

**Why does European Union Legislation sometimes empower  
national regulatory authorities and sometimes empower  
European Agencies to undertake regulation for the single market?**

**Annexes to the thesis**

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## **Annex 1: Exhaustive chronology and requirements for “independent” NRAs in Directives**

- 1995 Telecoms – “national regulatory authority” means the body or bodies in each Member State, legally distinct and functionally independent of the telecommunications organizations, entrusted by that Member State, inter alia, with the regulatory functions. Article 2(2) Directive 95/82/EC, OJL 321, 30.12.1995
- 1996 Electricity “Member States shall designate a competent authority independent of the parties, to settle disputes relating to the contracts in question. In particular, this authority must settle disputes concerning contracts, negotiations and refusal of access or refusal to purchase”. Article 20(3) Directive 96/92/EC, OJL 027, 30.1.1997
- 1997 Posts – “Each Member State shall designate one or more NRAs for the postal sector that are legally separate from and operationally independent of the postal operators. Member States that retain ownership or control of postal service providers shall ensure effective structural separation of the regulatory functions from activities associated with ownership and control.” Article 22 Directive 97/67, OJ L 15 21.1.1998
- 1997 Telecoms-“In order to guarantee the independence of national regulatory authorities: - national regulatory authorities shall be legally distinct from and functionally independent of all organizations providing telecommunications networks, equipment or services, -Member States that retain ownership or a significant degree of control of organizations providing telecommunications networks and/or services shall ensure effective structural separation of the regulatory function from activities associated with ownership or control.” Article 5a Directive 97/51 of 6 October 1997

- 1998 Gas and 1996 Electricity - “Member States shall designate a competent authority independent of the parties, to settle disputes relating to the contracts in question. In particular, this authority must settle disputes concerning negotiations and refusal of access within the scope of this Directive” Article 21 Directive 98/30 OJL 204 21.7.1998
- 2001 Rail – “Member States shall establish a regulatory body. This body, which can be the Ministry responsible for transport matters or any other body, shall be independent in its organisation, funding decisions, legal structure and decision-making from any infrastructure manager, charging body, allocation body or applicant.” Article 30 of Directive 2001/14, OJ L 75 15.3.2001
- 2002 Posts – no change. Article 22, Directive 2002/39, OJ L 176, 5.7. 2002
- 2002 Telecoms – no change. Article 3, Directive 2002/21, OJ L 108, 24.4.2002
- 2003 Electricity and Gas– regulatory authorities must be “wholly independent from the interests of the electricity industry” but decisions can be required to be submitted to review and for formal decisions to other bodies, not subject to such a requirement for independence”. Article 23, Directive 2003/54, OJ L 176, 15.07.2003
- 2006 Posts No change. Article 22, Directive 2008/6, OJ L 52, 27.2.2008
- 2007 Audiovisual media services “Member States shall take appropriate measures to provide each other and the Commission with the information necessary for the application of the provisions of this Directive, in particular Articles 2.2a and 3 hereof, notably through their competent independent regulatory bodies.” Article 23b, Directive 2007/65/EC, OJ L 332, 18.12.2007
- 2009 Airport charges: “Member States shall guarantee the independence of the independent supervisory authority by ensuring that it is legally distinct from and functionally independent of any airport managing body and air carrier. Member

States that retain ownership of airports, airport managing bodies or air carriers or control of airport managing bodies or air carriers shall ensure that the functions relating to such ownership or control are not vested in the independent supervisory authority. Member States shall ensure that the independent supervisory authority exercises its powers impartially and transparently.” Article 11(3) Directive 2009/12, OJ L 14.3.2009

- 2010 Gas - “1. Each Member State shall designate a single national regulatory authority. 2. Member States shall guarantee the independence of the regulatory authority and shall ensure that it exercises its powers impartially and transparently. For this purpose, Member State shall ensure that, when carrying out the regulatory tasks conferred upon it by this Directive, the regulatory authority is legally distinct and functionally independent from any other public or private entity, and that its staff and the persons responsible for its management act independently from any market interest and do not seek or take direct instructions from any government or other public or private entity when carrying out the regulatory tasks. That requirement is without prejudice to close cooperation, as appropriate, with other relevant national authorities or to general policy guidelines issued by the government not related to the regulatory powers and duties...In order to protect the independence of the regulatory authority, Member States shall in particular ensure that:
- (a) the regulatory authority can take autonomous decisions, independently from any political body, and has separate annual budget allocations, with autonomy in the implementation of the allocated budget, and adequate human and financial resources to carry out its duties;...” Article 39 Directive 2009/73/EC OJL 211/94 of 14.8.2010 (Gas)

- 2010 Electricity: 1. Each Member State shall designate a single national regulatory authority at national level.
4. Member States shall guarantee the independence of the regulatory authority and shall ensure that it exercises its powers impartially and transparently. For this purpose, Member State shall ensure that, when carrying out the regulatory tasks

conferred upon it by this Directive and related legislation, the regulatory authority:

(a) is legally distinct and functionally independent from any other public or private entity;

(b) ensures that its staff and the persons responsible for its management:

(i) act independently from any market interest; and

(ii) do not seek or take direct instructions from any government or other public or private entity when carrying out the regulatory tasks. This requirement is without prejudice to close cooperation, as appropriate, with other relevant national authorities or to general policy guidelines issued by the government not related to the regulatory powers and duties under Article 37.

5. In order to protect the independence of the regulatory authority, Member States shall in particular ensure that:

(a) the regulatory authority can take autonomous decisions, independently from any political body, and has separate annual budget allocations, with autonomy in the implementation of the allocated budget, and adequate human and financial resources to carry out its duties. Article 39 Directive 2007/72/EC OJL 14.8.2009

2010 Telecoms: “National regulatory authorities shall act independently and shall not seek or take instructions from any other body in relation to the exercise of these tasks assigned to them under national law implementing Community law. This shall not prevent supervision in accordance with national constitutional laws... Member States shall ensure that national regulatory authorities referred to in the first subparagraph have separate annual budgets. The budgets shall be made public. Member States shall also ensure that national regulatory authorities have adequate financial and human resources to enable them to actively participate in and contribute to the Body of European Regulators for Electronic Communications (BEREC)” Article 3a Directive 2009/140/EC, OJL 337 18.12.2009

## Annex 2: State ownership

Sector	AT	BE	BU	CZ	CY	DK	EE	FI	FR	DE	EL	HU	IE	IT	LU	NL	PO	PT	RO	S	ES	SE	UK	TOTAL
Water																								23
Broadcasting																								22
Post																								22
Railway																								22
Electricity																								18
Finance																								17
Airline																								16
Telecom																								15
Property																								14
Airport																								13
Oil																								12
Gas																								11
Port																								9
Nuclear																								9
Engineering																								7
Defence																								7
Mining																								5
Forestry																								4
Manufacturing																								4
Research																								4

Source: own research, Conway and Nicoletti:2006.

## **Annex 3: Interviews**

Interviewees by sector and by organisation

### **Telecoms**

2 Commission officials, 1 former Commission official, 3 MEP (Rapporteur), 3 officials from 3 national ministries, 9 officials from 9 national regulatory authorities, 3 representatives of incumbent companies, 3 representatives of new entrants, 3 representatives of pan-European trade associations (1 for new entrants, 1 for incumbents, 1 for multinational users of telecoms), 2 sectoral legal experts.

### **Rail**

1 Commission official, 1 Commission official subsequently moved DG, 1 former Commission official, 2 MEP (rapporteurs), 3 officials from 3 national ministries, 6 officials from 6 national regulatory authorities (1 from each country on economic access and on safety and interoperability issues), 3 representatives of new entrants, 3 representatives of pan-European trade associations (1 for incumbents, 1 for new entrants, 1 for logistic companies using rail), 2 officials of the ERA.

### **Pharmaceuticals**

1 Commission official, 1 former commission official, 2 officials from 2 national regulatory authorities, 2 representatives of pan-European trade associations (1 for innovators, 1 for generics), 1 former Director of the EMA, 3 officials of the EMA, 1 sectoral legal expert.

### **Competition**

3 current, 2 former DG Competition officials.



## **Annex 4: Example of questionnaire**

This questionnaire was used with an official of the European Railways Agency

### **1. ownership**

- 1.1. How important do Member State governments consider their ownership in any enterprises operating in the sector? Very; not very; neutral.
- 1.2. Are Ministries actively involved in issues of sector-specific regulation?
- 1.3. Do state owned enterprises lobby Ministries on regulatory issues?
- 1.4. Do Ministries raise sector-specific regulatory issues with the independent regulators?
- 1.5. Do the Ministries give instructions, either formally or informally, to the independent regulators?

### **2. Negotiation of EU Legislation: national ministry**

- 2.1. What were the motivations for Ministries approving market opening EU legislation in this sector?
- 2.2. Does the sectoral EU legislation cover all the necessary access issues to allow effective competition in the sector?

### **3. Negotiation of EU legislation: Commission**

- 3.1. Did the Commission have preferences regarding institutional issues in the legislation? NRAs, agencies, ministries, comitology, appeal systems. What was the motivation for these preferences?
- 3.2. Were there factors that strengthened the Commission's negotiating position or weakened it? – Eg Member State domestic politics, EC competition law, relations with EP, EP division, US views etc.
- 3.3. How successful was the Commission in achieving its institutional objectives and what were the reasons behind the outcome?

#### 4. Negotiation of legislation: EP

4.1. Did the EP have preferences regarding institutional issues in the legislation? NRAs, agencies, ministries, comitology, appeal systems. What was the motivation for these preferences?

4.2. Were there factors that strengthened the EP's negotiating position or weaken it?

4.3. How successful was the EP in achieving its institutional objectives and what were the reasons behind the outcome?

4.4. Did the EP consider that the legislation covers all the necessary access issues?

#### 5. Informal Regulatory Networks – access (costs and paths) issues

5.1. How transparent to regulators in one country is the actual nature of regulatory practice in other countries?

5.2. How important to national regulators is their reputation in the eyes of other national regulators? How does it compare to the importance of their reputation vis-à-vis national other civil servants?

5.3. After leaving the regulator, what is the typical next job for a member of the regulator's staff? Ordinary staff and Heads of Regulator.

5.4. Does the network make recommendations?

5.5. Do NRAs consider the decisions of networks of NRAs to be binding on them?

5.6. Is there any sanction for failing to implement a decision of the network of regulators?

#### 6. Agency

6.1. What was justification for moving to agency – any opposition?

6.2. How do CSMs and CSTs work?

6.3. How do NRA delegates to agency act? How would this compare with the answers to question 5?

6.5. Development of ERTMS – purely technical or issues of national mercantilism around deployment in practice?

## 6. Comitology

6.1. To what extent do Ministries influence policy decisions subject to comitology in practice?

6.2. In what percentage of cases do comitology committees amend proposed Commission decisions?

6.3. Is it possible to predict Ministerial reactions before a proposal reaches a comitology committee? At what stage is it predictable?

6.4. When ministerial influence is exercised in the committees does it amend aspects of the Commission decision which could be described either as originally Commission inspired or agency inspired or regulator inspired policy?

## **Annex 5: Results of interviews regarding telecommunications access**

The results of the interviews suggest that the conditions identified as necessary for deliberative supranationalism do not exist in the telecommunications sector. The interviews also suggest that there is a continued perception that where there is state ownership that ministries exercise influence over the “independent” regulators.

### **1. Conditions necessary for deliberative supranationalism**

**Q: How transparent to a regulator in one country is the actual conduct of access regulation by other regulators?**

	NRA A	NRA B	NRA C
	Only very generally	The outlines – we do discuss now in ERG.	Not really

**Q: How important to national regulators is their reputation in the eyes of other national regulators?**

	NRA A	NRA B	NRA C
	Not important	Not important	Not important

**Q: How does it compare to the importance of their reputation vis-a-vis other national civil servants?**

	NRA A	NRA B	NRA C
	Latter more important	Latter more important	Latter more important

**Q: After being in the regulator, what is the typical next job for a member of the regulator's staff?**

	NRA A	NRA B	NRA C
	National public sector or telecoms operator	National public sector or telecoms operator	National public sector or telecoms operator

**Q: Do NRAs consider decisions of the network of regulators to be binding on them?**

	NRA A	NRA B	NRA C
	No	No	No

**Q: Is there any sanction for failing to implement a decision of the network of regulators?**

	NRA A	NRA B	NRA C
	No	No	No

## 2. Responses from interviewees regarding interactions between Ministries and Regulators

**Q:How important do Member State governments consider their ownership in any enterprises operating in the sector? Very, neutral, not very?**

	Country A	Country B	Country C
Ministry Official	Very	Very	N/A but believed so in other member states
Regulatory Official	Very	Very	N/A but believed so in other member states
Incumbent	Very	Neutral	N/A but believed so in other member states
New entrant	Very	Very	N/A but believed so in other member states

**Q: Are Ministries actively involved in issues of sector-specific access regulation?**

	Country A	Country B	Country C
Ministry Official	Sometimes	Sometimes	No
Regulatory Official	In the past but no longer	Yes, but subtle	No
Incumbent	Only if important political issue	No	No
New entrant	In the past, infrequently now	Yes	No

**Q: Do state owned enterprises lobby ministries on access issues?**

	Country A	Country B	Country C
Ministry Official	Yes	Yes	N/A but believed so in other member states
Regulatory Official	Yes	Yes	N/A but believed so in other member states
Incumbent	Yes	No	N/A but believed so in other member states
New entrant	Yes	Yes	N/A but believed so in other member states

**Q: Do Ministries discuss access issues with the regulator?**

	Country A	Country B	Country C
Ministry Official	Yes, on major issues	Yes	On major policy issues
Regulatory Official	Yes, on major issues	Yes	Very infrequent
Incumbent	Yes, if politically important	No	No
New entrant	Only major issues	Yes	No



**Q: Have Ministries given instructions, either formally or informally, to the regulator?**

	Country A	Country B	Country C
Ministry Official	Not as such now but there is an environment of what it is politically possible for the regulator to do	Yes	No
Regulatory Official	In the past, not now	Yes, but subtle	No
Incumbent	Relationship is much less one of direct tutelage as it was prior to 2003. However, regulator will be aware of what the political boundaries are eg can't really regulate fibre	No	No
New entrant	Not any more but the NRA has to be sensitive to wider political issues such as the effect of its decisions on employment at the incumbent.	Yes	No

## **Annex 6: Results of interviews regarding access and safety/interoperability issues in rail**

### **1. Conditions necessary for deliberative supranationalism in regulatory networks**

The same questions were asked of NRAs as in telecoms. The results regarding access issue were identical to telecoms. The conditions theoretically required for deliberative supranationalism did not exist. The results for the informal safety/interoperability network are different. There the existence of a formal hierarchical EU decision-making process exercised via both an Agency and comitology dominated by Ministries has created incentives for the safety regulators to cooperate in order to try and influence the Agency. This is not voluntaristic deliberative supranationalism and the theorised conditions necessary for its development appear to be rather weak.

#### **1.1 Responses from members of NRAs from 3 countries participating in the informal access network**

**Q: How transparent to a regulator in one country is the actual conduct of access regulation by other regulators?**

	NRA A	NRA B	NRA C
	Not	Not	Not

**Q: How important to national regulators is their reputation in the eyes of other national regulators?**

	NRA A	NRA B	NRA C
	Not important	Not important	Not important

**Q: How does it compare to the importance of their reputation vis-à-vis other national civil servants?**

	NRA A	NRA B	NRA C
	Latter more important	Latter more important	Latter more important

**Q: After being in the regulator, what is the typical next job for a member of the regulator's staff?**

	NRA A	NRA B	NRA C
	National public sector	National public sector or rail operator	National public sector or rail operator

**Q: Do NRAs consider decisions of the network of regulators to be binding on them?**

	NRA A	NRA B	NRA C
	No	No	There are no decisions or recommendations, and seldom even a discussion paper.

**Q: Is there any sanction for failing to implement a decision of the network of regulators?**

	NRA A	NRA B	NRA C
	No	No	No

**1.2. Responses from members of NSAs from 3 countries participating in the informal safety network and in ERA**

**Q: How transparent to a regulator in one country is the actual conduct of access regulation by other regulators?**

	NRA A	NRA B	NRA C
	Historically, at best a vague idea. Since 2006, ERA audits and reviews of national rules and registers for mutual recognition, regime requires it.	Prior to 2006 and the operation of ERA not many countries had a National Safety Authority, there was not many people whom we could include in our network. Our focus was on specific technical issues/accidents not on discussing our respective regimes in the round and in detail.	Prior to 2006 was really bilateral about accidents, not in depth discussion of each others regimes. Now ERA peer review process, so we do find out all about each others powers and processes.

**Q: How important to national regulators is their reputation in the eyes of other national regulators?**

	NRA A	NRA B	NRA C
	National delegates are informed by the concrete economic outcomes at domestic level because that's what Ministers care about.	To a degree.	Probably depends on the extent to which they are genuinely independent stand alone entities and there is a lot of variation in that respect.

**Q: How does it compare to the importance of their reputation vis-à-vis other national civil servants?**

	NRA A	NRA B	NRA C
	Reputation with national civil servants much more important. All delegates move around within the national civil service.	Latter more important	Latter more important

**Q:After being in the regulator, what is the typical next job for a member of the regulator's staff?**

	NRA A	NRA B	NRA C
	National public sector	National public sector. ERA is a small body and many of staff do not come from the regulators.	National public sector or rail operator.

**Q: Do NRAs consider decisions of the network of regulators to be binding on them?**

	NRA A	NRA B	NRA C
	No, it does not take decisions. Decisions are made in ERA and in comitology by ministerial representatives.	No, it's an informal discussion but we do try and come to common understandings. We are conscious of the whole political decision-making chain, so we discuss with others to try and get a common understanding, certainly with the regulators of the bigger Member States, to make sure our preferences are not derailed in	It does not take decisions. It helps to deliver an understanding on how to implement common rules, but the rules are decided by Ministerial representatives in ERA/Comitology- although of course we do have an influence. The network is very useful for trying to work out what might be the eventual positions in comitology of

		comitology. Our priority is safety, but the priority of Ministries in comitology is national economic interests as well as safety issues.	different countries.
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**Q: Is there any sanction for failing to implement a decision of the network of regulators?**

	NRA A	NRA B	NRA C
	No because there are no formal decisions.	No, there are no decisions.	No, sanctions only operate once there is a Commission decision.

## **2. Perceptions of Ministerial involvement**

On access issues the results of the interviews, indicate that in countries with state-owned vertically-integrated operators that there is ministerial influence on the regulator, although the degree appears to vary between countries A and B. In country C, issues of discrimination do not arise, as the network operator is not vertically integrated. On safety/interoperability issues, ministries are highly engaged due to the potential economic costs of safety/interoperability regulation. In this sector, the existence of the European Agency and comitology appears to reinforce the hierarchical power of ministries collectively. This creation of a formal joint decision-making power at EU-level appears to have obliged national regulators to respond through a network in order to try and influence the formal process.

## 2.1 Responses from interviewees regarding interactions between Ministries and Regulators on access issues

**Q: How important do Member State governments consider their ownership in any enterprises operating in the sector? Very, neutral, not very?**

	Country A	Country B	Country C
Ministry Official	Very	Very	Very
Regulatory Official	Very	Very	Very
Incumbent	Unable to obtain interview	Unable to obtain Interview	Unable to obtain interview
New entrant	Very	Very	Very



**Q:Are Ministries actively involved in issues of sector-specific access regulation?**

	Country A	Country B	Country C
Ministry Official	Yes, but reality is that State owned entity conducts regulation of itself.	We can have influence. But it is not possible to influence on day to day decisions, these are more or less independent...But there is a tension between the concept of a national champion and a real free market. I cannot see following the free market being general view in Europe, most people have a national vertically integrated incumbent for which they have ownership responsibility; cannot even assume for [Country B]	We discuss access prices as part of the 5 year multi-annual state investment in the rail network but we do not get involved in access regulation and the prevention of discrimination. There is not the same issue about discrimination as in other countries as the state is only involved at the network layer. We believe these kinds of interventions do take place in many other Member States.
Regulatory Official	State owned operator is the regulator in practice	No	No
Incumbent	Unable to obtain interview	Unable to obtain interview	Unable to obtain interview
New entrant	Yes, but state owned entity runs it in	No	No

	practice		
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**Q: Do state owned enterprises lobby ministries on access issues?**

	Country A	Country B	Country C
Ministry Official	Yes	Not on specific access issues, but would get involved on issues of general and political importance.	Not applicable.
Regulatory Official	Yes	Yes	No
Incumbent	Unable to get obtain interview	Unable to obtain interview.	Unable to obtain interview.
New entrant	Yes	Yes	No

**Q: Do Ministries discuss access issues with the regulator?**

	Country A	Country B	Country C
Ministry Official	Yes	Yes	Not really
Regulatory Official	Yes	Yes	Limited
Incumbent	Unable to obtain interview	Unable to obtain Interview	Unable to obtain interview
New entrant	Yes	Yes	No

**Q: Have Ministries given instructions, either formally or informally, to the regulator?**

	Country A	Country B	Country C
Ministry Official	Yes	No	No
Regulatory Official	Yes	No	No
Incumbent	Unable to obtain interview	Unable to obtain interview	Unable to obtain interview
New entrant	Yes	No	No

## 2.2 Responses from interviewees regarding interactions between Ministries and Regulators on safety and interoperability issues<sup>1</sup>

**Q: How important do Member State governments consider their ownership in any enterprises operating in the sector? Very, neutral, not very?**

	Country A	Country B	Country C
Ministry Official	Very	Very	Very
Regulatory Official	Very	Very	Very

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<sup>1</sup> Operators were not questioned on this issue as there was no commentary put forward to suggest other than that Ministries were heavily engaged.

**Q:Are Ministries actively involved in issues of safety and interoperability regulation?**

	Country A	Country B	Country C
Ministry Official	Ministry makes the decisions. It is the body responsible for engagement with ERA and takes decisions in comitology.	Ministry is responsible for policy, regulator for implementation. Ministry is on board of ERA and takes comitology decisions.	Ministry makes the policy decisions and implements interoperability. Safety implementation is role of the regulator.
Regulatory Official	Ministry makes the decisions. Regulator is advisory body.	They are the policy making body.	Yes and on safety they have the final word through their position in comitology.

**Q: Do state owned enterprises lobby ministries on safety and interoperability issues?**

	Country A	Country B	Country C
Ministry Official	Yes, work closely with industry.	Yes, work closely with industry.	Yes, work closely with industry.
Regulatory Official	Yes	Yes, on each safety and interoperability issue there are joint working groups with ministry, industry and regulator.	Yes, on each safety and interoperability issue there are joint working groups with ministry, industry and regulator.

**Q: Do Ministries discuss safety and interoperability issues with the regulator?**

	Country A	Country B	Country C
Ministry Official	Yes	Yes	Yes
Regulatory Official	Yes	Yes	Yes

**Q: Have Ministries given instructions, either formally or informally, to the regulator?**

	Country A	Country B	Country C
Ministry Official	Ministry is the regulator	Not where the regulator is exercising its discretion	Ministry is the regulator for interoperability. On safety issues not interfere with regulator's discretion.
Regulatory Official	Ministry is the regulator	On future policy, the Ministry's views dominate. On implementation of safety issues, ours should dominate.	On the rare occasions when there is a disagreement on safety policy, Ministry can use comitology to prioritise economic considerations over regulator's prioritisation of safety issues.

## **Annex 7: Results of interviews regarding pharmaceutical authorizations**

### **1. Conditions necessary for deliberative supranationalism**

The same questions were asked of NRAs as in telecoms. In this case, despite a series of attempts to engage with representatives of countries A and B, it proved impossible to be able to secure any interviews<sup>2</sup>. An additional interview was therefore held with a representative of the NRA from Country D. Country D is one of the leading countries selected to conduct authorizations investigations alongside countries A, B and C. The answers given here indicate that the conditions for deliberative supranationalism amongst the network of regulators do hold. However, this is in the context, as the answers indicate, where the formal EC decision-making process requires a binding collective outcome and NRAs are part of this process.

**Q: How transparent to a regulator in one country is the actual conduct of access regulation by other regulators?**

	NRA C	NRA D
	Decision making process requires this	There is a rapporteur country leading one investigation and a co-rapporteur country leading a separate investigation. Views are then formally reconciled in the decision-making process. This obliges us to understand the approaches of the different regulators.

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<sup>2</sup> I am very grateful to Professor David Coen for following up my requests with a formal request from the School of Public Policy at UCL.

**Q: How important to national regulators is their reputation in the eyes of other national regulators?**

	NRA C	NRA D
	Very	May be important for some, but cannot say driver over all. Might partly depend on how the NRA is financed. If it is entirely dependent on fees then reputation may be more of an issue.

**Q: How does it compare to the importance of their reputation vis-à-vis other national civil servants?**

	NRA C	NRA D
	Competing tension for CPMH member but when “push comes to shove” follow national brief. For the actors at the comitology stage, other national civil servants	We are part of the national ministry.

**Q: After being in the regulator, what is the typical next job for a member of the regulator's staff?**

	NRA C	NRA D
	CPMH members: industry or EMEA. Comitology: national civil service	EMEA, national civil service, industry.

**Q: Do NRAs consider decisions of the network of regulators to be binding on them?**

	NRA C	NRA D
	Follow national interest so if necessary where rules allow appeal – so from CMD(h) to CPMH and from latter to comitology. Once final decision is made it is binding on everyone.	Yes, the final decision by the Commission is binding. However, when consider it necessary for national reasons will take the appeal routes within the structure – so CMD(H) to CPMH and then to comitology.



**Q: Is there any sanction for failing to implement a decision of the network of regulators?**

	NRA C	NRA D
	Yes, private litigation or infringement procedures	An NRA that tried to block market entry of a drug than had been authorised would be swiftly enjoined by the company that was prejudiced as a result. There could be no grounds for such a block and a national court would have no choice but to overturn the NRAs decision.

## 2. Perceptions of ministerial involvement

The perception on the part of regulatory officials is that there is ministerial involvement. Indeed, this is required as part of the EC process. According to interviews with representatives of industry trade associations, political management is not, however, considered problematic in this area<sup>3</sup> since there is no generalised conflict of interest such as between ownership and regulation.

**Q: Are Ministries actively involved in issues of sector-specific access regulation?**

	Country A	Country D
Regulatory Official	Yes, the NRA is a department of Ministry. Minister approves comitology position	The NRA is part of the Ministry.

**Q: Do Ministries discuss detailed issues with the regulator?**

	Country C	Country D
	Yes, but Minister will not usually get involved at the level of specific product authorisations	If the comitology process becomes one in which there are disagreements.

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<sup>3</sup> See page [ ]

**Q: Have Ministries given instructions, either formally or informally, to the regulator?**

	Country C	Country D
	Yes, exceptionally the Minister might take a different view from the NRA as to how to proceed in comitology	Yes, although it is uncommon for it to happen with respect to a specific product.

## Annex 8: Tables with summary of the institutional outcomes in telecoms

Legislative documents are listed in the bibliography under telecommunications legislative documents: in the tables the Commission is referred to as “Com”, parliament as “EP” and Council as “Council”.

Commission (1995; 1996), Parliament (1996a; 1996b), Council (1996), Parliament and Council (1997a; 1997b)

**Table 1: 1998 Directives**

Negotiated 1995-1997	Com pref	EP Pref	Council Pref	Outcome
Accounting separation	Binding guideline on accounting separation	Same as Com	Recommendation only	Council preference
Power to amend technical annexes	Mandatory technical annexes amendable by Com subject to advisory committee	Same as Com	Technical annexes containing list of examples of items which are possible NRA options, revision subject to regulatory committee	Council Preference
Commission arbitration powers	Com decides cross-border dispute resolution	Same as Com	Only applies where dispute not within the territory of an NRA (impossible) and in that event NRAs must cooperate	Council preference

Euroregulator	Undeclared support	Preference for Euroregulator (1 <sup>st</sup> reading);  Review in 1999 to include Euroregulator (2 <sup>nd</sup> Reading)	Remove any reference	EP Second Reading compromise
NRA independence	NRA independent of operators and Member States with state ownership to ensure “effective” separation of ownership and regulatory functions BUT Ministries within definition of NRA	Same as Com	Same as Com	Com text  (but not within context of Com constraints).

**Table 2: 2002 Directives**

Legislation: Commission (1999b; 2000a; 2001c), Parliament (2001), Presidency of the Council (2001a; 2001b; 2001c; 2001d), Parliament and Council (2002a; 2002b)

Negotiated 1999-2002	Com Pref	EP Pref	Council Pref	Outcome
Commission veto of NRA decisions	Com veto incl remedies  Subject to NRA advisory committee	Same as Com	No veto	Com veto but not on remedies and Ministerial advisory committee
Commission harmonisation decisions	Harmonisation Decisions anywhere “barrier to single market” subject to NRA advisory committee	Same as Com	Harmonisation Decision on Numbering subject to Ministerial regulatory comitology	Council Pref
Membership of advisory committee	Advisory Committee of NRAs	Same as Com, except all proposals to also be discussed with a working group of MEPS	Advisory Committee of Ministry representatives	Council Pref
Excluding ministerial instruction to	No instructions from Ministries to NRAs	Same as Com	Not accept	Council Pref

NRAs				
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**Table 3: 2009 Directives**

Legislative documents: Commission (2007a; 2007b; 2007c; 2007d; 2007e; 2007f), Parliament (2008a; 2008b; 2009), Council (2009a; 2009b), Presidency of the Council (2009), Parliament and Council (2009a; 2009b)

Negotiated 2006-2009	Com Pref	EP Pref	Council Pref	Outcome
Commission veto of remedies	Veto on remedies.  Where NRA reacts to veto by failing to take any further decision, Commission can step in after a certain period	Same as Com [but veto on Commission veto with Agency]	No veto on remedies	No veto on remedies
Controlling body of Agency	Agency with 6 Com appointees and 6 Council appointees – decisions by two thirds majority; strong Exec Director	Board of NRAs only; no Executive Director	Board of NRAs Only	Board of NRAs only
Board of NRAs	Board of NRAs for pre- decisions, simple majority	Board of NRAs with QMV	Same as EP	Same as EP

	voting			
Appeal body for Agency decisions	Board of Appeal appointed by Admin Board from current or former Heads of NRAs but only deals with numbering	Agency should not deal with numbering so no need for Appeal Board	Same as EP	Same as EP
Financing of Agency	Community budget	Community budget and donations from NRAs	No community budget	Community budget and donations from NRAs
Commission harmonisation decisions	Harmonising Decisions with Min reg committee	Same as Com but with Parl scrutiny	Additional hurdles plus EP scrutiny	Additional hurdles plus EP scrutiny
Ministerial instructions	No instructions to NRAs from Mins	Same as Com	No instruction, but rights of supervision	No instruction, but rights of supervision
Financing of NRAs	Requirement for NRAs to be adequately funded	Same as Com	Amended to adequate financing to fund participation in BEREC	Amended to adequate financing to fund participation in BEREC
Functional separation	Discretionary functional separation if justifiable	Discretionary functional separation if justifiable	Discretionary functional separation if justifiable	Discretionary functional separation if justifiable
Discretion to	Removal of technical	Same	Same	Same



regulate fibre	phrasing which potentially inhibited the discretionary regulation of fibre			
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## Annex 9 - Tables summarising institutional outcomes in Rail Access

**Table 1: 1991 Development of the Community Railways Directive**

Legislative documents: Commission (1990; 1991), Parliament (1991), Council (1991)

Legislative negotiations 1990-1991	Com Pref	EP Pref	Council Pref	Outcome
Option to open markets under EC Law	Excludes urban and suburban railway services	Exclude regional  Com's amended proposals exclude regional	Same	Excludes urban, suburban and regional services.
Authorisation conditions	To be determined by Member States	To be open to all undertakings on principle of equal treatment  Com's amended proposals adopt EP text	Removed from text	Council Pref
Companies eligible to request access	Railway undertakings licensed in a member state can request "equitable access in that Member State;	Recital but no operative text: access must be made available to the railway undertakings of all other Member States. Article added	Access for international groupings in Member States where their constituent members are licensed; access for transit	Council Pref

	and  International groupings where the members are licensed to operate within member state where seeking access	providing for transit rights for international groupings in Member States where not have a constituent member.  Recital added in amended Com proposal. Transit rights added.	between two states with constituent members.	
Organisational Separation	Split transport and infrastructure into two separate divisions.	Same	Separation of accounts mandatory, organizational separation optional	Council Pref
Comitology	Advisory (but only power of Commission is to request information).	Recital stating decisions must be harmonised.  If complaints from operators, Com power to make a proposal for a Council regulation on a code of conduct	Member States may raise issues of implementation with the Commission. Draft Commission measures shall be reviewed by the Advisory Committee. The	Council Pref

		for access to infrastructure.	Com shall take utmost account of the Advisory Committee.	
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**Table 2: Licensing and allocation and infrastructure charging directives**

Legislative documents: Commission (1994a; 1994b; 1994c; 1994d), Parliament (1994a; 1994b), Council (1994a; 1994b; 1995a; 1995b).

Legislative negotiation period 1994-1995	Com Pref	EP Pref	Council Pref	Outcome
Market Opening (Licensing and Infrastructure and Charging Directives)	Urban, suburban and regional services can only be excluded if using separate infrastructure	Same (excepting private tourist and museum railways).  Amended Com text adopts exclusion above.	Maintain existing exclusions and add Channel Tunnel	Council Pref
Companies eligible to request access and a licence (Licensing Directive)	Any that provide traction and are established anywhere in the Community	Same (excepting private tourist and museum railways)  Second reading:	Any that provide traction to provide the services authorised by the 1991 Directive	Council Pref

		Traction equipment can include equipment owned, leased or rented.		
National Authorising Body (Licensing Directive)	MS designates	Must not be associated, directly or indirectly with the national railway undertaking.  Amended Com text adopts EP text.  Second reading: EP restates	Can be whatever Member State decides, but decisions subject to judicial review	Council Pref
Infrastructure Manager “IM” (Infrastructure and Charging )	MS designates	The IM cannot be assigned the duties of the allocation body or linked to it, directly or indirectly.  Amended Com	Can be whatever Member State decides but railway undertakings can appeal where the IM is also a railway operator to an independent	Council Pref

		text, IM can only be assigned these duties if it is not a railway operator.	body (undefined).	
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**Table 3: Abandoned 1995 Amendment of the development of Community Railways Directive**

Legislative documents: Commission (1995, 1997), Parliament (1996)

Legislative negotiation 1995-1997	COM Pref	EP Pref	Council Pref	Outcome
Access rights	Extend to international freight, international passenger and international combined transport	Same	No published opinion	Withdrawn
Include Cabotage	For all the above services	Same		
Infrastructure charging		Requirement for IMs to charge for the use of infrastructure on the basis of uniform criteria.		

		Com not adopt on basis goes beyond Infrastructure and Charging Directive		
Implementation	No change to first Directive	Same		

**Table 4: 2001 Package (amending directives to the development of the community's railways,licensing and allocation and charging of infrastructure directives)**

Legislative documents: Commission (1998a; 1998b; 1998c; 1999a; 1999b; 1999c; 2000a; 2000b; 2000c; 2000d; 2000e), Parliament (1999; 2001), Council (2000a; 2000b; 2000c; 2000d; 2000e), Parliament and Council (2001a; 2001b; 2001c).

Legislative negotiation 1998-2001	COM pref	EP Pref	Council Pref	Outcome
First proposal withdrawn before Council common position agreed				
Independent NRA	Where IM in its legal form, organization and decision-making function is not	Separate charging body can also be the regulator. If so, needs to be		.

	<p>independent of any railway undertaking then tasks described in Directive have to be performed by a body with such characteristics.</p> <p>In addition, MS have to create a regulatory body independent of IM and railway undertakings to which decisions of IM can be referred.</p>	<p>possibility of judicial review.</p> <p>Second reading insists on IM and NRA.</p>		
Vertical disaggregation	<p>Separation for body determining equitable and non-discriminatory access</p> <p>Optional separate management of infrastructure from services</p>	<p>Same</p> <p>Separate division</p>		



		immediately and full structural separation within 2 years		
Accounts	Separation profit and loss and balance sheets between infrastructure and services	Same		
Implementation	No proposal	Recital calls for technical harmonisation measures but no amendment to articles		
<b>Amended proposal</b>				
Vertical disaggregation of railway undertaking	Separate divisions immediately and then structural separation with separate legal entities	Same as Com. Rejects Council proposal for exception to requirement where independent regulator.  Allocation of slots must be transferred to an independent	MS option of distinct divisions or separation.  Separate entity for determining non- discriminatory access, but may allocate management and collection of charges and	MS option of distinct divisions or separation.  Separate entity for determining non- discriminatory access, but may allocate management and collect of charges and

		body which is not a railway undertaking at the latest within 4 years.	access to capacity to railway undertaking.  Not have to do separation if set up independent rail regulator. Commission to do review within framework of European Rail Observation System. Com can then take a decision subject to regulatory comitology	access to capacity to railway undertaking.
Accounts	Separation profit and loss and balance sheets between infrastructure and services	Same	Same	As Com proposed
Market Access	Access to specific Trans European Rail Freight Network for purposes of international freight from 2003 including	Extend within 5 years to national and international freight services. International passenger services also to	No cabotage.  Access to TRFN by 2008.	No cabotage.  TRFN by 2008 and rest of network by 2015.

	cabotage.  Can limit on reciprocity basis	be opened up by 2010.  Com does not adopt EP amendment as will not get political agreement.		
Independent NRA	Charging and slot allocation bodies must be independent of railway undertaking.  NRA must be independent from railway undertakings and IM	Same as Com	If regulator not need separate IM. Regulator which can specifically be the Ministry of Transport must be independent of IM, charging body, allocation body or applicant.  Judicial review of regulatory decisions	Must create IM or equivalent.  Must create regulator but specified as including Ministry.  Judicial review of regulatory decisions
Judicial review	All decisions	same	same	All decisions
Implementation	MS can bring questions of implementation to the Com and	Same as Com	A request of a MS or own initiative, Com	MS or Com can raise issue of implementation re MS decision.

	<p>decisions will be adopted by use of the advisory committee.</p> <p>With respect to access questions the Com or a Member State may bring up a specific issue and the Comon may decide subject to an advisory committee.</p> <p>If a measure is of general scope then it will be subject to a regulatory committee.</p>		<p>can review only who has been granted access and after consultation of advisory committee decide whether MS can continue to apply a measure. A draft measure can be referred by a Member State to Council where it can be overturned by qmv.</p> <p>MS can bring any question of implementation to the Com and decisions will be adopted by advisory comitology.</p> <p>Amendment to the annexes (including scope of the regulation) can</p>	<p>Com can decide subject to advisory committee. However, a single MS can refer to the Council and latter can overturn by qmv.</p> <p>Amendment to the annexes (including scope of the regulation) can only be amended via regulatory comitology.</p>
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			only be amended via regulatory comitology.	
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**Table 5: Amending community railways directive**

Legislative documents: Commission (2002,2003b), Parliament (2002a; 2002b; 2003a; 2004d; 2004e; 2004f; 2004h), Council (2003a), Parliament and Council (2004).

Legislative negotiation 2002-2004	Com Pref	EP Pref	Council Pref	Outcome
Access Rights	Domestic freight and cabotage for international freight	Same but also national and cross border passenger services  COM not adopt re passenger services	1 Jan 2006 access to national networks for international freight  1 Jan 2008 all freight  No to passenger services	1 Jan 2006 access to national networks for international freight  1 Jan 2008 all freight  But, recital saying Council would examine further rail legislation looking to open passenger markets

**Table 6: Amendment to community railways directive**

Legislative documents: Commission (2004a; 2004b; 2006a;2007a), Parliament (2004j; 2005; 2006f; 2006g; 2007a), Council (2006), Parliament and Council (2007b).

Legislative negotiation 2004-2007	Com Pref	EP Pref	Council Pref	Outcome
International groupings	No longer permitted automatically by Directive	Same	Same	All institutions agreed
Access Rights	International passenger services including cabotage by 1 Jan 2010	International passenger services by 1 Jan 2008 and all other passenger services by 1 Jan 2012.  Can refuse access if open earlier to operators from MS that have not yet opened.  International passenger access can be limited if would threaten economic viability of a	International passenger services including cabotage by 2012, but only where ancillary to the int service, no disguised attempt to open up domestic passenger services.  Access can be limited as per EP.	Council position

		public service contract. Regulator to make assessment of economic viability.		
Framework agreements	Must comply with Regulation on public service contracts in the transport field (not yet agreed)	Framework agreements must be limited to 5 years, can be longer only if justified. Can be 10 years if based on special infrastructure and long term investment required	From 1 Jan 2010 initial 5 year framework agreement, can be automatically renewed once. NRA is responsible for authorising.	Covered in regulation 1370/2007
USO Levy where passenger is opened up and new entrant is operating on lines where there is a public service contract	Yes	Yes	Yes	All institutions agree

**Table 7: Public Transport Services regulation**

Legislative documents: Commission (2000b; 2002g; 2007b), Parliament (2007a; 2001i), Council (2007), Parliament and Council (2007a).

Legislative negotiation 2000-2007	COM Pref	EP Pref	Council Pref	Outcome
Cover transport	Agreed	Agreed	Agreed	As agreed
Public Service Contacts	Must go to competitive tender, but public authority can award directly if doing otherwise would jeopardise national or international safety standards	Must in addition be able to award directly where would jeopardise economic viability.  National authority must be able to offer services directly without competitive tendering if limited to area of 50km	Same as EP, except national authorities must be able to offer services directly without competitive tendering. However, entities in receipt of non competitively tendered public service contracts may not bid on competitive tenders in other jurisdictions.	Council preference
Length	5 years but can be extended if necessary to ensurey payback on investments	15 years for rail	15 years for rail and period can be increased by 50% if substantial investments	Council preference



**Table 8: Freight Regulation**

Legislative documents: Commission (2008b; 2010), Parliament (2009a; 2009b; 2009c); Council (2009a).

2008-Negotiations ongoing.	Com Pref	EP Pref	Council Pref	Outcome
Creation of freight corridor	Obligatory to propose within 1 year if two land borders; obligatory to propose within 3 years, 2 or 3 routes depending on volumes. Selection and modification of proposals by Commission subject to regulatory comitology.	No comitology just a Commission decision in accordance with criteria in the annex. Annex can only be revised by regulatory procedure with scrutiny.  Every Member State at least 1 freight corridor after 3 years.  2 <sup>nd</sup> reading	First set of routes to be agreed by Council as political decision only and listed in annex.  Further must be proposed by two Member States, subject to regulatory comitology.  MS can opt out if socio-economic benefits insufficient or costs disproportionate, Commission can review opt out subject to	Not yet occurred

		Commission decision only but power can be revoked by either institution.	advisory comitology.	
Governance of freight corridor	<p>Independent legal entity appointed by IMs. Where differences between MS, a MS can approach Commission and it will raise this with advisory committee.</p> <p>MS should take views of committee into account.</p> <p>Governing body can't make decisions that contradict opinion of a working group of owners of strategic</p>	<p>All interested users should be able to participate in the governing body on a consultative basis.</p> <p>2<sup>nd</sup> reading:</p> <p>IM body must be independent legal entity.</p> <p>Advisory group of railway undertakings.</p>	<p>Member States form executive board, only representatives of Member States. Decisions by consensus. They appoint board of IMs who report to board.</p>	

	terminals.			
Implementation plan re investment/maintenance	Governance body	Governance body but MS should be able to set joint executive body to oversee.	Management body but approved by executive board.	
Bodies whose views must be taken into account by governance body	Users of freight corridors	Users spelled out to make clear includes all bodies which have an economic interest in the handling of freight, not just railway companies.  2 <sup>nd</sup> reading: railway undertakings	Up to management body to create consultation mechanism.	
Access		2 <sup>nd</sup> reading: include bodies other than railway undertakings		
Governing bodies must prioritise freight on	Yes	Yes	No must also take into account the needs of	

these routes			passenger services	
Policing implementation	Company disgruntled with governance body can complain to the Com which can raise with Advisory Committee	Delete. Must be able to raise with the NRAs.  2 <sup>nd</sup> reading:  NRAs who must all be raised to the same regulatory level.	Deleted.	
One stop shop for cross border freight paths	Governing body must create	Same  2 <sup>nd</sup> reading:  One stop bodies must receive and make decisions about access	Can pass requests to national bodies that make the decisions	
Cooperation between IMs	Working group chaired by Com	Deleted, motivation is that need for cooperation is	Deleted	

		obvious.		
Regulation of freight corridors	NRA's should cooperate to ensure non discriminatory access to the corridors	Same	Same	

### Tables summarising institutional outcomes in Rail interoperability and safety

**Table 9: High Speed directive**

Legislative documents: Commission (1994d), Parliament (1994c), Council (1996).

Legislative negotiation 1994-1996	Com	EP	Council	Outcome
Technical Specifications for Interoperability ("TSIs") for high speed train services	<p>Drawn up by body representing industry at request of Commission</p> <p>Com submits to Advisory Committee</p> <p>Commission to take utmost account of Committee's view</p>	<p>Same, but TSIs also to cover customer facing elements of ticketing and interconnecting reservation systems</p> <p>Com supports in amended proposal</p>	<p>Industry body must prepare report assessing the costs and benefits for all the different stakeholders of all the possible viable solutions.</p> <p>The Committee may give recommendations or briefs to the industry body regarding the</p>	Council

			design of TSIs including with respect to the assessment of costs.  Regulatory comitology	
Applications	TENS only	TENS only	TENS only	TENS only
Sensitive constituent parts must permit interoperability	MS must ensure can meet and cannot block companies installing in compliance with	Same	Same	Com
MS can disapply in certain circumstances	COM amended proposal responding to Council amendment creating derogations: agrees with EP	Derogation only where cleared by Com subject to advisory committee	Not need to apply where threatens economic viability of investment.  Agrees with Com and EP that should be subject to advisory committee	EP
Inspection of compliance with	Responsibility of MS to nominate body, need to be	Same, but bodies must also specifically be	Where Infrastructure Manager ("IM") is	Original COM text.

TSIs	independent of the pecuniary interests relating to infrastructure	independent of railway undertakings.  Com supports in amended proposal	the notified body must have similar separation from provider of services as IM.	
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**Table 10: safety and interoperability aspects of the 2001 package of directives**

Legislative documents: Commission (1998a; 1998b; 1998c; 1999a; 1999b; 1999c; 2000a; 2000b; 2000c), Parliament (1999; 2001m), Council (2000b; 2000c; 2000d), Parliament and Council (20001a; 2001b; 2001c).

Licensing Directive	Com	EP	Council	Legislative negotiations 1998-2001. Outcome
Body to issue licences standards and rules	MS to designate bodies that do not provide rail transport services themselves and are independent of bodies and undertakings that do so.	Same	Same	MS to designate bodies that do not provide rail transport services themselves and are independent of bodies and undertakings that do so.
Informing Com			When a licensing authority issues, amends, revokes a licence must	

			inform the Com which will inform the other Member States	
Safety certificate required for operation	National laws, compatible with EC law which lay down the technical, operational and safety requirements	Same	Same	National laws, compatible with EC law which lay down the technical, operational and safety requirements
Issuing and enforcement of rules	Where the IM in its legal form, organisation and decision- making is not independent of any railway undertaking the functions should be performed by an independent body	Same	The safety certificate should be issued by whichever body is designated by the Member State. (First reading)  Second reading:  Rules must be laid down by independent bodies but unless MS mandate independent bodies with enforcement and	Rules must be laid down by independent bodies but unless MS mandate independent bodies with enforcement and monitoring, they may require or allow railway undertakings to be involved in ensuring the enforcement and monitoring of the safety standards and rules while guaranteeing the neutral and non-



			monitoring, they may require or allow railway undertakings to be involved in ensuring the enforcement and monitoring of the safety standards and rules while guaranteeing the neutral and non-discriminatory execution of these functions,	discriminatory execution of these functions,
Applicant can ask for statement as to the compatibility of national requirements with EC law and as to whether they are being applied in a non-discriminatory manner		EP Second Reading amendment, supported by Com	Not support	EP Preference

Infrastructure charging...and safety certification	Com	EP	Council	1998-2001.  Outcome
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Technical harmonisations measures		EP favours  Supported by Commission in amended proposals	Separate Com study of interoperability to be undertaken	Council Pref
Safety Certificate	Express requirements for staff, rolling stock and internal organisation to be set out. To be issued by national authority where operating.	Same	Same – except body monitoring and enforcing can be railway undertaking.	Council Pref
	MS can bring questions of implementation to the Com and decisions will be adopted by use of the advisory committee.  With respect to questions of who can get access, the Com or a Member State may bring up a		A request of a MS or own initiative, Com can review who has been granted access and after consultation of advisory committee decide whether MS can continue to apply a measure. A draft measure can be referred by a Member State to	Council Pref

	<p>specific issue and the Comon may decide subject to an advisory committee.</p> <p>If a measure is of general scope then it will be subject to a regulatory committee.</p>		<p>Council where it can be overturned by qmv.</p> <p>Amendment to the annexes (including scope of the regulation can only be amended via regulatory comitology</p>	
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Interopeabilty of the trans-european conventional rail system	Com	EP	Council	Outcome
Extension of procedures and rules above to cover international freight services	Joint body should act at order of Com and Com decision should be subject to regulatory comitology	<p>Same</p> <p>Users groups and social partners should be consulted as well as industry</p>	<p>Comitology regulatory but in two stages.</p> <p>Comitology with respect to initial mandate of working group and narrowing of the options and then comitology on</p>	<p>Commitology regulatory but in two stages.</p> <p>Comitology with respect to initial mandate of working group and narrowing of the options and then comitology on the actual</p>

			the actual TSI.  At the request of a single MS may require working group to examine alternatives.  Agrees users and social partners should be consulted.	TSI.  At the request of a single MS may require working group to examine alternatives.  Agrees users and social partners should be
Coverage	TENS only	TENS only	TENS only	TENS only

**Table 11: 2004 Package of safety and interoperability directives and creation of an Agency**

Legislative documents: Commission (2002a; 2002d; 2002e; 2002f; 2003a;2003c; 2004b), Parliament (2004a; 2004b; 2004c; 2004g; 2004k; 2004l; 2004m), Council (2003a; 2003b;2003c;2003d) Parliament and Council (2004a; 2004b; 2004c; 2004d).

Legislative negotiation 2002-2004	Com Pref	EP Pref	Council Pref	Outcome
Harmonised Common Safety Targets	Drawn up by Agency; adopted by Com subject to regulatory	Should be legislative proposal (drops at second and third reading –	As per Com, plus an MS can adopt a rule that goes beyond CST but Com to	Council Pref

	committee	not supported by the Com)	review and if it considers that it is a means of arbitrary discrimination or a disguised restriction on rail transport between Member States then can veto subject to regulatory comitology	
Harmonised Common Safety Measures	Drawn up by Agency; adopted by Com subject to regulatory committee	Should be legislative proposal (drops at second and third reading – not supported by the Com)		Com Pref
Harmonised Common Safety Indicators	Drawn up by Agency; adopted by Com subject to regulatory committee	Collect national figures in accordance with methodology in Annex	Same as EP	EP/Council Pref
Existing Member State safety rules (which apply where no TSI, CST or CSM)	Must publish and must notify Com	Same	Same	Com

New Member State safety rules (which can apply where no TSI, CST or CSM)	Must notify proposal to Com and can veto subject to regulatory committee if not compatible with EC legislation	Legislation in force or in preparation	MS can adopt a rule that goes beyond CST but Com to review and if it considers that it is a means of arbitrary discrimination or a disguised restriction on rail transport between Member States then can veto subject to regulatory comitology	Council Pref
Safety certificate	Split into two parts: (1) certificate confirming acceptance of safety management and system, can only be required once by country of establishment; and (ii) certificate confirming acceptance of the provisions taken by a	Same	Same	Same

	company to meet specific requirements necessary for safe operation on a specific network.			
Migration strategy for a single harmonised EU safety certificate	Agency to propose	Same	Agency to propose but adoption of strategy by Com is subject to regulatory comitology	Agency to propose but adoption of strategy by Com is subject to regulatory comitology
MS to set up independent Safety Agency	Independent in its organisation, legal structure and decision-making from any railway undertaking, IM or applicant.	Safety agency could also be multi-national.	National or binational. The authority may be the Ministry responsible for transport matters and shall be independent from any railway undertaking.	National or binational. The authority may be the Ministry responsible for transport matters and shall be independent from any railway undertaking.
TSIs for high speed and conventional [whole network for freight]	Agency substitutes for joint body.  Agency advises	Same	Same	Same

	Com with respect to request for derogation to TSI			
Inspection and control of bodies applying TSIs	Agency in addition to national safety authorities	Same	Same, but must warn MS that inspection will take place.	Council Pref
Agency workpackages	Com approval then submission to Admin Board. Executed by Exec Dir.	Consulation of Com not approval of Com, otherwise same.	Admin Bd sets rules of procedure with respect to the execution of work packages. Exec Dir can consult Com.	Council Pref
Appointment of Exec Dir	Admin Bd on proposal of Com	Same	Same, but 4/5ths majority required.	Council Pref
Dismissal of Exec Dir	By Admin Bd, but only if proposed by Com	Same	Solely with Admin Bd and can also discipline Heads of Unit.	Council Pref
Report to EP	Every year plus EP can require hearing at any point.	Same	Same	Council Pref
Admin Bd	6 Com, 6 Ms, 3 non voting experts; 2/3 <sup>rd</sup>	Same plus 5 non voting experts from the trade	1 rep each MS, 4 Com, 6 non voting groups	Council Pref



	majority voting	<p>associations representing the railway industry; railway infrastructure managers; railway undertakings; railway undertakings staff; rail freight users.</p> <p>Second reading: 6 reps MS, 4 Com and 6 reps of associations (Com choosing 1 rep from 3 names put forward by each association).</p> <p>Com supports.</p>	representing functional groups	
Funding	EC plus sale of services	Same	Same	

**Table 12: Recast of the safety directive**

Legislative documents: Commission (2006d; 2008a), Parliament (2007b, 2008), Council (2007), Parliament and Council (2008b).

2006 -2008	Com	EP	Council	Outcome
Authorisation of locomotives; harmonised sections of safety clearance that must be mutually recognised	Int standards and national standards deemed to be equivalent cannot be rechecked. Annexes setting out what falls into the harmonised sections can only be revised by regulatory comitology	Regulatory comitology plus scrutiny	Same as EP	Regulatory comitology plus scrutiny
Agency can be requested by applicant to give a technical opinion on a negative decision by an NSA regarding a safety certificate		EP amendment.  Not supported by Commission. EP drops at second reading.	Not accepted by Council.  Com supports Council.	Omitted.

**Table 13: Recast of the interoperability directives**

Legislative documents: Commission (2006e), Parliament (2007d), Council and Parliament (2008a).

Legislative period 2006-2008.	Com	EP	Council	Outcome
TSIs	Com can amend mandate during procedure but not Committee. Committee can request that COM do so.	Same	Same	Com can amend mandate during procedure but not Committee. Committee can request that Com do so.

## **Annex 10: Tables summarising institutional outcomes in pharmaceuticals authorisations**

**Table 1: 1965 Directive**

Legislative documents: Commission (1962), Parliament (1963), Council (1965)

Legislative negotiation 1962-1965	Com Pref	Parl Pref	Council Pref	Outcome,
National Implementation	Yes	Yes	Yes	National Implementation
General principles for implementation	Yes	Yes	Yes	General principles for implementation

**Table 2: Institutional Outcomes 1975-1987**

Legislative documents: Commission (1976; 1979; 1980a; 1980b; 1980c ; 1980d; 1980e; 1981a; 1981b; 1982; 1984), Parliament (1981a; 1981b; 1983), Council (1975a; 1975b; 1983; 1987)

Legislative negotiations 1975-87	Com Pref	Parl Pref	Council Pref	Outcome
Institutional proposal	Coordination committee, non-binding opinions	Same as Com	Same as Com	Same as Com
Methodologies for applying the regulatory principles	Greater detail	Same as Com	Same as Com	Same as Com

**Table 3: 1993 Directive and Regulation**

Legislative documents: Commission (1990a; 1990b; 1993), Parliament (1991a; 1991b; 1991c; 1993) and Council (1991; 1993a; 1993b).

Legislative negotiation 1990-1993	Com Pref	Parl Pref	Council Pref	Outcome
Treaty base	Article 100a	Article 100a	Article 235	Article 235
Agency Management Board	2 x Reps each MS; 2 from Com	1 <sup>st</sup> Reading: 2 x Reps each MS; 2 Reps Com; 2 Reps Consumer orgs; 2 reps EP  2 <sup>nd</sup> Reading:	2 x Rep each MS; 2 from Com, 2 x MEPs	Council Pref

		2 x MEPs		
CPMP	2 x Rep each MS	From list jointly approved by EP	No approval from EP	Council Pref
Executive Director	Com proposal, Council choice	List to be jointly approved by EP	No approval from EP	Council Pref
Decisions on authorizations/ arbitrations	CPMP opinion  Com decision (if varies from opinion, detailed explanation)  No comitology	Same as Com	Regulatory comitology in addition	Council Pref
Remittance to CPMP	Where MS provides reasoned request	MS must provide detailed justification based on scientific evidence or Community Law	Adopts EP wording	EP Pref
Committee opinions and Commission decisions	Available to Member States and applicant	Available to any interested party	Adopts EP wording	EP Pref
Admissability to Centralised procedure	Biotech	Wider	Biotech	Council Pref
Extension of admisability	CPMP opinion, Com decision	Joint EP decision	CPMP opinion  Com decision	Council Pref

	No comitology		Regulatory comitology	
Role of CPMP members	Scientific advice and national representation	Scientific advice only	National representation emphasized and scientific advice	Council Pref
Appointment of rapporteurs	Exec Director	Same	CPMP	Council Pref
Financing of Agency	Fees plus Community Budget	Community Budget	Fees plus Community Budget	Com/Council Pref

**Table 4: 2004 Directive and Regulation**

Legislative documents: Commission (2001; 2002b), Parliament (2001; 2003a; 2003b), Council (2002; 2003a; 2003b; 2003c), Parliament and Council (2004a; 2004b).

Legislative negotiation 2001-2004	Com Pref	EP Pref	Council Pref	Outcome
Treaty base	100a	100a	100a	100a
Extend CP	Extend CP	Extend CP wider than Com	Extend CP less than Com and EP and review for further in 2008	Council position
CPMP membership	1 Rep per MS and 5 addtl experts	Each member proposes list of 5, Exec Director selects one from each MS pool [Com backs in amended proposals]	1 Rep per MS plus 5 addtl experts	Council position
Management Board	4 Reps for Council, 4 for EP and 4 for industry and patients orgs (latter to be appointed by Com)	14 members plus 1 Com Rep. 14 to include 2 MEPs and 4 from consumers and industry. EP to be consulted on list prior to appointment by Council [COM backs in	1 Rep per MS plus 4 Com	1 per MS 2 Com 2 MEP 2 patient orgs 1 doctors org 1 vets org



		amended proposal]		
		2 <sup>nd</sup> reading  1 Rep per MS and stakeholders, but not including industry		
Exec Dir	No change	Exec Dir appear before Parl prior to appointment	Adopt EP position	EP and Council Pref
Financing	No change	Core to be funded from Community budget	No change	No change
Creation MRP and DP	Proposed	Agreed	Agreed	Creation MRP and DP
No withdrawal MRP and DP	Proposed	Agreed	Agreed	No withdrawal MRP and DP
CMD(h)	Formalised	Agreed	Agreed	CMD(h) formalised

## Annex 11 – Statistics workbook

Workbook prepared for Tarrant and Cadman: 2009.

**Table 1: Data regarding rail: Access Score, Vertical Integration and Market Share**

Country	Access Score	Vertical Integration	Incumbent Market Share		
			Passenger	Freight	Mean
Austria	781	0	100	92.3	96.15
Belgium	626	0			
Czech Republic	713	0	100	100	100
Estonia	680	0	50	70	60
France	568	0	100	99.5	99.75
Germany	807	0	85	83.6	84.3
Greece	544	0	100	100	100
Hungary	613	0	100	95	97.5
Ireland	338	0	100	100	100
Latvia	642	0	100	90	95
Lithuania	650	0	100	100	100
Poland	728	0	89	77	83
Slovenia	675	0	100	100	100
Spain	610	0	100	99	99.5
Denmark	780	1	96.6	95	95.8
Finland	612	1	100	100	100
Netherlands	795	1		75	75
Portugal	676	1	99	100	99.5
Slovakia	662	1	100	97	98.5
Sweden	817	1	45	55	50
UK	791	1	0	0	0
641.0714286					
733.2857143					

0= vertical integration at network and service levels (all networks in the EU are state owned).

**Source: IBM:2009**

**Table 2: Data regarding Electricity: regulatory scores, state ownership, vertical integration, market shares**

Country	Electricity							Market Shares				
	Transmission	VI (T)	Unbundling Score	Distribution	VI (D)	Unbundling Score	Total	State Shareholding	Large Industrial	Medium Industrial	Small Industrial/ Household	Mean
Cyprus	2	0		1	0		3	100	100	100	100	100
Estonia	5	0		5	0		10	100	100	92	92	94.7
Greece	3	0		1	0		4	100	97.5	98.5	100	98.7
Ireland	5	0	1	4	0	1	11	100				
Slovenia	5	0		3	0		8	100	88	80	75	81
France	5	0	2	3	0	2	12	85	94	98	96	96
Hungary	2	0	2	2	0	2	8	75	71	99	100	90
Austria	4	0	2	2	0	2	10	51	50	50	50	50
Luxembourg	3	0		1	0		4	33.33	92	96	97	95
Poland	4	0	2	0	0	2	8	5	47.5	51.5	48.2	49.1
Belgium	5	0	2	5	0	2	14	0				
Germany	2	0	2	2	0	2	8	0	48.5	36	47	43.8
Netherlands	5	1	3	4	0	2	15	100			80	80
Sweden	5	1	3	3	0	2	14	100	43	43	43	43
Denmark	5	1	3	3	0	2	14	73				
Czech Republic	3	1	3	1	0	2	10	69	96	98	99	97.7
Finland	5	1	3	3	0	2	14	50				
Italy	5	1	3	2	0	2	13	30	49	34	91	58
Portugal	5	1	3	3	0	0	12	25	100	99	99	99.3
UK	5	1	3	4	0	2	15	0	55	56	58	56.3

Sources: regulatory scores(Datamonitor:2006; Charles Russell:2006), vertical integration and market shares (European

Commission:2008; state ownership (Conway and Nicoletti:2006; own research)

**Table 3: Data regarding Gas: regulatory scores, state ownership, vertical integration, market shares**

Country	Gas					State Shareholding	Concentration Ratio 3			Mean
	Transmission	VI(T)	Distribution	VI(D)	Total		Large Industrial	Medium Industrial	Small Industrial/Household	
Austria	2	0	2	0	4	0				
Belgium	5	0	5	0	10	0	100			100
Estonia	1	0	1	0	2	0	100	100	97	99
France	5	0	3	0	8	0	86	93	100	93
Ireland	1	0	1	0	2	0	91	100	100	97
Italy	4	0	2	0	6	0	71	47	47	55
Luxembourg	2	0	1	0	3	0	100	95	92	95.66666667
Poland	4	0	0	0	4	0	96	59	62	72.33333333
Slovakia	1	0	1	0	2	0	100	100	100	100
Slovenia	5	0	0	0	5	0	97	56	66	73
Czech	1	0	1	0	2	1	58	58	58	58
Germany	2	0	2	0	4	1	45.5	23.6	27.1	32.06666667
Hungary	4	0	2	0	6	1	78	77	81	78.66666667
Denmark	5	1	4	0	9	0		85	95	90
Netherlands	5	1	2	0	7	0			79	79
Sweden	5	1	3	0	8	1				
UK	5	1	5	0	10	1	52	61	73	62

Sources: regulatory scores(Datamonitor:2006; Charles Russell:2006), vertical integration and market shares (European Commission:2008; state ownership (Conway and Nicoletti:2006; own research)

**Table 4: Data regarding telecommunications: regulatory score, state ownership, market shares**

Telecom					
Country	Score	State Ownership	Incumbent Market Share		Mean
			Broadband	Calls	
Czech	185	0.00%	33%	65%	49%
Denmark	339	0.00%	58%		58%
Ireland	297	0.00%	51%	69%	60%
Netherlands	357	0.00%	50%	65%	58%
Spain	261	0.00%	56%	75%	66%
UK	368	0.00%	26%	58%	42%
Italy	297	1.00%	61%	62%	62%
Hungary	280	1.00%	43%	82%	63%
Poland	180	4.00%	57%	68%	63%
Portugal	286	8.44%	39%	69%	54%
Finland	298	13.70%	65%		65%
France	320	26.69%	47%	68%	58%
Austria	280	27.37%	42%	60%	51%
Greece	245	28.00%	58%	75%	67%
Germany	280	31.70%	46%	51%	49%
Sweden	265	37.30%	38%	57%	48%
Belgium	254	53.50%	46%	71%	59%
Slovenia	251	74.00%	48%	94%	71%
	30117%		46%	66%	55%
	26971%		49%	69%	59%
	6		6		
	12		12		
	69.48501037		0.130639453	0.062289646	0.084241716
	35.65517668		0.08912028	0.119734555	0.073895914

Source: regulatory score, state ownership, market shares (ECTA:2009)

**Table 5: Votes in Europe**

Country	EEC12 1986 -	EU15 1995 -	EU25 2004	EU25 2004 -
BE	5	5	5	12
FR	10	10	10	29
DE	10	10	10	29
IT	10	10	10	29
LU	2	2	2	4
NL	5	5	5	13
DK	3	3	3	7
IE	3	3	3	7
UK	10	10	10	29
EL	5	5	5	12
PT	5	5	5	12
ES	8	8	8	27
AT		4	4	10
FI		3	3	7
SE		4	3	10
PL			8	27
CZ			5	12
HU			5	12
SV			3	7
LT			3	7
LV			3	4
SI			3	4
EE			3	4
CY			2	4
MT			2	3

Source: Wiberg 2005

**Table 6: Rail analysis**

	Access Score	Passenger Market Share	Freight Market Share	Test Method
Vertically Integrated	655	94.2	92.8	
Non-Vertically Integrated	756	73.4	74.6	
Significance		11.64%	34.94%	Mann-Witney
Significance	1.70%	23.80%	19.96%	z-test

**Lib Score**

XLSTAT 2007.7.02 - Two-sample t-test and z-test - on 24/11/2009 at 10:10:59

Sample 1: Workbook = 20091124 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$C\$4:\$C\$17 / 14 rows and 1 column

Sample 2: Workbook = 20091124 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$C\$18:\$C\$24 / 7 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

Summary statistics:

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	14	0	14	333.000	826.000	654.500	118.834
Var1(2)	7	0	7	636.000	827.000	756.000	74.802

z-test for two independent samples / Two-tailed test:

90% confidence interval on the difference between the means:

] -171.440 , -31.560 [

Difference	-101.500
z (Observed value)	-2.387
z (Critical value)	1.645

p-value (Two-tailed)	0.017
Alpha	0.1

Test interpretation:

H0: The difference between the means is not significantly different from 0.

Ha: The difference between the means is significantly different from 0.

As the computed p-value is lower than the significance level  $\alpha=0.1$ , one should reject the null hypothesis H0, and accept the alternative hypothesis Ha.

The risk to reject the null hypothesis H0 while it is true is lower than 1.70%.

### Consolidated Market Shares

XLSTAT 2007.7.02 - Two-sample t-test and z-test - on 26/11/2009 at 10:54:43

Sample 1: Workbook = 20091124 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$G\$4:\$G\$17 / 14 rows and 1 column

Sample 2: Workbook = 20091124 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$G\$18:\$G\$24 / 7 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

Summary statistics:

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	14	1	13	60.000	100.000	93.477	11.650
Var1(2)	7	0	7	0.000	100.000	74.114	37.538

z-test for two independent samples / Two-tailed test:

90% confidence interval on the difference between the means:

] -4.572 , 43.297 [

Difference	19.363
z (Observed value)	1.331
z (Critical value)	1.645
p-value (Two-tailed)	0.183
alpha	0.1



Test interpretation:

H0: The difference between the means is not significantly different from 0.

Ha: The difference between the means is significantly different from 0.

As the computed p-value is greater than the significance level  $\alpha=0.1$ , one should accept the null hypothesis H0.

The risk to reject the null hypothesis H0 while it is true is 18.33%.

**Table 7: Telecoms analysis**

Incumbent Market Share					
	Regulatory Score	Broadband	Calls	Broadband & Calls	Test Method
State Owned	269.7	49%	69%	59%	
Non-State Owned	301.2	46%	66%	55%	
Significance	18.7%	54.3%	81.0%	53.40%	Mann-Witney
Significance	29.7%	55.4%	59.6%	38.70%	z-test

**ECTA Score**

XLSTAT 2007.7.02 - Comparison of two samples (Wilcoxon, Mann-Whitney, ...) - on 14/07/2010 at 11:49:27

Sample 1: Workbook = 20091126 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$AJ\$10:\$AJ\$21 / 12 rows and 1 column

Sample 2: Workbook = 20091126 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$AJ\$4:\$AJ\$9 / 6 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

**Summary statistics:**

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	12	0	12	179.805	320.000	269.709	35.655
Var1(2)	6	0	6	185.000	368.000	301.167	69.485

**Mann-Whitney test / Two-tailed test:**

U	21.500
Expected value	36.000
Variance (U)	113.765
p-value (Two-tailed)	0.187
alpha	0.1

The p-value is computed using an exact method.

**Test interpretation:**

H0: The location difference between the samples is not significantly different from 0.

Ha: The location difference between the samples is significantly different from 0.

As the computed p-value is greater than the significance level  $\alpha=0.1$ , one should accept the null hypothesis H0.

The risk to reject the null hypothesis H0 while it is true is 18.75%.

Ties have been detected in the data and the appropriate corrections have been applied.

XLSTAT 2007.7.02 - Two-sample t-test and z-test - on 14/07/2010 at 11:58:11

Sample 1: Workbook = 20091126 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$AJ\$10:\$AJ\$21 / 12 rows and 1 column

Sample 2: Workbook = 20091126 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$AJ\$4:\$AJ\$9 / 6 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

Summary statistics:

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	12	0	12	179.805	320.000	269.709	35.655
Var1(2)	6	0	6	185.000	368.000	301.167	69.485

z-test for two independent samples / Two-tailed test:

90% confidence interval on the difference between the means:

] -81.094 , 18.179 [

Difference	-31.457
z	
(Observed value)	-1.042
z (Critical value)	1.645
p-value	
(Two-tailed)	0.297
alpha	0.1

Test interpretation:

H0: The difference between the means is not significantly different from 0.

$H_a$ : The difference between the means is significantly different from 0.

As the computed p-value is greater than the significance level  $\alpha=0.1$ , one should accept the null hypothesis  $H_0$ .

The risk to reject the null hypothesis  $H_0$  while it is true is 29.72%.

**Market Share:**  
**Telecommunications**

XLSTAT 2007.7.02 - Two-sample t-test and z-test - on 14/07/2010 at 12:01:09

Sample 1: Workbook = 20091126 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$AN\$10:\$AN\$21 / 12 rows and 1 column

Sample 2: Workbook = 20091126 Article Consolidated.xls / Sheet = Correlations / Range = Correlations!\$AN\$4:\$AN\$9 / 6 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

Summary statistics:

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	12	0	12	0.475	0.710	0.588	0.074
Var1(2)	6	0	6	0.420	0.655	0.553	0.084

z-test for two independent samples / Two-tailed test:

90% confidence interval on the difference between the means:

] -0.032 , 0.102 [

Difference	0.035
z (Observed value)	0.865
z (Critical value)	1.645
p-value (Two-tailed)	0.387
alpha	0.1

Test interpretation:

H0: The difference between the means is not significantly different from 0.

Ha: The difference between the means is significantly different from 0.

As the computed p-value is greater than the significance level  $\alpha=0.1$ , one should accept the null hypothesis  $H_0$ . The risk to reject the null hypothesis  $H_0$  while it is true is 38.71%.

## Pooled data and analysis 1

Country	Access Score	Max. Score	Normalised Score	Market Share	State Ownership	Veritcal Integration	Total	Sector
Austria	4	5	0.8	50.0	0	0	0	Electric TSO
Belgium	5	5	1		0	1	1	Electric TSO
Cyprus	2	5	0.4	100.0	0	0	0	Electric TSO
Estonia	5	5	1	94.7	0	0	0	Electric TSO
France	5	5	1	96.0	0	0	0	Electric TSO
Germany	2	5	0.4	43.8	0	1	1	Electric TSO
Greece	3	5	0.6	98.7	0	0	0	Electric TSO
Hungary	2	5	0.4	90.0	0	0	0	Electric TSO
Ireland	5	5	1		0	0	0	Electric TSO
Luxembourg	3	5	0.6	95.0	0	0	0	Electric TSO
Poland	4	5	0.8	49.1	0	0	0	Electric TSO
Slovenia	5	5	1	81.0	0	0	0	Electric TSO
Austria	2	5	0.4		0	0	0	Gas TSO
Belgium	5	5	1	100.0	0	1	1	Gas TSO
Czech	1	5	0.2	58.0	0	1	1	Gas TSO
Estonia	1	5	0.2	99.0	0	1	1	Gas TSO
France	5	5	1	93.0	0	0	0	Gas TSO
Germany	2	5	0.4	32.1	0	1	1	Gas TSO
Hungary	4	5	0.8	78.7	0	1	1	Gas TSO
Ireland	1	5	0.2	97.0	0	0	0	Gas TSO
Italy	4	5	0.8	55.0	0	0	0	Gas TSO
Luxembourg	2	5	0.4	95.7	0	0	0	Gas TSO
Poland	4	5	0.8	72.3	0	0	0	Gas TSO
Slovakia	1	5	0.2	100.0	0	1	1	Gas TSO
Slovenia	5	5	1	73.0	0	1	1	Gas TSO
Austria	788	1000	0.788	96.15	0	0	0	Rail
Belgium	649	1000	0.649		0	0	0	Rail
Czech Republic	738	1000	0.738	100	0	0	0	Rail
Estonia	691	1000	0.691	60	0	0	0	Rail
France	574	1000	0.574	99.75	0	0	0	Rail
Germany	826	1000	0.826	84.3	0	0	0	Rail
Greece	559	1000	0.559	100	0	0	0	Rail
Hungary	637	1000	0.637	97.5	0	0	0	Rail
Ireland	333	1000	0.333	100.0	0	0	0	Rail
Latvia	650	1000	0.65	95	0	0	0	Rail

Lithuania	684	1000	0.684	100	0	0	0	Rail
Poland	739	1000	0.739	83	0	0	0	Rail
Slovenia	665	1000	0.665	100	0	0	0	Rail
Spain	630	1000	0.63	99.5	0	0	0	Rail
Austria	280	485	0.577	51.0	0	0	0	Telecom
Belgium	254	485	0.524	58.5	0	0	0	Telecom
Finland	298	485	0.614	65.0	0	0	0	Telecom
France	320	485	0.660	57.5	0	0	0	Telecom
Germany	280	485	0.578	48.5	0	0	0	Telecom
Greece	245	485	0.505	66.5	0	0	0	Telecom
Hungary	280	485	0.577	62.5	0	0	0	Telecom
Italy	297	485	0.612	61.5	0	0	0	Telecom
Poland	180	485	0.371	62.5	0	0	0	Telecom
Portugal	286	485	0.590	54.0	0	0	0	Telecom
Slovenia	251	485	0.517	71.0	0	0	0	Telecom
Sweden	265	485	0.546	47.5	0	0	0	Telecom
Czech Republic	3	5	0.6	97.7	1	0	1	Electric TSO
Denmark	5	5	1		1	0	1	Electric TSO
Finland	5	5	1		1	0	1	Electric TSO
Italy	5	5	1	58.0	1	0	1	Electric TSO
Netherlands	5	5	1	80.0	1	0	1	Electric TSO
Portugal	5	5	1	99.3	1	0	1	Electric TSO
Sweden	5	5	1	43.0	1	0	1	Electric TSO
UK	5	5	1	56.3	1	1	2	Electric TSO
Denmark	5	5	1	90.0	1	0	1	Gas TSO
Netherlands	5	5	1	79.0	1	0	1	Gas TSO
Sweden	5	5	1		1	1	2	Gas TSO
UK	5	5	1	62.0	1	1	2	Gas TSO
Denmark	788	1000	0.788	95.8	1	1	2	Rail
Finland	636	1000	0.636	100	1	1	2	Rail
Netherlands	809	1000	0.809	75	1	1	2	Rail
Portugal	707	1000	0.707	99.5	1	1	2	Rail
Slovakia	700	1000	0.7	98.5	1	1	2	Rail
Sweden	825	1000	0.825	50	1	1	2	Rail
UK	827	1000	0.827	0	1	1	2	Rail
Czech	185	485	0.381	49.0	1	0	1	Telecom
Denmark	339	485	0.699	58.0	1	0	1	Telecom



Ireland	297	485	0.612	60.0	1	0	1	Telecom
Netherlands	357	485	0.736	57.5	1	0	1	Telecom
Spain	261	485	0.538	65.5	1	0	1	Telecom
UK	268	485	0.553	42.0	1	0	1	Telecom

## Normalised Score

XLSTAT 2007.7.02 - Two-sample t-test and z-test - on 21/09/2010 at 16:55:33

Sample 1: Workbook = 20100715 Article Consolidated.xls / Sheet = Pooled Data and Analysis 1 / Range = 'Pooled Data and Analysis 1'!\$D\$4:\$D\$45 / 42 rows and 1 column

Sample 2: Workbook = 20100715 Article Consolidated.xls / Sheet = Pooled Data and Analysis 1 / Range = 'Pooled Data and Analysis 1'!\$D\$46:\$D\$79 / 34 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

Summary statistics:

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	42	0	42	0.200	1.000	0.644	0.192
Var1(2)	34	0	34	0.200	1.000	0.753	0.266

z-test for two independent samples / Two-tailed test:

90% confidence interval on the difference between the means:

] -0.199 , -0.020 [

Difference	-0.110
z (Observed value)	-2.017
z (Critical value)	1.645
p-value (Two-tailed)	0.044
Alpha	0.1

Test interpretation:

H0: The difference between the means is not significantly different from 0.

Ha: The difference between the means is significantly different from 0.

As the computed p-value is lower than the significance level  $\alpha=0.1$ , one should reject the null hypothesis H0, and accept the alternative hypothesis Ha.

The risk to reject the null hypothesis H0 while it is true is lower than 4.37%.

## Market Share Incumbent

XLSTAT 2007.7.02 - Two-sample t-test and z-test - on 21/09/2010 at 16:54:24

Sample 1: Workbook = 20100715 Article Consolidated.xls / Sheet = Pooled Data and Analysis 1 / Range = 'Pooled Data and Analysis 1'!\$E\$4:\$E\$45 / 42 rows and 1 column

Sample 2: Workbook = 20100715 Article Consolidated.xls / Sheet = Pooled Data and Analysis 1 / Range = 'Pooled Data and Analysis 1'!\$E\$46:\$E\$79 / 34 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

Summary statistics:

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	42	3	39	47.500	100.000	79.195	19.689
Var1(2)	34	4	30	0.000	100.000	70.023	25.286

z-test for two independent samples / Two-tailed test:

90% confidence interval on the difference between the means:

] -0.024 , 18.367 [

Difference	9.172
z (Observed value)	1.641
z (Critical value)	1.645
p-value (Two-tailed)	0.101
Alpha	0.1

Test interpretation:

H0: The difference between the means is not significantly different from 0.

Ha: The difference between the means is significantly different from 0.

As the computed p-value is greater than the significance level  $\alpha=0.1$ , one should accept the null hypothesis H0.

The risk to reject the null hypothesis H0 while it is true is 10.09%.

## Pooled data and analysis 2

Country	Access Score	Max. Score	Normalised Score	Market Share	State Ownership	Vertical Integration	Total	Sector
Austria	4	5	0.8	50.0	0	0	0	Electric TSO
Cyprus	2	5	0.4	100.0	0	0	0	Electric TSO
Estonia	5	5	1	94.7	0	0	0	Electric TSO
France	5	5	1	96.0	0	0	0	Electric TSO
Greece	3	5	0.6	98.7	0	0	0	Electric TSO
Hungary	2	5	0.4	90.0	0	0	0	Electric TSO
Ireland	5	5	1		0	0	0	Electric TSO
Luxembourg	3	5	0.6	95.0	0	0	0	Electric TSO
Poland	4	5	0.8	49.1	0	0	0	Electric TSO
Slovenia	5	5	1	81.0	0	0	0	Electric TSO
Austria	2	5	0.4		0	0	0	Gas TSO
France	5	5	1	93.0	0	0	0	Gas TSO
Ireland	1	5	0.2	97.0	0	0	0	Gas TSO
Italy	4	5	0.8	55.0	0	0	0	Gas TSO
Luxembourg	2	5	0.4	95.7	0	0	0	Gas TSO
Poland	4	5	0.8	72.3	0	0	0	Gas TSO
Austria	788	1000	0.788	96.2	0	0	0	Rail
Belgium	649	1000	0.649		0	0	0	Rail
Czech Republic	738	1000	0.738	100.0	0	0	0	Rail
Estonia	691	1000	0.691	60.0	0	0	0	Rail
France	574	1000	0.574	99.8	0	0	0	Rail
Germany	826	1000	0.826	84.3	0	0	0	Rail
Greece	559	1000	0.559	100.0	0	0	0	Rail
Hungary	637	1000	0.637	97.5	0	0	0	Rail
Ireland	333	1000	0.333	100.0	0	0	0	Rail
Latvia	650	1000	0.65	95.0	0	0	0	Rail
Lithuania	684	1000	0.684	100.0	0	0	0	Rail
Poland	739	1000	0.739	83.0	0	0	0	Rail
Slovenia	665	1000	0.665	100.0	0	0	0	Rail
Spain	630	1000	0.63	99.5	0	0	0	Rail
Austria	280	485	0.577	51.0	0	0	0	Telecom
Belgium	254	485	0.524	58.5	0	0	0	Telecom
Finland	298	485	0.614	65.0	0	0	0	Telecom
France	320	485	0.660	57.5	0	0	0	Telecom
Germany	280	485	0.578	48.5	0	0	0	Telecom

Greece	245	485	0.505	66.5	0	0	0	Telecom
Hungary	280	485	0.577	62.5	0	0	0	Telecom
Poland	180	485	0.371	62.5	0	0	0	Telecom
Portugal	286	485	0.590	54.0	0	0	0	Telecom
Slovenia	251	485	0.517	71.0	0	0	0	Telecom
Sweden	265	485	0.546	47.5	0	0	0	Telecom
Italy	297	485	0.612	61.5	0	0	0	Telecom
Czech Republic	3	5	0.6	97.7	1	0	1	Electric TSO
Denmark	5	5	1		1	0	1	Electric TSO
Finland	5	5	1		1	0	1	Electric TSO
Italy	5	5	1	58.0	1	0	1	Electric TSO
Netherlands	5	5	1	80.0	1	0	1	Electric TSO
Portugal	5	5	1	99.3	1	0	1	Electric TSO
Sweden	5	5	1	43.0	1	0	1	Electric TSO
Denmark	5	5	1	90.0	1	0	1	Gas TSO
Netherlands	5	5	1	79.0	1	0	1	Gas TSO
Czech	185	485	0.381	49.0	1	0	1	Telecom
Denmark	339	485	0.699	58.0	1	0	1	Telecom
Ireland	297	485	0.612	60.0	1	0	1	Telecom
Netherlands	357	485	0.736	57.5	1	0	1	Telecom
Spain	261	485	0.538	65.5	1	0	1	Telecom
UK	268	485	0.553	42.0	1	0	1	Telecom

#### Regulatory Score

Average Sample 1

Average Sample 2

Average

0.643719548

0.807972509

Size

42

15

## Normalised Score

XLSTAT 2007.7.02 - Two-sample t-test and z-test - on 14/07/2010 at 13:42:03

Sample 1: Workbook = 20100714 Article Consolidated.xls / Sheet = Pooled Data and Analysis 2 / Range = 'Pooled Data and Analysis 2'!\$D\$4:\$D\$45 / 42 rows and 1 column

Sample 2: Workbook = 20100714 Article Consolidated.xls / Sheet = Pooled Data and Analysis 2 / Range = 'Pooled Data and Analysis 2'!\$D\$46:\$D\$60 / 15 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

Summary statistics:

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	42	0	42	0.200	1.000	0.644	0.192
Var1(2)	15	0	15	0.381	1.000	0.808	0.226

z-test for two independent samples / Two-tailed test:

90% confidence interval on the difference between the means:

] -0.272 , -0.057 [

Difference	-0.164
z (Observed value)	-2.513
z (Critical value)	1.645
p-value (Two-tailed)	0.012
Alpha	0.1

Test interpretation:

H0: The difference between the means is not significantly different from 0.

Ha: The difference between the means is significantly different from 0.

As the computed p-value is lower than the significance level  $\alpha=0.1$ , one should reject the null hypothesis H0, and accept the alternative hypothesis Ha.

The risk to reject the null hypothesis H0 while it is true is lower than 1.20%.

## Incumbent Market Share

XLSTAT 2007.7.02 - Two-sample t-test and z-test - on 14/07/2010 at 13:43:07

Sample 1: Workbook = 20100714 Article Consolidated.xls / Sheet = Pooled Data and Analysis 2 / Range = 'Pooled Data and Analysis 2'!\$E\$4:\$E\$45 / 42 rows and 1 column

Sample 2: Workbook = 20100714 Article Consolidated.xls / Sheet = Pooled Data and Analysis 2 / Range = 'Pooled Data and Analysis 2'!\$E\$46:\$E\$60 / 15 rows and 1 column

Hypothesized difference (D): 0

Significance level (%): 10

Summary statistics:

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Var1	42	3	39	47.500	100.000	79.195	19.689
Var1(2)	15	2	13	42.000	99.333	67.615	19.688

z-test for two independent samples / Two-tailed test:

90% confidence interval on the difference between the means:

] 1.208, 21.951 [

Difference	11.579
z (Observed value)	1.836
z (Critical value)	1.645
p-value (Two-tailed)	0.066
Alpha	0.1

Test interpretation:

H0: The difference between the means is not significantly different from 0.

Ha: The difference between the means is significantly different from 0.

As the computed p-value is lower than the significance level  $\alpha=0.1$ , one should reject the null hypothesis H0, and accept the alternative hypothesis Ha.

The risk to reject the null hypothesis H0 while it is true is lower than 6.63%.