

REGULATORY SCORECARD 2008

Report on the relative effectiveness of the regulatory frameworks for electronic communications in

Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, the United Kingdom and Turkey

EXECUTIVE SUMMARY

This report compares the regulatory environment in 18 EU Member States, Norway and Turkey in the electronic communications sector and its effectiveness in promoting the objectives of the EU regulatory framework. The scope of the survey includes the wider institutional and legislative environment affecting the sector as well as the application of regulation by national telecoms regulators.

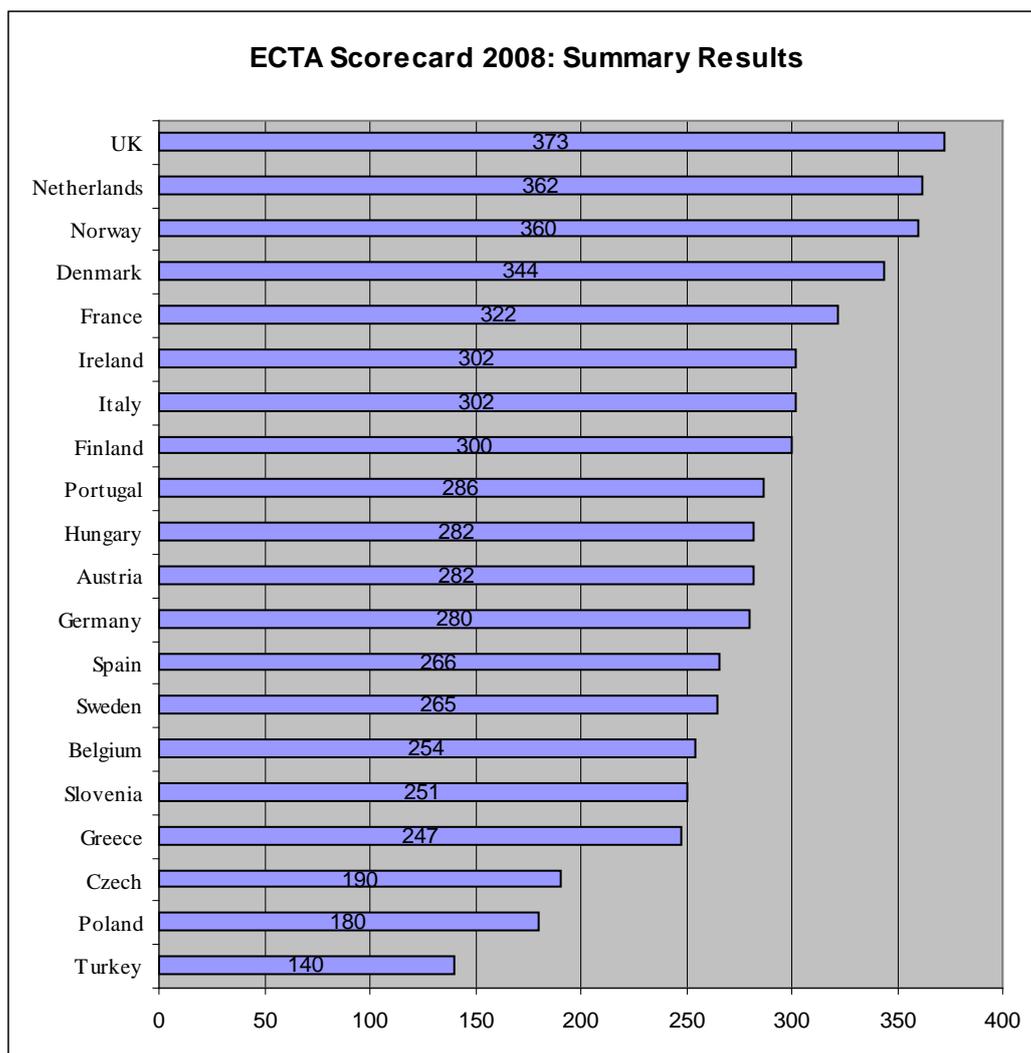
On the basis of this study, a comparative analysis has been conducted to identify areas of best practice and weakness in the application of the current legislative framework and to assess the implications of variations in regulatory approach on consumer welfare, competition and investment. Finally, the authors have drawn conclusions and made recommendations on actions that could be taken through national implementation measures and through the revision of the EU-wide regulatory framework to improve outcomes for Europe's citizens and businesses.

The Member States surveyed in this report are Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Turkey and the UK.

The Scorecard is based on responses submitted by National Regulatory Authorities ("NRAs") and ECTA members to a detailed questionnaire consisting of 104 questions grouped in five sections: (A) overall institutional environment, (B) key enablers for market entry and network roll out, (C) the NRA's regulatory processes, (D) application of regulation by the NRA, and (E) regulatory and market outcomes. The questionnaire was compiled following consultation with NRAs, ECTA members, the European Commission, and the European Regulators Group (ERG) and takes account of the requirements and recommendations contained in the EU regulatory framework, the World Trade Organisation (WTO) reference paper on telecommunications, and European Commission and ERG Guidelines.

On the basis of consolidated responses received for each country from the various stakeholders, a comparative quantitative analysis was carried out, resulting in an overall score for the effectiveness of the regulatory environment in each country. The overall results of the Scorecard are shown in Figure 1.

Figure 1: Overall Results of Scorecard



Specific country rankings can lie within the bounds of error, particularly where differences are small. However, the Table shows that countries can be grouped broadly into four categories. Leading countries which perform well across all sections include the UK, the Netherlands, Norway, Denmark and France. Countries which are generally strong but may have weaker performances in specific areas include Ireland, Finland, Austria, Italy, Germany, Hungary and Portugal. Countries with more variable performance include Sweden, Spain, Belgium, Slovenia and Greece. Finally, there are certain countries which have weak performances in most sections covered by the report, namely the Czech Republic, Poland and Turkey. The report also shows that these countries have specific strengths or improved compared to last year's report.

A comparative analysis with last year should take account of the methodological changes that were made as described in the report. Overall, however, one can observe that the stronger and weaker performing countries remain largely the same over the years. Interesting changes can nonetheless be observed, some of which may result from new criteria introduced in the methodology (such as the increased focus on spectrum and forward looking NGN policies) whilst changes in regulatory policy and

implementation have affected the results for other countries. Finland has for example benefited in this Scorecard partly as a result of the increased focus on frequency policy and improvements to the institutional framework. Ireland has benefited from more efficient processes whilst both Ireland and Belgium benefit from relatively progressive policy proposals concerning next generation networks. The absence of detailed operational provisions to enforce regulation, which received increased attention in this Scorecard, has contributed to the lower relative positioning of Sweden. Meanwhile in Spain, a deterioration in the competitive conditions in the broadband market and deficiencies in next generation access regulation have contributed to a lower ranking. Whilst its relative ranking has not improved, tangible progress seems to have been made in Greece since the 2007 Scorecard especially on implementation of local loop unbundling.

It is also interesting to note that certain countries have very different scores for different sections which confirms that a granular analysis must be made of the Report. Germany and Belgium have particularly low scores on the institutional environment as a result of continuing legislative weaknesses extending in some cases beyond the telecoms sector, whereas they score comparatively well in other sections (for example Germany is one of the leading countries for NRA processes). Conversely Ireland performs well in sections concerning the legislative environment and regulatory policy but is generally weaker on the resulting regulatory and market outcomes.

Finally, the weakness of certain countries also appears to be attributable to weaker overall economic conditions or later implementation. New Member States such as Hungary, Slovenia and Poland remain generally weaker in terms of outcomes. However, given that their overall legislative and institutional environment is generally well-established and pro-competitive policies are being introduced, improvement can be expected. The result for Turkey should therefore also be put in perspective. Although it lags behind compared to the other surveyed countries, it is clear that a substantial amount of work has been done to bring the regulatory environment into line with European benchmarks.

To illustrate this contrast Figures 2 and 3 show the results for “Institutional” questions, Sections A and B1 of the Scorecard and the remaining “Regulatory” questions, B2 to E4, respectively. In general, Institutional Questions lie outside the control of NRA, whilst Regulatory questions are generally (although not always) within the remit of the NRA.

Figure 2: Institutional results (section A, B1)

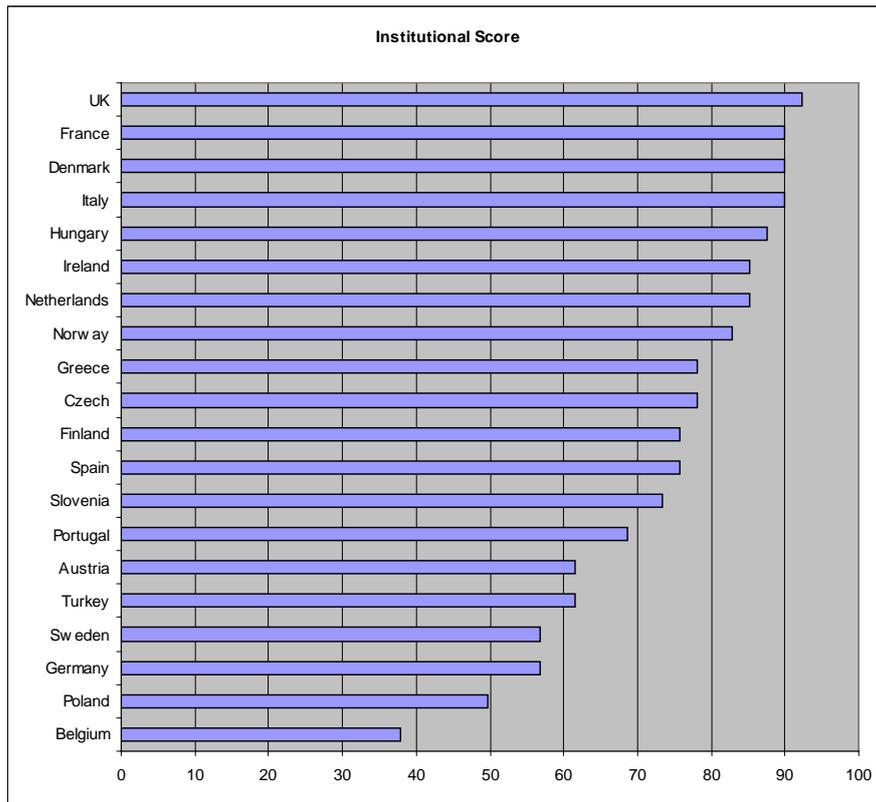
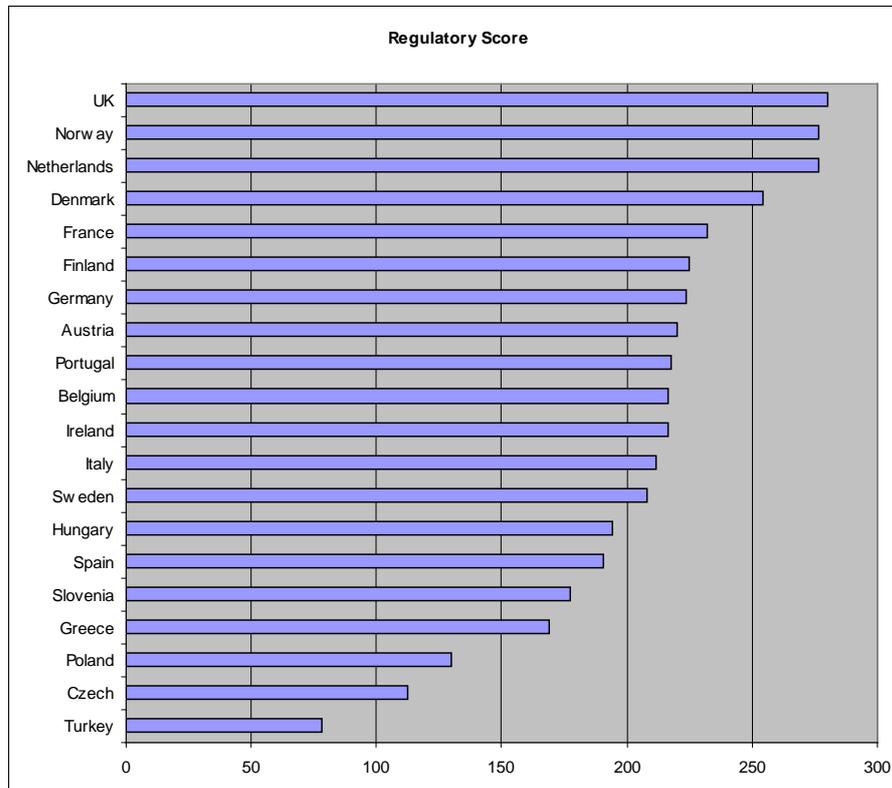


Figure 3: Regulatory results (Section B2 through E4)



Qualitative Findings

The institutional framework as well as the application of regulation varies significantly across Europe. For example some NRA have no power to impose penalties whilst others can impose fines ranging from 1% to 10% of turnover. The average timeframe for appeals processes ranges from less than six months to two years. Even amongst those few regulators with powers to apply some form of functional or structural separation, the scope of these powers differs.

As regards the application of regulation by NRAs, divergence remains both on timescales for concluding market reviews and disputes and in regulatory approaches and effectiveness in addressing significant market power. The regulatory approach to existing technologies such as local loop unbundling appears to have become more consistent over successive Scorecards. However, it is notable that outcomes differ with unbundling prices ranging from €103 in Netherlands to approx. €200¹ in Ireland and the take-up varies widely from less than 5% of incumbent lines in Belgium, Hungary, Ireland and Poland to more than 35% in the UK, France, Germany and Sweden.

Significantly for the future, the Scorecard also shows a divergence of regulatory approaches in the treatment of ‘next generation’ FTTx and Ethernet technologies amongst those regulators which have examined these issues, which may translate into diverging outcomes in subsequent years. In particular, decisions to effectively exclude forms of NGA from regulation in Germany and Spain and delays in addressing these issues in some other markets may lead to a weakening of competition assessed by future Scorecards compared with present outcomes. Application of ERG best practice by NRAs to address discriminatory practices also varies, although in successive years this may converge. Key areas of divergence in the legislative framework and regulatory practice are described as follows.

- NRAs’ power to enforce rules under the EU telecoms framework remains limited in several significant respects. No NRA has yet been granted full powers to apply the remedy of functional separation, even in countries such as Sweden, Italy and Poland, where such measures are under active consideration by the NRA. NRAs’ powers to impose fines are also generally more restricted than those granted to the Commission as a competition enforcer.
- Independence of NRAs is not always fully guaranteed. In a number of countries, NRAs powers are restricted, subject to general guidance from Ministries, or the tenure of Management is undermined. These issues are of particular concern in Poland, Finland, Germany, Austria and Turkey. Governments also continue to retain significant ownership interests in incumbents or other telecoms operators in Belgium, Germany, Norway, Poland, Portugal, Slovenia, Sweden and Turkey.
- Appeals remain a significant source of legal uncertainty in some countries particularly where numerous challenges combine with lengthy court processes to delay the outcome. This is of particular concern in Belgium, Sweden and Germany.

¹ These are the annualised prices based on a two year subscription. Connection charges are depreciated over two years. Thus the calculation is (connection charge x 0.5) + (monthly rental x 12).

- Rights of way regimes remain largely dictated by local or regional authorities and very few legislators have introduced procedures which allow one-stop shop authorizations. Charges are high or variable in many cases and delays are also of concern across a number of countries including in Austria, Greece, Poland, Spain and Sweden. General availability of access to ducts and sewers is also limited except in Portugal and certain regions of France.
- Number portability for mobile and fixed services is becoming increasingly effective. However, virtually no European country would meet the proposed requirement for 1 day porting under the Telecoms Framework proposals. Only in Germany and Belgium is fixed portability achieved in two days or less, whilst the shortest mobile portability timeframe is achieved in Ireland at less than one day. In most other cases timeframes exceed 5 days and in Poland fixed and mobile porting take 45 days. Lack of flexibility in the numbering arrangements for VoIP also remains a problem in many countries.
- Frequency policy remains generally conservative in most EU Member States, although recent initiatives at the EU level are progressively being implemented. The Nordic countries have made the most progress in liberalizing frequency bands, progressing the digital switchover and ensuring technological neutrality.
- Full compliance with the four month legal deadline for resolving access disputes has been achieved in only four countries (France, Germany, Hungary and Sweden).
- NGA developments have generally not yet been reflected in NRAs' market analyses, with some important exceptions. The Netherlands has made the most progress in defining a technological neutral framework which addresses NGA issues. Relatively progressive regimes have also been proposed in Belgium, Ireland and the UK. Conversely, Spain and Germany have put in place Frameworks which have the effect of excluding certain forms of next generation access network from regulation, whilst many other countries have not yet examined this issue. Progress is expected in the next Scorecard as a number of NRAs complete their analyses in the course of 2009.
- Measures to address discrimination have been applied in accordance with recent ERG guidelines in the UK, France and Denmark, but some provisions remain absent in countries such as Sweden, Poland, Czech Republic and Germany. Sweden and Poland are currently examining whether to address discrimination issues in the context of functional separation.
- Accounting separation regimes in many countries suffer from lack of transparent and timely publication of information. The UK and Ireland set the benchmark in this regard.
- A review of Section E, which examines primarily the existing status of competition and consumer outcomes affected by previous actions taken by the regulator, shows that :
 - (i) UK, Sweden, Norway and the Netherlands benefit from the most competitive environments for fixed voice services generally, whilst France, Germany, Italy, Portugal and Greece have made particular progress in achieving voice competition through local loop

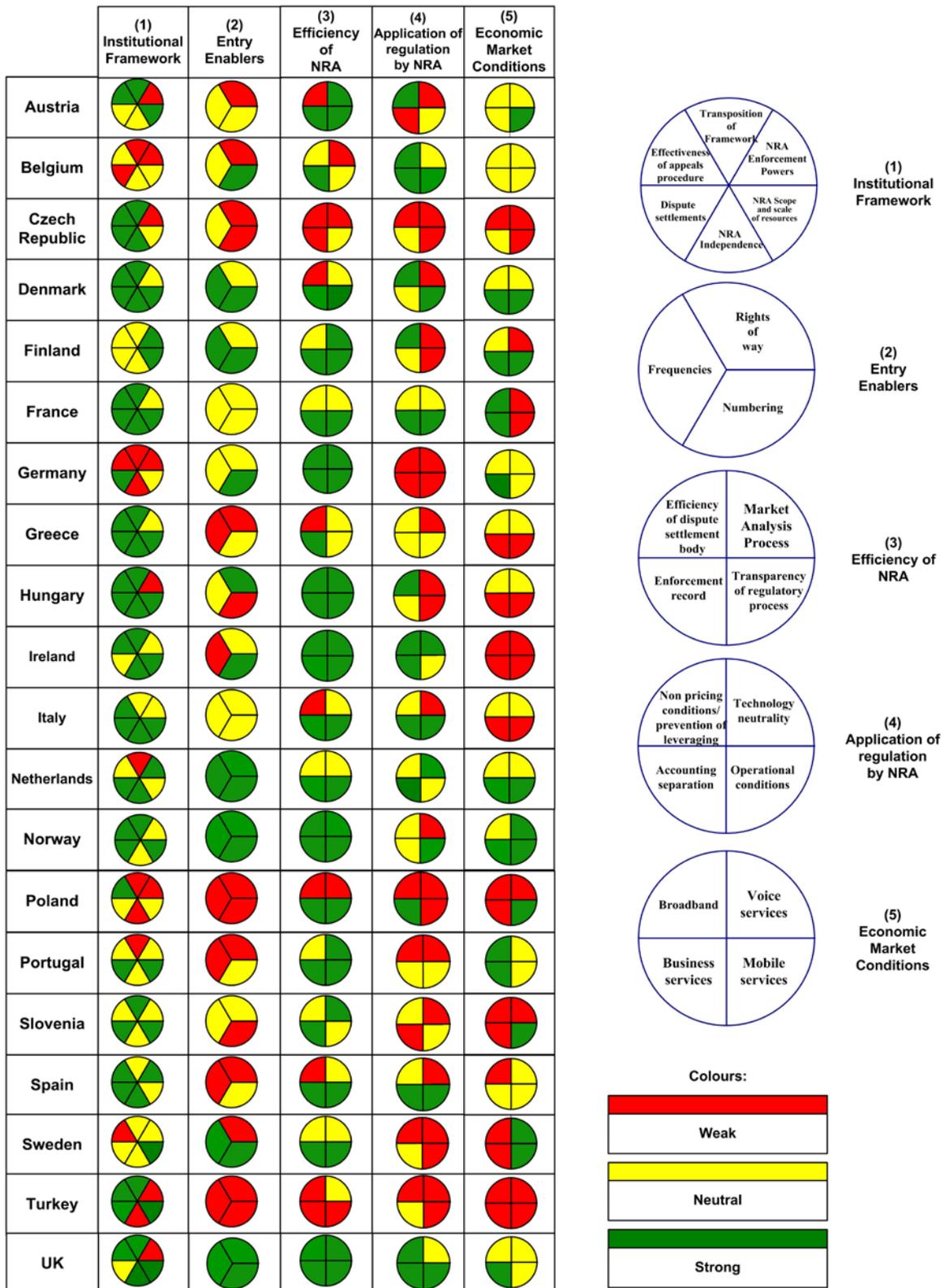
unbundling. Meanwhile, competition in fixed voice remains limited and prices are high in the Czech Republic and Finland although in Finland low mobile prices may partly compensate.

- (ii) Scandinavian countries perform most strongly in mobile markets. Highly performing countries in mobile markets also generally have the most liberal frequency principles and benefit from the presence of real MVNOs.
- (iii) Regimes for business service competition based on traditional interfaces are most advanced in the UK, Germany, Netherlands, France, Denmark, Portugal and Norway with particular weaknesses in Slovenia, Sweden, Poland, Ireland, Hungary and Greece. However, when prospects for next generation competition via modern Ethernet interfaces are considered, very few countries perform well. Effective availability of Ethernet-based services is currently limited to Belgium, Denmark, France, UK and Norway.
- (iv) France and Portugal perform most strongly on a range of broadband measures assessing existing competitive and consumer outcomes, whilst when specifically considering current levels of infrastructure-based competition (including cable and local loop unbundling) and retail outcomes the strongest performers are Portugal, UK and the Netherlands. Competitive weaknesses in the broadband environment are apparent in Spain and Ireland, and new Member States such as Poland and the Czech Republic remain behind on a range of broadband measures. Greece has improved its position since 2007 through more effective implementation of local loop unbundling.

A section by section analysis of the Scorecard results is shown in figure 4 overleaf whilst more granular question by question analysis is contained at the back of the report.

Figure 4: Overview of Strengths and Weaknesses of the Surveyed Countries

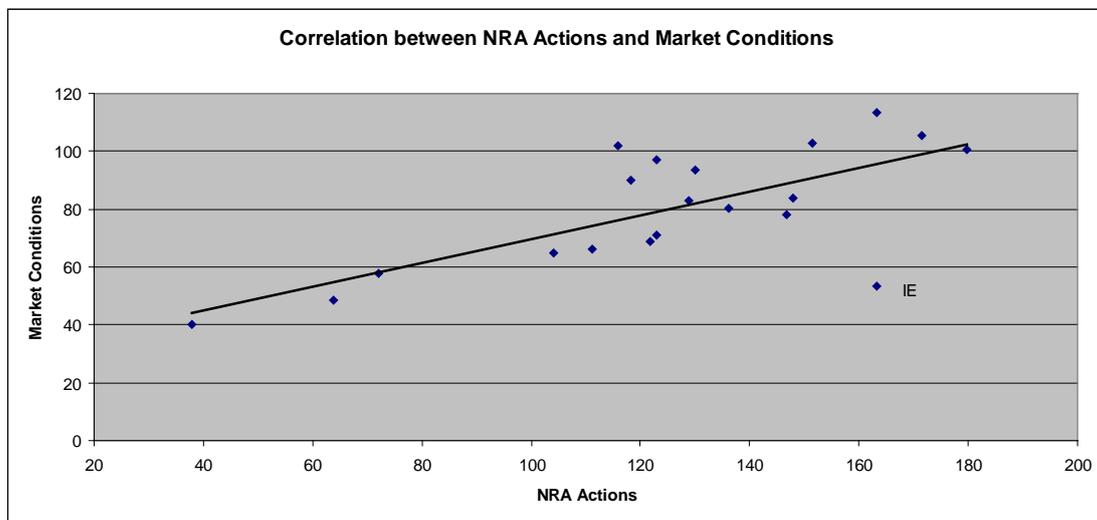
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Quantitative findings

To assess what impact, if any, divergent regulatory approaches may have on competitive and consumer outcomes in the market, we have examined the relationship between the actions and policies of the NRAs (as reflected in sections B2-D4 inclusive) and the resulting market conditions assessed in section E which include measures of the presence of parallel infrastructures and access-based competition, together with resulting retail market shares and prices in four key areas: narrowband access, mobile, business services and broadband access. Overall we find a strong positive correlation between the two: countries where the regulator is more active tend to achieve broadly better results in terms of competition and consumer welfare. The scores for these two sets of questions are shown in Figure 4.

Figure 5: Scores for NRA Actions and Market Conditions



Broadband continues to be an area of intense public policy interest due to the contribution it makes to the European economy and the social benefit it delivers. We have examined the relationship between the overall measure of regulatory effectiveness in the broadband area (Section E4 of the Scorecard) against the key consumer outcome of penetration. The analysis shows a clear positive relation: those countries which score highly across a range of broadband competitive measures included in the Scorecard also enjoy higher broadband penetration rates (correlation coefficient = 0.50).

We have also more specifically examined the correlation between the penetration (per 100 population) and competitive mechanisms, including the incumbent's share of the market, LLU and cable penetration (see table below)². We find that, of these, the penetration of LLU is most strongly correlated (0.63) with the overall penetration of broadband in the market, LLU is also associated with higher overall retail broadband penetration rates for the incumbent (0.44). Cable take-up has a less pronounced relationship than LLU with overall penetration (0.40). A similar analysis between the

² Data used for these calculations has been obtained from COCOM report 08-4 "Broadband access in the EU: situation at 1 July 2008". To ensure comparability of data only EU countries have been included in the analysis.

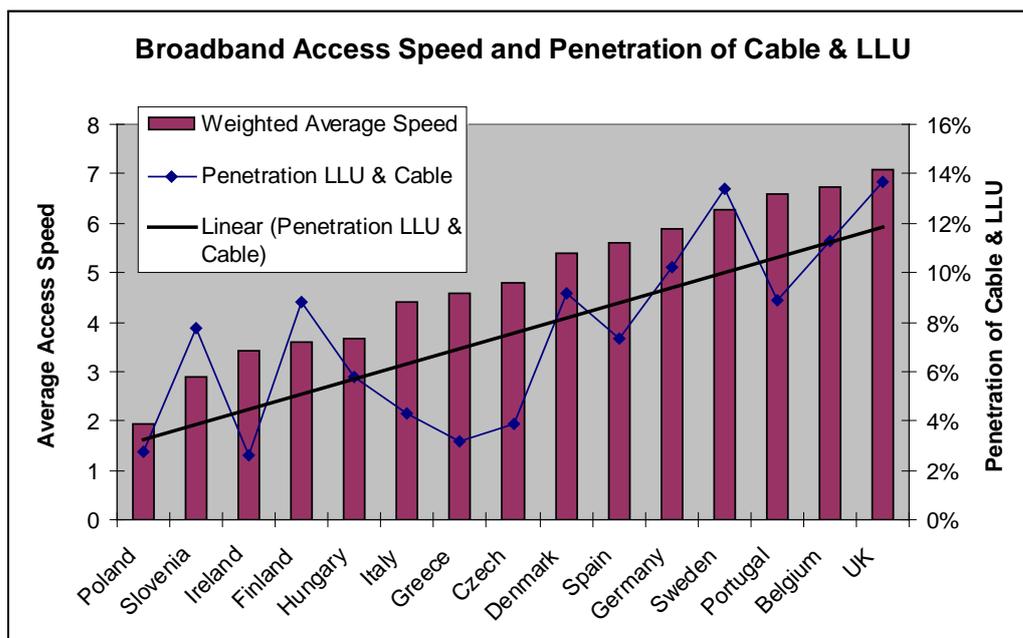
market share of access mechanisms shows that the incumbent's share is weakly and negatively correlated with overall penetration. LLU remains positively, though less strongly correlated, and share of cable has no correlation with penetration.

Correlation Coefficients between penetration rate of competitive broadband access mechanisms and total penetration		Correlation coefficients between penetration rates of competitive access mechanisms and incumbent's penetration
LLU	0.63	0.44
Cable	0.40	0.04

These correlations indicate that increased effectiveness in competitive forms of access which allow competitors to innovate including unbundling may contribute to an increase in the overall size of the market. In tandem, effective access mechanisms are compatible with increased take-up of the incumbent's own services. This may result from the overall growth effect from unbundling and from the direct stimulus provided to the incumbent to compete more vigorously with those renting access lines.

We have also examined what may be the main drivers of higher access speeds and found that there is a strong and highly statistically significant (at 1%) relationship (correlation coefficient = 0.56) between the combined penetration of competitive access mechanisms which allow innovation (cable and LLU) and average access speeds. We deduce from this that these access mechanisms may be complementary in driving service innovation. Neither cable or other parallel access mechanisms nor LLU penetration alone achieve such a significant result. There is no significant relationship between competitive broadband wireless penetrations or incumbent market shares and access speeds.

Figure 6: Broadband Access Speed and Penetration of Competitive Access Methods



Developments in building next generation access networks are at too early a stage in most European countries to assess quantitatively any regulatory effects. Even Sweden

which has the highest number of FTTH connections only has about 600,000 lines³. However, qualitatively we see that FTTx deployment and announcements have often followed an increase in competitive intensity from a combination of LLU and cable (e.g. NL, France, UK, Germany, Spain). We can also conclude from the data available that there is no significant correlation between effective LLU and parallel infrastructure penetration whether cable or FTTH, suggesting that both access and parallel infrastructures may be available in tandem.

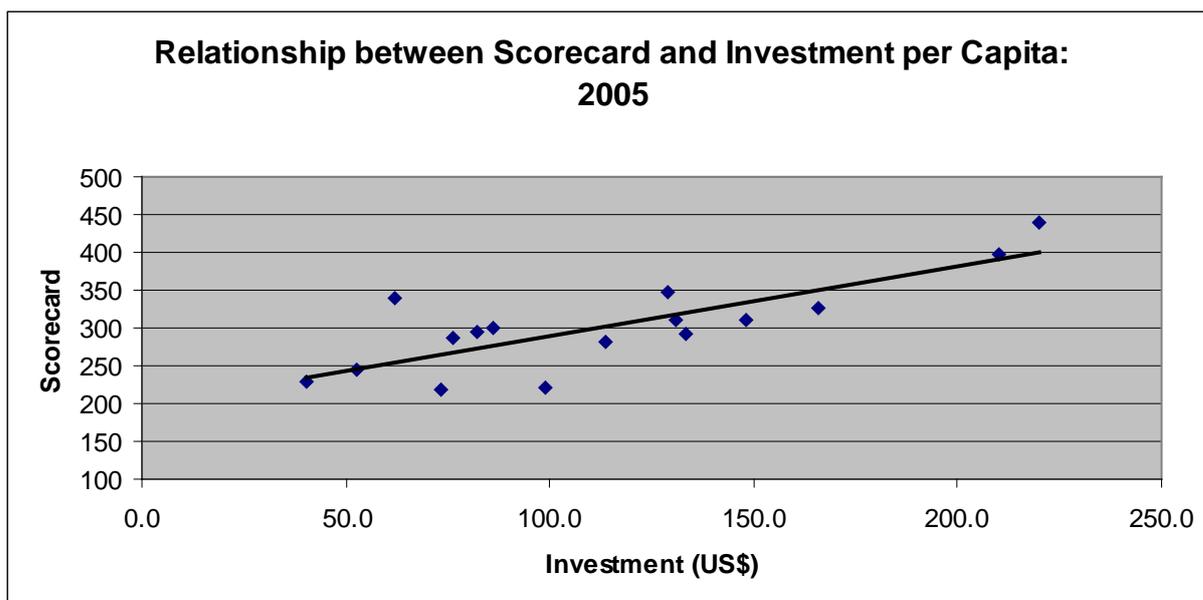
It may be tentatively concluded from these and other results found by analysing data reported in the Scorecard together with July 2008 broadband data reported by the European Commission and OECD that infrastructure and effective access-based competition may complement each other in stimulating high broadband take-up rates, and take-up of higher speed services – both of which are necessary to justify and reduce risks in investments in access upgrades such as FTTH. The positive relationship between incumbent retail DSL lines and LLU also suggests that the benefits of access regulation through increasing overall take-up of broadband may also enable the incumbent to increase its own take-up rates. Although data is not yet available to assess the effects quantitatively, one might also postulate, following similar logic to unbundling of copper loops, that the take-up of fibre access and higher speed services available over it could be stimulated through unbundling and that such expansion and competition could also facilitate increased demand for the incumbents own fibre services.

These results are consistent with economic theory which suggests that markets with greater competition result in lower prices and increased innovation driving consumer demand. Conversely in more concentrated and less competitive markets prices may be set above the competitive level and innovation reduced thereby restricting demand.

In addition, whilst further investment data have not yet been published which would allow us to assess any link between these Scorecard results and communications investment, previous Scorecards have consistently shown a strong and statistically significant relationship between effective regulation as measured by the Scorecard and investment levels in different European countries in the telecoms sector. For example in the leading country for the Scorecard, the UK, investment levels per capita in the last reported data from the OECD for 2005 were five times higher than those in Poland.

Figure 7: Scorecard and Investment 2005

³ Source: COCOM.



In light of the above conclusions, the authors consider that the following recommendations should be made.

Telecoms Framework Review Recommendations to Council and Parliament

- Achieving **consistently effective pro-competitive regulation** should be the main objective of the Review of the Telecoms Framework. **Pro-active and fully empowered regulators** are key to achieving results for consumers and multi-national businesses.
- **Parallel infrastructure should be pursued, where efficient, alongside open networks and effective access regulation** to create market conditions which drive demand and innovation to justify investments in high speed fibre access networks.
- To ensure that access is effective, access pricing should allow a fair return for the investor, but not have the effect of discriminating in favour of the dominant firm so as to give it competitive advantage (eg risk sharing).
- NRAs should be fully and equally empowered under the Framework to enforce competition rules. This should include both an explicit and workable power to mandate **functional separation** under Article 13a of the Access Directive and **credible sanctioning measures** under Article 10 of the Authorisation Directive.
- **Technologically neutral regulation of local access networks should be assured** wherever there is dominance in local access. NRAs should also retain **explicit powers to seek information on NGA deployments** through Article 5 Framework Directive.
- **Independence of NRAs should be guaranteed** through amendments to Article 3 Framework Directive including measures to assure the tenure of Heads and to prohibit Ministerial guidance on issues concerning economic regulation.

- **Appeals processes should be ‘timely’. Structures should also be set-up to improve cooperation between national courts.**
- The revised Telecoms Framework should ensure effective collaboration amongst NRAs and with the Commission in issuing guidance and reviewing economic regulation applied by NRAs. **An efficient mechanism to ensure consistent remedies are applied in similar circumstances must be found.**

Recommendations to national Ministries

- Member States should implement, at national level, the above Recommendations in relation to **NRA empowerment and independence** as best practice even if the final Framework does not explicitly require them. Powers should explicitly include the possibility to mandate functional separation, apply dissuasive fines up to 5% turnover, periodic penalty payments and the possibility to suspend launch of non-compliant services or prices.
- Member States should establish a **‘one-stop-shop’ mechanism for authorising rights of way** and addressing disputes concerning rights of way. Reasonable charges and timescales should be established centrally.
- Member States should aim to **streamline appeals proceedings through implementing fast-track measures and/or specialised tribunals** with deadlines for handling telecoms matters. Third parties should be able to intervene in the process.
- Member States should **divest shareholdings in incumbents** or other telecoms operators.
- Member States should empower NRAs to issue interim decisions for disputes
- Member States should ensure that NRAs may set wages and incentive schemes independently from civil service benchmarks if these are insufficient to compete with private sector salaries.
- Member States should include spectrum activities within the remit of NRAs.

Recommendations to NRAs

- NRAs should conduct further reviews of markets 4 (physical access) and 5 (wholesale broadband access) where necessary to ensure that they include FTTH and FTTC technologies within the market and establish clear and pro-competitive expectations and rules concerning fibre-based remedies. NRAs should also set in advance conditions for migration to NGA including notice periods and compensation applicable for the closure of MDF sites. The availability of naked bitstream should be ensured to facilitate competition in double play including VoB. Further Scorecards will also assess the availability of triple-play capable bitstream.
- NRAs should ensure, through further review of market 6 (terminating segments of leased lines) if necessary, the availability on reasonable terms of key forward-looking inputs for competitive business service markets – in particular wholesale Ethernet services.

- NRAs should ensure compliance with ERG best practice on SLAs (including varied SLAs to address business needs), KPIs and bulk migration processes for key wholesale products. NRAs should examine other mechanisms to address non-price discrimination and prevent foreclosure including the use of the same systems (equivalence of inputs) and measures to prevent winback.
- Particularly in cases where take-up is low compared with EU benchmarks, NRAs should review pricing of essential SMP wholesale products such as LLU and associated operational conditions.
- Particularly where reported wholesale prices show a relatively low or negative margin when compared with reported relevant retail prices, NRAs should assess whether a margin squeeze is present and take necessary action to remedy any squeeze identified
- NRAs should ensure the timely publication of regulatory accounts containing sufficient public data to allow independent verification that products are cost-oriented and no anti-competitive cross-subsidies have occurred.
- NRAs should review rules on VoIP to allow use of geographic numbers for nationwide (or wider) nomadic use and to ensure number portability is mandated.
- NRAs should establish a process to review pricing and migration arrangements for IP Interconnection. ERG best practice guidance will be useful in this respect.
- NRAs should actively pursue enforcement action when SMP rules are breached including applying penalties and securing compliance within a reasonable timeframe.
- NRAs should review number portability processes to cost-effectively meet reduced timeframes expected to be included in the EU Telecoms Framework. Action should also be taken by NRAs where wholesale portability costs are high and portability levels are below EU benchmarks.
- NRAs should review timescales for market analyses and resolution of disputes. Ideally market analyses should be completed within 1 year whilst dispute resolution should respect the EU 4 month deadline. There should be no mandatory timeframe prior to submitting a dispute.
- NRAs should improve transparency where possible by ensuring that requests for confidentiality are not granted automatically, but subject to more stringent review.
- NRAs should publish a forward-looking action plan following consultation with stakeholders.