



ASSOCIATION *of* TRAIN OPERATING COMPANIES

# **Ten-year European Rail Growth Trends**

**A study by the Association of Train  
Operating Companies**

## **Introduction**

This report follows on from the Ten-Year European Rail Growth Trends paper that The Association of Train Operating Companies (ATOC) published in July 2005, which highlighted the unprecedented levels of growth on Britain's railways since the early to mid-1990's.

The significant growth trend over the past ten years which we identified in our reports of July 2004 and July 2005 has continued over the past 12 months – there has been a growth in passenger kilometres travelled on Britain's railways of over 42% in the past decade to 43.0 billion, an increase of 3.4% over the 41.6 billion of 2004. This represents the best performance since 1946 when there were no motorways, far fewer cars on the roads and domestic air travel was virtually non-existent. Growth was greatest in London and the south east commuter area (52.9%) with increases in regional and long distance services of 42.1% and 34.6% respectively.

There are now an average of 2.96 million passenger journeys travelled on Britain's rail network every day, the highest since 1958. Only Germany, with a network significantly larger than Britain's, carries more people. Britain's railways carried over 100 million more people than did the SNCF in France, with virtually the same population. Over 19,600 scheduled passenger services were being operated each weekday during the 2005 timetable, an increase of 15.6% since 1995.

Freight traffic continues to grow significantly also - up 63.0% in terms of tonne kilometres since the early 1990's, making Britain the fourth highest haulier in Europe. There was an increase of 5.3% in 2004 compared with the previous 12 months.

## **Methodology**

The study looked at the growth performance of Britain's railways compared with those of a wide range of countries in mainland Europe in 2005. To derive a representative comparison we used a "Base Year" comparator, this being the average of the three years 1994, 1995 and 1996, since the choice of a single individual year would disproportionately affect the results. This paper compares the performance of 2005 with this "Base".

The countries covered in this study include:

Austria	Hungary
Belgium	Ireland
Czech Republic	Italy
Denmark (DSB only – passenger; Railion DK – freight)	Norway
Great Britain	Poland
Holland (NS only – passenger; Railion NL - freight)	Portugal
Finland	Spain
France	Sweden
Germany	Switzerland (SBB only)

## **Acknowledgements**

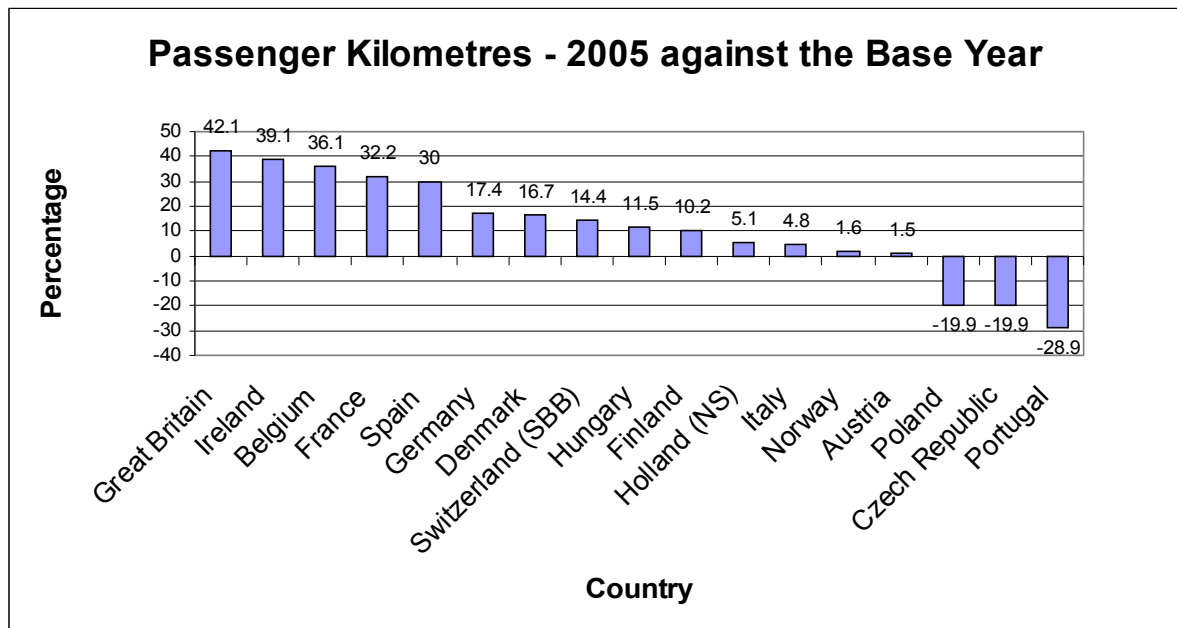
We are grateful to the International Union of Railways (UIC), the Office of Rail Regulation and ATOC's Commercial Analysis Unit for providing the raw data used in this study.

# 1. Growth in Passenger Kilometres

**There has been a very high level of growth in the number of passenger kilometres travelled on Britain's railways over the past decade - the highest of any country in Europe.**

In the notional Base Year with which comparisons were made (an average of 1994, 1995 and 1996) a total of 30.2 billion kilometres were achieved. This had increased to 43.0 billion in 2005, a rise of 42.1%. The four next fastest growing countries over the same period were Ireland (39.1%), Belgium (36.1%), France (32.2%) and Spain (30.0%). See Figure 1/Appendix Table 1.

**Figure 1**



At the other end of the scale, there have been major reductions in travel in Portugal over the same period (-28.9%) and in two of the major eastern European countries, Czech Republic and Poland, both of which lost 19.9% of its traffic. Although Hungary has been relatively successful in growing its travel (up 11.5%), its passenger journeys have actually dropped.

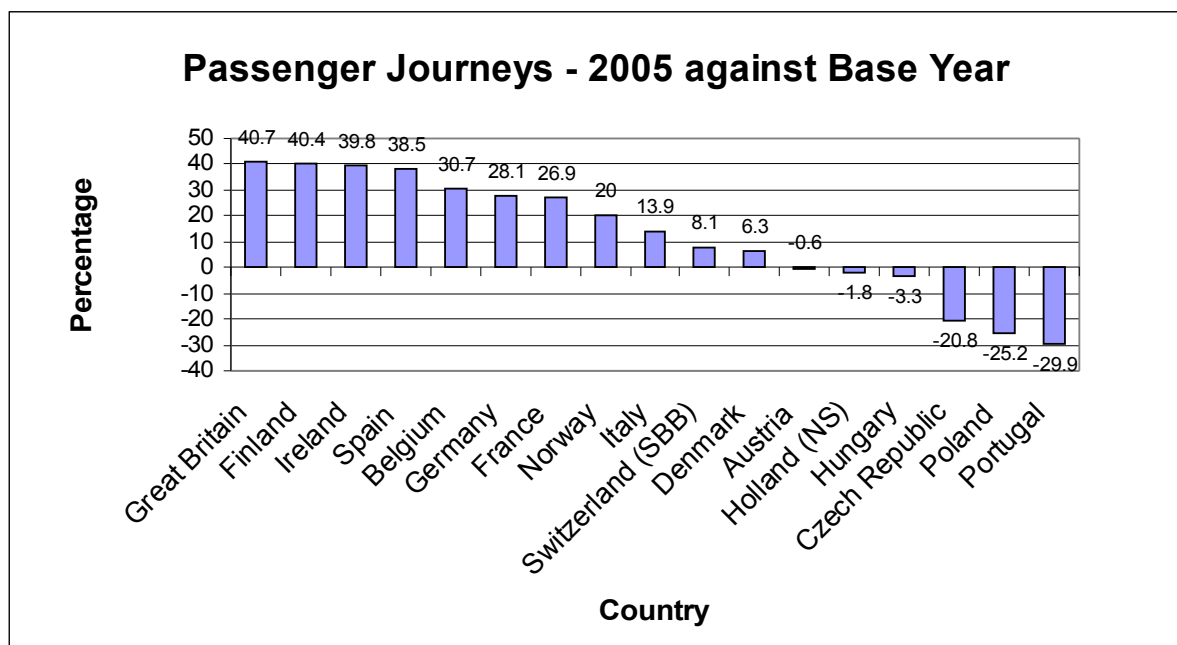
Ireland achieved the highest year-on-year growth (12.6%) in 2005 compared to the previous year. Britain's growth (3.4%) was marginally higher than that in France, whilst Germany achieved 2%. Spain's passenger kilometres rose by 4.3% and Italy's by 1.3%.

## 2. Growth in Passenger Journeys

**Britain's rail network performance in growing its passenger journeys is no less impressive. In 2005 a total of 1,078 million journeys were undertaken, an increase of 4.6% during the year and of 40.7% since the notional Base Year.** The only other rail networks to come close to that level of growth over the past ten years were Finland (40.4%), Ireland (39.8%) and Spain (38.5%). The major networks of Germany, France and Italy achieved 28.1%, 26.9% and 13.9% respectively. See Figure 2/Appendix Table 2.

In the UK growth has been high in all business sectors but particularly impressive in the long distance market, with journeys rising by 58.1% (up from 55 to 87 million) in the ten years from 1995 to 2005. In the London and south east commuter area the increase was 37.8% - from 523 to 721 million, whilst on Regional services the increase was 46.7% (184 to 270 million).

**Figure 2**



### **3. Other Passenger Characteristics of National Railways**

In order to aid further comparisons with mainland European railways the study looked into other travel characteristics:

- (i) average passenger journey length
- (ii) passenger kilometres/journeys per head of population

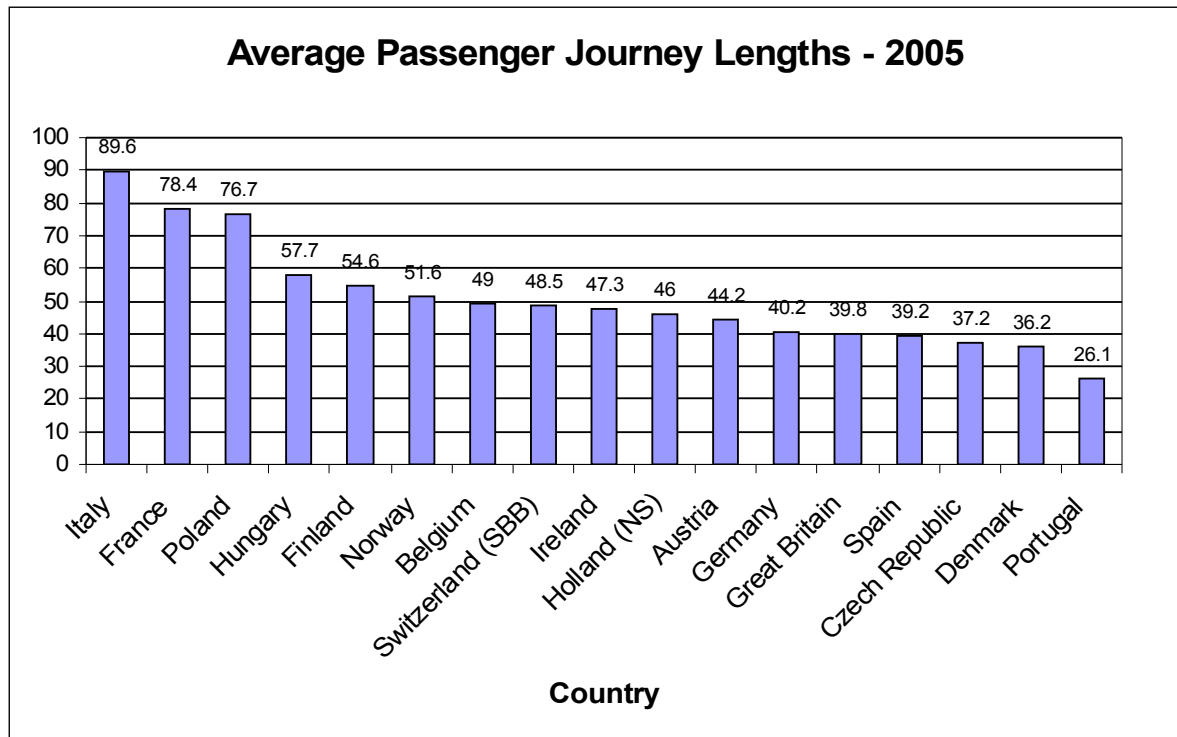
#### **3.1 Average passenger journey length**

As can be seen from Figure 3/Appendix Table 3 the average passenger journey length varies considerably throughout Europe as a whole. The Italians continue to travel furthest when they make journeys by rail (89.6 km), though this is down 8% from 97.3 km in the Base Year. This clearly highlights the fact that there is a substantial proportion of long distance inter-city travel in Italy and relatively few heavy commuter flows. At the other of the scale Portugal's citizens only travel 26.1 km per journey when they take the train.

It is noticeable that on the three busiest networks in terms of journeys undertaken (see Appendix Table 2), the average journey length in France is virtually twice that of both Britain and Germany - reflecting the more advanced development of their high speed long distance network. Britain's average journey length has not changed significantly over the past ten years (up 1.0% - 39.4 to 39.8 km). Germany's has actually fallen 8.3% from 43.8 to 40.2 km, whilst France's has risen by 4.1% from 75.3 to 78.4 km.

Britain's geographical size mitigates against our achieving a high proportion of journeys being long distance compared to France - which is over twice the size of Britain - and Germany, which is almost 50% larger.

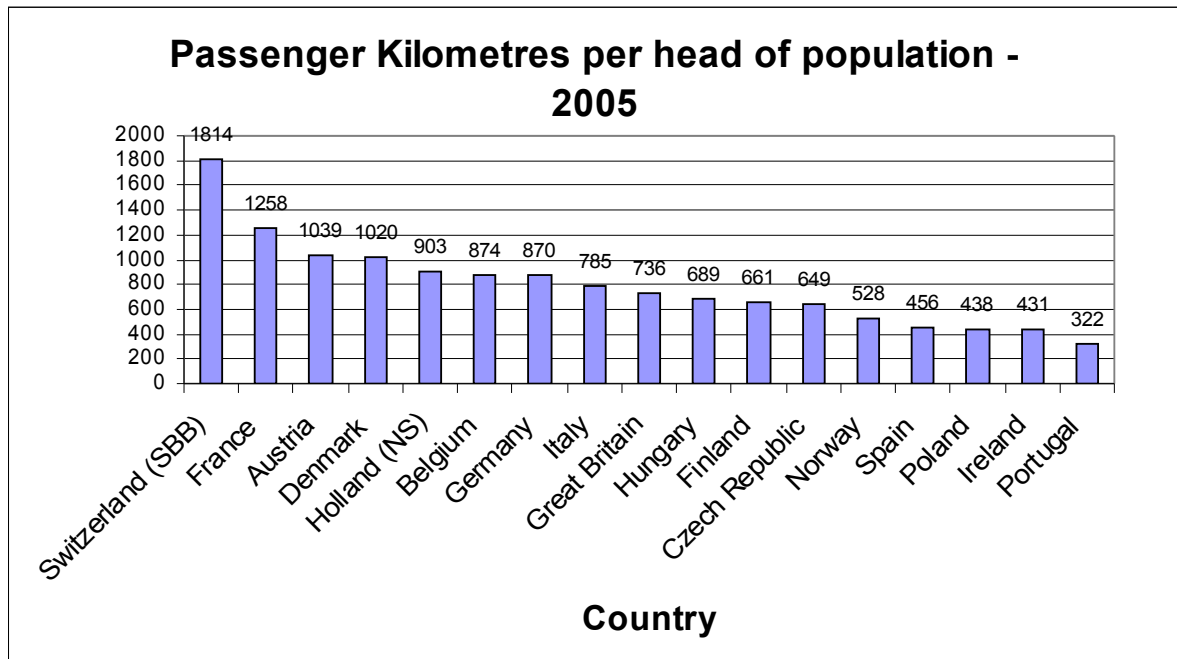
**Figure 3**



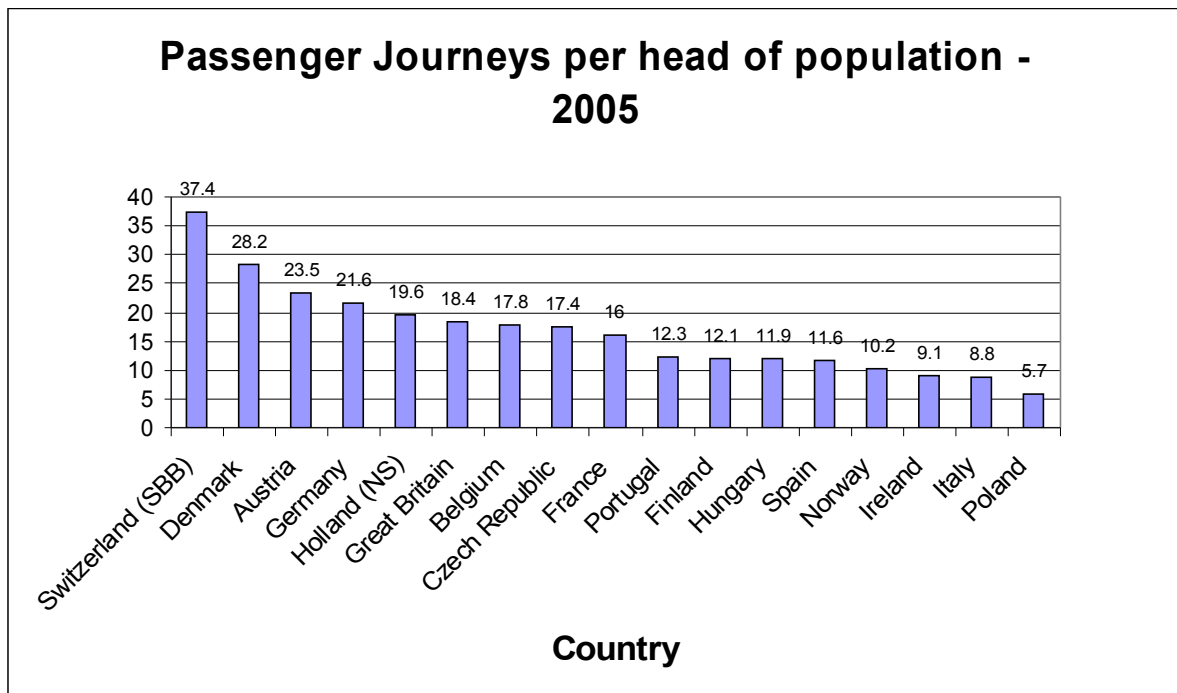
### **3.2 Passenger kilometres/journeys per head of population**

In terms of passenger kilometres and passenger journeys per head of population Britain remains in the mid-range of the countries studied (Figures 4 and 5/Appendix Tables 4 and 5). In 2005 Britons travelled on average 736 kilometres by rail during the course of the year and made a total of 18.4 journeys each – slightly more than in France (16.0) and fewer than the Germans (21.6). Noticeably though, the Italian people travelled much less frequently (only 8.8 journeys on average each) during the year. Switzerland came out top on both measures – the Swiss travelled on average a total of 1814 kilometres in 2005 and made 37.4 journeys.

**Figure 4**



**Figure 5**

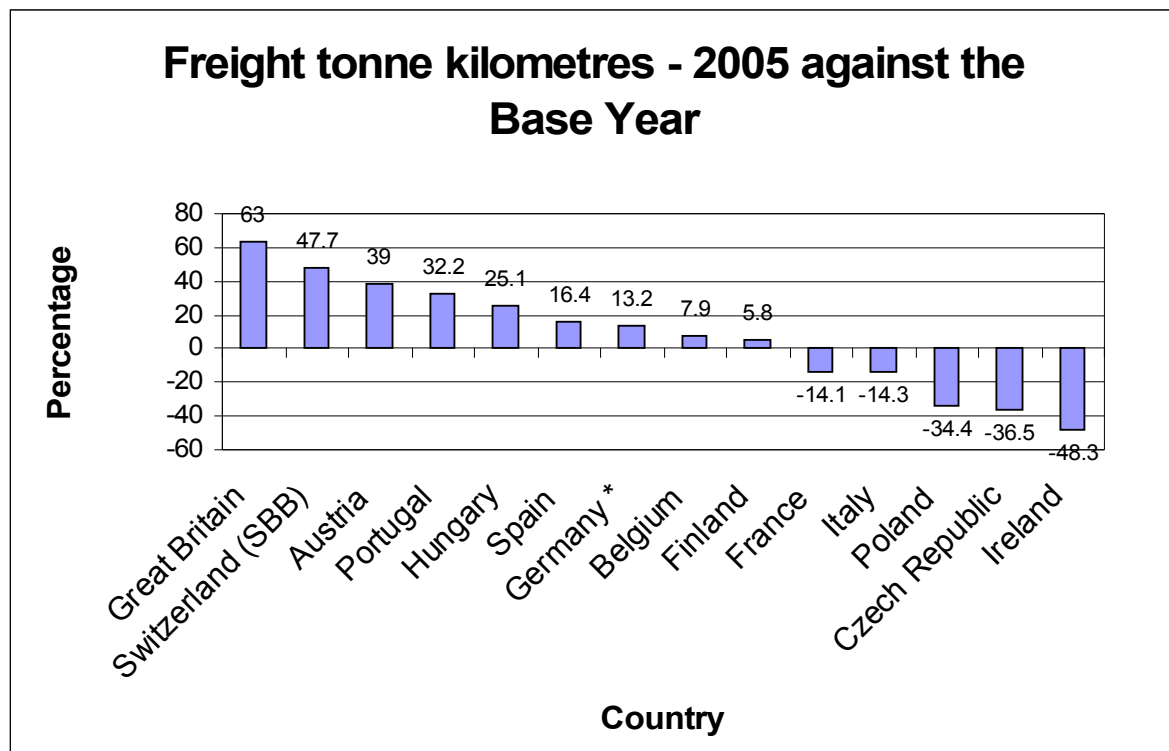


## 4. Freight tonne kilometres

The growth of the freight sector in Britain has been very strong. There has been an increase in the freight kilometre performance since the Base Year of 63.0% - see Figure 6/Appendix Table 6. In 2005 21.80 billion tonne kilometres were achieved against 13.4 billion a decade earlier. The absolute tonnage of freight is only slightly higher than a decade earlier, but the traffic that is being conveyed is travelling considerably further.

Britain's increase in traffic is by far the biggest in Europe over the ten year period, the next highest growth coming in Switzerland (47.7%), Austria (39.0%) – both of which cater for high levels of international traffic – and Portugal (32.2%). Freight in Germany (including Railion DK and Railion NL) has risen by 13.2% but there have been significant reductions in Italy and France (14.3% and 14.1% respectively). Two of the major east European countries, the Czech Republic and Poland, have lost traffic heavily, as has the Irish Republic.

**Figure 6**



\* including Railion NL and Railion DK

## **Conclusion**

Britain has had the fastest growing railway in Europe when measured in terms of both passenger kilometers, and passenger journeys when compared to the Base Year. Also, freight traffic has experienced an explosion of growth over the same period, rising more than in any other of the countries studied, as new flows of traffic are attracted to rail and travel significantly longer distances than has hitherto been the norm.

How to accommodate this and future growth is one of the biggest challenges the industry has to face over the next few years. Capacity improvements involving low levels of expenditure will have to be combined with skillfully focused major infrastructure enhancements if this growth is to be accommodated efficiently.

# Appendix

**Table 1****Passenger kilometres - 2005 against the Base Year \***

<b>Passenger kilometres (billions)</b>	<b>2005</b>	<b>Base Year</b>	<b>% increase</b>
<b>Great Britain</b>	<b>43.00</b>	<b>30.25</b>	<b>42.1</b>
<b>Ireland</b>	<b>1.78</b>	<b>1.28</b>	<b>39.1</b>
<b>Belgium</b>	<b>9.15</b>	<b>6.72</b>	<b>36.1</b>
<b>France</b>	<b>76.47</b>	<b>57.83</b>	<b>32.2</b>
<b>Spain</b>	<b>19.84</b>	<b>15.25</b>	<b>30.0</b>
<b>Germany</b>	<b>71.78</b>	<b>61.12</b>	<b>17.4</b>
<b>Denmark</b>	<b>5.53</b>	<b>4.74</b>	<b>16.7</b>
<b>Switzerland (SBB)</b>	<b>13.51</b>	<b>11.81</b>	<b>14.4</b>
<b>Hungary</b>	<b>6.95</b>	<b>6.23</b>	<b>11.5</b>
<b>Finland</b>	<b>3.47</b>	<b>3.15</b>	<b>10.2</b>
<b>Holland (NS)</b>	<b>14.73</b>	<b>14.01</b>	<b>5.1</b>
<b>Italy</b>	<b>46.14</b>	<b>44.00</b>	<b>4.8</b>
<b>Norway</b>	<b>2.44</b>	<b>2.40</b>	<b>1.6</b>
<b>Austria</b>	<b>8.47</b>	<b>8.34</b>	<b>1.5</b>
<b>Poland</b>	<b>16.74</b>	<b>20.84</b>	<b>-19.9</b>
<b>Czech Republic</b>	<b>6.63</b>	<b>8.20</b>	<b>-19.9</b>
<b>Portugal</b>	<b>3.41</b>	<b>4.80</b>	<b>-28.9</b>
<b>Sweden</b>	<b>Not available</b>		

**\* The Base Year is an average of 1994, 1995 and 1996**

**Table 2****Passenger journeys - 2005 against the Base Year**

<b>Passenger journeys (millions)</b>	<b>2005</b>	<b>Base Year</b>	<b>% increase</b>
<b>Great Britain</b>	<b>1078.0</b>	<b>765.9</b>	<b>40.7</b>
<b>Finland</b>	<b>63.5</b>	<b>45.2</b>	<b>40.4</b>
<b>Ireland</b>	<b>37.6</b>	<b>26.9</b>	<b>39.8</b>
<b>Spain</b>	<b>505.6</b>	<b>364.9</b>	<b>38.5</b>
<b>Belgium</b>	<b>186.6</b>	<b>142.7</b>	<b>30.7</b>
<b>Germany</b>	<b>1784.6</b>	<b>1392.6</b>	<b>28.1</b>
<b>France</b>	<b>974.4</b>	<b>767.8</b>	<b>26.9</b>
<b>Norway</b>	<b>47.3</b>	<b>39.4</b>	<b>20.0</b>
<b>Italy</b>	<b>514.8</b>	<b>451.8</b>	<b>13.9</b>
<b>Switzerland (SBB)</b>	<b>278.5</b>	<b>257.7</b>	<b>8.1</b>
<b>Denmark</b>	<b>152.8</b>	<b>143.7</b>	<b>6.3</b>
<b>Austria</b>	<b>191.6</b>	<b>192.6</b>	<b>-0.6</b>
<b>Holland (NS)</b>	<b>320.0</b>	<b>325.7</b>	<b>-1.8</b>
<b>Hungary</b>	<b>120.4</b>	<b>124.4</b>	<b>-3.3</b>
<b>Czech Republic</b>	<b>178.2</b>	<b>225.0</b>	<b>-20.8</b>
<b>Poland</b>	<b>218.0</b>	<b>375.5</b>	<b>-25.2</b>
<b>Portugal</b>	<b>130.6</b>	<b>186.3</b>	<b>-29.9</b>
<b>Sweden</b>	<b>Not available</b>		

**Table 3****Average passenger journey lengths - 2005 against the Base Year**

<b>Journey length (km)</b>	<b>2005</b>	<b>Base Year</b>	<b>% increase</b>
<b>Poland</b>	<b>76.7</b>	<b>55.4</b>	<b>38.4</b>
<b>Hungary</b>	<b>57.7</b>	<b>50.1</b>	<b>15.1</b>
<b>Denmark</b>	<b>36.2</b>	<b>32.9</b>	<b>10.0</b>
<b>Holland (NS)</b>	<b>46.0</b>	<b>43.0</b>	<b>6.9</b>
<b>Switzerland (SBB)</b>	<b>48.5</b>	<b>45.8</b>	<b>5.8</b>
<b>France</b>	<b>78.4</b>	<b>75.3</b>	<b>4.1</b>
<b>Belgium</b>	<b>49.0</b>	<b>47.1</b>	<b>4.0</b>
<b>Czech Republic</b>	<b>37.2</b>	<b>36.4</b>	<b>2.1</b>
<b>Austria</b>	<b>44.2</b>	<b>43.3</b>	<b>2.0</b>
<b>Portugal</b>	<b>26.1</b>	<b>25.7</b>	<b>1.5</b>
<b>Great Britain</b>	<b>39.8</b>	<b>39.4</b>	<b>1.0</b>
<b>Ireland</b>	<b>47.3</b>	<b>47.6</b>	<b>-0.6</b>
<b>Spain</b>	<b>39.2</b>	<b>41.7</b>	<b>-6.0</b>
<b>Italy</b>	<b>89.6</b>	<b>97.3</b>	<b>-8.0</b>
<b>Germany</b>	<b>40.2</b>	<b>43.8</b>	<b>-8.3</b>
<b>Norway</b>	<b>51.6</b>	<b>60.9</b>	<b>-15.3</b>
<b>Finland</b>	<b>54.6</b>	<b>69.8</b>	<b>-21.8</b>
<b>Sweden</b>	<b>Not available</b>		

**Table 4****Passenger kilometres per head of population – 2005 cf. 2004**

	<b>2005</b>	<b>2004</b>
<b>Switzerland (SBB)</b>	<b>1814</b>	<b>1677</b>
<b>France</b>	<b>1258</b>	<b>1234</b>
<b>Austria</b>	<b>1039</b>	<b>1023</b>
<b>Denmark</b>	<b>1020</b>	<b>1016</b>
<b>Holland (NS)</b>	<b>903</b>	<b>865</b>
<b>Belgium</b>	<b>874</b>	<b>834</b>
<b>Germany</b>	<b>870</b>	<b>841</b>
<b>Italy</b>	<b>785</b>	<b>791</b>
<b>Great Britain</b>	<b>736</b>	<b>694</b>
<b>Hungary</b>	<b>689</b>	<b>712</b>
<b>Finland</b>	<b>661</b>	<b>644</b>
<b>Czech Republic</b>	<b>649</b>	<b>642</b>
<b>Norway</b>	<b>528</b>	<b>519</b>
<b>Spain</b>	<b>456</b>	<b>447</b>
<b>Poland</b>	<b>438</b>	<b>487</b>
<b>Ireland</b>	<b>431</b>	<b>385</b>
<b>Portugal</b>	<b>322</b>	<b>325</b>
<b>Sweden</b>	<b>Figures not available</b>	<b>Figures not available</b>

**Table 5****Passenger journeys made by rail per head of population – 2005 cf. 2004**

	<b>2005</b>	<b>2004</b>
<b>Switzerland (SBB)</b>	<b>37.4</b>	<b>33.7</b>
<b>Denmark</b>	<b>28.2</b>	<b>27.9</b>
<b>Austria</b>	<b>23.5</b>	<b>23.2</b>
<b>Germany</b>	<b>21.6</b>	<b>20.5</b>
<b>Holland (NS)</b>	<b>19.6</b>	<b>19.0</b>
<b>Great Britain</b>	<b>18.4</b>	<b>17.2</b>
<b>Belgium</b>	<b>17.8</b>	<b>17.1</b>
<b>Czech Republic</b>	<b>17.4</b>	<b>17.5</b>
<b>France</b>	<b>16.0</b>	<b>15.7</b>
<b>Portugal</b>	<b>12.3</b>	<b>12.7</b>
<b>Finland</b>	<b>12.1</b>	<b>11.4</b>
<b>Hungary</b>	<b>11.9</b>	<b>12.0</b>
<b>Spain</b>	<b>11.6</b>	<b>11.3</b>
<b>Norway</b>	<b>10.2</b>	<b>10.1</b>
<b>Ireland</b>	<b>9.1</b>	<b>8.4</b>
<b>Italy</b>	<b>8.8</b>	<b>8.7</b>
<b>Poland</b>	<b>5.7</b>	<b>7.1</b>
<b>Sweden</b>	<b>Not available</b>	<b>Not available</b>

**Table 6****Freight tonne kilometres - 2005 against the Base Year**

<b>Freight tonne kilometres (billions)</b>			
	<b>2005</b>	<b>Base Year</b>	<b>% increase</b>
<b>Great Britain</b>	<b>21.80</b>	<b>13.37</b>	<b>63.0</b>
<b>Switzerland (SBB)</b>	<b>11.48</b>	<b>7.77</b>	<b>47.7</b>
<b>Austria</b>	<b>18.01</b>	<b>12.95</b>	<b>39.0</b>
<b>Portugal</b>	<b>2.42</b>	<b>1.83</b>	<b>32.2</b>
<b>Hungary</b>	<b>8.51</b>	<b>6.80</b>	<b>25.1</b>
<b>Spain</b>	<b>10.82</b>	<b>9.29</b>	<b>16.4</b>
<b>Germany (includes Railion NL and Railion DK)</b>	<b>83.11</b>	<b>73.41</b>	<b>13.2</b>
<b>Belgium</b>	<b>8.13</b>	<b>7.53</b>	<b>7.9</b>
<b>Finland</b>	<b>9.70</b>	<b>9.16</b>	<b>5.8</b>
<b>France</b>	<b>40.69</b>	<b>47.34</b>	<b>-14.1</b>
<b>Italy</b>	<b>20.11</b>	<b>23.46</b>	<b>-14.3</b>
<b>Poland</b>	<b>43.79</b>	<b>66.75</b>	<b>-34.4</b>
<b>Czech Republic</b>	<b>14.35</b>	<b>22.59</b>	<b>-36.5</b>
<b>Ireland</b>	<b>0.30</b>	<b>0.58</b>	<b>-48.3</b>
<b>Sweden</b>	<b>Not available</b>		
<b>Norway</b>	<b>Not available</b>		



*ASSOCIATION of TRAIN OPERATING COMPANIES*

**Association of Train Operating Companies  
40 Bernard Street  
London WC1N 1BY  
Tel: 020 7841 8000  
[www.nationalrail.co.uk](http://www.nationalrail.co.uk)**