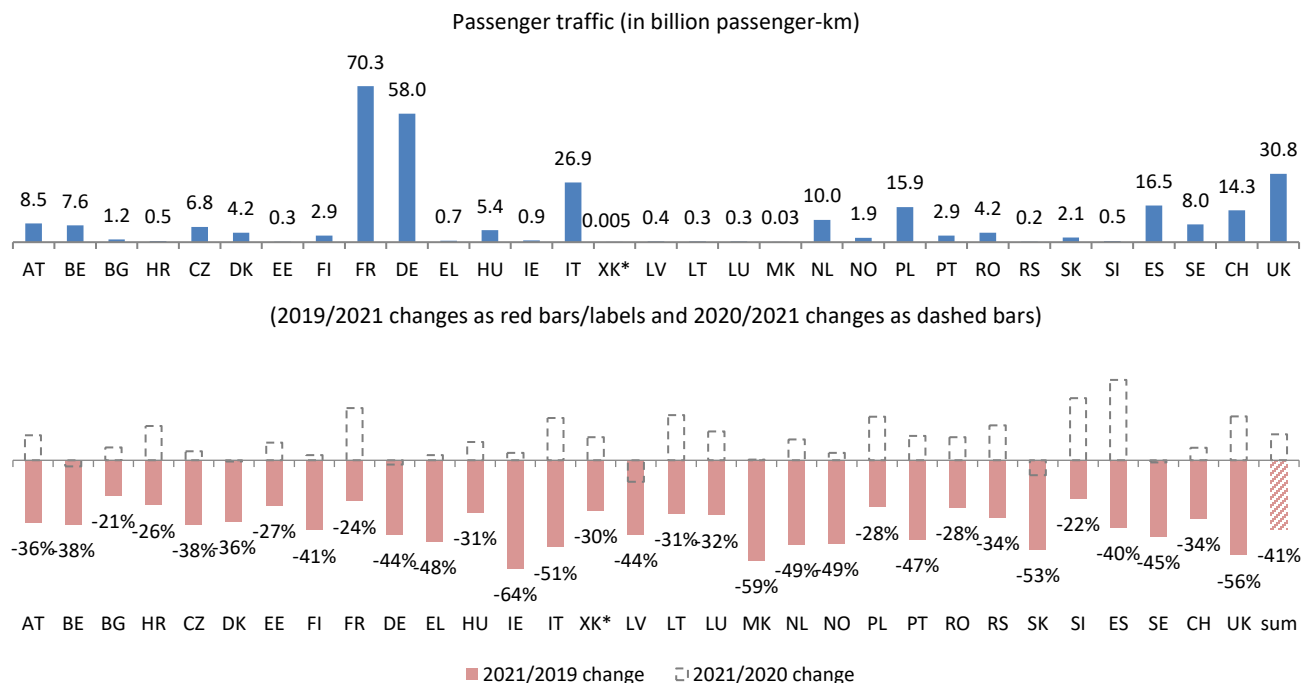
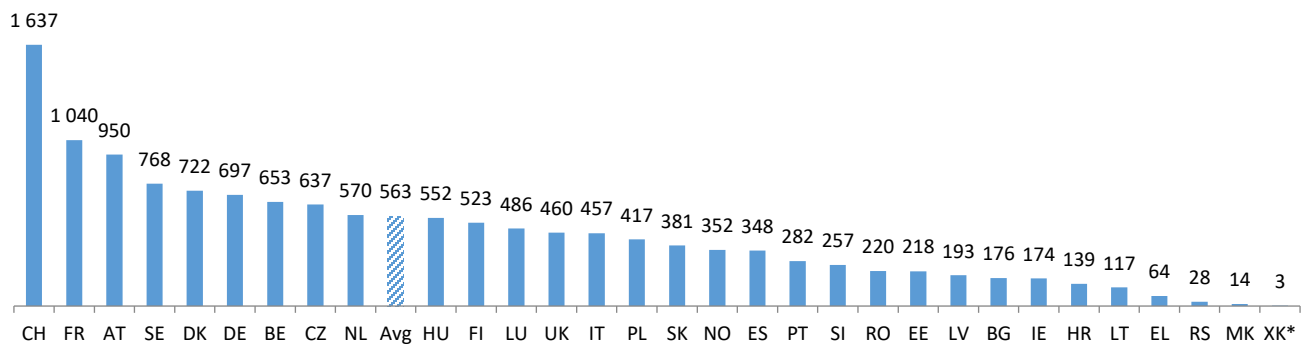


Figure 28 shows how many kilometres, on average, an inhabitant travelled by train in the monitored countries in 2021 (obtained by dividing passenger-km by population). There is still substantial variation between countries, ranging from 3 km per inhabitant in Kosovo to 1,637 km per inhabitant in Switzerland.

FIGURE 28 - PASSENGER-KM PER INHABITANT IN 2021

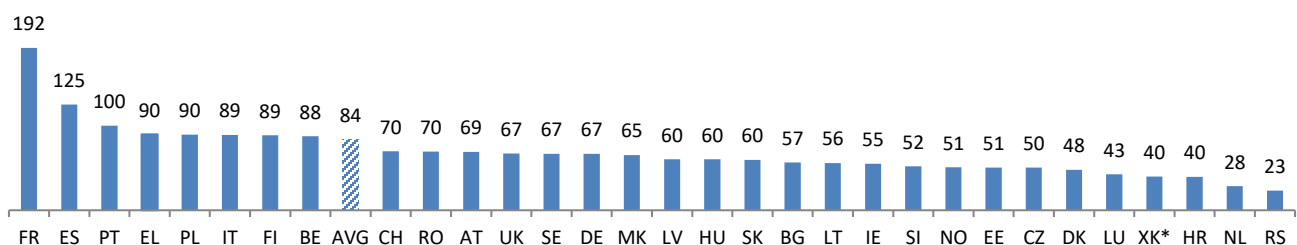


Most countries have shown an increase in passenger-km per inhabitant compared to 2020, but levels are still below traffic figures per inhabitant observed in 2019.

As in previous years, Switzerland continues to show the highest number in terms of passenger-km per inhabitant far ahead from the closest group of France, Austria and Sweden. This can be related to the global modal performance of rail services: as observed in Eurostat statistics¹⁶, these four countries (together with the Netherlands) also rank within the Top Five of countries in terms of modal share of rail passenger transport, showing 20% modal share in Switzerland, 13% in Austria, 12% in Sweden, 11% in the Netherlands and 10% in France for 2019. For Switzerland this can be explained by a comprehensive (covering even most of the country's remote regions) and a well-integrated public transport system with a networked timetable ensuring good transfer connections across all modes of transport (including trains, trams, buses, ferries and cable cars).

Figure 29 shows the passenger load factor for each monitored country. It is calculated by dividing total passenger-km by total passenger train-km. This indicator differs from the occupancy rate. The former is not only affected by the occupancy rate but also by the carrying capacities (i.e. number of seats per train).

FIGURE 29 - NUMBER OF PASSENGER-KM PER TRAIN-KM IN 2021



¹⁶ Eurostat, Modal split of inland passenger transport (code TRAN_HV_PSMOD)

In 2021, France showed the highest passenger-km per passenger train-km, followed by Spain, Portugal, Greece and Poland. France's value was nearly double as high as the average of all monitored countries; this can be attributed partly to the greater capacity of its high-speed services compared to other European countries.

The load factor also varies widely between PSO and non-PSO services, being three times higher for the latter (the average was 66 passengers for PSO services and 212 for non-PSO services). As in 2020, there was way less variation in PSO load factors across monitored countries than for non-PSO services (Figure 30 and Figure 31).

FIGURE 30 - NUMBER OF PASSENGER-KM PER TRAIN-KM IN 2021 – PSO SERVICES

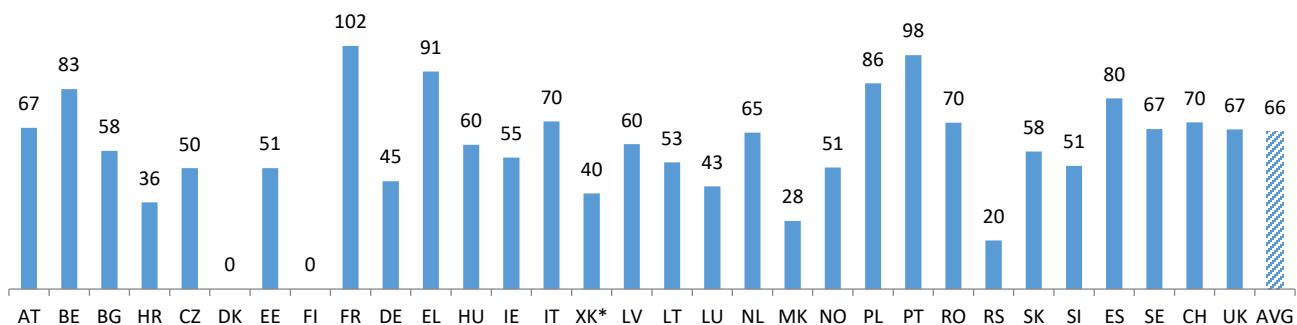
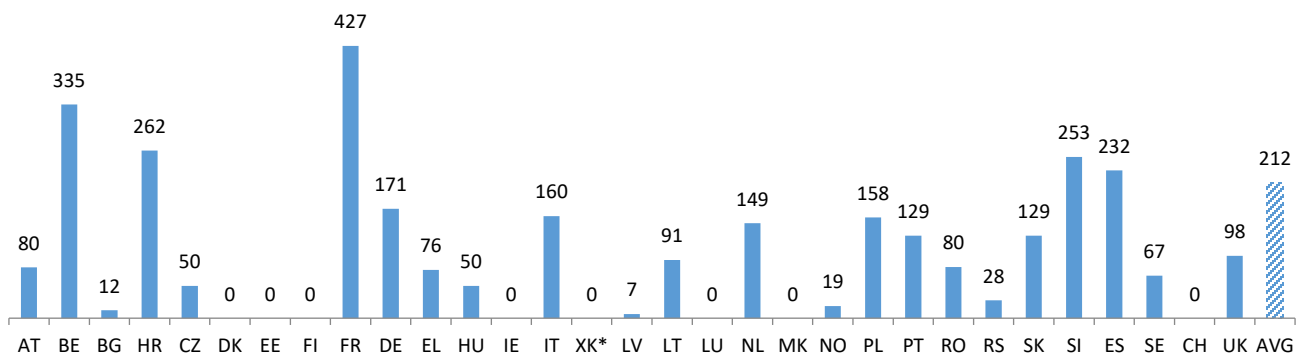


FIGURE 31 - NUMBER OF PASSENGER-KM PER TRAIN-KM IN 2021 – NON-PSO SERVICES

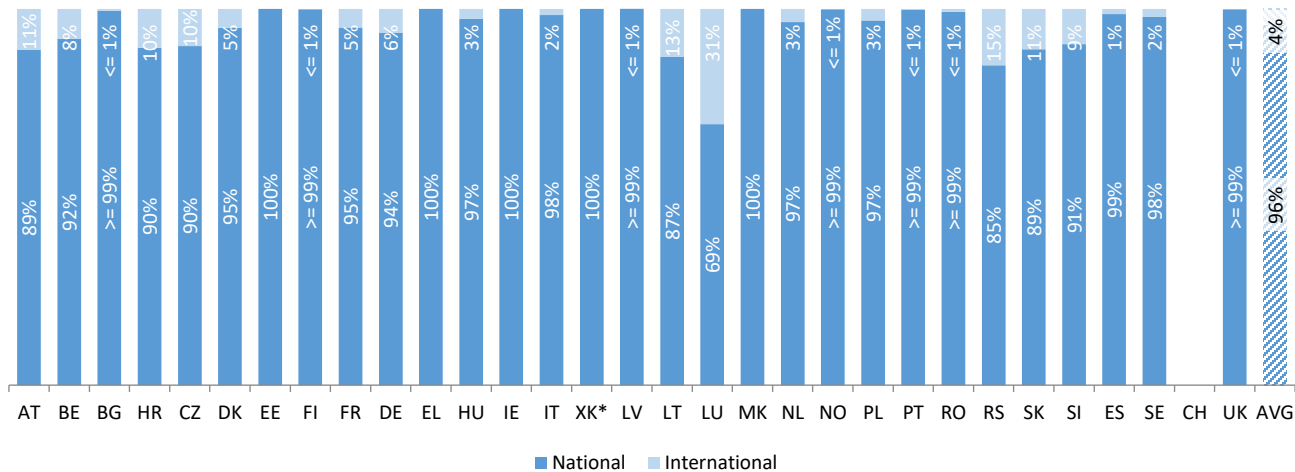


6.2. National and international passenger traffic

During the last two years, due to the COVID-19 pandemic, many countries introduced cross-border travel restrictions which severely impacted international passenger traffic. Figure 32 shows the share of national and international traffic across monitored countries in terms of passenger-km for 2021. The average share of international traffic was just 4% while 96% of all traffic came from national services. This ratio was stable between 2020 and 2021, but the proportion of international traffic appeared higher on average in 2019 for the reporting countries (6%, i.e. +2 percentage points).

FIGURE 32 - NATIONAL AND INTERNATIONAL PASSENGER TRAFFIC 2021

(in percent, based on passenger-km)



The share of international traffic was below the average in 18 countries, with 5 countries reporting no international traffic at all during 2021 (Estonia, Greece, Ireland, Kosovo and North Macedonia). The highest share of international traffic was recorded in Luxembourg (31%) followed by Serbia (15%), Lithuania (13%), Slovakia and Austria (11% each).

6.3. Share of PSO and non-PSO services

Figure 33 shows the proportion between PSO and non-PSO services on the supply-side (train-km). Across the monitored countries, PSO services accounted on average for 86% of the whole train-km offered on the passenger market.

In 2021, there were 14 countries where the share of PSO-operated passenger train-km equalled to or approximated 100%. In most monitored countries, the share of PSO services exceeded the average, except for Germany, Italy, France, Spain, Germany, Serbia, Sweden and Finland. These differences in proportion between PSO and non-PSO services per country can be explained by very different and, in some cases, historical organisation of the rail transport market: PSO services can be organised at different geographic levels (regional or long-distance rail services) and by different organising authorities (local authorities or the State), in consideration of the global organisation of public transport. Moreover, the liberalisation of rail transport has impacted rail competition both “in the market” and “for the market”. This had led to changes in the composition of the market, with the development of new international or domestic open access services. As a result, we can observe changes in the market share between PSO and non-PSO services.

FIGURE 33 - SHARE OF PSO AND NON-PSO SERVICES IN 2021 (BASED ON TRAIN-KM)

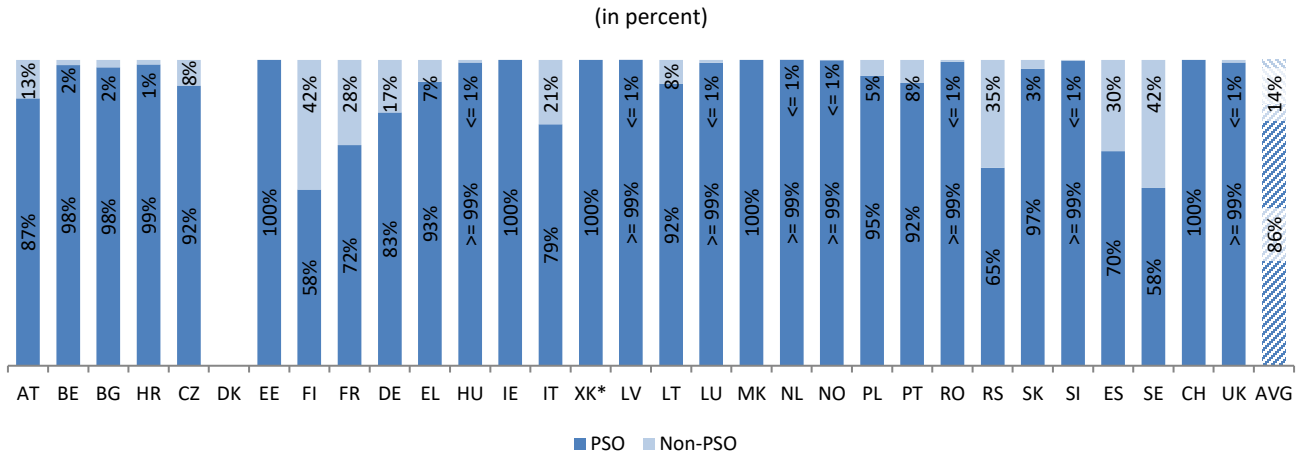
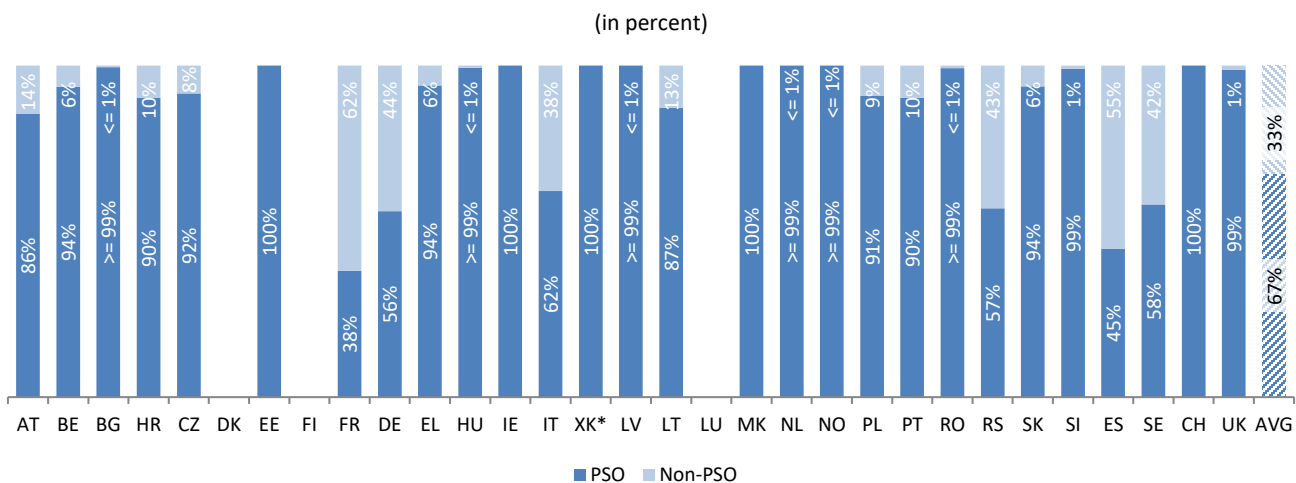


Figure 34 shows the proportion of PSO and non-PSO services on the demand-side (passenger-km). Across the monitored countries, PSO services accounted for two-thirds (67%) of passenger-km on average, a slight decline (-2 percentage points) since 2020 but equal to the level observed in 2019.

As in the supply-side, there were 13 countries where the share of PSO-operated passenger-km equalled to or approximated 100%. In Sweden, Serbia, Germany, Spain and France the share of PSO traffic on the supply side was larger than on the demand side. This can be explained either by differences between PSO and non-PSO services in seat capacities of train services (and the fact that for the panel of identified countries non-PSO trains would have higher capacity than PSO trains) or the usage and performance of train services (in terms of occupancy rates or distances travelled by passengers and the fact that for the panel of identified countries the occupancy rate would be superior for non-PSO trains than for PSO trains).

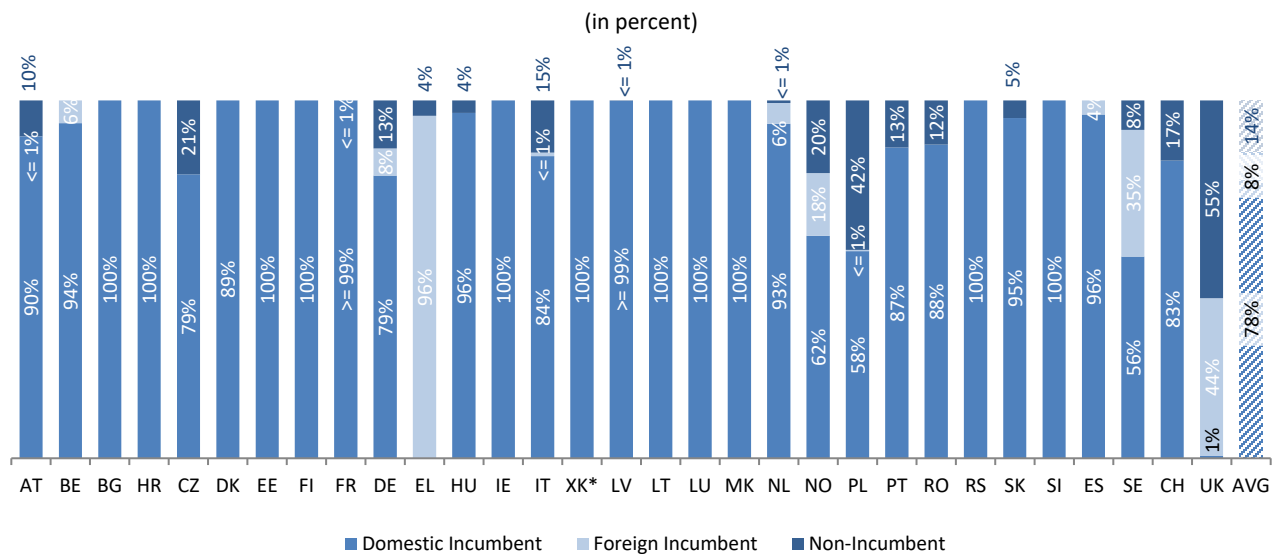
FIGURE 34 - SHARE OF PSO AND NON-PSO SERVICES IN 2021 (BASED ON PASSENGER-KM)



6.4. Market shares of passenger railway undertakings

In 2021, most European rail passenger markets continued to be dominated by domestic incumbents. Across the monitored countries, domestic incumbents accounted on average for a market share of 78% (in passenger-km) and non-incumbents for 14% (approximately the same values as in 2020). Foreign incumbents accounted for 8% (7% in 2020). This is broadly unchanged even when compared with the pre-pandemic share of 77% in 2019.

FIGURE 35 - MARKET SHARES OF PASSENGER RAILWAY UNDERTAKINGS IN 2021 (BASED ON PASSENGER-KM)¹⁷



The UK, Norway, Poland and Sweden are the only countries where the market share of the domestic incumbent was below the average. It was even zero for Greece where the former domestic incumbent was sold to the Italian domestic incumbent (in 2017). In the UK, the market share of the domestic incumbent accounted for only 1% of the market, as the British railways were passed from government control to private companies more than two decades ago. The only domestic incumbent is operated in Northern Ireland (Translink), which makes up only a small proportion of total passenger-km. In Norway, non-incumbents Go-Ahead and SJ Norge operated in 2021 after winning tenders for PSO contracts. Go-Ahead entered the Norwegian rail passenger market in December 2019 and SJ Norge started operating in summer 2020. They took over routes that the domestic incumbent used to operate, leading to the fall of the domestic incumbent's market share.

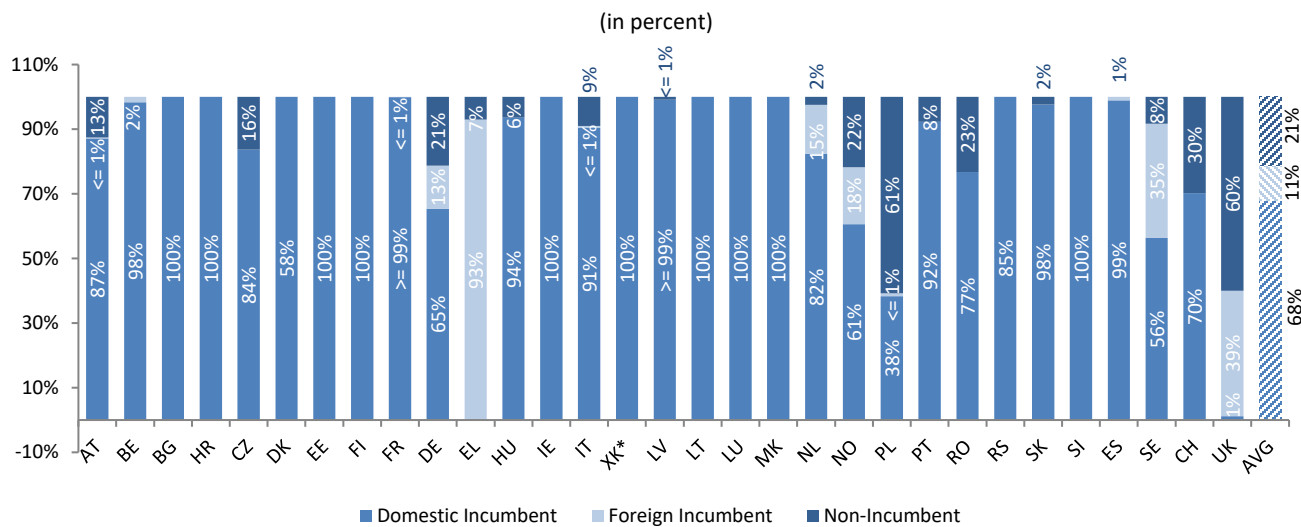
The market shares of incumbent and non-incumbent railway undertakings are an important indicator of the potential competitive advantages of incumbent operators and of the possible barriers to new market entrants. In 2021, in 11 countries the domestic incumbent was the only passenger railway operator, meaning there was no competition (13 countries with France and Latvia where the domestic incumbent's market share was above 99%).

Figure 36 shows the market shares across the monitored countries based on passenger train-km. In 2021, the average market share of domestic incumbents was 68%. This was slightly higher than in 2020 (67%), but still lower

¹⁷ The values for domestic and foreign incumbents include those of their subsidiaries, if any.

compared with an average value of 70% in 2019. As with passenger-km, domestic incumbents still dominated most markets, except for Poland, Greece and the UK. In Spain and France, the effective liberalisation of the domestic rail passenger transport occurred in 2021: in May, the subsidiary of the French incumbent Ouigo began operating on the Spanish Madrid-Barcelona corridor and reached a 20% share during the last quarter of 2021. In the French market¹⁸, the Italian railway undertaking Trenitalia began operating passenger services between Paris and Lyon in December 2021.

FIGURE 36 - MARKET SHARES OF PASSENGER RAILWAY UNDERTAKINGS IN 2021 (BASED ON TRAIN-KM)¹⁹



6.5. Economic performance indicators of passenger railway undertakings

The revenue of passenger railway undertakings from fares and compensations was affected by the consequences of the COVID-19 pandemic in 2020 and 2021. However, the decrease in revenue was less than the significant fall in passenger-km observed across monitored countries, resulting in a growth of both the ratio of revenue per train-km and the ratio of revenue per passenger-km. In 2021, the average revenue across monitored countries was €22.15 per train-km, higher than in 2020 (€19.69 per train-km) and 2019 (€20.34). The average revenue per passenger-km almost doubled from 13.88 Eurocent per passenger-km in 2019 to 25.74 Eurocent in 2021. In 2020 it was 20.47 Eurocent per passenger-km.

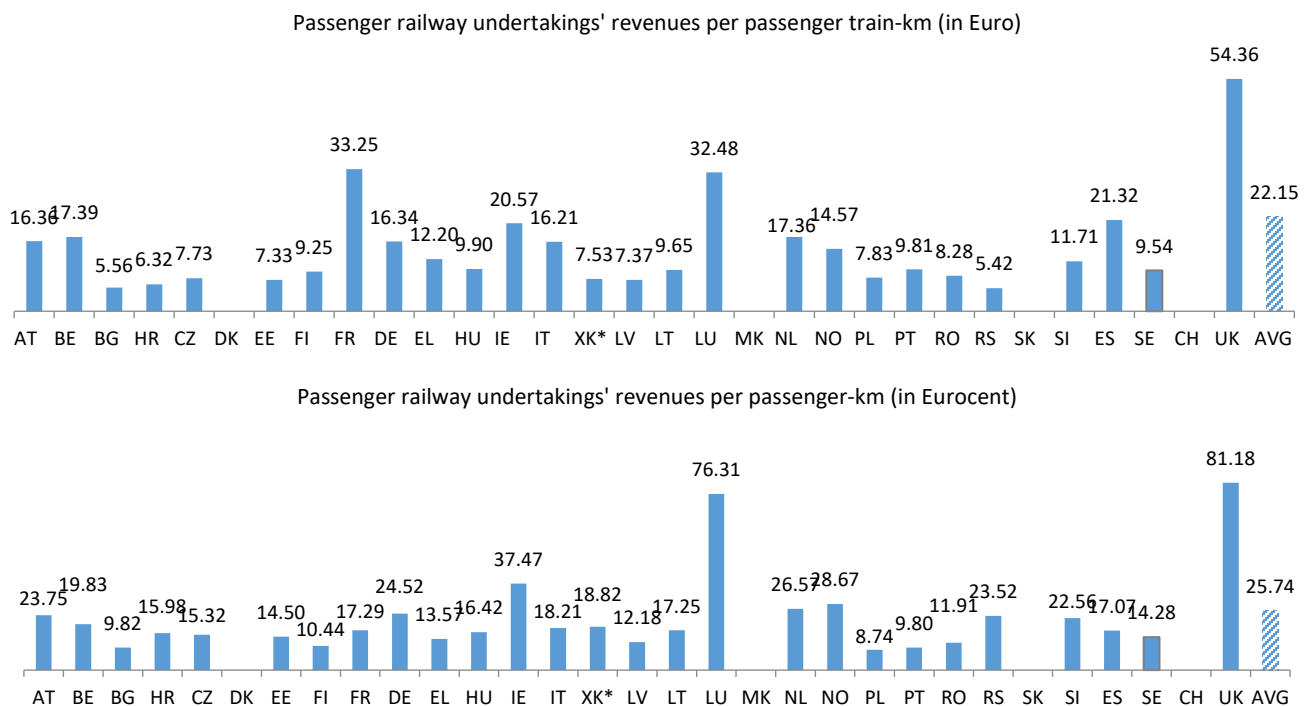
The moderate decrease in revenue is explained by the importance of public compensations and their increase since 2019: public subsidies represented 63% of the total (PSO and non-PSO) passenger revenue in 2021 (+2% in

¹⁸ Effective competition already existed in the French passenger market in 2020, restricted *de jure* to international activities and cabotage activities within international routes. Apart from international activities operated by the incumbent RU, its subsidiaries or with partnerships with other international railway undertakings, domestic competition was restricted *de facto* to a single cabotage route operated by Thello (former subsidiary RU of the Italian incumbent Trenitalia).

¹⁹ The values for domestic and foreign incumbents include those of their subsidiaries, if any.

comparison with 2020, and +30% in comparison with 2019), and almost doubled since 2019, which softened the decrease of revenue from fares related to the drop of passenger traffic.

FIGURE 37 - PASSENGER RAILWAY UNDERTAKINGS' REVENUES PER TRAIN-KM AND PER PASSENGER-KM IN 2021



The highest unit revenues on the supply side were in the UK with €54.36 per train-km, followed by France (€33.25) and Luxembourg (€32.48)²⁰. The lowest reported revenue was in Serbia with €5.42 per train-km.

On the demand side, the UK reported the highest unit revenues as well with 81.18 Eurocent per passenger-km, followed by Luxembourg with 76.31 Eurocent and Ireland with 37.47 Eurocent per passenger-km.

In terms of PSO revenue generated from fares only, the average revenue per passenger-km across monitored countries was 9.43 Eurocent. This represents a slight decrease from 2020 (-2,9%) and from the level of 9.69 Eurocent reported in 2019 (-2.6%). The highest unit revenue was reported in Kosovo, closely followed by the UK, Norway and the Netherlands (Figure 38).

²⁰ The demand-side in this context refers to the demand for the railway undertakings in terms of passenger-km, whereas the supply-side refers to the traffic in train-km.

FIGURE 38 - PASSENGER RAILWAY UNDERTAKINGS' PSO REVENUES FROM FARES IN 2021 PER PASSENGER-KM

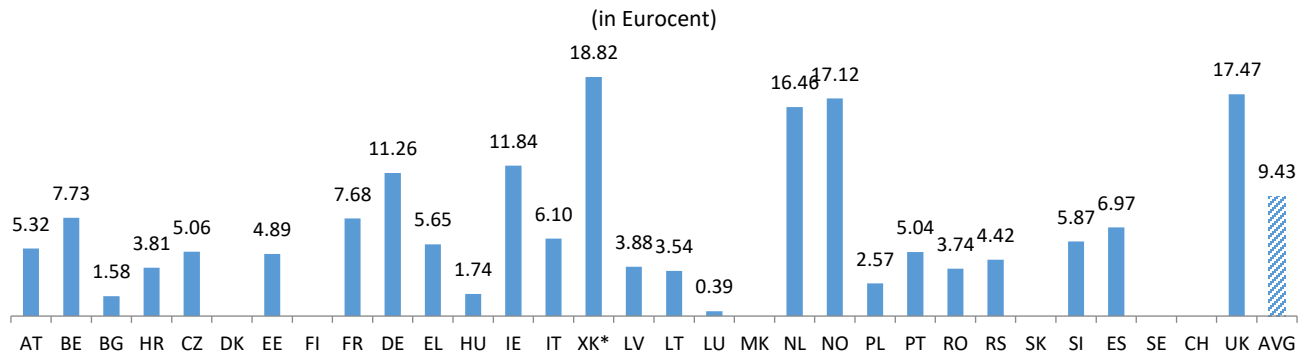
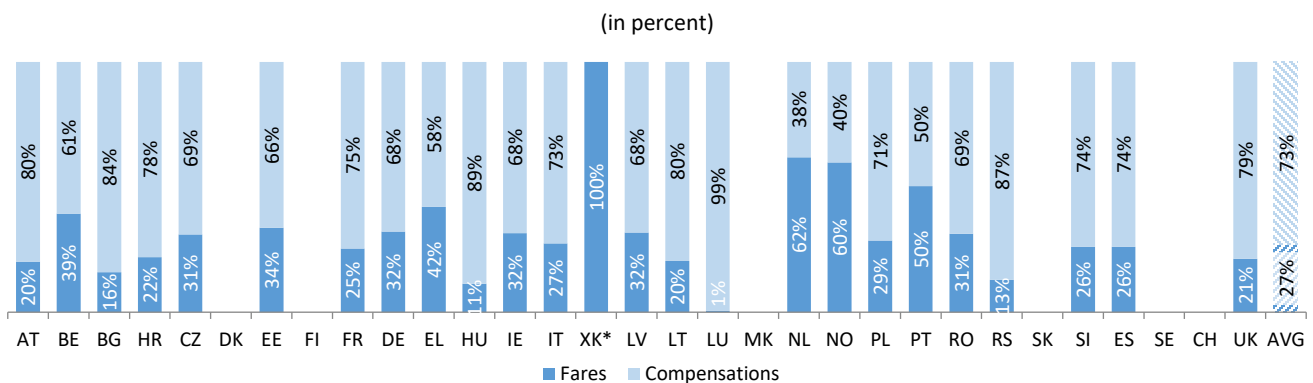


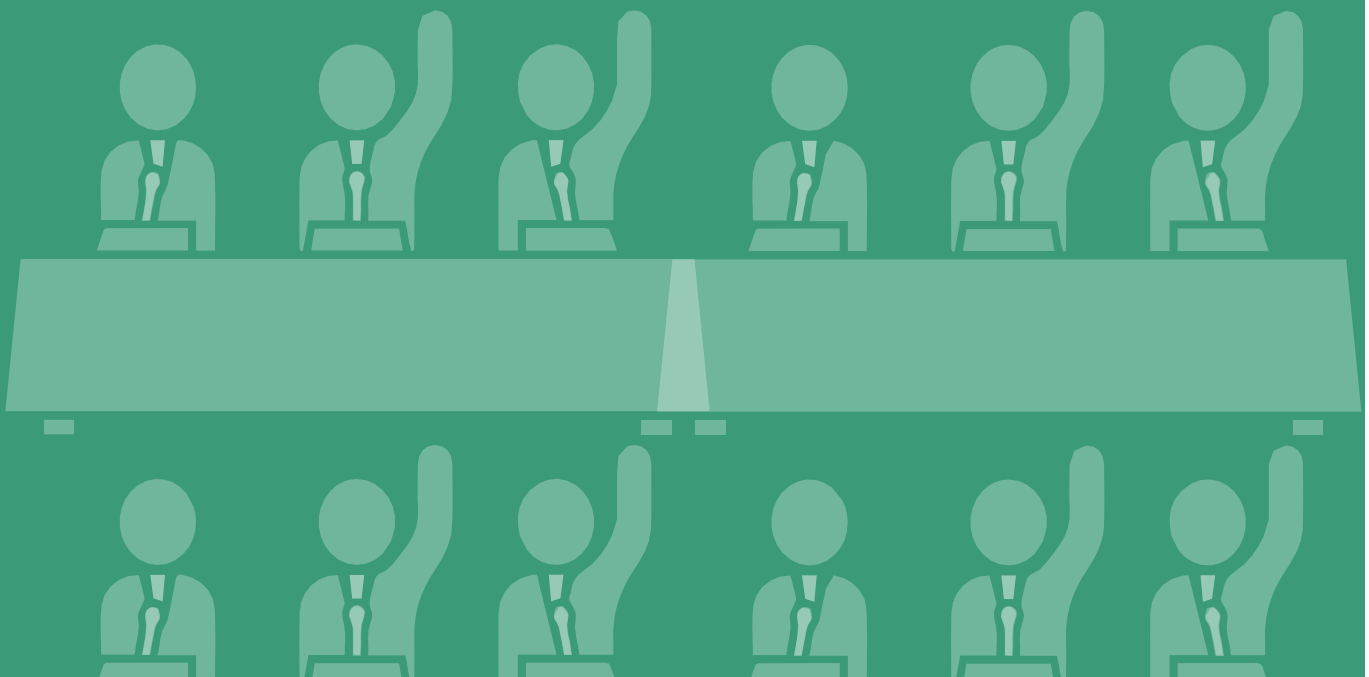
Figure 39 shows the distribution of PSO revenues generated from fares and compensations across selected countries. In 2021, the share of PSO revenues from fares decreased to 27%, from 30% in 2020 and 56% in 2019. On average, there were almost twice as many revenues from compensations than from fares, with the shares varying substantially across monitored countries. In Kosovo, all revenue was yielded from fares. Except for the Netherlands, Norway and Portugal, in all other responding countries PSO revenues generated from compensations were higher than those generated from fares. For instance, in Luxembourg, nearly the whole revenue (99%) was generated from compensations. Overall, the share of revenues generated from compensations has increased for all countries since 2019 (and by +10 percentage points for 15 countries) due to the COVID-19 pandemic, exception made for Norway (-3 percentage points).

FIGURE 39 - BREAKDOWN OF PASSENGER RAILWAY UNDERTAKINGS' PSO REVENUES BETWEEN FARES AND COMPENSATIONS IN 2021



07

Abstract of regulatory decisions in 2021



This section presents the full or main regulatory decisions taken by regulatory bodies per country in 2021: it includes the decisions either taken in 2020 or decisions taken before 2021 and for which conclusions or effects appeared in 2021.

Austria

- After various appeals by competitors, Schienen-Control checked several of the incumbent's services (for example maintenance, shunting, technical inspection of rolling stock) for different aspects of access and charging. In all cases, the incumbent was notified to offer them to all competitors in a non-discriminatory and transparent way. (decisions taken in 2021/final)
- Schienen-Control solved several conflicts for paths between RUs regarding the timetable for 2022. (decisions taken in 2021/final)
- *All other appeals and trials from 2021 (regarding charges for the MAP/passenger stations/SFs, mark-ups, traction current etc.) were either still pending or at other appeal stages and hence no final decisions had been made.*

Belgium

- Decisions D-2021-02 and D-2021-03 regarding the new passenger train services "Italia-Express" and "Brussel-Zuid - Innsbruck Hbf"
In April 2021 it was decided that these services do not fall within the scope of the legislation regarding economic equilibrium. Therefore access to the net is not limited.
- Decision regarding the complaint of the hyperpeak tariff in the North-South link in Brussels for the HST segment
On 5 November 2021, the RB decided that the complaint was unfounded. There was no violation of the following principles: efficiency, transparency, non-discrimination, market-can-bear and trust.
- Decision in the framework of the audit assignment of the General Track Control Protocol of terminal operator Zuidnatie (Port of Antwerp)
In November 2021, the RB noted that the protocol was not fully in line with legislation. Some adaptations were necessary.
- Decision on the determination of the reasonable period within which requests from railway undertakings for access to service facilities and rail-related services must be answered
On the 25th of November, the RB decided on the reasonable terms of different requests and actions (on ad-hoc access requests, for answering requests for access to and delivery of services in the facilities, etc.)
- Decision on audit assignment on the Reference document "Access to passenger stations" of SNCB
The RB decided that the document was not in line with legislation. It should be made clear that access to passenger stations is optional for railway undertakings and that the use of related services is also optional.

Bulgaria

No key regulatory decisions in 2021.

Croatia

No key regulatory decisions in 2021.

Czech Republic

- Decision about infrastructure charges, which were against the law (21.07.2021)
- Access to the regional line, which is normally not operated (11.03.2021)

- Access to the siding system operated by PKP Cargo (24.11.2021)

Denmark

- On 6 February 2020, the Danish rail regulatory body (JBN) began supervision of the Danish IM (Banedanmark) capacity planning process, cf. directive 2012/34/EU, Annex VII. The reason for the supervisory case was a questionnaire received from the European Commission about the capacity planning process. Banedanmark was therefore requested to report back with confirmation that applications for all types of maintenance work also are included in the capacity planning process as required in the directive's article 53, section 1 (17.03.2021)
- The Danish Rail regulatory body was in the process of carrying out a series of supervisions on the railway companies' compliance with Regulation No. 1371/2007 on the rights and obligations of railway passengers with regard to the provisions on travel time guarantees and information on this to passengers in case of delays or cancellations. The inspection thus focused on Article 16 on reimbursement and rescheduling of the journey, Article 17 on compensation for the ticket price, Article 18 on the right to a meal and refreshments, etc. as well as Article 29 on information to passengers about their rights. In the present case, the board has reviewed Lokaltog A/S' (Lokaltog) conditions for travel time guarantee and information for passengers about this. In this connection, Lokaltog has, among other things, carried out corrections and updates to the website (22.04.2021)
- Aalborg Stevedore Company A/S (ASC) operates cargo handling at the Port of Aalborg, including facilities designed to handle rail cargo. ASC has applied for the mentioned facility to be exempted from a number of the provisions in implementing regulation 2017/2177 of 22 November 2017 on access to service facilities and railway-related services (the implementing regulation). After reviewing the application and the circumstances of the case in general, cf. the presentation of the case in section 2, and with reference to the comments in section 3, the Danish rail regulatory body (JBN) announced an exemption from Art. 4 section 2, letter e) and j), art. 6 section 3, art. 7, section 1, 2nd point, art. 7, section 2-3, and art. 15 (22.09.2021)

Estonia

No key regulatory decisions in 2021.

Finland

- Finnish Rail Regulatory Body issued a decision in the case "Complaint by VR Group Ltd concerning the reactive power costs charged by the Finnish Transport Infrastructure Agency". In its decision, Finnish Rail Regulatory Body saw the filtering electrical interference in the electrified railway network and the resulting reactive power costs to be included in the minimum access package (MAP) of the Finnish Rail Transport Act. Therefore, publishing the costs of filters that generate reactive power, as well as related information had to be treated in accordance with the requirements of legislation on minimum access package. Consequently, the costs due to filters that generate reactive power, included in the transfer fee from high-voltage networks and published by the Finnish Transport Infrastructure Agency (FTIA) in its railway network statements for the timetable periods 2021 and 2022, were not in accordance with the Finnish Rail Transport Act, and they had to be removed from the context of electricity transfer service and contact line network's electricity transfer fees specified in the network statement (01.07.2021)
- Finnish Rail Regulatory Body issued a decision in the case "Claim for a revised decision (complaint) by the VR Group Ltd concerning the infrastructure charges published by the Finnish Transport Infrastructure Agency in its network statements for the timetable periods 2021 and 2022". In its decision, the Rail Regulatory Body saw no need to change the infrastructure charges for the timetable

period of 2022. What comes to the infrastructure charges for the timetable period of 2021, the Rail Regulatory Body did not investigate the case, because the claim for a revised decision was not submitted within the deadline set by Finnish legislation. The decision was issued, because VR Group Ltd (VR, the incumbent RU) claimed a revised decision, which is a type of complaint used, when it concerns calculation principles and level of the infrastructure charge levied by the Finnish Transport Infrastructure Agency (FTIA) (20.01.2021)

France

- Decision N°2021-032 (17 June 2021): dispute resolution between Provence-Alpes Côte d'Azur region and SNCF Voyageurs concerning the transmission of information related to the organisation or execution of rail public passenger services and to the missions covered by the PSO contract concluded between the region and SNCF Voyageurs (the incumbent railway undertaking).
Decision N°2021-032 is the second dispute resolution of ART concerning the information transmission which is essential for the market liberalisation. Indeed, the regional authorities competent for transport organisation must possess all information necessary to precisely characterise the service and define the criteria for the contract awarding. The decision obliged SNCF Voyageurs to communicate within one month the information that concerns the service organisation, compensation justification, rolling stock use and maintenance, transport supply, traffic and distribution channels, and human resources. The first dispute resolution concerning the information transmission concerned Decision N°2020-044 (30 July 2020) between Hauts-de-France region and SNCF Voyageurs
- Decision N°2021-063 and Decision N°2021-064 (2 December 2021): requests of Economic Equilibrium Test of region Bourgogne-Franche-Comté and region Normandie regarding new non-PSO passenger services notified by the railway undertakings SNCF Voyageurs and Railcoop.
In both decisions, ART considered, based on maximalist hypothesis (considering, as estimated by the region, a total modal shift to the new non-PSO service in direct competition with the existing PSO service organized by the region), that the assessed and sole financial impact (the potential loss of revenue compared to the amount of public subsidies to be paid by the PSO service) could not be considered as significant as defined by Article 10 of Commission Implementing Regulation (EU) 2018/1795. Consequently, ART granted the right to the non-PSO services to operating these services.
- Decision N°2021-018 and Decision N°2021-019 (11 March 2021): ART published two decisions of regular data collection regarding passenger and freight railway undertakings. These decisions are updates of former decisions from ART enforcing, since 2016, all passenger and freight RUs operating on the French national network (including international RUs) to provide detailed statistical indicators about their activity (supply, demand and revenue per month and category of traffic, indicators regarding the quality of service, financial results).

Germany

- Network Statement (NBN) 2023 of DB Netz AG
Bundesnetzagentur has rejected some of the changes and recasts to the network statement intended by DB Netz AG for the 2023 network timetable period. For the most part, the rejections were about requirements related to sections relevant to rail access (in particular as regards the reintroduction of framework contracts). DB Netz AG had previously informed Bundesnetzagentur of various intended changes and recasts of the network statement. A focus of the proposed amendments was the (re)introduction of framework contracts. A few years ago, DB Netz AG decided to no longer offer framework contracts due to increased requirements under European law. In particular, actors from local rail transport had criticised this because framework contracts allow longer-term protection of

transport. As incentive for the introduction of framework contracts, the legislator has introduced an approval of framework contracts by Bundesnetzagentur. This is the precondition, among other things, that certain provisions of European law relating to the post-clearance amendment of framework contracts does not apply. The approval of the individual framework contracts is an administrative procedure that is detached from the above-mentioned network statement modification procedure. Another focus of the audit was the introduction of mandatory use of radios on the infrastructure of DB Netz AG that are better protected against interference. The aim of this is to avoid the fact that the expansion of LTE900 near railway lines leads to safety-relevant radio holes in train radio.

- Construction activities/implementation of delegated decision (EU) 2017/2075

For several years now, the European Commission has consistently regulated the planning and coordination of construction measures by rail operators with adjacent infrastructure managers and authorised access providers throughout Europe. The requirements are based on the respective impact of the construction project on railway operations. The greater the impact, the earlier the communication and coordination must take place. Construction measures that lead to a loss of more than 30 percent of the expected traffic on more than seven consecutive days must be planned with a preliminary period of more than two years. In some cases, alternative building variants need to be discussed and be weighed against each other with regard to the impact on users. In addition, capacity on possible diversion routes must be taken into account and, if necessary, reconciliation criteria. Construction projects with less impact can be planned with a shorter lead. In this case restrictions must be coordinated and published six months before the start of the relevant network timetable period. Urgent measures or measures with no effect on users are possible at any time. The overall objective of the delegated decision is to minimise the impact of construction activities on railway operations and to transparently coordinate them with all relevant market participants. In 2021, the Bundesnetzagentur made specific guidelines for implementation of DB Netz AG and will continue to accompany the necessary implementation steps.

- Rejections of path requests for the network timetable

DB Netz AG had submitted to the Bundesnetzagentur a total of 89 notifications of intended path rejections (from the first and second notification phases) on the network timetable 2021/2022. Thus, the number of procedures was slightly lower than the previous years' level (92 notifications). In total, there were about 80,000 path requests. Almost 40 percent of the planned rejections from the first registration phase concerned a construction project in the Elb Valley, which, from 26.06.2022 onwards, will negatively impact cross-border freight traffic to the Czech Republic. In the corresponding path conflicts, rail freight transport path requests usually were unsuccessful. Further spatial focal points could be identified on the relations Berlin — Hamburg, Munich — Salzburg and in Munich itself. In particular, long-distance rail transport was affected here. The Bundesnetzagentur did not object to the intended rejections.

- Deutschlandtakt

“Deutschlandtakt” includes the implementation of “synchronised timetables” that are coordinated nationwide. Passengers are supposed to benefit in particular from synchronised timetables with secured transfer options. At the same time, sufficient capacity is to be secured for freight transport. On the basis of a “target roadmap”, the necessary infrastructure projects are defined. In the final report on the target roadmap Deutschlandtakt it became clear that the necessary infrastructure expansion is expected. Bundesnetzagentur has prepared an opinion on this. In particular, it is committed to ensuring that competition must be permanently safeguarded and that the German market ultimately has to be

politically responsible with the participation of the entire rail market and must not be shaped by a single important company. A half-hour cycle will be offered on important long-distance routes for 2026 by 2030. However, this could lead to a “freeze” of freight traffic at the level of 2019. The corresponding criticism by the freight transport companies that this cannot be accepted for a growing market is supported by Bundesnetzagentur. Within the framework of a working group set up by the Federal Ministry of Digital Affairs and Transport, Bundesnetzagentur supports the institutional implementation of Deutschlandtakt. The complexity of capacity management and scheduling is an operational-technical challenge. In addition, the requirements of European law must be observed. The legislator therefore initially decided to test regulatory rules on pilot routes, which Bundesnetzagentur will evaluate.

Greece (n/d)

Hungary

- According to the Hungarian railway act national infrastructure managers, railway undertakings and applicants shall coordinate on the topics listed in the railway act (e.g. content of the Network Statement; intermodality) at least once a year. Infrastructure managers in consultation with the above mentioned parties are obliged to develop coordination guidelines and publish those on their websites. Furthermore infrastructure managers shall publish a summary of their coordination activity at least once a year. As a result of an official inspection we have come to the conclusion, that MÁV Zrt. (infrastructure manager) has not fulfilled its above mentioned obligations in the years 2019 and 2020. Due to the breach of law MÁV Zrt. was given a warning, and was obliged to publish the documents required by law for the year 2021.
- According to the Hungarian railway act national infrastructure managers, railway undertakings and applicants shall coordinate on the topics listed in the railway act (e.g. content of the Network Statement; intermodality) at least once a year. Infrastructure managers in consultation with the above mentioned parties are obliged to develop coordination guidelines and publish those on their websites. Furthermore infrastructure managers shall publish a summary of their coordination activity at least once a year. As a result of an official inspection we have come to the conclusion, that GYSEV Zrt. (infrastructure manager) has not fulfilled its above mentioned obligations in the year 2020. Due to the breach of law GYSEV Zrt. was given a warning, and was obliged to publish the documents required by law for the year 2021.
- According to Annex VII point (15) of the Directive 2012/34/EU the infrastructure manager shall publish the information mentioned in point (15), or a link where it can be found, in its network statement as referred to in point (3) of Annex IV. The infrastructure manager shall keep this information updated. As a result of an official inspection we have come to the conclusion, that MÁV Zrt. (infrastructure manager) has not fulfilled properly its above mentioned obligation, because a link to a wrong page was provided in the Network Statement. Due to the breach of law MÁV Zrt. was given a warning, and was obliged to publish the correct link in the Network Statement.
- According to Annex VII point (15) of the Directive 2012/34/EU the infrastructure manager shall publish the information mentioned in point (15), or a link where it can be found, in its network statement as referred to in point (3) of Annex IV. The infrastructure manager shall keep this information updated. As a result of an official inspection we have come to the conclusion, that GYSEV Zrt. (infrastructure manager) has not fulfilled properly its above mentioned obligation, because a link to a password

protected page was provided in the Network Statement. Due to the breach of law GYSEV Zrt. was given a warning, and was obliged to publish a link available for anyone without restriction in the Network Statement.

- In Hungary, the Network Statement is published by the independent capacity allocation body (VPE Kft.). According to a ministerial decree, if VPE Kft. intends to modify the content of the Network Statement, it shall make the draft version public on its webpage at least 30 days before the publication of the final version. Interested parties may send their comments on the draft version within 10 days of its publication. As a result of an official inspection we have come to the conclusion, that VPE Kft. has not fulfilled its above mentioned obligation of prior publication, because VPE Kft. published the final version of two modifications of the Network Statement without providing the opportunity for interested parties to comment on the draft versions. Due to the breach of law VPE Kft. was given a warning to refrain from committing an infringement in the future.

Italy

- Decision n. 28/2021: Conclusion of proceedings initiated by decision No. 147/2020. Approval of "Measures concerning the minimum rights that may be claimed by users of rail and bus and coach transport services against service providers and managing bodies of the related infrastructure with regard to the handling of complaints".
- Decision n. 88/2021: Conclusion of the proceeding initiated with decision n. 39/2021. Criteria for the recalculation of the Track Access Charges to the high-speed/high-capacity railway infrastructure for the period 6 November 2014 - 31 December 2015, in compliance with the sentence of the Council of State, n. 6108 of 2019.
- Decision n. 114/2021: Proposal formulated by Rete Ferroviaria Italiana S.p.A. of the 2022-2026 tariff system for the Minimum Access Package to the national railway infrastructure, as well as for Services other than the Minimum Access Package provided by the same - Compliance with the regulatory model approved with resolution no. 96/2015 and subsequent additions.
- Decision n. 173/2021: Indications and requirements relating to the "2023 Network Statement", presented by the national railway network manager R.F.I. S.p.A., as well as relating to the "2022 Network Statement".
- Decision 175/2021: Conclusion of the proceeding initiated with resolution no. 28/2020. Provisions for the application of the toll relating to the Minimum Access Package to the national railway infrastructure, in compliance with the sentences of the Regional Administrative Court for Piedmont (Second Section), n. 19, no. 23 and no. 25 of 2020.

Ireland

No key regulatory decisions in 2021.

Kosovo

- Initiation and organizing the consultation process for the draft Network Statement 2022 and holding a public discussion with stakeholders.
- There are prepared and sent to stakeholders final comments on draft Network Statement 2022.
- Publication of data in the railway sector or harmonization of statistical data.
- Advertising campaign for passenger rights in rail transport.

Latvia

- On 05.03.2020. RB received a complaint from railway undertaking JSC "Baltijas Ekspresis" (RU) regarding main infrastructure manager's SJSC "Latvijas dzelzceļš" (IM). RU complained that the IM was

not-fulfilling its obligation in accordance with RB's decision on 09.11.2019 to give access to part of its infrastructure in Ventspils port, which is not a service facility, for shunting and train formation operations of RU itself. It's noteworthy that IM has appealed the afore mentioned RB's decision in court and the court has decided, before considering the case in detail, to suspend RB's decision. On 02.03.2021. RB adopted a decision to reject the RU's complaint on the grounds that RB has already decided on the underlying facts and therefore it's not useful to undertake this investigation once more (02.03.2021. The decision was not appealed to court; thus, the decision is final and in force)

Lithuania

- On 24 March 2020, the Communications Regulatory Authority of the Republic of Lithuania ('the RRT') received the railway undertaking Gargždų geležinkelis Ltd request to initiate an investigation into the utilization of capacity allocated to railway undertakings ('RU'). After assessing the circumstances indicated in the request, the RRT decided to initiate an own-initiative investigation into the capacity utilization in the period from 8 December 2019 until 31 March 2020.

During the investigation, the RRT found that the RU did not use the allocated capacity in the same way as it was indicated in the public railway infrastructure manager's JSC "LTG Infra" ('the IM') decision on the allocation of capacity.

RRT found that certain provisions of the 2020 Network Statements that allowed changes in the use of allocated capacity were in conflict with provisions of the Railway Transport Code of the Republic of Lithuania ('the Code') and had to be amended. After the whole investigation, the RRT imposed the following obligations on the IM: 1) to organize train traffic according to the routes and train departure times as specified in the capacity allocation decisions, with the exceptions provided for in the legislation; 2) to change provisions of the 2021 Network Statements that do not comply with the Code; 3) to prepare and approve the accounting procedure for allocated capacity utilization.

- On 20 October 2020 and 29 October, the RRT received two complaints from the railway undertaking Gargždų geležinkelis Ltd. ('the GG') regarding the allocation of capacity for the validity period of the 2020-2021 working timetable and related decisions.

GG stated in the complaints, that the 2021 Network Statement was amended without following procedures, i. e. without consulting market participants, and the IM's decision not to allocate the requested capacities was unlawful and unjustified.

The GG's requirements for the RRT: 1) declare amendments of the 2021 Network Statement made by the IM unlawful and annul them; 2) annul the decisions of the IM and oblige him, following the Priority rule, to take new decisions at the request for capacity of the GG.

The decision of the RRT (RRT 20 April 2021 order No. (1.9E)1V-369): 1) the amendments of the 2020-2021 Network Statement the IM made lawfully, i.e. with the aim to ensure the requirements of the Priority rule; 2) the IM's decision not to allocate the GG's requested capacity on the congested infrastructure was justified because the GG didn't present to the IM any information about the contractual obligations for the requested capacity as needed to justify 1st criteria (the capacity on the congested infrastructure shall be allocated to the applicant who justifies his readiness to use the requested capacity, i.e. provides the IM with documentation confirming that he has traction units, train drivers and other staff directly involved in railway traffic, as well as contractual obligations for the carriage of freight) of the Priority rule. Thus, the RRT decided to reject the GG's complaint.

- On 25 November 2020, the RRT received the complaint from the railway undertaking LGC Cargo Ltd ('the LGC Cargo') against the public railway infrastructure manager's JSC "LTG Infra" ('the IM') actions regarding capacity allocation. On 8 May the LGC Cargo submitted a late request for capacity for the

validity period of the 2020-2021 working timetable to the IM. On 28 October the LGC Cargo received the IM's decision allocating capacity as follows: 1) one part of the requested capacity was allocated, 2) the second part was not allocated because there was no available capacity due to congested infrastructure. The LGC Cargo stated in the complaint, that the decision of the IM is not justified. The LGC Cargo's requirements for the RRT: the RRT, after examination of the complaint, shall oblige the IM to allocate all the capacity requested by the LGC Cargo.

- The RRT received a complaint from a railway undertaking regarding the principles for the application of the Priority rules set out in the 2021-2022 Network Statement. The railway undertaking complained that the requirements to provide evidence of readiness to use the requested capacity to the infrastructure manager were excessive and discriminatory against new entrants. RRT has established that the Priority rules have been adopted by the Ministry of Transport of the Republic of Lithuania. These rules require railway undertakings to prove that they have traction vehicles, employees and contractual obligations to use the requested capacity. In 2021-2022 Network Statement new requirements were not set and the documents for justification of the readiness to use the requested capacity were mandatory for all railway undertakings requesting capacity on the congested part of the infrastructure. RRT decided to reject the complaint as unfounded as all claims made by the manager were justified and known in advance.

Luxembourg

No key regulatory decisions in 2021.

Republic of North Macedonia

No key regulatory decisions in 2021.

The Netherlands

- Approval methodology for cost allocation of minimum access package (cat. 1 services) (April 2021)
- Decision in complaint of Nederlandse Spoorwegen (NS) about capacity allocation for 2022 in Amsterdam (Dec 2021)
- Decision in complaint on capacity allocation in two freight shunting yards (Kijfhoek and Maasvlakte) for 2021 (Feb 2022)

Norway

- In an investigation following a complaint, the Norwegian Regulatory Body (the RB) found that Bane NOR SF (the IM in Norway) had infringed the access to service facilities rules in the Norwegian railway regulation. (Regulation of June 30 2021 number 2315 on railway activities, service facilities, taxes and distribution of infrastructure capacity etc. (The railway regulation)). The regulation entered into force on July 5 2021.) In April 2021, the RB received a complaint from Flytoget AS (Flytoget). The company is handling passenger transport back and forth to the main airport in Oslo. The complaint concerned the location of the airport train terminal at Oslo Central Station (Oslo S). The reason for the complaint was that the airport train terminal was obliged to move from tracks 13 and 14 on Oslo S to track 10. This was due to the IM preparing for the facilitation of a new main train line at Oslo S (the new Follo line). Flytoget was awarded track 10 for five of its six departures. The IM believed that the area at track 10 could not be exclusive to Flytoget, and that it would be a violation of section 4-2 of the Norwegian railway regulation regulating access to service facilities. Flytoget disagreed and complained about Bane NOR's decision to the RB.

The RB in Norway believed that the principle of non-discrimination in section 4-2 of the Norwegian railway regulation did not prevent Flytoget from accessing the relevant area at Oslo S in order to fulfil its special transport assignment. Section 4-2 in the Norwegian railway regulation correspond to

directive 2012/34 article 13 number 2. (Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area.) With reference to the railway regulation section 4-3, on the processing of requests for access to service facilities, the RB decided that Bane NOR had to meet the requirements from Flytoget. This section correspond to directive 2012/34 article 13 number 3 and 4. The area in question had not been allocated to another railway undertaking (it was used as a general waiting area for passengers) and there were no conflicting requests for access to the area. Thus, Flytoget got a new location for its airport train terminal at track 10 by 20 July 2021. Flytoget could then complete the move before the distribution of tracks (infrastructure capacity) was changed from 9 August that year. The RB followed up that Bane NOR complied with the orders in its decision and the airport train terminal at Oslo S was moved (08.07.2021)

Poland

- Based on complaint from social organizations related to railway transport, on penalties imposed by PKP PLK on RU for a stoppage of more than 4 hours at the Gdańsk Northern Port station, it was initiated ex officio administrative proceedings regarding the correctness of the reparation and application of the Network Statement by PKP PLK. According to the organization, the penalties imposed by PKP PLK are too high, and theirs the introduction breached the provisions of the act on rail transport. After analysis, President of UTK stated that the penalties imposed on RU regarding train stops lasting more than 4 hours on the tracks at the Gdansk Northern Port station, they are not included in the list of fees within the meaning of Art. 33 sec. 13 the Act on Rail Transport and will not be applicable to the above-mentioned regulations, i.e. art. 32 sec. 1 point 3 of the Rail Transport Act. Therefore, the regulatory body was obliged to discontinuation of the proceedings (05.10.2021)
- As part of the oversight of contracts for the allocation and use of capacity in 2021 to the President of UTK, considered the application for consent to termination of the contract for the use of capacity of one of RU, and then make consent to terminate the capacity use agreement between PKP PLK and LOGISTICS & TRANSPORT COMPANY sp. z o .o. (17.09.2021)
- The decision replacing the power of the allocation agreement was issued by the President of UTK at the request of Zespół Elektrociepłowni Wrocławskich KOGENERACJA S.A. (owner of the heat and power plant). The case concerned the provision of the access managed by OT Logistics S.A. infrastructure providing access to the heat and power plant siding, which has been classified by the manager as private infrastructure. Taking into account the specificity of the case and the provisions of the Transport Law, the President of UTK took the position that the IM performed an incorrect qualification of the infrastructure. This infrastructure should not be considered private. Consequently, the President UTK issued a decision that replaced the agreement between the applicant and the manager regarding the assignment ability by settling disputes where companies could not reach an agreement (21.10.2021)

Portugal

- Access charges for the 2021 timetable, were approved by AMT in October 2021
- In April 2021 AMT decided to set-up a working group with the railway undertakings, infrastructure manager, energy regulator and the Directorate of Energy and Geology of Minister of Environment and Climation Action, with the aim of defining a legal framework for railway undertakings to have direct access to the suppliers of electric energy for traction. The work is still in progress.

Romania

No key regulatory decisions in 2021.

Serbia

(n/d)

Slovakia

- In 2021 Regulatory Authority has taken several decisions or statements in the field of access to service facilities of infrastructure manager and service facilities of third parties. Binding opinions and statements has been issued within competences performed as National Enforcement Body for passenger rights in railway sector.

Slovenia

- The Agency opened the procedure on identification of irregularities of the implementation of point 3.1 of Article 11.b of the Railway Transport Act (Official Gazette of the Republic of Slovenia, No. 99/15 – UPB, 30/18 and 82/21). During the procedure, the Agency determined whether the content of the Network statement complies with the provisions of Annex IV of Directive EU) no. 2012/34 and with the provisions of Article 7 of the Regulation on the allocation of train paths, user fees and the performance regime on public railway infrastructure (Official Gazette of the Republic of Slovenia, No. 44/16, 16/19 and 121/20). Based on received information, the agency stopped the procedure, which was introduced ex officio, without imposing measures to eliminate the irregularities, since the IM had already taken appropriate measures and supplemented the content of the Network statement 2022 accordingly (Dec 2021)

Spain

- Decision on track access charges for 2022: CNMC analysed ADIF's proposal concluding that track access charges of two railway services were above direct cost, requesting its modification. In addition, the mark up applied to public services was higher than the total non-eligible costs of the network, considering that is was excessive and asking for its modification (22.09.2021, pending)
- Report on drivers: drivers are an essential asset to compete in railway markets. Indeed, CNMC issued a decision already in December 2017 (uphold by administrative court) imposing transparency obligations on Renfe to assure a sufficient number of formed drivers. This report analysed the situation given the challenges posed by passenger liberalisation (28.10.2021)
- Decision on maintenance services: after a complain by an association of alternative RU, CNMC analysed the provision of certain maintenance services, concluding that the manager of the workshop was not fulfilling with the obligations imposed by Regulation 2017/2177 (25.02.2021, pending)
- Report on ADIF Network Statement: ADIF is modifying the conditions of traction current service. In particular, the modification analysed by CNMC allowed on-board measurement equipment, facilitating that each operator pays for its real energy consumption (06.05.2021)

Sweden

- (TSJ 2021-1796): the complaint concerned the different charges imposed for supply of traction current. Traction current is comprised an additional service according to Directive 2012/34/EU point 3.a. of Annex II. The complaining railway undertaking (RU) argued that the charging scheme for supply of traction current does not comply with the criteria set out in the Swedish Railway Act (chapter 7 paragraph 8; see also Article 31 paragraph 8 of Directive 2012/34/EU). According to the Article the charges imposed for additional and ancillary services listed in points 3 and 4 of Annex II which are offered by only one supplier shall not exceed the cost of providing it, plus a reasonable profit. The applicable provision in the Swedish Railway Act also stipulates that the charges shall not discriminate any RU. The reimbursements referred to in the actual provision shall be determined either on production of proof of actual expenditure, or on the basis of fixed amounts for RUs lacking electricity

meter in their vehicles. The complaining RU considered that the different procedures within the charging scheme were discriminatory and that they lead to distortion of the railway market. The service facility manager did not agree with the arguments put forward by the complaining RU. The Swedish regulatory body (RB, also the Swedish Transport Agency/Transportstyrelsen) decided that the charging scheme for supply of traction current is in accordance with the applicable legislation except one procedure, i.e. the reimbursement methods for reloaded traction current. The actual reimbursement rate is 100 percent based on the assumption that all reloaded traction current can be used by other vehicles. The Swedish RB considered this procedure discriminatory since the service facility manager had not been able to bring evidence that shows that the rate of reuse is 100 percent. Therefore the Swedish RB found this procedure not compliant with the Swedish Railway Act. The Swedish RB also decided that the service facility manager shall investigate what the appropriate reimbursement rate should be. The results from the investigation was to be handed into the Swedish RB on 31 December 2022 at the latest (28.09.2021)

- (TSJ 2020-4849): following a complaint the Swedish Regulatory Body has decided that the main infrastructure manager Trafikverket's performance scheme (article 35 SERA-directive) does not comply with the Swedish Railway legislation in the following way. The Swedish RB has found that a cancelled stop is a deviation from the train plan. As a deviation from the train plan it is to be included in the charging scheme, which it previously was not. In this context "cancelled stop" refers to the situation where a train follows its planned route but does not stop at a station in accordance with the train plan. In addition the Swedish RB has found that it was not the right forum for a complaint regarding the request that the IM should pay penalties to the RU.

The decision was appealed by Trafikverket and the Administrative Court decided in favour of the appeal. This decision has in turn been appealed to the Administrative Court of Appeal, where a decision has not yet been determined (30.03.2021)

Switzerland

No key regulatory decisions in 2021.

United Kingdom

- Track access decisions

10 February 2021 – Rejection of a new track access contract for planned services between London Paddington and Carmarthen by Grand Union Trains Limited. Grand Union (open access operator) applied in May 2020 to run services between London and Carmarthen. The application was for: From December 2021, seven return services a day between Cardiff Central and London Paddington, calling at Newport, Severn Tunnel Junction and Bristol Parkway; and From December 2023, extending each of these services so that they operate between Carmarthen and London Paddington, with limited stops at Llanelli and Swansea and then calling at Newport, Severn Tunnel Junction and Bristol Parkway. The proposed service would have initially used electric Class 91 locos, Mark 4 coaches and DVTs (existing ECML rolling stock), and then from December 2023 would use new build bi-mode Hitachi Class 802s. As part of the assessment, ORR considered the operational viability of the proposed services, any concerns relating to the fair and efficient use of capacity and any impacts on operational performance. ORR also considered the level of revenue the proposals will generate against what they will abstract from public funds, and the absolute level of that abstraction. ORR considered carefully the beneficial aspects of the application, but decided to place additional emphasis on the absolute level of abstraction due to the current exceptional state of rail finances, and therefore gave additional weight to ORR duty to have regard to the funds available to the Secretary of State. We have therefore rejected this application.

Application for a new track access contract for services between London Paddington and Carmarthen - Decision dated 10 February 2021 (orr.gov.uk)

24 March 2021 – approval for trial running on the Crossrail Central Operating Section (MTR Crossrail)

26 March 2021 – approval of connection contract between DB Cargo (UK) and Harry Needle Railroad company limited (HNRC) at Workshop Wagon Repair Depot Up Sidings

4 August 2021 – Approval of connection contract between Seilwaith Amey Cymru/Amey Infrastructure Wales Limited and Transport for Wales Limited at Rhymney Station Sidings Refuelling Facility.

15 September 2021 – approval of the novation of three connection contracts between Network Rail Infrastructure Limited and Siemens Plc covering Light Maintenance Depots at Manchester, York and Cleethorpes

12 October 2021 – approval of connection contract between Network Rail Infrastructure Limited and Northern Trains at Neville Hill Depot, Leeds

28 October 2021 – directions in respect of a charter passenger access contract between Network Rail Infrastructure Limited and SLC Operations Limited. This allows SLC Operations to run charter passenger services in all Network Regions, but did not grant any specific firm rights for train paths.

- Consumer decisions

ORR was granted powers under the Health Protection (Coronavirus, Pre-Departure Testing and Operator Liability)(England)(Amendment) Regulations 2021 to take enforcement action against rail operators in relation to coronavirus track and trace and its containment. During 2021, ORR issued a total of 109 Fixed Penalty Notices (FPNs), of which 19 were then rescinded. On 18 March 2022 the health protection regulations were removed and ORR no longer holds this responsibility.

6 April 2021 - ORR published a review prompting industry action on website accessibility and passenger information. The improvements come after the rail regulator's two separate reviews in 2020 to analyse compliance with website requirements for all 25 operators. Requirements include providing a source of relevant information on assisted travel on websites, and working towards achieving Website Content Accessibility Guidelines (WCAG) standards to make sure websites can be read and used by disabled passengers. Rail regulator's review prompts industry action on website accessibility and passenger information | Office of Rail and Road (orr.gov.uk)

15 Dec 2021 - ORR finalised a new licence condition on train companies which they must comply with by next April. The licence condition requires train companies to comply with a new Delay Compensation Code of Practice which provides passengers with clear information about their entitlements to compensation both before and during their journey. Train companies will also have to improve the way they process claims for compensation as a result of train delays, and publish data on how well they are meeting these obligations. Rail regulator acts to make claiming for train delays easier | Office of Rail and Road (orr.gov.uk)

- Monitoring

25 May 2021 - ORR published its annual review of Network Rail's progress in delivering against the five-year plan for Control Period 6 (CP6, which runs from 2019 to 2024). The plans are broadly on track. But the regulator raises concerns about the remaining levels of risk funding, particularly in Scotland, and that continued focus is also needed to deliver renewal work. The regulator has noted that risk funding

arrangements are working well and are providing planning stability to Network Rail in challenging circumstances. But, in the two years since the start of CP6, remaining risk funding has reduced considerably from £2.7bn as shown in its 2019 Business Plan to £0.8bn, in part due to the impact of COVID-19. This situation is creating some challenges across Network Rail, particularly in Scotland, where it only has £57m available to fund £106m of identified risks. Network Rail Scotland is currently considering changes to its plans to fund this potential gap. While Network Rail remains broadly on track to renew the railway, some of this work – such as signalling and telecommunications – has been put back towards the end of CP6. ORR has emphasised the need for Network Rail to effectively manage deliverability risks. Rail Regulator finds Network Rail's delivery plans are broadly on track but raises risk funding concerns | Office of Rail and Road (orr.gov.uk)

13 July 2021 – ORR published its 2020-21 annual assessments of rail safety in Great Britain and of Network Rail's performance. Overall, ORR found the rail industry responded extremely well to the COVID-19 pandemic; that Network Rail has continued to deliver its planned efficiencies; and train punctuality has been, and remains, very high, mainly due to fewer passengers and services. However, ORR has highlighted the risk that punctuality will drop as passengers and services return. Network Rail needs to work cross-industry to retain performance improvements where possible. The reports jointly highlight the need for Network Rail to focus on drainage asset knowledge, structures examinations and track workforce safety. The regulator has also repeated its warning that Network Rail's financial risk reserves are lower than may be necessary for the remainder of the control period, particularly in Scotland. ORR finds Britain's rail industry responded well to COVID-19 but calls for more action on drainage, structures and track worker safety | Office of Rail and Road

14 October 2021- ORR published its review into how Network Rail (NR) plans for and delivers engineering works, The findings found that while there have been some recent improvements, further work is required to minimise disruption to passengers and ensure public money is spent appropriately. The review into possession efficiency - when Network Rail closes sections of the railway for works - looked at how planned engineering works benefitted rail users, funders and passengers. The findings show a lot of changes to access plans, including cancellations and inconsistent processes being adopted across all Network Rail regions in managing 'late changes' to possession. These often occur after revised timetables have been made available to passengers. There is also a lack of understanding of the Network Code, access costs and impact of disruption. Opportunities to minimise compensation paid to train operators were also missed by NR Regions at the planning stage. Rail regulator calls for better planning of engineering works to reduce impact on passengers | Office of Rail and Road (orr.gov.uk)

8 November 2021 - ORR published recommendations aimed at opening up the railway signalling market in a package of measures that would allow Network Rail to boost competition between suppliers on cost, quality and innovation, and drive greater efficiency and performance across the network. The current signalling market in Great Britain is valued at £800-900 million per year. ORR has found that the current market is not competitive enough; with too few suppliers, high costs and Network Rail not having the procurement practices in place to benefit from its considerable buyer power. As a result, ORR has made a number of recommendations aimed at attracting more suppliers to the market, in order to stimulate competition and achieve better value for money when procuring signalling equipment. Rail regulator sets sights on boosting competition, innovation and value for money in

railway signalling | Office of Rail and Road (orr.gov.uk)

23 November 2021 - ORR called for further Network Rail action to retain railway performance improvements seen over the pandemic. While performance remains better than before the pandemic, it declined over the last six months as passenger numbers more than doubled and train services increased, but with regional variations. Network Rail's Wales and Western region showed the largest deterioration in train service performance from the end of 2020/21. Delays attributed to track failures and temporary speed restrictions due to track condition have contributed to this. The rail regulator's mid-year report has looked at Network Rail's contribution to performance. ORR found that while Network Rail had taken steps to learn from the high levels of performance seen during the pandemic, it still had more to do to build better performing timetables. ORR calls for further Network Rail action to retain railway performance | Office of Rail and Road

- 30 November 2021 - ORR published its Rail Industry Finance (UK) 2020-21 report. The report shows the income, expenditure, and government funding of the UK rail industry for the financial year 1 April 2020 to 31 March 2021. The rail industry in 2020-21 was substantially affected by the coronavirus (COVID-19) pandemic. Passenger journeys fell to historically low levels and the government used emergency measures to keep train services running, which led to a large increase in train operator subsidy. The rail industry has started to recover from the impact of the pandemic. In 2021-22 Q1 (April to June 2021) 182 million rail passenger journeys were made in Great Britain, more than five times the 35 million journeys made in 2020-21 Q1. Regulator's rail industry finance report shows impact of pandemic | Office of Rail and Road (orr.gov.uk)