



REGULATORY SCORECARD 2009

Report on the relative effectiveness

of the regulatory frameworks for electronic communications in

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



SPC Network

EXECUTIVE SUMMARY

This report compares the regulatory environment of the electronic communications sector in 22 countries (19 EU Member States, Norway, Switzerland and Turkey) 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 Regulatory Authorities (“NRAs”) and the market outcomes in key wholesale access and retail markets.

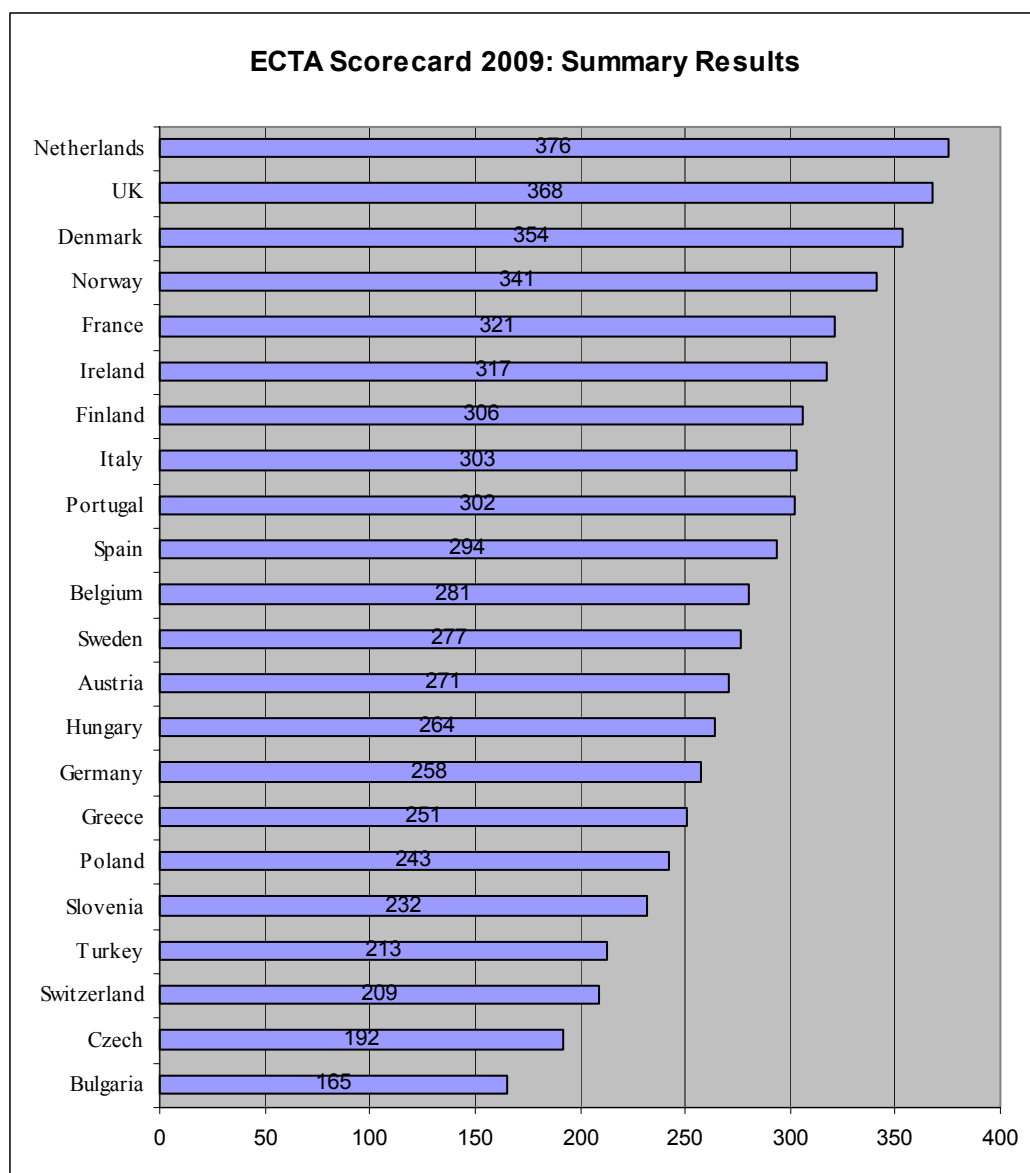
On the basis of this study, a comparative analysis has been conducted to identify areas of best practice and weaknesses in the application of the current legislative framework and to assess the implications of variations in regulatory approach on consumer welfare, competition and investment. Finally,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

The EU Member States surveyed in this report are Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, Slovenia, Spain, Sweden, and the UK. In addition, three non-EU countries are also covered: Norway, Switzerland and Turkey.

The Scorecard is based on responses submitted by NRAs and ECTA members to a detailed questionnaire consisting of 118 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 and methodology were compiled following consultations with NRAs, ECTA members and the European Regulators Group (ERG) and take 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 conducted, 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 Netherlands, the UK, Denmark, Norway, France, and Ireland. These are the same six leading countries as in the last Scorecard. With the exception of Ireland, which has a weaker result for market outcomes, these countries perform well across all sections of the Scorecard. The second group of countries are countries which are generally strong but may show weaker performances in some specific areas. It includes Finland, Italy, Portugal, Spain, Belgium, and Sweden. The third group of countries has more variable performance and includes Austria, Hungary, Germany, Greece, Poland and Slovenia. Finally, the fourth group are countries with weak performances in most sections covered by the report, namely Turkey, Switzerland, the Czech Republic, and Bulgaria. However, the report also shows that some of these countries have specific strengths or have improved since the 2008 Scorecard report.

A comparative analysis with last year should take account of the extended scope of the questionnaire as well as the methodological changes that were made, as described in the report.

In total, this year's questionnaire includes 14 additional questions and certain existing questions have been substantially revised on the basis of previous years' experience and consultations with stakeholders. 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 the increased scope of the questionnaire or from new criteria introduced in the methodology (such as the increased focus on access to modern interfaces such as Ethernet and networks based on FTTH and vDSL technologies, the importance given to non-discrimination and equivalence of inputs, the need to address margins squeeze, discounts and bundles, the attention to mobile data and roaming services, the distinction between the existence of a technologically neutral market analysis and the imposition of remedies, etc.). Changes in regulatory policy and implementation have also affected the results for other countries.

In particular, the Netherlands, which was second in 2008, ranks first in this year's Scorecard. This results from its achievements regarding the regulatory environment and the economic market conditions. The Netherlands has benefited from its proactive and effective approach on NGA access and from favourable market outcomes, in particular in terms of low pricing across all retail markets. The UK, which had come first in previous Scorecards is still close second with the best result in terms of efficiency. Norway and Denmark have swapped places when compared to the 2008 Scorecard: Denmark ranks third supported by very steady results across all sections, while Norway suffers from comparatively weaker results on the institutional framework and the application of the regulation by the NRA. Ireland has obtained the highest scores for both the institutional framework and the application of regulation by ComReg. Its weakness lies in the market outcomes. This discrepancy may reflect difficulties or delays in the effective enforcement of the regulatory remedies.

Several countries have improved their positions compared with the 2008 results. This includes Belgium which comes up four places, from 15th in 2008 to 11th this year. This progression reflects the improved regulatory environment and the BIPT's forward looking regulation. Belgium still continues to suffer from certain institutional weaknesses and under-performing market outcomes, that improved regulatory conditions have been unable to curb as of yet. Poland also significantly improved its regulatory environment by improving the NRA's independence and adopting *ex ante* regulation in various fields. Spain has also improved its ranking.

Other countries have declined in the ranking. This includes Germany, which is now ranked 15th while ranking 12th in 2008. This position may be due to a historically poor institutional framework and the lack of NGA regulation which receives more weight in the present report. Austria, Italy, and Slovenia are also ranked slightly lower than in 2008. In Italy, this score might be partially affected by the delays in the adoption of the relevant market analysis, pending the adoption of Telecom Italia's commitments. Austria also shows weaknesses in relation to recent regulatory approaches of its NRA, such as its approach to NGA, which affects its scores.

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. As already mentioned, Ireland performs well in sections concerning the legislative environment and regulatory policy, but is generally weaker on the resulting regulatory and market outcomes. Also, Germany and Poland have low scores on the institutional environment as a result of continuing legislative weaknesses extending in some cases beyond the telecoms sector, whereas they might score comparatively better in other sections. Conversely, Austria scores better in the market outcomes than it does in other sections of the report.

The weakness of certain countries also appears to be attributable to weaker overall economic conditions or later implementation. For example, Bulgaria that scores last in the Scorecard, may use the review of the national framework to implement the revised EU framework as an opportunity to improve, as the positive impact of legal amendments can be observed for example in Poland.

It should also be noted that the Bulgarian and Czech NRAs were unable to participate in the data collection for the purpose of the present report which necessarily reduces the granularity of the responses and could negatively affect their performances. Overall, we observe, however, that the best performing countries are the countries that observe the greatest administrative transparency and where access to data and information is the most extensive.

Furthermore, the results for Turkey and Switzerland should also be put in perspective as those countries are outside the EU. Although it lags behind compared to several other surveyed countries, Turkey has already accomplished a substantial amount of work to bring the regulatory environment in line with European benchmarks, and its score has increased as compared to 2008. Similarly, Switzerland has a regulatory framework exclusively based on reactive regulation, which creates regulatory uncertainty for operators and affects its score on the institutional framework, efficiency of the NRA and application of regulation by the NRA¹.

To illustrate the contrast between the overall institutional conditions and the deliberate regulatory options, 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.

¹ Where the Swiss NRA complained that a question was biased against their ex post and non-EU regime, Switzerland was awarded intermediate marks for the question to counter the bias.

Figure 2: Institutional results (section A, B1)

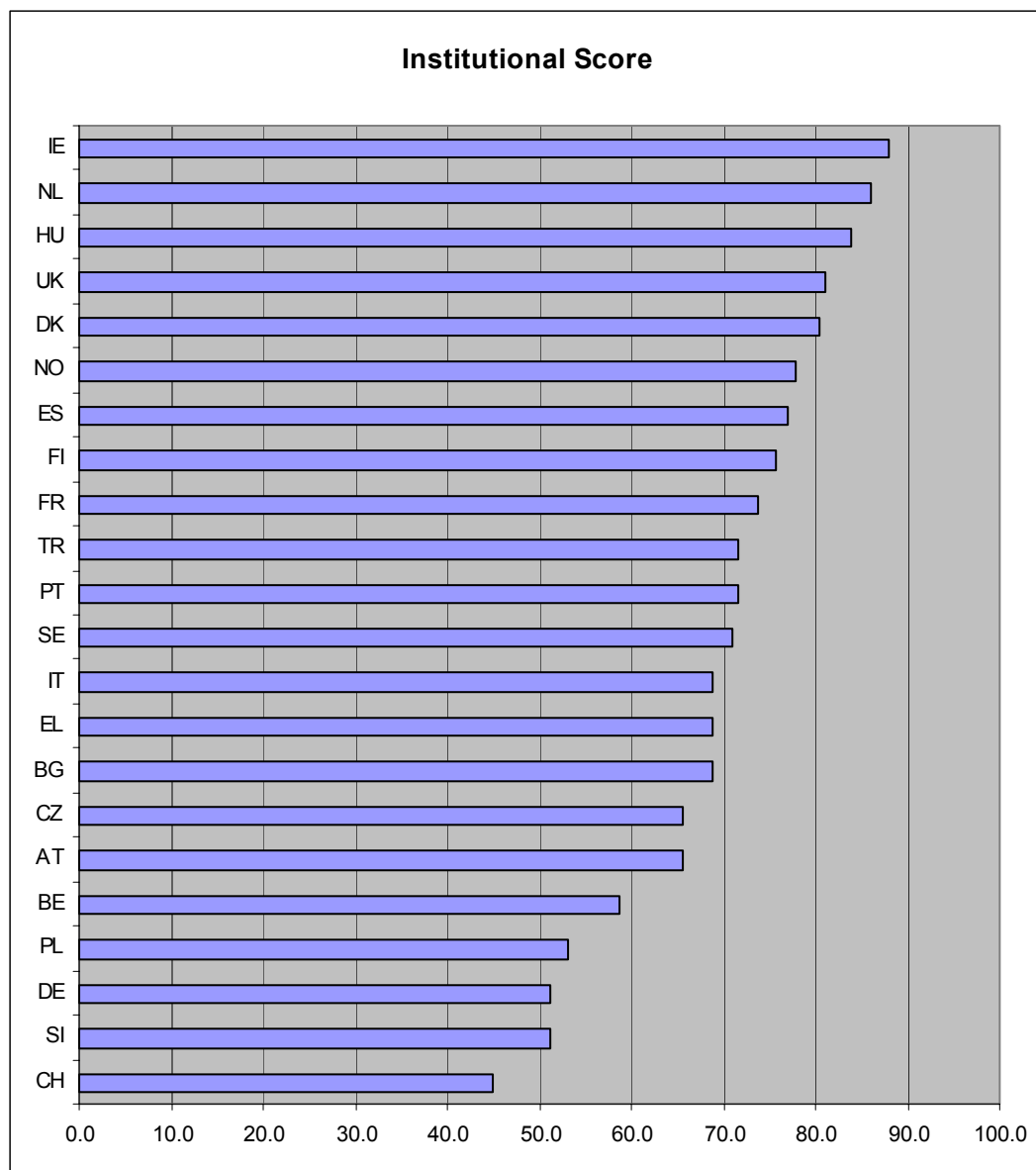


Figure 3: Regulatory results (Section B2 through E4)

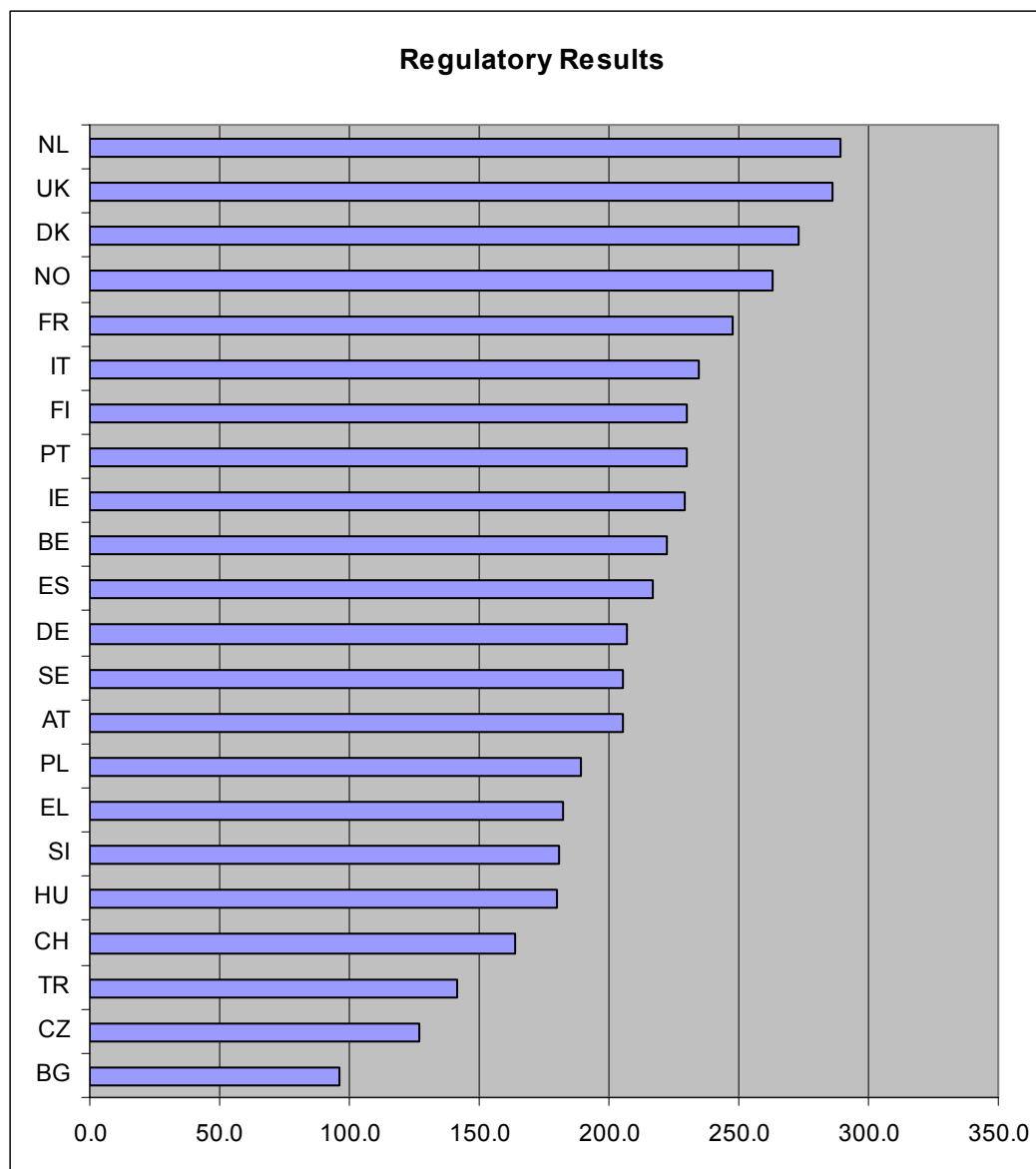
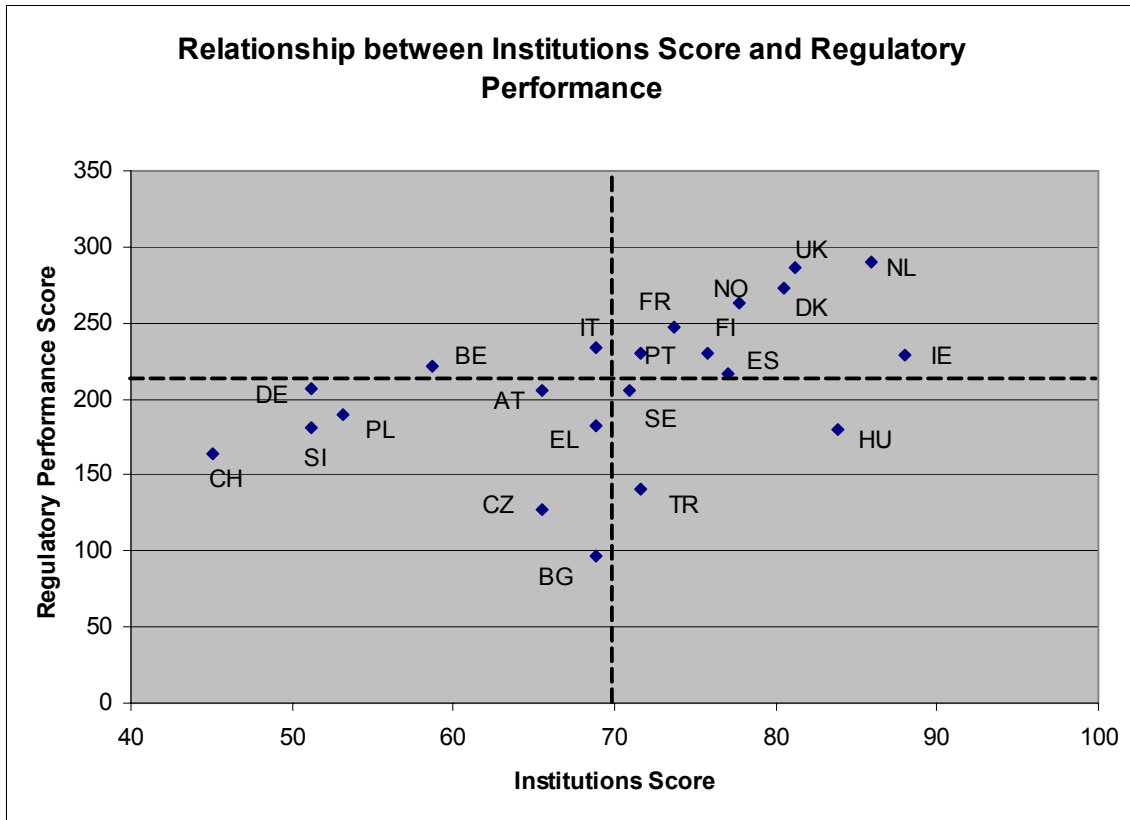


Figure 4 shows the Institutional score and the Regulatory Performance score plotted on the same graph. The dashed lines show the average score for each of the two axes.

In many ways the most interesting group is the bottom right quartile, where Regulatory Performance underperforms compared with their Institutional score. The two greatest underperformers are Hungary and Turkey, whilst Sweden is a little less than average for both.

The bottom left quartile shows the general underperformers and so, as expected given overall results, includes Austria, Bulgaria, Czech Republic, Germany, Greece, Poland, Slovenia and Switzerland.

Figure 4: Relationship between Institutional and Regulatory Performance Score



A. Qualitative Findings

The institutional framework as well as the application of regulation varies significantly across Europe. For example, some NRAs have no power to impose penalties whilst others can impose fines ranging from 0.5% to 10% of turnover. The average timeframe for appeal processes ranges from three months to over two years. In view of the national transposition of the new framework, it is also noteworthy that divergences remain in NRAs' reported level of independence, and that there is still no country where the NRA has the explicit power to impose functional separation. On the other hand, with the exception of Germany and Switzerland, all countries seem to allow the imposition of equivalence of inputs (although this is actually imposed in only about a third of the countries surveyed).

As regards the application of regulation by NRAs, divergences remain 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 €134 in Poland to approx. €439² in Ireland and the take-up varies widely from less than 1% of incumbent lines in Czech Republic, Poland and Turkey to more than 40% in the UK.

Significant 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 who have examined these issues, which may translate into diverging outcomes in subsequent years. In particular, decisions effectively excluding forms of NGA from regulation in Germany and Spain and delays in addressing these issues in some other markets, in particular in the Czech Republic, Bulgaria and Hungary, may lead to a weakening of competition assessed by future Scorecards compared with present outcomes. This confirms the need for the Commission to proceed with the adoption of the NGA Recommendation. Another regulatory issue where significant discrepancy and lack of consistency can be observed concerns the NRAs approaches to discrimination, price squeeze, bundling and discounts. NRAs have generally failed to establish clear principles to go beyond the existing principles of competition law and effectively address the specific needs of asymmetric market conditions.

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 the UK, Sweden, Italy and Ireland. NRAs' powers to impose fines are also generally more restricted than those granted to the Commission as a competition enforcer. Furthermore, the Danish, Swiss and Swedish NRAs are still not empowered to conduct inspections at the premises of the SMP operators and the BnetzA is the only NRA that might be restricted from collecting information on network deployment plans. Finally, in some countries like Spain, the NRA does not have full responsibility for spectrum.
- NRA independence is not always fully guaranteed. In a number of countries, NRA powers are restricted, subject to general guidance from Ministries, or, in other cases, the tenure of Management is undermined. These issues are of particular concern in Germany, Norway and Slovenia. Governments also continue to retain significant ownership interests in

²

These are the total prices for a two year subscription. Connection charges are depreciated over two years. Thus the calculation is connection charge + (monthly rental x 24). This approach allows for an evening out of prices should countries adopt and high connection fee and lower monthly rental, or vice versa.

incumbents or other telecoms operators in Austria, Belgium, Bulgaria, Germany, Greece, Norway, Poland, Portugal, Slovenia, Sweden, Switzerland 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, Czech Republic, Italy, Poland Slovenia and Switzerland.
- Rights of way regimes remain largely dictated by local or regional authorities and one-stop shops are only available in the UK for the grant of authorizations and only in Norway, Ireland and Belgium for resolving disputes. Charges are high or variable in many cases and delays are also of concern across a number of countries including in Austria, Czech Republic, Greece, Sweden and Switzerland. Regulated availability of access to ducts and sewers (other than through SMP regulation) is also limited except in Finland, France, Italy, the Netherlands and Portugal.
- Number portability for mobile and fixed services is becoming increasingly effective. However, only Ireland provides a timescale of 1 day for the porting of numbers as required by the new regulatory framework and, even then, it is only for mobile numbers. Porting can take as much as 23 days in Poland. In most other cases timeframes exceed 5 days. In addition, the largest mobile and fixed operators still apply a retail charge for porting out their customers' number in Austria (only for mobile), Bulgaria, Germany and Slovenia.
- Frequency policy remains generally conservative and national although recent initiatives at the EU level are progressively being implemented. The Nordic countries have traditionally made the most progress in liberalizing frequency bands, progressing towards the digital switchover and ensuring technological neutrality, but Germany and Switzerland have also adopted a more liberal approach. Despite the adoption of Directive 2009/114/EC, technology neutral conditions for 900 MHz and/or 1800 MHz are only adopted in Belgium, Czech Republic, Finland, Germany, Italy and Switzerland.
- Full compliance with the four month legal deadline for resolving access disputes has been achieved in only about a third of the countries surveyed. Similarly, less than half of the countries surveyed timely publish the pending disputes.
- While transparency of the NRA's processes has significantly improved over the years, excessive redactions of confidential data are reported in various countries including Bulgaria, Czech Republic, Germany, Greece, Hungary, Poland, Portugal, Slovenia and Turkey. Similarly, if most NRAs publish detailed accounts showing their cost of operations, some do not publish forward looking action plans.
- Several NRAs have a poor track record in identifying violations of SMP obligations and pursuing enforcement actions. Some NRAs, like Bulgaria, Germany, France and Switzerland have failed to identify even one violation of SMP obligations, despite sometimes receiving numerous complaints. On the basis of this Report, however, one should not conclude that other NRAs have been much more active in opening infringement procedures. It rather appears that there are a limited number of enforcement proceedings that are effectively being opened.
- NGA developments have been addressed in an inconsistent manner by NRAs: Some, like the Netherlands and Ireland, have defined a technological neutral framework, which addresses NGA issues. Others, like Germany or Austria, have adopted technology based market definitions that have the effect of excluding certain forms of next generation access networks from regulation. In certain countries, like Spain, some markets have been defined in a technological neutral way but the corresponding remedies were restricted on the basis of speeds or technology. Portugal has included FTTC and FTTH in the market definition,

but has not imposed corresponding remedies. Finally, NGN access is still not addressed in some countries even when there are reported fibre deployments. At this stage, it is also noteworthy that only Belgium, Ireland and Spain provide for a five year notice period for the closure of MDF sites, as foreseen in the Commission's draft NGA Recommendation

- Measures to address discrimination, in particular (i) the obligation to provide a wholesale offer before launching a retail offer and (ii) the imposition of equivalence of inputs, have only been imposed cumulatively in the UK and Denmark, but any such provisions remain absent in countries such as France, Greece, Slovenia, Spain, Sweden, Switzerland and Turkey. Furthermore, only about half the countries impose appropriate Chinese walls obligations to prevent anti-competitive win-back campaigns.
- Foreclosure practices, such as margin squeeze, bundling and discounts, have never been addressed in countries such as Poland, Sweden, Switzerland and Turkey. By the same token, over two-thirds of the countries surveyed have not imposed either a truly cost oriented MTR in accordance with the Commission Recommendation on termination rates, or any internal non-discrimination obligations.
- Accounting separation is now generally introduced in all countries, albeit still not in Germany, and Switzerland. The methodology is also generally published, although sometimes not in sufficient detail. However, those obligations are often ineffective as the accounts themselves are not published in a timely or in a sufficiently detailed manner in over 80% of the countries surveyed.
- A review of Section E, which primarily examines the existing status of competition and consumer outcomes affected by previous actions taken by the regulator, shows that :
 - (i) Sweden, Portugal and Norway benefit from the most competitive environments for fixed voice services generally, whilst Slovenia, Norway, the Netherlands, Greece, France, Denmark and Belgium have made particular progress in achieving voice competition through VoB. Meanwhile, competition in fixed voice remains limited and prices are high in Belgium, the Czech Republic, Ireland, Finland, Poland, Spain and Turkey, although low mobile prices in Finland and Poland may partly compensate for this.
 - (ii) The most competitive environments for mobile and wireless services are in Austria, the UK, the Nordic countries and the Netherlands. Highly performing countries in mobile markets also generally have the most liberal frequency principles and benefit from the presence of real MVNOs. The UK and Austria also have particularly low roaming tariffs. The use of mobile Internet services and of mobile broadband data dedicated services is particularly developed in Austria, Finland, Ireland and Sweden.
 - (iii) Regimes for business service competition based on traditional interfaces are most advanced in the Netherlands, Portugal, France and the UK while particular weaknesses are evident in Bulgaria, Czech Republic, Greece, and Turkey. Turkey and Poland are the sole countries where there are no wholesale leased lines terminating segment available. However, effective take up of Ethernet-based services is currently limited to Austria, Belgium, France, the Netherlands, Norway, Portugal and the UK. Specific business grade (low contention) bitstream services are still not available in Bulgaria, Greece, Poland, Sweden and Turkey
 - (iv) Regarding broadband services, the Netherlands, Norway and France perform most strongly overall. Average (median) retail prices for a 1 -2 Mbps package

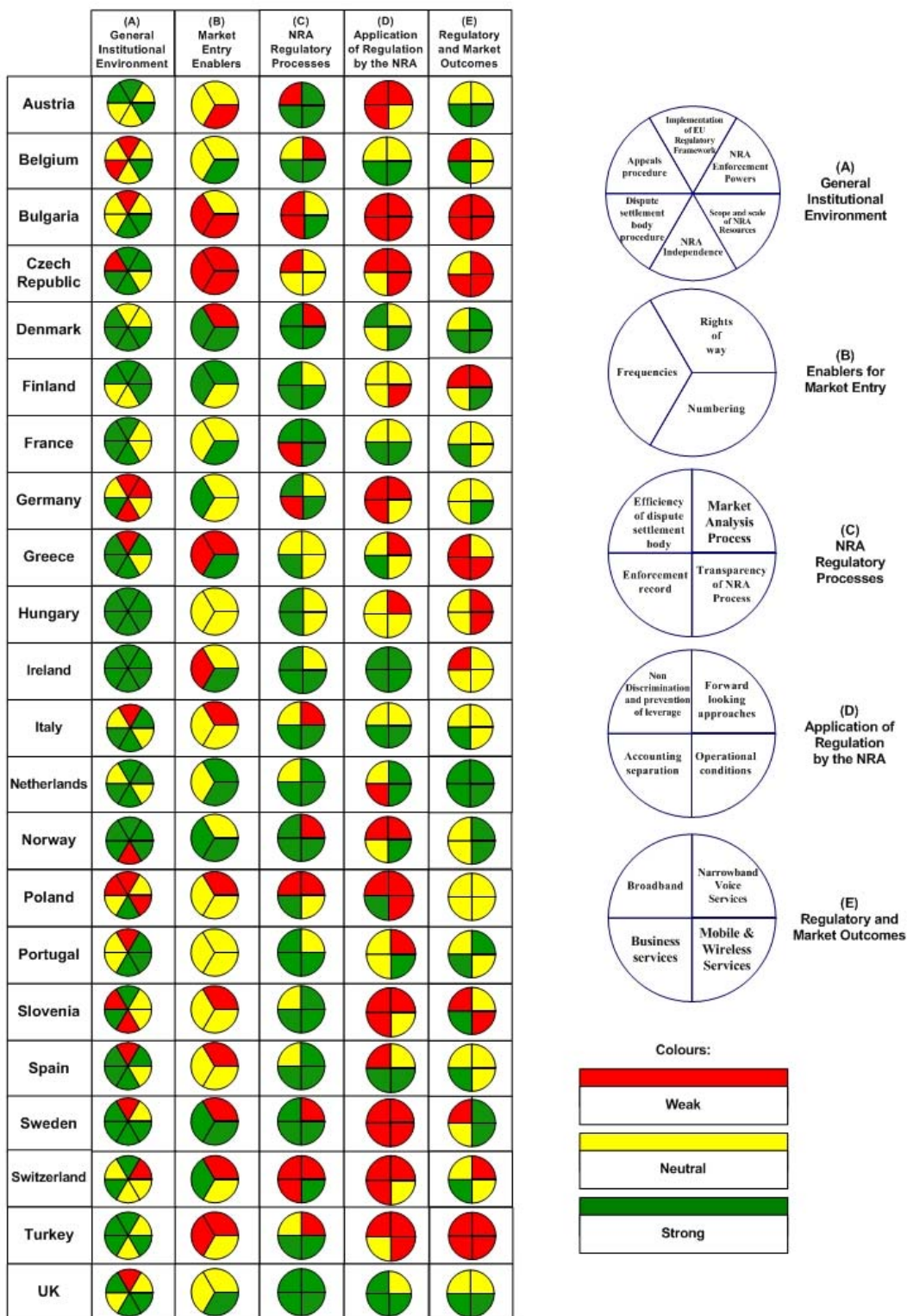
range from about 8 EUR in the UK to about 62 EUR in Poland³. Fibre full loop or subloop (from the ODF) is only available in Finland, France, the Netherlands, Norway and Sweden. Subloop unbundling is only available and used in about a third of the countries surveyed. Similarly, wholesale naked bitstream is not available or used in about nine of the countries surveyed. For the provision of triple play offers, some countries face a monopoly position while the most competitive markets are found in Denmark and Norway.

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.

³ Based on basket 1024-2048 kbs/s of the BIA Report, 2008. The 2009 BIA report was released too late to be included in this report.

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

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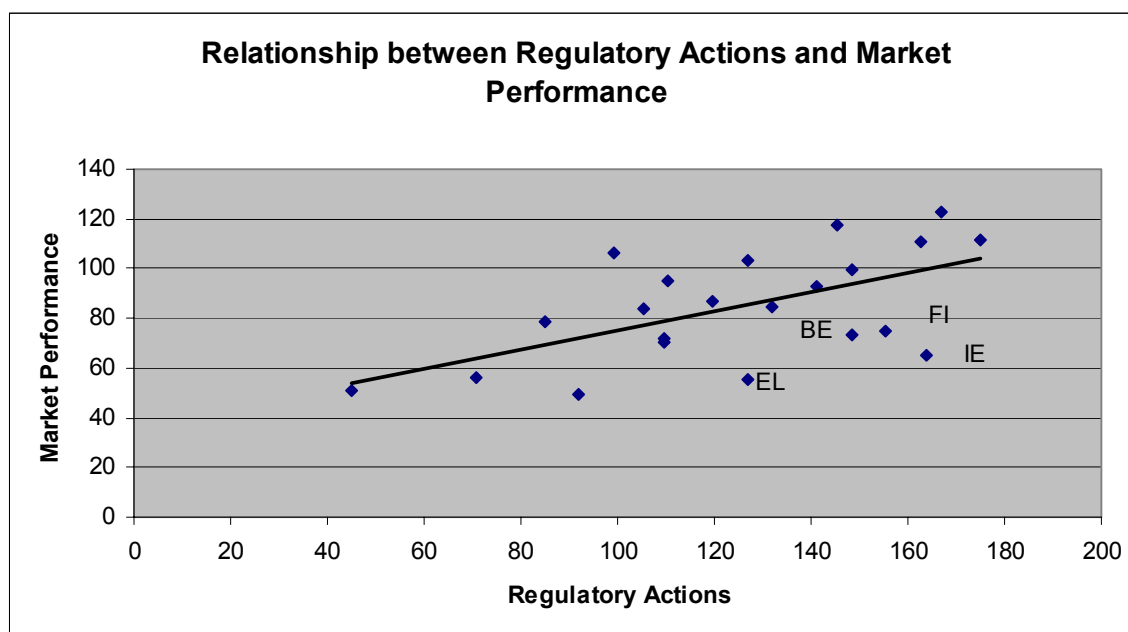


B. Quantitative Findings

To assess what impact, if any, divergent regulatory approaches may have on competitive and consumer outcomes in the market, we have again 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 includes 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 (59%). 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 5.

As we found in the last Scorecard, Ireland underperforms compared to how we might expect given its Score for regulatory action, as do Belgium, Finland and Greece.

Figure 5: Scores for NRA Actions and Market Conditions

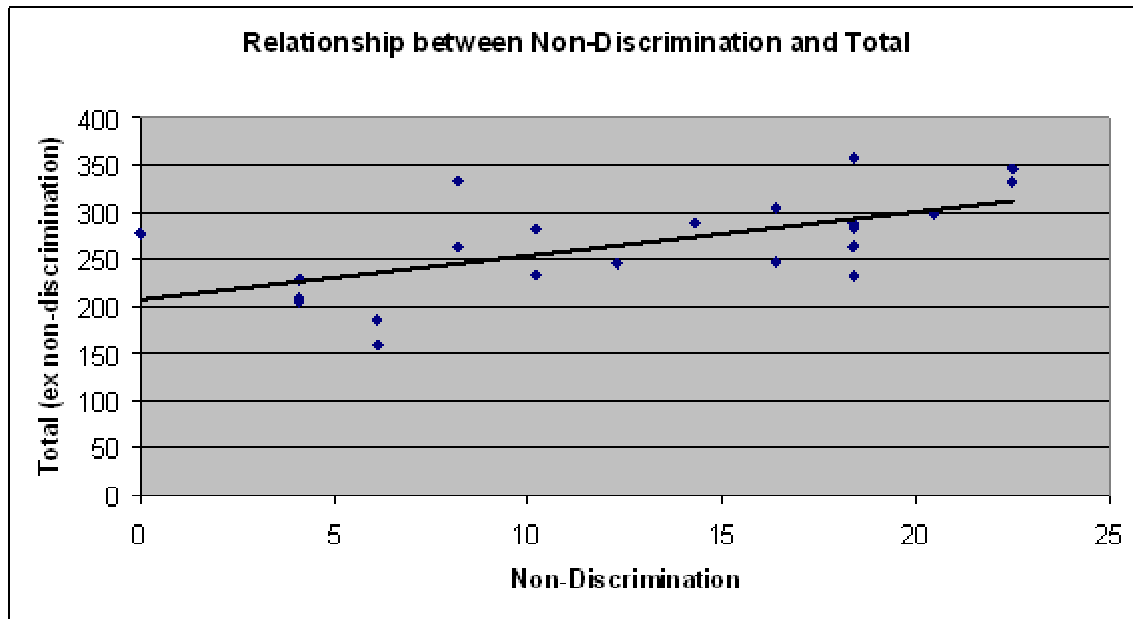


In this Scorecard we have examined some of the key regulatory actions and their impact on market conditions and the overall performance of the regulatory regime. In particular, we have examined how an effective non-discrimination regime affects performance.

We find that there is a positive correlation (29%) between an effective non-discrimination regime (Section D4) and market conditions. In particular those countries that score highest on non-discrimination (Denmark, Netherlands and the UK) also have generally good market outcomes.

We also find a strong and positive correlation (61%) between non-discrimination and total score (excluding non-discrimination). This would imply that better regulatory regimes recognize the importance of non-discrimination (Figure 6).

Figure 6: Relationship between non-Discrimination and Total



Recommendations to the Commission, the Parliament and the Council

- Monitor the **timely and consistent transposition of the revised Framework and take enforcement action** where principles are not adhered to – such as the independence and full empowerment of the NRA, and ensuring the publication of a full and technology neutral reference offer for unbundled access by firms found with SMP;
- Ensure the **lifting of technological limitations in the 900MHz and 1800 MHz bands** in accordance with the rules of the amended GSM Directive in all Member States in a timely manner and encourage non-discriminatory and pro-competitive national spectrum policies (including **the assignment of the Digital Dividend**) supporting high mobile broadband take-up.
- The **planned Commission NGA Recommendation should ensure a consistent and technologically neutral approach to broadband regulation supporting the deployment of open networks** in order 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 a competitive advantage. Finally, it should maintain the requirement of a minimum **five year notice period** for the closure of MDF sites.
- The Commission should give guidance on the application of price control and non-discrimination rules under the EU telecoms framework so that best practice can be encouraged for these important rules across the EU.
- **Compliance with the Recommendation on fixed and mobile termination rates** should be pursued to guarantee consistency across the EU and guarantee the application of a truly cost-oriented price that prevents abusive on-net practices.
- **Technologically neutral regulation of local access networks should be assured** in all Member States where there is dominance in local access. NRAs should also make full use of the **explicit powers they have been given to seek information on NGA deployments** through Article 5 Framework Directive.
- The new cooperation mechanisms involving BEREC and the Commission should be used **to ensure that consistent analysis and remedies are applied when similar circumstances are found.**

Recommendations to national Ministries

- The **early (or at least timely) national transposition** of the revised Telecoms Framework should be encouraged and guaranteed. This should allow NRAs to mandate **functional separation** under Article 13a of the Access Directive. It would also guarantee that **number portability** takes place in one day at a wholesale charge that is cost-oriented and with retail charges that do not give rise to a disincentive to switching.
- **Independence of NRAs should be guaranteed** (and the Commission should take appropriate infringement actions where it is not), building on the new Article 3 Framework Directive including measures to assure the tenure of Heads and to prohibit Ministerial guidance on issues concerning economic regulation.
- Member States should guarantee, at national level, **NRA empowerment** and independence. Powers should explicitly include the possibility to mandate functional separation, impose Equivalence of inputs, conduct inspections at the corporate and operational premises of operators, apply dissuasive fines up to 5% turnover and periodic penalty payments and

suspend launch of non-compliant services or prices. NRAs should also be made responsible for spectrum activities.

- Member States should establish a **‘one-stop-shop’ mechanism for authorizing 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 prompt 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 ensure that NRAs have adequate resources to perform their tasks and may set wages and incentive schemes independently from civil service benchmarks, if these are insufficient to compete with private sector salaries.

Recommendations to NRAs

- NRAs should review **markets 4 (physical access) and 5 (wholesale broadband access)** in a technology neutral manner so as to ensure that they include FTTH and FTTC technologies within the market and include fibre-based remedies. NRAs should also establish in advance conditions for migration to NGA including notice periods and compensation applicable to the closure of MDF sites. The availability of naked bitstream should be ensured to facilitate competition in double play including VoB.
- Particularly in cases where take-up is low compared with EU benchmarks, NRAs should, in cooperation with each other, **review pricing of essential SMP wholesale products** such as LLU and **ensure consistent access prices for copper and fibre based wholesale products**.
- NRAs should ensure that the **non-discrimination obligation imposed on SMP operators is adequately detailed in relation to each market concerned and strictly enforced**.
- 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.
- NRAs should ensure the **timely and detailed 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 improve **transparency** where possible by ensuring that requests for confidentiality are not granted automatically, but subject to more stringent review. This is in particular the case for cost models.
- NRAs must assess and take necessary action to remedy **incumbents’ foreclosing practices including margin squeeze, bundling and rebates** and adopt methodologies that go beyond the existing principles of competition law and effectively address the specific needs of asymmetric market conditions. This should be in particular the case for multiple play offers.
- 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 make certain that **complaints about SMP infringements** are addressed in a timely fashion, and that established violations are subject to dissuasive sanctions. NRAs should also **actively pursue enforcement action** when SMP rules are breached including applying penalties and securing compliance within a reasonable timeframe.
- NRAs should prevent the incumbent operators from applying wholesale charges that are not cost-oriented or any retail charges for **number portability**, and should mandate one-day number portability, in particular when 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 one year whilst dispute resolution should respect the EU's four month deadline. There should be no mandatory timeframe prior to submitting a dispute.
- NRAs should publish a **forward-looking action plan** following consultation with stakeholders.

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I. Introduction

The purpose of this report is to assess if the regulatory framework on electronic communications networks and services in selected European countries is effectively applied and enforced towards securing certain fundamental objectives. In particular, the report examines if the regulatory regime in place on 31 December 2009: (i) facilitates the establishment of public electronic communications networks and the provision of public electronic communications services, (ii) encourages investment in telecommunications infrastructure, and (iii) ensures a level playing field for all players to stimulate investment, innovation, and sustainable competitive development. Proper application of this regime should also enhance employment, economic growth and international competitiveness in these countries and the EU as a whole.

This is the seventh ECTA Regulatory Scorecard Report. Since the first report was published in November 2002, both its scope and methodology have been reviewed in light of the experience gained from the previous studies, valuable feedback received from regulators and industry, modification of the EU regulatory framework and technological evolutions. The questionnaire and methodology of the current report have also been extensively consulted upon with stakeholders, resulting in a further refinement of the scope and criteria covered in the report. The report will continue to require revision as individual regimes, markets and technology evolve. The authors therefore welcome further comments and suggestions from NRAs, telecoms operators, and others.

This report covers leading economies in the EEA, including the main EU economies, certain new accession countries, and certain European countries that are outside the EEA, such as Turkey. Bulgaria and Switzerland are included for the first time this year. The countries surveyed are: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

The report is based on inputs and responses received from NRAs, ECTA members and other stakeholders and observers, as well as the views of the European Commission and the ERG. The authors are particularly grateful for the detailed input received from the various stakeholders, which has been very valuable for their contribution to the analysis. Where diverging opinions have been expressed on particular issues, we have tried to formulate the responses to adequately reflect the respective views⁴.

The report also relies on some comparative statistical and pricing data based on the Commission's Implementation Reports, OECD and other sources, as these provide consistent comparative data. For the questions based on the Commission

⁴ The country annexes are therefore a consolidated version of the inputs received from the various stakeholders, and the authors have limited their review and editorial control on these responses to ensure a certain degree of consistency for the qualitative and quantitative comparative analysis. Two successive rounds of consultations were held for the data collection, followed with one round of consultation on scoring. For certain questions, ECTA may also have had to rely on other data than the inputs received in the survey in order to have a consistent basis for comparison and sufficiently granular information.

Implementation Report, preference has been given to data from the 15th Implementation Report over data from the 14th Implementation Report. However, the 15th Implementation Report had not been published on time to be fully taken into consideration in this year's Scorecard. Therefore, the report could only be based on the data from the 15th Implementation Report when these were provided by NRAs⁵. Such data have been verified with the Commission, and, where divergences have been identified, these have been reviewed and corrected on the basis of the responses provided by NRAs. In view of the above, it cannot be excluded that some divergences with the 15th Implementation Report may remain or that data from the 14th Implementation Report has been used for some countries.

In addition, whenever possible, the authors have also referenced recent available trends or updated data in the country reports. However, the cut-off date for all data to be taken into account in the scoring has been set at 31 December 2009. More regular and comparable data collection of retail price baskets for fixed and mobile voice and broadband services and data on double and triple play take-up, as well as further information concerning market shares in the business service market, would be particularly welcomed in future Scorecards.

The authors also recognize that some data contained in this report might be based on assumptions or estimates of market players that have been used in the absence of precise statistical data (e.g., various questions pertaining to appeal procedures). The authors hope that this situation will provide an incentive to the various stakeholders to collect or publish more reliable data where this appears to be presently lacking.

The assessment is based on selected key criteria, including:

- *Institutional environment* - the overall institutional and legislative environment in which in the NRAs and market players must operate (this includes the applicable legislative framework, the NRA's enforcement powers, resources and independence, the dispute settlement system, and the appeal system (Section A));
- *Market entry and network roll-out enablers* - the existence and efficiency of key regulatory enablers for the roll-out of new networks and development of alternative service providers such as numbering, rights of way and frequencies (Section B);
- *NRA regulatory processes* – the efficiency and transparency of the NRAs' operations, and the enforcement record for regulatory compliance and dispute settlements (section C);
- *Application of the regulation by the NRA* in terms of ensuring a forward looking and technological neutral regulatory environment and ensuring that key operational, accounting separation, and non-discriminatory conditions are in place for bottleneck facilities and that appropriate actions preventing foreclosure and leveraging are taken (Section D);

⁵ Some NRAs have requested that the 15th Implementation Report data be considered as confidential and not published. In such cases, the data has been used but is not detailed in the relevant country annex.

- *Regulatory and market outcomes* - the availability, use and price of key wholesale inputs, the degree of infrastructure and service competition and resulting retail market shares and prices (Section E).

It derives from the above that this report does not assess simply the effectiveness of regulators, but constitutes a much broader assessment of the effectiveness of the regulatory and competitive environment as a whole. Although, NRAs play a key role and their performances are specifically reviewed under Sections C, D and E, other important factors include the constitutional and legislative framework, the effectiveness of the judicial courts, the conduct of market players and, in particular, SMP operators.

Since the 2008 edition, the Scorecard methodology has been updated to improve the structure of the report, capture technological and regulatory evolutions and include important additional topics. Furthermore, the scope of the report has been substantially increased. The questionnaire now includes 118 questions in total, *i.e.*, 14 additional questions when compared to the 2008 edition. The institutional environment has been extended to cover NRA powers to impose equivalence of inputs and to conduct inspections at corporate and operational premises of the SMP operator. With regard to market entry and network roll-out enablers, the report now also includes data on current retail charges for porting mobile and fixed numbers, as well as information on the publication of a national spectrum allocation table. In the section on NRA application of regulations, the focus has been put on access to modern interfaces such as Ethernet and networks based on FTTH and vDSL technologies, distinguishing instances where a technologically neutral market has been defined and those where technologically neutral remedies have been imposed. Furthermore, the section on non-discrimination has been expanded to include foreclosure and leveraging practices and to reflect the increasing importance of tackling issues such as margin squeezes, bundling and volume discounts. On market outcomes, the Scorecard has been extended to cover Voice over Broadband, pricing for roaming voice and data services, the development of mobile data services and fixed wireless, the availability of specific business grades, access to bitstream Ethernet and to ducts, and the competition for triple play offers.

For each of the assessed areas, the authors have aimed as far as possible to identify objective and complementary parameters, which are used to evaluate national legislation and authorities and the competitiveness of the prevailing market conditions. Whilst the authors of the report consider that the selected criteria provide strong insights into what is necessary to achieve the EU's objectives for electronic communications markets, they also recognize that a number of criteria may not be included in this report. Further criteria can, of course, be included in the future versions depending on the feedback received from the various stakeholders.

This report is structured as follows:

- Section II presents the qualitative and quantitative assessment made on the basis of the country questionnaire and the general conclusions on the in-country assessment.

- Section III explains in detail the various areas subject to the assessment, the reasons why they were chosen, and their content and the methodology used for the assessment.
- Section IV explains the weighting applied for the quantitative analysis.
- Section V contains the outcome of the quantitative assessment with the individual scores per question and per country.
- The Annexes contains country questionnaires with the replies received from local specialists, national regulators, and other stakeholders. The annexes have only been edited to provide a single consolidated response which allowed us to score on a coherent basis following two intensive rounds of consultations with the stakeholders.⁶

II. Qualitative and quantitative findings

This section sets out the main qualitative findings that can be derived from the various sections and sub-sections covered by the Report. It also seeks to provide a comparative perspective with last year's report, where the same criteria have been retained.

A. Qualitative findings

1. Qualitative findings of Section A (Institutional framework)

Section A examines the general institutional environment. It does not, however, cover matters that are typically considered to fall within the NRA's scope of competences. Other national institutional players such as Governments, legislators and judicial bodies play a key role in designing the overall regulatory and institutional environment in which the NRA and market players must operate.

The best performing countries in this section are Ireland, Hungary, Spain, Denmark, the Netherlands, Greece and the UK. Switzerland, Poland, Slovenia and Germany have the weakest institutional environment. Switzerland, Poland, Slovenia and Germany lose a significant number of points as a result of various restrictions in NRA powers and competencies that do not exist to the same degree in other Member States, such as the power to impose effective fines or penalty payments.

The sub-sections show that:

- Sub-section A.1 (transposition of the framework): Countries with incorrect or late transposition of the framework can suffer from consequent problems elsewhere in the report. This appears to be a particular problem in Germany, Italy, Portugal, and Poland where delays or restrictions to the NRAs capabilities may have had a material effect on the proper enforcement of the Framework.

⁶ The drafting and detail of the responses may still vary to a certain degree depending on the inputs received from the stakeholders. The author's editorial control over these responses is therefore limited.

- Sub-section A.2 (NRA enforcement powers). Powers that are explicitly granted to the NRA can vary quite significantly. The powers granted to the European Commission pursuant to Regulation 1/2003 are used as a benchmark. In most countries, however, the NRA powers are more restrictive. Countries such as Germany, Switzerland or Turkey have granted weak powers to the NRA for enforcing SMP obligations. For example, Switzerland and Germany are the only countries where the NRA is restricted in imposing equivalence of inputs. Conversely, countries such as the Netherlands, Norway or Spain have granted their NRAs more robust enforcement tools. It is interesting to note that there is not a single country where the NRA has explicitly been granted with the unrestricted power to impose functional separation under the *ex ante* regime, as required by the new regulatory framework. Only Ireland, Sweden and the UK have limited powers to impose such separation. This confirms the need for a swift and consistent implementation of the new regulatory framework. By the same token, there remain few countries where the NRA cannot conduct inspections at the corporate and operational premises of the SMP operators, namely Denmark, Sweden and Switzerland, while Germany is the only country where the NRA is restricted from collecting information on network deployment plans.
- Sub-section A.3 (NRA scope and scale of resources) shows that in certain Member States (such as Czech Republic, Germany, Poland or Slovenia) NRAs have limited flexibility to determine the pay scales of their employees, which could, and in some cases does, lead to difficulties in attracting and retaining suitably qualified staff.
- Sub-section A.4 (NRA independence). This section examines various ways in which the political bodies can intervene or influence the exercise of the NRA's powers. Germany continues to be remarkably weak in this sub-section as a result of various ways in which the NRA's powers are constrained and the ability for the Government to give general policy directions to the NRA. However, Slovenia and Norway also raise concerns about the independence of their NRAs. On the other hand, best practice can be found in Denmark, Czech Republic, Italy, Spain and the UK. In these countries, NRAs operate under institutional conditions that reduce the risk for political intervention (no restrictions in NRA powers, no policy guidelines, procedural safeguards for NRA management during tenure, no public shareholding in incumbent). Ireland is only weak on one aspect in this sub-section as their Communications Regulation Act allows the Minister to “*give such policy direction [to ComReg] as he or she considers appropriate*”.
- Sub-section A.5 examines specific aspects in relation to the dispute settlement body. Belgium is still the only country where this competence is granted to an authority other than the NRA. There are also several countries in which the dispute settlement body cannot impose interim measures whilst a dispute is pending. This might seriously affect the effectiveness of the settlement process.

- Sub-section A.6 examines the effectiveness of the appeal procedure. The case law in almost all countries now ensures that the administrative decision is only suspended during the appeal process in exceptional conditions. A notable exception is Switzerland, where the suspension of the NRA decision is principally provided by law, which creates legal uncertainty in particular since the NRA decision that is suspended is already an “ex post” decision that relates to past behaviours. Timing remains a significant concern in the Czech Republic, Germany, Poland, Portugal, Slovenia and Spain where the average duration of the appeal process extends beyond two years. Another concern relates to restrictions on third parties’ rights to appeal decisions affecting their interests which have been raised in a number of countries as confirmed in the T2 Austria judgment of the ECJ.⁷ Notwithstanding the above, it appears that this issue still constitutes a concern in the Czech Republic, Slovenia and Switzerland. Finally, in a significant number of countries a very large number of market analysis decisions have been appealed. This may be for a variety of reasons including the ease with which an appeal may be brought and the tendency of the operators to appeal the NRA’s decision. The frequency of appeal can contribute to regulatory uncertainty particularly when combined with other negative factors in the appeals process such as long timeframes, suspensive effect or annulments. NRA decisions tend to be systematically appealed particularly in Belgium, Bulgaria, Denmark, Italy, Germany, the Netherlands, Poland and Slovenia. In this regard, it appears that, in nine of the countries assessed, at least one market analysis decision was annulled (even if the appeal was limited to minor points).

2. Qualitative findings of Section B (Key enablers for market entry and network roll-out)

Section B examines the presence of key-enablers for market entry and network roll-out. Since the introduction of the general authorization regime in the EU, this has significantly facilitated market entry. However, certain regulatory barriers remain such as the authorizations for obtaining rights of way, access to numbering and restrictions on the use of frequencies. Here again, it should be noted that data does not appear to be collected in a systematic way. The countries with the most favourable conditions for market access are also the countries which generally perform best overall in this Report and include Norway, the UK, the Netherlands, Finland and Denmark. Countries such as Bulgaria, Turkey, and the Czech Republic perform rather poorly which suggests that the roll-out of networks and launch of a service in these countries is more difficult and time consuming. The analysis of the sub-sections leads to the following conclusions:

- Sub-section B.1 (rights of way). The regime for obtaining rights of ways in the Czech Republic, Greece, Spain, Sweden, Switzerland and Turkey is fragmented and complex resulting in rather long timeframes. The UK is the only country offering a one-stop shop (i.e., a single

⁷ Case C 426/05, Tele2 Telecommunication GmbH v. Telekom Control Kommission, 21 February 2008.

authority) for obtaining rights of ways, while Belgium is the only country where there is a one-stop shop for disputes regarding rights of ways. In most other countries, local authorities are often granted competence for Rights of Way with varying degrees of common procedural principles. Ducts and sewers are available on regulated terms for the roll-out of networks (outside SMP regulation) and are widely used only in Finland, France, Italy, the Netherlands, and Portugal.

- Sub-section B.2 (numbering). Numbering policy constitutes another key enabler for the launch of an electronic communications service. Member States can facilitate market entry by adopting flexible and liberal rules on the use of numbers and by ensuring that effective number porting processes are in place including for VoIP. The best-performing countries in the section include Belgium, Denmark, France, Ireland, the Netherlands, and the UK. Improvements should be made in other countries such as Austria, Bulgaria and Czech Republic. In this regard, an efficient system for fixed and mobile number portability is essential to facilitating the change of provider. This process should be quick and should ideally entail no -or very limited- charges at both wholesale and retail level. Regarding retail charges, the largest mobile and fixed operators apply a retail charge for porting out their customers' number in Austria (only for mobile), Bulgaria, Germany and Slovenia. In view of the implementation of the new regulatory framework, it is also interesting to note that only Ireland provides a timescale of one day for the porting of numbers and that this only applies to mobile numbers
- Sub-section B.3 (frequencies). In a convergent environment, the availability of a wide range of frequencies under transparent and technology neutral conditions is essential to promoting competition and investments. The best performing countries in this section are Finland, Germany, Norway, Sweden and Switzerland. On the other hand, the frequency regime is still particularly conservative in Bulgaria, Greece and Turkey. In view of Directive 2009/114/EC, it is also relevant to note that, as of end-2009, technology neutral conditions for 900 MHz and 1800 MHz were only adopted in Belgium, Czech Republic, Finland, Germany, Italy, and Switzerland.

3. Qualitative findings of Section C (NRA's regulatory processes)

Section C focuses on the NRA's regulatory processes. It examines the NRA's record in conducting market analyses and the application of remedies, the transparency of the decision-making process, and NRA effectiveness in pursuing enforcement actions and in acting as a dispute settlement body. NRAs achieving the best performances are Ofcom (UK), FICORA (Finland), ComReg (Ireland), OPTA (the Netherlands), and NPT (Norway). These NRAs have been able to conduct the market analyses decisions in an efficient and transparent manner and have also been able to act effectively as enforcement or dispute settlement bodies. On the other hand, improvements could be made in Bulgaria, Czech Republic, Poland, and Switzerland. However, it should also be noted that the weak performances of certain NRAs cannot always necessarily be attributed to the NRA itself. Other factors, such as delays in

implementations or divergent frameworks, have for example delayed the ability of certain NRAs to properly conduct their market analyses. The specific conclusions that can be drawn from an analysis of the sub-sections are as follows.

- Section C.1 (implementation of the EU regulatory framework). A number of NRAs have a strong track record for conducting market analyses in a timely and efficient manner. These include the Netherlands, Spain and the UK. On the other hand, certain NRAs have experienced significant delays in conducting the analyses. Those include Denmark, Poland, Sweden and Turkey.
- Section C.2 (transparency of the NRA processes). Transparency of the NRA's processes has significantly improved over the years. Market consultations allow all interested market players to participate actively in the decision-making process by providing at least four weeks to comment with the exception of Hungary where the statutory timeframe for public consultation is fifteen working days. Publication of the decisions, including a full publication on-line, has become a general practice although it could still be improved in Greece and Slovenia. Nevertheless, excessive redaction of confidential data remains an essential concern in a number of countries including Bulgaria, the Czech Republic, Germany, Greece, Hungary, Poland, Portugal, Slovenia and Turkey. NRAs (preferably) or another administrative body should have the ability to check confidentiality claims and disclose information that does not genuinely constitute business secrets or other information that should be treated on a confidential basis for other public policy reasons. A limited number of NRAs still do not publish a forward looking action plan setting out the regulatory issues to be addressed by the NRA. However, most NRAs publish detailed accounts showing their cost of operations.
- Section C.3 (enforcement record). This sub-section examines the NRA's track record in identifying violations of SMP obligations and pursuing the enforcement actions. At the outset, it should be noted that data on the infringement proceedings initiated by the NRA is often not publicly available. It appears, however, that only a limited number of NRAs (France and Germany) have failed to identify at least one violation of the SMP obligations. On the basis of this Report, however, one should not conclude that NRAs have been very active in opening infringement procedures. It rather appears that a limited number of enforcement proceedings are effectively being opened.
- Section C.4 (efficiency of dispute settlement body). The dispute settlement process in Finland, Germany and Norway appears to be quick, efficient and transparent. In most countries, timeframes for the procedure have on occasion exceeded the four months timeframe mandated by the EU framework. Certain countries (*e.g.*, Austria, Bulgaria, Czech Republic, Poland, Spain, Switzerland and Turkey) still foresee mandatory negotiation timeframes prior to seizing the dispute settlement body which often results in a further extension of the timeframe for the dispute settlement body to intervene. Transparency of the process also appears to be a concern in a significant number of

countries: when pending disputes are not published or third parties are restricted from intervening, interested third parties can be confronted by precedents that could also have negative effects for their own access requests.

4. Qualitative findings of Section D (Application of regulatory framework)

Section D examines the NRA's application of the regulatory framework. It seeks to determine whether (i) principles of technological neutrality and forward looking regulations have led NRAs to define markets and impose remedies which also capture NGN and NGA evolution, (ii) NRAs have taken adequate operational measures to ensure that access products are provided effectively and are of appropriate quality, (iii) NRAs have imposed and verified in a transparent manner the accounting separation remedy, (iv) NRAs have taken adequate measures to prevent discriminatory practices as well as anti-competitive leveraging and foreclosure practices. As last year, the NRAs with the best track record in this section include Ireland, the UK, the Netherlands, France and Belgium. For accounting separation, however, the effectiveness of the remedy remains rather limited in most Member States as a result of delays in publication of the accounts or ineffective redactions. The UK and Ireland remain best practice. A further analysis of the sub-sections leads to the following conclusions:

- Sub-section D.1 (Technological neutrality and forward-looking approaches) examines specifically the forward looking character of the market definition and remedies in specific markets (leased line terminating segment, wholesale broadband access and physical network infrastructure access). In particular, it examines whether the NRA has addressed specific technical and commercial issues related to the deployment of NGN and NGA and has mandated access to modern interfaces such as Ethernet and networks based on FTTH and vDSL technologies. In this regard, the questionnaire has also distinguished between the existence of a technologically neutral market analysis and the imposition of technology neutral remedies. ComReg (Ireland) and OPTA (the Netherlands) are the best-performing NRAs in this regard. In both countries, the market definition and remedies have been defined on a technologically neutral basis without speed restrictions and including Ethernet and fibre. Some countries, including Belgium, France, Finland, Spain and the UK, have adopted technologically neutral conditions on some markets but not on others. While some countries, like Bulgaria and Hungary, have not yet adopted their decisions, others, like Germany and Austria, have adopted technology based market definitions that have the effect of excluding certain forms of next generation access networks from regulation. Finally, it is interesting to note that only Belgium, Ireland and Spain provide for a five year notice period for the closure of MDF sites, as foreseen in the Commission's draft NGA Recommendation.
- Sub-section D.2 (operational conditions) examines whether the NRA has adopted measures aimed at ensuring equivalence of outputs for key bottleneck products and key enablers to facilitate migration between wholesale access products. For pan-European operators, it is

particularly critical to have adequate safeguards on the access conditions in these countries to enable a level playing field. AGCOM (Italy), CMT (Spain), ARCEP (France), OPTA (the Netherlands) and OfCom (UK) have established the best practices in relation to SLAs, KPIs and other migration/synchronization processes. This allows new entrants to have adequate safeguards on the quality of the access conditions and migrate between various types of wholesale accesses. Countries that have done little in relation to this type of issues are Bulgaria, Finland and Sweden.

- Sub-section D.3 (Accounting Separation). Since the publication of the first Scorecard Report, the authors have pointed out that effectiveness of the accounting separation remedy was critical to guaranteeing compliance monitoring of pricing issues. With the notable exception of Germany, the Netherlands, and Switzerland, accounting separation is generally typically introduced when a firm has been declared SMP. The methodology is also generally published, although sometimes not in sufficient detail. The only countries where accounting separation has been imposed without publication of the methodology are Austria, Slovenia and Sweden. However, it remains a primary concern that the accounts themselves are not published in a timely or in a sufficiently detailed manner in over 80% of the countries surveyed. Historically, the UK and Ireland have always been best practice countries in respect of accounting separation. They still score best this year, as joined by Belgium.
- Sub-section D.4 (non-discrimination and prevention of leveraging/foreclosure). Adequate mechanisms should be in place to restrict incumbents from gaining artificial benefits over their competitors as a result of their control over key bottleneck access products and vertical integration. Such measures include explicitly setting out the scope of the non-discrimination remedy in the case of self-provisioning, imposing the principle of the equivalence of inputs and imposing Chinese walls between wholesale and retail divisions. Only about half the countries impose appropriate Chinese walls obligations. Furthermore, obligations to provide a wholesale offer before launching a retail offer and to guarantee the equivalence of inputs have only been imposed cumulatively in the UK and Denmark, but no such obligation is imposed in countries such as France, Greece, Slovenia, Spain, Sweden, Switzerland and Turkey. This section also examines whether the NRA has addressed margin squeeze, bundling and discounting practices that could foreclose competitors. None of these practices has ever been addressed in countries such as Poland, Sweden, Switzerland and Turkey. This Report, however, should not lead to conclusions that NRAs have been very active in tackling those issues. On the contrary, it appears that there may be a general lack of enforcement against those practices and that NRAs have generally failed to establish clear principles that go beyond the existing principles of competition law to effectively address the specific needs of asymmetric market conditions. Finally, it is notable that over two-thirds of the countries surveyed have imposed neither truly cost

oriented MTRs in accordance with the Commission Recommendation on termination rates, nor any internal non-discrimination obligations. Overall, best practices in this section are those of the UK and Denmark while other countries including Sweden, Switzerland, Slovenia and Turkey have been relatively inactive on those issues.

5. Qualitative findings of Section E (Regulatory and Market Outcomes)

Section E examines current regulatory and market outcomes thereby in part reflecting on the effectiveness of regulatory measures imposed in previous years as well as the result of market developments. It is composed of four sub-sections, *i.e.*, on fixed voice services, on mobile and wireless services, on business services and on broadband services. Countries performing best across all sub-sections are the Netherlands, Norway, UK, Denmark, Austria, Portugal and France. While the weak performance of some new Member States may be attributed to a later implementation of the regulatory framework, it is noteworthy that amongst the more advanced economies the performances of Belgium, Ireland and Greece is particularly weak. The individual results of the sub-sections can be summarized as follows.

- Sub-section E.1 (voice services). Sweden, Portugal and Norway benefit from the most competitive environments for fixed voice services overall, closely followed by the Netherlands, Denmark and the UK. Meanwhile competition in fixed voice remains limited in Belgium, Bulgaria, the Czech Republic, Ireland, Finland, Poland, Spain, Switzerland and Turkey, although this Finland and Poland benefit from competitive mobile services.
- Sub-section E.2 (mobile services). The best performing country is Austria, followed by the UK, the Nordic countries and the Netherlands. The countries with competitive mobile and wireless markets include the Nordic countries, which have traditionally implemented liberal frequency policies (see findings in Section A). Roaming tariffs are low in Austria and the UK. Competition is weak in Turkey, Greece, Czech Republic and Slovenia. The use of mobile Internet services and of mobile broadband data dedicated services is particularly developed in Austria, Finland, Ireland and Sweden.
- Sub-section E.3 (business services). Competitive conditions and low prices are achieved in the Netherlands and Portugal closely followed by France and the UK. The lowest performing are Bulgaria, Czech Republic, Greece, and Turkey. Turkey and Poland are the only countries with no available wholesale leased lines terminating segment. Effective take up of Ethernet-based services is currently limited to Austria, Belgium, France, the Netherlands, Norway, Portugal and the UK. Specific business grade DSL products are still not available in Bulgaria, Greece, Poland, Sweden and Turkey.
- Sub-section E.4 (broadband). The Netherlands, Norway and France perform most strongly overall. Average prices ranges from 8 EUR in the UK to 62 EUR in Poland. Fibre full loop or sub loop (from the ODF) is only available in Finland, France, the Netherlands, Norway and Sweden. Sub loop unbundling is only available in about a third of

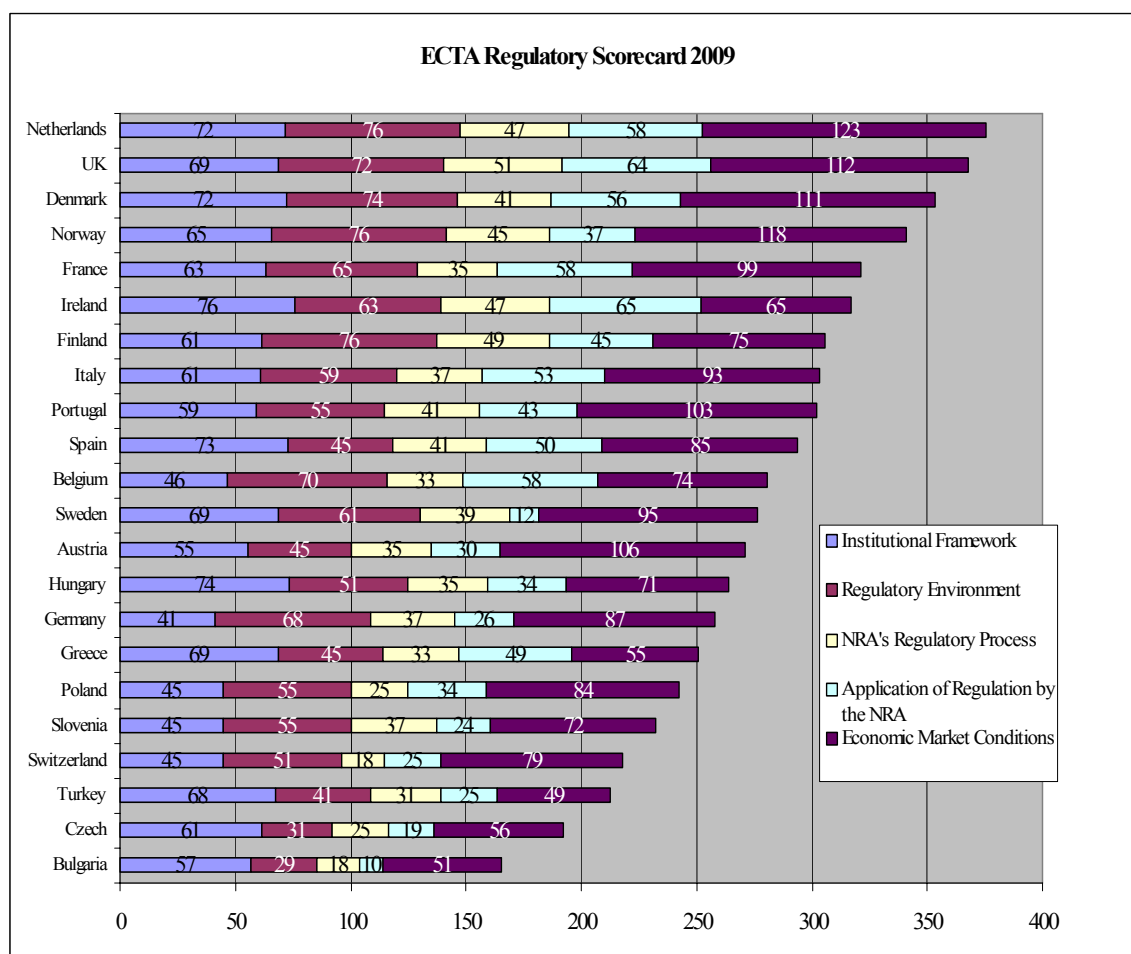
the countries surveyed. Similarly, naked bitstream is still not available in some nine of the countries surveyed. Triple play is not available in Poland and Turkey, and the most competitive markets are found in Denmark, Hungary and Norway.

B. Quantitative findings

In this section of the report, we present some quantitative analysis of the Scorecard examining internal relationships and the effect on market outcomes. We divide this into five areas: (i) overall results, (ii) institutional framework, (iii) general market access enablers, (iv) effectiveness of implementation, and (v) economic market conditions.

Overall Results. In calculating the overall scores for regulatory effectiveness, the same weighting has been given for each individual question. This is consistent with the approach taken in previous Scorecards and reflects previous findings that different weighting mechanisms did not significantly affect the outcome (see Table 3 below). The only exceptions to application of standard weightings are where, to capture data in a more granular fashion, several questions are asked on the same subject. This is the case for example for questions 72 and 73, for some questions in Sections E1 (Narrowband Voice) and some questions in E4 (Broadband). This adapted weighting prevents certain topics from carrying a disproportionate weight in the Scorecard. Two questions (112 and 117) concerning broadband parallel infrastructures and broadband pricing have been given a high weight to ensure that these important criteria receive sufficiently high weighting. On this basis, the overall results are presented in the graph below.

Figure 7: Scorecard Results by Section



For the first time, the Netherlands is the highest scoring country, just above the UK. This is based on unweighted results. There are no particular areas where the UK underperforms and thereby flags a warning signal. The cause therefore appears to be that the Netherlands has improved to the same extent as any slip in the performance of the UK.

If all sections are equally weighted, the UK would remain the highest scoring country by one point.

There is also a swap of positions between last year's third and fourth rankings. Denmark comes in third this year, while Norway slips to fourth place. France and Ireland are fifth and sixth. As with last year, and given the need to take account of a margin of error, these countries should, as a group, be considered as the leading countries.

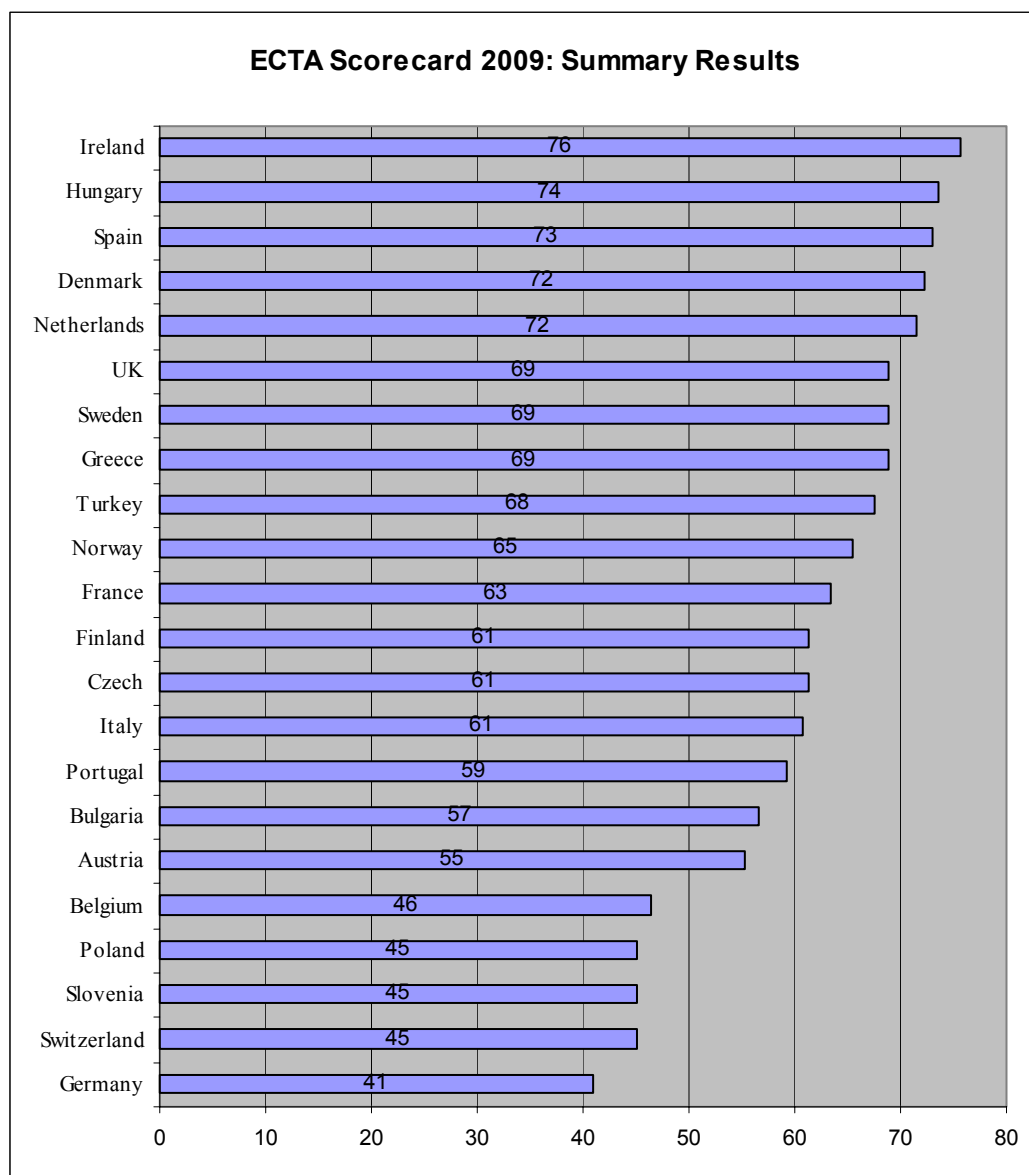
Germany is ranked lower than in 2008 from 12th in 2008 to 15th this year. This position remains to a large extent due to a relatively poor institutional framework and poor application of regulation. Both Austria and Hungary are also ranked lower than in 2008.

Belgium is the country that increased most this year, up FOUR places, from 15th in 2008 to 11th this year. Spain, Sweden and Poland are other countries which have improved their ranking.

Institutional Framework

Figure 8 presents the results for Section A (Institutional Framework). Ireland has the highest score, followed by Hungary, Spain and Denmark. The last rank is Germany.

Figure 8: Scorecard Results: Section A



We have also conducted a more detailed analysis of the relationship between (i) those parts of the Scorecard for which responsibility lies with national Governments - namely the Institutional Framework, (Section A) with the addition of provisions on rights of way (section B1) and (ii) the results for the remaining Sections. This generates a number of interesting findings.

Correlating the Institutions (Section A1 to B1) score against the remainder of the Scorecard (Sections B2 to E4) we find a positive, though not particularly strong

relationship. The correlation coefficient is 39% which is the same as we found in 2008.

Of most interest are the countries that have a poorer performance than their institutional score would suggest. Figure 9a shows the relationship. Those countries below the line have a weaker Performance score than we would expect given the strength of their institutions. We have labelled those countries which lie furthest from the trend line. As can be seen, these countries are Bulgaria, THE Czech Republic, Greece, Hungary and Turkey. Figure 9b shows the same relationship in the 2008 Scorecard.

Figure 9a: Relationship between Institutional Environment and Performance (2009)

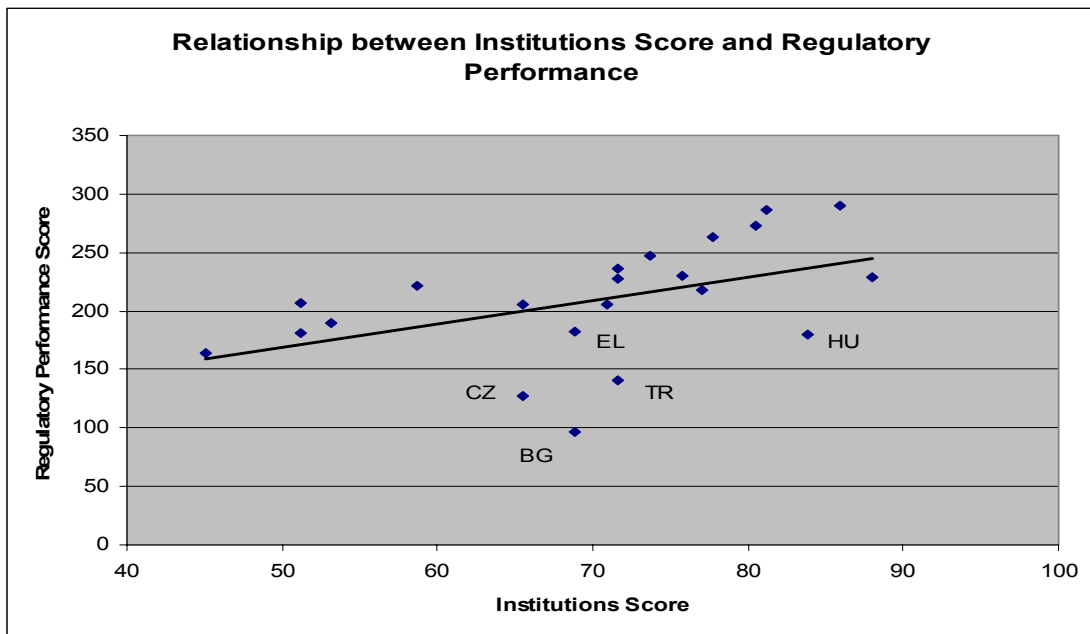
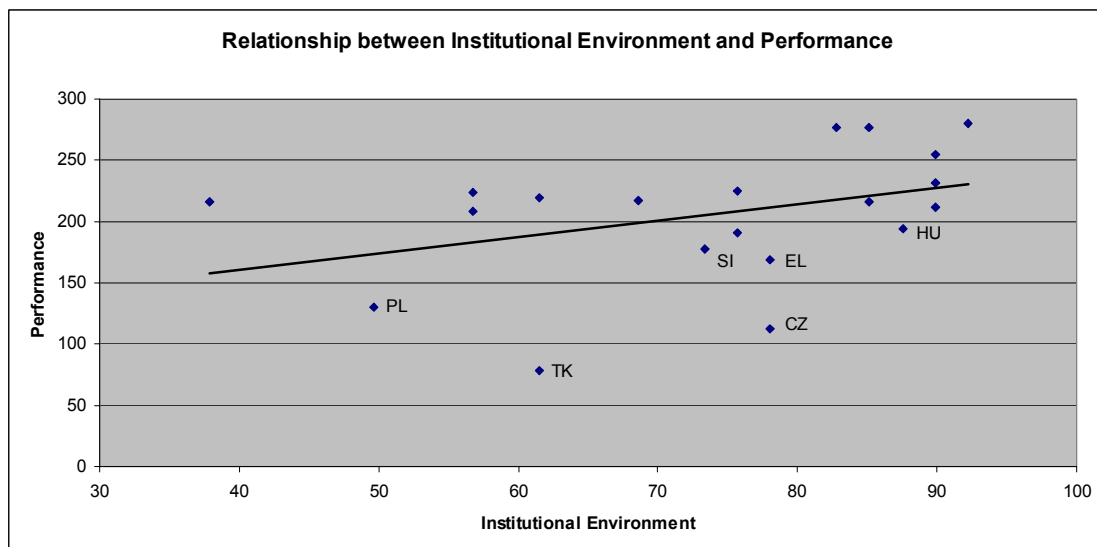


Figure 9b: Relationship between Institutional Environment and Performance (2008)



Comparing the two figures, we see that Poland (PL) and Slovenia (SI) are no longer performing below the level we would expect given their institutional score and have improved their regulatory and market performances. We also see that Greece, which was well below the line in 2008 is now performing at close to the level we would expect.

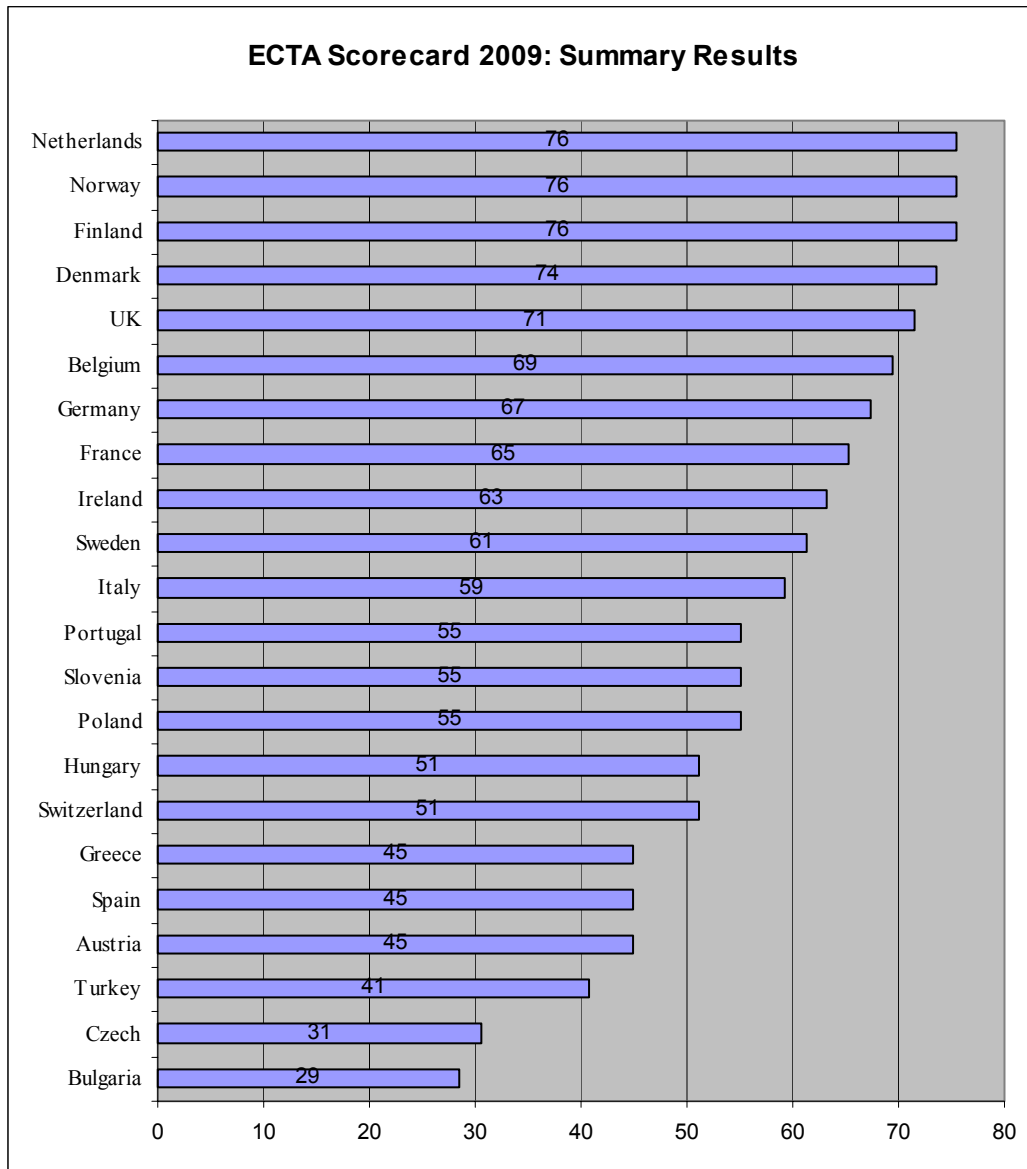
Turkey, Hungary and the Czech Republic are still performing below expectations, as is Bulgaria which we have included for the first time. There is substantial opportunity for these countries to improve their overall position if they can overcome remaining issues related to implementation of regulation in the marketplace in order to drive beneficial market outcomes.

General Market Access Enablers.

Figure 10 shows the results for Section B. Finland, the Netherlands and Norway share the highest score. As in 2008, Germany performs substantially better for this section than it does for the Scorecard overall.

The two sub-sections on Rights of Way and Numbering correlate strongly with the overall results.

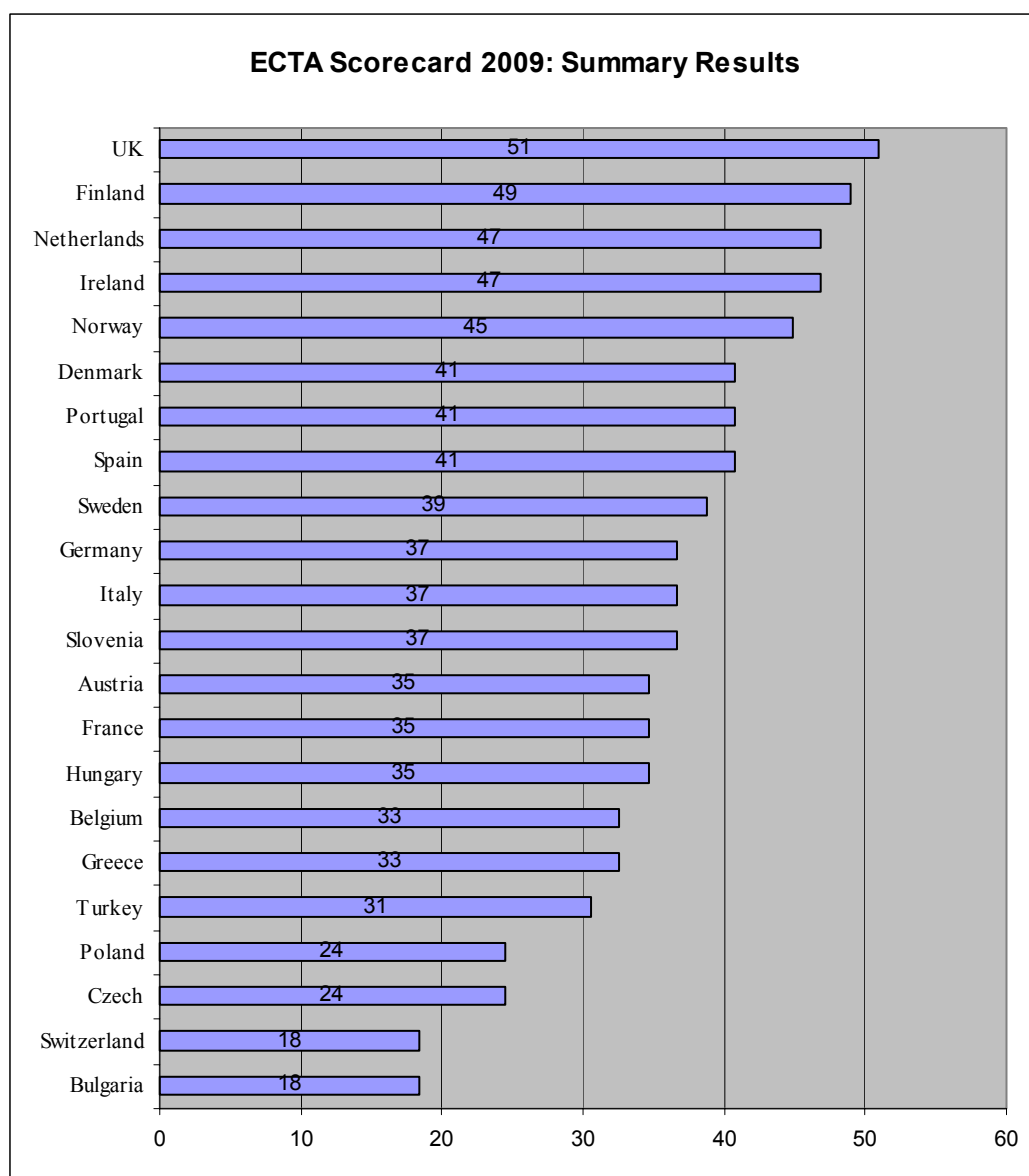
Figure 10: Scorecard Results: Section B



Efficiency of implementation.

Figure 11 shows the results for Section C. The six best performing countries in this section are also the best overall performers. It is not surprising therefore that Section C correlates most strongly with the overall results, with a coefficient of 90%.

Figure 11: Scorecard Results: Section C



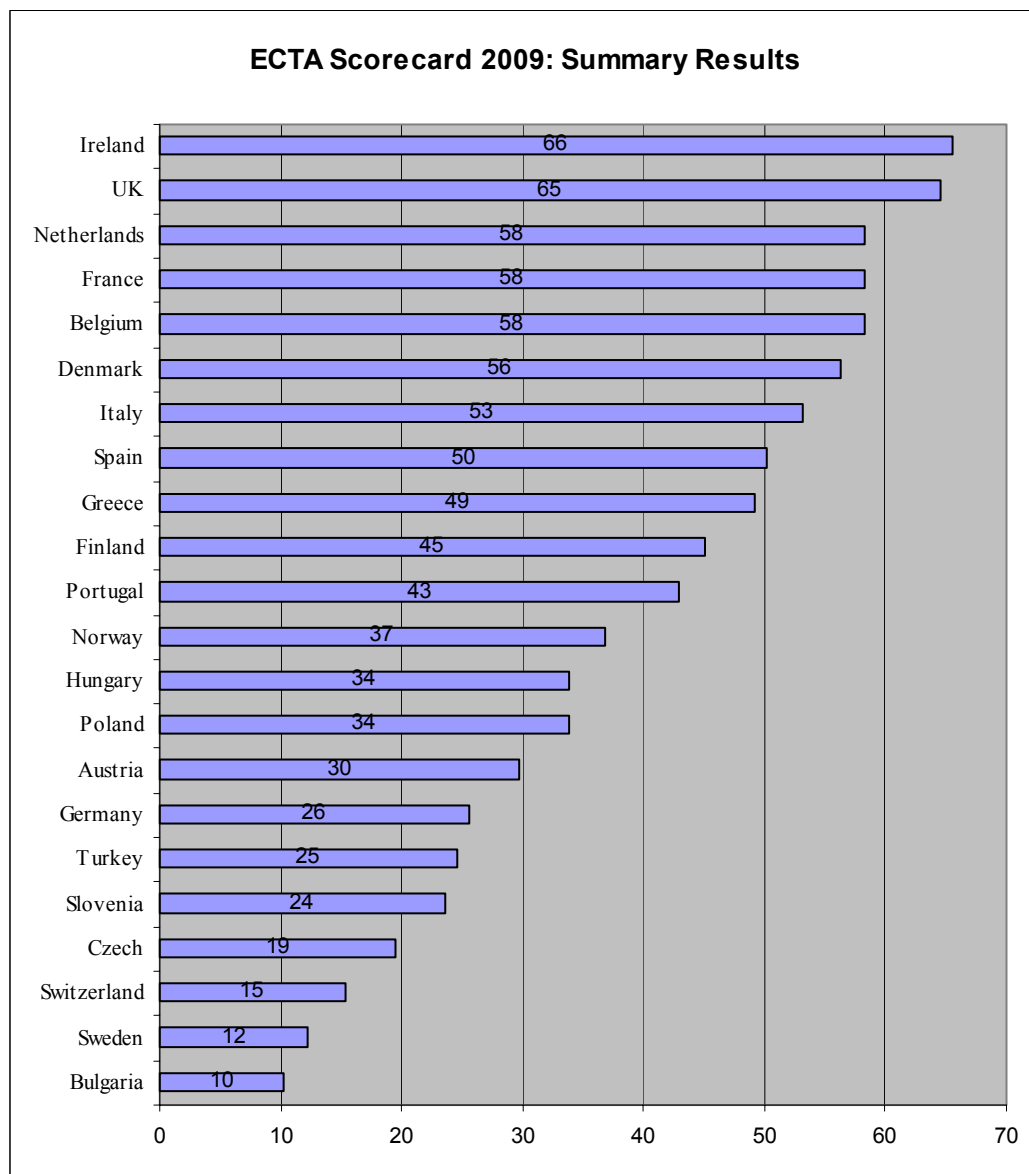
The UK, Finland, the Netherlands and Ireland perform strongly for this Section. Less efficient or transparent processes are found in Bulgaria, the Czech Republic and Switzerland, although it should be noted that processes may be negatively influenced by the institutional environment – such as the ex post system prevailing in Switzerland or the late implementation of the Framework in Bulgaria.

Application of Regulation by the NRA.

Figure 12 shows the results for this Section. Ireland has the highest rank closely followed by the UK and then the Netherlands and Belgium and France (which all score equally). As in 2007 and 2008, Sweden's overall ranking in the Scorecard is diminished by its poor performance in this section.

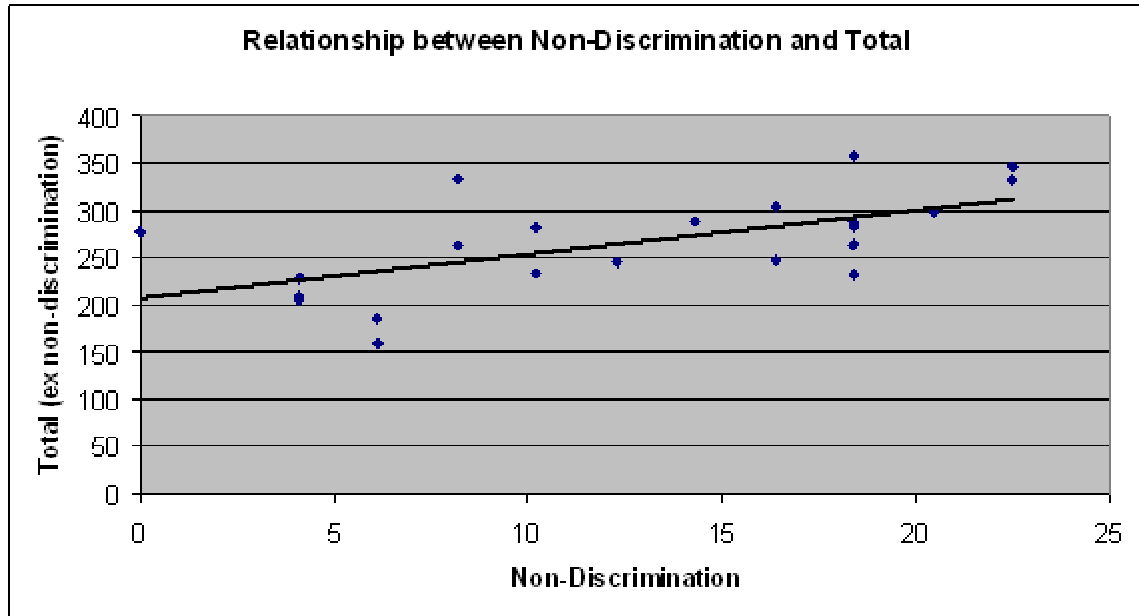
Within this section, only D3, which covers accounting separation and the publication and content of separated accounts does not correlate strongly with the overall result.

Figure 12: Scorecard Results Section D



The effective application of non-discrimination measures is key effective outcomes. We have correlated the score each country receives for Section D4 of the Scorecard which measures non-discrimination measures against the overall results, excluding D4, and find a strong and positive correlation of 61%, indicating that better market outcomes are associated with effective non-discrimination measures (Figure 13).

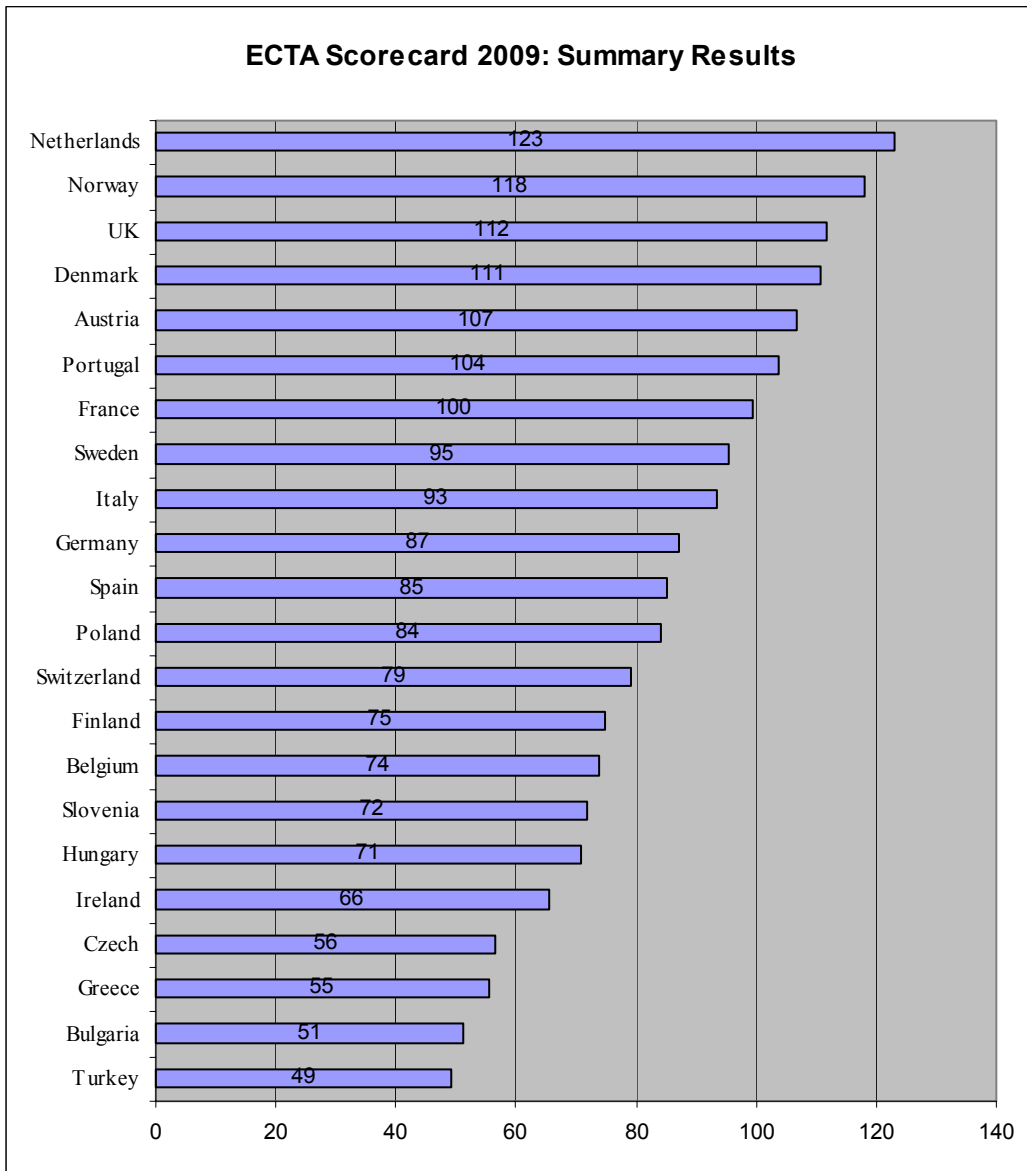
Figure 13: Relationship between Non-Discrimination and Total Score



Economic Market Conditions.

Section E covers conditions in key markets accounts for 158 of the 485 available points, and so has an important role in the Scorecard. The results of this Section correlate strongly with the overall results of the Scorecard, having a correlation coefficient of 80%. The results are shown in Figure 14.

Figure 14: Scorecard Results Section E



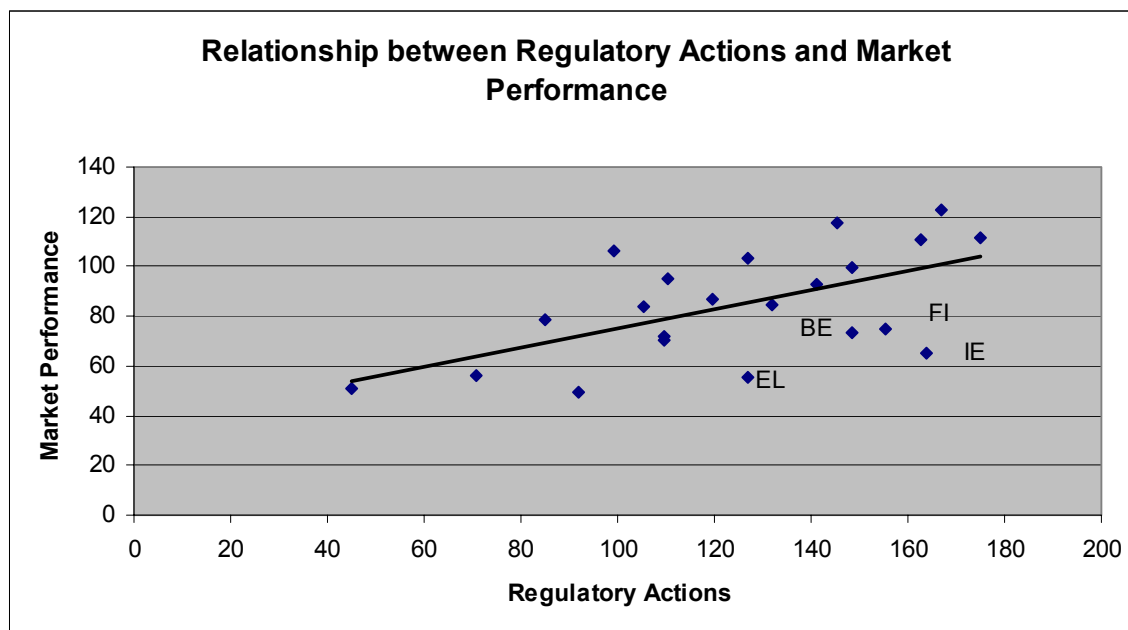
The Netherlands obtains the highest score in Section E, followed by the UK and Denmark. Norway and France also perform particularly well on broadband. Some countries like, Austria and Portugal, are in the lowest quartile for Section A but still achieve top marks for Section E, indicating that despite institutional weaknesses they were able to obtain good results for consumers.

Because of its important role in the Scorecard, we have undertaken more detailed analysis of the results of this section, examining the relationship of this section both with the NRA actions and with key market outcomes for consumers with regard to mobile and broadband.

Relationship with NRA Actions.

Sections B2 to D4 cover NRA actions to ensure efficient outcomes for competition and consumers which are quantitatively measured in Section E. Correlating the scores of these Sections we find that there is a positive and strong correlation of 59% (Figure 15). Belgium, Greece, Finland and Ireland all underperform compared with their regulatory actions. In the case of Greece this may be because recent improvements in regulatory actions are not yet seen in market performance.

Figure 15: Relationship between NRA Actions and Market Conditions



Mobile. Our first area of interest within section E is to establish whether there is any relationship between the presence of real MVNOs, and the structure of the mobile market and consumer benefits, notably in relation to lower prices.

We can divide the twenty two countries in the Scorecard into two groups: countries where real MVNOs are present (fifteen countries) and those where MVNOs are not present (seven). The table below shows the mean HHI and basket prices for low and medium, as defined by the OECD.

Averages	Mean			Sample
	HHI	Low	Medium	
No MVNO	3,732	12.32	21.58	7
MVNO	3,090	9.49	17.63	15

Where MVNOs are present, the market has a lower HHI, suggesting a more competitive market. It is not surprising therefore that in those countries where MVNOs are present the average retail price baskets are also lower.

We caution against drawing overly strong conclusions from the above analysis, however, as the samples are small and a statistical test of each pair of means shows

that the difference between the means is not significantly different from zero. However, all differences between the means are as we would expect and are consistent with findings in both 2007 and 2008. We can therefore have a degree of confidence that MVNOs do have a positive impact on consumer outcomes.

Secondly, it has long been argued by mobile operators that lower termination rates would lead to increased retail prices, in particular for low users – the “waterbed” effect. If this were the case, we would expect to see a negative relationship between termination rates and retail prices particularly for low users: as termination rates increased retail prices could decrease overall. We have therefore run a simple correlation between the weighted average termination rate used in the Scorecard and both the medium and low user basket prices. We find that no strong correlation exists. Against the medium user basket, the correlation coefficient is 26% and against the low user basket is 13%. The evidence that we have therefore does not support the existence of a waterbed effect.

Business Services. The lack of consistency of availability of wholesale products for business services has often been highlighted by suppliers of electronic communications services in this market. The results of the Scorecard show some significant problems:

- Partial Private Circuits are not available in Poland and Turkey.
- Prices of 2km, 2Mbps terminating segments vary from €1,832 to €6,457 per annum
- Prices of 2km, 34 Mbps terminating segments vary even more widely from €8,111 to €30,619 per annum. Two countries (Bulgaria and Czech Republic) did not report prices.
- Five countries reported no availability of business grade wholesale bitstream products, meaning that many businesses must rely on residential grade products or buy more expensive leased lines.

Broadband Broadband is central to the economic development and competitiveness of Member States and the EU as a whole and remains the focus of much public policy debate and regulatory developments. We therefore wish to examine what, if any, is the relationship between effective regulation of broadband inputs from SMP operators and consumer outcomes, including price and take-up.

In these assessments, we have relied on inputs within the Scorecard such as the overall broadband ranking alongside data from the OECD and Cocom concerning pricing and speeds. The OECD reports both lowest and average subscription prices in conjunction with other variables⁸ (see table). Also shown is the score for Section E4 achieved by each country.

⁸ Source: OECD Broadband Portal.

Country	Penetration (per 100 population)	Average Subscription Price (€ per month)	Lowest Subscription Price (€ per month)	Score
Austria	21.8	42.67	12.91	18.9
Belgium	28.3	35.18	20.01	11.3
Bulgaria	11.9			8.8
Czech	17.8	30.69	9.48	15.1
Denmark	37.2	47.51	21.38	20.2
Finland	30.5	33.54	16.42	12.6
France	29.2	29.16	21.91	21.4
Germany	29.4	33.08	16.41	15.1
Greece	15.6	21.34	16.51	8.8
Hungary	17.2	22.08	9.33	16.4
Ireland	21.2	32.16	19.01	10.1
Italy	19.8	26.26	19.13	18.9
Netherlands	37.9	35.46	18.01	23.9
Norway	34.5	69.95	23.81	22.7
Poland	12.8	20.45	9.27	16.4
Portugal	17.6	55.86	20.00	17.6
Slovenia	22.1			11.3
Spain	20.7	37.55	19.91	16.4
Sweden	32.5	29.19	9.61	13.9
Switzerland	33.8	37.51	16.86	15.1
Turkey	6.9	75.89	4.27	13.9
UK	28.8	22.26	5.47	20.2

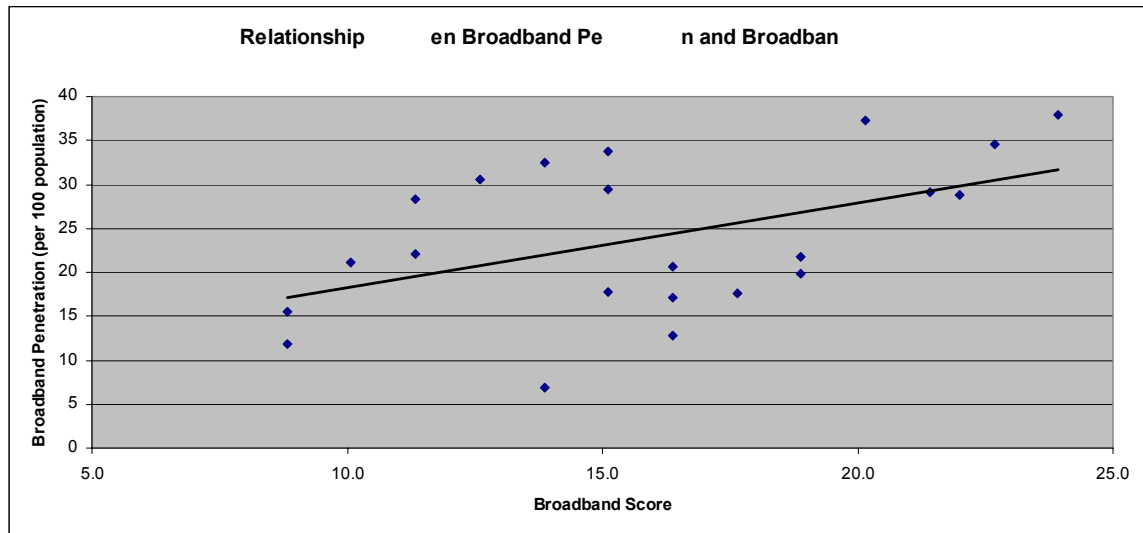
We begin with an examination of the relationship between the score each country achieves in Section E4, which covers a range of broadband indicators, and the penetration of broadband. It should be noted that broadband penetration is not measured in Section E4, though the relative share of different broadband access mechanisms including parallel infrastructure and access-based competition are measured alongside retail outcomes such as price and speed. We find a positive relationship between the two with a correlation coefficient of 49%, approximately the same as in 2008 when we found a coefficient of 50% (Figure 16).

We have also examined the relationship between the price of broadband access and penetration, and in particular the margin available to LLU operators and the share of LLU in the market place (question 109 of the Scorecard). To make this calculation, we have subtracted the weighted average cost of full and shared access LLU in each country (questions 107 and 108) from the retail price reported in question 117⁹ of the Scorecard. The weighting factor is the proportion of full and shared LLU reported in each country in the ECTA Broadband Scorecard. For example, in Slovenia, 73% of LLU lines are fully unbundled and 27% shared access, whereas in the UK the proportions are almost reversed (70% and 30% respectively).

⁹ Data in the Annexes is largely based on the Broadband Internet Access Cost (BIAC) report as at April 2008. A 2009 update was published in May 2010, but this was too late to include in the analysis. BIAC is available at http://ec.europa.eu/information_society/europe/i2010/docs/benchmarking/broadband_access_costs_1st_half_2008.pdf. Where data was not included in BIAC, this was supplemented with our own research or with data provided by respondents.

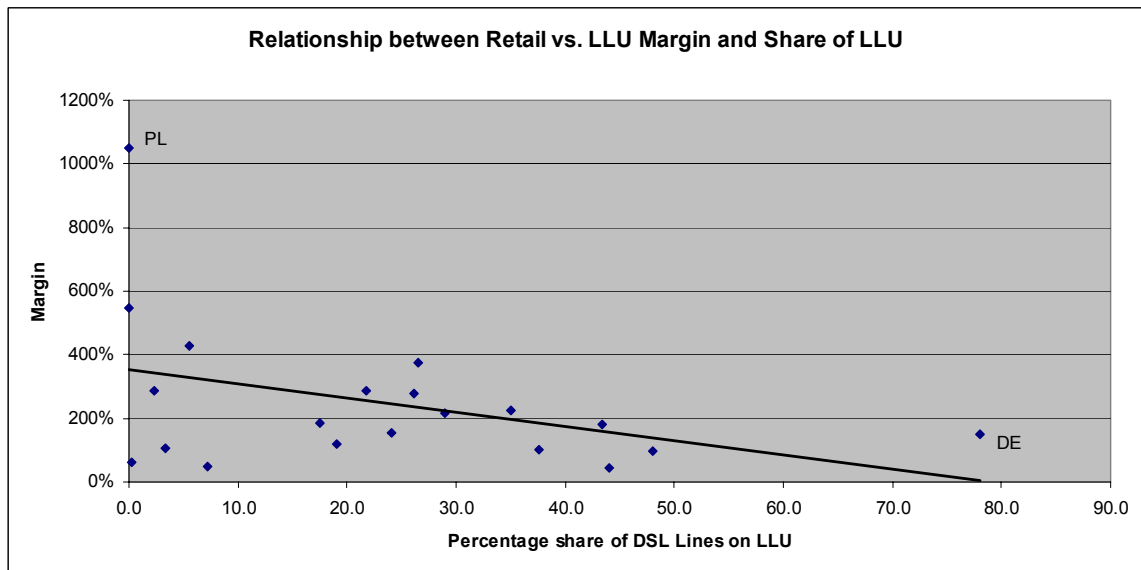
We find a moderate, negative correlation (-39%) between margin and share of LLU (Figure 17). Although correlation does not measure cause and effect, we expect that this correlation reflects competitiveness in the market driving down margins, so as LLU operators gain more share and competition intensifies, so margins are reduced and firms compete on price relative to input costs.

Figure 16: Relationship between broadband penetration and broadband score



Two outliers can be seen on the chart. Poland has a negligible proportion of LLU lines and a very high margin. Germany has a higher margin given the share of the market on LLU. If these two outliers are removed, the correlation coefficient hardly changes.

Figure 17: Broadband Retail Margin vs. Market Share of LLU



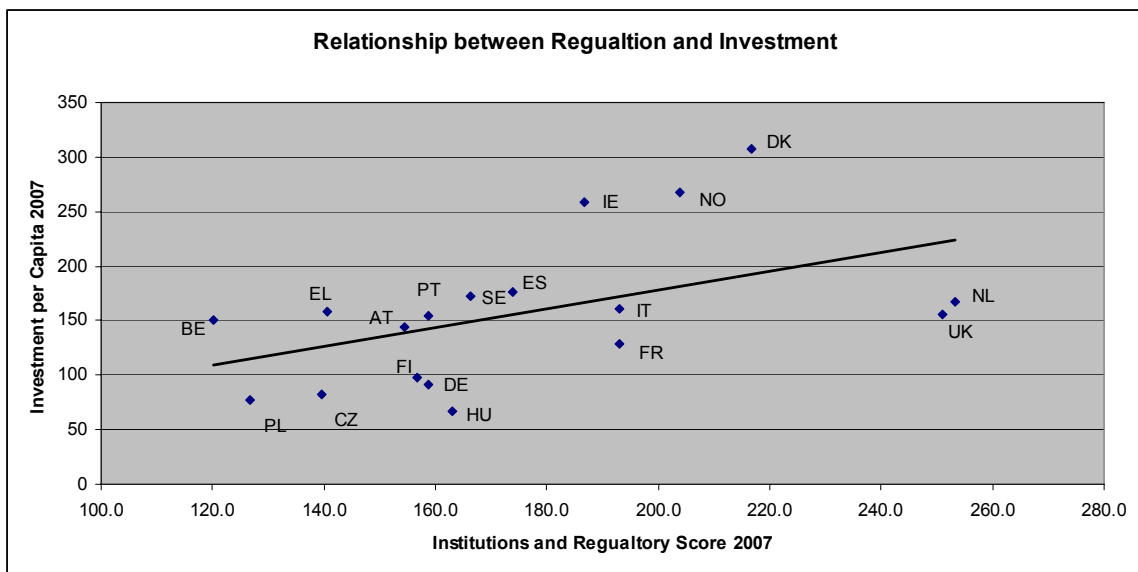
Another point to note on the chart is that there is considerably greater dispersion of margin in the countries where LLU has a share of less than 10%. The average margin in the less than 10% countries is 362% with a standard deviation of 359%, and in the more than 10% countries the average is 186% with a standard deviation of 90%

Regulation and Investment

Since the publication of the 2007 Scorecard, the OECD has published investment data for 2007¹⁰. The 2008 Scorecard was therefore our first opportunity to monitor the relationship between investment and regulation, as measured by the Scorecard.

Figure 18 shows the correlation between the Institution and Regulatory Action score in 2007 with investment per capita in 2007 as reported by the OECD. We find a medium correlation of 49%, indicating that better regulation remains positively associated with higher levels of investment. In previous Scorecards we have shown the correlation between the total score and investment. This correlation is effectively the same at 48%.

Figure 18: Scorecard 2007 and Investment 2007



The chart shows that the Netherlands and the UK both have lower investment than we would expect, given the correlation, and that Denmark, Ireland and Norway all have significantly higher investment.

In October 2009, SPC Network published a short note on the relationship between investment in 2007 and the 2007 Scorecard in which it calculated some econometric models of the relationship between these two variables¹¹. An extract from that note is reproduced below.

“In our previous analysis [of investment and regulation] we found that, in addition to regulation, there is a positive relationship between the wealth of a country, measured by Gross Domestic Product (GDP) per capita, and investment: wealthier countries tend to invest more than less wealthy countries. In the models that we have produced using the 2007 data, therefore, we have again included both the results of Scorecard

¹⁰ OECD *Communications Outlook 2009*

¹¹ Available at www.spcnetwork.eu

and GDP per capita as explanatory variables. We report below the results of four models:

- Model 1 is a cross-section regression model using data for 2007 for 16¹² countries.
- Model 2 is a pooled model using data for the years 2005, 2006 and 2007, again for 16 countries. Pooling the data provides 48 data points.
- Model 3 is also a pooled model, but uses the log of the percentage change in GDP (DLOG) since the previous period and introduces a dummy variable (EU15) which distinguishes EU15 countries from the new member states (Czech Republic, Hungary and Poland in our sample).
- Model 4 is as Model 3 but Scorecard is lagged by one period and produces slightly stronger results.

In all four models the dependent variable is log (investment per capita). The results are presented in the table below (t-stats in brackets).

	Model			
	1	2	3	4
Constant	-6.1	-9.1	-4.4	1.4
Log(Scorecard)	0.5 (4.43)	0.3 (2.2)	0.3 (2.0)	
Log(Scorecard(t-1))				0.58 (3.1)
Log(GDP)	0.8 (6.15)	1.2 (13.1)		
DLog(GDP)			5.1 (2.7)	6.0 (3.4)
EU15 Dummy			-0.8 (-9.7)	-0.8 (-13.0)
Adjusted R ²	0.83	0.81	0.83	0.89
urbin Watson		0.73	1.85	1.99

Source: SPC Network

As all models use log values of the variables, the resulting coefficients can be interpreted as elasticities. For example, in model 4, a 1% increase in the Scorecard result in the previous year would lead to a 0.58% increase in investment per capita. The results are consistent across the four models: the Scorecard elasticity of investment ranges between 0.3 and 0.58.

All models have strong predictive abilities (indicated by the adjusted R² being close to 1.0) and all variables are significant at 5% or less. The Durbin Watson (DW) statistic indicates whether there is a problem with autocorrelation, i.e. correlation between values in a time series with the previous period in the same time series. A DW close to 2.0, as in models 3 and 4, indicates that there is no such problem.”

¹² Austria, Belgium, Czech Republic, Denmark, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Portugal, Spain, Sweden, UK. These were the 16 countries included in the 2005 Scorecard.

Once again, therefore we find that pro-competition regulation is strongly associated with higher levels of investment in the electronic communications market.

III. Areas of assessment

The chosen areas of assessment reflect the main principles set out in the EU regulatory framework and associated guidelines and recommendations of the European Commission and European Regulators Group. The first area of assessment in this survey pertains to the general institutional environment. The second area deals with the regulatory environment for key enablers for market entry and network roll-out. The third area relates to NRAs effectiveness. The fourth area examines NRA application of the regulatory tools. The fifth area examines market outcomes, in view of the application in practice of regulations and the degree of competition in key markets. Each of the five sections is scored as follows:

General institutional environment	90
Key enablers for market entry and network roll-out	98
NRA regulatory processes	53
Application of regulation by the NRA	86
Regulatory and market outcomes	158

A. General institutional environment

The first section examines the effectiveness of the general institutional framework and the legal environment in which the NRAs and market players operate. This section does not address the exercise of the tasks (generally) assigned to the NRA, but rather seeks to assess the overall effectiveness of other relevant institutional players. These include the competent political instances (at legislative or Governmental level) in charge of transposing and determining the regulatory framework, the judiciary (whether civil or administrative courts in charge of appeals against regulatory decisions), and the applicable legislative framework.

The report updates the criteria for this section in order to address changes caused by the 2003 regulatory framework, market developments, and relevant factual data reflecting the effectiveness of each institutional player. Given the institutional complexity of each Member State, six areas of assessment compose this section.

Section A.1 Question 1 examines the proper transposition of the EU regulatory framework. Legal uncertainty causes failures in the framework's transposition, which can hamper or delay the application of regulation to reduce barriers for market entry and diminish the Member State's ability to address economic bottlenecks. The sole issue covered in this section is Question 1, which examines if Member States correctly transposed the regulatory framework. The Commission's infringement proceedings are a measurable proxy for the adequacy of such transposition. The list of proceedings is based on the list published by the Commission of infringement procedures for incorrect implementation, unless where the Commission has recognized that it closed the case without any corrective measures. The report gives a maximum score (3/3) to countries with no infringement proceedings initiated in the

last 3 years, an upper intermediate score (2/3) to countries with no pending open infringement proceedings, a lower intermediate score (1/3) to countries with one infringement proceeding open on 31 December 2009 and zero to countries with more than one infringement proceeding open on 31 August 2008.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
1	Proper transposition of the EU regulatory framework.	Maximum (3/3) to zero.	3/3 for countries with no initiated infringement proceedings. 2/3 for countries with no pending infringement proceedings. 1/3 for countries with one open infringement proceedings. Zero for countries with more than one open infringement proceedings.

Section A.2 examines the enforcement powers entrusted to the NRA. The NRA bears the primary responsibility of regulating markets to achieve the objectives of the regulatory framework and to ensure effective compliance with SMP-obligations. To that effect, the NRA should have specific and explicit powers enabling it to impose all adequate measures, including functional separation, equality of inputs and accounting separation. Furthermore, in order to ensure effective compliance with SMP-obligations, the NRA's sanctioning powers should allow it to impose fines as well as periodic penalty payments. It should also have the power to order the suspension of new offers pending scrutiny and should be able to impose fines as from the date that an offence first occurred. Finally, NRAs should be empowered to collect information on the network deployment plans of operators and to conduct inspections at the corporate or operational premises of SMP operators to impose and monitor compliance with *ex ante* obligations. Anti-competitive practices can have structural effects on the electronic communications market and often allow operators to reap long term benefits from illegal practices. The Commission's cases involving Deutsche Telekom, France Télécom and Telefonica show that incumbents have been tempted to engage in anti-competitive practices in developing markets (such as broadband) to exploit first mover advantages and create artificial barriers to entry on these markets.

Question 2. Question 2 examines if the Member State empowers the NRA to impose fines and up to what level. The report gives a maximum score if the NRA can impose fines for violations of SMP-obligations with deterrent effect (*i.e.*, 5% or more of turnover of activity concerned), an intermediate score if the NRA cannot impose fines or sanctions but another authority can. The report gives a score of zero if an institution can impose a fine, but without sufficient deterrent effect (again assessed on the basis of the amount of the potential fine compared to offender's turnover) or if no fine can be imposed at all.

Question 3. Question 3 examines if the Member State empowers the NRA to impose periodic penalty payments. The report considers these measures to be a particularly effective mechanism for encouraging compliance. It is also a power that the

European Commission retains as a competition law enforcer and which it has effectively used in practice. The report gives a maximum score if the NRA can impose a penalty payment and a zero if it cannot.

Question 4. Question 4 examines if the NRA can order the suspension of commercial offers pending the assessment of the offer's compliance with *ex ante* regulation. The report gives a maximum score if the NRA can impose a full suspension, even if the retail market is not regulated but relies on a regulated wholesale input. An intermediate score is given if a partial suspension can be ordered (i.e., power only granted if retail market is regulated) and a zero if the NRA cannot impose such an *ex ante* review.

Question 5. Question 5 examines if the NRA is explicitly legally prevented from imposing equivalence of inputs on SMP operators. The Report gives a maximum score if there is no such restriction, and zero if such power is restricted by law.

Question 6. Question 6 examines if the NRA can impose functional separation and the scope of such power under the law. The report gives a maximum score if the NRA explicitly has such power, an intermediate score if such power is restricted by law or if it has the ability to request such a remedy before another authority, and zero if the NRA has no such explicit power. It should be noted that the general power to impose remedies other than those explicitly provided for in the law does not suffice. The current debate on the introduction of this remedy in the review demonstrates that unless this remedy is explicitly provided for in the legislative framework, there is significant uncertainty as to an NRA's ability to impose such a measure.

Question 7. Question 7 examines if the NRA is explicitly empowered to conduct inspections at the corporate or operational premises of SMP operators. Inspections at the corporate (*e.g.*, wholesale, strategy or retail departments) and operational (*e.g.*, local exchanges) premises are critical not only to establishing *ex ante* obligations, but also to enforcing those *ex ante* obligations on an *ex post* basis. The report gives a maximum score if the NRA has the power to inspect corporate and operational premises; an intermediate score if the NRA has the power to inspect either corporate or operational premises and zero if the NRA has none of these powers.

Question 8. Question 8 examines if the NRA is explicitly restricted from collecting information on the network deployment plans of operators. The Report gives a maximum score if the NRA has such power and zero if such power is restricted by law.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
2	Power of the NRA to impose fines and up to what level ¹³ .	Maximum, intermediate or zero.	Maximum if the NRA has the power to impose deterrent fines (at least 5% of the activity). Intermediate if the NRA does not have the power to impose fines, but fines can be imposed by another authority. Zero if fines can be imposed, but without sufficient deterrent effect or no fines can be imposed.
3	Power of the NRA to impose periodic penalty payments.	Maximum or zero.	Maximum score if the NRA has the power to impose a penalty payment. Zero if the NRA does not have such power.
4	Power of the NRA to suspend the commercial launch of services pending compliance.	Maximum, intermediate or zero.	Maximum score if the NRA has such power even if the retail market is not regulated. Intermediate if such power is only granted if the retail market is regulated. Zero if the NRA does not have such power.
5	Power of the NRA to impose the equivalence of inputs on SMP operators.	Maximum or zero.	Maximum score if no restriction on the NRA's power to impose the equivalence of inputs. Zero otherwise.
6	Power of the NRA to impose functional separation.	Maximum, intermediate or zero.	Maximum score if the NRA explicitly has the power to impose functional separation. Intermediate if such NRA power is restricted by law or if the NRA has the ability to request such a remedy to another authority (such as a court) Zero if the NRA does not have such power.
7	Power of the NRA to conduct inspections at the corporate and operational premises of SMP operators.	Maximum, intermediate or zero.	Maximum if the NRA has the power to inspect corporate and operational premises. Intermediate if the NRA has the power to inspect either corporate or operational premises. Zero if the NRA has none of these powers.
8	Power of the NRAs to collect information on the network deployment plans of operators.	Maximum or zero	Maximum if the NRA has such power. Zero if such power is restricted by law.

Section A.3 examines the NRA's scope and scale of resources. The ability to attract qualified employees is a particularly important factor in assessing the NRA's ability to operate effectively. The report also considers that the Member State can further improve the coherence and effectiveness of the regulatory framework if it entrusts the NRA with powers in relation to spectrum policy.

¹³ If the NRA also has powers to enforce competition law obligations, only the ex ante sector-specific sanctioning powers have been taken into account.

Question 9. Question 9 examines if the NRA has the legal and financial ability to set the level of remuneration of its employees. This ability is important to enabling the NRA to attract and retain qualified staff. The report gives a maximum score if the NRA has this ability to set the level of remuneration of its staff or if it is pegged to a pay scale that is higher than regular pay-scales, an intermediate score when salary is tied to civil service rates but the NRA has financial incentive schemes, and zero if the NRA has no such power or has insufficient financial resources.

Question 10. Question 10 examines if the NRA has responsibility for spectrum. Homogeneity and coherency of regulation, as well as independence, is better achieved if the NRA is also in charge of spectrum. The report gives a maximum score if the NRA has full spectrum responsibility, an intermediate score if it has responsibility for either elaborating the frequency allocation plan or granting the right to use spectrum, and a zero if the NRA has no such responsibility.

The table below explains the weight the report gives to this section’s assessment criteria:

	Criteria	Weight	Comments
9	Financial capability of your NRA to attract and retain suitably qualified key staff	Maximum, intermediate or zero.	<p>Maximum score if the NRA has the ability to set the level of remuneration of its staff or benefit from a higher pay-scale.</p> <p>Intermediate when salary tied to civil service rates, but the NRA has financial incentive schemes.</p> <p>Zero if the NRA has no such power or has insufficient financial resources.</p>
10	NRA responsibility for spectrum	Maximum, intermediate or zero.	<p>Maximum score if the NRA has full spectrum responsibility.</p> <p>Intermediate score if it has responsibility for either elaborating the frequency allocation plan or granting of the right to use spectrum</p> <p>Zero if the NRA has no such responsibility.</p>

Section A.4 examines the NRA’s independence. The report assesses independence, *inter alia*, on the following basis: the extent to which the Member State limits the NRA’s discretion by law, the potential and actual extent of political intervention, and the grounds for removal. Political influence is the most direct means of influencing the regulator, and the mere possibility of political intervention may put the regulator under pressure. Such pressure is likely to increase when the Government wholly or partially owns or controls the incumbent operator.

Question 11. Question 11 examines if the Member State’s legislature imposes any restrictions on the NRA’s discretion to exercise its powers granted under the EU regulatory framework (such as the power to collect relevant information, conduct market analysis and select appropriate remedies). The report gives a maximum score where there are no restrictions and a zero where the legislature restricts this discretion by law.

Question 12. Question 12 examines if the Minister or the Government has the power to give instructions to the NRA and if such powers have been exercised. The report gives a maximum score if no instructions can be given, an intermediate score if there are no direct powers for issuing instructions, but indirect powers with similar effects and zero if the Member State has given or can give binding directions.

Question 13. Question 13 examines if a Government Minister's order must precede or follow certain NRA decisions before these can be adopted or entered into force. In other words, is there an explicit procedural requirement in the adoption process allowing the Government to intervene or some form of administrative appeal before the Minister or Government? The report gives a maximum score if the NRA can adopt all its decisions without prior or subsequent Governmental intervention and a zero where certain NRA decisions are dependent on a prior or subsequent governmental intervention or if there is a process which enables the Government to suspend NRA decisions.

Question 14. Question 14 examines the grounds for removal of the NRA's head. The report gives a maximum score if the Member State limits and restricts the grounds for removal (diminishing the risk for politically motivated decisions)¹⁴. The report gives an intermediate score if the grounds for removal are very broad and a zero if there are cases of removals on political grounds.

Question 15. Question 15 examines the percentage of the incumbent's share capital held by the Government. The report gives a maximum score if the incumbent is entirely privatized, an intermediate score where State ownership is without control and below 30%, and a zero where State ownership confers control or exceeds 30%. The report will also give a zero if the Member State has less than a 30% interest but still retains substantial veto rights over the incumbent's management.

The table below explains the weight the report gives to this section's assessment criteria:

¹⁴ For example, members of the Executive Board can only be dismissed for serious misconduct by the Court of Justice upon application of the Governing Council or Executive Board.

	Criteria	Weight	Comments
11	Restrictions on the NRA's discretion for the market analysis and imposition of remedies	Maximum or zero.	Maximum score if no restrictions. Zero if restrictions.
12	Power to give instructions to the NRA	Maximum or zero.	Maximum score if no instructions can be given. Intermediate score if there are no direct powers for issuing instructions, but indirect powers with similar effects Zero if binding instructions can be or are given in practice
13	Governmental intervention required for adopting decisions	Maximum or zero.	Maximum score if no Governmental intervention is required. Zero if Governmental intervention is required or if there is a process which enables the Government to suspend NRA decisions.
14	Grounds for removal of the head of your NRA.	Maximum, intermediate or zero.	Maximum score if the grounds for removal are restrictive (serious misconduct). Intermediate if grounds for removal are very broad. Zero if cases of removal on political grounds.
15	Percentage of the incumbent's share capital held by the Government.	Maximum, intermediate or zero.	Maximum score if full private ownership. Intermediate score for State ownership without control and below 30%. Zero for State ownership conferring control or exceeding 30% or below 30% but with substantial veto rights.

Section A.5 examines the NRA's power as a dispute settlement body for settling disputes under Article 20 of the Framework Directive, an important function the directives establish. The selected criteria for assessing the effectiveness of the dispute settlement procedure are the following:

Question 16. Question 16 examines whether the dispute settlement body is the same body as the NRA. The report gives a maximum score if it is the same and a zero if it is not.

Question 17. Question 17 examines if the Member State empowers the dispute settlement body to impose interim measures on pending disputes. The report gives a maximum score if the dispute settlement body can order interim measures and a zero if the dispute settlement body has no such power.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
16	Competence of NRA for dispute settlement matters.	Maximum or zero.	Maximum if same authority. Zero if not.
17	Power of the dispute settlement body to adopt interim measures.	Maximum or zero.	Maximum score if the dispute settlement body can order interim measures. Zero if the dispute settlement does not have such power.

Section A.6 examines the effectiveness of the appeals procedure. The possibility of appealing decisions of the regulator and the way in which such appeals are implemented in practice can significantly impact the effectiveness of a regulatory regime. Appeals of market analysis decisions create significant legal uncertainty on the market, which is detrimental to all market players (and new entrants in particular who are more likely to depend on regulated access products for developing their activities). The suspensive effect of such appeals, or the possibility of suspending the decisions of the regulator by means of a Court injunction, has proven to present a potential hurdle for new entrants seeking to ensure that SMP operators effectively comply with the decisions of the regulator. In addition, the timeframe for obtaining a decision on appeal and the likelihood that decisions are overturned are important given the inherent legal uncertainty caused by such appeal processes and their potential retroactive effects. To the extent this information was not available in detail, the answers are based on the contributors' estimates of the SMP operator's general tendency to challenge NRA decisions.

Question 18. Question 18 examines the standard the court applies to suspend an NRA decision under appeal (as a result of the law or on the basis of its own judicial decision). The report gives a maximum score if the court applies the conditions restrictively and a zero if not.

Question 19. Question 19 examines the average time of the appeal procedures (including all appeal levels). The report gives a maximum score if the appeal processes have been shorter than 12 months, an intermediate score if the appeal processes have ranged between 12 and 24 months, and zero if the appeal processes have exceeded 24 months.

Question 20. Question 20 examines the *locus standi* requirements which third parties must fulfil to be allowed to challenge said decisions. The report considers restrictive *locus standi* requirements detrimental, insofar as they limit the ability for new entrants to challenge decisions involving SMP operators, even though they are affected by those SMP obligations. The report gives a maximum score when the *locus standi* requirements allow interested parties to challenge NRA decisions in appeals proceedings, an intermediate score when there are doubts regarding the possibility for interested parties to challenge, and a zero for countries where *locus standi* requirements have restricted the ability for interested parties to challenge the NRA decisions.

Question 21. Question 21 examines the number of relevant markets – both from the Commission's original and revised Recommendation on relevant markets – where an appeal has been brought against the market analysis decision or an implementing decision thereof. The question is limited to market analysis decisions, including all

implementing decisions adopted between 1 January 2007 and 31 December 2009 that have been appealed by 31 December 2009. The highest score is given to countries where the number falls into the lowest-third of the distribution of surveyed countries; an intermediate score is attributed to those in the middle-third, and a zero is given to countries in the highest-third.

Question 22. Question 22 examines the number of market reviews amended or annulled. The report gives a maximum score to countries where no market review has been amended or annulled and zero where at least one market review was annulled.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
18	Applicable standard to obtain suspension of the NRA's decision and application in practice (if applicable)	Maximum or zero.	Maximum score if there is a strict standard. Zero if there is a lax standard (<i>i.e.</i> no requirement if "irreparable harm" (or similar legal standard requirement) or lax application in practice).
19	Average (median) timeframe between the filing of an appeal and the final decision (<i>i.e.</i> , entire appeal process is exhausted)	Maximum, intermediate or zero.	Maximum score for process less than 12 months. Intermediate score for appeal process ranging between 12 and 24 months. Zero if appeal process exceeds 24 months.
20	<i>Locus standi</i> requirements for third parties to be allowed to challenge NRA decisions	Maximum, intermediate or zero.	Maximum score for <i>locus standi</i> requirements allowing interested parties to appeal. Intermediate score if there are doubts regarding the possibility for third party to appeal. Zero where <i>locus standi</i> requirements restrict the ability for interested parties to appeal.
21	Market analyses being appealed	Maximum, intermediate or zero.	Maximum if the number falls into the lowest-third of the distribution of surveyed countries. Intermediate score if the number falls into the middle-third. Zero if the number falls into the highest-third
22	Number of judgements annulling or overturning appealed market analysis	Maximum or zero.	Maximum score for countries where no market analysis was amended or annulled Zero if one decision was amended or annulled.

B. Key enablers for market entry and network roll-out

Section B identifies the general regulatory enablers that are considered to contribute to market entry and network roll-out, independently of potential SMP-access regulation. They include rights of way and facility-sharing, numbering regulation and frequencies.

Section B.1 examines the regime pertaining to the rights of way, an important enabler to promoting infrastructure competition. The report assesses this regime by examining if there is a single authority or at least a common nationwide procedure for rights of way and finding the cost and average timescale for the application process governing these rights. It should be noted that the rights of way regime is often a

matter which falls outside of the NRAs' competences and under a general administrative law regime.

Question 23. Question 23 examines if there is a single authority or a common, nationwide procedure establishing rights of way for telecommunications and an application process governing these rights. The purpose of this question consists of promoting regimes that establish a one-stop-shop procedure with a central administration (ideally the NRA). The report gives a maximum score if there is a single authority, an intermediate score if a common nationwide procedure exists and a zero otherwise.

Question 24. Question 24 examines if there is a single forum competent or a common procedure at nation-wide level for the efficient resolution of disputes regarding rights of way. The report gives a maximum score if there is a single forum, an intermediate score if a common nationwide procedure exists and a zero otherwise.

Question 25. Question 25 examines the charges levied (if any) for obtaining rights of way. The report gives a maximum score if no or minimal charges levied, an intermediate score if the charges are adequately published and not reported to be excessive, and a zero score if they are reported to be high compared to other countries or are not transparent or inconsistent.

Question 26. Question 26 examines the average timescale from formal application to obtaining permissions for rights of way. The report gives a maximum score if the timescale falls in the lower-third of Member State averages, an intermediate score if in the middle-third of averages, and zero if in the upper-third of averages.

Question 27. Question 27 examines if ducts or equivalent facilities such as sewers are available under regulated terms (other than those required through SMP regulation) for the installation of telecom networks. The report gives a maximum score if access to such facilities is available and widely used, an intermediate score if such access is available but its use is limited, and zero if it is unavailable or unused.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
23	Single authority or a common, nationwide procedure establishing rights of way for telecommunication and an application process governing these rights.	Maximum intermediate or zero	Maximum if there is a single authority. Intermediate if a common nationwide procedure. Zero otherwise.
24	Single forum competent or a common procedure at nation-wide level for the efficient resolution of disputes regarding rights of way.	Maximum intermediate or zero	Maximum if there is a single forum. Intermediate if a common nationwide procedure. Zero otherwise.

25	Charges levied (if any) for obtaining rights of way (on public land)	Maximum, intermediate or zero	Maximum score if no or minimal charges levied. Intermediate score if charges levied but they are adequately published and not reported as excessive. Zero if charge is high, not transparent or inconsistent.
26	Average timescale from formal application to obtaining permissions for rights of way	Maximum, intermediate, or zero	Maximum score if in lower-third of average timescales Intermediate score if in middle-third of average timescales Zero if in upper-third of average timescales
27	Availability of ducts/sewers.	Maximum, intermediate, or zero	Maximum score if wide access is available and widely used. Intermediate score if use of access is limited. Zero if access is not available or unused.

Section B.2 examines the effectiveness of the regime pertaining to numbering. Numbering raises not only issues of number availability, but also number portability, a requirement under the EC Directives. The availability of number distributions and number portability for VoIP is also considered to be a key market enabler favouring the development of competition on the market.

Question 28. Question 28 examines the average timeframe for obtaining the reservation of numbers from receipt of the application to completion of the assignment process. The report gives a maximum score if the reservation takes less than 10 working days, an intermediate score where the timeframe is from 10 to 20 working days, and a zero if the timeframe exceeds 20 working days.

Question 29. Question 29 examines if geographic numbers can be used for VoIP services with a nomadic character without any geographic restriction (e.g., possibility to use a UK number for a VoIP service in Belgium). The report gives a maximum score if geographic numbers can be used in this way; an intermediate score if geographic numbers can be used but nomadicity is restricted to a specific region/country and a zero if geographic numbers cannot be used.

Question 30. Question 30 examines if number portability is legally mandated (not dependent on the donor operator's discretion) for porting numbers to VoIP services (including VoIP services that would not satisfy the PATS conditions). The report gives a maximum score if there is mandatory number porting for VoIP, and a zero if not.

Question 31. Question 31 examines the average wholesale price for porting fixed numbers. The report gives a score on the basis of a price comparison with the other

surveyed countries. The maximum score is given to countries whose average price falls into the lowest third of the distribution between the highest and lowest prices. An intermediate score is given for those in the middle third, and a zero is given where the price falls into the highest third.

Question 32. Question 32 examines if the incumbent fixed operator levies a charge on customers for porting fixed numbers. The report gives a maximum score to countries where no charge is levied on customers by the fixed incumbent operator and a zero to countries where such charge is levied.

Question 33. Question 33 examines the proportion of fixed numbers ported in 2008. The report gives a score on the basis of a comparison with the other surveyed countries. The report gives a maximum score to countries whose proportion of ported numbers falls into the highest third of the distribution between the fewest and most ported numbers. The report gives an intermediate score to those in the middle third and a zero to countries in the lowest third.

Question 34. Question 34 examines the average timescale for the porting of fixed numbers in 2008 from the submitted request to the actual switch. The report gives a score on the basis of a comparison with the other surveyed countries. The report gives a maximum score to countries whose portability time falls into the lowest third of the distribution between the least and most time, an intermediate score for those in the middle third, and a zero where the time falls into the highest third.

Question 35. Question 35 examines the average wholesale price for porting mobile numbers. The report gives a score on the basis of a price comparison with the other surveyed countries. The report gives a maximum score to countries whose price falls into the lowest third of the distribution between the highest and lowest prices, an intermediate score for those in the middle third, and a zero where the price falls into the highest third.

Question 36. Question 36 examines if the largest mobile operator levies a charge on customers for porting mobile numbers. The report gives a maximum score to countries where no charge is levied on customers by the largest mobile operator and a zero to countries where such charge is levied.

Question 37. Question 37 examines the proportion of active mobile numbers ported in 2008. The report gives a score on the basis of a comparison with the other surveyed countries. The report gives a maximum score to countries whose proportion of ported numbers falls into the highest third of the distribution between the fewest and most ported numbers, an intermediate score to those in the middle third, and a zero to countries in the lowest third.

Question 38. Question 38 examines the average timescale for the porting of mobile numbers in 2008 from submitted request to the actual switch. The report gives a score on the basis of a comparison with the other surveyed countries. The report gives a maximum score to countries whose portability time falls into the lowest third of the distribution between the least and most time, an intermediate score for those in the middle third, and a zero where the time falls into the highest third.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
28	Average timeframe for reservation of numbers.	Maximum, intermediate or zero.	Maximum if less than 10 working days. Intermediate if between 10 and 20 working days. Zero if more than 20 working days.
29	Use of geographic numbers for VoIP services with a nomadic character.	Maximum or zero.	Maximum if geographic numbers can be used with no geographic restrictions. Intermediate score if geographic numbers can be used but nomadicity is restricted to a specific region/country. Zero if geographic numbers cannot be used.
30	Number portability for VoIP	Maximum or zero.	Maximum if legally mandated. Zero if not.
31	Average wholesale price for porting fixed numbers.	Maximum, intermediate or zero.	Maximum if price falls in the low third of the distribution. Intermediate if it falls in the middle third. Zero if it falls in the highest third.
32	Charge levied on customers by the fixed incumbent operator for porting fixed numbers.	Maximum or zero	Maximum score if no charge is levied Zero if such charge is levied.
33	Proportion of ported fixed numbers.	Maximum, intermediate or zero.	Maximum if percentage falls into the upper third of the distribution Intermediate if percentage falls in the middle third. Zero if percentage falls in the lower third.

34	Timescale from fixed number porting application to actual switch.	Maximum, intermediate or zero.	Maximum if time falls in the lower third of the distribution Intermediate if time falls in the middle third. Zero if time falls in the upper third.
35	Average wholesale price for porting mobile numbers.	Maximum, intermediate or zero.	Maximum if price falls in the lower third of the distribution. Intermediate if it falls in the middle third. Zero if it falls in the highest third.
36	Charge levied on customers by the largest mobile operator for porting fixed numbers.	Maximum or zero.	Maximum score if no charge is levied Zero if such charge is levied.
37	Proportion of ported mobile numbers.	Maximum, intermediate or zero.	Maximum if percentage falls into the upper third of the distribution Intermediate if percentage falls in the middle third. Zero if percentage falls in the lower third.
38	Timescale from mobile number porting application to actual switch.	Maximum, intermediate or zero.	Maximum if time falls in the lower third of the distribution Intermediate if time falls in the middle third. Zero if time falls in the upper third.

Section B.3 examines the effectiveness of the regime pertaining to frequencies. The convergence of fixed and mobile services and the development of new mobile technologies and services have made frequency allocation conditions an important factor for promoting competition and investments in alternative networks and services. The transparency and predictability of spectrum allocation and access is essential for investments by operators. Furthermore, spectrum should be made available on the basis of technological and service neutrality, and spectrum trading should be allowed. Finally, the prompt allocation of the digital dividend is also crucial for the development of telecommunication services in those bands.

Question 39. Question 39 examines if the national allocation table indicating the bands and conditions of spectrum access are published. Such publication increases transparency for market entry and competition. The Report gives a maximum score if such table has been published, including information on which frequencies have been allocated to whom and for what period, and zero otherwise.

Question 40. Question 40 examines rules for spectrum trading. The report gives a maximum score to countries where spectrum trading is available across significant bands and used in practice, an intermediate score to countries where spectrum trading is allowed but limited in scope (in terms of available frequencies or not used in practice), and a zero to countries where spectrum trading is not available.

Question 41. Question 41 examines if there are any service or technology restrictions associated to the 3.5 GHz frequency bands, in particular where restrictions prevent the provision of “mobile” services (with cell handover). This is based on the EC decision of 21 May 2008¹⁵, which allows restrictions in certain geographic areas where coordination with countries outside the EU is required and provided that all reasonable efforts are made to solve such restrictions. The report gives a maximum score if no such restrictions are imposed, intermediate if restrictions are in place but a process has been initiated to review conditions, and a zero if restrictions are imposed.

Question 42. Question 42 examines if the 2.6 GHz frequency bands have been made available on technologically neutral conditions in accordance with Commission Decision of 13 June 2008¹⁶. The report gives a maximum score if such frequencies have been made available on a technologically neutral basis, and a zero otherwise.

Question 43. Question 43 examines if the Member State has adopted technologically neutral conditions for the 900/1800 MHz band. The report gives a maximum score if the Member State GSM bands can already be used at least by existing licensees for UMTS and specific plans are in place for making DCS-1800 bands available, an intermediate score if plans are in place for the two bands, and a zero if no such plans are in place.

Question 44. Question 44 examines the Member State’s progress towards making the digital switch-over. The report gives a maximum score if the switch-over has occurred, an intermediate score if there is an established date when the switch-over will occur (and is taking place prior to 31 December 2010), and a zero if there is no planned date for switch-over or if it is taking place after 31 December 2010.

Question 45. Question 45 examines if the Member State has made a decision on how to allocate the frequencies freed-up as a result of digital switch-over - including an allocation to telecoms services. If not, the report asks if the Member State has initiated a consultation to arrive at a solution. The report gives a maximum score if the Member State has made a decision on frequency allocation, including allocation to

¹⁵ Commission decision of 21 May 2008 on the harmonisation of the 3 400-3 800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community, O.J., 4/06/2008, L 144, p.77.

¹⁶ Decision of 13 June 2008 on the harmonisation of the 2500-2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community, O.J., 24/06/2008, L 163 , p. 37.

telecoms services, intermediate if it has made proposals to this effect (in a public consultation), and a zero if there has been no decision nor consultation.

Question 46. Question 46 examines if spectrum has been made available (i.e. assigned) by the Member State which could be used for mobile TV (excluding UMTS). The report gives a maximum score if it has been made available and a zero if not.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
39	Publication of the national allocation table indicating the bands and conditions of spectrum access.	Maximum or zero.	Maximum if published. Zero if not.
40	Spectrum trading possible and used in practice.	Maximum, intermediate, or zero.	Maximum if spectrum trading widely available and used in practice. Intermediate if spectrum trading allowed but limited in scope. Zero if spectrum trading not in place.
41	No service/technological restrictions on the use of 3.5 GHz frequencies.	Maximum, intermediate, or zero.	Maximum if no restrictions. Intermediate if restrictions in place but a process has been initiated to review conditions. Zero if there are restrictions.
42	Availability of 2.6 GHz frequency bands on technologically neutral conditions.	Maximum, or zero	Maximum if such frequencies have been made available Zero otherwise.
43	Plans to adopt technological neutral conditions for the 900/1800 MHz band.	Maximum, intermediate, or zero.	Maximum if such technologically neutral conditions are in place for GSM 900 and plans for DCS 1800. Intermediate if plans are envisaged for GSM 900 and DCS 1800. Zero if no such plans are contemplated.

44	Progress towards making digital switch-off.	Maximum, intermediate or zero	Maximum if switch-off has occurred. Intermediate if there is a planned date for switch-off (prior to 31 December 2010). Zero if no planned date (or after 31 December 2010).
45	Frequency allocation resulting from the digital switch-off .	Maximum, intermediate or zero.	Maximum if a decision has been made on allocation (including an allocation for telecoms applications). Intermediate if no decision but consultation launched. Zero if no decision or consultation or spectrum allocated for broadcasting applications.
46	Availability of spectrum for mobile TV.	Maximum or zero.	Maximum if the spectrum is available. Zero if not.

C. NRA's regulatory processes

Section C examines the exercise of the tasks assigned to the NRAs from a process point of view. It considers the speed of the market analyses, the transparency observed by the NRA, its enforcement record and efficiency as dispute settlement body.

Section C.1 examines the efficiency of regulators' processes for the analysis of markets and application of remedies. Efficiency of these processes is particularly important in a sector such as electronic communications, which is characterised by rapid technological innovation, short investment cycles and significant first mover advantages. This report assesses the NRA's speed of process on the basis of the time required for conducting the SMP market analyses. The weighting given to the assessment criteria of this section is set out in the table below.

Question 47. Question 47 examines how many second round analyses have been completed as of 31 December 2009 for the 18 markets of the 2003 Commission Recommendation on relevant markets. The report gives a maximum score if the analysis of at least 17 markets had been completed, an intermediate score if the analysis of at least 12 markets had been completed, and a score of zero if less than 12 markets had been analysed on the basis of the 2003 Commission Recommendation on relevant markets.

Question 48. Question 48 examines the average duration of the latest NRAs' market analysis procedures for the 18 markets listed in the 2003 Commission Market Recommendation, starting from the launch of the process (*i.e.*, first request for information) until the adoption of the final decision including identification of remedies, where appropriate. Countries where the average duration of the market analysis between 6 and 12 months are given maximum scores. An intermediate score is given where the market analysis lasted between 13 and 18 months, and zero scores were given where this lasted 19 months or more. The timeframe should be calculated as of the date on which the NRA launched the first request for information for a specific market investigation. The averages have been calculated on the basis of the timeframe for the most recent reviews.

	Criteria	Weight	Comments
47	Number of second market analysis for the 18 markets listed in the 2003 Commission Recommendation for which the NRA has adopted a final decision.	Maximum, intermediate, or zero.	Maximum if 17 markets have been reviewed. Intermediate score if at least 12 markets have been reviewed. Zero otherwise.
48	Average (median) duration of a market analysis procedure by the NRA.	Maximum, intermediate, or zero.	Maximum of 6-12 months. Intermediate if between 13 and 18 months. Zero if 19 months or more or six months less.

Section C.2 examines the transparency of the NRA's decision-making processes and the ability for all stakeholders to actively contribute to the decision-making. NRAs play a critical role in shaping the market environment in the new regulatory framework. A transparent decision-making process has therefore become increasingly important. Moreover, lack of transparent decision-making undermines legal certainty and increases the potential for political interference. The criteria for assessing the NRA's transparency are the existence of a consultation process, the timescale given for commenting, the obligation to publish decisions, the publication of an action plan, and public availability of the NRA's costs of operation.

Question 49. Question 49 examines the average timescale for market players to participate in public consultations. The report gives a maximum score where the NRA gives four to eight weeks to third parties to comment and a zero where the consultation lasts less than four weeks or extends beyond eight weeks. An intermediate score is given where the general practice has been to hold a consultation period ranging between four to eight weeks, but where market players have expressed concerns about the timing for the consultation process. For example, in certain cases, the positive outcome of timely processes is hampered by excessively long delays in the publication of the consultation's results, or by the NRA's discretionary power to modify the effective consultation deadlines or excessively short deadlines.

Question 50. Question 50 examines how NRA decisions are made available to interested parties. The report gives a maximum score to countries with a legal

obligation or a general practice of publishing decisions, an intermediate score where such publication takes place on an ad hoc basis in the absence of any formal legal obligation to do so or where all third parties are always informed of the NRA's decision in some other way, and a score of zero in the absence of such an obligation or practice.

Question 51. Question 51 examines if the NRA's published decisions are excessively redacted and restrict the ability of third parties to understand the justification substantiating a decision. The report gives a maximum score where confidentiality requires a justification for redacted information, such that the NRA must verify if the redacted information is effectively confidential and then replace it with non-confidential summaries or approximate values¹⁷. The report gives a zero where the redaction of information is considered excessive and prevents third parties from understanding the justification for decisions made.

Question 52. Question 52 examines the existence of a public, forward-looking action plan which details the planned activities of the regulator and allows consultation by the stakeholders. The report gives a maximum score if the NRA publishes an action plan setting out specific forward-looking action points and targets and also allows for consultation from the various stakeholders. The report gives an intermediate score if the NRA publishes a generic action plan which does not specify action items and targets or does not foresee a prior consultation. The report gives a zero where no such action plan is published.

Question 53. Question 53 examines the existence of detailed, publicly-accessible accounts showing the NRA's costs of operation. The report gives a maximum score if accounts are published in sufficient detail, an intermediate score if accounts are published but with insufficient details or in an untimely manner, and a zero if there is no publication of accounts.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
49	Timescale usually given to interested parties to respond to comment on proposals of general interest	Maximum, intermediate or zero.	Maximum if four to eight weeks. Intermediate if procedural difficulties or short timings are reported. Zero if less than four weeks and more than eight weeks.
50	Requirement for or common practice of the NRA to publish all its decisions upon adoption	Maximum, intermediate or zero.	Maximum if legal obligation or general publication practice. Intermediate if publication practice on ad hoc basis and third parties are always informed of decisions in some other way. Zero if no practice of publication.

¹⁷ The benchmark against which this should be assessed is the European Commission's practice in competition law enforcement cases. The Commission only redacts information that is strictly confidential. There is a strict verification process that confidentiality claims are adequately justified.

51	Confidentiality of the data	Maximum or zero.	Maximum if redaction is limited, adequately verified and replaced with non-confidential data in order to ensure proper understanding of the decision-making process. Zero if redaction is not adequately verified and prevents the understanding of the decision-making process.
52	Publication of action plan which sets out specific forward-looking targets and deliverables and allows consultation.	Maximum, intermediate or zero.	Maximum if action plan is published with specific forward looking targets and allows consultation. Intermediate score if action plan is published but without specific forward looking targets and/or without consultation. Zero if no action plan is published or no such plan exists.
53	Transparent costs of operating the NRA.	Maximum, intermediate or zero.	Maximum if publication of accounts with sufficient detail. Intermediate if publication of accounts with insufficient detail. Zero if no publication at all.

Section C.3 examines the NRA's enforcement record. NRAs must not only be active in imposing SMP obligations, where required after a market review, but must also bear the primary responsibility for ensuring compliance with such obligations. To this effect, NRAs must take enforcement actions through sanctions and proceedings to ensure proper application and compliance with SMP obligations.

Question 54. Question 54 examines the breaches of imposed SMP obligations in those markets considered to have characteristics of enduring SMP. The report gives a maximum score if breaches have been notified (*i.e.*, opening of procedures, regardless of whether such procedures ended with rectifications or fines) and zero if not. It is considered that the absence of any notification of breaches may indicate an absence of effective enforcement, given that outcomes in nearly all European markets suggest that retail competition is not generally fully effective across all markets.

Question 55. Question 55 examines the NRA's enforcement actions taken over the three last years (up until 31 December 2009) in relation to notified breaches of SMP obligations. Such actions may, for example, include the imposition of financial penalties or suspension of services. The report gives a maximum score if the NRA has a track record which confirms that it has been actively pursuing SMP violations by opening infringement proceedings, issuing notices of default and obtaining rapid rectifications, imposing effective sanctions or otherwise closing opened cases. The report gives an intermediate score if the NRA has an enforcement track record which shows that it has not systematically closed opened proceedings. The report gives a zero if the NRA has no track record of effective enforcement.

The table below explains the weight the report gives to this section's assessment criteria:

54	How many breaches of imposed SMP obligations have been notified.	Maximum or zero	Maximum score if NRA opened at least one procedure for breach of SMP obligation. Zero if no procedure was opened for violation of SMP obligations.
55	NRA's enforcement actions taken over the three last years (up until 31 December 2009) in relation to breaches of SMP obligations.	Maximum, intermediate or zero	Maximum score if the NRA has a track record which confirms that it has been actively pursuing SMP violations, issuing notices of default, imposing effective sanctions or otherwise closing opened cases. Intermediate if the NRA has an enforcement track record which shows that not all cases have been closed. Zero if the NRA has no track record of effective enforcement.

Section C.4 examines the NRA's efficiency in its capacity as dispute settlement body, in terms of timing, transparency and accessibility.

Question 56. Question 56 examines the timeframe required for obtaining a decision from the dispute settlement body. The report gives a maximum score if 85% of the measures have been ordered within the legally mandatory timeframe of four months. An intermediate score is given if 15-85% of the decisions have been adopted within the required timeframe. Zero if over 15% of the proceedings have taken longer.

Question 57. Question 57 examines the mandatory timeframe for negotiations (if any) before a dispute can be submitted to the dispute settlement body. The report gives a maximum score if there is no mandatory negotiation period, and zero if there is a mandatory negotiation period.

Question 58. Question 58 examines if the NRA (acting in its capacity of dispute settlement body) publishes pending disputes. The report gives a maximum score if they are published and a zero if not.

Question 59. Question 59 examines if the dispute settlement body allows third parties to contribute to the process in the context of a market consultation procedure or intervention. The report gives a maximum score if this is possible and common practice, an intermediate score when this is possible but uncommon, and a zero if no consultation can be held.

The table below explains the weight the report gives to this section's assessment criteria:

56	Timeframe for obtaining a final decision from the dispute settlement body, over the past two years	Maximum, intermediate or zero.	Maximum score if at least 85% of the decisions are adopted within the legally required timeframe of four months. Intermediate if between 15 and 85% of decisions were adopted within the required timeframe. Zero if less than 15% of the decisions are adopted in a period of four months.
57	Mandatory timeframe for negotiations (if any) before a dispute can be submitted to the dispute settlement body	Maximum, or zero.	Maximum score if no mandatory timeframe Zero if there is mandatory timeframe
58	Publication of disputes by the NRA	Maximum or zero.	Maximum score if pending disputes are published. Zero otherwise.
59	Consultation of third parties	Maximum, intermediate or zero.	Maximum if common practice. Intermediate if possible but not common. Zero if not possible.

D. Application of regulation by the NRA

Section examines the substantive track record of the NRA in key access and retail markets. It examines to what extent the NRA has promoted the principles of technological neutrality and forward looking analysis in its market analyses, as well as whether the NRA has imposed adequate operational conditions for SMP products to promote market entry and whether it has imposed an effective accounting separation regime and conditions for preventing discriminatory and foreclosure practices.

Section D.1 assesses forward looking approaches by examining if the regulatory environment and market conditions favour the principle of technological neutrality, including if the definition and remedies for leased line and local access and broadband markets have been created on a technologically neutral basis. Also assessed in relation to forward-looking approaches are if IP interconnection has been considered in voice termination markets and if fixed incumbents have made reference offers available for duct access.

Question 60. Question 60 examines if the leased line market has been defined and if remedies applied on a technologically neutral basis, such that (i) Ethernet interfaces are included in the defined market and remedies, and (ii) no unreasonable speed or unwarranted geographical restrictions are foreseen in the market definition or remedies. The report gives a maximum score if such definition/remedies include Ethernet without significant speed restrictions and have been made available on a nationwide basis (except where justified on the basis of high business density and business network duplication to relevant premises), an intermediate score if the

definition/remedies includes Ethernet and is effectively available but partly restricted, and a zero if Ethernet-based interfaces are not available at all or are significantly restricted in terms of speed or unavailable in areas which do not have high business density and network duplication.

Question 61. Question 61 examines if the wholesale broadband access market has been defined and if any remedies are applied on a technologically neutral and forward looking basis, such that (i) FTTC/vDSL and FTTH technologies and the relevant speeds are included in the relevant market, (ii) remedies apply to all relevant speeds with no undue restrictions on availability (except where point to point fibre unbundling is available and results in effective competition), and (iii) if a business grade product is foreseen. The report gives a maximum score if such definition/remedies include FTTC and FTTH, remedies have been made available on a national/unlimited speed basis (except where effective competition otherwise secured), and where a business-grade product has been made available. Subtractions are made (i) where remedies apply to all relevant technologies but are not sufficiently specified in order to be effective except where effective competition secured and (ii) in the absence of business-grade products. A zero is given if bitstream access has not been mandated to cover all relevant vDSL/FTTH-based speeds across the national territory except where otherwise justified on the basis of effective competition resulting from full fibre unbundling in market 4. Duct access alone is not generally considered sufficient to enable effective competition in downstream markets.

Question 62. Question 62 examines if the market for local access been defined on a technologically neutral basis to include lines provided via fibre as envisaged in the Commission's revised Relevant Market Recommendation. The report gives a maximum score if such definition has been made, and a zero if not.

Question 63. Question 63 examines in the market for local access (M11 and/or M4) if the NRA, when determined SMP, applied remedies which facilitate competition in downstream markets without specific restrictions relating to the underlying technology. The report wants to know in particular if the NRA has accomplished the following, in line with the Commission's draft NGA Recommendation and the proposed revisions to annex II Access Directive:

- ◆ (i) established, where relevant, detailed rules regarding sub-loop unbundling including access to street cabinets and appropriate backhaul facilities and the obligation to publish a reference offer;
- ◆ (ii) ensured the availability of a reference offer for the provision of duct access allowing the installation of competing infrastructure in the whole of the access network (including the 'sub-loop' portion) and for backhaul;
- ◆ (iii) ensured the availability of a reference offer for physical ODF access to fibre irrespective of architecture (PON or point to point) and established pricing conditions.

The report gives a maximum score if the NRA completed (1) all three of the above actions or (2) (ii) and (iii) in the context of an FTTH-only country, or (3) (i) and (ii) in the context of an FTTN-only country or country without NGA deployment. The duct requirement may be waived where no ducts exist. An intermediate score is given if obligations have been set out but are not yet implemented (for example, no reference

offer has yet been issued) or if at least one of the three requirements above is satisfied, and zero otherwise.

Question 64. Question 64 examines whether IP interconnection has been addressed in the analyses of markets relevant to calls, and in particular whether (i) IP interconnection has been addressed and (ii) any safeguard measures applying to calls have been applied on a technologically neutral basis. For the first part of the question, a full score is given when the NRA calculates charges taking as the basis the IP network’s costs. Simply extending PSTN prices to IP is insufficient to merit a full score. For the second part of the question, a full score is given if competitive safeguards are extended to VoIP or the market develops competitively (evidenced by the results of a market analysis). Maximum score is given where IP interconnection has been addressed and safeguard measures have been applied. An intermediate score is given if either has been done, and zero otherwise.

Question 65. Question 65 examines if the Member State has established conditions (such as a minimum notice period and applicable compensation) in relation to the closure of MDF sites or other interconnection points at which competitors connecting with an SMP operator are sited. The report gives a maximum score if such conditions are established based on a best practice (at least five-year prior notice). An intermediate score is set for conditions requiring a three-year period notice. Zero is given if there are no conditions or conditions are unsatisfactory (below minimal period of three years).

The table below explains the weight the report gives to this section’s assessment criteria:

60	Definition/remedies of leased line market including Ethernet interfaces and limitation on the basis of speed or geography.	Maximum intermediate or zero.	<p>Maximum score if definition/remedies include Ethernet and Ethernet leased lines and are available without significant speed restrictions or geographic exemptions (except where justified by business density).</p> <p>Intermediate if the definition/remedies include Ethernet, but services are partly restricted.</p> <p>Zero if Ethernet is excluded or if significant speed/geographic restrictions apply.</p>
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61	Definition/remedies of wholesale broadband access market including Ethernet interfaces and without unjustified limitation on the basis of speed or geography and with business grades.	Maximum intermediate or zero	<p>Maximum score if definition/remedies include (i) FTTC/vDSL and FTTH technologies (ii) without any restrictions and (iii) with a business grade product.</p> <p>Reduction if such definition/remedies exist, but explicitly exclude FTTH (except where competition assured through effective fibre unbundling). Where FTTH has not yet been installed, general principles should have been set out for the approach to fibre-based bitstream.</p> <p>Further reduction if business-grade product not available.</p> <p>Zero otherwise</p>
62	Definition of market for local access on a technologically neutral basis to include lines provided via fibre	Maximum or zero	<p>Maximum score if such definition was made.</p> <p>Zero if not</p>
63	NRA remedies to facilitate downstream competition in local access markets through: (i) detailed rules for SLU (incl. backhaul); (ii) reference offer for duct access; (iii) reference offer for ODF access to fibre.	Maximum, intermediate or zero.	<p>Maximum if NRA has imposed (i) (ii) and (iii); or (ii) and (iii) in the context of a FTTH-only country; or (i) and (ii) in a FTTN-only country or a country with no NGA deployment [(ii) can be waived if no ducts exist]</p> <p>Intermediate if proposals have been made along the lines of the above, but are not yet enforced through implementation in a reference offer or not all the requirements above are present.</p> <p>Zero otherwise.</p>
64	Technologically neutral consideration of VoIP	Maximum, intermediate or zero.	<p>Maximum score is given where IP interconnection has been addressed and safeguard measures have been applied.</p> <p>Intermediate score is given if either has been done.</p> <p>Zero otherwise.</p>
65	Establishment of conditions for closure of MDF sites or other interconnection points.	Maximum or zero.	<p>Maximum score if such conditions are established based on best-practice (five-year prior notice for closing with compensation for ULL sites in use).</p> <p>Intermediate score if conditions are established based on three-year prior notice period.</p> <p>Zero if not.</p>

Section D.2 assesses the operational conditions. It examines the existence of SLA (including various specifications), penalties, published KPIs (including internal services), migration processes, and simultaneous number portability processes.

Question 66. Question 66 examines, in accordance with ERG WLA/WBA Best Practice Guidance (where relevant), whether the following operational measures are taken for the access products listed below (i) an SLA; (ii) different specifications of SLA including business grade (whose importance will be critical on a forward looking basis), and (iii) penalties for failure to meet the SLAs.

- ◆ (i) LLU (or equivalent access product falling under Market 4 of the Revised Recommendation);
- ◆ (ii) wholesale broadband access (Market 5 of the Revised Recommendation);
- ◆ (iii) terminating segments of leased lines (Market 6 of the Revised Recommendation).

Each product is worth one-third of the total available marks for the question. And within each product securing all three outcomes is worth full marks, whilst securing at least two will achieve an intermediate score.

Question 67. Question 67 examines, in accordance with ERG WLA/WBA Best Practice Guidance (where relevant), whether the following operational measures are taken for the access products listed below (i) KPIs measuring performance against an SLA (ii) publication of KPIs and (iii) KPIs covering just service provision to third parties and also comparative statistics concerning service provision to the dominant provider's own in-house provider.

- ◆ (i) LLU (or equivalent access product falling under Market 4 of the Revised Recommendation);
- ◆ (ii) wholesale broadband access (Market 5 of the Revised Recommendation);
- ◆ (iii) terminating segments of leased lines (Market 6 of the Revised Recommendation).

Each product is worth one-third of the total markets for the question. Within each product, an intermediate score will be given if there are published KPIs and full marks if internal and external provisioning are publicly notified within the KPIs.

Question 68. Question 68 examines if the NRA intervened to ensure effective migration processes for operator and customer migrations for the voice, broadband and leased lines products. The products listed in each table are worth one-third of the available marks for that table. As concerns operator migration availability, individual migration and bulk migration are each worth half of the available marks. As concerns customer migration, availability will secure half marks. For timing, corresponding to the other half of the marks, a maximum score is given if there is a mandatory timeframe of maximum five working days for voice and broadband products and an intermediate score if there is no specified timing (no score is attached for a minimum timeframe for leased lines).

Question 69. Question 69 examines if there are processes in place to synchronise number portability with (i) local loop unbundling and (ii) wholesale naked bitstream. The report gives a maximum score to Member States who have synchronized number portability for LLU and wholesale naked bitstream, an intermediate score for either of them, and a zero otherwise.

The table below explains the weight the report gives to this section’s assessment criteria:

66	Presence and effectiveness of SLAs dealing with LLUs, wholesale broadband access, and terminating segments of leased lines.		One-third marks for each product. For each product, maximum score if all criteria met and intermediate if two.
67	Presence and effectiveness of KPIs dealing with LLUs, wholesale broadband access, and terminating segments of leased lines.		One-third marks for each product. For each product, maximum score if both criteria met and intermediate if just one.
68 (a)	Effective migration processes for operator migrations for the voice, broadband and leased lines products.		One-third marks available for each product For each product maximum score if both criteria met and intermediate if just one.
68 (b)	Effective migration processes for customer migrations for the voice, broadband and leased lines products.		One-third marks available for each product Availability of migration procedures score half of the available marks. The other half is granted for timing whereby a maximum score is given for a timeframe of maximum five working days (for leased lines, however, a mandatory timeframe suffices).
69	Number portability synchronization with LLUs and wholesale naked bitstream.	Maximum, intermediate or zero.	Maximum if portability synchronized for LLU and wholesale naked bitstream. Intermediate if only one of these. Zero if no synchronization at all.

Section D.3 Accounting separation examines compliance monitoring of pricing issues. It examines in particular if the NRA has adopted methodological measures to favour an effective and transparent application of the *ex ante* remedies. This includes in particular the adoption of general methodological documents which set out in detail the way in which remedies must be applied (*e.g.*, clearly elaborated methodologies and guidelines on accounting separation, non-discrimination, price squeeze and bundling). It also examines if adequate transparency measures are provided to ensure that compliance with *ex ante* remedies can be controlled by third parties. This includes measures such as publication of separated accounts and if there are pricing rules (*e.g.*, minimum margin) or the application of a price squeeze test to ensure consistent pricing of both the broadband and voice ladders of investment.

Question 70. Question 70 examines if an associated requirement of accounting separation is typically introduced when a firm has been declared SMP across several related markets and is required to have cost-based and/or non-discriminatory pricing. The report gives a maximum score if an associated requirement of accounting separation is typically introduced, and a zero if not.

Question 71. Question 71 examines if the NRA has clearly elaborated a methodology for accounting separation and if such methodology has been determined following a market consultation. The report gives a maximum score if a clear methodology exists for accounting separation following a public consultation, an intermediate score whenever certain methodological principles are publicised but are considered insufficient, and a zero if no methodology exists or is not publicly available.

Question 72. Question 72 examines if separated accounts have been published and, if so, for which year the last set of accounts was published. The report gives a maximum score if the verified separated accounts are published in a timely fashion (*i.e.*, with a maximum delay of one year following the publication of the audited accounts), an intermediate score is given if accounts are published but out of date or not complete (but more recent than three years), and a zero if the accounts are not published or if there is a significant delay before publication (more than three years after they have been audited).

Question 73. Question 73 examines if the NRA’s published accounts are sufficiently detailed to enable third parties to verify transfer charging within the dominant firm, including from markets where it has been found to have SMP into neighbouring markets. The report gives a maximum score if the accounts are sufficiently detailed and available to third parties, intermediate if published but not sufficiently detailed, and a zero if not.

The table below explains the weight the report gives to this section’s assessment criteria:

	Criteria	Weight	Comments
70	Associated requirement typically introduced of accounting separation.	Maximum or zero.	Maximum if typically introduced. Zero if not.
71	Methodology for accounting separation clearly specified and subject to consultation	Maximum, intermediate or zero.	Maximum score if a clear methodology exists and is published. Intermediate score if certain principles are publicized but are considered insufficient. Zero if no publicly available methodology exists.
72	Publication of separated accounts	Maximum, intermediate or zero.	Maximum score if accounts are published in a timely fashion. Intermediate score if accounts are published but out of date (but more recent than three years) or not complete. Zero if accounts are not published or not published in time.

73	Sufficient detail of NRAs' published accounts available to third parties.	Maximum or zero.	Maximum if accounts are sufficiently detailed and available to third parties. Intermediate if they are published but not sufficiently detailed Zero if not.
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Section D.4 Non-discrimination and prevention of leverage/foreclosure examines compliance monitoring of non-price issues. It examines the existence of an obligation to provide a wholesale offer prior to the launch of the corresponding retail offer/bundle and of measures to prevent a price squeeze for the provision of mobile termination services. It also examines if there are explicit rules restricting information exchanges between wholesale and retail divisions of dominant players to prevent anti-competitive use of such information. Finally, it examines the mechanisms in place to prevent discrimination (equivalence of input) and the publication of margin squeeze guidelines.

Question 74. Question 74 examines whether the NRA has applied an obligation in any market where SMP has been found for the SMP operator to provide a wholesale offer prior to the launch of the corresponding retail offer or bundle. The report gives a maximum score if such obligation has been applied in at least one market with notice of at least 3 months prior to launch by the dominant operator, intermediate if such obligation exists but with a notice of less than three months and zero otherwise.

Question 75. Question 75 examines if the NRA has adopted measures to prevent a price squeeze for the provision of mobile termination services by (i) imposing an internal and external non-discrimination obligation for pricing or (ii) imposing a truly cost oriented MTR in accordance with the methodological principles set out in the Commission's Recommendation. The Report gives a maximum score if at least one such obligation has been imposed and a zero if not.

Question 76. Question 76 examines if there are any mechanisms in place that require use of the same ordering and/or information systems for a vertically integrated SMP operator and competitors to prevent discrimination (equivalence of input). The report gives a maximum score if such mechanisms are in place, and a zero if not.

Question 77. Question 77 examines if there are any specific restrictions for the exchange of information within a dominant provider to prevent misuse of such information for example through anti-competitive win-back campaigns (Chinese wall obligations). The report gives a maximum score if restrictions are in place for all markets, an intermediate score for restrictions for some but not all markets, and a zero if otherwise.

Question 78. Question 78 examines if the NRA has addressed margin squeeze issues on the markets and the methodology applied. The Report gives a maximum score if such margin squeeze issues have been appropriately assessed, at least once on an ex ante basis, through either preventing the retail offer or regulating/modifying the wholesale offers, intermediate if such margin squeeze issues have been appropriately assessed at least once on an ex post basis, and a zero otherwise.

Question 79. Question 79 examines if the NRA has addressed bundling issues on the markets and the methodology applied. The Report gives a maximum score if such bundling issues have been appropriately assessed at least once on an ex ante basis, either through preventing the retail offer or regulating/modifying the wholesale offers, or if the first bundle offers were launched by the new entrants and there is proven competition between bundles for which the incumbent is not dominant, intermediate if such bundling issues have been appropriately assessed at least once on an ex post basis, and a zero otherwise.

Question 80. Question 80 examines if the NRA has addressed (i) volume discounts and (ii) long term discounts that may have discriminatory effect on the markets and the methodology applied. Discounts are not appropriately assessed if they are permitted in a manner which would benefit a dominant firm (*i.e.* discounts should either be operator neutral or accessible to at least four operators in practice). The Report gives a maximum score if such discounting issues have been appropriately assessed at least once on an ex ante basis by either preventing the retail offer or regulating/modifying the wholesale offers, intermediate if such discounting issues have been appropriately assessed at least once on an ex post basis, and a zero otherwise.

The table below explains the weight the report gives to this section’s assessment criteria:

74	Obligation to provide a wholesale offer prior to the launch of the corresponding retail offer/bundle.	Maximum, intermediate or zero	Maximum if it has been applied on at least 1 market with at least 3 months notice. Intermediate if it has been applied but with notice of less than 3 months. Zero if there is no notice period or otherwise.
75	Internal/external non-discrimination obligation for MTR pricing or (ii) truly cost oriented MTR to prevent a price squeeze.	Maximum or Zero	Maximum score if either of such obligations has been imposed Zero otherwise.
76	Mechanisms in place which require use of same ordering by SMP and competitors.	Maximum or zero.	Maximum if such mechanisms exist. Zero if not.
77	Specific rules to restrict transfer of information.	Maximum, intermediate or zero.	Maximum if restrictions. Intermediate if in some markets but not all. Zero otherwise.
78	Addressing margin squeeze issues on the markets and the methodology applied	Maximum, intermediate or zero	Maximum if such margin squeeze issues have been appropriately assessed at least once on an ex ante basis through either preventing the retail offer or regulating/modifying the wholesale offers. Intermediate if such margin squeeze issues have been appropriately assessed at least once on an ex post basis. Zero otherwise.

79	Addressing bundling issues on the markets and the methodology applied.	Maximum, intermediate or zero	<p>Maximum if such bundling issues have been appropriately assessed at least once on an ex ante basis through either preventing the retail offer or regulating/modifying the wholesale offers.</p> <p>Intermediate if such bundling issues have been appropriately assessed at least once on an ex post basis.</p> <p>Zero otherwise.</p>
80	Addressing (i) volume discounts and (ii) long term discounts may have discriminatory effect on the markets and the methodology applied	Maximum, intermediate or zero	<p>Maximum if such discounting issues have been appropriately assessed at least once on an ex ante basis by either preventing the retail offer or regulating/modifying the wholesale offers.</p> <p>Intermediate if such discounting issues have been appropriately assessed at least once on an ex post basis.</p> <p>Zero otherwise.</p>

E. Regulatory and market outcomes

This section examines market outcomes in key access and retail markets. A wide distribution of indicators is used, including the extent of end-to-end infrastructure competition, the effectiveness of pro-competitive wholesale remedies, retail prices available to consumers and the market share of competitors at retail level. In view of recent market developments, questions concerning the impact of VoB on competition in voice markets and the availability and regulation of sub-loop unbundling have been included. Equally, over time, technological and market developments may render less relevant some of the existing access products such as WLR and CPS, and providers are expected to migrate towards other access mechanisms. However, for many customers, these still constitute the only means by which they can access competitive services. They are thus still relevant and considered important in forming the basis upon which competition can develop using other means.

The services covered by this section include: (i) narrow band voice services, (ii) mobile services, (iii) access services relevant to business customers, (iv) broadband services based on bitstream and (v) broadband services based on LLU and other infrastructure. Each type of access service or market constitutes a separate section:

Section E.1 examines the competitive conditions prevailing for the provision of narrowband voice telephony services, and the effectiveness of regulation relevant to the competitive development of this market. Retail competitiveness indicators include a comparison of retail tariffs, market shares of competitors for both calls and voice line access (including access provided via cable networks and LLU), and the existence of services using VoB as a ‘replacement’ for traditional switched voice services.

Wholesale indicators include tariffs for interconnection and the availability of ‘voice’ remedies for retail line rental and call origination. The provision of carrier pre-selection services is an obligation that must be imposed pursuant to the Universal

Service Directive. Wholesale line rental is a remedy that may be imposed on the basis of a market analysis, but it is notable that for the relevant market in question (access for narrowband telephony), all regulators have reported market shares around or above 80%. Such level which clearly constitutes dominance, and the European Commission has advocated WLR as relevant in promoting competition for customers who do not receive broadband services.

As the migration to VoB from the traditional PSTN is an important competitive development, the report also examines the extent to which interconnection rules permit non-time based charging and the extent to which VoB has been offered on a competitive basis..

Question 81. Question 81 examines the level of the fixed incumbent's termination charges at local level, single tandem level and double tandem level, whether regulated or not. The report gives a score on the basis of a comparison of the tariffs as published in the 14th Implementation Report (Figures 87-89). The highest score is given to countries whose price falls into the lowest-third of the distribution between the most and least expensive costs. An intermediate score is given for those in the middle-third, and a zero is given where the price falls into the upper-third.

Question 82. Question 82 examines if there is an offer for capacity based interconnection for (i) all calls (voice and Internet) or (ii) Internet-only. Capacity-based and other non-time based charging mechanisms are expected to become increasingly relevant as consumers move towards bundled services priced at a flat rate and where traffic is increasingly carried via IP technology. The report gives a maximum score where such an offer exists for all calls, an intermediate score if it is provided for Internet only or if capacity based charging is not mandated due to lack of market demand demonstrated by the results of a public consultation, and a zero otherwise.

Question 83. Question 83 examines the proportion of customers (in terms of access lines) using an alternative fixed network operator for direct access to telephone services. The score is given on the basis of a comparison of the percentage of the alternative operators' market share as reflected in the country annexes. The highest score is given to countries where the market share of alternative fixed operators falls into the upper-third of the distribution of market shares. An intermediate score is given to those in the middle-third, and a zero is given to countries in the lowest-third.

Question 84. Question 84 examines the proportion of customers (in terms of access lines) using an alternative fixed network operator for their fixed telephone line via ULL. The score is given on the basis of a comparison of the percentage of the alternative operator's market share as reflected in the country annexes. The highest score is given to countries where the market share of alternative fixed operators falls into the highest third of the distribution of market shares. An intermediate score is given to those in the middle third, and a zero is given to countries in the lowest third.

Question 85. Question 85 examines the proportion of customers (in terms of access lines) using an alternative fixed network operator for their fixed line via WLR. The highest score is given to countries where the market share of alternative fixed operators with WLR penetration is above 5% and a zero otherwise. This threshold is given to assess whether the WLR remedy is effective in permitting competition for

non-broadband subscribers without rewarding unduly high levels of WLR that may indicate failures in other remedies such as LLU.

Question 86. Question 86 examines the proportion of active CPS lines (compared to the total incumbent lines). The score is given on the basis of a comparison of the percentage of the CPS lines as reflected in the country annexes. The highest score is given to countries where the percentage active CPS lines is above 5% and a zero otherwise. This threshold is given to assess whether the CPS remedy is effective in permitting competition for non-broadband subscribers without rewarding unduly high levels of CPS that may indicate failures in other remedies such as LLU.

Question 87. Question 87 examines the proportion of telephone subscribers receiving services via VoB from (i) incumbents and (ii) alternative providers. This is based on the data published in the 14th Implementation Report (Figure 43). The highest score is given on a relative basis with the top third receiving a maximum score, middle third intermediate and lowest zero.

Question 88. Question 88 examines alternative operators' total market share for the provision of voice telephony services. The score is given on the basis of a comparison of the percentage of the alternative operator's market share as reflected in the country annexes. The highest score is given to countries where the market share of alternative fixed operators falls into the upper-third of the spread of market shares. An intermediate score is attributed to those in the middle-third, and a zero is given to countries in the lowest-third.¹⁸

Question 89. Question 89 examines if VoB services are offered by incumbents and competitors on a standalone (single-play) basis, or only as part of a bundle (double or triple-play) offer. A maximum score is given if VoB services are offered on a standalone basis by an Altnet, an intermediate score if it is available and zero otherwise.

Questions 90 and 91. Questions 90 and 91 examine the value of the retail price basket (*i.e.*, the monthly average expenditure) for residential and business customers. The score is given on the basis of a comparison of the value of the retail price basket. The data source for these questions are Figures 55 and 56 of Annex II of the 14th Implementation Report (except for Norway and Turkey)¹⁹. The highest score is given to countries whose basket prices fall into the lowest-third of the distribution between the most expensive and cheapest costs. An intermediate score is given to those in the middle-third, and a zero is given where the price falls into the upper-third.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
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¹⁸ Market shares have been based on the basis of the share for national calls.

¹⁹ Prices include VAT.

81	Level of the incumbent's interconnection tariffs for call termination with interconnection at: - the local switch level; - the single tandem switch level; - the double tandem switch level	Maximum, intermediate or zero.	Maximum if in lowest-third of prices. Intermediate if in middle-third. Zero if in upper- third.
82	Existence of capacity based interconnection offer for: - all calls; - internet-only	Maximum, intermediate or zero.	Maximum if such an offer exists for all calls. Intermediate score if it is provided for Internet only or if capacity based charging is not mandated due to lack of market demand demonstrated by the results of a public consultation Zero otherwise.
83	Proportion of customers using an alternative provider to the incumbent for direct access to telephone services on the basis of an alternative network	Maximum, intermediate or zero.	Maximum if in upper-third of market share for Alnets. Intermediate if in middle-third. Zero if in lowest- third.
84	Proportion of customers using an alternative provider to the incumbent for direct access to telephone services on the basis of ULL	Maximum, intermediate or zero.	Maximum if in upper-third of market share for Alnets. Intermediate if in middle-third. Zero if in lowest- third.
85	Proportion of customers using an alternative provider to the incumbent for direct access to telephone services on the basis of WLR	Maximum or zero.	Maximum if above 5% Zero if below.
86	Proportion of lines that are active CPS lines compared to the total number of incumbent lines.	Maximum or zero.	Maximum if above 5% Zero if below.

87	Proportion of telephone subscribers receiving services via VoB.	Maximum or zero.	Maximum if in upper-third Intermediate if in middle-third Zero otherwise
88	Market share (revenue) of alternative operators in the fixed voice market	Maximum, intermediate or zero.	Maximum if in upper-third of market share held by alternative operators. Intermediate if in middle-third. Zero if in lowest-third.
89	Proportion of telephone subscribers receiving services via VoB on stand-alone or bundled basis by incumbents or Altnets	Maximum, intermediate or zero.	Maximum if offered on a stand-alone basis and by an Altnet Intermediate if available Zero otherwise
90	Value of the retail price basket for residential customers	Maximum, intermediate or zero.	Maximum if in lowest-third of prices. Intermediate if in middle-third. Zero if in upper-third.
91	Value of the retail price basket for business customers ²⁰	Maximum, intermediate or zero.	Maximum if in lowest-third of prices. Intermediate if in middle-third. Zero if in upper-third.

Section E.2 examines the degree of competition and application of economic regulation in mobile and wireless markets. The first criterion included in this section pertains to call termination services. The traditionally high cost of calling mobile networks in a calling party pays environment has generally been perceived as detrimental to consumers and distorts competition and investment. It has, in particular, allowed incumbent mobile network operators to create artificially high barriers to entry and subsidize their retail operations. Moreover, termination services on mobile networks are considered to constitute a bottleneck facility that is not

²⁰ For business customers, prices for scoring have been calculated without VAT.

subject to sufficient competitive constraints from the retail markets. The report has therefore compared the level of the tariffs applied for the provision of voice call termination services of the largest mobile network operator. In addition to the issue of mobile termination, the overall level of prices at the retail level for mobile services and the presence of MVNOs and service providers on the market provide a good indicator of the effectiveness of competition in the mobile sector as a whole. Finally, the Report also examines the average wholesale and retail roaming charges or (i) voice and (ii) data, and the proportion of all active mobile customers subscribing to mobile Internet access service (including but not limited to 3G).

Question 92. Question 92 examines the level of the termination charges of the largest mobile network operator. The report scores this question on the basis of a comparison of the tariffs as reported in the annexes. The highest score is given to countries whose price falls into the lowest-third of the distribution between the most expensive and cheapest cost. An intermediate score is given for those in the middle-third, and zero is given where the price falls into the upper-third.

Question 93. Question 93 examines the HHI level on the retail mobile market (calculated on the basis of subscribers). The report gives a maximum score to countries where the HHI falls in the lowest-third, an intermediate score for countries in the middle-third, and a zero to countries where the HHI is in the upper -third.

Questions 94 and 95. Questions 94 and 95 examine the value of the retail mobile price basket (*i.e.*, the monthly average expenditure) for low users and medium users as defined by the OECD²¹. The data source for these questions are Figures 17 and 18 of Annex II of the 14th Implementation Report²². The cheaper of the two operators shown in each country has always been chosen. The highest score is given to countries whose basket prices fall into the lowest-third of the spread between the most expensive and lowest costs. An intermediate score is given for those in the middle-third, and a zero is given where the price falls into the upper-third.

Question 96. Question 96 examines if mobile virtual network operators (real MVNOs) are operational. The report gives a maximum score if MVNOs are active and a zero if not. It is considered that a “real MVNO” has at least some of the following characteristics: it can (i) obtain its own number distributions from the NRA; (ii) set its own wholesale call termination charges, (iii) own its customer base (which can be transferred to another host operator), (iv) set its own retail prices (for all voice and data services including roaming) and wholesale charges (for all voice and data services including roaming), (v) receive revenues from its host operator for inbound traffic and for roaming, and (vi) use its own HLR, IMSI, and SIM cards.

Question 97. Question 97 examines the market share of MVNOs and SPs (on the basis of subscribers). The report gives a maximum score to the countries with a market share exceeding 10%, an intermediate score to countries with a market share

²¹ There exist some controversies on the accuracy of the baskets provided by the OECD. In particular, some baskets might cover only part of the market and thus sometimes ignore a significant part of the relevant market data. However, the OECD data constitute the most reliable data available to date.

²² Unless these significant updates on prices were contained in the annexes. Prices include VAT.

between 1 and 10%, and a zero to the others (below 1%) based on the market share data contained in the annexes.

Question 98. Question 98 examines the average retail roaming charge paid by customers on a per minute/per Mbit basis for (i) voice, (ii) data and (iii) SMS. The data sources for these questions are figures 1, 15 and 19 of the ERG Roaming Report. The highest score is given to countries whose prices fall into the lowest-third, an intermediate score is given to those in the middle-third, and a zero is given where the price falls into the upper-third.

Question 99. Question 99 examines the average wholesale roaming charge applied by mobile network operators on a per minute/per Mbit basis for (i) voice, (ii) data and (iii) SMS. The data sources for these questions are figures 12, 18 and 21 of the ERG Roaming Report. The highest score is given to countries whose prices fall into the lowest-third; an intermediate score is given to those in the middle-third, and a zero is given where the price falls into the upper-third.

Question 100. Question 100 examines the (i) the proportion of all mobile active customers that subscribe to mobile Internet access service in comparison with the total number of available terminals/SIM cards and (ii) the proportion of all mobile broadband dedicated to data services cards/modems/keys only, in comparison with the number of lines for retail fixed broadband access. When available, the data are based on the COCOM Report on Broadband (see table 4 (page 75) and national figures). The highest score is given to countries whose proportions fall into the upper-third; an intermediate score is given to those in the middle-third, and a zero is given where the price falls into the lowest -third.

Question 101. Question 101 measures how actively the 3.5 GHz band is used in different Member States. The scoring will be based on the number of operators in this band. No operators will be scored zero, a minimal number of active subscribers will be scored median and a larger number of active connections will be scored maximum. The number of 'minimal' and 'larger' will be determined on the basis of market outcomes.

The table below explains the weight the report gives to this section's assessment criteria:

	Criteria	Weight	Comments
92	Rates for fixed to mobile termination charges applied by the largest (in revenue) mobile operator in your country	Maximum, intermediate, or zero	Maximum if in lowest-third of prices. Intermediate if in middle-third. Zero if in upper-third.
93	HHI level on the retail mobile market (calculated on the basis of subscribers).	Maximum, intermediate or zero.	Maximum if in lowest-third. Intermediate if in middle-third. Zero if in upper-third.

94	Price of the basket for low users of mobile retail services	Maximum, intermediate or zero.	Maximum if in lowest-third of prices. Intermediate if in middle-third. Zero if in upper-third.
95	Price of the basket for average users of mobile retail services	Maximum, intermediate or zero.	Maximum if in lowest-third of prices. Intermediate if in middle-third. Zero if in upper-third.
96	Operation of one or more MVNOs	Maximum or zero.	Maximum if MVNO exist. Zero if not.
97	Market share of MVNOs and SP	Maximum, intermediate or zero.	Maximum if more than 10%. Intermediate if up to 10%. Zero if 1% or less.
98	Average retail roaming charge paid by customers for (i) voice, (ii) data and (iii) SMS.	Maximum, intermediate or zero	Maximum if in lowest-third. Intermediate if in middle-third. Zero if in upper-third.
99	Average wholesale roaming charges for (i) voice, (ii) data and (iii) SMS.	Maximum, intermediate or zero	Maximum if in lowest-third. Intermediate if in middle-third. Zero if in upper-third
100 (a)	Proportion of all mobile active customers who subscribe to mobile Internet access service in comparison with the total number of available terminals/SIM cards.	Maximum, intermediate or zero.	Maximum if in upper-third. Intermediate if in middle-third. Zero if in lowest-third.
100 (b)	Proportion of mobile broadband dedicated data services cards/modems/keys only, in comparison with the number of lines for retail fixed broadband access.	Maximum, intermediate or zero.	Maximum if in upper-third. Intermediate if in middle-third. Zero if in lowest-third.
101	Use of the 3.5 GHz band.	Maximum, intermediate or zero.	Maximum if at least three operators. Intermediate if at least one. Zero if none.

Section E.3 examines the effective regulation and degree of competition for the provision of services to business customers. Access services essential to the business segment consist, in particular, of leased lines, PPCs, and successor products. Besides the existence and tariffs of these access services, it is also important to ensure that strict service level agreements are foreseen, which prevent non-price discrimination and quality deterioration. In view of recent technical developments, it is particularly important to assess if wholesale Ethernet offers are available and used, and if specific business grade (low contention) bitstream services are available across the national territory.

Question 102. Question 102 examines if partial private circuits (terminating segments of leased lines) are available in the Member State. The report gives a maximum score if they are available and a zero if not.

Question 103. Question 103 examines the price of set-up and monthly rental for a 2Mbit/s, 2km wholesale leased line terminating segment as reported in Figure 124 of the 14th Implementation Report (except for Norway and Turkey). The report gives the maximum score to countries whose price falls into the lowest third of the spread between the most expensive and least expensive cost, an intermediate score for prices in the middle third, and a zero for prices in the upper third.

Question 104. Question 104 examines the price of set-up and monthly rental for a 34Mbit/s, 2km wholesale leased line terminating segment as reported in Figure 126 of the 14th Implementation Report (except for Norway and Turkey). The report gives the highest score to countries whose price falls into the lowest third of the spread between the most and least expensive cost, an intermediate score for prices in the middle third, and a zero for prices in the upper third.

Question 105. Question 105 examines the proportion of regulated wholesale leased line terminating segments that are provided on an Ethernet basis. The report gives a maximum score if such proportion falls into the upper-third; an intermediate score to those in the middle-third, and a zero where the price falls into the lowest-third.

Question 106. Questions 106 examines if there are specific business grade (low contention) bitstream services available across the national territory, whether on regulated terms or otherwise. The report gives a maximum score if such business grades are available and a zero otherwise.

The table below explains the weight the report gives to this section’s assessment criteria.

	Criteria	Weight	Comments
102	Availability of partial private circuits.	Maximum or zero.	Maximum if available. Zero if not.
103	Price of set-up and monthly rental for a 2Mbit/s, 5km PPC	Maximum, intermediate or zero.	Maximum if in lowest-third of price distribution. Intermediate if in middle-third. Zero if in upper-third.
104	Price of set-up and monthly rental for a 34Mbit/s, 5km PPC	Maximum, intermediate or	Maximum if in lowest-third of price distribution.

		zero.	Intermediate if in middle-third. Zero if in upper-third.
105	Proportion of the regulated wholesale leased line terminating segments that are used on an Ethernet basis	Maximum, intermediate or zero.	Maximum if in upper-third. Intermediate if in middle-third. Zero if in lowest-third..
106	Availability of specific business grade (low contention) bitstream services across the national territory.	Maximum or zero.	Maximum if such grades are available. Zero otherwise.

Section E.4 considers if the provision of broadband services are competitive when assessed against a range of retail and wholesale indicators. Local loop unbundling (LLU), alongside end-to-end duplication of infrastructure, are considered the most significant requirements for a competitive market. In addition, the provision of wholesale broadband services (bitstream) is likely to take on increasing influence where vDSL or fibre PON architectures are deployed, and in most countries this provides an essential access route in reaching geographic areas where network roll-out to local exchanges is not economically feasible. Questions about subloop unbundling, access to fibre and duct access are also asked in view of their relevance to the competitive development of services based on network generation access networks.

Whilst nearly all countries have found significant market power across the broadband ladder of investment (markets 4 and 5), we recognize that in a few countries with particular geographic characteristics and historic infrastructure, significant market power has not been found in certain aspects of bitstream. An assessment has thus been made based on the availability (rather than regulation) of bitstream, on the basis that it is likely to be a feature of a well-functioning competitive market in the same way that secondary markets have developed for the competitive international transit segment.

Question 107. Question 107 examines the set-up and recurrent tariffs for setup of a full ULL. The score is given on the basis of a comparison of the value of access as reported in Figures 115 and 116 of the 14th Implementation Report (except for Norway and Turkey). Prices are calculated at the annual cost for a two-year period (set-up charge + 12 x monthly charge). The report gives the maximum score to countries whose price falls into the lowest-third of the distribution between the most and least expensive costs, an intermediate score for those in the middle-third, and a zero where the price falls into the upper-third.

Question 108. Question 108 examines the set-up and recurrent tariffs for setup of shared ULL access. The score is given on the basis of a comparison of the value of access as reported in Figures 117 and 118 of the 14th Implementation Report (except for Norway and Turkey). Prices are calculated at the annual cost for a two-year period (set-up charge + 12 x monthly charge). The report gives the maximum score to countries whose price falls into the lowest-third of the distribution between the most and least expensive costs, an intermediate score for those in the middle-third, and a zero where the price falls into the upper-third.

Question 109. Question 109 compares the percentage of DSL lines provided by competitors on the basis of unbundled and shared access, compared as a proportion of the total retail DSL lines based on the ECTA Broadband Scorecard or, if available, Cocom data as of January 2010. The report gives the maximum score to countries where the proportion of unbundled and shared access is in the upper-third of the distribution of surveyed countries, an intermediate score to countries in the middle-third, and a zero to countries in the lower-third.

Question 110. Question 110 examines if unbundled fibre full loops (from the ODF) or subloops (from an intermediate distribution point) are available in the market whether on regulated terms or otherwise. The report gives a maximum score if they are and a zero if not.

Question 111. Question 111 examines if sub-loop unbundling (SLU) is in use, and if so, the number of lines as a percentage of total DSL lines. The report gives a maximum score where such unbundling is in use and a zero where such sub-loop unbundling is not in use.

Question 112. Question 112 examines the percentage of broadband lines supplied end to end (i.e., without use of the incumbent's fixed network) by competitors on the basis of (i) cable networks, (ii) fibre to the home, (iii) own PSTN (alternative copper network) (iv) fixed (non-mobile) wireless networks including satellite. The data used is based on the ECTA broadband scorecard or Cocom data as of January 2010, if available. The report gives the maximum score to countries where the proportion of broadband lines provided end to end by competitors is in the upper-third of the distribution of surveyed countries, an intermediate score to countries in the middle-third, and a zero to countries in the lowest-third.

Question 113. Question 113 compares the percentages of DSL lines provided by competitors on the basis of wholesale bitstream access (ERG options 2 and 3) compared as a proportion of the total retail DSL lines based on the ECTA Broadband Scorecard. Resale (ERG option 4) is not included in this assessment, as it is not considered to allow for sufficient differentiation between players to stimulate competition. The question considers both regulated and unregulated bitstream. The report gives the maximum score to countries where 5-15% of such lines are provided on the basis of bitstream (i.e., within the range considered usual for rural and/or business needs), intermediate marks if the proportion is >15% (as such proportion may indicate problems with unbundling) and zero otherwise.

Question 114. Question 114 examines if wholesale naked bitstream access is available and actively used in the market as measured by the proportion of bitstream lines provided on a 'naked' basis (calculated on the basis of the total number of incumbent DSL lines). The report gives the maximum score to countries where the proportion is above 10%, an intermediate score if the proportion is above 0% but below 10% and a zero if the proportion is 0%.

Question 115. Question 115 examines the proportion of bitstream lines made available on an Ethernet basis. The report gives the maximum score to countries where the proportion is above 30%, an intermediate score if the proportion is above 0% but below 30% and a zero if the proportion is 0%.

Question 116. Question 116 examines the number of agreements signed with telecoms operators for duct access under regulated terms, and the proportion of successful requests for duct access. The report gives the maximum score to countries where at least three agreements for duct access have been signed. An intermediate score is given if one or two agreements have been signed, and zero otherwise.

Question 117. Question 117 examines the pricing for retail broadband access. This is based on the median price for the basket “1024kbs/s - 2048 kbs/s (incl.) data” provided in the EU BIAC benchmark of December 2008 (page 53). The report gives the maximum score to countries where prices fall into the lowest-third of the distribution of surveyed countries, an intermediate score to countries in the middle-third, and a zero to countries in the upper-third.

Question 118. Question 118 examines the HHI for the provision of retail triple play offers (Voice, Internet, IPTV/satellite/cable). The report gives the maximum score if the HHI is in the lowest-third of the distribution of surveyed countries, an intermediate score to countries in the middle-third, and a zero to countries in the upper-third.

The table below explains the weight the report gives to this section’s assessment criteria.

	Criteria	Weight	Comments
107	Set-up and recurrent tariff charged for full ULL.	Maximum, intermediate or zero.	Maximum for countries in the lowest-third of the distribution. Intermediate for countries in the middle-third. Zero in the upper-third.
108	Set-up and recurrent tariff charged for shared ULL access.	Maximum, intermediate or zero.	Maximum for countries in the lowest-third of the distribution. Intermediate for countries in the middle-third. Zero in the upper-third.
109	Number of unbundled lines and shared access as a percentage of total (retail) DSL lines.	Maximum, intermediate or zero.	Maximum if LLU share is in upper-third of the distribution. Intermediate if in the middle-third. Zero if in the lowest-third.
110	Unbundled fibre full loops or subloops (from the	Maximum, or zero.	Maximum if

	ODF) are available in the market.		available. Zero if not.
111	Use of sub-loop unbundling (SLU).	Maximum or zero.	Maximum where such unbundling is in use. Zero otherwise.
112	Percentage of broadband lines supplied end to end by competitors on the basis of cable, fibre, fixed wireless networks and own copper network.	Maximum, intermediate or zero.	Maximum if share in upper-third of distribution. Intermediate in middle-third. Zero in lowest-third.
113	Percentage of DSL lines provided by competitors on the basis of wholesale bitstream access.	Maximum, intermediate or zero.	Maximum if proportion between 5-15% Intermediate if >15% Zero otherwise (less than 5%).
114	% of DSL lines provided by competitors on the basis of wholesale naked bitstream access (calculated on the basis of the total number of incumbent DSL lines).	Maximum or zero.	Maximum if the proportion is above 10% Intermediate if the proportion is above 0% but below 10% Zero if the proportion is 0%.
115	Proportion of bitstream lines that are made available on an Ethernet basis.	Maximum, intermediate or zero	Maximum if the proportion is above 10% Intermediate if the proportion is above 0% but below 10% Zero if the proportion is 0%.
116	Number of agreements signed with telecoms operators for duct access under regulated terms and proportion of successful requests for duct access.	Maximum, intermediate or zero.	Maximum if 3+ agreements. Intermediate if 1-2 agreements. Zero to others.
117	Average price for retail broadband access offered on the market.	Maximum, intermediate or zero.	Maximum to lower-third in the distribution.

			Intermediate to middle-third. Zero to others.
118	HHI for triple play (Voice, Internet, IPTV/satellite/cable).	Maximum, intermediate or zero.	Maximum to lower-third in the distribution. Intermediate to middle-third. Zero to others.

IV. Scoring Methodology and Weighting

As with all Scorecards since 2007 we have adopted a top down principle when setting the scores available for each question. We have begun by deciding on the maximum number of points to be allocated to all 118 criteria, which we have set as 485 for easy comparison with previous versions when the same number of points were assigned. The points are then allocated to individual criteria based on the weighting assigned to each criterion.

The “base” version reported is “unweighted”, that is, we have assigned weights at the individual criterion level so the weight of each Section and Sub-Section is the sum of the points for each criterion in the Section of Sub-Section.

The vast majority of questions have been weighted ‘medium’, equivalent to a maximum possible score for that question of 4.1, to signify that, in the absence of any evidence to the contrary, we assume that they have an equal contribution to the effectiveness of regulation. A ‘high’ (8.2 points) or ‘low’ (2.0 points) weight has been applied to balance the weightings in a particular section, such that there is neutrality in the weightings amongst the type of questions asked.

Each country receives one of three scores for each question: full marks, intermediate or half marks or zero. The table below shows the points scored for each question dependent on the weight applied rounded to the nearest 0.5. Readers should check the score per country per question against the weighting to determine how well the country performed for the question.

	Full		Intermediate		Zero
	As used in calculation	As presented in table	As used in calculation	As presented in table	
High	8.2	8	4.1	4	0
Medium	4.1	4	2.0	2	0
Low	2.0	2	1.0	1	0

In addition, we considered it of interest to examine if applying different weightings to the different sections of the report might affect the scores.

Table 1 shows the overall results of the Scorecard according to the different weightings.

Table 2 shows the ranking of countries by different weighting factors.

Table 3 shows the coefficients of correlation between each of the various weightings.

Table 1 : Results Table

	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SL	ES	SE	CH	TK	UK
Unweighted	271	281	165	192	354	306	321	258	251	264	317	303	376	341	243	302	232	294	277	209	213	368
Section Weighted	266	290	166	198	357	327	323	260	268	275	344	309	379	341	238	305	241	307	278	198	227	380
Sub-Section Weighted	285	281	177	223	354	326	330	241	275	299	359	305	383	346	228	304	264	318	277	209	253	377

Table 2: Ranks by Weightings

	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TK	UK
Unweighted	13	11	22	21	3	7	5	15	16	14	6	8	1	4	17	9	18	10	12	20	19	2
Section Weighted	15	11	22	21	3	6	7	16	14	13	4	8	2	5	18	10	17	9	12	20	19	1
Sub-Section Weighted	12	13	22	20	4	7	6	18	15	11	3	9	1	5	19	10	16	8	14	21	17	2

Table 3: Correlation Matrix of Model Versions

	<i>Unweighted</i>	<i>Section Weighted</i>	<i>Sub-Section Weighted</i>
Unweighted	1		
Section Weighted	0.9892447	1	
Sub-Section Weighted	0.9541955	0.976685	1

V. In-country analysis

Institutional Framework

Section	Sub-section	Question	Question	Weight	AT	BE		CZ	DK	F	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	S	ES		CH	TR	U
A		1	No. of Infringement Proceedings in three years to 31/12/2009	4.1	4.1	1.4	1.4	4.1	2.7	4.1	4.1	0.0	1.4	4.1	4.1	1.4	4.1	4.1	0.0	0.0	4.1	1.4	1.4	4.1	4.1	1.4
			TOTAL	4.1	4.1	1.4	1.4	4.1	2.7	4.1	4.1	0.0	1.4	4.1	4.1	1.4	4.1	4.1	0.0	0.0	4.1	1.4	1.4	4.1	4.1	1.4

Section	Sub-section	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK	
A		2	Up to what level is NRA entrusted to impose administrative fines	4.1	2.0	4.1	0.0	0.0	4.1	4.1	4.1	0.0	0.0	4.1	2.0	4.1	4.1	2.0	0.0	0.0	4.1	4.1	4.1	4.1	0.0	4.1
		3	impose period of enforcement payments? If so, at what level?	4	0.0	0.0	4.1	4.1	4.1	0.0	0.0	4.1	4.1	0.0	0.0	4.1	4.1	0.0	4.1	0.0	4.1	4.1	0.0	0.0	0.0	
			Power of NRA to suspend commercial pending compliance	4.1	2.0	0.0	0.0	4.1	0.0	0.0	4.1	4.1	0.0	4.1	4.1	4.1	4.1	2.0	4.1	0.0	4.1	0.0	0.0	2.0	0.0	
		5	Is NRA restricted from imposing EOI	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1
			Is NRA explicitly empowered to impose	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	
		7	conduct inspections at premises of SMP operators		4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	0.0	4.1	4.1
		8	Is NRA restricted from collecting information on network deployment plans	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
			TOTAL	28.6	16.4	16.4	16.4	20.5	16.4	20.5	16.4	8.2	20.5	20.5	20.5	20.5	24.6	22.5	14.3	20.5	16.4	24.6	18.4	8.2	14.3	18.4

Section	Sub-section	Question	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
	3	9	Does NRA have financial capability to set remunerati	4.1	4.1	4.1	4.1	0.0	4.1	4.1	2.0	0.0	2.0	2.0	4.1	4.1	4.1	2.0	0.0	4.1	0.0	4.1	4.1	2.0	4.1	4.1
		10	Does NRA have res spe all of	4	2.0	2.0	2.0	4.1	4.1	2.0	2.0	4.1	2.0	4.1	4.1	0.0	0.0	4.1	2.0	4.1	4.1	0.0	4.1	2.0	4.1	4.1
				8.2	6.1	6.1	6.1	4.1	8.2	6.1	4.1	4.1	4.1	6.1	8.2	4.1	4.1	6.1	2.0	8.2	4.1	4.1	8.2	4.1	8.2	8.2

	Sub-section	Question	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES		CH	TR	UK	
A	4	11	Are the powers of the NR ma restricted through nat	4.1	4.1	0.0	4.1	4.1	4.1	0.0	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
		12	Do po instructions to NRA for the	4.1	0.0	4.1	4.1	4.1	4.1	0.0	4.1	0.0	4.1	0.0	0.0	4.1	2.0	0.0	4.1	2.0	4.1	4.1	4.1	4.1	2.0	0.0	4.1
		13	Ar dec ap Go	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	0.0	4.1	4.1	0.0	4.1	4.1	
		14	Gr the val of	4.1	2.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1
		15	Per incumbent's share capital hel	4.1	0.0	0.0	0.0	4.1	4.1	2.0	2.0	0.0	0.0	4.1	4.1	0.0	4.1	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	4.1	
			TO	20.5	10.2	12.3	16.4	20.5	20.5	10.2	14.3	8.2	16.4	16.4	16.4	16.4	18.4	8.2	16.4	14.3	8.2	20.5	16.4	10.2	12.3	20.5	

Section	Sub-section	Question	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
A	5	16	body a separate body from NRA?	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
		17	body adopt interim measures?	4.1	0.0	0.0	0.0	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	0.0	4.1	4.1	4.1	4.1	4.1	0.0
				8.2	4.1	0.0	4.1	8.2	8.2	4.1	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	4.1	4.1	8.2	8.2	8.2	8.2	8.2	4.1

Section	Sub-section	Question	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
A	6		Applicable standards to obtain suspension of the NRA's decision	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	0.0	4.1	4.1
			Duration of appeals since 1/1/2007	4.1	4.1	2.0	2.0	0.0	4.1	2.0	4.1	0.0	2.0	2.0	4.1	2.0	4.1	4.1	0.0	0.0	0.0	0.0	4.1	2.0	4.1	4.1
			<i>Locus standi</i> requirements for third parties to challenge NRA decisions	4.1	2.0	4.1	2.0	0.0	4.1	2.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	2.0	4.1	4.1	0.0	4.1	2.0	0.0	4.1	4.1
			Market analyses being appealed	4.1	4.1	0.0	0.0	0.0	0.0	4.1	4.1	0.0	4.1	4.1	2.0	0.0	0.0	2.0	0.0	4.1	0.0	2.0	2.0	4.1	4.1	4.1
			How many market analysis decisions annulled or overturned	4.1	0.0	0.0	4.1	0.0	4.1	4.1	0.0	4.1	4.1	4.1	4.1	0.0	0.0	4.1	0.0	4.1	0.0	4.1	4.1	4.1	4.1	0.0
				20.5	14.3	10.2	12.3	4.1	16.4	16.4	16.4	12.3	18.4	18.4	18.4	10.2	12.3	16.4	8.2	12.3	4.1	14.3	16.4	10.2	20.5	16.4

Regulatory Environment

Section	section	Questio	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
B	1	23	fixed networks be obtained from a single source through a common procedure?		2.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	4.1
		24	Is there a single forum to resolve disp com procedure?	4.1	2.0	4.1	2.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	4.1	2.0	2.0	4.1	2.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0
		25	obtaining ROW	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	0.0	2.0	4.1	0.0	4.1	4.1	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0
		26	What is the average timescale for obtaining ROW for a fixed network?	4.1	0.0	2.0	4.1	0.0	2.0	2.0	2.0	4.1	0.0	4.1	2.0	2.0	2.0	2.0	4.1	4.1	2.0	2.0	0.0	0.0	4.1	4.1
		27	access to ducts other than through SMP regulation?	4.1	2.0	2.0	0.0	0.0	0.0	4.1	4.1	0.0	0.0	0.0	4.1	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				20.5	10.2	12.3	12.3	4.1	8.2	14.3	10.2	10.2	0.0	10.2	12.3	8.2	14.3	12.3	8.2	12.3	6.1	4.1	2.0	0.0	4.1	12.3
Section	Sub-section	Question		Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
	2	28	Average timeframe for reservation of numbers	4.1	4.1	4.1	2.0	0.0	4.1	4.1	4.1	2.0	4.1	4.1	4.1	2.0	4.1	4.1	4.1	4.1	2.0	0.0	4.1	4.1	4.1	4.1
		29	aphic numbers be used for VOIP services of a nomadic character?	4.1	0.0	4.1	2.0	0.0	4.1	4.1	2.0	4.1	4.1	0.0	4.1	2.0	4.1	4.1	2.0	0.0	4.1	2.0	4.1	4.1	0.0	4.1
		30	Is NP mandated for porting numbers to VOIP services?	4.1	0.0	4.1	0.0	0.0	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	0.0	4.1	4.1	0.0	0.0	4.1	4.1	4.1

		31	Average wholesale price for porting individual fixed numbers	4.1	0.0	2.0	0.0	0.0	2.0	0.0	4.1	4.1	4.1	2.0	2.0	0.0	4.1	0.0	2.0	2.0	2.0	0.0	4.1	2.0	4.1	4.1
		32	Is the charge levied for porting fixed numbers by the incumbent fixed operator?	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1
		33	fixed numbers ported in 2009	4.1	2.0	0.0	0.0	0.0	4.1	0.0	4.1	2.0	4.1	4.1	2.0	2.0	4.1	4.1	2.0	4.1	2.0	2.0	2.0	0.0	0.0	0.0
		34	porting fixed number from application to porting in 2009	4.1	2.0	4.1	0.0	0.0	4.1	4.1	4.1	2.0	2.0	2.0	2.0	4.1	2.0	0.0	2.0	4.1	2.0	2.0	2.0	2.0	4.1	4.1
		35	wholesale price for porting individual mobile numbers	4.1	0.0	2.0	0.0	0.0	2.0	0.0	4.1	4.1	0.0	4.1	2.0	4.1	2.0	0.0	2.0	2.0	2.0	4.1	2.0	0.0	4.1	4.1
		36	levied for porting mobile numbers by the largest mobile operator?	4.1	0.0	4.1	0.0	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1
		37	Proportion of active mobile numbers ported in 2009	4.1	2.0	4.1	0.0	2.0	4.1	4.1	2.0	0.0	2.0	0.0	4.1	4.1	2.0	4.1	0.0	0.0	2.0	4.1	2.0	0.0	0.0	2.0
		38	timescale for porting mobile number application to porting	4.1	4.1	4.1	0.0	2.0	4.1	2.0	0.0	4.1	0.0	0.0	4.1	2.0	4.1	2.0	4.1	0.0	4.1	2.0	4.1	0.0	2.0	4.1
				45.0	18.4	36.8	4.1	12.3	40.9	30.7	36.8	26.6	32.7	24.6	36.8	30.7	40.9	32.7	24.6	26.6	26.6	24.6	32.7	24.6	30.7	38.9

Section	Sub-section	Question	Question	We	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT		ES	SE	CH	TR	UK	
B	3	39	Is the alloca publis	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
		40	Please servic which tradin	4.1	4.1	2.0	4.1	4.1	4.1	2.0	2.0	2.0	4.1	4.1	0.0	2.0	4.1	4.1	2.0	4.1	4.1	4.1	4.1	2.0	0.0	4.1	4.1
		41	Are th legal r the se can be 3.5GH	4.1	4.1	4.1	4.1	2.0	2.0	4.1	2.0	4.1	4.1	4.1	2.0	4.1	0.0	4.1	4.1	4.1	4.1	2.0	4.1	4.1	2.0	4.1	4.1
		42	Has 2. been on tec neutra	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0	4.1	0.0	0.0	4.1	0.0	0.0	4.1	4.1	0.0	4.1	0.0	4.1	0.0	0.0	0.0	0.0
		43	Did M techno neutra 900/1 spectr	4.1	0.0	4.1	0.0	4.1	2.0	4.1	2.0	4.1	0.0	0.0	2.0	4.1	0.0	2.0	0.0	2.0	2.0	0.0	2.0	4.1	0.0	0.0	0.0
		44	What digital	4.1	0.0	2.0	0.0	0.0	4.1	4.1	0.0	4.1	0.0	0.0	0.0	0.0	4.1	4.1	0.0	0.0	2.0	2.0	4.1	4.1	0.0	0.0	0.0
		45	Has d taken freque as a result of digital switch	4.	0.0	0.0	0.0	0.0	4.1	4.1	4.1	4.1	0.0	0.0	2.0	2.0	4.1	4.1	4.1	2.0	2.0	4.1	4.1	4.1	0.0	4.1	4.1
		46	Availa spectr TV	4.	4.1	4.1	0.0	0.0	4.1	4.1	4.1	4.1	0.0	4.1	0.0	4.1	4.1	4.1	4.1	0.0	0.0	0.0	0.0	4.1	0.0	4.1	4.1
			TOTA	32.7	16.4	20.5	12.3	14.3	24.6	30.7	18.4	30.7	12.3	16.4	14.3	20.5	20.5	30.7	22.5	16.4	22.5	16.4	26.6	26.6	6.1	20.5	

Efficiency of NRA

Section	section	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK	
C	1	47	4.1	4.1	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	4.1	2.0	0.0	4.1	0.0	0.0	0.0	4.1	4.1	0.0	0.0	0.0	0.0	4.1
		48	4.1	2.0	2.0	4.1	4.1	0.0	4.1	4.1	2.0	4.1	0.0	2.0	2.0	4.1	2.0	0.0	4.1	2.0	4.1	0.0	2.0	0.0	4.1	
			8.2	6.1	2.0	4.1	4.1	0.0	4.1	6.1	4.1	4.1	4.1	4.1	2.0	8.2	2.0	0.0	4.1	6.1	8.2	0.0	2.0	0.0	8.2	

Section	Sub-section	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
	2		4.1	4.1	2.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
		50	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	2.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	2.0	4.1	4.1	4.1	4.1	4.1
		51	4.1	4.1	4.1	0.0	0.0	4.1	4.1	4.1	0.0	0.0	0.0	4.1	4.1	4.1	4.1	0.0	0.0	0.0	4.1	4.1	4.1	0.0	4.1
		52	4.1	4.1	2.0	2.0	0.0	2.0	4.1	2.0	4.1	2.0	2.0	4.1	2.0	4.1	2.0	0.0	2.0	4.1	0.0	2.0	0.0	4.1	4.1

		53	Transparent costs of operating the NRA	4.1	4.1	2.0	4.1	4.1	4.1	4.1	2.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	2.0	4.1	
			TOTAL	20.5	20.5	14.3	14.3	12.3	18.4	20.5	16.4	16.4	12.3	10.2	20.5	18.4	20.5	18.4	12.3	14.3	14.3	16.4	18.4	16.4	14.3	20.5
Section	section	Question	n	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
C	3	54	breaches of imposed SMP obligations in the 18 markets	4.1	4.1	4.1	0.0	4.1	4.1	4.1	0.0	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1
		55	enforcement action taken over the past 3 years in relation to SMP breaches	4.1	4.1	4.1	0.0	0.0	4.1	4.1	0.0	0.0	4.1	4.1	4.1	2.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1
			TOTAL	8.2	8.2	8.2	0.0	4.1	8.2	8.2	0.0	0.0	8.2	8.2	8.2	6.1	8.2	8.2	8.2	8.2	8.2	8.2	8.2	0.0	8.2	8.2
	Sub-section		Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
C	4	56	Number of cases submitted to dispute settlement body in last two years and proportion of cases decided within four months	4.1	0.0	0.0	0.0	0.0	2.0	4.1	4.1	4.1	2.0	4.1	2.0	4.1	2.0	4.1	0.0	2.0	2.0	2.0	4.1	0.0	4.1	2.0
		57	timeframe for negotiations before a dispute can be submitted to the dispute settlement body	4.1	0.0	4.1	0.0	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	0.0	4.1	0.0	0.0	4.1
		58	pending disputes by the NRA	4.1	0.0	0.0	0.0	0.0	4.1	4.1	0.0	4.1	0.0	0.0	4.1	0.0	0.0	4.1	0.0	4.1	0.0	4.1	4.1	0.0	0.0	4.1
		59	affected third parties	4.1	0.0	4.1	0.0	4.1	4.1	4.1	4.1	4.1	2.0	4.1	4.1	2.0	4.1	4.1	4.1	4.1	2.0	2.0	0.0	0.0	4.1	4.1
				16.4	0.0	8.2	0.0	4.1	14.3	16.4	12.3	16.4	8.2	12.3	14.3	10.2	10.2	16.4	4.1	14.3	8.2	8.1	12.3	0.0	8.2	14.3

Section	Sub-section	Question	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
D	1	60	leased line market and remedies applied on a neutral basis including Ethernet interfaces	4.1	2.0	4.1	0.0	0.0	4.1	4.1	4.1	2.0	4.1	0.0	4.1	0.0	4.1	0.0	4.1	0.0	4.1	4.1	4.1	0.0	4.1	4.1
		61	Definition of wholesale broadband access market and any remedies applied on a technologically neutral basis	4.1	0.0	3.1	0.0	0.0	3.1	4.1	0.0	0.0	0.0	0.0	4.1	3.1	4.1	0.0	0.0	1.0	0.0	3.1	0.0	0.0	0.0	3.1
		62	market for on a neutral basis to include lines provided via fibre	4.1	0.0	0.0	0.0	0.0	0.0	4.1	4.1	0.0	0.0	0.0	4.1	4.1	4.1	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		63	NRAs remedies to facilitate downstream competition in local access markets.	4.1	2.0	2.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0
		64	fixed narrowband access, call termination and origination been defined on a technological neutral basis?	4.1	2.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
		65	MDF sites subject to conditions set out in NGA recommendation?	4.1	0.0	4.1	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	2.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	2.0

			TOT	24.6	6.1	13.3	0.0	0.0	11.3	14.3	14.3	2.0	6.1	0.0	18.4	11.3	18.4	6.1	4.1	3.1	4.1	13.3	4.1	2.0	6.1	13.3
Section	Sub-section	Question	on	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
D	2	66	effectiveness of SLAs dealing with LLU, wholesale broadband access, and terminating segments of leased lines.	4.1	4.1	4.1	0.0	3.1	4.1	2.0	4.1	3.1	3.1	3.1	4.1	4.1	4.1	4.1	2.0	4.1	2.0	4.1	0.0	2.0	3.1	4.1
		67	effectiveness of KPIs dealing with LLUs, wholesale broadband access, and terminating segments of leased lines.	4.1	0.0	2.0	0.0	0.0	4.1	0.0	2.0	0.0	2.0	1.0	1.0	4.1	3.1	3.1	4.1	4.1	1.0	2.0	0.0	1.0	0.0	4.1
		68a	Migration process for voice, broadband and leased lines: Bulk	4.1	2.0	4.1	0.0	1.0	4.1	1.0	3.1	2.0	3.1	1.0	4.1	4.1	2.0	2.0	1.0	2.0	1.0	4.1	1.0	3.1	0.0	3.1
		68b	Migration process for voice, broadband and leased lines: Consumer	4.1	3.1	4.1	0.0	1.0	2.0	1.0	3.1	4.1	3.1	4.1	3.1	1.0	3.1	1.0	1.0	3.1	3.1	2.0	3.1	3.1	1.0	3.1
		69	portability synchronization with LLUs, wholesale naked bitstream, and WLR.	4.1	2.0	0.0	0.0	2.0	0.0	0.0	4.1	2.0	2.0	0.0	2.0	4.1	4.1	4.1	0.0	2.0	4.1	4.1	0.0	0.0	2.0	2.0
			TOTAL	20.5	11.3	14.3	0.0	7.2	14.3	4.1	16.4	11.3	13.3	9.2	14.3	17.4	16.4	14.3	8.2	15.3	11.3	16.3	4.1	9.2	6.1	16.4

Section	Sub-section	Question	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
D	3	70	requirement typically introduced of accounting separation.	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1
		71	accounting separation clearly specified and subject to consultation	4.1	0.0	4.1	0.0	2.0	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	2.0	4.1	4.1	2.0	0.0	4.1	0.0	0.0	4.1	4.1
		72	separated accounts	2.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0
		73	of SMP's published accounts available to third parties.	2.0	0.0	2.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	2.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
				12.3	4.1	12.3	4.1	6.1	8.2	8.2	11.3	0.0	11.3	8.2	12.3	11.3	5.1	8.2	11.3	6.1	4.1	10.2	4.1	0.0	8.2	12.3

Section	Sub-section	Question	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
	4		Has an obligation been applied for the SMP operator to provide a wholesale offer prior to the launch of a retail offer	4.1	2.0	2.0	2.0	2.0	4.1	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	4.1
		75	Has NRA adopted measures to prevent price squeeze for the provision of mobile termination services	4.1	0.0	4.1	0.0	0.0	4.1	4.1	4.1	0.0	4.1	4.1	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	4.1	0.0
		76	in place which use of the same ordering and/or information processing systems (EOI)?	4.1	0.0	4.1	0.0	0.0	4.1	4.1	0.0	0.0	0.0	4.1	4.1	0.0	4.1	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	4.1
		77	^e restrictions for the exchange of information within an SMP operator to prevent misuse of such information?	4.1	2.0	2.0	0.0	0.0	0.0	4.1	4.1	4.1	2.0	2.0	4.1	4.1	4.1	4.1	4.1	4.1	0.0	2.0	0.0	4.1	0.0	4.1
		78	Has the NRA addressed margin squeeze? Have general principles been published, which markets, what methodology?	4.1	4.1	4.1	0.0	2.0	4.1	0.0	4.1	4.1	4.1	0.0	4.1	4.1	4.1		0.0	4.1	0.0	4.1	0.0	0.0	0.0	4.1

		79	Has the NRA addressed anti-com bundling?	4.1	0.0	2.0	0.0	2.0	2.0	0.0	4.1	2.0	4.1	0.0	2.0	4.1	0.0	0.0	0.0	4.1	0.0	4.1	0.0	0.0	0.0	2.0
			Has the NRA set restrictions on volume and long term discounts? Which products and what methodology?	4.1	0.0	0.0	4.1	0.0	4.1	4.1	0.0	0.0	4.1	4.1	4.1	0.0	4.1	2.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1
				28.6	8.2	18.4	6.1	6.1	22.5	18.4	16.4	12.3	18.4	16.4	20.5	14.3	18.4	8.2	10.2	18.4	4.1	10.2	0.0	4.1	4.1	22.5

Economic Market Conditions

Section	Sub-section	Question	Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK	
E	1	81	interconnection tariffs at: local, single tandem and double tandem levels	4.	0.0	2.0	2.0	0.0	4.1	0.0	2.0	0.0	2.0	4.1	2.0	4.1	4.1	2.0	2.0	4.1	2.0	0.0	4.1	0.0	0.0	4.1
		82	based interconnection offer for: all calls, internet only.	2.	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	1.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	1.0
		83	Proportion of customers using an alternative provider to the incumbent for direct access to telephone services on the basis of an alternative network	4.1	0.0	4.1	0.0	2.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	4.1	4.1	4.1	4.1	2.0	4.1	2.0	2.0	0.0	4.1
		84	Proportion of customers using an alternative provider to the incumbent for direct access to telephone services on the basis of LLU	4.1	4.1	0.0	0.0	4.1	2.0	2.0	4.1	4.1	4.1	0.0	0.0	4.1	2.0	2.0	0.0	2.0	4.1	2.0	2.0	0.0	0.0	2.0
		85	Proportion of customers using an alternative provider to the incumbent for direct access to telephone services on the basis of WLR	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0
		86	What proportion of lines are active CPS lines compared to the total number of incumbent lines ?	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0
		87	What proportion of all active lines are based on VOB?	4.1	2.0	4.1	0.0	0.0	4.1	0.0	4.1	0.0	4.1	0.0	2.0	2.0	4.1	4.1	0.0	2.0	4.1	2.0	2.0	2.0	0.0	2.0

		88	Market share of alternative operators in fixed voice market for all types of calls?	4.1	4.1	2.0	0.0	0.0	4.1	0.0	2.0	2.0	2.0	0.0	2.0	2.0	4.1	4.1	0.0	4.1	0.0	2.0	4.1	2.0	0.0	4.1
		89	Are VOB services offered on a stand-alone basis or only as part of a	4.1	4.1	4.1	4.1	4.1	4.1	2.0	4.1	2.0	4.1	4.1	4.1	4.1	2.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
		90	basket for residential customers	4.1	4.1	0.0	4.1	0.0	2.0	0.0	2.0	4.1	2.0	2.0	0.0	2.0	2.0	2.0	0.0	4.1	4.1	0.0	4.1	2.0	4.1	0.0
		91	Value of the retail price basket for business customers	4.1	2.0	0.0	4.1	0.0	2.0	0.0	2.0	4.1	4.1	2.0	0.0	0.0	2.0	4.1	2.0	2.0	4.1	0.0	4.1	2.0	4.1	0.0
			TOTAL	38.9	22.5	19.4	14.3	12.3	28.6	8.2	23.5	18.4	24.6	16.4	17.4	21.5	29.7	30.7	17.4	30.7	24.6	18.4	30.7	16.4	12.3	25.6
Section	Sub-section	Question		Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
E	2	92	termination charge applied by the largest (in revenue) mobile operator in your country	4.1	4.1	2.0	0.0	0.0	2.0	4.1	4.1	2.0	0.0	2.0	0.0	0.0	2.0	2.0	4.1	2.0	2.0	2.0	4.1	0.0	4.1	4.1
		93	HHI level on the retail market?	4.1	4.1	2.0	0.0	2.0	4.1	2.0	2.0	4.1	0.0	0.0	2.0	4.1	4.1	2.0	4.1	0.0	0.0	2.0	2.0	0.0	0.0	4.1
		94	low users of mobile retail services	4.1	4.1	2.0	2.0	0.0	4.1	4.1	0.0	2.0	0.0	2.0	0.0	0.0	4.1	4.1	4.1	2.0	2.0	0.0	4.1	2.0	2.0	0.0
		95	average users of mobile retail services	4.1	4.1	0.0	2.0	0.0	4.1	4.1	0.0	2.0	0.0	2.0	0.0	2.0	4.1	4.1	4.1	2.0	2.0	0.0	4.1	0.0	2.0	2.0
		96	more "real" MVNOs	4.1	4.1	4.1	0.0	0.0	4.1	4.1	0.0	4.1	0.0	0.0	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	0.0	4.1
		97	and SP	4.1	0.0	4.1	0.0	0.0	4.1	2.0	2.0	4.1	2.0	0.0	2.0	2.0	4.1	4.1	0.0	0.0	2.0	2.0	0.0	2.0	0.0	4.1
		98	retail roaming charge? (Voice)	2.0	2.0	1.0	2.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	2.0	1.0	1.0	2.0	1.0	1.0	0.0	2.0	2.0	0.0	0.0	2.0
		98b		2.0	2.0	1.0	0.0	0.0	1.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	2.0	2.0	0.0	1.0	0.0	1.0	2.0	2.0	0.0	2.0
		98c		2.0	2.0	0.0	2.0	1.0	2.0	2.0	2.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	2.0	0.0	2.0
		99	wholesale roaming charge? (Data)	2.0	2.0	0.0	2.0	1.0	1.0	0.0	1.0	1.0	1.0	2.0	0.0	1.0	2.0	2.0	1.0	2.0	0.0	1.0	0.0	0.0	0.0	2.0

		99b	Data	2.0	1.0	2.0	1.0	1.0	0.0	1.0	2.0	2.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
		99c		2.0	1.0	0.0	1.0	1.0	0.0	1.0	2.0	2.0	0.0	2.0	1.0	1.0	1.0	2.0	0.0	2.0	0.0	1.0	0.0	2.0	0.0	2.0
		100	users with mobile internet and proportion of mobile broadband dedicated data services	2.0	2.0	1.0	0.0	0.0	2.0	2.0	1.0	1.0	0.0	0.0	2.0	1.0	2.0	2.0	0.0	1.0	0.0	1.0	2.0	1.0	0.0	1.0
		100b		2.0	2.0	0.0	0.0	1.0	1.0	2.0	0.0	1.0	0.0	1.0	2.0	2.0	0.0	1.0	2.0	2.0	1.0	1.0	2.0	0.0	0.0	1.0
		101	Operators active in the 3.5GHz band		4.1	2.0	4.1	4.1	4.1	4.1	4.1	2.0	4.1	4.1	4.1	4.1	2.0	4.1	4.1	2.0	2.0	4.1	4.1	4.1	0.0	2.0
			TOTAL	45.0	38.9	21.5	16.4	11.3	34.8	33.8	22.5	31.7	8.2	17.4	21.5	24.6	33.8	37.9	29.7	23.5	12.3	23.5	31.7	21.5	8.2	34.8

Section	Sub-section	n		Weight	AT	BE	BG	CZ	DK	FI	FR	DE	EL	HU	IE	IT	NL	NO	PL	PT	SI	ES	SE	CH	TR	UK
E	3	102	Are term available on regulated terms or o	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	0.0	4.1
		103	Price of monthly Mbit/s, 5km term	4.1	0.0	2.0	2.0	0.0	4.1	4.1	4.1	0.0	0.0	0.0	0.0	4.1	4.1	0.0	4.1	4.1	2.0	2.0	2.0	2.0	2.0	2.0
		104	Price of set-up and monthly rental for a 34Mbit/s, 5km terminating segment	4.1	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	4.1	0.0	4.1	4.1	4.1	4.1	2.0	4.1	2.0	4.1
		105	Proportion of regulated wholesale leased line terminating segments are Ethernet	4.1	4.1	4.1	0.0	0.0	2.0	2.0	4.1	2.0	2.0	2.0	2.0	2.0	4.1	4.1	2.0	4.1	2.0	2.0	2.0	2.0	2.0	4.1
		106	Are specific business grade bitstream services available on regulated terms or otherwise?	4.1	4.1	4.1	0.0	4.1	4.1	0.0	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	0.0	4.1	0.0	4.1
			TOTAL	20.5	14.3	14.3	6.1	8.2	14.3	12.3	18.4	12.3	8.2	10.2	10.2	16.4	20.5	12.3	10.2	20.5	16.4	16.4	10.2	16.4	6.1	18.4

Section	Sub-section		Question	Weig	AT	BE	BG	CZ	DK	FI	FR	D	E	HU	I	I	NL	NO		PT	SI	ES	SE		TR	K
E	4	107	Set-up and recurrent tariff charged for full	4.1	4.1	2.0	2.0	0.0	0.0	0.0	2.0	0.0	4.1	4.1	0.0	2.0	4.1	0.0	4.1	2.0	2.0	2.0	4.1	0.0	4.1	2.0
		108	tariff charged for shared ULL access.	4.1	2.0	4.1	0.0	0.0	0.0	0.0	2.0	4.1	2.0	2.0	4.1	4.1	4.1	0.0	4.1	2.0	2.0	2.0	0.0	0.0	2.0	4.1
		109	lines and shared access as a percentage of total (retail) DSL lines.	4.1	2.0	0.0	0.0	2.0	2.0	2.0	4.1	4.1	4.1	0.0	0.0	4.1	2.0	4.1	0.0	2.0	2.0	2.0	4.1	0.0	0.0	4.1
		110	full loops or subloops (from the ODF) used in the market?	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
			Is sub-loop unbundling (SLU) in use?	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0
		112	Percentage of broadband lines supplied end to end by competitors on the fixed wireless networks and own copper network	8.2	8.2	8.2	4.1	8.2	4.1	0.0	0.0	0.0	0.0	8.2	4.1	0.0	8.2	4.1	8.2	8.2	4.1	4.1	0.0	4.1	0.0	4.1
		113	Percentage of DSL lines provided by competitors on the basis of wholesale bitstream access	4.1	4.1	2.0	0.0	2.0	4.1	4.1	4.1	4.1	0.0	2.0	2.0	2.0	4.1	4.1	2.0	4.1	4.1	4.1	0.0	2.0	4.1	2.0
		114	Availability of wholesale naked bitstream access	4.1	2.0	2.0	0.0	0.0	4.1	4.1	2.0	2.0	0.0	4.1	0.0	4.1	0.0	4.1	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0
		115	What proportion of bitstream lines are on an Ethernet basis	4.1	0.0	0.0	0.0	0.0	4.1	2.0	4.1	0.0	0.0	2.0	2.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	4.1	2.0	0.0	4.1

		116	Please specify the number of agreements in place of duct access and the per successful requests	4.1	2.0	0.0	4.1	0.0	4.1	4.1	4.1	4.1	0.0	0.0	0.0	4.1	0.0	4.1	4.1	4.1	0.0	4.1	0.0	4.1	4.1	0.0
		117	price of retail broadband access in April 2009	8.2	4.1	0.0	0.0	8.2	4.1	0.0	8.2	4.1	4.1	0.0	4.1	8.2	8.2	4.1	0.0	0.0	0.0	4.1	4.1	8.2	8.2	8.2
		118	the provision of retail triple play offers?	4.1	0.0	0.0	4.1	4.1	4.1	2.0	2.0	0.0	0.0	4.1	0.0	2.0	4.1	4.1	0.0	4.1	2.0	2.0	2.0	2.0	0.0	2.0
				53.2	30.7	18.4	14.3	24.6	32.7	20.5	34.8	24.6	14.3	26.6	16.4	30.7	38.9	36.8	26.6	28.6	18.4	26.6	22.5	24.6	22.5	32.7