Railway travel in Europe - faster and more frequent

EPF Conference
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Jacques Dirand
Senior Policy Adviser - PASSENGER
Main areas of CER work

CER stands for...

- **75 member companies**, rail transport operators and infrastructure managers from all countries within the EU, the accession countries as well as from the Western Balkan countries, Norway and Switzerland.

- **The representation of our members’ interests in Brussels** towards the European Parliament, Commission and Council of Ministers as well as other policymakers and partners in transport.

- **Promoting a strong rail industry** that is essential to the creation of a sustainable transport system which is efficient, effective and environmentally sound.

Representing European rail sector in EU

Pro-active shaping of EU agenda

Own initiatives
Passenger traffic in Europe: a MIXED picture

Rail financing is KEY to growth...

But financing is lacking!

Will rail passenger market liberalisation help?

What prospects for rail passengers, then?

What should we fight for?
Snapshot: **SWEDEN**, an example of best implementation of White Paper principles, leading to rail growth.

**Rail growth 2002-2007**

- Passenger: rail +16% (EU15: +9%) All +4%
- Freight: rail +21% (EU15: +17%) All +14%

**Rail Modal Share 2007**

- Passenger: 9% (EU15: +7%) ➲ +11%
- Freight: 36% (EU15: +15%) ➲ +6%

**% NEW ENTRANTS 2007**

- Passenger: 19%
- Freight: 33%

**FINANCING (1) 2002-2006**

- **SE**: 85k€/track-km/yr
- **EU25**: 116k€/track-km/yr
- **EU15**: 186k€/track-km/yr

**ACCESS CHARGES (2) 2007**

- **Pass**: 0,50€/tr-k ➲
  - **EU15**: 1.95train-km
- **Freight**: 0,48€/tr-k ➲
  - **EU15**: 2,09€/train-km

**SWEDEN**: an example of RIGHT implementation of White Paper principles...
- Low access charges & high investments in infrastructure, starting in 1990,
- Attracting new entrants into the market since 1995

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(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008

**Passenger:** 9% (EU15: +9%) All +9%
**Freight:** 8% (EU15: +17%) All -7%  

Source: **ETIF 2009, European Commission**

**Passenger:** 9% (EU15: +7%) ➔ -1%
**Freight:** 8% (EU15: +15%) ➔ +2%

Source: **ETIF 2009, European Commission**

**DENMARK:** High rail financing and low access charges allowed passenger services to increase and rail to keep up modal share. Due to the small size of the country, freight services are very much subject to international traffic variations.

Source: **Source: ETIF 2009, European Commission**
Source: **Source: DG TREN 2009, European Commission**
Source: **Source: ITF 2005-2008, OECD**
Source: **Source: RMMS 2007/09, European Commission**

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **POLAND**, implementing the First Railway Package will not be sufficient...

**Passenger:** Rail -6% (EU25: +8%) All: +32%

**Freight:** Rail +16% (EU25: +18%) All: +60%!

Source: ETIF 2009, European Commission

**Passenger:** 7% (EU10: +7%) 📈 -28%

**Freight:** 26% (EU10: +28%) 📈 -27%

Source: ETIF 2009, European Commission

**% NEW ENTRANTS 2007**

- Passenger: 10%
- Freight: 20%

Source: RMMS 2007/09, European Commission

**Rail growth 2002-2007**

In Europe, one of the highest penetrations of new entrants

**FINANCING (1) 2002-2006**

- **PL:** 4k€/track-km/yr
  - EU25: 116k€/track-km/yr

Source: DG TREN 2009, European Commission

**Access charges for freight are extremely high.**

- **Pass:** 1,27€/tr-k 📈
  - EU25: 2.09train-km

Source: ETIF 2005-2008, OECD

- **Freight:** 5,18€/tr-k 📈
  - EU25: 3,60€/train-km

Source: ITF 2005-2008, OECD

**POLAND:** In spite of a good penetration of new entrants, rail performance becomes very fragile. **Rail modal share is collapsing.** Infrastructure charges for freight are too high compared to road. And rail financing is one of the lowest in Europe.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: ROMANIA, an example of lacking White Paper principles implementation, leading to rail decline.

Rail growth 2002-2007

Passenger: Rail -12% (EU25: +8%) All +14%
Freight: Rail +4% (EU25: +18%) All +89%

Source: ETIF 2009, European Commission

Passenger: 9% (EU10: +7%) ➣ -23%
Freight: 19% (EU10: +28%) ➣ -45%

Source: ETIF 2009, European Commission

% NEW ENTRANTS 2007

Passenger: 1%
Freight: 34%

Source: RMMS 2007/09, European Commission

Market opening effectively started in 2004 in freight

FINANCING (1) 2002-2006

RO: 0.03€/track-km/yr
EU25: 116k€/track-km/yr

Source: DG TREN 2009, European Commission

Lowest investment level in infrastructure in Europe

ACCESS CHARGES (2) 2007

Pass: 2,49€/tr-k ➤
EU25: 2.09€/train-km
Freight: 3,87€/tr-k ➤
EU25: 3,60€/train-km

Source: ITF 2005-2008, OECD

Access charges ABOVE EU average AND going up!!!

ROMANIA: With high access charges and no financing for rail, market opening was counterproductive, driving block train prices down and undermining the already limited ability of the rail system to finance itself. Rail modal shares collapsed!

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Passenger traffic in Europe: a MIXED picture

Rail financing is KEY to growth...

But financing is lacking!

Will rail passenger market liberalisation help?

What prospects for rail passengers, then?

What should we fight for?
Financing & Charging account for 55% of rail passenger absolute growth. Competition for only 0.01%.

**Rail FINANCING**

Traffic growth in p.km betw. 2002 and 2007 (in %)

- Best data fit is reached via a logarithmic correlation (curved line)
  \[ y = 0.039 \ln(x) - 0.0975 \]
  \[ R^2 = 0.4982 \]

Financing in 000€/Track.km/Yr (Year average 2002 - 2006)

- Rail FINANCING explains 50% of rail passenger absolute growth variation!

**Rail CHARGING**

TAC in €/Train.km in 2007 (weighted average)

- Rail CHARGING explains only 5% of rail passenger absolute growth variation (PSOs!)

- \[ y = -0.0336x + 0.1391 \]
  \[ R^2 = 0.0472 \]

**Market OPENING**

% of t.km made by New Entrants in 2007

- Market OPENING explains only 0.01% of rail passenger absolute growth variation!

- \[ y = 0.0004x + 0.0599 \]
  \[ R^2 = 0.0001 \]

**OTHER Drivers?**

Other factors may also drive growth:
- Difference in charging between modes;
- Economic growth;
- Infrastructure investments in other modes;
- Quality-price-productivity;
- Rail historic debt; etc…

45% of variation remains to be explained by other drivers than financing, charging or market opening.

55% - Rail **FINANCING & CHARGING** is a PRIMARY DRIVER of rail passenger growth.

0% - Market opening very much LESS so.

Which other driver? **No EC data!**
Financing & Charging account for 58% of rail Freight relative growth. Competition for less than 0.001%.

Rail FINANCING explains 48% of rail freight relative growth variation!

Rail CHARGING explains 10% of rail freight relative growth variation.

Market OPENING explains less than 0.001% of relative rail freight growth variation!

42% of variation remains to be explained by other drivers than financing, charging or market opening.

58% - Rail FINANCING & CHARGING is a PRIMARY DRIVER of rail freight dynamism.

0% - Market opening very much LESS so.

Which other driver? No EC data!

Other factors may also drive growth:
- Difference in charging between modes;
- Economic growth;
- Infrastructure investments in other modes;
- Quality-price-productivity
- Rail historic debt; etc…
Rail financing is KEY to growth...

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What should we fight for?
But rail financing is lacking: 35% of Public Service Obligations not compensated in EU 10

Average EU10 State Compensation
(as % of difference between expenses and ticket revenue)

- 2005: 55%
- 2006: 59%
- 2007: 61%
- 2008: 66%

state financing shortfall
Rail financing is also lacking, due to poor level of investments in rail infrastructure, compared to road.

In EU15, between 1970 and 2005
- road traffic more than tripled
- rail traffic also increased, but NOT as much. WHY?

In 35 years MOTORWAY length INCREASED 3.5 times!

In 35 years, RAILTRACK length DECREASED by 14%!

Similar growth levels can be reached by rail with similar levels of investments as road.
In this context, it is surprising that rail managed to keep up its modal share since 1995.

Source: ETIF 2009
Why? In a context of poor financing, rail managed to maintain its modal share through **productivity gains**.

Since 2001:
- ... freight volumes grew on average by 2.2%/year.
- ... Modal share of rail in land transport picked up from 16.8% to 17.6%.

**EU15**
In 10 years, labour productivity in EU15 increased by **+46%**

**EU10**
In 10 years, labour productivity in EU10 increased by **+53%**

Source: ETIF 2006 (Energy and Transport in Figures), Eurostat
Passenger traffic in Europe: a MIXED picture

Rail financing is KEY to growth...

But financing is lacking!

Will rail passenger market liberalisation help?

What prospects for rail passengers, then?

What should we fight for?
Market opening has started in some countries according to European Commission’s data.

Zero % in Belgium, Bulgaria, Greece, Spain, Finland, France Ireland, Lithuania, Slovenia

Data missing Sweden, Italy, Portugal, Czech Republic and Luxembourg
But EC claim that market opening creates growth is misleading (and contradicts EC own data) e.g. freight

Commission claims: “The market for freight has already been opened, a process that has been associated with increased modal shares for rail”. But an analysis of market entry against relative rail freight growth (using Commission’s own data) shows no correlation (flat corr. line).

Growth is also observed in countries where competition is low. In most of them, growth may result from high rail financing and/or low access charges.

Most underperforming countries in freight are also underfinanced (esp. on infrastructure for freight).

Lack of correlation between market opening and rail freight growth shows that other factors have an overriding influence on growth, i.e.: “Access Charging” and “Rail Financing” (in terms of PSO payments and support to infrastructure operation, maintenance, upgrades, new construction...).
In freight, lack of correlation between market opening and volume growth has been apparent since 2006.

In 2006, in its reaction to the Commission’s review of the 1st Railway Package, CER already reported on the lack of correlation between the market share of new entrants in freight and rail freight volume growth, based on Commission’s data.

In 2009, the study on « Experiences from implementing the first EU railway package » by the SIKA institute in Sweden pointed to the lack of correlation between the level of deregulation and the growth of rail freight volumes.

Figure 4.17 shows the correlation between ideal type and change in the number of tonne km. If ideal type 1 is included, no correlation is visible in the material. If this ideal type is excluded, the market with a higher extent of deregulation has a more positive development for rail freight transport than countries with a lower extent of deregulation.

Note: source data taken from the European Commission’s review of the 1st Railway Package (Annex 11 – figures 11.3 and 11.4). Market share of New Entrants in Estonia corrected to correspond to reference period of market growth data.
Big asymmetries in “rail financing” do NOT put all EU countries on an equal par with regard to liberalisation

Level of Rail Financing(1) in 000€ per track.km per year
(Yearly average over the period 2002 - 2006)

<table>
<thead>
<tr>
<th></th>
<th>EU25</th>
<th>EU15</th>
<th>EU10</th>
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<td>ROMANIA (4)</td>
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</table>

(1) DG TREN « rail financing » data includes:
   - money paid by public authorities in compensation of PSOs, as well as
   - state funding of infrastructure operations, maintenance, upgrades, renewals and new constructions

(2) For Luxembourg, figure is blown up, notably by high investments in ERTMS.

(3) For Greece, railway funding was mainly financed by debt, which remained within the railway system and is now likely to bear on its development.

(4) For CEECs, European Commission’s figures do not include contributions from Cohesion Funds.

(5) For Spain, these figures do not include investments in the High Speed Network!

Source: European Commission, DG TREN 2009 statistics
Asymmetries in “Access Charging” do NOT put EU countries on an equal par with regard to liberalisation

Level of Track Access Charging in € per train.km
Average for (intercity and regional/local) passenger trains in 2007 (1)

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<tr>
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<th>EU25</th>
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<td>1.45</td>
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Sources: OECD - ITF 2005 and OECD - ITF 2008

(1) Track access charges levels for 2007 have been derived from a linear progression between 2005 levels (based on OECD-ITF 2005 data) and 2008 levels (based on OECD-ITF 2008 data).
For 2008, average passenger access charges had to be recalculated based on a « weighted » average between charges for intercity trains and local trains. Assumption was 3/4 regional/local trains against 1/4 intercity trains.

(2) Level of track access charges for Luxembourg, Ireland and Greece was not available in OECD-ITF data.
Asymmetries in “Access Charging” on Intercity trains create unequal “Open Access” between countries.

Level of Track Access Charging in € per train.km

Average for INTERCITY passenger trains in 2008

<table>
<thead>
<tr>
<th>EU25</th>
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<tbody>
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<td>EU10</td>
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<th>EU25</th>
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<td>EU15</td>
<td>2,24</td>
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<tr>
<td>EU10</td>
<td>2,51</td>
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</tbody>
</table>

1. DENMARK 0,25
2. FINLAND 0,80
3. SWEDEN 0,80
4. POLAND 0,95
5. CZECH REPUBLIC 1,40
6. PORTUGAL 1,40
7. SPAIN 1,50
8. NETHERLANDS 1,65
9. ESTONIA 1,75
10. SLOVAKIA 1,80
11. FRANCE 2,20
12. SLOVENIA 2,20
13. UNITED KINGDOM 2,30
14. AUSTRIA 2,35
15. HUNGARY 2,50
16. ROMANIA 2,50
17. ITALY 2,90
18. BULGARIA 3,50
19. LATVIA 3,90
20. GERMANY 4,00
21. LITHUANIA 4,60
22. BELGIUM 6,75
23. GREECE (1) n.a.
24. IRELAND (1) n.a.
25. LUXEMBOURG (1) n.a.

(1) Level of track access charges for Luxembourg, Ireland and Greece was not available in OECD-ITF reports

Source: OECD – ITF report 2008
Cost Coverage: Target % of total cost covered by TACs (remainder covered by public support)

Source: OECD/ITF 2005
Rail financing is KEY to growth...

But financing is lacking!

Will rail passenger market liberalisation help?

What prospects for rail passengers, then?

What should we fight for?
The Economic crisis has hit Rail Passenger growth in 2009!
(passenger-km % growth compared to previous year)

Source: CER, February 2010
Question: How is output performance in your company expected to develop in 2010 compared to 2009?

Replies by CER Members*:

<table>
<thead>
<tr>
<th>Rail Passenger Companies (pass-km)</th>
<th>EU10</th>
<th>EU15</th>
</tr>
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<tbody>
<tr>
<td>better</td>
<td>25%</td>
<td>37%</td>
</tr>
<tr>
<td>same</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>worse</td>
<td>12%</td>
<td>26%</td>
</tr>
</tbody>
</table>

*none answered ‘much better’ or ‘much worse’
High-Speed Rail is expected to carry on developing:
Length of High-Speed Lines in Europe (in km)

Average: 187 km / year

Average: 554 km / year

Source: UIC (Ignacio Barrón de Angoiti, Director HS)
But, if nothing is done, road is expected to grow even faster.

source: European Commission 2007 (Einschätzung Entwicklung Transportnachfrage nach PRIMES-Model, DG TREN)
However, passenger rights are expected to expand to all modes...
But are passenger rights really going to be harmonised across modes?

**BUS AND COACHES**

(European Council position)

- Limited set of fundamental rights
- Compensation for delay “at departure”
- Compensation only starting from 2 hours delay

**AVIATION**

- Compensation only starting from 5 hours delay

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CER is in favour of a harmonisation of passenger rights across modes!
Passenger traffic in Europe: a MIXED picture

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But financing is lacking!

Will rail passenger market liberalisation help?

What prospects for rail passengers, then?

What should we fight for?
CONCLUSION: how to make rail travel faster and more frequent?

1. Let us not dream. **Liberalisation will NOT make it (on its own)**!

2. Like for road, **financing will be crucial**:
   - Financing infrastructure maintenance, upgrade, renewal, new constructions;
   - Financing public service obligations;
   - Having track access charges that do not handicap rail (against air and road);
   - Cancelling rail historic debt, whereever this has not yet been done.

3. In the absence of these **crucial conditions**:
   - Liberalisation may be counterproductive (or destructive): loss of traffics;
   - Passenger rights might not be optimally guaranteed.
CONCLUSION: To revitalise rail, efforts MUST now FOCUS on rail financing & charging for all modes.

- Competition, on its own, is not sufficient to revitalise rail.
- Without **fair competition between modes** (fair charging) and sufficient **rail financing** (PSO compensations + infrastructure funding), the railways efforts in quality, productivity and efficiency are reduced to nil.
CONCLUSION: the best recipe for passenger transport relies on the right balance between 3 ingredients...

3 ingredients are needed to make good BREAD

- Flour
- Yeast
- Water

3 ingredients are needed to make successful RAIL

- On Rail Competition
- Financing
- Fair charging between modes
Thank you for your attention!

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For further information, visit our website: www.cer.be
ANNEX

CER study on
Market Opening, Financing, Charging
AND
Rail Performance
Market opening, financing, charging AND railway performance

Analysis of EC (RMMS/ETIF) and OECD (ITF) data
DRAFT
19 March 2010

Jacques Dirand
Senior Policy Adviser - PASSENGER
Senior Policy Adviser - FREIGHT
INTRODUCTION: Liberalisation must be looked at in the wider context of the «rail financial architecture».

1. CER SUPPORT market LIBERALISATION measures, as a principle.

2. Liberalisation is a complex issue and is not sufficient, on its own, to elicit market growth. OTHER FACTORS have to be taken into consideration:
   1. Financing (in terms of PSO compensation and infrastructure funding);
   2. Infrastructure access charging;
   3. Difference in charging between modes;
   4. Financing of other modes (esp. infrastructure financing);
   5. Quality, price and productivity;
   6. Economic growth;
   7. Rail historic debt... Etc...

3. This analysis focuses ONLY on the factors available in EC data: market opening, financing & charging. In this context, analysis shows that rail financing & charging is overriding market opening in eliciting growth.

4. Whenever rail financing and charging are neglected, market opening has unintended consequences (as seen in France, Romania, Poland...).
EXECUTIVE SUMMARY: To revitalise rail, efforts MUST now FOCUS on rail financing & track access charging.

Analysis of RMMS and ITF-OECD data shows that:

1. Rail traffic growth is very dependent on level of railway financing.
2. Growth is also somewhat affected by track access charges, esp. in freight.
3. There is no correlation between traffic growth and level of market opening.

A country by country analysis shows that:

1. All countries where both rail financing and access charging are correctly set perform very well, regardless of market opening: Belgium, Netherlands, Sweden, Greece (although, in Greece, infrastructure was financed by debt!)...
2. Countries where both rail financing and access charging are inadequate perform badly, regardless of market opening: Bulgaria, Poland, Romania, Slovakia...
3. Competition may have a stimulating effect in countries where rail financing and access charging are adequately set (Sweden, Netherlands...) and a counterproductive effect in countries where rail financing and access charging are inadequate (France, Hungary, Poland, Romania...)
Methodological Remarks

Introduction and EXECUTIVE SUMMARY

Methodological Remarks

Overall European Analysis

Individual Country Snapshots

Final Conclusion
Methodological Remarks (1)

Data sources:
- Track access charges: ITF 2005 and ITF 2008, OECD.

Data processing:
- All data shown is calculated on the basis of the above original sources.
- For UK, market share of new entrants excludes DB Schenker & Freightliner Ltd.
- Track access charges for 2007 has been recalculated (see next page).

Rail performance (based on 2007 data) has been analysed against:
- Level of market share reached by new entrant companies in 2007.
- Average yearly rail financing per track.km of the previous 5 years (2002-2006).
- Average track access charges (based on 2007 projected values - see next page).
Methodological Remarks (2)

Remark concerning data on market share of new entrants:
- 2007 market shares of new entrants have been calculated as the average between 2006 market shares (RMMS 2007) and 2008 market shares (RMMS 2009).
- In the UK, 2007 market share of new entrants excludes EWS (now DB Schenker and ex-division of British Rail for conventional freight) and Freightliner Ltd (ex-division of British Rail for intermodal freight). However, it includes Freightliner Heavyhaul, which competes with EWS (DB Schenker) on conventional freight.

Remarks regarding track access charge estimates for 2007:
- Track access charges levels for 2007 have been derived from a linear progression between 2005 levels (based on ITF 2005) and 2008 levels (based on ITF 2008).
- As a result, track access charges levels for 2007 can also be considered as a «weighted» average of track access charging between 2005 and 2008.
- To do this, average FREIGHT access charge for 2008 had to be recalculated based on the average between charges for 960t trains and charges for 2000t trains.
- Similarly, average PASSENGER access charge for 2008 had to be recalculated based on a «weighted» average between charges for intercity trains and local trains. Assumption was 3/4 local trains against 1/4 intercity trains.
Overall European Analysis

Introduction and EXECUTIVE SUMMARY

Methodological Remarks

Overall European Analysis

Individual Country Snapshots

Final Conclusion
Railway financing is crucial to boost rail... ...both in passenger and in freight traffic.

Each dot represents one EU country.

**Left mappings:** a correlation analysis of rail passenger traffic (both in absolute terms and in relative terms) AGAINST railway financing shows that rail passenger traffic greatly benefits from higher rail financing.

**Bottom mapping:** Rail freight traffic benefits even more from higher rail financing.

Sources: European Com., ETIF 2009European Com., DG TREN statistics 2009; For CEEC countries, rail financing figures do not include cohesion funds.
Big asymmetries in “rail financing” do NOT put all EU countries on an equal par with regard to liberalisation

Level of Rail Financing(1) in 000€ per track.km per year
(Yearly average over the period 2002 - 2006)

<table>
<thead>
<tr>
<th>EU25</th>
<th>116</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU15</td>
<td>186</td>
</tr>
<tr>
<td>EU10</td>
<td>10</td>
</tr>
</tbody>
</table>

| 1     | LUXEMBOURG (2) | 509 |
| 2     | NETHERLANDS   | 450 |
| 3     | BELGIUM       | 432 |
| 4     | ITALY         | 260 |
| 5     | DENMARK       | 255 |
| 6     | IRELAND       | 225 |
| 7     | FRANCE        | 175 |
| 8     | UNITED KINGDOM| 169 |
| 9     | GREECE (3)    | 137 |
| 10    | GERMANY       | 134 |
| 11    | SWEDEN        | 85  |
| 12    | SLOVENIA (4)  | 75  |
| 13    | AUSTRIA       | 63  |

<table>
<thead>
<tr>
<th>EU25</th>
<th>116</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU15</td>
<td>186</td>
</tr>
<tr>
<td>EU10</td>
<td>10</td>
</tr>
</tbody>
</table>

| 14    | FINLAND     | 55  |
| 15    | SPAIN (5)   | 54  |
| 16    | HUNGARY (4) | 47  |
| 17    | SLOVAKIA (4)| 18  |
| 18    | PORTUGAL    | 15  |
| 19    | CZECH REP. (4) | 13 |
| 20    | ESTONIA (4) | 6   |
| 21    | LATVIA (4)  | 4   |
| 22    | POLAND (4)  | 4   |
| 23    | BULGARIA (4)| 2   |
| 24    | LITHUANIA (4)| 1 |
| 25    | ROMANIA (4) | 0   |

(1) DG TREN « rail financing » data includes:
- money paid by public authorities in compensation of PSOs, as well as
- state funding of infrastructure operations, maintenance, upgrades, renewals and new constructions

(2) For Luxembourg, figure is blown up, notably by high investments in ERTMS.

(3) For Greece, railway funding was mainly financed by debt, which remained within the railway system and is now likely to bear on its development.

(4) For CEECs, European Commission’s figures do not include contributions from Cohesion Funds.

(5) For Spain, these figures do not include investments in the High Speed Network!

Source: European Commission, DG TREN 2009 statistics
Level of “Track Access Charges” (TAC) does affect rail traffic (especially freight)...

Each dot represents one EU country.

**Bottom mapping:** a correlation analysis of the rail freight relative growth AGAINST the level of track access charges shows that higher access charges negatively affect rail freight traffic.

**Left mappings:** Track access charges affect rail passenger traffic far less. **Explanation:** most of passenger traffic is run under PSO contracts and falls under PSO compensations.

Sources: European Commission, ETIF 2009; OECD, ITF 2005 and ITF 2008 – NOTE: No data available for EL, IE and LU
Asymmetries in “Access Charging” do NOT put EU countries on an equal par with regard to liberalisation

**Level of Track Access Charging in € per train.km**

*Average for (intercity and regional/local) passenger trains in 2007 (1)*

<table>
<thead>
<tr>
<th></th>
<th>EU25</th>
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<th>EU25</th>
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</thead>
<tbody>
<tr>
<td>EU15</td>
<td>1.95</td>
<td>EU15</td>
<td>1.95</td>
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</tr>
<tr>
<td>EU10</td>
<td>2.26</td>
<td>EU10</td>
<td>2.26</td>
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<tr>
<th>Rank</th>
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<th>EU15 (€)</th>
<th>EU10 (€)</th>
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<td>3</td>
<td>DENMARK</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CZECH REPUBLIC</td>
<td>0.93</td>
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<tr>
<td>5</td>
<td>ESTONIA</td>
<td>0.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>SPAIN</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>POLAND</td>
<td>1.27</td>
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<td></td>
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<tr>
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<td>NETHERLANDS</td>
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<tr>
<td>9</td>
<td>PORTUGAL</td>
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<tr>
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<tr>
<td>18</td>
<td>HUNGARY</td>
<td>3.27</td>
<td></td>
<td></td>
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<tr>
<td>19</td>
<td>LATVIA</td>
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</tr>
<tr>
<td>20</td>
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<td></td>
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<tr>
<td>21</td>
<td>GERMANY</td>
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<td>22</td>
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<tr>
<td>(2)</td>
<td>IRELAND</td>
<td>n.a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>GREECE</td>
<td>n.a.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: OECD - ITF 2005 and OECD - ITF 2008

(1) Track access charges levels for 2007 have been derived from a linear progression between 2005 levels (based on OECD-ITF 2005 data) and 2008 levels (based on OECD-ITF 2008 data).

For 2008, average passenger access charges had to be recalculated based on a «weighted» average between charges for intercity trains and local trains. Assumption was 3/4 regional/local trains against 1/4 intercity trains.

(2) Level of track access charges for Luxembourg, Ireland and Greece was not available in OECD-ITF data.
Asymmetries in “Access Charging” on Intercity trains create unequal “Open Access” between countries.

### Level of Track Access Charging in € per train.km

**Average for INTERCITY passenger trains in 2008**

<table>
<thead>
<tr>
<th>Country</th>
<th>Level of Track Access Charging in € per train.km</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EU25</strong></td>
<td>2,36</td>
</tr>
<tr>
<td><strong>EU15</strong></td>
<td>2,24</td>
</tr>
<tr>
<td><strong>EU10</strong></td>
<td>2,51</td>
</tr>
</tbody>
</table>

| 1. DENMARK         | 0,25                                             |
| 2. FINLAND         | 0,80                                             |
| 3. SWEDEN          | 0,80                                             |
| 4. POLAND          | 0,95                                             |
| 5. CZECH REPUBLIC  | 1,40                                             |
| 6. PORTUGAL        | 1,40                                             |
| 7. SPAIN           | 1,50                                             |
| 8. NETHERLANDS     | 1,65                                             |
| 9. ESTONIA         | 1,75                                             |
| 10. SLOVAKIA       | 1,80                                             |
| 11. FRANCE         | 2,20                                             |
| 12. SLOVENIA       | 2,20                                             |
| 13. UNITED KINGDOM | 2,30                                             |
| 14. AUSTRIA        | 2,35                                             |
| 15. HUNGARY        | 2,50                                             |
| 16. ROMANIA        | 2,50                                             |
| 17. ITALY          | 2,90                                             |
| 18. BULGARIA       | 3,50                                             |
| 19. LATVIA         | 3,90                                             |
| 20. GERMANY        | 4,00                                             |
| 21. LITHUANIA      | 4,60                                             |
| 22. BELGIUM        | 6,75                                             |
| 23. GREECE (1)     | n.a.                                             |
| 24. IRELAND (1)    | n.a.                                             |
| 25. LUXEMBOURG (1) | n.a.                                             |

Source: OECD – ITF report 2008

(1) Level of track access charges for Luxembourg, Ireland and Greece was not available in OECD-ITF reports.
There seem to be no obvious correlation between market OPENING and rail GROWTH.

Each dot represents one EU country.

**Right mappings:** Spread clouds of points and flat correlation lines show that there is no apparent correlation between «market opening» and «traffic growth» in freight.

**Bottom mapping:** The same seems to apply to passenger traffic. **WARNING:** RMMS data measures share of secondary operators (even in non open markets).

**Rail PASSENGER relative GROWTH VS Market OPENING**

- y = -3E-05x - 0.0274
- R² = 0.0000008
- EE: market share corrected to 0%
- % of p.km made by non-main operator in 2007

**Rail FREIGHT absolute GROWTH VS Market OPENING**

- Traffic growth in t.km in % betw. 2002 - 2007
- y = 0.0026x + 0.147
- R² = 0.0066

**Rail FREIGHT relative GROWTH VS Market OPENING**

- Difference betw. Rail Freight Growth and Total Freight Growth in % betw. 2002-2007
- y = 0.0001x - 0.0835
- R² = 0.000009

Sources: European Commission, ETIF 2009; European Commission, RMMS 2009
Lack of correlation between market opening and volume growth has been apparent since 2006.

In 2006, in its reaction to the Commission’s review of the 1st Railway Package, CER already reported on the lack of correlation between the market share of new entrants in freight and rail freight volume growth, based on Commission’s data.

In 2009, the study on « Experiences from implementing the first EU railway package » by the SIKA institute in Sweden pointed to the lack of correlation between the level of deregulation and the growth of rail freight volumes.

Figure 4.17 shows the correlation between ideal type and change in the number of tonne km. If ideal type 1 is included, no correlation is visible in the material. If this ideal type is excluded, the market with a higher extent of deregulation has a more positive development for rail freight transport than countries with a lower extent of deregulation.

Note: source data taken from the European Commission’s review of the 1st Railway Package (Annex 11 – figures 11.3 and 11.4). Market share of New Entrants in Estonia corrected to correspond to reference period of market growth data.
EC services’ claim that market opening creates growth is inaccurate (and contradicts EC own data).

Commission claims: “The market for freight has already been opened, a process that has been associated with increased modal shares for rail”. But an analysis of market entry against relative rail freight growth (using Commission’s own data) shows no correlation (flat corr. line).

Growth is also observed in countries where competition is low. In most of them, growth may result from high rail financing and/or low access charges.

Most underperforming countries in freight are also underfinanced (esp. on infrastructure for freight).

Lack of correlation between market opening and rail freight growth shows that other factors have an overriding influence on growth, i.e.: “Access Charging” and “Rail Financing” (in terms of PSO payments and support to infrastructure operation, maintenance, upgrades, new construction…).
CONCLUSION: Financing & Charging account for 55% of rail Passenger absolute growth. Competition for only 0.01%.

Other factors may also drive growth:
- Difference in charging between modes;
- Economic growth;
- Infrastructure investments in other modes;
- Quality-price-productivity;
- Rail historic debt; etc…

45% of variation remains to be explained by other drivers than financing, charging or market opening.

55% - Rail FINANCING & CHARGING is a PRIMARY DRIVER of rail passenger growth.

0% - Market opening very much LESS so.

Which other driver? No EC data!
CONCLUSION: Financing & Charging account for 58% of rail Freight relative growth. Competition for less than 0.001%.

Rail FINANCING

Difference between Rail Freight Growth and Total Freight Growth in % betw. 2002-2007

Rail CHARGING

Market OPENING

OTHER Drivers?

Other factors may also drive growth:
- Difference in charging between modes;
- Economic growth;
- Infrastructure investments in other modes;
- Quality-price-productivity;
- Rail historic debt; etc…

R² = 0.4807
Rail FINANCING explains 48% of rail freight relative growth variation!

R² = 0.1008
Rail CHARGING explains 10% of rail freight relative growth variation.

R² = 0.00009
Market OPENING explains less than 0.001% of relative rail freight growth variation!

42% of variation remains to be explained by other drivers than financing, charging or market opening.

58% - Rail FINANCING & CHARGING is a PRIMARY DRIVER of rail freight dynamism.

0% - Market opening very much LESS so.

Which other driver? No EC data!
CONCLUSION: To revitalise rail, efforts MUST now FOCUS on rail financing & charging for all modes.

The original architecture of European transport and rail policy (as set out in the “2001 White Paper”)…

In the 2001 White Paper, the European railway policy rested on 3 “pillars”

- Market Opening
- Competition
- Fair Competition between modes
- Rail Financing

Ten years on: the week points of current European transport policy…

One “almost” straight “pillar” and two neglected “pillars”!

- Competition, on its own, is not sufficient to revitalise rail.
- Without fair competition between modes (fair charging) and sufficient rail financing (PSO compensations + infrastructure funding), the railways efforts in quality, productivity and efficiency are reduced to nil.
Snapshot: **AUSTRIA**, good performance in the context of moderately favourable framework conditions.

**Rail growth 2002-2007**

- **Passenger:** Rail +8% (EU15: +9%) All +6%
- **Freight:** Rail +25% (EU15: +17%) All +5%

**Rail Modal Share 2007**

- **Passenger:** 10% (EU15: +7%) ➔ +2%
- **Freight:** 35%! (EU15: +15%) ➔ +19%

**% NEW ENTRANTS 2007**

- **Passenger:** 9%
- **Freight:** 12%

**FINANCING (1) 2002-2006**

- **AU:** 63k€/track-km/yr
  - EU25: 116k€/track-km/yr
  - EU15: 186k€/track-km/yr

**ACCESS CHARGES (2) 2007**

- **Pass:** 2,44€/tr-k ➔
  - EU15: 1.95train-km
- **Freight:** 3,28€/tr-k ➔
  - EU15: 2,09€/train-km

**Market opening underway.**

**After the 90’s, rail financing has become more moderate.**

**Access charges above EU15 average (esp. for freight).**

**AUSTRIA:** Although rail financing has been more moderate (after the 90’s) and infrastructure charges are relatively high, both freight and passenger performances have been good in a context of moderate (but increasing) competition.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008.
Snapshot: **BELGIUM**, good performance in the context of high rail financing (but also high pas. access charges).

**Rail growth 2002-2007**

Passenger: **Rail** +20% (EU15: +9%) All +7%
Freight: **Rail** +13% (EU15: +17%) All -13%

**Passenger:**
- Rail +20% (EU15: +9%)
- All +7%

**Freight:**
- Rail +13% (EU15: +17%)
- All -13%

**Source:** ETIF 2009, European Commission

**Rail Modal Share 2007**

Passenger: 7% (EU15: +7%)  +12%
Freight: 14% (EU15: +15%)  +29%

**Passenger:**
- 7% (EU15: +7%)

**Freight:**
- 14% (EU15: +15%)

**Source:** ETIF 2009, European Commission

**% NEW ENTRANTS 2007**

Passenger: 0%
Freight: 5%

**Source:** RMMS 2007/09, European Commission

**FINANCING (1) 2002-2006**

**BE:** 432k€/track-km/yr
**EU25:** 116k€/track-km/yr
**EU15:** 186k€/track-km/yr

**Pass:** 3,08€/tr-k 
**EU15:** 1.95train-km
**Freight:** 1,87€/tr-k 
**EU15:** 2,09€/train-km

**3rd-highest** intensity of rail financing in Europe

**Source:** DG TREN 2009, European Commission

**ACCESS CHARGES (2) 2007**

**Pass:** 3,08€/tr-k 
**EU15:** 1.95train-km
**Freight:** 1,87€/tr-k 
**EU15:** 2,09€/train-km

**Source:** ITF 2005-2008, OECD

**BELGIUM:** In spite of low penetration of new entrants, moderate infrastructure charges in freight and high rail financing have allowed freight to grow. Passenger traffic grew as well in spite of high infrastructure charges and no competition.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
**Snapshot: BULGARIA (1), a dramatic example of lacking implementation of White Paper principles.**

**Passenger:** Rail -7% (EU25: +8%) All +9%
Freight: Rail +13% (EU25: +18%) All +49%

**Freight:**
- **BU:** 2k€/track-km/yr
  - EU25: 116k€/track-km/yr
  - Source: DG TREN 2009, European Commission
- **EU25:** 2.09 train-km

**Passenger:**
- **Pass:** 1,55€/tr-k
- **EU25:** 2.09 train-km

**Freight:**
- **Freight:** 6,07€/tr-k
- **EU25:** 3,60€/train-km

---

**Market opening started in freight.**

**Among the lowest levels of rail financing in Europe**

**Very high freight access charges, still rising!!!**

---

**BULGARIA:** With very high access charges on freight and one of the lowest level of rail financing (PSO and infrastructure investments) in Europe, modal shares go down dramatically since 2002, and this, in spite of starting market opening.

---

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008.

---

Source: ETIF 2009, European Commission
Source: DG TREN 2009, European Commission
Source: ETIF 2009, European Commission
Source: ITF 2005-2008, OECD
Source: RMMS 2007/09, European Commission
Snapshot: **BULGARIA (2)**, the situation got worse since 2003, where freight traffic started to fall in absolute terms.

**Rail growth 2003-2007**

- **Passenger:** Rail: +4% (EU25: +8%) All +14%
- **Freight:** Rail: -1% (EU25: +18%) All +36%!

**Rail Modal Share 2007**

- **Passenger:** 5% (EU10: +7%)  -16%
- **Freight:** 25% (EU10: +28%)  -27%

**% NEW ENTRANTS 2007**

- **Passenger:** 1%
- **Freight:** 9%

**FINANCING (1) 2002-2006**

- **BU:** 2k€/track-km/yr
- **EU25:** 116k€/track-km/yr

**ACCESS CHARGES (2) 2007**

- **Pass:** 1,55€/tr-k 
  - EU25: 2.09train-km
- **Freight:** 6,07€/tr-k 
  - EU25: 3,60€/train-km

**BULGARIA:** With very high access charges on freight and one of the lowest level of rail financing (PSO and infrastructure investments) in Europe, modal shares and absolute volumes go down dramatically, in spite of starting market opening.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008.
Snapshot: **CZECH REPUBLIC**, low financing and high freight access charges may jeopardize freight growth.

**Rail growth 2002-2007**

- **Passenger:** rail +5% (EU25: +8%) All +7%
- **Freight:** rail +3% (EU25: +18%) All +8%

**Rail Modal Share 2007**

- **Passenger:** 7% (EU10: +7%) ➔ -2%
- **Freight:** 25% (EU10: +28%) ➔ -5%

**FINANCING (1) 2002-2006**

- **CZ:** 13k€/track-km/yr
- **EU25:** 116k€/track-km/yr

**ACCESS CHARGES (2) 2007**

- **Pass:** 0,93€/tr-k ➔
  - EU25: 2.09 train-km
- **Freight:** 4,92€/tr-k ➔
  - EU25: 3,60€/train-km

**% NEW ENTRANTS 2007**

- **Passenger:** 0%
- **Freight:** 0%

- No new entrant in Slovenia.

**Rail financing is extremely low.**

**CZECH REP.:** In spite of high infrastructure charges for freight, low rail financing and no new entrants, the Czech Republic managed to keep its traffic volumes (but lost shares). Freight may suffer from high access charges and too low rail financing.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
**Snapshot: DENMARK**, successful implementation of the White Paper principles (in passenger business).

**Rail growth 2002-2007**

- **Passenger:** \( +8\% \) (EU15: +9\%) **All**: +9\%
- **Freight:** \( -5\% \) (EU15: +17\%) **All**: -7\%

**Rail Modal Share 2007**

- **Passenger:** \( 9\% \) (EU15: +7\%) \( \Rightarrow -1\% \)
- **Freight:** \( 8\% \) (EU15: +15\%) \( \Rightarrow +2\% \)

**% NEW ENTRANTS 2007**

- **Passenger:** 9\%
- **Freight:** 0\%

**Source:** RMMS 2007/09, European Commission

**FINANCING (1) 2002-2006**

- **DK:** 255k€/track-km/yr
- **EU25:** 116k€/track-km/yr
- **EU15:** 186k€/track-km/yr

**5th-highest intensity of rail financing** in Europe

**Source:** DG TREN 2009, European Commission

**ACCESS CHARGES (2) 2007**

- **Pass:** 0.52€/tr-k \( \Rightarrow \)
  - **EU15:** 1.95train-km
- **Freight:** 1.25€/tr-k \( \Rightarrow \)
  - **EU15:** 2.09€/train-km

**Low access charges** for EU15 standard

**Source:** ITF 2005-2008, OECD

**DENMARK:** High rail financing and low access charges allowed passenger services to increase and rail to keep up modal share. Due to the small size of the country, freight services are very much subject to international traffic variations.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **ESTONIA**, mixed performance against the background of mixed framework conditions.

**Rail growth 2002-2007**

Passenger: rail **+ 55%** (EU25: +8%) All **+35%**
Freight: rail - **13%** (EU25: +18%) All **+5%**

**Rail Modal Share 2007**

Passenger: **2%** (EU10: +7%)  **+14%**
Freight: **57%** (EU10: +28%)  **-18%**

**% NEW ENTRANTS 2007**

Passenger: **49%**
Freight: **40%**

**FINANCING (1) 2002-2006**

ES: **6k€/track-km/yr**
EU25: 116k€/track-km/yr

**ACCESS CHARGES (2) 2007**

Pass: **0,99€/tr-k** 
EU25: 2.09train-km
Freight: **6,52€/tr-k** 
EU25: 3,60€/train-km

**ESTONIA**: In spite of competition, rail freight decreased in the context of low rail financing and high charges. However, passenger traffic managed to grow in spite of very low rail financing, but thanks to low access charges (and competition?).

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **FINLAND**, a positive counter-example of implementation of the 1st railway package…

**Rail growth 2002-2007**
- **Passenger**: rail +14% (EU15: +9%) All +8%
- **Freight**: rail +8% (EU15: +17%) All -3%

**Passenger**: 5% (EU15: +7%) => +5%
**Freight**: 26% (EU15: +15%) => +12%

**FINANCE (1) 2002-2006**
- **Pass**: 0,46€/tr-k
  - **EU15**: 1.95€ train-km
  - **EU25**: 116k€/track-km/yr
  - **EU15**: 186k€/track-km/yr

- **Freight**: 3,07€/tr-k
  - **EU15**: 2,09€/train-km

**FINLAND**: In spite of modest (but not negligible) railway financing, increasing infrastructure charges for freight trains and no new entrant, the National Operator, VR, managed to increase volumes, with the highest punctuality levels in Europe!

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
SNAPSHOT: FRANCE, a mixed picture between freight and passenger (and even within the passenger business).

**Rail growth 2002-2007**

Passenger: rail +9% (EU15: +9%) All +1%
Freight: rail -17% (EU15: +17%) All +3%

Source: ETIF 2009, European Commission

**Rail Modal Share 2007**

Passenger: 9% (EU15: +7%) ↗ +8%
Freight: 16% (EU15: +15%) ↘ -19%

Source: ETIF 2009, European Commission

**% NEW ENTRANTS 2007**

Passenger: 0%
Freight: 5%

Source: RMMS 2007/09, European Commission

New operators started to enter the freight market in 2006.

**FINANCING (1) 2002-2006**

FR: 175k€/track-km/yr
EU25: 116k€/track-km/yr
EU15: 186k€/track-km/yr

Source: DG TREN 2009, European Commission

Funds look good, but focussed on 2 new High Speed Lines!

**ACCESS CHARGES (2) 2007**

Pass: 3,77€/tr-k ↘
EU15: 1.95train-km
Freight: 1,63€/tr-k ↗
EU15: 2,09€/train-km

Source: ITF 2005-2008, OECD

Access charges are high (pass) or soaring (freight).

**FRANCE:** In spite of high access charges, funding focussed on 2 new High Speed lines and no competition, the National operator managed to increase passenger traffic and modal share. Unlike freight, victim of very low infrastructure funding!

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
 Snapshot: **GERMANY**, an example of successful White Paper implementation, BUT watch road vs rail charging!

**Rail growth 2002-2007**

- Passenger: rail +12% (EU15: +9%) All +1%
- Freight: rail +41% (EU15: +17%) All +21%

**Rail Modal Share 2007**

- Passenger: 8% (EU15: +7%)  +11%
- Freight: 22% (EU15: +15%)  +16%

**% NEW ENTRANTS 2007**

- Passenger: 7%
- Freight: 19%

**FINANCING (1) 2002-2006**

- DE: 134k€/track-km/yr
- EU25: 116k€/track-km/yr
- EU15: 186k€/track-km/yr

**ACCESS CHARGES (2) 2007**

- Pass: 3,75€/tr-k 
- EU15: 1.95train-km
- Freight: 2,47€/tr-k 
- EU15: 2,09€/train-km

**GERMANY**: market opening has been combined with a sustained level of rail financing (including cancellation of historic debt). But passenger access charges are high (compared to road). LKW Maut may reestablish level playing field in freight?

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
**Snapshot: GREECE**, a positive (counter)example of implementing the first railway package?

**Rail growth 2002-2007**
- **Passenger:** rail +5% (EU15: +9%) All +24%
- **Freight:** rail +155% (EU15: +17%) All -9%

**Rail Modal Share 2007**
- **Passenger:** 2% (EU15: +7%)  -15%
- **Freight:** 3% (EU15: +15%)  +179%

**% NEW ENTRANTS 2007**
- **Passenger:** 0%
- **Freight:** 0%

**FINANCING (1) 2002-2006**
- **EL:** 137k€/track-km/yr
  - EU25: 116k€/track-km/yr
  - EU15: 186k€/track-km/yr

**ACCESS CHARGES (2) 2007**
- **Pass:** ?€/tr-k
  - EU15: 1.95train-km
- **Freight:** ?€/tr-k
  - EU15: 2,09€/train-km

There was no known new entrant in Greece in 2007

Rail financing is **high**, but covered by high **indebtedness**!

No information on access charges.

**GREECE:** In spite of no new entrant on the Greek rail market, the operator, OSE, managed to increase freight volumes and shares **significantly**, supported by high but **unsecure** infrastructure funding (i.e. mostly financed by own debts!).

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **HUNGARY**, a mixed picture.

**Rail growth 2002-2007**

- **Passenger:** rail -17% (EU25: +8%) All -11%
- **Freight:** rail +29% (EU25: +18%) All +77%

**Rail Modal Share 2007**

- **Passenger:** 13% (EU10: +7%)  -7%
- **Freight:** 21% (EU10: +28%)  -27%

**% NEW ENTRANTS 2007**

- **Passenger:** 2%
- **Freight:** 12%

**FINANCING (1) 2002-2006**

- **HU:** 47k€/track-km/yr
- **EU25:** 116k€/track-km/yr
- **EU10:** 10k€/Track-km/yr

**Access charges (2) 2007**

- **Pass:** 3,27€/tr-k 
- **EU25:** 2.09train-km
- **Freight:** 3,05€/tr-k 
- **EU25:** 3,60€/train-km

**HUNGARY:** With moderate investments and access charges, plus growing market opening, Hungary is not doing too badly in freight (but loosing shares!). Increasing infrastructure charges for passenger trains may worsen performance in passenger.

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(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **IRELAND**, good rail financing benefitted passenger traffic, not freight.

**Rail growth 2002-2007**
- **Passenger:** rail \(+23\%\) (EU15: +9\%) All \(+21\%\)
- **Freight:** rail \(-70\%\) (EU15: +17\%) All \(+30\%\)!

**Passenger Modal Share 2007**
- **Passenger:** 4\% (EU15: +7\%) \(\Rightarrow\) +2\%
- **Freight:** 1\% (EU15: +15\%) \(\Rightarrow\) -77\%

**% NEW ENTRANTS 2007**
- **Passenger:** 0\%
- **Freight:** 0\%

**Financing (1) 2002-2006**
- **IE:** 225k€/track-km/yr
- **EU25:** 116k€/track-km/yr
- **EU15:** 186k€/track-km/yr

**Access Charges (2) 2007**
- **Pass:** ?€/tr-k
  - EU15: 1.95train-km
- **Freight:** ?€/tr-k
  - EU15: 2,09€/train-km

**IRELAND:** With a good level of rail financing, rail passenger traffic significantly grew, maintaining rail modal share. Explanation for fall in freight traffic difficult to explain; may have to be sought outside usual framework conditions.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **ITALY**, good framework conditions for freight, therefore good freight performance.

**Passenger:** rail +1% (EU15: +9%)  All +2%
**Freight:** rail +22% (EU15: +17%)  All +2%

Source: ETIF 2009, European Commission

**Passenger:** 6% (EU15: +7%)  ➞ -1%
**Freight:** 12% (EU15: +15%)  ➞ +20%

Source: ETIF 2009, European Commission

**4th-highest intensity** of rail financing in Europe

**Market opening is on its way.**

**ITALY:** With the 4th highest intensity of rail financing in Europe, moderate infrastructure charges for freight and a moderate level of new entrant penetration, Italy performs well in freight: an example of good White Paper implementation.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km);  (2) Access charges: estimate based on progression between 2005 and 2008.
Snapshot: **LATVIA** (1), mixed performance against the background of unfavorable framework conditions.

**Rail growth 2002-2007**

- **Passenger:** Rail +32% (EU25: +8%) All: +35%
- **Freight:** Rail +22% (EU25: +18%) All: +49%

**Passenger:** Rail 5% (EU10: +7%) ➔ -2%

**Freight:** 58% (EU10: +28%) ➔ -18%

**% NEW ENTRANTS 2007**

- **Passenger:** 10%
- **Freight:** 10%

**FINANCING (1) 2002-2006**

- **LA:** 4k€/track-km/yr
- **EU25:** 116k€/track-km/yr

**Pass:** 3,45€/tr-k ➔

**EU25:** 2.09 train-km

**Freight:** 6,23€/tr-k ➔

**EU25:** 3,60€/train-km

**ACCESS CHARGES (2) 2007**

**Market opening is on its way.**

**One of the lowest levels of rail financing in Europe**

**Very high access charges (esp. in freight), still rising!!!**

**LATVIA:** Freight volumes vary erratically year on year mainly due to big variations in Russian exports. However, rail maintained its modal share in passenger traffic, in spite of very low rail financing, high access charges and moderate competition.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: LATVIA (2), the situation got worse since 2004, where freight traffic started to fall in absolute terms.

**Passenger:** Rail +21% (EU25: +8%) All: +25%
Freight: Rail - 2% (EU25: +18%) All: +21%

**Freight:** Rail - 2% (EU25: +18%) All: +21%

Source: ETIF 2009, European Commission

**LATVIA:** Freight volumes vary erratically year on year mainly due to big variations in Russian exports. But freight volumes situation worsen a lot since 2004 (with absolute volumes starting to fall).

**Market opening is on its way.**

**One of the lowest levels of rail financing in Europe**

**Very high access charges (esp. in freight), still rising!!!**

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008.

### Rail growth 2002-2007

- **Passenger:** rail: -18% (EU25: +8%) _All_ +46%
- **Freight:** rail: +47% (EU25: +18%) _All_ +69%

*Source: ETIF 2009, European Commission*

### Rail Modal Share 2007

- **Passenger:** 1% (EU10: +7%)  -44%
- **Freight:** 41% (EU10: +28%)  -13%

*Source: ETIF 2009, European Commission*

### % NEW ENTRANTS 2007

- **Passenger:** 0%
- **Freight:** 0%

*Source: RMMS 2007/09, European Commission*

No new entrants in Lithuania in 2007.

### FINANCING (1) 2002-2006

- **LT:** 1k€/track-km/yr
- **EU25:** 116k€/track-km/yr

*Source: DG TREN 2009, European Commission*

One of the **lowest levels** of rail financing in Europe

### ACCESS CHARGES (2) 2007

- **Pass:** 2,90€/tr-k 
  - **EU25:** 2.09train-km

- **Freight:** 7,37€/tr-k 
  - **EU25:** 3.60€/train-km

*Source: ITF 2005-2008, OECD*

Very high access charges (esp. in freight), **still rising!!!**

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**LITHUANIA:** In spite of very poor rail financing and high infrastructure charges, freight grew because of Russian exports. However, passenger traffic did not resist these adverse conditions and rail modal shares (freight & passenger) dropped.

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(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **LUXEMBOURG**, good passenger evolution but dependent on its neighbours for freight performance.

**Rail growth 2002-2007**
- **Passenger:** rail + 18% (EU15: +9%) All +13%
- **Freight:** rail - 22% (EU15: +17%) All +2%

**Rail Modal Share 2007**
- **Passenger:** 4% (EU15: +7%) ➔ +4%
- **Freight:** 4% (EU15: +15%) ➔ -24%

**% NEW ENTRANTS 2007**
- **Passenger:** 0%
- **Freight:** 0%

Source: RMMS 2007/09, European Commission

**FINANCING (1) 2002-2006**
- **LU:** 509k€/track-km/yr
- **EU25:** 116k€/track-km/yr
- **EU15:** 186k€/track-km/yr

**EU15:** 1.95train-km

Highest intensity of rail financing in Europe

Source: DG TREN 2009, European Commission

**ACCESS CHARGES (2) 2007**
- **Pass:** ?€/tr-k
- **EU15:** 1.95train-km
- **Freight:** ?€/tr-k
- **EU15:** 2.09€/train-km

Source: ITF 2005-2008, OECD

No information on access charges

**LUXEMBOURG:** With the highest level of rail financing in Europe (mainly linked to ERTMS investments), passenger traffic grew significantly. However, for freight, this small country is dependent on its neighbours’ performance.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **NETHERLANDS**, successful implementation of White Paper principles. BUT watch access charges!!!

**Rail growth 2002-2007**
- Passenger: **rail +14%** (EU15: +9%) **All +5%**
- Freight: **rail +79%!** (EU15: +17%) **All +4%**  
  (Source: ETIF 2009, European Commission)

**Rail Modal Share 2007**
- Passenger: **9%** (EU15: +7%) 🔺 +9%
- Freight: **6%** (EU15: +15%) 🔺 +73%!
  (Source: ETIF 2009, European Commission)

**% NEW ENTRANTS 2007**
- Passenger: 2%
- Freight: 26%
  (Source: RMMS 2007/09, European Commission)

**FINANCING (1) 2002-2006**
- NL: 450k€/track-km/yr
- EU25: 116k€/track-km/yr
- EU15: 186k€/track-km/yr
  (Source: DG TREN 2009, European Commission)

**ACCESS CHARGES (2) 2007**
- Pass: 1,40€/tr-k 🔺
  - EU15: 1.95train-km
- Freight: 2,33€/tr-k 🔺
  - EU15: 2,09€/train-km
  (Source: ITF 2005-2008, OECD)

**THE NETHERLANDS:** With the highest intensity of public financing in Europe and low infrastructure charges, traffic has been boosted (and new entrants have been attracted). DANGER: infrastructure charges have been increasing drastically lately!

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
 Snapshot: **POLAND**, implementing the First Railway Package will not be sufficient…

**Rail growth 2002-2007**
- **Passenger:** Rail -6% (EU25: +8%) All: +32%
- **Freight:** Rail +16% (EU25: +18%) All: +60%

Source: ETIF 2009, European Commission

**Rail Modal Share 2007**
- **Passenger:** 7% (EU10: +7%) ↘ -28%
- **Freight:** 26% (EU10: +28%) ↘ -27%

Source: ETIF 2009, European Commission

**% NEW ENTRANTS 2007**
- **Passenger:** 10%
- **Freight:** 20%

Source: RMMS 2007/09, European Commission

**FINANCING (1) 2002-2006**
- **PL:** 4k€/track-km/yr
- **EU25:** 116k€/track-km/yr

Source: DG TREN 2009, European Commission

**ACCESS CHARGES (2) 2007**
- **Pass:** 1,27€/tr-k ↘
  - **EU25:** 2.09train-km
- **Freight:** 5,18€/tr-k ↘
  - **EU25:** 3,60€/train-km

Source: ITF 2005-2008, OECD

**In Europe, one of the highest penetrations of new entrants**

**Railway financing is extremely low in Poland**

**Access charges for freight are extremely high.**

**POLAND:** In spite of a good penetration of new entrants, rail performance becomes very fragile. **Rail modal share is collapsing.** Infrastructure charges for freight are too high compared to road. And rail financing is one of the lowest in Europe.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: PORTUGAL, mixed performance in the context of mixed framework conditions.

**Rail growth 2002-2007**

- **Passenger:** rail +2% (EU15: +9%) All +15%
- **Freight:** rail +18% (EU15: +17%) All +15%

**Rail Modal Share 2007**

- **Passenger:** 4% (EU15: +7%) ➔ -12%
- **Freight:** 5% (EU15: +15%) ➔ +2%

**% NEW ENTRANTS 2007**

- **Passenger:** 5%
- **Freight:** 0%

Source: ETIF 2009, European Commission

**FINANCING (1) 2002-2006**

- **PT:** 15k€/track-km/yr
- **EU25:** 116k€/track-km/yr
- **EU15:** 186k€/track-km/yr

Source: DG TREN 2009, European Commission

**ACCESS CHARGES (2) 2007**

- **Pass:** 1,45€/tr-k ➔
  - **EU15:** 1.95 train-km
- **Freight:** 1,78€/tr-k ➔
  - **EU15:** 2.09€/train-km

Source: ITF 2005-2008, OECD

PORTUGAL: Almost negligible rail financing did not allow rail to keep up its modal share... except in freight where relatively low infrastructure charges may have helped rail to take its share of overall freight demand growth.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: ROMANIA (1), an example of lacking White Paper principles implementation, leading to rail decline.

Rail growth 2002-2007

Passenger: Rail -12% (EU25: +8%) All +14%
Freight: Rail +4% (EU25: +18%) All +89%!

Source: ETIF 2009, European Commission

Passenger: 9% (EU10: +7%)  -23%!
Freight: 19% (EU10: +28%)  -45%!

Source: ETIF 2009, European Commission

% NEW ENTRANTS 2007

Passenger: 1%
Freight: 34%

Source: RMMS 2007/09, European Commission

Market opening effectively started in 2004 in freight

FINANCING (1) 2002-2006

RO: 0.03€/track-km/yr
EU25: 116k€/track-km/yr

Source: DG TREN 2009, European Commission

Lowest investment level in infrastructure in Europe

Access charges (2) 2007

Pass: 2,49€/tr-k 
EU25: 2.09€/train-km
Freight: 3,87€/tr-k 
EU25: 3,60€/train-km

Source: ITF 2005-2008, OECD

Access charges ABOVE EU average AND going up!!!

ROMANIA: With high access charges and no financing for rail, market opening was counterproductive, driving block train prices down and undermining the already limited ability of the rail system to finance itself. Rail modal shares collapsed!

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **ROMANIA (2)**, the situation got worse since 2004, with decrease in absolute rail freight volumes.

**Passenger:** Rail -13% (EU25: +8%) All +7%
**Freight:** Rail -7% (EU25: +18%) All +36%

**Passenger:** 9% (EU10: +7%) -19%
**Freight:** 19% (EU10: +28%) -32%

% NEW ENTRANTS 2007
- Passenger: 1%
- Freight: 34%

Market opening effectively started in 2004 in freight

FINANCING (1) 2002-2006
- RO: 0.03€/track-km/yr
- EU25: 116k€/track-km/yr

**Lowest investment level** in infrastructure in Europe

ACCESS CHARGES (2) 2007
- Pass: 2,49€/tr-k
- EU25: 2.09train-km
- Freight: 3,87€/tr-k
- EU25: 3,60€/train-km

Access charges **ABOVE EU average AND going up!!!**

**ROMANIA:** Before 2004, very high overall freight demand helped maintain rail freight volumes. In 2004 in spite of starting competition, low rail financing, high access charges and decreasing prices of block trains precipitated rail freight decline.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: **SLOVAKIA**, a dramatic example of lacking implementation of White Paper principles.

**Rail growth 2002-2007**

- **Passenger:** rail -19% (EU25: +8%) All 0%
- **Freight:** rail -7% (EU25: +18%) All +46%

**Rail Modal Share 2007**

- **Passenger:** 6% (EU10: +7%)  -19%
- **Freight:** 26% (EU10: +28%)  -36%

**% NEW ENTRANTS 2007**

- **Passenger:** 0%
- **Freight:** 3%

**FINANCING (1) 2002-2006**

- **SK:** 18k€/track-km/yr
- **EU25:** 116k€/track-km/yr

**ACCESS CHARGES (2) 2007**

- **Pass:** 3,60€/tr-k 
  - **EU25:** 2.09train-km
- **Freight:** 9,17€/tr-k 
  - **EU25:** 3,60€/train-km

**SLOVAKIA:** With the highest access charges in Europe for freight (+ very high charges for passenger trains) and one of the lowest level of financing (PSO and infrastructure investments) volumes go down dramatically. **Modal share drops!**

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(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
**SLOVENIA**: Contrary to the other CEE Countries, Slovenia enjoys a comparatively good level of rail financing and access charging. In this context, traffic managed to increase in spite of the absence of a new entrant, but freight modal share dropped.

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1. **Passenger**: rail +8% (EU25: +8%) All +7%
2. **Freight**: rail +17% (EU25: +18%) All +79%

**Source**: ETIF 2009, European Commission

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1. **Passenger**: 3% (EU10: +7%) ➔ +1%
2. **Freight**: 21% (EU10: +28%) ➔ -35%

**Source**: ETIF 2009, European Commission

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1. **Passenger**: 0%
2. **Freight**: 0%

**Source**: RMMS 2007/09, European Commission

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**FINANCING (1)** 2002-2006

- **SI**: 75k€/track-km/yr
- **EU25**: 116k€/track-km/yr
- **EU10**: 10k€/track-km/yr

**Source**: DG TREN 2009, European Commission

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**Access Charges (2)** 2007

- **Pass**: 2,12€/tr-k ➔
- **EU25**: 2.09 train-km
- **Freight**: 1,87€/tr-k ➔
- **EU25**: 3,60€/train-km

**Source**: ITF 2005-2008, OECD

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1. **Public financing** = Infrastructure financing + PSO compensation (annual average per track-km);
Snapshot: **SPAIN**, a mixed picture.

**Rail growth 2002-2007**

- **Passenger:** rail +3% (EU15: +9%) All +10%
- **Freight:** rail -4% (EU15: +17%) All +38%

Source: ETIF 2009, European Commission

**Rail Modal Share 2007**

- **Passenger:** 5% (EU15: +7%)  -6%
- **Freight:** 4% (EU15: +15%)  -31%

Source: ETIF 2009, European Commission

**% NEW ENTRANTS 2007**

- **Passenger:** 4%
- **Freight:** 5%

Source: RMMS 2007/09, European Commission

- New operators started to enter the market in 2006.

**FINANCING (1) 2002-2006**

- **ES:** 54k€/track-km/yr
  - EU25: 116k€/track-km/yr
  - EU15: 186k€/track-km/yr

Source: DG TREN 2009, European Commission

**ACCESS CHARGES (2) 2007**

- **Pass:** 1,00€/tr-k 
  - EU15: 1.95 train-km
- **Freight:** 0,30€/tr-k 
  - EU15: 2,09€/train-km

Source: ITF 2005-2008, OECD

**SPAIN:** Infrastructure charges are low for EU15 standards but rail financing other than new line constructions (although not negligible) remains moderate. Penetration of new entrants is low. In this context, results are mixed.

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008.
Snapshot: **SWEDEN**, an example of best implementation of White Paper principles, leading to rail growth.

**Rail growth 2002-2007**

- **Passenger:** rail +16% (EU15: +9%)  **All** +4%
- **Freight:** rail +21% (EU15: +17%)  **All** +14%

**Rail Modal Share 2007**

- **Passenger:** 9% (EU15: +7%)  ➔ +11%
- **Freight:** 36% (EU15: +15%)  ➔ +6%

**% NEW ENTRANTS 2007**

- **Passenger:** 19%
- **Freight:** 33%

Market opening, started in 1995, developed in freight

**FINANCING (1) 2002-2006**

- **SE:** 85k€/track-km/yr
- **EU25:** 116k€/track-km/yr
- **EU15:** 186k€/track-km/yr

**ACCESS CHARGES (2) 2007**

- **Pass:** 0,50€/tr-k ➔
- **Freight:** 0,48€/tr-k ➔

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**Lowest access charges** in Europe, going up in freight

**Intense investments** in infrastructure in the 1990’s

**SWEDEN:** an example of RIGHT implementation of White Paper principles…
- low access charges & high investments in infrastructure, starting in 1990,
- attracting new entrants into the market since 1995

---

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
Snapshot: UK, good frame conditions, therefore good performance.

Rail growth 2002-2007

Passenger: rail + 26% (EU15: +9%) All +3%
Freight: rail + 43% (EU15: +17%) All +8%

Source: ETIF 2009, European Commission

Rail Modal Share 2007

Passenger: 6% (EU15: +7%) ➤ +22%
Freight: 13% (EU15: +15%) ➤ +32%

Source: ETIF 2009, European Commission

% NEW ENTRANTS 2007

Passenger: 100%
Freight: 25%

Source: RMMS 2007/09, European Commission

Highest level of market opening in Europe.

FINANCING (1) 2002-2006

UK: 169k€/track-km/yr
EU25: 116k€/track-km/yr
EU15: 186k€/track-km/yr

Source: DG TREN 2009, European Commission

Among the countries with the highest rail financing intensity

ACCESS CHARGES (2) 2007

Pass: 2,33€/tr-k ➤
EU15: 1.95train-km
Freight: 4,28€/tr-k ➤
EU15: 2,09€/train-km

Source: ITF 2005-2008, OECD

Access charges have increased drastically lately!

UK: With a high intensity of rail financing, moderate infrastructure charges and a high level of market opening, the United Kingdom performs well, an example of good White Paper implementation. Watch access charge increases in freight!

(1) Public financing = Infrastructure financing + PSO compensation (annual average per track-km); (2) Access charges: estimate based on progression between 2005 and 2008
### FULL DATA OVERVIEW

#### Passenger Overall Rail Passenger Non main Freight Access Access Access Rail

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#### Source

- ITF - OECD
- EU10
- EU15
- EU25
- None (raw data)

#### Schluss

The Voice of European Railways
Final Conclusion

Contents

- Introduction and EXECUTIVE SUMMARY
- Methodological Remarks
- Overall European Analysis
- Individual Country Snapshots
- Final Conclusion
Final CONCLUSION: the best recipe for rail relies on the right balance between 3 ingredients...

3 ingredients are needed to make good BREAD

- Flour
- Yeast
- Water

3 ingredients are needed to make successful RAIL

- On Rail Competition
- Fair charging between modes
- Financing

Final CONCLUSION: the best recipe for rail relies on the right balance between 3 ingredients...
CER - representing European railways in Brussels

CER stands for...

- 75 member companies, rail transport operators and infrastructure managers from all countries within the EU, the accession countries as well as from the Western Balkan countries, Norway and Switzerland

- The representation of our members’ interests in Brussels towards the European Parliament, Commission and Council of Ministers as well as other policymakers and partners in transport

- promoting a strong rail industry that is essential to the creation of a sustainable transport system which is efficient, effective and environmentally sound.
Thank you for your attention!

Jacques DIRAND
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Senior Policy Adviser - FREIGHT
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Mobile: +32.743.89.50.61
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