



## REPORT II

# Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries

June 1, 2009

## Executive Summary

The market for electronic communications in the Western Balkans and Turkey in 2008 continued to show the signs of strong and positive growth, despite the economic crisis. In the absence of the complete financial data for 2008, it is still early to judge about the negative effects of the crisis on individual national economies or on the overall performance of the electronic communications sector in the region. The forecasts for 2009, however, look far less optimistic as overall economic downturn, falling sources of finance and declining foreign investment are likely to negatively affect the growth of the sector.

As the countries struggle with growing budget deficits, the electronic communications sector could also be affected by some of the measures introduced by national governments to combat the crisis. One such example is a temporary additional 10% tax on mobile communications recently introduced in Serbia. However, according to the European Central Bank and the International Monetary Fund, the overall economic growth in the Western Balkans and Turkey will resume already by 2010 and will be higher than that in the Euro zone.

Mobile telephony remains the fastest growing electronic communications market in the region. The strong growth of the mobile penetration has continued in all countries, reaching the level of the EU-27 and sometimes even surpassing it, with Montenegro (185%), Croatia (132.5%) and Serbia (128.3%) in the lead. The growth in mobile penetration was accompanied by intensified competition as the new players that entered the mobile markets in the former Yugoslav Republic of Macedonia, Albania, Montenegro, Serbia and Kosovo in 2007 have been rolling out their networks and building subscriber base. The competition has also brought some reductions in mobile retail prices, in particular in Croatia, the former Yugoslav Republic of Macedonia, Montenegro and Serbia. Mobile retail prices in these countries have reached the levels below the EU-27 average.

Spectrum licences for provision of 3G mobile services have been issued in Croatia, the former Yugoslav Republic of Macedonia, Turkey, Bosnia & Herzegovina, Montenegro and Serbia, and some commercial services have been launched, using both UMTS and HSDPA. Mobile broadband is also taking off, in particular in Croatia and Serbia. At the end of 2008, Croatia reported 158,500 active users of dedicated data cards and keys, corresponding to 3.6% penetration.

Mobile number portability is now available in Croatia, the former Yugoslav Republic of Macedonia and Turkey. In Turkey, it appears to have been a particular success with almost 1.2 million mobile numbers ported within the first four months since its launch in November 2008, equivalent to 2% of total mobile numbers.

Fixed networks have been liberalised in most of the countries – data before voice and domestic services before international gateways. Yet there are significant delays between adoption of the intention and effective implementation. Consequently incumbent operators retain strong or very strong positions in most fixed markets. Fixed voice telephony services de facto have not been opened to competition in Serbia, while in Turkey there is no effective competition in the provision of fixed voice telephony networks and services at the local level. Some improvements, however, could be expected during 2009. As the first step in liberalising the fixed voice telephony market, several providers of VoIP and international interconnection were licensed in Serbia in late 2008 and tender procedures for licensing alternative fixed voice telephony network operators are expected in the second half of 2009. Under the new Electronic Communications Law adopted in November 2008, Turkey is expected to introduce a general authorisation regime that should facilitate competitive market entry.

The provision of fixed broadband Internet access remains limited. At the end of 2008, the average broadband penetration rate for the eight countries was 7.74%, which is about one third of the EU-27 average of 22.90%. The highest broadband penetration rate of 11.80% was reported by Croatia, above the level of Romania and Bulgaria that joined the EU in 2007.

Fixed broadband markets are dominated by the incumbent operators in Croatia, Turkey and Montenegro, where xDSL is the main access technology. A different situation is observed in the former Yugoslav Republic of Macedonia, Bosnia & Herzegovina, Serbia and Kosovo, where competitors are using

alternative infrastructures: cable and fixed wireless access networks. In Albania, local operators offer xDSL services in competition with the incumbent based on own network infrastructures.

The implementation of competitive safeguards for fixed voice telephony remains in the early stages and is dependent upon the capacity and expertise of the authorities. National legislation based on the EU 2003 regulatory package has been implemented in four countries: Albania, Croatia, FYROM and Montenegro. Elements of the EU 2003 regulatory framework have also been introduced in the new law in Turkey, but the key provisions on competitive safeguards and the market analysis regime still require further implementing legislation. With the exception of Croatia, that has implemented the necessary starting conditions concerning access, interconnection and universal service, the regulatory regimes are not yet sufficiently prepared for the implementation of the new regulatory framework.

The greatest challenge facing regulators is the task of carrying out market analyses. They must define relevant markets, gather the necessary data, designate operators with SMP and then identify and enforce appropriate remedies. To date, progress has been extremely limited.

The extent of the changes to legislation and consequently to regulatory systems has been considerable. In view of the political changes and disruptions, at least in the Western Balkans, the lack of stability causes regulatory uncertainty. In some cases, the actions of governments could be construed as interference with or lessening of the status of the regulator. Commitments to strengthen regulators are not being given sufficient priority by governments. This is against a background of the European Commission criticism of public administration, judicial reform and anti-corruption campaigns.

The evidence from the collection of data for this report suggests that there is a need to improve the transparency in the operation of regulators in terms of publication of the decisions, consultation procedures and reporting of market conditions.

The EU legal framework for information society services largely has been implemented in national legislation, in particular the provisions on legal recognition of electronic contracts and electronic signatures and measures to tackle cybercrime and spam.

Most countries have established a government body which is in charge of preparing the national strategy on information society development and has some coordinating role at the state and the international levels. However, the responsibility for information society policy is not clearly defined. In some countries it is distributed over several institutions or assigned to a body that still has to be established.

Some national statistics institutes have started collecting information society statistics, but often covering only basic indicators and not fully integrated with Eurostat statistics. Data on online commercial transactions or on usage of e-government and e-learning services is missing. Computer and Internet usage is below the EU average, although similar to other EU member states of the region. Some countries have reported large gaps between male and female usage of computers and the Internet.

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## List of Abbreviations

3G	Third Generation (mobile telecommunications)
ACQ	All Calls Query
ADSL	Asymmetric Digital Subscriber Line
ATM	Asynchronous Transfer Mode
BRAS	Broadband Remote Access Server
BSA	Bitstream Access
BWA	Broadband Wireless Access
CAS	Cost Accounting System
ccTLD	country code Top Level Domain
CDMA	Code Division Multiple Access
CERT	Computer Emergency Response Team
CI	Cullen International
COCOM	Communications Committee
CPI	Consumer Price Index
CPS	Carrier Pre-Selection
CRDB	Centralised Reference Database
CS	Carrier Selection
DD	Digital Dividend
DG	Directorate-General
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexor
DVB-H	Digital Video Broadcasting - Handheld
DVB-T	Digital Video Broadcasting - Terrestrial
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
EC	European Commission
ECJ	European Court of Justice
ECS	Electronic Communication Service
ECTA	European Competitive Telecommunications Association
EDC	Embedded Direct Costs
ENISA	European Network and Information Security Agency
ERG	European Regulators Group
ETR	ETSI Technical Report
EU	European Union
ETSI	European Telecommunications Standards Institute
FDC	Fully Distributed Costs
FTTH	Fibre To The Home
FWA	Fixed Wireless Access
Gbps	Gigabit per second
GDP	Gross Domestic Product
GSM	<i>Groupe Speciale Mobile</i> or Global Standard for Mobile communications
IANA	Internet Assigned Numbers Authority
ICANN	Internet Corporation for Assigned Names and Numbers
ICT	Information and Communication Technologies
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronic Engineers
IP	Internet Protocol
IPO	Initial Public Offering
IOT	Inter Operator Tariff
ISDN	Integrated Services Digital Access
ISDN BRA	ISDN – Basic Rate Access (2 x 64 kbits/second)
ISDN PA	ISDN – Primary Access (32 x 64 kbits/second)
ISP	Internet Service Provider
ISO	International Organization for Standardization
ITU	International Telecommunication Union
IXP	Internet Exchange Point
LLU	Local Loop Unbundling
LRIC	Long Run Incremental Cost

LRAIC	Long Run Average Incremental Cost
NCA	National Competition Authority
NRA	National Regulatory Authority
OECD	Organisation for Economic Cooperation and Development
PATS	Public Access Telephone Service
PC	Personal Computer
PLC	Power Line Communications
PMR	Private Mobile Radio
PRS	Premium Rate Service
PSTN	Public Switched Telephone Network
Q1	First quarter of the year
QOR	Query On Release
QOS	Quality Of Service
RIO	Reference Interconnection Offer
RLAN	Radio Local Area Network
ROCE	Return on Capital Employed
RPI	Retail Price Index
RSC	Radio Spectrum Committee
RSPG	Radio Spectrum Policy Group
RUO	Reference Unbundling Offer
SEE	South-East Europe
SLA	Service Level Agreements
SMP	Significant Market Power
SRSG	Special Representative of the United Nations Secretary General to Kosovo
TV	Television
UDRP	Uniform Dispute Resolution Procedure
UMTS	Universal Mobile Telecommunications System
UN	United Nations
UNDP	United Nations Development Programme
UNMIK	United Nations Mission in Kosovo
UNSCR	United Nations Security Council Resolution
URL	Uniform Resource Locator
US	Universal Service
USO	Universal Service Obligation
VAT	Value Added Tax
VOIP	Voice over Internet Protocol
WCDMA	Wideband Code Division Multiple Access
Wi-Fi	Wireless Fidelity (IEEE 802.11)
WiMAX	Worldwide Interoperability for Microwave Access
WIPO	World Intellectual Property Organisation
WLR	Wholesale Line Rental

## I. INTRODUCTION

The significance of the telecommunications sector has long been recognised by economists, not only as an important service sector in its own right, but also as a critical input for the rest of the economy and also as the enabling infrastructure for the information society. Over-arching goals for the European Union were set in the i2010 policy framework for a European information society for growth and employment.<sup>1</sup>

Telecommunications policies have come to occupy an important position in the economic development of nations.<sup>2</sup> There is a broad consensus within the OECD and the European Union that these policies should be based on competitive markets and that this is best achieved within a stable but evolving legal framework, with markets supervised by a regulatory authority that is separate from and independent of telecommunications operations.

There has been a pattern of privatisation of operators with state ownership no longer being considered essential for the achievement of national goals and recognised as a potential obstacle to fair competition. Privatisation also provided a welcome source of revenue for the state, rather than state-owned operators demanding funds for investments.

In the European Union, the regulatory environment for the telecommunications or electronic communications sector<sup>3</sup> has undergone progressive changes for a quarter of a century. This development is characterised by four major phases:

1. The first initiatives saw the liberalisation of the markets for terminals and some telecommunications services, though many services remained exclusive to the state. Competition was generally limited to value added services and to services provided to closed user groups within businesses.
2. “Full liberalisation”, which took effect by December 31, 1997, eliminated the remaining special and exclusive rights of the state and state-owned operators.<sup>4</sup> It was characterised by:
  - individual authorisations for public telephony services and for the construction of infrastructure, both fixed and mobile;
  - a prescribed set of asymmetric regulations imposed on operators with Significant Market Power (SMP), i.e., having 25% or more of a small number of broadly defined markets.

This became known as the “1998 *acquis*”.

3. The “1999 Review” saw the previous legislation repealed and a new set of directives enacted in 2002: Framework, Authorisation, Access, Universal Service, Privacy and Competition. The main changes were:
  - more extensive use of general authorisations, reducing regulatory barriers to market entry. Only activities requiring the use of scarce resources required an individual authorisation.
  - the designation of SMP was brought into line with competition law and its application limited to markets defined on competition law principles, with regulators being given a choice of the remedies to apply to such operators.
  - all electronic communications networks and services were regulated, including broadcasting transmission networks.<sup>5</sup>

This became known as the “2003 *acquis*”.<sup>6</sup>

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<sup>1</sup> [http://ec.europa.eu/information\\_society/eeurope/i2010/index\\_en.htm](http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm)

<sup>2</sup> The Seoul Declaration for the future of the Internet economy, June 18, 2008, Ministerial session. Paris: OECD. <http://www.oecd.org/dataoecd/49/28/40839436.pdf>

<sup>3</sup> Since 2002, the legislation has referred to “electronic communications” to reflect convergence, for example, it also applies to broadcasting networks. In this report, the term electronic communications is used when describing aspects that relate specifically to the 2003 regulatory framework. The term telecommunications is used to describe general aspects that do not relate to a specific regulatory framework.

<sup>4</sup> Greece, Ireland, Portugal and Spain had derogations on their introduction.

<sup>5</sup> However, the content of services delivered over those networks was excluded. See, for example, Directive 2007/65/EC amending Council Directive 89/552/EEC concerning the pursuit of television broadcasting activities.

4. In June 2006 the European Commission published a communication on the review of the current regulatory framework.<sup>7</sup> Then, in November 2007, it adopted a series of legislative proposals that were debated in the European Parliament and the Council of Ministers, with significant changes likely to be made.

The EC then revised its original proposals, the most significant elements of which were:<sup>8</sup>

- Creation of the Body of Telecoms Regulators (the Body), with roles in market analysis, radio spectrum and numbering.
- Changes to the market analysis procedures, including deadlines and a role for the Body if a country is late in conducting its market analyses. The Commission’s veto powers to be extended to include remedies, in order to ensure greater harmonisation.
- The inclusion of functional separation as a remedy of “last resort”. This would mean that a vertically integrated operator could be required to place activities related to the wholesale provision of its access network services in an independent operating business unit that would have to work under strict non-discriminatory obligations.
- More flexible but better harmonised radio spectrum management with technology and service neutrality. Spectrum trading to be permitted in bands designated by the EC under a regulatory procedure and, optionally, in additional bands designated by individual Member States.
- Changes to network integrity, data security, privacy and consumer rights.

It is possible that the directives could be adopted in 2009, with an implementation date in 2010 and would then become the “2010 *acquis*”. However, this is subject to the debates in Parliament and Council, plus any negotiations between the two bodies and may be delayed until 2010 and 2011 respectively.

In 2007, the EC under its own authority revoked its 2003 Recommendation of Relevant markets and replaced it with a new and much shorter list (see Table 1).<sup>9</sup> NRAs can additionally use the “three criteria test” to find that one of the markets deleted from the list or some other market required analysis:<sup>10</sup>

1. the presence of high and non-transitory barriers to entry (structural, legal or regulatory);
2. a market structure which does not tend towards effective competition within the relevant time horizon;
3. the insufficiency of competition law alone adequately to address the market failure(s)

They must then inform the EC and obtain consent for any additional market definition.

2003 Recommendation		2007 Recommendation		Comment
1	Access to the public telephone network at a fixed location for residential customers	1	Access to the public telephone network at a fixed location for residential and non-residential customers	Combines old markets 1 and 2.
2	Access to the public telephone network at a fixed location for non-residential customers			

<sup>6</sup> This framework is also referred to as the “2002 *acquis*”. The directives were adopted in 2002 and became effective in member states in July 2003. Because the widely accepted term is the “1998 *acquis*”, referring to the year when the directives became effective, it is consistent to use the term “2003 *acquis*”. However, some member states were late in their implementation and the new member states did not have to apply the directives until their accession.

<sup>7</sup> Report on the outcome of the Review of the EU regulatory framework for electronic communications networks and services. COM(2007) 696 final.

<sup>8</sup> [http://ec.europa.eu/information\\_society/policy/ecomm/library/proposals/index\\_en.htm](http://ec.europa.eu/information_society/policy/ecomm/library/proposals/index_en.htm)

<sup>9</sup> Commission recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation (2007/879/EC).

[http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/proposals/879/l\\_34420071228en00650069.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/proposals/879/l_34420071228en00650069.pdf)

See also the explanatory note:

[http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/proposals/sec2007\\_1483\\_final.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/proposals/sec2007_1483_final.pdf)

<sup>10</sup> The test for economic regulation in telecoms: Three criteria and Significant Market Power, Brussels, December 9, 2008.

[http://www.cullen-international.com/documents/cullen/cipublic/economicregtelecoms\\_9dec2008.cfm](http://www.cullen-international.com/documents/cullen/cipublic/economicregtelecoms_9dec2008.cfm)

2003 Recommendation		2007 Recommendation		Comment
3	Publicly available local and/or national telephone services provided at a fixed location for residential customers			deleted
4	Publicly available international telephone services provided at a fixed location for residential customers			deleted
5	Publicly available local and/or national telephone services provided at a fixed location for non-residential customers			deleted
6	Publicly available international telephone services provided at a fixed location for non-residential customers			deleted
7	The minimum set of leased lines			deleted
8	Call origination on the public telephone network provided at a fixed location	2	Call origination on the public telephone network provided at a fixed location	unchanged
9	Call termination on individual public telephone networks provided at a fixed location	3	Call termination on individual public telephone networks provided at a fixed location	unchanged
10	Transit services in the fixed public telephone network			deleted
11	Wholesale unbundled access (including shared access) to metallic loops and sub-loops for the purpose of providing broadband and voice services	4	Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location	Reference to metallic loops removed to permit the inclusion of fibre loops.
12	Wholesale broadband access	5	Wholesale broadband access	Non-physical or virtual network access (e.g., bit-stream).
13	Wholesale terminating segments of leased lines	6	Wholesale terminating segments of leased lines, irrespective of the technology used to provide leased or dedicated capacity	Made technology neutral.
14	Wholesale trunk segments of leased lines			deleted
15	Access and call origination on public mobile telephone networks			deleted
16	Voice call termination on individual mobile networks	7	Voice call termination on individual mobile networks	unchanged
17	The wholesale national market for international roaming on public mobile networks			deleted
18	Broadcasting transmission services, to deliver broadcast content to end-users			deleted

Table 1 - List of relevant markets

The EU adopted the Roaming Regulation in 2007.<sup>11</sup> While this is now part of the *acquis communautaire*, its application outside member states is complicated by the need for reciprocal agreements amongst operators. A proposal to amend and to extend the Regulation is presently being debated in the Council and the Parliament.

The EU started to address information society issues around 1990. In the beginning, the legislative initiatives focussed on completing the internal market by harmonising national legislation, for example by the Television without Frontiers Directive<sup>12</sup> (1989) and the Data Protection Directive<sup>13</sup> (adopted in 1995, though the Commission had published its first draft in 1990).

<sup>11</sup> Regulation (EC) No. [717/2007](#) of the European Parliament and of the Council of 27 June 2007 on roaming on public mobile telephone networks within the Community and amending Directive 2002/21/EC.

<sup>12</sup> Council Directive [89/552/EEC](#) on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities.

At a special meeting in March 2000 the European Council adopted the Lisbon Strategy, setting a new strategic goal to gain economic growth and better jobs by becoming “the most competitive and dynamic knowledge-based economy in the world”.<sup>14</sup> Creating “an information society for all” became one of the main means to achieve this dynamic knowledge-based economy. The information society aspects of the Lisbon Strategy were addressed in more detail by the eEurope 2002 and 2005 Action Plans. In June 2005 eEurope was replaced by the current i2010 Strategy.<sup>15</sup> The eSEEurope Initiative<sup>16</sup> extends the EU’s related activities to the SEE countries.

The Electronic Commerce Directive<sup>17</sup> adopted in 2000 ensures that Member States legally recognise electronic contracts. It also granted providers of information society services free market access and established rules on advertising. The Directive provided a safer legal environment for Internet service providers, because it limited their liability for infringements by their subscribers or users. Some of the provisions of the Electronic Commerce Directive, in particular on transparency of online offers, were preceded by the Directive on the protection of consumers in respect of distance contracts.<sup>18</sup>

The Electronic Signatures Directive adopted in 1999 established the legal framework for electronic signatures that are legally equal to handwritten signatures.<sup>19</sup> Certification-service providers must not be subject to prior authorisation. Member States must establish a supervision system for those providers who issue qualified certificates.

Regulatory development has been supported by monitoring the progress in the national electronic communications markets. Each year the European Commission publishes an in-depth report on the implementation of the electronic communications regulatory framework in the Member States. The fourteenth report was adopted by the Commission in March 2009.<sup>20</sup> These reports have examined major developments in the market and give an assessment of the implementation of the regulatory framework.

Further coordination is provided by a number of bodies where the EC and member states meet to discuss implementation and future policies:<sup>21</sup>

- Communications Committee (COCOM)
- European Regulators Group (ERG)
- Radio Spectrum Committee (RSC)
- Radio Spectrum Policy Group (RSPG)

Regulatory development was compressed into a much shorter period for the ten Member States that joined the EU on May 1, 2004, and also for Bulgaria and Romania that joined on January 1, 2007. While all negotiated their membership based on the 1998 *acquis*, the EU was in the process of replacing these with new directives which these countries had to transpose before they became member states.

As part of the preparation for EU enlargement, monitoring of telecommunication markets in South-East Europe has been performed for several years. Reports, similar to those for the EU Member States, were prepared for the period 2005 to 2007.

“Monitoring regulatory and market developments for electronic communications and information society services in enlargement countries” is a three-year project funded by the European Commission Directorate General for Information Society and Media and performed by Cullen International. The project

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<sup>13</sup> Directive 95/46/EC of the European Parliament and of the Council of October 24, 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

<sup>14</sup> See the Council conclusions and later amendments at [http://ec.europa.eu/growthandjobs/european-councils/index\\_en.htm](http://ec.europa.eu/growthandjobs/european-councils/index_en.htm).

<sup>15</sup> See [http://ec.europa.eu/information\\_society/eeurope/i2010/index\\_en.htm](http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm).

<sup>16</sup> See <http://www.eeseinitiative.org/>.

<sup>17</sup> Directive 2000/31/EC of the European Parliament and of the Council of June 8, 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce).

<sup>18</sup> Directive 97/7/EC of the European Parliament and of the Council of May 20, 1997 on the protection of consumers in respect of distance contracts.

<sup>19</sup> Directive 1999/93/EC of the European Parliament and of the Council of December 13, 1999 on a Community framework for electronic signatures.

<sup>20</sup> COM(2009) 140 final.

<sup>21</sup> <http://circa.europa.eu/Public/irc/infso/Home/main>

covers South-East European entities that are potential members of the European Union, either in the short or medium term.

The primary objective of the project is to assist the European Commission and the authorities in the entities in monitoring the progress made towards compliance with the EU rules for electronic communications and information society services, together with their convergence with the EU internal market. This is the second of four reports, one every nine months in the period from 2008 to 2010.

## II. PARTICIPATING ENTITIES

The entities covered by this project are set out in Table 2 and shown in Figure 1. The table lists them in the order in which they will be presented in the reports: the three candidates followed by the potential candidate countries. It also introduces the two letter codes that will be used to identify entities on graphs and charts. These are based on the ISO 3166-1 codes<sup>22</sup> that are used for Internet domain names assigned by Internet Assigned Numbers Authority (IANA).

Country	Code	Comments
Croatia	HR	-
The former Yugoslav Republic of Macedonia (FYROM)	MK	The constitutional name is the Republic of Macedonia, though it is not recognised under this name by some countries. The EU refers to it by the provisional reference under which it was admitted to the United Nations: "the Former Yugoslav Republic of Macedonia". This does not prejudice the outcome of the negotiations on the name of the country that are underway. The country code "MK" is used by ISO and some other organisations.
Turkey	TR	-
Albania	AL	-
Bosnia & Herzegovina	BA	Bosnia & Herzegovina (BiH) comprises two parts: <ul style="list-style-type: none"> <li>• The Federation of Bosnia &amp; Herzegovina</li> <li>• Republika Srpska</li> </ul> A separate federal district of Brčko belongs to both. In these reports, Bosnia & Herzegovina is presented as a single geographic unit because its constituent parts have a common legislative and institutional framework for electronic communications and information society services, established at the entity level. The report treats separately the three incumbent operators that, while now operating nationally, were initially established in different parts of the entity: BH Telecom d.d Sarajevo (BA-bh) based in Sarajevo, the Federation of Bosnia & Herzegovina Hrvatske Telekomunikacije d.o.o. Mostar (BA-ht) based in Mostar, the Federation of Bosnia & Herzegovina Telekom Srpske a.d. Banja Luka (BA-ts) based in Banja Luka, Republika Srpska
Montenegro	ME <sup>23</sup>	Montenegro has been an independent country since June 3, 2006. It separated from Serbia & Montenegro following a referendum held on May 21, 2006.
Serbia	RS	-

<sup>22</sup> [http://www.iso.org/iso/country\\_codes](http://www.iso.org/iso/country_codes)

<sup>23</sup> <http://www.iana.org/reports/2007/me-report-11sep2007.html>

Country	Code	Comments
Kosovo (under UNSCR 1244)	XK	Kosovo is a territory under interim international administration. Under United Nations Security Council Resolution 1244, the administration of Kosovo has been carried out by the UN without the involvement of the government of Serbia. <sup>24</sup> On February 17, 2008 the Kosovo Assembly, elected in December 2007, adopted a resolution declaring Kosovo to be independent. <sup>25</sup> On February 18, 2008 the EU Council took note of that resolution stating that member states would decide, in accordance with their national practices and international law, on their relations with Kosovo. <sup>26</sup> Kosovo does not have an officially assigned ISO 3166 code. However, the structure allows for so-called user assigned codes. The code "XK" is used by Eurostat and some other organisations. <sup>27</sup>

Table 2 - Entities covered in the report



Figure 1 - Map of South-East Europe

Since 1999 the European Union has engaged South-East Europe in a series of negotiations, agreements and partnerships, gradually drawing the entities closer to membership. The result has been three categories of South-East European countries: EU member states, candidates and potential candidates.

Slovenia joined the EU in 2004, followed by Bulgaria and Romania in 2007.<sup>28</sup>

The previous series of monitoring reports documented the progress made by Bulgaria and Romania towards implementation of the telecommunications regulatory package. As member states, they were included in the 13<sup>th</sup> and subsequent Implementation Reports by the European Commission and have also been subject to infringement proceedings for failures and errors in transposition and implementation.<sup>29</sup> They are no longer included in the monitoring exercise in South-East Europe.

This monitoring exercise covers the candidates and potential candidates for EU membership.

<sup>24</sup> <http://www.un.org/Docs/scres/1999/sc99.htm>

<sup>25</sup> <http://www.assembly-kosova.org/?krye=home&lang=en>

<sup>26</sup> [http://www.consilium.europa.eu/ueDocs/cms\\_Data/docs/pressdata/en/gena/98818.pdf](http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressdata/en/gena/98818.pdf)

<sup>27</sup> See, for example, Eurostat Pocketbook on candidate and potential candidate countries, 2008 edition, March 18, 2008. [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-PF-08-001/EN/KS-PF-08-001-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-PF-08-001/EN/KS-PF-08-001-EN.PDF)

<sup>28</sup> Treaty concerning the accession of the Republic of Bulgaria and Romania to the European Union (2005) Official Journal L 157 of 21 June 2005. <http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2005:157:SOM:EN:HTML>

<sup>29</sup> [http://ec.europa.eu/information\\_society/policy/ecomm/implementation\\_enforcement/index\\_en.htm](http://ec.europa.eu/information_society/policy/ecomm/implementation_enforcement/index_en.htm)

At present, there are three candidates: Croatia, Turkey and FYROM. Accession negotiations with the first two started on October 3, 2005. FYROM became a candidate country in December 2005 but accession negotiations have not yet begun. The three candidates have gone through a range of agreements as they have moved closer to membership.

Last year each candidate signed an Accession Partnership agreement with the EU:

- Croatia: [2008/119/EC](#)<sup>30</sup>
- FYROM: [2008/212/EC](#)<sup>31</sup>
- Turkey: [2008/257/EC](#)<sup>32</sup>

Chapters 10 of these partnerships bind them:

- To complete “alignment” of their legislation on electronic communications, electronic signatures, information security and media with the EU regulatory package;
- To ensure sufficient capacity to enforce and to provide a track record of enforcement of obligations on operators with SMP and the rights of new entrants;
- To ensure regulatory independence, guarding against “undue” political influence.

The five potential candidates have signed European Partnership agreements with the EU, renewed in 2007 and 2008:

- Albania: [2008/210/EC](#)<sup>33</sup>
- Bosnia & Herzegovina: [2008/211/EC](#)<sup>34</sup>
- Montenegro: [2007/49/EC](#)<sup>35</sup>
- Serbia: [2008/213/EC](#)<sup>36</sup>
- Kosovo: [2008/213/EC](#)<sup>37</sup>

They have undertaken to:

- align their telecommunications legislation with that of the EU;
- achieve competitive markets; and
- strengthen the expertise of their NRAs.

They are not yet required to provide a track record of enforcement.

The EU's policy framework for the potential candidate countries in the Western Balkans is known as the Stabilisation and Association Process (SAP).<sup>38</sup> The central element of SAP is the conclusion of individual Stabilisation and Association Agreements (SAAs), which establish mutual rights and obligations. Effective implementation of the SAAs is a prerequisite for any further assessment by the EU of the country's prospects of accession.

SAAs have been signed with four potential candidate countries: with Albania in June 2006, with Montenegro in October 2007, with Serbia in April 2008 and with Bosnia & Herzegovina in June 2008. Before their entry into force, SAAs must be ratified by all the EU Member States.

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<sup>30</sup> Previous agreements are: [2006/145/EC](#), [2005/40/EC](#) and [2004/648/EC](#).

<sup>31</sup> Previous agreements are: [2006/57/EC](#), [2004/518/EC](#) and [2001/0049 \(ACV\)](#).

<sup>32</sup> Previous agreements are: [2006/35/EC](#), [2003/398/EC](#) and [2001/235/EC](#).

<sup>33</sup> Previous agreements are: [8164/06](#), [8154/06](#), [2006/54/EC](#) and [2004/519/EC](#).

<sup>34</sup> Previous agreements are: [2006/55/EC](#) and [2004/515/EC](#).

<sup>35</sup> Previous agreements are: [2006/56/EC](#) and [2004/520/EC](#).

<sup>36</sup> Previous agreements are: [2006/56/EC](#) and [2004/520/EC](#).

<sup>37</sup> Previous agreements are: [2006/56/EC](#) and [2004/520/EC](#), included as part of the agreement with Serbia.

<sup>38</sup> Although Croatia and FYROM have been granted candidate country status they remain part of SAP.

As part of the process of the agreement and the movement towards membership, annual progress reports are produced (see Table 3 ), with relevant details included in the country profiles (see Section VII). The EC recently summarised its activities in the Western Balkans.<sup>39</sup>

Country	2008	2007	2006	2005
Croatia	<a href="#">SEC(2008) 2694</a>	<a href="#">SEC(2007) 1431</a>	<a href="#">SEC(2006) 1385</a>	<a href="#">SEC(2005) 1424</a>
FYROM	<a href="#">SEC(2008) 2695</a>	<a href="#">SEC(2007) 1432</a>	<a href="#">SEC(2006)1387</a>	-
Turkey	<a href="#">SEC(2008) 2699</a>	<a href="#">SEC(2007) 1436</a>	<a href="#">SEC(2006) 1390</a>	<a href="#">SEC(2005) 1426</a>
Albania	<a href="#">SEC(2008) 2692</a>	<a href="#">SEC(2007) 1429</a>	<a href="#">SEC(2006) 1383</a>	<a href="#">SEC(2005) 1421</a>
Bosnia & Herzegovina	<a href="#">SEC(2008) 2693</a>	<a href="#">SEC(2007) 1434</a>	<a href="#">SEC(2006) 1384</a>	<a href="#">SEC(2005) 1422</a>
Montenegro	<a href="#">SEC(2008) 2696</a>	<a href="#">SEC(2007) 1434</a>	<a href="#">SEC(2006) 1389,</a> <a href="#">SEC (2006) 1386</a>	<a href="#">SEC(2005) 1428</a>
Serbia	<a href="#">SEC(2008) 2698</a>	<a href="#">SEC(2007) 1435</a>	<a href="#">SEC(2006) 1389,</a> <a href="#">SEC (2006) 1386</a>	<a href="#">SEC(2005) 1428</a>
Kosovo	<a href="#">SEC(2008) 2697</a>	<a href="#">SEC(2007) 1433</a>	-	<a href="#">SEC(2005) 1423</a>

Table 3 - Progress reports on candidate and potential candidate countries

The EC provides assistance to countries in the Western Balkans to support their transition to membership of the EU through the Community Assistance for Reconstruction, Development and Stability in the Balkans (CARDS) programme.<sup>40</sup> Turkey and, as of 2004, Croatia, were also been eligible for the Programme of Community aid to the countries of Central and Eastern Europe [Phare].<sup>41</sup> From 2007 to 2013, both instruments were replaced by the Instrument for Pre-Accession (IPA).<sup>42</sup>

Since its launch in 1999, the Stability Pact for South Eastern Europe recognised the potential of ICTs to foster economic development and to facilitate cooperation in the region. The Electronic South East Europe (eSEE) Initiative was established as one of the activities within the framework of the Second Working Table (Economy).<sup>43</sup> In 2002, during the “South Eastern Europe Conference on Policy and Cooperation in Telecommunications” in Belgrade, ministers signed an eSEE Agenda for the Development of the Information Society. This was followed by the Memorandum of Understanding on the Development of Unified Market of Broadband Networks Fully Interconnected to the European and Global Networks – Initiative for bSEE – Broadband South Eastern Europe, signed during the South-Eastern Europe Ministerial Conference on the Information Society, in Thessaloniki in 2005. Finally, in 2007, in Sarajevo, during the Ministerial Conference of Electronic South Eastern Europe Initiative, responsible ministers of the entities signed the eSEE Agenda+ for the development of the information society from 2007 to 2012. Implementation of these agreements is monitored and facilitated by the eSEE Secretariat, established in Sarajevo with funding from UNDP. In 2008, the Centre for eGovernance Development was established in Ljubljana, to provide support and coordination for the implementation of eSEE Agenda+ through education and training, a knowledge base and web portal, workshops and seminars, plus support for preparing project proposals.<sup>44</sup>

The ITU has a programme of training events for officials from regulators and ministries in Eastern Europe through its Centre of Excellence.<sup>45</sup> A group of Greek operators and manufacturers created a private entity, South-eastern Europe Telecommunications and Informatics Research Institute (INA), to conduct telecommunications and ICT research in the region.<sup>46</sup> It also provides some training on telecom and ICT issues for regional authorities.

<sup>39</sup> [EU regionally relevant activities in the Western Balkans 2008/09. SEC\(2009\) 128 final.](#)

<sup>40</sup> Council Regulation (EC) No 2666/2000 of December 5, 2000 on assistance for Albania, Bosnia and Herzegovina, Croatia, the Federal Republic of Yugoslavia and the Former Yugoslav Republic of Macedonia, repealing Regulation (EC) No 1628/96 and amending Regulations (EEC) No 3906/89 and (EEC) No 1360/90 and Decisions [97/256/EC](#) and [1999/311/EC](#)

<sup>41</sup> [Council Regulation \(EC\) No 2257/2004 of December 20, 2004](#) amending Regulations (EEC) No 3906/89, (EC) No 1267/1999, (EC) No 1268/1999 and (EC) No 2666/2000, to take into account of Croatia’s candidate status

<sup>42</sup> Council Regulation (EC) No 1085/2006 of July 17, 2006 establishing an Instrument for Pre-Accession Assistance – IPA

<sup>43</sup> <http://www.stabilitypact.org/e-see/>

<sup>44</sup> <http://www.cegd.eu/>

<sup>45</sup> <http://www.itu.int/ITU-D/hrd/coe/eur/index.asp>

<sup>46</sup> <http://www.inatelecom.org/>

### III. METHODOLOGY

The monitoring project relies on the work of the national regulatory authorities and the ministries responsible for electronic communications and information society policies for data collection. The principal sources of the information presented in this report are listed in the table below. Some additional information has been taken from Eurostat.

Country	Electronic communications	Information society services
Croatia	Croatian Agency for Post and Electronic Communications (HAKOM)	Central State Administrative Office for e-Croatia
FYROM	Agency for Electronic Communications (AEC)	Agency for Electronic Communications (AEC) Ministry of Information Society
Turkey	Information and Communication Technologies Authority (ICTA)	State Planning Organisation (SPO)
Albania	Authority for Electronic Communications and Post (AKEP) Ministry of Public Works, Transport and Telecommunications	National Agency on Information Society (NAIS)
Bosnia & Herzegovina	Communications Regulatory Agency (RAK)	Communications Regulatory Agency (RAK) Ministry of Communications and Transport
Montenegro	Agency for Electronic Communications and Postal Services (EKIP)	Ministry for Information Society
Serbia	Republic Telecommunications Agency (RATEL)	Ministry for Telecommunications and Information Society
Kosovo	Telecommunications Regulatory Authority (TRA)	Ministry of Transport and Communications

Table 4 - Authorities and ministries supplying data for this report

The information collection process involved four sets of questionnaires distributed to the relevant ministries and authorities, three for electronic communications and one for information society services:

1. Electronic communications: Regulatory and organisational information. The questionnaire addressed institutional and organisational issues as well as of regulatory processes, such as the completion of market analyses, regulatory obligations imposed on operators with SMP, competitive safeguards and the universal service framework.
2. Electronic communications: Price information. The questionnaire covered a range of retail and wholesale tariffs.
3. Electronic communications: Market information. The questionnaire covered general economic background and various statistics from the electronic communications market.
4. Information society services. The questionnaire covers regulatory aspects of information society services and a limited set of statistical indicators.

The reference dates for the four questionnaires were January 1, 2009, for quarterly data and December 31, 2007, for annual data. Regulatory and institutional data were as at January 1, 2009, though some indications are also reported of further changes that were well advanced.

The information provided by the regulatory authorities has been reviewed and validated by independent experts contracted by Cullen International in each of the participating countries.

### IV. INTERIM STUDY REPORT STRUCTURE

The structure of the nine-monthly interim study reports comprises three principal chapters:

- Summary report: an overview of the most important legislative, regulatory and market developments in the region and in individual countries over the nine-months since September 2008. It presents key findings, highlights the major market trends and provides a summary assessment of the market data.
- Country profiles: an overview of policy making and regulatory authorities for electronic communications and information society services in the monitored countries and outlines the key legal and policy documents.

- Country data: the structure is similar to that of Volume 2 of the annex of the European Commission's Implementation Reports.<sup>47</sup> It presents the indicators for electronic communications and information society services in the form of cross-country comparative tables and figures.

## V. SCOPE OF INDICATORS

### A. General economic background

The indicators include general information about currencies, exchange rates, value added tax, inflation, population and household statistics, gross domestic product, unemployment, Purchasing Power Parity (PPP) and Gini (measuring inequality of income). This background information is necessary to provide a basic understanding of the economic conditions in each country and to allow the calculation of further indicators, for example, expressed as a percentage of the population.

### B. Electronic communications

The scope of the indicators for electronic communications services closely follows the previous series of reports on "*Monitoring the telecommunications services sector and related aspects in South East Europe*" in the period 2005 to 2007.<sup>48</sup> These reports were used as models with appropriate changes and additions, taking utmost account of the Commission's 13<sup>th</sup> and 14<sup>th</sup> Implementation Reports.

The indicators describe the following aspects of electronic communications markets:

- Electronic communications market overview: market value of the electronic communications sector by country and by individual service category, annual spending per capita, overview of fixed, mobile and broadband access markets in terms of penetration, main players, competition and available technologies. A new set of indicators is introduced to address market shares of the operators, the use of competitive fixed telephony services offered by alternative operators (VoIP, cable television, direct access and CS/CPS), prepaid and monthly paid mobile services, use of narrowband and broadband Internet services, retail broadband access by the type of technology. The degree of control over major undertakings (fixed, mobile and ISP) exercised by foreign investors. The key financial ratios of the incumbent operators.
- National regulatory authorities: the indicators were revised, taking into account some elements used in the ECTA Regulatory Scorecard.<sup>49</sup> Indicators were added to reflect NRA independence, powers, accountability and transparency.
- Market access conditions in electronic communications: liberalisation status of electronic communications networks and services, authorisation regimes, specific requirements applicable to cable television and VoIP providers.
- Implementation of the EU regulatory framework: market analyses by NRAs, national frameworks for market definitions, principles for the designation of operators with SMP and the imposition of remedies.
- Competitive safeguards: CS/CPS, number portability, availability and practical implementation of reference interconnection and wholesale access offers (LLU, bitstream access, resale offers and wholesale line rental), mobile access and call origination, price control and regulatory cost accounting for fixed and mobile operators.
- Universal service: the scope of universal service and the mechanisms to designate the provider(s), funding and quality of service.
- Retail tariffs:
  - Fixed tariffs: tariff rebalancing and the regulation of retail tariffs, call charging systems and the minimum cost of call, monthly subscription fees and one-off connection charges, tariffs of the

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<sup>47</sup> [http://ec.europa.eu/information\\_society/policy/ecommm/implementation\\_enforcement/index\\_en.htm](http://ec.europa.eu/information_society/policy/ecommm/implementation_enforcement/index_en.htm)

<sup>48</sup> [http://ec.europa.eu/information\\_society/newsroom/cf/itemdetail.cfm?item\\_id=2310](http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=2310)

<sup>49</sup> <http://www.ectaportal.com/en/basic651.html>

incumbent and alternative operators for local, long-distance, fixed-to-mobile and international calls;

- Mobile tariffs: based on the OECD 2006 mobile baskets;<sup>50</sup>
  - Special cross-border and roaming arrangements within the region;
  - Retail leased lines; and
  - Internet access retail prices: dial-up and broadband Internet access.
- Wholesale tariffs: call termination charges on the incumbent's fixed network and on mobile networks.

### C. Information society services

The indicators for "information society services"<sup>51</sup> have been chosen to address the following aspects:

- Since 2002 EU Member States measure progress toward the objectives defined in Lisbon in March 2000 and the eEurope action plan of 2002. The eEurope benchmarking is being further developed under the i2010 Benchmarking Framework<sup>52</sup> and adjusted annually by Commission Regulations<sup>53</sup>. The collected data are published by Eurostat<sup>54</sup>. In the monitored countries, data with a comparable level of detail are not yet available or the process of collecting them has just begun. This report identifies the national body responsible for information society statistics, the types of statistical data that are available and key indicators such as computer and Internet usage by individuals and by enterprises.
- Network and information security: obligations on providers to ensure the security of their service, measures to fight cybercrime, including whether a country has ratified the Council of Europe Convention on Cybercrime<sup>55</sup>, the responsible authority for security policy, the existence of alert systems in case of threats and the national policy;
- Electronic commerce and electronic signatures: market access and liability of information society services, legal recognition of electronic contracts and electronic signatures, market access to provide certification services, supervision and accreditation, and market data on availability of qualified certificates and usage of electronic signatures;
- Data protection and data retention: protection of confidentiality of communications, protection of traffic and location data, retention of traffic data for law enforcement purposes, measures to combat spam and provisions on itemised billing;
- Directories: legislation on the rights of subscribers to be included or to be not included, and the availability of comprehensive directories and directory enquiry services in practice;
- Internet backbone data: data on Internet Exchange Points (IXPs) and international Internet connectivity; and
- Management of Internet domains: name of the registry in charge of country code domain names, the relation between registry and registrars, national policies against cyber-squatting and market data on the number of domains and prices.

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<sup>50</sup> Previous reports used the 2002 baskets. However, in line with EC practice these now use the baskets described in DSTI/ICCP/CISP(2006)1 at [http://www.oecd.org/olis/2006doc.nsf/ENGDATCORPLOOK/NT00003A5E/\\$FILE/JT03212157.PDF](http://www.oecd.org/olis/2006doc.nsf/ENGDATCORPLOOK/NT00003A5E/$FILE/JT03212157.PDF)

<sup>51</sup> Defined in the Directive 98/48/EC as "any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services".

<sup>52</sup> [http://ec.europa.eu/information\\_society/eeurope/i2010/docs/benchmarking/060220\\_i2010\\_benchmarking\\_framework\\_nov\\_2006.doc](http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/060220_i2010_benchmarking_framework_nov_2006.doc)

<sup>53</sup> See Commission Regulations (EC) No 1099/2005, 1031/2006, 847/2007 and 960/2008.

<sup>54</sup> See the Information society statistics, now a sub-category of the theme Industry, Trade and Services: [http://epp.eurostat.ec.europa.eu/portal/page/portal/information\\_society/introduction](http://epp.eurostat.ec.europa.eu/portal/page/portal/information_society/introduction)

<sup>55</sup> Council of Europe, Convention on Cybercrime, ETS No. 185, Nov. 23, 2001.

## VI. SUMMARY REPORT

### A. Electronic communications market overview

#### 1. Electronic communications market value

The total value of the electronic communications market in the eight monitored countries is estimated at €15.86 billion in 2007, an increase of over 18% from the previous year. For comparison, in the EU-27, according to the data collected by the NRAs for 2007, the total revenues of the sector reached almost €357 billion, or 2.9% of GDP, while the estimated growth of the EU electronic communications sector in 2008 was 1.3% in real terms.<sup>56</sup>

The fastest growing sectors in the eight monitored countries in 2007 were Internet services with 40.3% annual growth and mobile communications showing almost 27% growth. In terms of revenues, mobile services amounted to 57% and Internet services to only 6% of the region's electronic communications market value. Fixed voice telephony represented 34% of the market value but had growth of only 5% (see Figure 2).

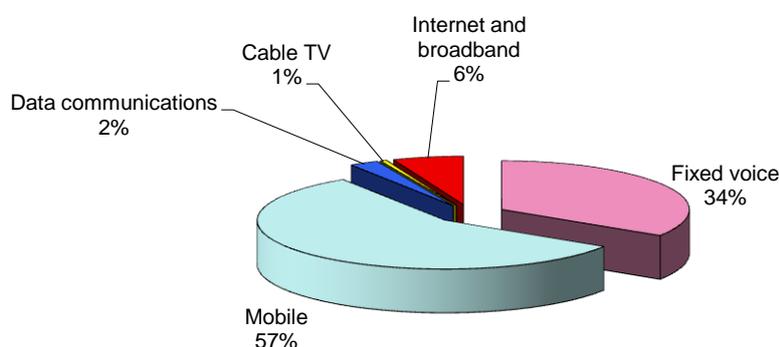


Figure 2 - Electronic communications market in 2007, by sector

Breaking down the markets by entities, the pattern is inevitably dominated by the size of the Turkish market (see Figure 3).

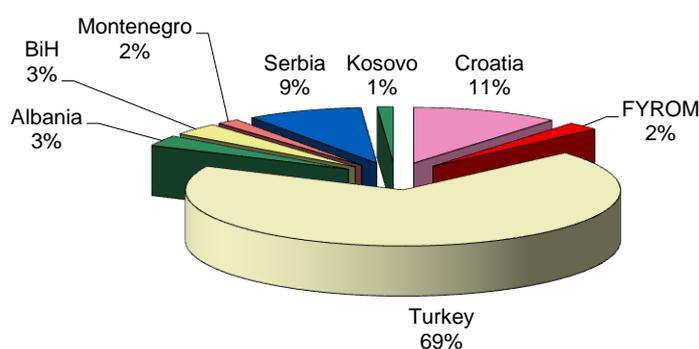
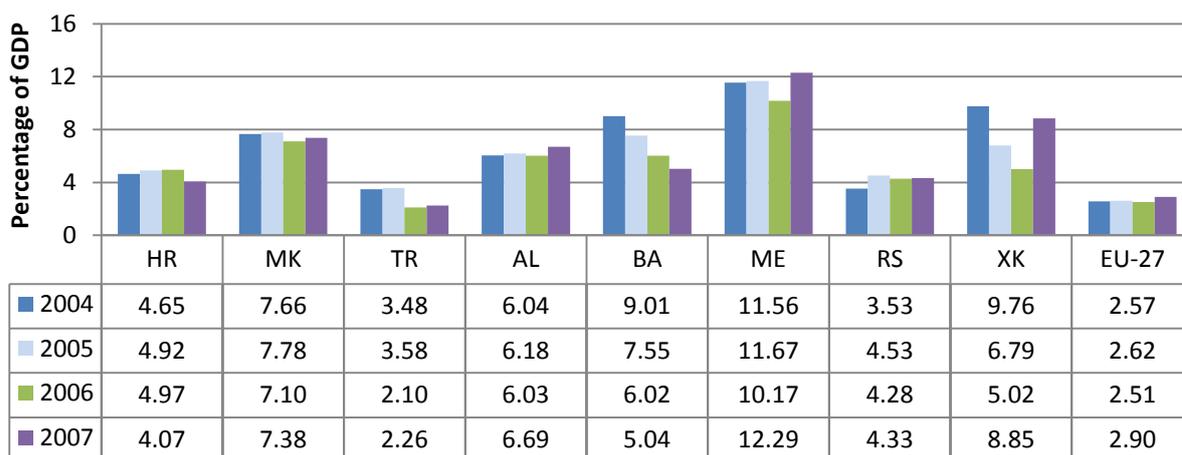


Figure 3 - Electronic communications market in 2007, by country

Electronic communications as percentages of GDP reflect the different levels and patterns of spending, of production and of supply within the economies (see Figure 4). The high value for Montenegro may indicate an underestimation of the GDP, though it may match the high household spending reported on communications. The average value for all the countries is 2.7%, heavily weighted by the lower Turkish value. Excluding this gives an average of 4.9%, significantly above the EU-27 average in 2007 of 2.9%.

<sup>56</sup> See [14<sup>th</sup> Implementation Report](#), March 2009


 Figure 4 - Electronic communications as a percentage of GDP<sup>57</sup>

## 2. Fixed telephony market

A total number of 24.4 million fixed lines is dominated by Turkey with 18 million, followed by Serbia with over 3 million, Croatia with 1.8 million, Bosnia & Herzegovina with almost 1 million, FYROM with 460,000, Albania with 300,000, Montenegro with 175,000 and Kosovo with 96,000.

At the end of 2008, the average fixed telephony penetration rate for the eight entities was 26%. However, there are considerable variations in the levels of penetration of the fixed network with Albania and Kosovo at relatively low levels, and Croatia and Serbia at levels comparable to the EU-27 average (see Figure 5). FYROM and Turkey have seen a continuing decrease in penetration since 2004, while Serbia and Albania have the reverse.

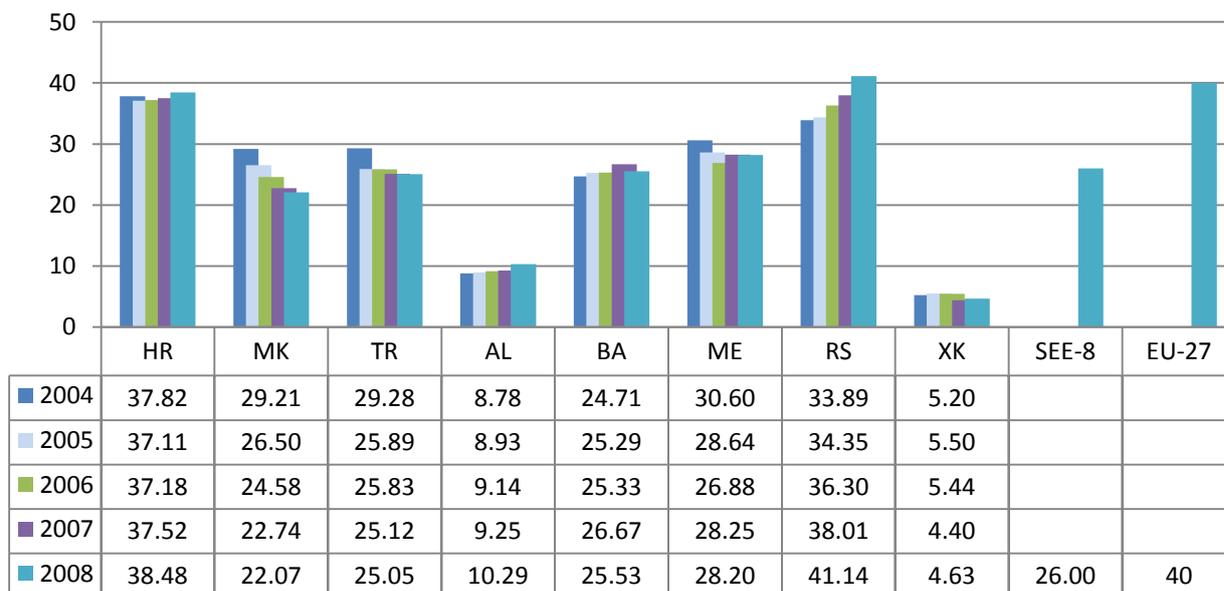


Figure 5 - Fixed lines per 100 population

All the entities have made progress in converting analogue networks to digital. In 2007, Croatia, Montenegro and FYROM with fully digital networks were joined by Kosovo, where the incumbent operator has been rolling out a new network. Turkey has achieved full digitalisation in 2008, while Albania and Bosnia & Herzegovina have almost reached the target. Serbia, which had less than 70% in 2005, has made significant progress and should reach 100% by 2010.

<sup>57</sup> Data before 2007 refer to EU-25 instead of EU-27, i.e. before the EU accession of Bulgaria and Romania.

Party or group of lines remain a significant factor in the region. These lines serve two or more subscribers and consequently are a potential barrier to any intensive use of broadband access and to local loop unbundling. Croatia, Kosovo, FYROM and Turkey have no party lines. Serbia has the highest level of party lines at 5.75%, followed by Albania at 5%, Bosnia & Herzegovina at 2% and Montenegro at 1.4%.

The development of competition in fixed networks and services in each country has been determined by specific paths towards liberalisation. Albania and Turkey are examples where competition at the local and the national levels has not been introduced at the same time. In Albania, rural local networks and services were liberalised before national services. Although there were 60 local or regional operators in Albania, only the incumbent operator could provide services nationally under the terms of its licence. With the introduction of the general authorisation regime under the new Law on Electronic Communications adopted in 2008, all regional operators may freely extend the provision of their services over the entire territory of the country. In Turkey, national networks and services were liberalised before local services. Therefore, there are 33 operators offering long distance services, but local networks and services are only provided by the incumbent. Any competitive entry is not likely to take place before the introduction of the general authorisation regime that is foreseen in May 2009.

In Serbia, fixed voice telephony services have, *de facto*, not been opened to competition.

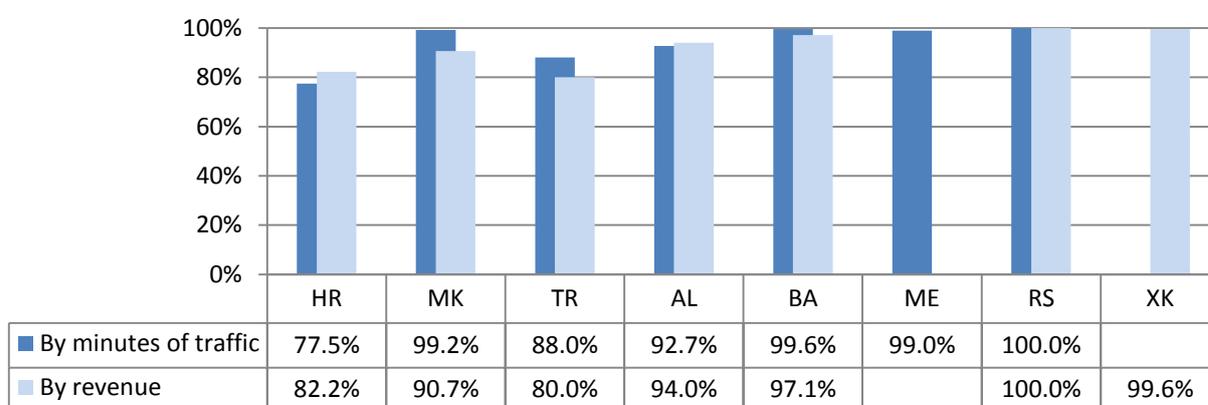


Figure 6 - Incumbent operators' overall market shares in fixed telephony in 2008

In all countries, the dominance of the incumbent operators is clear (see Figure 6). The high market shares for international traffic suggest that the basic measures to introduce competition by opening international gateways have not been taken or have not been effective. VoIP is a frequently advertised service in Croatia, FYROM and Albania. In Albania, around 18% of Altelecom's subscribers use VoIP services of alternative providers based on prepaid calling cards. Another effective way for the competitors to take market share from the incumbent is by using carrier selection or carrier pre-selection. Almost 25% of the subscribers in Croatia, 22% of the subscribers in Turkey, 5% in Kosovo and 4% in Montenegro are using an alternative operator. In the other countries, the figure is below 1%.

### 3. Mobile market

At the end of 2008, there were over 92 million subscribers of mobile services, 7 million more than at the end of 2007. This brings the average mobile telephony penetration rate for the eight entities to 98%. However, there appears to be a significant number of plastic roamers (people with multiple SIM cards who switch to a local operator when moving between the entities). Others have multiple domestic SIM cards in order to exploit particularly attractive tariffs or to ensure network coverage. Finally, discrepancies also stem from different practices in defining "active" pre-paid customers.

This is a sector where competition has been effectively implemented. The rise in mobile penetration rates has been rapid and sometimes dramatic. Croatia, Montenegro and Serbia exceed the EU-27 average while the other countries can be expected to join that level soon.

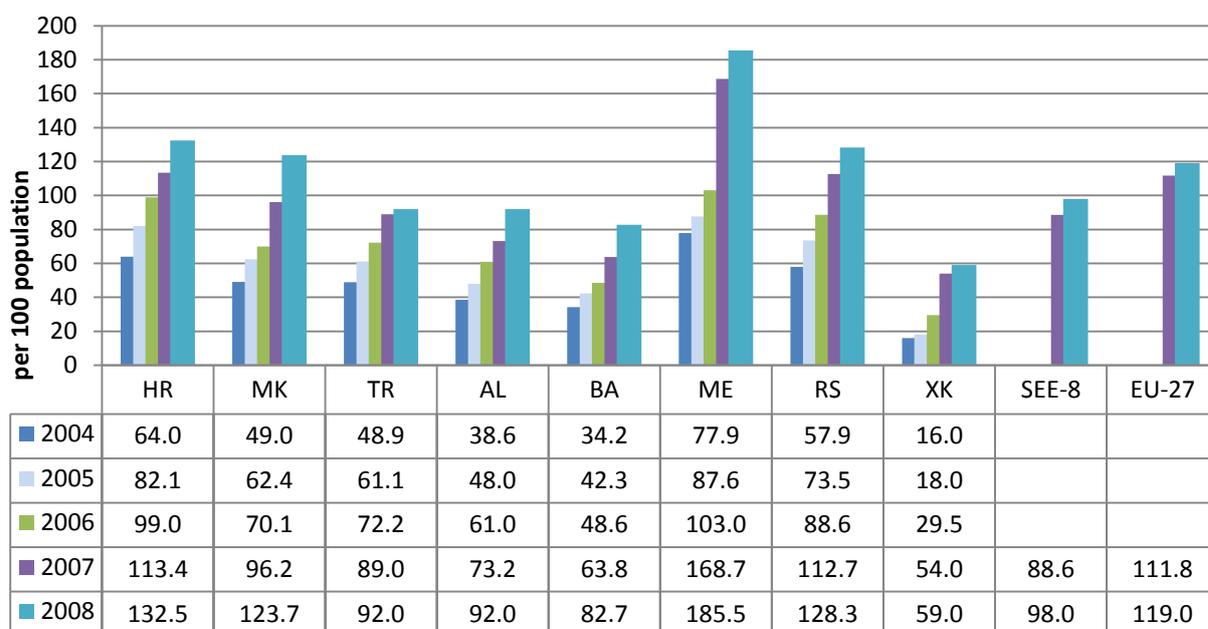


Figure 7 - Growth in mobile penetration (2004-08)

In 2008, a significant increase in mobile penetration was observed in Croatia, FYROM, Albania, Bosnia & Herzegovina, Montenegro and Serbia. With the exception of Kosovo, there are now three active network operators licensed to serve each market. In April 2009, Albania granted the fourth GSM licence to a group led by Post and Telecommunications of Kosovo (PTK), becoming the first country in the region with four mobile operators. In almost all countries, with the exception of Albania and Kosovo, mobile operators have been licensed to offer 3G/UMTS services in the 2.1 GHz band.

The majority of the customers use pre-paid services. In most countries, over 80% of mobile users are prepaid, with the exception of Croatia and Montenegro where the level of postpaid subscribers is slightly higher. In Kosovo and Albania, nearly all mobile users are prepaid.

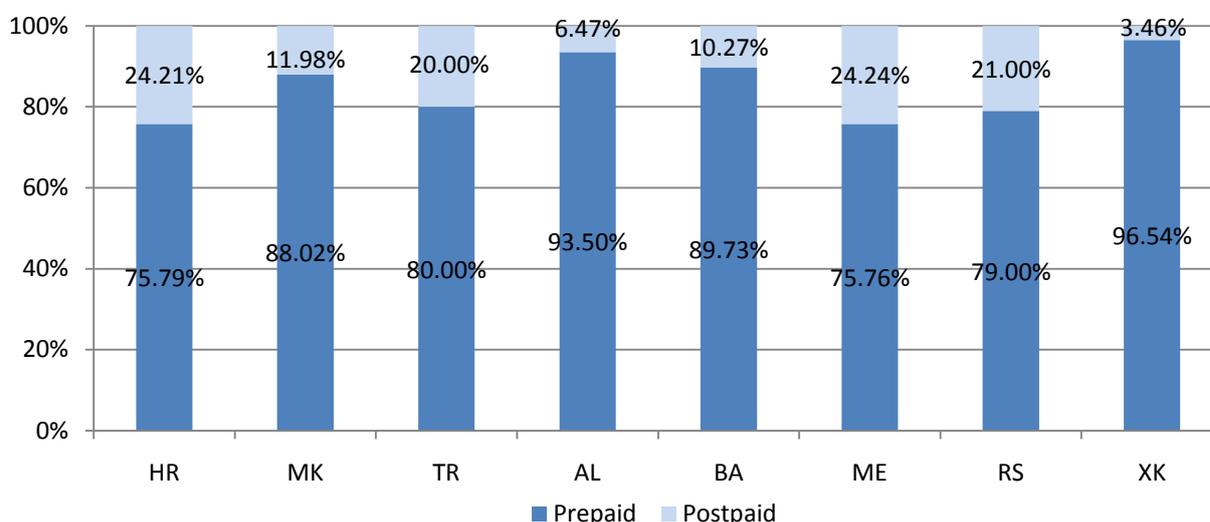


Figure 8 - Mobile subscribers - prepaid and postpaid in 2008

Although the mobile telephony is de facto the only sector where competition has emerged on any significant scale, most of the national mobile markets remain highly concentrated with established players typically controlling over 80-90% of the market. In 2008, however, the market shares of the third mobile operators increased in Croatia, FYROM, and Montenegro. While the entry of new operators is increasing competition and is reflected in the acceleration of mobile penetration, they struggle to get a proportionate share of higher spending (business) customers.

#### 4. Internet and broadband

In the fixed Internet access, dial-up is still predominant in Croatia and Montenegro. FYROM, Bosnia & Herzegovina and Serbia have a majority of broadband, but still retain significant numbers of dial-up lines. Turkey has few dial-up customers, possibly in areas where broadband is not accessible. The division between broadband and narrowband connections is shown in Figure 9. In line with the EC practice in recent Implementation Reports and statistics, broadband capacity is defined as equal to, or higher than, 144 kbit/s.

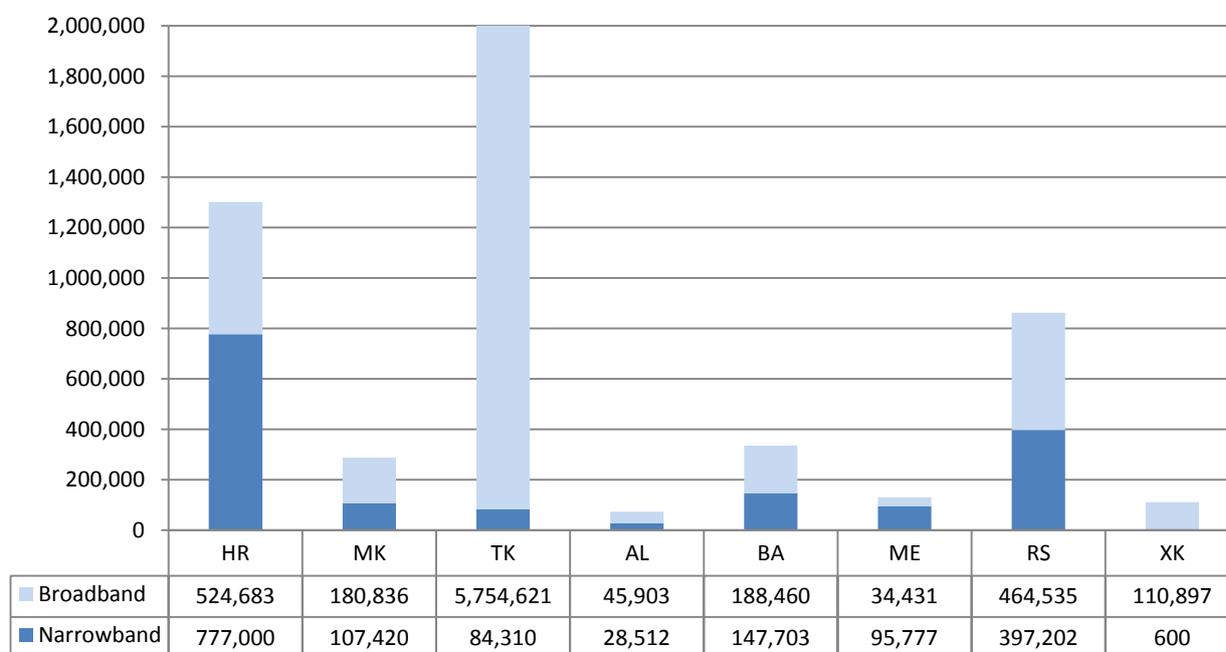


Figure 9 - Number of fixed Internet connections – broadband and narrowband in 2008

The number of ISPs active on the market may appear impressive in most of the countries. However, in several countries the majority of the market is controlled by the incumbent operators or (in particular in FYROM) the incumbent holds the higher spending customers.

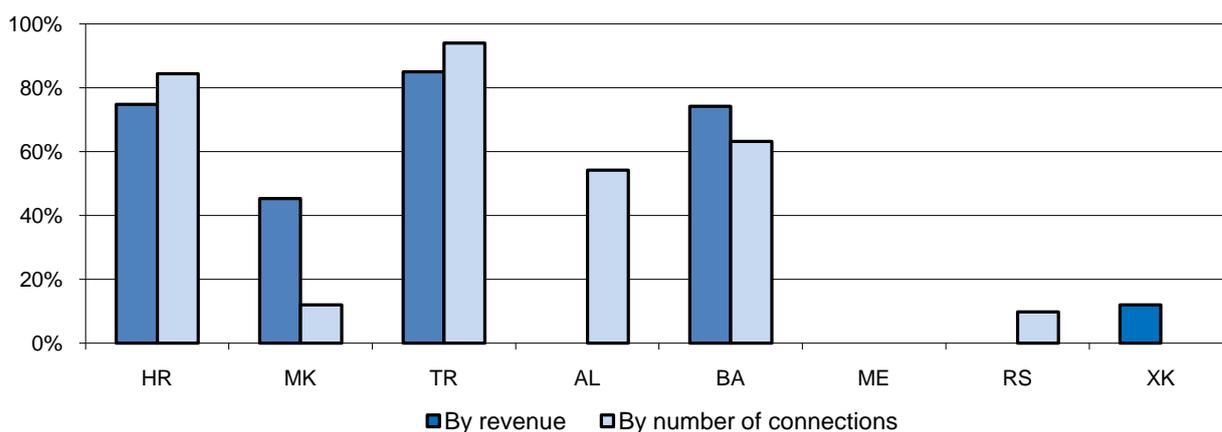


Figure 10 - Incumbent ISP's market share

Broadband penetration rate, measured as the overall number of broadband lines divided by the national population, is significantly below the EU-27 average rate that in January 2009 was 22.90%. The average broadband penetration rate for the eight countries was 7.74%. The highest broadband penetration level was observed in Croatia (11.80%), above the level of Romania and Bulgaria that joined the EU in 2007.

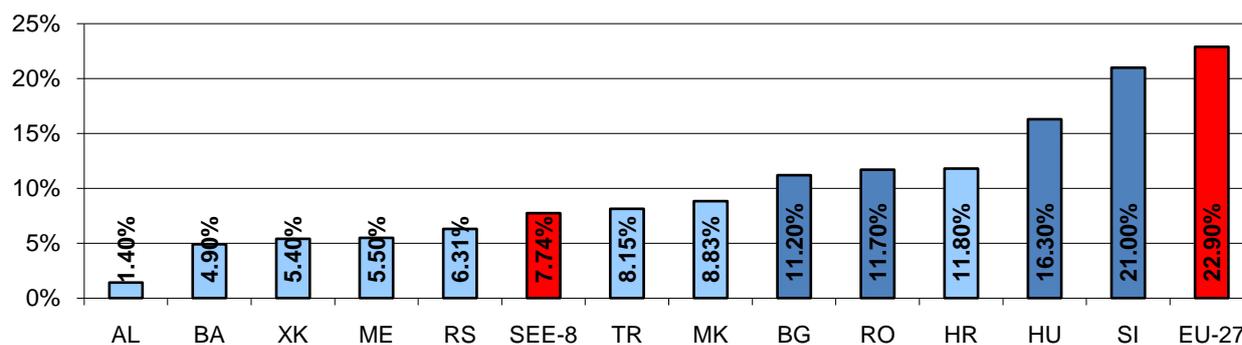


Figure 11 - Broadband penetration rate, January 2009<sup>58</sup>

Figure 12 illustrates the growth in broadband penetration in the monitored countries between January 2008 and January 2009.

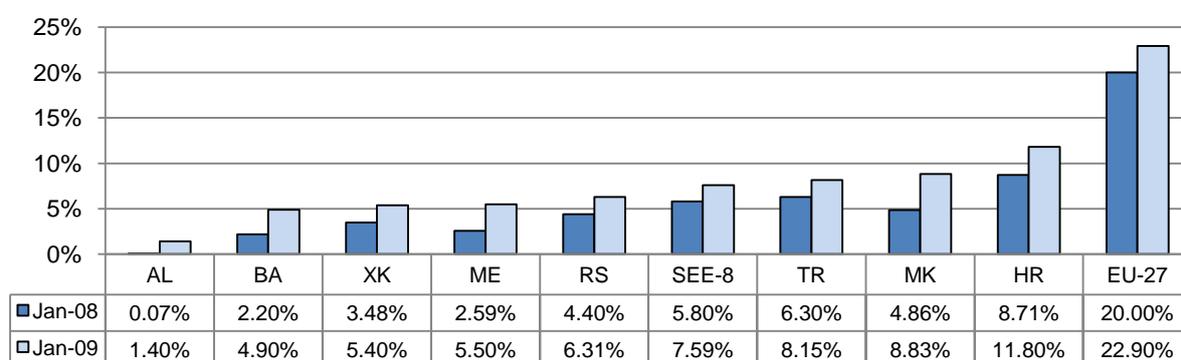


Figure 12 - Growth in broadband penetration<sup>59</sup>

Broadband markets are dominated by fixed incumbent operators in Croatia, Turkey and Montenegro, where xDSL is the main access technology. A different situation is observed in FYROM, Bosnia & Herzegovina, Serbia and Kosovo, where competitors are using alternative infrastructures – cable and to some extent also fixed wireless access networks. In Albania, local operators offer xDSL services in competition with the incumbent based on own network infrastructure.

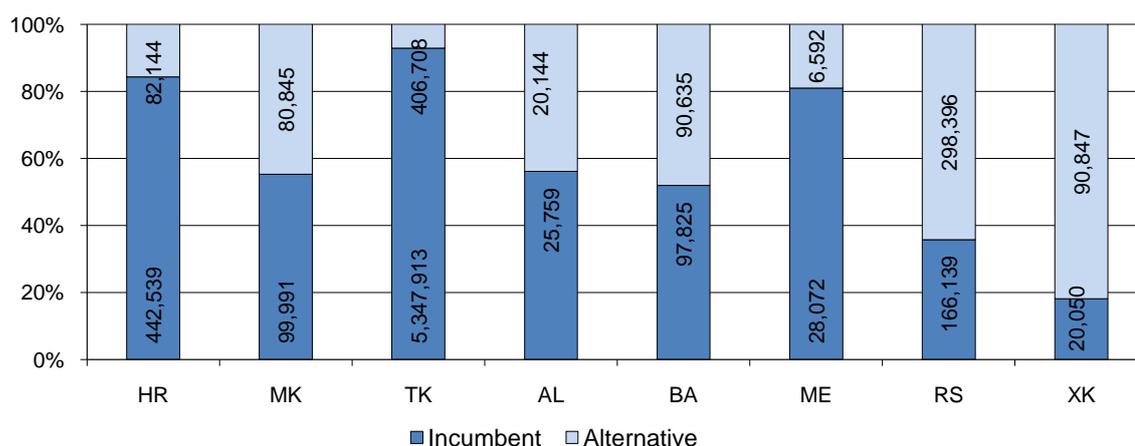


Figure 13 - Fixed retail broadband connections by incumbent and alternative operators

<sup>58</sup> Serbia: data as of January 2008

<sup>59</sup> Serbia: data as of January 2008

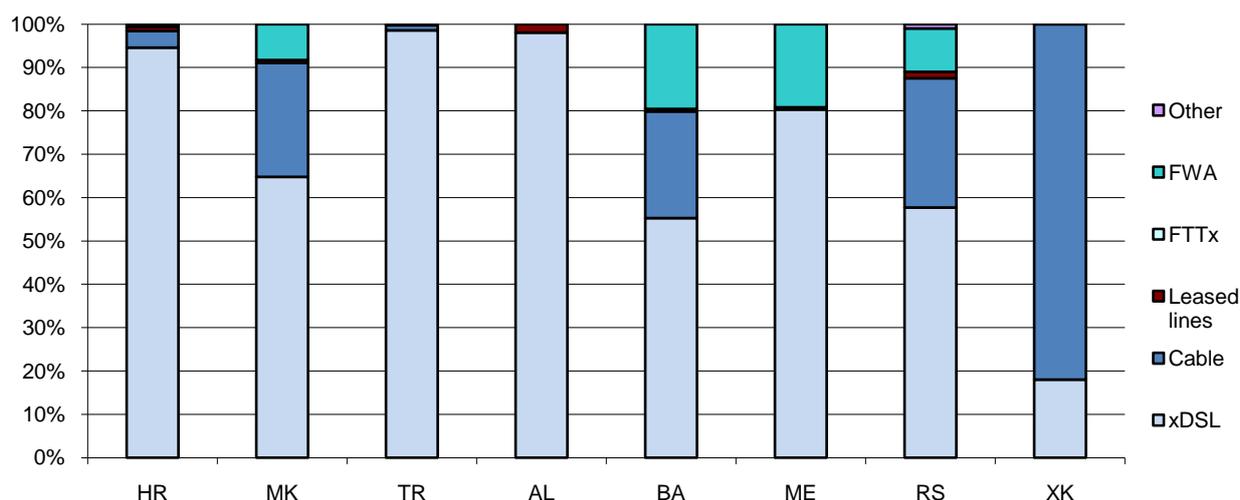


Figure 14 - Fixed retail broadband connections by technology

In most of the countries, the position of the incumbent operator in the retail xDSL broadband market is extremely strong, with alternative operators having less than 20% of the market. The position in Serbia is more equitable, with the incumbent having 61% of the retail market, but even then it supplies 100% of the bitstream access connections to alternative operators in the wholesale market. An exception is Albania, with alternative operators controlling 44% of the retail xDSL broadband connections supplied over their own infrastructure.

In terms of mobile broadband, spectrum licences for provision of 3G/UMTS services have been issued in Croatia, FYROM, Turkey, Montenegro, Bosnia & Herzegovina, and Serbia. Croatia has already achieved a significant number of 865,000 UMTS subscribers from the three mobile operators, of which 158,500 are active users of dedicated data cards and keys (3.6% penetration). Serbia reported over 760,000 UMTS subscribers using services of the three mobile operators at the end of 2008, of which 25,000 were active 3G mobile broadband users. In FYROM, Cosmofon launched commercial UMTS services in August 2008.

## 5. Control of major operators by foreign investors

A number of operators from other parts of Europe, some from countries with historic links through the former Yugoslavia and the previous Austro-Hungarian Empire, have invested in the region.

The German incumbent telecommunications operator, Deutsche Telekom, with its mobile subsidiary, T-Mobile, is one of the major investors in the region. In Croatia, it directly controls 51% of HT-Hrvatske Telekomunikacije that also owns one of the major Internet providers, Iskon Internet. Through its 60% owned Hungarian subsidiary, Magyar Telekom, Deutsche Telekom also controls 33.60% of Makedonski Telekom, the incumbent operator in FYROM and 45.53% of Crnogorski Telekom, the incumbent operator in Montenegro. Indirectly, through HT-Hrvatske Telekomunikacije, Deutsche Telekom also controls activities of the fixed operator HT-Mostar and the mobile operator HT-Euronet in Bosnia & Herzegovina.

The Greek incumbent operator, OTE, controls 20% of Telekom Srbije, the Serbian incumbent operator, and 85% of AMC, a major Albanian mobile network operator. Until recently, OTE also held 100% of shares in Cosmofon, the mobile operator in FYROM. In May 2008, Deutsche Telekom reached an agreement with the Greek government to increase its stake in OTE to 25% plus one vote that would give Deutsche Telekom the right to participate in management control of OTE. The proposed transaction was approved by the European Commission in October 2008. Approvals by the national competition authorities were also awarded during the last quarter of 2008. The transaction raised competition concerns about overlapping interests in the mobile market in FYROM, where Deutsche Telekom already controls one of the two largest mobile operators. On October 16, 2008 the Macedonian Commission for Protection of Competition approved the acquisition, subject to the condition that OTE would sell its Macedonian subsidiary, Cosmofon. On March 30, 2009 OTE agreed to sell Cosmofon to Telekom Slovenije. The sale was approved by the Macedonian Commission for Protection of Competition in April 2009.

Telekom Slovenije, the Slovenian incumbent operator, in addition to the recently acquired Cosmofon, also holds 83% of the largest alternative fixed network operator in FYROM, On.Net. It also controls 75% of the

major alternative provider of fixed and mobile services in Kosovo, IPKO and has invested in Internet service providers in Albania, and Bosnia & Herzegovina.

The Austrian incumbent telecommunications operator, Telekom Austria, through its mobile subsidiary, Mobilkom, controls 100% of the major Croatian mobile operator, VIPNet, and has mobile licences in FYROM and Serbia.

Vodafone group has a relatively modest presence in the region with the ownership of two mobile operators: in Turkey (former Telsim) and in Albania. The Norwegian incumbent operator, Telenor, also owns two mobile operators, in Montenegro and in Serbia.

## B. National regulatory authorities

### 1. NRA independence

The establishment of an independent NRA is a cornerstone of the EU regulatory framework for electronic communications. Independence involves two elements: (i) separation of the NRA from the regulated firms and (ii) isolation of the NRA from political intervention. The first aspect of independence (from industry) is generally less contentious and more straightforward to assess than the second (independence from political influence).

Under the EU regulatory framework, there has been no requirement for privatisation and the rules on institutional separation are set out in recognition of the legitimacy of the state ownership. All monitored countries, except for Montenegro and Croatia, have a state shareholding in telecommunications operators ranging from 25% up to 100%.

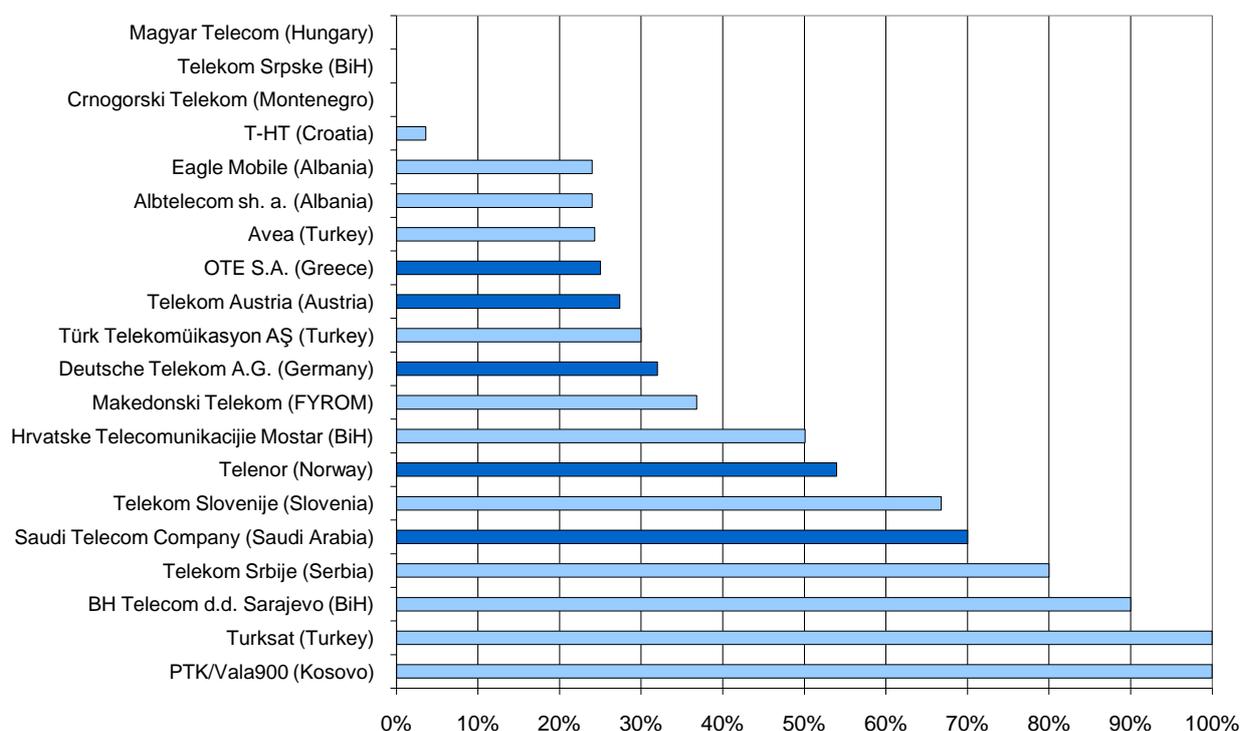


Figure 15 - State ownership of telecommunications operators

There are no clear trends in the management of the ownership functions. It varies from the government as a whole to a control via the Ministry of economy, the Ministry of telecommunications or a combination of both Ministries. The decrease of the state shareholding is usually facilitating the effectiveness of the independence of the NRA. However, one must note that in some of these countries, the partial or full privatisation of the national incumbents has occurred through acquisitions by incumbent operators from the former EU-15 (notably Deutsche Telekom) where the liberalisation has been initiated ten years ago. Consequently, the NRAs, which are still building their independence in a regulatory framework that is under construction, are facing local incumbent operators benefiting from the regulatory experience of their new shareholders. In other words, while the decrease of the state shareholding may facilitate political independence of the NRAs, the regulatory framework will need to be effectively implemented to ensure a

balance of power between strong local incumbents and emerging independent NRAs that are still on a learning curve.

Regarding political influence, the mere possibility of political intervention may put the NRAs under pressure. Although there is no explicit requirement to separate regulatory tasks from the activities of the Ministry or other bodies responsible for the electronic communications policy, the common practice across the EU is to create an NRA that is also separate from the policy-making bodies. Political independence can be assessed, inter alia, on the basis of: the Ministry (government) powers to give instructions to the NRA, the government approval required for adopting certain decisions, the rules for appointment and dismissal of the NRA management and its term of office.

In general, the concept of NRA independence is being progressively introduced in the national regulatory frameworks alongside the adoption of new laws on electronic communications. The key functions of the government and the regulator were redefined in the new laws adopted in 2008 in four countries: Croatia, Turkey, Albania and Montenegro. The common objective was to make a more clear division between the legislative and policy-making tasks carried out by the government (or the relevant ministry) and the regulatory tasks performed by the NRA. In Montenegro, the new Law on Electronic Communications, however, gave the ministry the powers of administrative review of the NRA decisions as the first appeal instance, effectively undermining the NRA independence.

The situation varies substantially from country to country. Relative effective independence of the NRA has been achieved in Croatia, where the ministry is no longer involved in adoption of regulatory decisions and is restricted from influencing the NRA decisions in individual cases. The institutional frameworks in FYROM, Turkey, Albania, Bosnia & Herzegovina and Montenegro foresee involvement of the ministry (or government) in adopting decisions on tender procedures for spectrum authorisations and designation of universal service providers. In Serbia, the ministry has quite an extensive scope of responsibilities covering approval of tender procedures for issuing individual licences and spectrum authorisations, universal service and an obligation for the NRA to obtain the opinion from the ministry about the constitutionality or the legality of the draft regulation. In Kosovo, the recent amendments to the Law on Telecommunications removed the provisions enabling the Ministry to issue instructions to the NRA to amend a licence.

To conclude, the situation is far from being completely satisfactory but there is a general positive trend with the adoption of a series of new laws aimed at increasing the political independence of the NRAs.

## 2. Appointment and dismissal of the directors of the NRA

The rules and procedures for the appointment and dismissal of the management of the NRAs are an important factor facilitating the effectiveness of the independence. This report measures (i) the eligibility criteria, (ii) procedures of appointment and government bodies involved, (iii) term in office and (iv) procedures for removal.

The situation varies across countries with different eligibility criteria reflecting a more or less detailed approach and/or requirements but with the same objective of ensuring the selection of qualified candidates.

The appointment procedures for the board members also vary from country to country with appointment (i) by the Parliament only (FYROM), (ii) appointment by the Parliament following a government proposal (Albania, Croatia, Bosnia & Herzegovina, Serbia, Kosovo), (iii) by the government only (Montenegro). Consequently, the Parliament is often included in the appointment process. One exception is found in Turkey where the appointment is the result of a complex mechanism with board members nominated by operators with more than 10% market share, the Ministry of Industry & Trade, the Union of Chambers and Industry and the Minister of Transport followed by the appointment via the Council of Ministers with the approval of the President of the Republic. The appointment of the Executive Director in charge of the NRA's day-to-day operations is usually done via the board members with few exceptions. Bosnia & Herzegovina requests the approval of the Council of Ministers. In Albania, Kosovo and Turkey there is no separate position of the Executive Director and the Chairman of the NRA board is responsible for both, regulatory and operational functions.

The term in office is generally 4 to 5 years with the possibility of one renewal, which seems reasonable.

### 3. NRA budget and sources of financing

The financial resources available to the NRA, the number of employees and its ability to attract and retain suitably qualified staff are particularly important aspects in assessing the capacity of the NRA to operate effectively.

The funds available for the NRAs are ranging from approximately €2 million (Kosovo, Albania) to €14 million (Croatia, Serbia) with the exception of Turkey where the budget was €43 million in 2008.

With the exception of Croatia, FYROM and Bosnia & Herzegovina, most of the NRAs relied for a large part on funding from one-off authorisation fees. The other main source of financing is spectrum usage fees, in particular in FYROM, Turkey, and Albania. In Serbia, 59% of the NRA funding comes from annual revenue based fees, while 22% - from one-off authorisation fees. The Croatian NRA, in particular, relies on a well-balanced funding from revenue based annual fees (34%), spectrum (23%) and numbers (40%).

### 4. NRA staffing

The average number of staff in 2008 is between 50 and 100 (up to 140 for Croatia) with two exceptions: Kosovo, with a team of 30 and Turkey with a team of nearly 650. The distribution of the number of people committed to the handling of electronic communications regulatory tasks and the handling of frequency monitoring tasks varies across countries, with particularly low numbers of regulatory staff in Kosovo (13), FYROM (14) and Montenegro (15) that raise concerns about the lack of competent resources.

### 5. NRA enforcement powers

In order to ensure effective compliance with SMP obligations, the NRAs sanctioning power should, in particular, allow them to impose fines with a sufficiently deterrent effect and to order the suspension of non-compliant commercial offers.

In general, the NRAs have the power to impose fines directly with an exception of Croatia, FYROM and Serbia where the NRAs are required to initiate a misdemeanours procedure before the relevant court. When the amount is calculated as a percentage, the level varies from 1% up to 10% of the total annual revenues with no maximum limit. Some countries impose a maximum fine: Serbia (€37,000), Montenegro (approximately €16,500), Bosnia & Herzegovina (€75,000 for the first violation and €150,000 for the second violation) and Kosovo (€250,000). However, it seems that financial penalties are not used very often, except in Bosnia & Herzegovina.

All the NRAs have the power to suspend commercial offers. However, only in Croatia, Turkey and Serbia, this enforcement power has been applied in practice. The interventions of the NRAs at the retail level are used as a tool to force the SMP operators to adapt their prices and solve a competition problem (price squeeze or predatory pricing). In some cases, the NRAs suspend the retail offer until the retail price is set at a level allowing competitors to enter the market. In other cases, the NRA suspends the retail offer as a leveraging tool in their negotiation of a wholesale reference offer until the wholesale price is set at a level that allows competitors to enter the market.

### 6. Dispute resolution

Dispute resolution mechanisms cover disputes between operators but some countries also give the NRA the power to settle disputes between providers and end users (Croatia, Bosnia & Herzegovina, Montenegro, Serbia, Kosovo).

In general, the deadline for the NRA to resolve a dispute is two to four months. Some countries specify a minimum unsuccessful negotiation period from 45 days up to 90 days before the dispute is passed to the NRA. Two countries impose a short deadline: in Bosnia & Herzegovina, the NRA has to issue a binding decision within six weeks (in exceptional cases, ten weeks) from receiving the request, in Kosovo, the NRA issues a binding decision within six weeks.

Croatia, FYROM, Albania, Montenegro and Serbia have included a specific provision in the law that obliges the NRAs to publish their decisions. Interestingly, Serbia is specifically requesting its NRA to create and maintain a database of all its decisions, including complaints about those decisions, as well as any other information of importance for the telecommunications sector. The other countries do not have legal provisions requiring the NRAs to publish their decisions.

## 7. NRA accountability

Independence needs to be reconciled with measures to ensure that the NRAs are accountable for their actions via (i) publication of an action plan, (ii) financial and regulatory reporting and (iii) review of the NRA performance.

Regarding the publication of the action plan, Croatia, FYROM, Turkey, Albania, Montenegro and Serbia request the NRA to publish it on its website. The new law in Montenegro requires the NRA to publish its action plan along with the financial plan, after both have been approved by the government. In Croatia, the action plan must respect the prioritisation and the long-term guidelines adopted by the Parliament following a government proposal. In Albania, Bosnia & Herzegovina and Kosovo, the NRA must plan its activities in accordance with the Telecommunications Sector Policies adopted by the government.

All the countries include a reporting mechanism. A general trend shows the emergence of a central role left to the Parliament alone or jointly with the government. Bosnia & Herzegovina is an exception where the NRA only reports to the government on the tasks performed.

## 8. Appeal procedures

In order to counterbalance the independence of the NRA, it is critical to ensure effective mechanisms enabling any party affected by an NRA decision to appeal against the decision to an independent and competent body.

All the countries have appeal procedures in place. However, being closely linked to the national judicial system, the appeal mechanisms are different. The appeal body is typically a court acting as first instance or as second instance after an appeal in first instance has been handled by the NRA managing board. The exception is Montenegro, where the NRA decisions are not final in the administrative procedure and the first appeal instance is the ministry.

In order to avoid weakening the NRA and abuse of the appeal procedure, an appeal of the NRA decision should not automatically suspend the application of the appealed decision. In Albania and Kosovo, the NRA decision is automatically suspended for 30 days while an administrative appeal is first considered by the NRA managing board (there is, however, no automatic suspension when the appealed decision is submitted to the court as the next instance). In other countries, there is no automatic suspension of the appealed decision, unless the appeal body or the NRA decides to grant a suspension upon the complainant's request.

The appeal body should be able to consider the merit of the case and not only the procedural matters. This is the case in most of the countries, except FYROM where the court is limited to the correct application of the law. All countries allow a third party to appeal a decision if it has a legal interest in the case.

In order to be effective, the duration of such a procedure must be reasonable. Croatia reported an average duration of the appeal proceeding in the court of five years. Unfortunately, the insufficient data does not allow a comparative assessment of the length of the appeal procedures across the monitored countries.

## 9. NRA transparency and participation

The NRAs need to exercise their powers impartially and transparently. A lack of transparency undermines legal certainty and increases the potential for political interference. Furthermore, according to the principle of transparency, regulatory processes should allow for formal consultation of the stakeholders before decisions are made.

The rules and procedures vary from country to country but, to a certain degree, all NRAs have an established practice to organise public consultation on specific decisions. The average period for comments is 30 days with a maximum of 3 months in Montenegro and a minimum of 14 days in Bosnia & Herzegovina. However, it does not seem to be a common practice for the NRAs to publish a summary of the received responses to the consultation along with their reasoned opinion.

The publication of the adopted decisions is not always a straightforward process. In Turkey, there is no obligation for the NRA to publish all its decisions, and the publication is decided on a case by case basis.

## 10. Frequency management

Frequency management function includes two main tasks: (i) frequency allocation, including the decision on the national frequency plan; and (ii) frequency assignments, covering individual authorisations to use

frequencies in the national frequency plan. Frequencies for the military sector are normally decided outside this framework.

In Bosnia & Herzegovina and FYROM, NRAs are responsible for the full scope of frequency management functions, including both frequency allocation and frequency assignments for telecommunications and broadcasting. In Turkey, the NRA is responsible for frequency allocation and frequency assignment for telecommunications, while frequency assignment for broadcasting is carried out by the broadcasting authority. In Croatia and Serbia, frequency allocation is carried out by the government on the basis of a proposal of the NRA, while the NRA performs all frequency assignment tasks. In Montenegro, a similar regime was introduced by the new law adopted in 2008: frequency allocation is done by the government on the basis of a proposal of the NRA to the ministry, and the NRA assigns frequencies for telecommunications and broadcasting (under the previous law, spectrum assignment for broadcasters was carried out by the broadcasting authority).

In Kosovo, the national frequency plan is approved by the Parliament on the basis of the NRA proposal, and the NRA carries out all frequency assignments. Spectrum assignments for broadcasters, however, must be done in coordination with the broadcasting authority. In Albania, frequency allocation is decided by the government on the basis of a proposal of the NRA to the Ministry. Similarly to Turkey, the NRA is responsible for frequency assignment for telecommunications, while frequency assignment for broadcasting is carried out by the broadcasting authority.

## 11. Regulatory framework for broadcasting networks

The convergence of new digital technologies implies that all forms of networks, including broadcasting networks, can compete for the delivery of voice, data and internet services as well as radio and television broadcasting content.

Bosnia & Herzegovina is the only country in the region that has established RAK as a converged regulator, responsible for broadcasting and telecommunications. In late 2008, the government discussed the possibility to split RAK into two authorities. The legislative process, however, was stopped following criticism by the European Commission.

In other countries, except for Turkey and Albania, even if there is a specific broadcasting authority responsible for content, it is the NRA that assigns frequencies for both electronic communications operators and for broadcasters. In most countries, there is a cooperation agreement between the NRA and the broadcasting authority. The exceptions are Croatia, Albania and Kosovo where the practical aspects of this coordination have not been defined yet.

## 12. Digital switchover plan

Most of the countries have set a switchover deadline before the end of 2012, except for Turkey with a later deadline of 2014. Nevertheless, only Croatia with an early deadline of 2011 has a review on the future use of digital dividend under way. No formal decision on the analogue to digital switchover has been adopted in Albania and Serbia. At the same time, Albania is reported to operate already now a well developed DVB-T and DVB-H networks with national coverage offering 38 programmes and over 100,000 subscribers.<sup>60</sup> The network, however, operates outside of the current legal framework for broadcast services which was adopted by the Parliament in May 2007. Serbia, according to the draft strategy for the analogue to digital switchover, recently published for consultation<sup>61</sup>, is considering setting April 2012 as the switchover deadline. The deadline of 2012 has been also proposed in Albania.

## 13. Cooperation between the NRA and the National Competition Authority

In Montenegro and in Kosovo, the NRA is responsible for competition issues in the electronic communications sector. In Croatia and in FYROM, both authorities have formalised their cooperation. In FYROM, however, concerns have been expressed over the lack of coordination between *ex ante* measures imposed by the NRA and *ex post* regulation of the same wholesale products by the NCA.

In the other countries, such cooperation has not yet been formalised.

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<sup>60</sup> <http://www.digitag.org/WebLetters/2008/External-Aug2008.html>

<sup>61</sup> <http://www.mtid.gov.rs/upload/documents/konsultacije/dtv2/Nactr%20Strategije%20i%20Aktionog%20plana%20digitalizacije.pdf>

## C. Market access conditions in electronic communications

### 1. Liberalisation of public fixed telecommunications networks and services

At least in theory, all the monitored entities liberalised the provision of all forms of public fixed telecommunications networks and services. In practice, however, access to certain market segments still remains problematic in some of the countries.

Croatia was the first country to introduce full liberalisation of local, domestic long distance and international networks and services on January 1, 2003. It was followed by Montenegro on January 1, 2004. However, the high Montenegrin licensing fees, especially for international services, created a barrier to entry that was only reduced in April 2007.

In FYROM, liberalisation of public fixed telecommunications networks and services was originally foreseen from January 1, 2005. Implementation was delayed until the second half of 2005 when the secondary legislation required under the Law of Electronic Communications of 2005 was adopted.

In Turkey, domestic long-distance and international networks were liberalised on January 1, 2004, and local services in July 2005. In practice, however, no licences have been issued for provision of local fixed telephony networks and services, pending the adoption of the licensing framework that was only completed in November 2008. It is not clear, however, whether this framework will be applied in practice before the entry into force of general authorisation regime that is foreseen from May 2009.

In Albania, liberalisation of fixed telephony networks and services has been a gradual process starting with rural local services in 1998, moving to domestic long distance services in July 2003 and international services in January 2005. In November 2006 the Law on Telecommunications was amended to introduce a new concept of a regional licence for rural, urban and domestic long distance networks, effectively opening urban local networks for competition. The implementing legislation was adopted by the NRA only in April 2007, with little effect. Despite the formal liberalisation, the Albanian incumbent also continued to control the provision of international connectivity. The Law on Electronic Communications that entered into force on June 26, 2008 introduces a general authorisation regime for any type of electronic communications services and allows regional operators to extend the provision of their services on the entire national territory and to offer international interconnection.

Bosnia & Herzegovina liberalised local and domestic long distance services in 2002. International telephone services were opened for competition on January 1, 2006.

In Serbia, under the Telecommunications Law of 2003, the fixed incumbent operator was granted an exclusive right until June 9, 2005 to provide all types of fixed telecommunications services, with the exception of Internet and cable TV services that were already open to competition. In practice, Telekom Srbija remains the only licensed public fixed voice telephony operator. It also maintained a *de facto* monopoly over international interconnection until alternative operators were issued first licences for international network interconnection in December 2008. Serbia has a significant tariff rebalancing problem, and the policy document of October 2006 took a very cautious approach to the practical implementation of full liberalisation. The new Action Plan for implementation of the National Strategy for Development of Telecommunications adopted in January 2009 foresees licensing of first alternative fixed voice telephony operators in 2009.

In Kosovo, the liberalisation of fixed networks and services was formally achieved by the Law on Telecommunications of May 12, 2003. However, the NRA only completed the secondary legislation on authorisations in 2006, allowing market entry for alternative providers. PTK, the incumbent operator, maintained exclusive control over international gateway facilities until December 31, 2007.

### 2. Liberalisation of data networks and services

Data networks and services had been opened to competition in all countries, often some years before voice services. Nonetheless, there remained problems with international traffic in several entities.

Albania and FYROM were the first countries to liberalise data services and networks in 1998, followed by Croatia which introduced liberalisation in 1999. In FYROM, the incumbent operator, however, maintained its monopoly over international networks until 2000.

Bosnia & Herzegovina liberalised both, national and international data networks and services in 2002. In Montenegro, data networks and services were formally liberalised in 2004, but the high licensing fee for international gateway facilities, created a barrier to entry that was only reduced in April 2007.

In Kosovo, the liberalisation was introduced by the Law on Telecommunications of May 12, 2003, but the authorisation framework enabling competitive market entry was implemented only in 2006. Furthermore, the incumbent maintained a monopoly over international gateway facilities until January 1, 2008.

In Turkey, the provision of data services was formally liberalised on June 10, 1994. The first licences were issued to service providers only in March 2002 after the establishment of the NRA in January 2002. The provision of data networks remained under monopoly of the incumbent operator until January 1, 2004.

### 3. Authorisation regime for electronic communications services

The EU 2003 regulatory framework establishes a general authorisation regime for the provision of electronic communications networks and services. Undertakings may only be required to notify the intention to commence the provision of electronic communication networks or services and to submit information required to allow the NRA to keep a register or list of providers. There is no requirement to obtain an explicit decision by the NRA before starting activities. Individual authorisations can only be required for the rights to use spectrum and numbers.

So far, only four of the monitored countries have introduced a general authorisation regime. FYROM introduced a general authorisation regime for all activities that do not require access to limited resources with adoption of the Law on Electronic Communications in 2005 based on the principles of the EU 2003 regulatory framework. Albania, Croatia and Montenegro have moved to a general authorisation regime in 2008 following the recent adoption of new laws based on the EU 2003 regulatory framework.

In Turkey, the new Electronic Communications Law adopted in November 2008 foresees introduction of general authorisation regime from May 10, 2009.

The authorisation regime in Kosovo is based on individual licences with one-off fees ranging from €5,000 for the provision of Internet services to €87,000 for national fixed telephone services. In Bosnia & Herzegovina, the authorisation regime combines individual licences for the provision of different type of public fixed telephony networks and services and class licences for the provision of Internet services. Individual licences are subject to low one-off fees (around €500), but relatively high annual fees (ranging from €2,600 for local networks to €35,800 for public fixed telephony services, with even higher fees paid by the incumbent operators). Serbia has a complex authorisation regime combining different categories of individual and class licences (authorisations). This regime also envisages complex public tender procedures for some of the most important licensing categories, including the provision of public fixed voice telephony networks and services.

The annual fee paid by authorised undertakings in most countries varies from 0.1% to 0.5% of gross annual turnover. Montenegro has the highest fee at 1% of revenue.

### 4. Rights of way

Rights of way are necessary to establish electronic communications infrastructure. For fixed network operators rolling out new infrastructures, access to public and private land is required to install cables and ducts. Similarly, access to building sites and construction permits is important for operators installing mobile network infrastructure. Article 11 of the Framework Directive requires that applications for granting the rights to install infrastructure on public or private property shall be handled by the relevant authorities in a transparent, non-discriminatory manner and without delay. It also states that the authorities issuing building permits must be structurally separated from the network operators.

The information provided by the NRAs shows that all countries have legal provisions on non-discriminatory access to the rights of way. However, no sufficient details have been provided by the NRAs to make an assessment of the applicable procedures and time frames for securing building and location permits in the monitored countries. Typically, the NRAs have little or no control over the procedures for granting rights of way, which involve issuing of building permits by local or regional authorities and location permits by authorities in charge of urban and country spatial planning.

It was reported that in Croatia application procedures for building permits for mobile infrastructure could take up to 359 days and application procedures for location permits – up to 559 days. In Serbia, the same procedures very often could last even longer.

In Croatia the problem has been addressed in the new Electronic Communications Law that prescribes 30 days time limit for issuing building permits by the manager of the public property or the private property owner, and 30 days time limit for issuing location permits by planning authorities. Several initiatives to improve the present situation have been initiated, involving the relevant government bodies, the NRA and

the industry. In Serbia, a new draft law on spatial planning and construction that is expected to address the issue of rights of way for telecommunications infrastructure and to simplify the procedures has been recently prepared by the Ministry of Environment and Spatial Planning. The new law is expected to be adopted by fall 2009. In Turkey, the new Electronic Communications Law establishes 60 days time limit for granting rights of way by public institutions, on transparent and non-discriminatory terms. The Albanian Law on Urban Planning sets out the deadline for approval or refusal of construction permit within 45 days from receiving the request, but according to some operators, the timing to obtain digging permits in practice may exceed 12 months.

#### D. Implementation of the EU regulatory framework

Five of the monitored countries have adopted national legislation based on the EU 2003 regulatory framework. FYROM was the first country in the region to adopt the new Law on Electronic Communications in 2005. Albania, Croatia, Montenegro and Turkey introduced the principles of the EU 2003 regulatory framework in their national legislation in 2008. The regulatory frameworks in other three countries are essentially based on the EU 1998 regulatory framework, sometimes combining certain elements of the 2003 framework.

In relation to the implementation of the regulatory framework, Article 27 of the Framework Directive establishes a requirement to ensure that the regulatory obligations related to access and interconnection, universal services and obligations related to retail markets are duly in place and maintained until the NRAs adopt new decisions in accordance with the new regulatory framework. The sections below address the national frameworks for market analysis procedures that are seen as a prerequisite for imposing asymmetric regulatory obligations, the implementation of access and interconnection obligations along with other competitive safeguards and universal service obligations.

##### 1. Market analysis procedures and regulations

The concept of significant market power (SMP) is one of the central elements of the EU regulatory framework for electronic communications. Following a market analysis by the NRA, an operator can be designated as having SMP in a specified electronic communications market. Subsequently, it may be subject to specific *ex ante* regulatory obligations (remedies).

In all countries, the NRAs have no restrictions in collecting the information to be able to carry out market analysis. The provisions on definition of the relevant markets vary across countries: (i) it is left to the entire discretion of the NRAs (Bosnia & Herzegovina, Serbia and Kosovo), (ii) it is left to the discretion of the NRAs but with requirement to apply the competition law principles (FYROM, Turkey, Albania) or (iii) it is left to the discretion of the NRA but in line with the EU Recommendation on relevant markets (Croatia, Montenegro).

The central role of competition law is included in the regulatory frameworks. However, there may be a gap between the general principles and the effective application, in particular in Albania and Turkey where there is no cooperation agreement between the NRA and the NCA. In practice, the NRAs in FYROM and Turkey have also relied on the European Commission Recommendation on relevant markets of 2003 in defining relevant markets.

The common practice in recent years in all countries has been the application of the 25% market share threshold as a basis for SMP designation together with the rigid lists of regulatory obligations predefined in the laws or sometimes even in the licences. In Serbia, the market share threshold is 20%, though with the option for the NRA to use 25%. Kosovo and Turkey have a mixed system where a minimum set of remedies must be automatically applied to the SMP operator while the NRA can add additional remedies on its own discretion.

FYROM was the first country to introduce 40% market share threshold taken from its domestic competition law together with the requirement to consider other relevant market characteristics. Also, the predefined list of remedies was removed leaving the imposition of remedies to the NRA discretion. The timing of this report finds legal changes coming into effect, which should bring the applied approaches in three other countries much closer to that of the EU regulatory framework. The new laws adopted last year in Croatia, Albania and Montenegro also move away from the 25% rule to a more comprehensive assessment based on the competition law principles and also enable the NRAs to impose regulatory obligations on their own discretion.

The frequency of the market analysis varies considerably between the countries: (i) not defined (Serbia, Montenegro), (ii) not defined but upon request of any service provider (Kosovo), (iii) once every year

(FYROM, Bosnia & Herzegovina), (iv) every two years (Albania) and (v) every three years (Croatia and Turkey). In Montenegro, the NRA is however required to complete its first market analysis within one year from the entry into force of the law, i.e. already by August 27, 2009.

In practice, setting a very short timeframe for market analyses often turns out to be unrealistic taking into consideration the NRAs' lack of expertise and insufficient administrative capacities. For example, in FYROM where the NRA is required to analyse relevant markets at least once a year, only one market has been analysed since the entry into force of the Law on Electronic Communications in 2005 – the market for wholesale call termination on individual mobile networks.

## 2. Analysis of relevant markets by NRAs

Although there has been a general positive trend in the regulatory framework with a move towards competition law principles, there is still a long way to go between the modification of the regulatory framework and its effective application. For many NRAs, matching their market analysis procedures with the requirements of the complex EU 2003 regulatory framework will present the main challenge in the coming months.

In Croatia, the NRA has analysed in 2006-2007 four markets with definitions broadly corresponding to the ones defined under the ONP directive. The fixed incumbent operator, T-HT, and its 100% subsidiary, Iskon, were designated as having joint SMP in public fixed telephone network and services (including voice services and services for transmission of voice, sound, data, documents, pictures, etc.). T-HT was also designated as having SMP in leased lines. T-Mobile and VIPnet have SMP in public voice services on mobile networks. Finally, T-Com, T-Mobile and VIPnet also have SMP in interconnection. After the new Electronic Communications Act was passed in June 2008 that requires applying the principles of the national Law on Competition and the EU 2003 regulatory framework, a new round of market analyses has been initiated. Between March 2 and April 20, 2009 the NRA consulted on the draft conclusions of its analysis of the nine relevant markets. In identifying the relevant markets, the NRA has followed the Commission Recommendation of 2007 and applied the three criteria test to additional markets covering retail mobile telephony services, wholesale access and call origination in mobile networks and the wholesale fixed transit services.<sup>62</sup>

In FYROM, the NRA has defined in August 2005 18 product markets according to the Commission Recommendation of 2003. So far, it has only completed its analysis of the wholesale call termination market for individual mobile networks, designating T-Mobile and Cosmofon as having SMP and imposing regulatory obligations in January 2008. Until the NRA has completed its market analyses, the transitional provisions of the Electronic Communications Law provide for the designation of Makedonski Telekom as having SMP in fixed telephone networks and services and data transmission and leased lines services.

In Turkey, the NRA adopted the definitions of the 18 relevant markets according to the EC Recommendation of 2003 and completed market analyses as foreseen under the EU framework. In December 2005, all three MNOs, Turkcell, Vodafone and Avea were designated as having SMP in the mobile call termination market, with Turkcell also having SMP in the mobile access and call origination market. In March 2006, the NRA completed its analysis of the fixed markets, both wholesale and retail, corresponding to markets 1-14/2003, and designated Türk Telekom as having SMP in those markets. Since the law requires the NRA to perform its market analysis at least once every three years, one may expect that a new round of market analyses will be finalised before the end of 2009.

In Albania, the NRA identified and analysed eight markets in 2007. The mobile operators, AMC and Vodafone, were designated as having SMP in the markets for wholesale call termination on individual mobile networks and retail public mobile services. The fixed incumbent operator, Albtelecom, was designated as having SMP in six markets, covering retail access and publicly available phone calls at a fixed location, wholesale call termination on geographic numbers, wholesale call origination on the public fixed telephone network, national transit services in the public fixed telephone network and international transit services in the public telephone network. The scope of regulatory obligations includes: access and interconnection, non-discrimination, transparency, including RIO, price control, accounting separation and cost accounting. Albtelecom is also required to provide CS/CPS. A new law passed in May 2008 requires

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<sup>62</sup> The three cumulative criteria for ex ante regulation are: high and non-transitory barriers to market entry; the market displays characteristics such that it will not tend towards effective competition over time; and ex post application of competition law by itself is insufficient to regulate the market.

the application of competition law principles. A new round of market analyses is expected to be initiated before the end of 2009.

In Bosnia & Herzegovina, the NRA identified and analysed two markets in September 2007: one for fixed telephony services and one for mobile telephony services. The remedies imposed on the three incumbent operators include carrier selection (CS) and carrier pre-selection (CPS) and the publication of RIO for the fixed market. This approach may help the NRA to introduce competition, but there is still a long way to go with the identification and analysis of relevant markets.

In Serbia, the NRA has identified and analysed two broad markets that do not reflect either the EU 1998 or 2003 frameworks. As a result, Telekom Srbija was designated as having SMP in the market for public fixed telephone networks and services, and SBB, the major cable TV operator, as having SMP in the market for radio and television programme distribution via cable network. Last year the NRA adopted a decision identifying six markets relevant for ex ante regulation, comprising the four markets of the ONP framework and two additional markets: fixed telephony, mobile telephony, leased lines, interconnection, Internet services and provision of cable distribution systems.<sup>63</sup> The new market analysis is expected to be undertaken by RATEL in the third quarter of 2009.

In Kosovo and Montenegro, no comprehensive market analyses have been carried out by the NRAs yet. In Kosovo, by the provisions of the Telecommunications Law, the fixed incumbent operator PTK is deemed to have SMP in the market for public fixed telephone networks and services, while its mobile subsidiary, Vala, has SMP in public mobile services. In Montenegro, by the provisions of the previous Telecommunications Law of 2000, Crnogorski Telekom was deemed to have SMP the markets for fixed networks and services and for Internet services, while the two mobile operators, T-Mobile and Promonte, in mobile networks and services. No regulatory obligations had been applied to mobile operators. The new Law on Electronic Communications adopted in July 2008 contains transitional provisions that designate Crnogorski Telekom as having SMP in the markets for fixed voice telephone networks and services including the markets for data transmission services and leased lines. Under the same provisions, all fixed and mobile network operators are deemed to have SMP in the markets for call termination in their respective networks, while the national broadcasting operator in the market for broadcasting transmission services. The law however, does not specify the remedies applicable to the SMP operators.

## E. Competitive safeguards

### 1. Competitive safeguards

The sections below address the implementation of competitive safeguards which constitute the basic mechanisms enabling competition when a national market is being liberalised.

The implementation of competitive safeguards is still in the early stages and depends on the capacity and expertise of the NRAs. As demonstrated in the table below, only Croatia, FYROM and Turkey, have made significant progress, while other countries are lagging behind.

	HR	MK	TR	AL	BA	ME	RS	XK
Carrier selection (CS)	●	●	●	○	●	●	○	○
Carrier pre-selection (CPS)	●	●	●	○	●	●	○	○
Number portability - fixed	●	●	○	○	○	○	○	○
Number portability - mobile	●	●	●	○	○	○	○	○
RIO Fixed	●	●	●	●	●	●	●	●
RIO Mobile	●	●	●	●	○	○	○	○
RUO	●	●	●	○	○	○	○	○
Wholesale broadband access (WBA)	●	○	●	○	○	○	○	○
Wholesale line rental (WLR)	○	●	○	○	○	○	○	○
MVNO	○	○	○	●	○	○	○	○
National roaming	●	○	○	○	●	○	○	○

<sup>63</sup> [http://www.ratel.rs/editor\\_files/File/Regulativa/Odluke/ODLUKA-analiza%20trzista.pdf](http://www.ratel.rs/editor_files/File/Regulativa/Odluke/ODLUKA-analiza%20trzista.pdf)

	HR	MK	TR	AL	BA	ME	RS	XK
Regulatory cost accounting - fixed	○	●	○	○	○	○	○	○
Regulatory cost accounting - mobile	○	●	○	○	○	○	○	○
Legend: ● implemented - ○ not implemented - ● commercial offer								

Table 5 - Implementation of competitive safeguards

## 2. Carrier selection and pre-selection

Carrier selection (CS) and carrier pre-selection (CPS) are among the basic mechanisms enabling competition at the service level. CS allows a subscriber, who is connected to the incumbent operator's network, to choose a competitive operator to make local calls, long-distance calls, calls to mobile, or international calls by dialling a carrier selection code. When CPS is available, the subscriber can make a permanent (or semi-permanent) selection of an alternative operator for all calls or certain types of calls.

CS/CPS has been implemented in Croatia, FYROM, Turkey, Bosnia & Herzegovina and Montenegro.

Country	Carrier selection/pre-selection			
	Local calls	National	International	Calls to mobile
Croatia	February 2005	February 2005	February 2005	February 2005
FYROM	May 2008	January 2007	January 2007	January 2007
Turkey	Not available	April 2006 (CS) July 2006 (CPS)	April 2006 (CS) July 2006 (CPS)	April 2006 (CS) July 2006 (CPS)
Albania	Not available	Not available	Not available	Not available
Bosnia & Herzegovina	October 2006 (CS) July 2007 (CPS)			
Montenegro	December 2007	December 2007	December 2007	December 2007
Serbia	Not available	Not available	Not available	Not available
Kosovo	Not available	Not available	Not available	Not available

Table 6 - Availability of carrier selection and carrier pre-selection

In Croatia, CS/CPS has been implemented by the incumbent operator in February 2005 for all types of calls: local, national, international and mobile numbers. In practice, however, alternative operators were offering CPS from February 2005 and CS – only from July 2006. Currently there are four providers offering CPS services and five providers offering CS services.

In FYROM, CS/CPS has been available in the fixed network since January 2007 for national, international and calls to mobile numbers. In May 2008, the NRA amended Makedonski Telekom's RIO to extend CS/CPS to local calls. So far, only CS services are being offered by two alternative providers.

In Turkey, CS has been available in the fixed network since April 2006 and CPS – since July 2006 for long-distance and international calls, as well as for calls to mobile numbers. It is not yet available for local calls. There are 11 providers offering CPS and nine providers offering CS.

In Bosnia & Herzegovina, CS was introduced in October 2006 and CPS in July 2007. Four alternative operators offer CS services but none offers CPS.

In Montenegro, CS/CPS was introduced in December 2007 and applies to all fixed and mobile public network operators. However, since the incumbent operator has not yet been obliged to include CPS in its RIO, service providers are required to negotiate terms and conditions with Crnogorski Telekom on commercial basis. CS services are offered commercially by six providers.

In Albania, CS/CPS was imposed as a regulatory obligation on Albtelecom, but implementation is only foreseen in 2009.

In Serbia, regulations on CS/CPS are expected to be adopted before the end of 2009, but the timing for its introduction is not yet known. There is no clear timeframe for the implementation of CS/CPS in Kosovo.

### 3. Number portability

Another important competitive safeguard is number portability, which enables subscribers to maintain their telephone number when changing the operator. This is particularly important for business users, for whom a change of telephone number may be associated with potentially high transaction costs.

Article 30 of the Universal Service Directive requires all operators of publicly available mobile and fixed telephone services to provide number portability. It also must be available for both geographic and non-geographic numbers.

Only Croatia and FYROM have so far implemented number portability for both fixed and mobile networks. Turkey has implemented mobile number portability.

Croatia is the first country in the region that has successfully implemented number portability for both fixed and mobile numbers. Fixed number portability has been available since July 2005. Mobile number portability was delayed until October 2006. As of March 2009, the Croatian NRA reported over 285,000 ported fixed numbers and 72,200 ported mobile numbers.

In FYROM, number portability in fixed and mobile network was implemented in September 2008 but take-up so far, in particular in mobile networks, has been limited. As of March 2009, the NRA reported over 7,000 ported fixed numbers and slightly over 1,500 ported mobile numbers. One explanation of the slow take up of number portability in mobile networks could be the one-off porting fee of around €10.00 that mobile operators charge to end-users.

Turkey implemented mobile number portability in November 2008. It appears to have been a particular success with almost 1.2 million mobile numbers ported within the first four months, equivalent to 2% of total mobile numbers. Fixed number portability is due to be implemented by May 2009.

In Albania, no decision on the implementation of number portability has been adopted so far. The new Electronic Communications Law stipulates that it should be implemented for both fixed and mobile numbers within one year from the enactment of the new electronic communications law, i.e., by June 26, 2009.

In Bosnia & Herzegovina both fixed and mobile number portability are due to be implemented by December 2009.

No clear deadlines have been established for the implementation of number portability in Montenegro, Serbia and Kosovo. In Serbia, regulations on number portability are expected to be adopted before the end of 2009.

Comparative information was collected to show where VoIP providers are allowed to use geographic and non-geographic numbers from the national numbering plan and where they are allowed to port-in such numbers from another operator, usually the incumbent. In most cases, because general number portability is not implemented, it is not available for VoIP. Croatia and Montenegro have created dedicated number ranges for non-nomadic VoIP, respectively 075 and 078.<sup>64</sup>

### 4. Reference interconnection offers

One of the key factors in enabling a competitive telecommunications market is ensuring the availability of a reference interconnection offer (RIO) from the incumbent operators in transparent and non-discriminatory manner.

RIOs have been established and published by the fixed incumbent operators in all jurisdictions. Nevertheless, while considerable work has been undertaken on the preparation and approval of RIOs across the region, there are a significant number of gaps -- especially for RIOs of MNOs.

In Croatia, RIOs have been published by fixed and mobile operators with SMP since February 2005. The current versions of the RIOs were approved by the NRA in February 2009 and are valid from March 2009.

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<sup>64</sup> The term 'nomadic services' refers to services where the user can connect to their VoIP service from any network termination point and make or receive calls using the same number. Therefore, nomadic VoIP services are provided independently of the physical location of the user. However, the user may be required to specify a particular physical location and corresponding network termination point as their 'home' location when signing the contract with the provider of the nomadic VoIP service in order to enable the provision of caller location information to the emergency services.

The RIO of the fixed incumbent operator, however, only applies to the interconnection with fixed networks, while mobile operators have to negotiate interconnection on commercial terms.

In FYROM, the fixed incumbent operator's RIO has been available since February 2006. The current version was approved by the NRA and is valid from February 2009. In July 2008, the NRA approved, with changes, the current RIOs for the two MNOs with SMP. The RIOs are valid from August 2008.

In Turkey, RIOs are published by fixed and mobile operators with SMP.

In Albania, Albtelecom's new RIO was approved by the NRA and is valid from February 2009. The RIOs of the two mobile operators were also approved by the NRA and are valid from February 2009.

In Bosnia & Herzegovina, RIOs for the three fixed incumbent operators have been available since November 2006.

In Montenegro, the first RIO of Crngorski Telekom was published in December 2004. In April 2008, the NRA approved a new RIO introducing some reductions to interconnection charges based on the EU benchmarks. The first RIOs of T-Mobile and Promonte should be submitted for approval by the NRA.

In Serbia, the first RIO of the fixed incumbent operator was published in August 2008. A separate RIO for interconnection with VoIP providers was published in March 2009.

In Kosovo, the first RIO of the fixed incumbent operator, PTK, was approved by the NRA in January 2007.

## 5. Reference unbundling offer

Access to unbundled local loops of the network connecting individual subscribers with the nearest exchange has a particular significance for alternative operators. Access networks often represent half of the investment by the fixed network operator and although competitive access technologies are emerging, the copper access network infrastructure is still difficult to duplicate. For this reason, the obligation for local loop unbundling (LLU) is seen as one of the key enablers of competition. In addition, new technologies, such as xDSL, have enabled transmission of digital data over copper loops at broadband speeds and competitive access to this resource has been deemed as an indispensable instrument to speed up the growth of broadband access.

In the EU, this topic was deemed sufficiently important to justify the adoption of Regulation (EC) No. 2887/2000 of the European Parliament and of the Council of December 18, 2000 on unbundled access to the local loop, which also set out a requirement for the publication of a reference unbundling offer. The regulation was later replaced by a corresponding requirement in article 9.4 of the Access Directive 2002/19/EC. The existence of a reference unbundling offer (RUO) is therefore an indication that the local loop facilities of the incumbent operator are being made available to alternative operators under non-discriminatory terms and conditions.

There are many different technical alternatives for how local loop unbundling can be implemented. The two main alternatives are:

- full access to unbundled loops, whereby the alternative operator takes full control over the loop.
- shared access, whereby the alternative operator normally gets access to the xDSL channel in the high frequency band, while the incumbent keeps the normal telephony channel in the lower band.

Only three countries in the region have implemented LLU and have RUOs in place: in Croatia since October 2005, in FYROM since May 2006; and in Turkey since November 2006.

Given the late and inconsistent introduction of LLU across the region, the number of loops unbundled so far is small, being almost exclusively in Croatia. The Croatian NRA reported almost 93,000 unbundled loops as of end 2008, with five LLU agreements in place. Although Turkey has had an RUO since November 2006 and there are ten LLU agreements, only about 8,000 loops have been unbundled as of end 2008 on a network of around 18 million lines. In FYROM, there has been only one agreement on LLU between Makedonski Telekom and the major alternative operator On.Net, owned by Telekom Slovenije. Around 2,000 loops had been unbundled there as of end 2008.

In Bosnia & Herzegovina, RUOs for the three fixed incumbent operators are to be published by the end of 2009. No clear deadlines have been established for the implementation of local loop unbundling in Albania, Montenegro, Serbia and Kosovo.

## 6. Wholesale broadband access

In addition to LLU, another option for access to the local loop is based on a wholesale bitstream access product, whereby the incumbent operator hands over the digital traffic over the xDSL channel according to an agreed standard. There are four common bitstream options, representing typical handover points between an incumbent operator and an alternative operator or ISP: DSLAM level; ATM/Ethernet level; IP level; and end-to-end resale.

As with LLU, the availability of bitstream varies considerably across the monitored countries. In Croatia and Turkey, for example, multiple options for bitstream access are available on the basis of regulated reference offers.

In Croatia, reference offers for bitstream access have been available since December 2007, including DSLAM level and IP level handover. The latest version of the reference offer was approved by the NRA in February 2009. Before the introduction of the regulated offers, T-Com had been providing ADSL Transport service since 2006, covering the transmission capacity from DSLAM to BRAS with handover in the incumbent's IP network, and where the retail customer was still charged by T-Com for the ADSL line.

While an obligation to provide bitstream access with IP handover and resale was imposed on Turk Telekom as early as 2004, the first reference offer was only approved by the NRA and available in August 2007. During 2008 there was a massive migration by alternative operators from the resale product to bitstream access with IP handover, plus a significant number of new bitstream access connections. As of January 2009 there were over 280,000 bitstream access lines with IP handover and 43,000 resale lines. For comparison, at start of 2008, there were only 1,200 bitstream access lines and 200,000 resale lines. In December 2008 the NRA approved Turk Telekom's reference offer for bitstream access with ATM handover and this will be available from July 1, 2009.

In FYROM, Makedonski Telekom offers wholesale ADSL on a commercial basis, providing IP level handover and a resale product. A bylaw on wholesale bitstream access and resale was adopted in December 2008 requiring Makedonski Telekom to submit a reference offer to the NRA. The draft reference offer is currently being assessed by the NRA.

In other countries, this competitive safeguard is not yet a regulatory priority. In Serbia, Telekom Srbija, however, offers wholesale ADSL with IP handover on a commercial basis. In Albania, Bosnia & Herzegovina, Montenegro and Kosovo, no form of bitstream access is available on a regulated or commercial basis.

## 7. Wholesale line rental

An incumbent operator may rent its subscriber lines on a wholesale basis to alternative operators that would then resell the subscriber line to the end user, usually known as wholesale line rental (WLR). In conjunction with carrier pre-selection ('all calls' option), WLR enables alternative operators to end the billing relationship between the incumbent and the end user.

WLR is currently only available in FYROM, where a bylaw was adopted in December 2008, and the incumbent reference offer was approved by the NRA in March 2009.

## 8. National roaming, mobile access and call origination

When a country decides to issue additional frequency licences to new mobile operators, it may also decide to provide some regulatory assistance to the new entrants by requiring the established operators to allow national roaming on their networks. National roaming requirements normally are not intended to be a permanent solution and have some conditions attached, such as the achievement of a minimum level of the network coverage before national roaming is permitted and a maximum duration period.

Croatia has introduced such national roaming requirements to facilitate the entry of new mobile operators. Bosnia & Herzegovina also has national roaming requirements, but these are in order to ensure full national coverage for the three MNOs.

In FYROM and Serbia, the new entrant mobile operators (both are subsidiaries of mobilkom Austria) have reached commercial agreements on national roaming with the established mobile operators.

Another way of increasing competition in the mobile market is to impose wholesale access obligations, where justified on a regulatory basis, on MNOs. In some countries, there is a specific obligation for MNOs to provide access to mobile virtual network operators (MVNO) and service providers, in addition to the general obligation to negotiate interconnection.

In Croatia, for example, MNOs with SMP have been required to provide open access to their networks. However, there are no specific obligations on access for service providers.

In Albania, an Access and Interconnection regulation provides an obligation on MNOs with SMP to provide access to networks for MVNOs.

In Kosovo in May 2008, the NRA adopted a policy framework for MVNOs and issued licences to two MVNOs. While there are no legal obligations for access, MVNOs can be launched on the basis of a commercial agreement with one of the two MNOs. Two MVNO licences were issued in June 2008, representing the first commercial reality in this domain for the region.

## 9. Price control and regulatory cost accounting for fixed and mobile wholesale prices

When an operator is designated as having SMP in a wholesale market, fixed or mobile, NRAs are entitled under article 13 of Access Directive 2002/19/EC to impose a cost accounting obligation to ensure that operators subject to price regulation follow fair, objective, and transparent criteria when allocating their costs to services. The Directive does not mandate any specific price control methodology. The European Commission recommendation on the regulatory treatment of fixed and mobile termination rates adopted on May 7, 2009, however, envisages that by 2012 NRAs should set both FTRs and MTRs using a bottom-up forward-looking long-run incremental costs (FL-LRIC) model.

Because the implementation of a sound cost accounting methodology is typically a time consuming and resource intensive process, both for the NRAs and the regulated SMP operators, most of the NRAs in the monitored countries so far have opted for the use of some form of benchmarking-based price controls and not yet implemented cost-based pricing of regulated wholesale services.

A few NRAs, though, have imposed cost-orientation obligations for wholesale services and are implementing cost-based pricing.

In FYROM, for example, initially the NRA applied a benchmarking methodology to approve the regulated fixed interconnection and LLU charges. From May 2008, the regulator amended Makedonski Telekom's RIO and RUO to introduce cost-oriented charges based on forward-looking top-down LRIC methodology. The termination prices of the two mobile operators with SMP are set based on a benchmarking methodology, while the introduction of LRIC is foreseen in 2009.

In Turkey, wholesale leased lines are priced on the basis of long-run average incremental costs (LRAIC). Local loop prices are based on a retail-minus approach.

The introduction of LRIC pricing for fixed and mobile interconnection is foreseen in Croatia, FYROM and Albania.

## F. Universal service

Most of the monitored countries have some form of universal service being delivered by one or more operators, often based on existing concessions or licences. However, only a few countries have a universal service regime that is fully in line with the EU regulatory framework.

### 1. Scope of universal service and provider designation mechanism

Universal Service Directive 2002/22/EC defines universal service as the "minimum set of services, of specified quality to which all end-users have access, at an affordable price in the light of national conditions, without distorting competition". The current scope of universal service includes:

- connection to the public telephone network at a fixed location and access to publicly available telephone services (PATS);
- provision of directories and directory enquiry services;
- public payphones; and
- special measures for disabled users.

The Universal Service Directive requires any designation of a universal service (US) provider to be carried out by "an efficient, objective, transparent and non-discriminatory designation mechanism, whereby no undertaking is a priori excluded from being designated". These rules allow the designation of one or more undertakings to guarantee the provision of universal service and even different or several undertakings to

provide different elements of universal service or to cover different parts of the national territory. Furthermore, according to Article 8 and Recital 8 in the Universal Service Directive, mobile networks may be used for the provision of universal service. This could reduce the cost of universal service provision.

Several of the monitored countries have defined a scope of universal service in their legislation that broadly corresponds to the requirements of the Universal Service Directive. However, only Croatia and the FYROM have implemented the universal service rules in a technology neutral way, which would allow the participation in the provision of universal service by mobile operators. The Albanian Law on Electronic Communications adopted in 2008 also sets out a technology neutral universal service framework, although these provisions have not been yet applied in practice.

Croatia was the first country in the region to put a comprehensive universal service regime in place, and to designate the incumbent operator T-HT as USO provider for a 5-year period from November 2005.

In FYROM, the NRA launched a tender procedure to designate one or more universal service providers in January 2008. The designation procedure has not been yet completed because of certain issues that are not clear in the Macedonian text of the law, in particular regarding the designation of several providers covering only specific universal service components or specific geographic areas. Once the law has been amended to clarify these aspects, the procedure will continue. Some of the USO elements had been provided by the incumbent operator, Makedonski Telekom, within the scope of its concession agreement before its termination in September 2008.

In Turkey, the universal service legislation has not been applied in practice and universal service is still provided by Türk Telekom under the requirements set out in its concession agreement. The Universal Service Law of 2005, which has not yet been implemented, envisages a tender procedure for the designation of universal service providers.

In Albania, under the new Law on Electronic Communications adopted in May 2008, the regulator can designate one or more universal service providers based on a public tender procedure, subject to the Ministry approval. However, no designation mechanism has been established and no provider has been designated.

In Bosnia & Herzegovina, the requirement to offer the minimum scope of universal service is covered by the terms of licences of the three incumbent operators. A draft regulation covering the scope of the universal service, the designation mechanism for the universal service providers, funding and the quality of service requirements has been submitted by the NRA to the Council of Ministers for approval.

In Montenegro, no universal service obligations have been imposed on any operator. The Law on Electronic Communications adopted in July 2008 provides legal basis for universal service. Furthermore, it also requires the NRA, no later than 6 months from the entry into force of the law, to adopt the necessary regulations and initiate a tender procedure for selection of the universal service provider, which was not achieved in practice. Secondary legislation is still under preparation.

In Serbia, Telekom Srbija was required to provide the “initial scope” of universal services until expiry of its exclusivity rights in June 2005. The initial scope of universal services was defined as comprising access to a public fixed telephone service enabling functional Internet access; special measures for disabled and socially disadvantaged users; free access to emergency services; public payphones and access to telephone directory and directory enquiry services. Following the expiry of Telekom Srbija’s universal service obligations, the Ministry of Information Society and Telecommunications is required to define the scope of universal service based on the proposal of the NRA, while the NRA must designate the provider and establish the universal service fund. According to the Action plan for implementation of the National Strategy for Development of Telecommunications, the Ministry has to define the minimum scope of universal service in the first half of 2009.

In Kosovo, free access to emergency services is a universal service condition in the licence of all providers. The Telecommunications Sector Policy envisages adoption of a more comprehensive universal service framework, which has not been achieved so far.

## 2. Universal service funding

Article 12 of the Universal Service Directive 2002/22/EC requires NRAs to calculate the net cost of universal service provision where they consider that it may represent an unfair burden on the provider. According to Article 13, NRAs may either introduce a public funding mechanism for compensation or share the net cost between operators.

In practice, none of the monitored countries is compensating the universal service provider for the net cost of the universal service.

Croatia and FYROM have adopted legislation that allows them to introduce compensation schemes based on a cost sharing mechanism in the future. Albania, Bosnia & Herzegovina, Montenegro and Serbia are in the process of adopting similar regulations providing for the sharing of universal service cost between operators. In Kosovo, no decision has been taken yet on the universal service compensation mechanism.

In Turkey, contributions to the universal service fund are collected from several industry sources by the Treasury and allocated to the budget of the Ministry of Transport, although no payments have been made yet to the universal service provider.

### 3. Quality of service

Article 11 of the Universal Service Directive 2002/22/EC states that NRAs may set specific quality of service (QoS) targets for key performance indicators (e.g. repair time for line faults) for the designated universal service providers. The standards are set out in Annex III to the Directive, specifying ETSI EG 201 769-1 version 1.1.1 of April 2000.

QoS obligations exist in most of the monitored countries and the ETSI standards are followed for the method of measurements. However, only one or two of the countries monitor and ensure (e.g., with use of penalties) compliance, as was the intention of the Universal Service Directive. Only Croatia has so far published the actual performance against the targets set out in the QoS requirements for the universal service provider.

## G. Fixed retail telephony tariffs

### 1. Retail tariff rebalancing

Assessment of fixed retail telephony tariffs shows one trend common for most of the monitored countries: the overall progress with tariff rebalancing remains slow.

The ending of monopolies in all countries has meant that the incumbent fixed line operators are bringing their tariffs more into balance with the underlying costs of providing their services. Where monopoly providers keep monthly rental and local call charges low (in order to make basic service more affordable) this is traditionally subsidised by excessive prices on national and international calls.

NRAs have typically enforced a tariff rebalancing process, where retail tariffs are allowed to adjust within a defined basket of services with the overall changes in the customers' bills being kept within an applied "price cap". After a period of adjustment the dual process of competition and tariff rebalancing should bring benefits to consumers in the form of lower overall bills. Those customers that stay with the incumbent may have to pay more in line rental than before, but any increases are generally offset by reduced call charges in a more competitive market.

With retail tariff rebalancing, the market should benefit significantly because, when relative tariffs more in balance with the underlying relative costs, the investment decisions for the incumbent and new operators are not distorted by loss-making services and the need for cross-subsidy.

For comparison, the EU experience on fixed retail tariffs according to the 14<sup>th</sup> Implementation Report shows the following trends<sup>65</sup>:

- *Rentals and local tariffs rise*  
In the EU member states, over the period from 2000 to 2008, the EU-27 weighted average residential monthly rental per month has risen by 30%, from €11.30 per month (including VAT) to €14.7 per month. At the same time, the EU-27 weighted average charges for a 3 minutes local call have risen by 16%.
- *While national and international call tariffs fall*  
Over the same period, from 2000 to 2008, international call baskets for residential customers have

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<sup>65</sup> [http://ec.europa.eu/information\\_society/policy/ecomm/implementation\\_enforcement/index\\_en.htm](http://ec.europa.eu/information_society/policy/ecomm/implementation_enforcement/index_en.htm)

fallen in price by 54%, and the EU-27 weighted average charges for a 3 minutes national call have fallen by 65%.

The graph below, for the Enlargement countries, shows that only Croatia has approached the cost oriented charges for monthly line rentals, coming close to the EU-27 average of €14.7 per month. Other countries, including FYROM, Turkey, Bosnia & Herzegovina, Montenegro and Kosovo, have made some progress to increase monthly rentals over the last five years. At the same time, very little progress was made in Albania and Serbia.

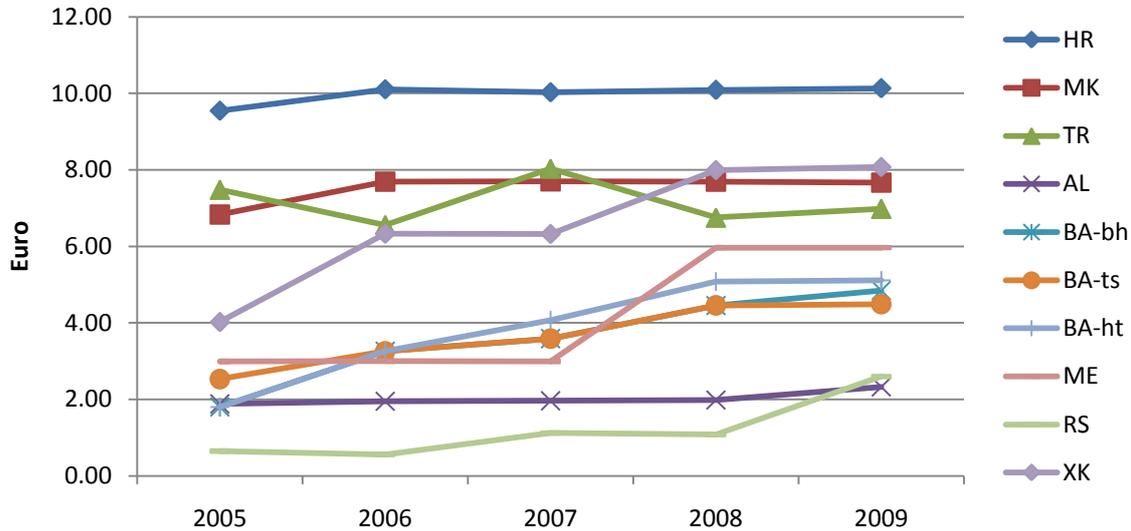


Figure 16 - Residential line rentals by incumbent, including VAT, 2005-2009

Local call tariffs in most SEE countries have only risen slowly in some countries, and in others have fallen, as can be seen on the graph below. The EU average of 13.8 eurocents for a 3 minute call has only been approached in Croatia, closely followed by Turkey. The other countries appear to charge for local calls significantly below cost.

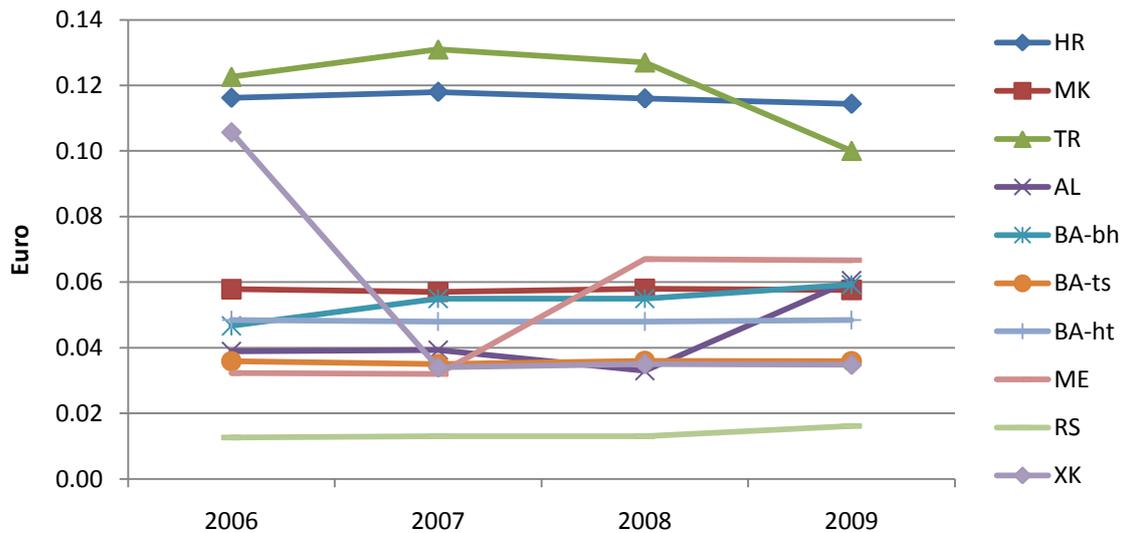


Figure 17 - Residential charges for a 3-minute local call by incumbent, including VAT, 2006-2009

Meanwhile, as the figure below shows, the cost of making a 3 minute national call has decreased significantly in Turkey and Kosovo. Other countries have been slow to bring rates more in line with costs. Albanian consumers have yet to receive any price benefits from a more competitive long distance market.

The weighted average cost of a 3 minute national call for the EU-27 is now 22.7 eurocents. Albanian consumers still pay the most, by a significant margin, while consumers in Serbia and Kosovo appear still to enjoy national call tariffs which are significantly below costs.

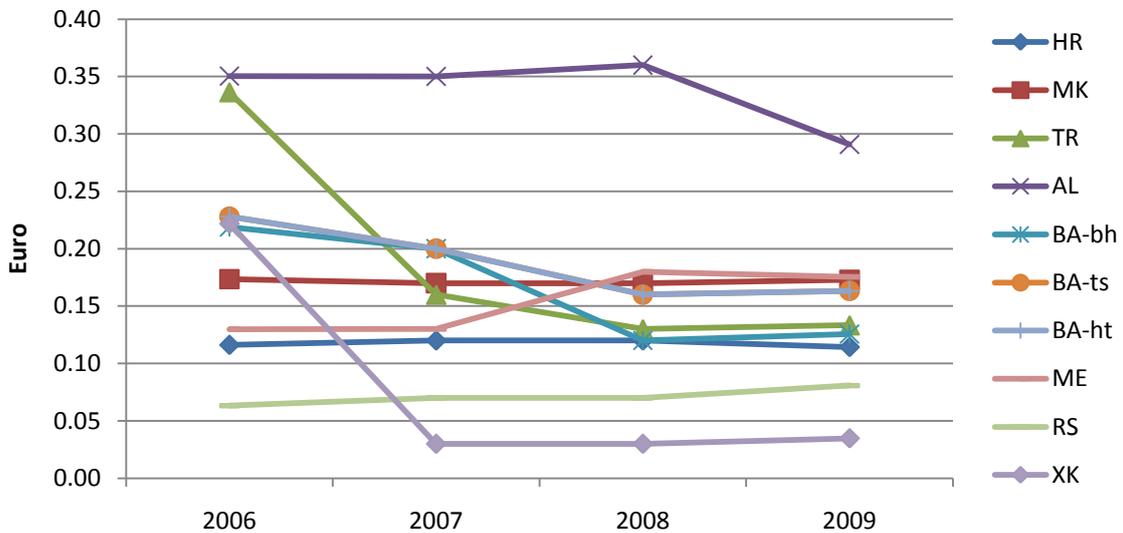


Figure 18 - Residential charges for a 3-minute long distance call by incumbent, including VAT, 2006-2009

At the same time, the level of charges for fixed to mobile calls remained relatively stable in most of the monitored countries. The exception is Albania, where fixed to mobile charges were substantially reduced in 2008, following the regulatory intervention.

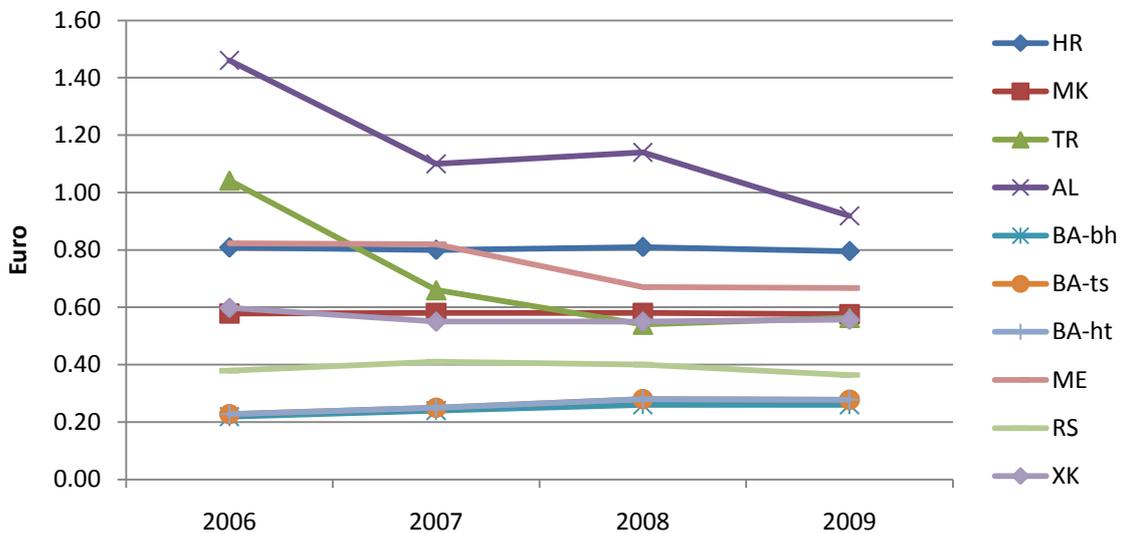


Figure 19 - Residential charges for a 3-minute fixed to mobile call by incumbent, including VAT, 2006-2009

For international calls, all incumbents appear to be responding to more competitive conditions. Tariffs have shown a reducing trend although, as the chart below shows for call prices from the incumbent to UK, the reductions appear to have slowed in the last 12 months.

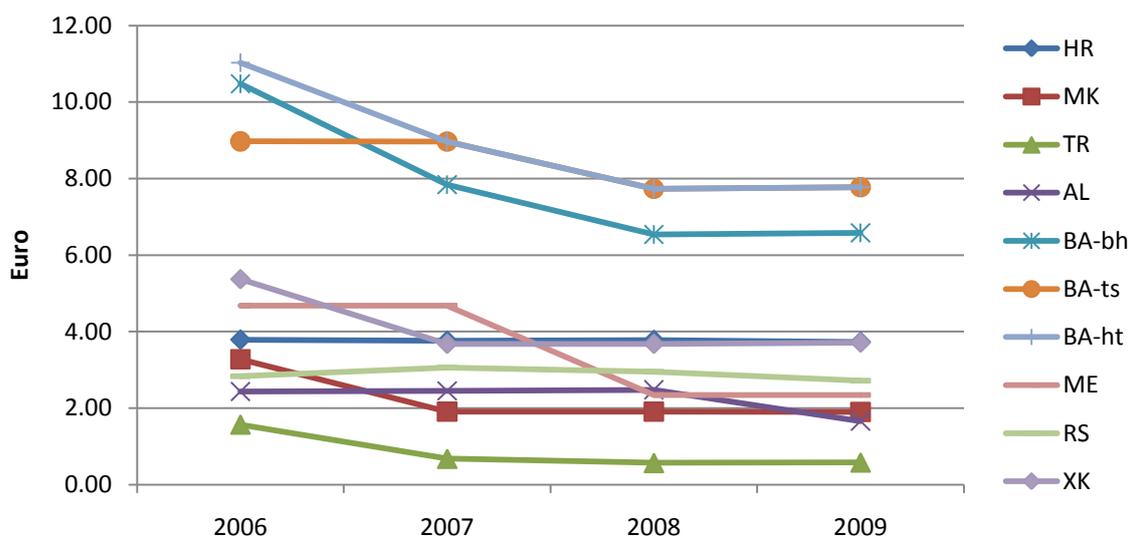


Figure 20 - Residential charges for a 10-minute international call to UK by incumbent, including VAT, 2006-2009

Rebalancing of the incumbent operator's retail tariffs is ongoing in all countries of the region, except for Montenegro where according to the NRA, rebalancing was completed in August 2007.

Three other countries, Croatia, FYROM and Turkey appear to have made significant progress in terms of implementing tariff rebalancing.

Albania has approved a two-year rebalancing scheme for the fixed incumbent, which commenced in September 2008 with increases in monthly line rentals of 20%, local call tariffs increases of 12%, reductions in rates for calls to mobile subscribers of 13-24% and international call tariff reductions of up to 63%.

In Bosnia & Herzegovina the rebalancing process is carried out in several phases with the second phase scheduled during 2009-2011.

In Serbia, the target date for bringing the tariffs of the incumbent operator in line with costs is set for the third quarter of 2009. In October 2008 the NRA approved<sup>66</sup> an increase by up to 100% in monthly rentals and impulse charges, as well as uniform call prices for residential and business customers.

## 2. Regulation of retail tariffs

A cost-based approach is theoretically closer to the philosophy of the EU regulatory framework while a price cap approach has the advantage of being easier to use. Although price cap methodologies still predominate in the SEE region, other tariff regulatory methodologies are now beginning to appear and replace price caps.

Croatia has a "price squeeze test" based on the SMP operator's own costs, where retail prices have to cover the SMP operator's own network and commercial costs. Serbia and Kosovo are using a cost-based assessment, the details have not been made available but it is understood that neither of them has implemented a comprehensive costing model.

Three of the eight countries have used a price cap approach – FYROM, Turkey and Albania – applying "CPI±X" methodologies. In FYROM, under the concession agreement of the incumbent operator the overall price cap CPI+6% applied to the basket of residential fixed tariffs, with two sub-caps - CPI+35% for local and long-distance calls and CRI+25% for residential monthly line rental charges. Following the termination of concession agreements in September 2008, no regulation currently applies to the incumbent's retail prices.

66

[http://www.ratel.rs/editor\\_files/File/Regulativa/Odluke/ODLUKA\\_o\\_davanju\\_saglasnosti\\_Preduzecu\\_za\\_telekomunikacije\\_%27%27T\\_elekom%20Srbija%27%27\\_da\\_izvrsi\\_promenu\\_cena\\_u\\_fiksnoj\\_telefoniji.pdf](http://www.ratel.rs/editor_files/File/Regulativa/Odluke/ODLUKA_o_davanju_saglasnosti_Preduzecu_za_telekomunikacije_%27%27T_elekom%20Srbija%27%27_da_izvrsi_promenu_cena_u_fiksnoj_telefoniji.pdf)

In Turkey, CPI-3.3% has been applied to the fixed voice telephony basket until December 31, 2008, with the possibility of a one year extension.

In Albania, following a market consultation, there is a rate of RPI-RPI (i.e. a zero increase price cap) applied to a whole basket of residential and business services including connection fees, monthly subscriptions, local, national and international calls and leased lines. There are also sub-caps applied to individual fixed services: RPI+15% for residential monthly rentals, RPI+4.25% for local calls, RPI-15% for national calls, and RPI-20% for calls to mobile numbers. The Albanian NRA also applies a requirement for prices to be no higher than the EU averages. During 2009, Albania will be examining fixed retail tariffs using a Bottom-Up Long Range Average Incremental Costs methodology (BU-LRIC).

Bosnia-Herzegovina considers combining the use of benchmarks with a price cap.

No retail price regulation is currently applied in Montenegro. Following a consultation on a draft rulebook for tariffs in public telecommunication service (prepared with technical assistance from the European Bank of Reconstruction and Development), a price cap method has been defined but not been applied yet.

All countries have included a provision for formal advance notification of any new retail prices to the NRA. Where a prior period is specified, it ranges from 8 to 30 days.

### 3. Monthly subscription fees for residential and business users

This section reviews the monthly rental prices for PSTN fixed lines for residential subscribers in nominal euro with value added tax included and for business subscribers, without VAT. The ranking in the figure below starts from the cheapest to the most expensive standard residential monthly rental.

Country	Standard residential monthly rental	Low usage residential monthly rental	Business monthly rental
Albania	€2.33	-	€8.56
Serbia	€2.60	-	€2.20
Bosnia & Herzegovina	€4.49-€5.11 (including €1.64-€2.70 of calls)	€1.86 (including €1.64-€2.70 of calls)	€8.36 (including €1.64-€2.70 of calls)
Montenegro	€5.97 (including €0.95 of calls)	€2.60	€5.10
Turkey	€6.98	-	€6.04
FYROM	€7.67	€4.24	€11.4
Kosovo	€8.07 (including €10.00 of calls)	€3.47	€21.47 (including €100.00 of calls)
Croatia	€10.13 (including €1.69 of calls)	€5.07 (including €2.72 of calls)	€9.69

Table 7 - Monthly subscription fees

Residential subscribers pay less than business subscribers in most of the countries, particularly in Albania, Bosnia & Herzegovina and Kosovo. Turkey, Montenegro and Serbia have the same charges for both subscriber categories after eliminating the difference caused by VAT.

On the evolution of the prices for residential monthly rental, the only significant recent changes have been in Albania, which has increased line rental charges by 20% and Serbia by 160%. Similarly for business monthly rental, the only recent significant changes have been 32% increase in Albania and 160% increase in Serbia.

These prices are expressed in euro. However, prices are generally lower in South East Europe than the EU average. The relationship between national price levels may be expressed through purchasing power parity (PPP) indexes that take into consideration differences in relative price levels. The graph below shows the differences in standard monthly rentals when presented in nominal euro and in PPP values. Taking relative price levels into account means that the prices for consumers in the region appear higher than those expressed using the nominal exchange rate.

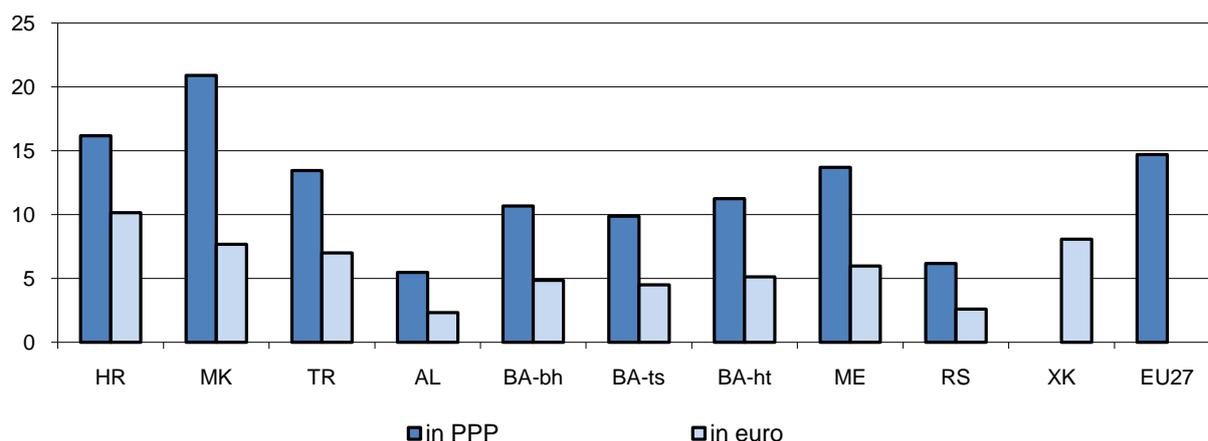


Figure 21 - Standard residential monthly rental in €/PPP and nominal euro, including VAT

Further increases in line rentals should be expected before some of the monitored countries approach closer to the EU-27 average level of €14.70 per month. This has been achieved in Croatia, with FYROM and Montenegro very close. Countries where residential monthly rentals appear to be below cost-oriented levels on a PPP basis are Albania, Bosnia & Herzegovina and Serbia. It is more difficult to make an assessment for Kosovo, as no PPP calculations are available.

#### 4. One-off connection charges

This section analyses the initial charges for the new line connection and reconnection for residential and business subscriptions. The new line connection charge is the price of a new installation in a location that has not been connected before. The reconnection charge is the price for the connection of an existing subscriber line to a new subscriber, for example when a new family takes over an apartment where the previous occupant was already connected. The table below shows the applicable charges ranking from the cheapest to the most expensive reconnection charge.

Country	Residential (including VAT)		Business (excluding VAT)	
	New line connection charge	Reconnection charge	New line connection charge	Reconnection charge
Kosovo	€10.00	€2.02	Same as residential	Same as residential
Turkey	€3.13	€3.13	Same as residential	Same as residential
Serbia	€66.59	€4.96	€112.87	Same as residential
FYROM	€23.83	€7.67 (monthly rental)	Same as residential	€11.40 (monthly rental)
Croatia	€84.45	€10.13	Same as residential	Same as residential
Montenegro	€65.00	€12.5	Same as residential	Same as residential
Bosnia & Herzegovina	€36 to €54	€36 to €54	Same as residential	Same as residential
Albania	€116.00	€116.00	Same as residential	Same as residential

Table 8 - Connection charges

Contrary to monthly subscription fees, there are no differences between residential and business charges with the exception of Serbia where business customers pay twice the price for a new line connection.

In general, a reconnection charge is significantly cheaper than a new installation (as would be expected by the lower costs involved). The exception is Albania where the prices are the same. Albanian charges are also the highest among the monitored countries, by a very significant margin.

Initial connection charges are higher than monthly rental charges, ranging from 25% difference in Kosovo to being 50 times greater in Albania. The exception is Turkey, where connection charges are actually 50% lower than monthly rental charges. On average, however, initial connection charges are 12 times higher than monthly rental charges (i.e. an initial connection, on average, costs as much as one year in rental charges).

Initial connection charges have been reduced recently in Turkey by 13%, in Albania by 14%, Bosnia & Herzegovina by 10-25% and in Montenegro by 17%.

### 5. Local fixed telephony tariffs of the incumbent and an alternative operator

There is very little real competition in the local calls market, possibly reflecting that incumbent operators in the monitored countries traditionally under-priced local calls, making it difficult for alternative operators to compete. Only in Croatia and FYROM, alternative service providers are quoting slightly cheaper local call prices. In Albania, Bosnia & Herzegovina, Montenegro and Kosovo, the local call tariffs of alternative operators by far exceed the incumbents' prices. There are no fixed network local call competitors in Turkey and Serbia.

The description of alternative operators chosen for comparisons in this report is available in Table H.4 of the annex.

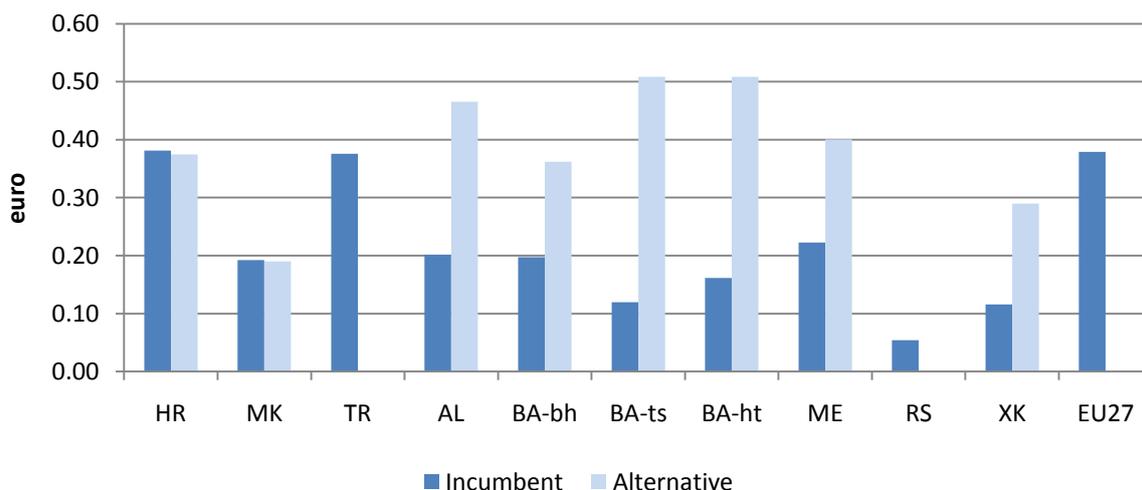


Figure 22 - 10-minute local call charges in euro for residential users, including VAT

### 6. Long distance fixed telephony tariffs of the incumbent and an alternative operator

In FYROM, Turkey and Montenegro, it is cheaper to use an alternative operator for a 3-minute long distance national call. In Serbia, there are no alternative providers, while in Albania and Kosovo the competitors are significantly more expensive than the incumbent. Competition to incumbents' long-distance call services is primarily coming from VoIP services.

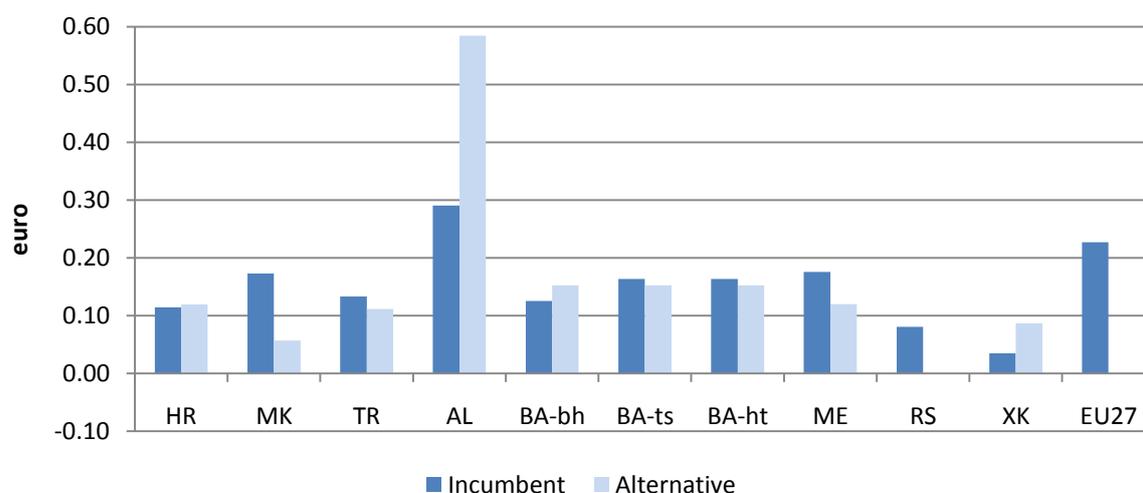


Figure 23 - 3-minute national call charges in euro for residential users, including VAT

## 7. Fixed to mobile tariffs

In general, fixed to mobile prices are much more expensive than national long distance calls. Based on the level of charges for a 3 minute long call, the prices for fixed to mobile calls in the monitored countries are ranging from €0.26 in Bosnia & Herzegovina to €0.95 in Albania, which remains the most expensive in the region even after the reductions implemented in 2008. The charges in Croatia also remain relatively high at €0.8.

In Bosnia & Herzegovina, where the differences are smallest, a 3 minute call from a residential fixed line to a mobile number is 1.8 times more expensive than national calls to fixed lines. In Croatia, fixed to mobile calls are 7 times more expensive, but the difference is largest in Kosovo, where fixed to mobile calls are 16 times more expensive.

Country	3 minute fixed to mobile call	3-minute fixed national call	Price Ratio
Bosnia & Herzegovina	€0.26-0.28	€0.13-0.16	1.8
Albania	€0.92	€0.29	3.2
FYROM	€0.8	€0.17	3.3
Montenegro	€0.67	€0.18	3.8
Turkey	€0.56	€0.13	4.2
Serbia	€0.36	€0.08	4.5
Croatia	€0.8	€0.11	7.0
Kosovo	€0.56	€0.03	16
<b>Weighted SEE Average</b>	<b>€0.56</b>	<b>€0.14</b>	<b>4.1</b>

Table 9 - Comparison of charges for fixed network calls to mobile subscribers and for national fixed calls

The weighted average for the SEE region is €0.56 for a 3 minute fixed to mobile call, which is 4.1 times the regional average for a fixed national call.

In the fixed to mobile market, competitive conditions do not appear to have developed adequately in Albania and Bosnia & Herzegovina, where alternative operators' charges are higher than the incumbent's, as shown in the next graph.

In other monitored countries, with the exception of Serbia where no competitive alternative exists, customers can use alternative services that provide calls to mobile subscribers at the tariffs 6-15% lower than the incumbent's prices.

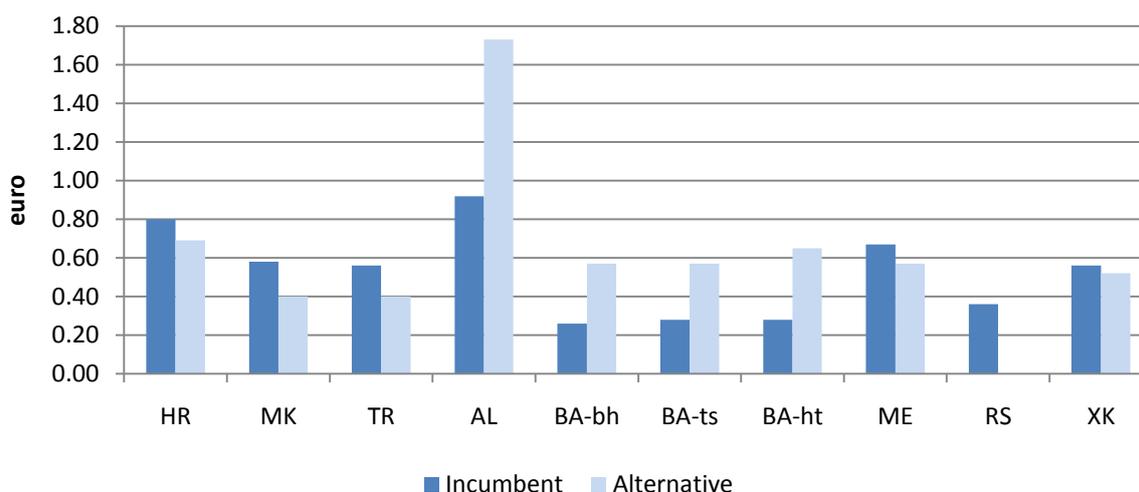


Figure 24 - 3-minute fixed to mobile call charges in euro for residential users, including VAT

## 8. International tariffs

The report compares the cost of a 10 minutes call to the UK and to the USA for each monitored country. There is considerable variation in the prices, as the graphs below illustrate, with Bosnia & Herzegovina being the most expensive while Turkey is the cheapest.

Alternative operators are offering significantly lower prices than the incumbents for calls to the UK (average discounts across the region are 31% for residential customers and 38% for businesses) and to the USA (average discounts are 45% for residential customers and 48% for businesses). The largest discounts of over 60% are offered by alternative fixed operators in Bosnia Herzegovina and Kosovo, while the smallest discounts of less than 20% are to be found in Turkey and Croatia.

The exception is Albania, where unfavourable conditions imposed by the incumbent still controlling international interconnection, have resulted in alternative operators charging significantly higher prices to customers for international calls.

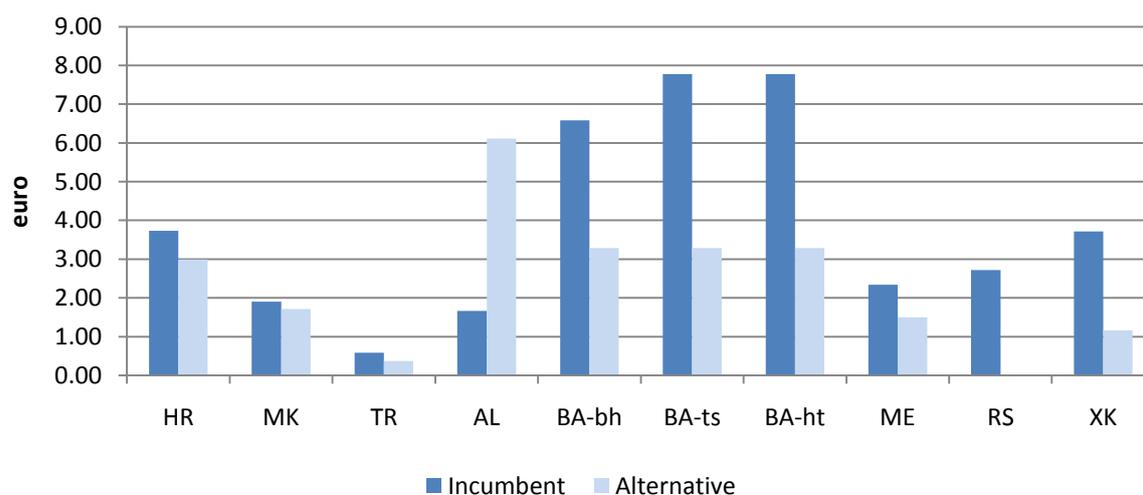


Figure 25 - Residential charges for a 10-minute call to the UK in euro, including VAT

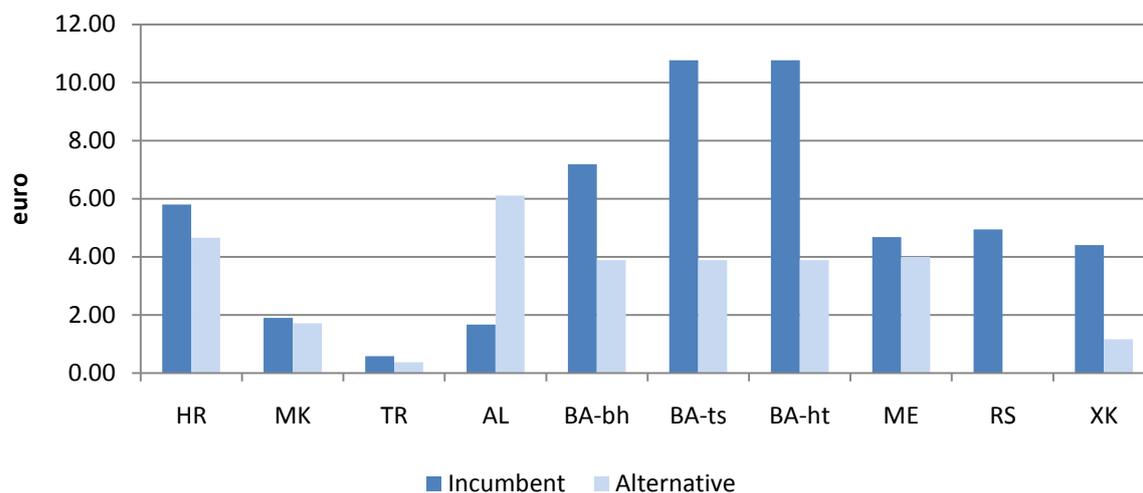


Figure 26 - Residential charges for a 10-minute call to the USA in euro, including VAT

## H. Mobile retail tariffs

Mobile network operators provide a range of tariff options that are rather complicated and difficult to compare. Consumers have to take into account a significant number of parameters, including the initial activation charge, monthly subscription charge, peak and off-peak tariffs, “free” calls and text messages included in the package, volume-dependent tariffs, SMS tariffs, tariffs for calls within the same network

(on-net calls), tariffs for calls to other mobile networks (off-net), calls to fixed networks and, of course, cross-subsidies for the handset.

In order to be able to make comparisons between its member countries, the OECD constructed a set of mobile tariff “baskets” building on its work in fixed telephony baskets. These baskets are updated to reflect changing usage patterns. The current basket is referred to as the 2006 version, while the previous basket is referred to as the 2002 version. This report uses the 2006 baskets for the first time for the monitored countries. This means that basket prices can be directly compared with the EU results which also use the 2006 OECD baskets. However, because the previous monitoring reports used the 2002 OECD baskets, the direct historical comparisons cannot be made.

A full description of the methodology used to calculate the 2006 OECD baskets can be found in the annex to this report.

The results for low usage mobile basket in the monitored countries show that most countries have offerings that are cheaper than the simple average of EU mobile operators €12.48 per month, according to the 14<sup>th</sup> Implementation report. The exceptions are mobile operators in Albania and HT Mostar in Bosnia & Herzegovina.

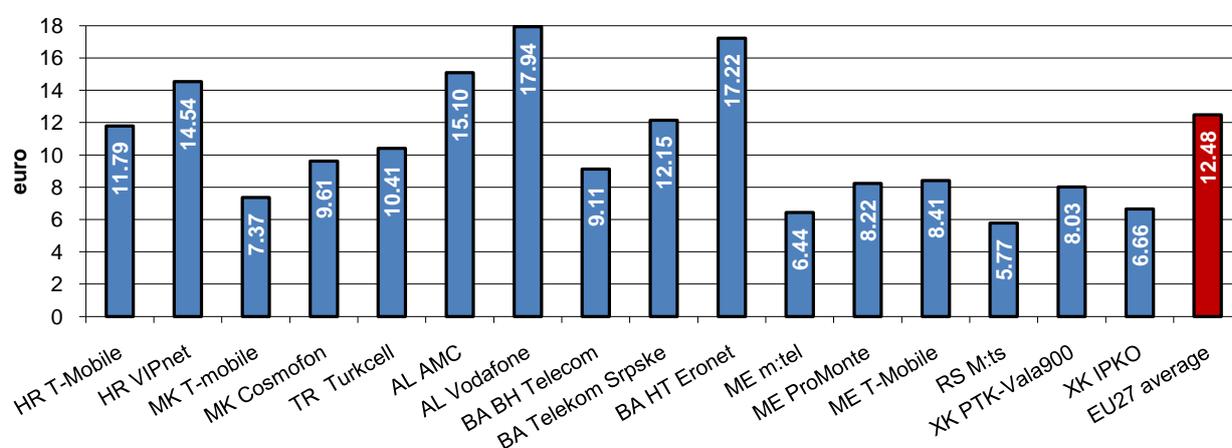


Figure 27 - Low usage basket in euro per month, including VAT

For medium usage baskets, where the EU average price is €21.37, offerings in Turkey, Albania and Bosnia & Herzegovina all remain significantly higher, while Croatia, FYROM, Montenegro and Serbia have at least one offering below than average EU charges.

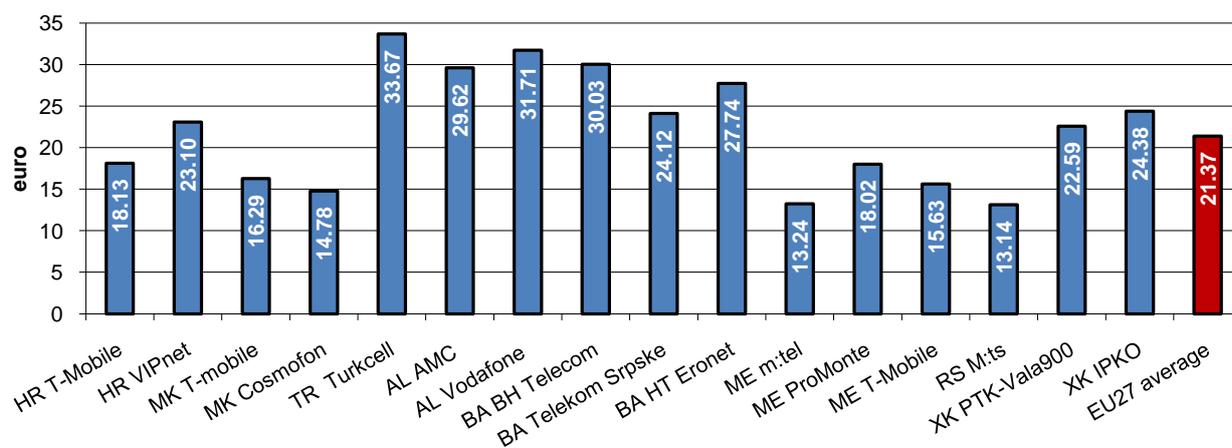


Figure 28 - Medium usage basket in euro per month, including VAT

For high usage baskets, Albania, Turkey and Bosnia & Herzegovina are significantly above the EU average of €35.28, while other countries, notably Croatia, FYROM, Montenegro and Serbia offer better deals.

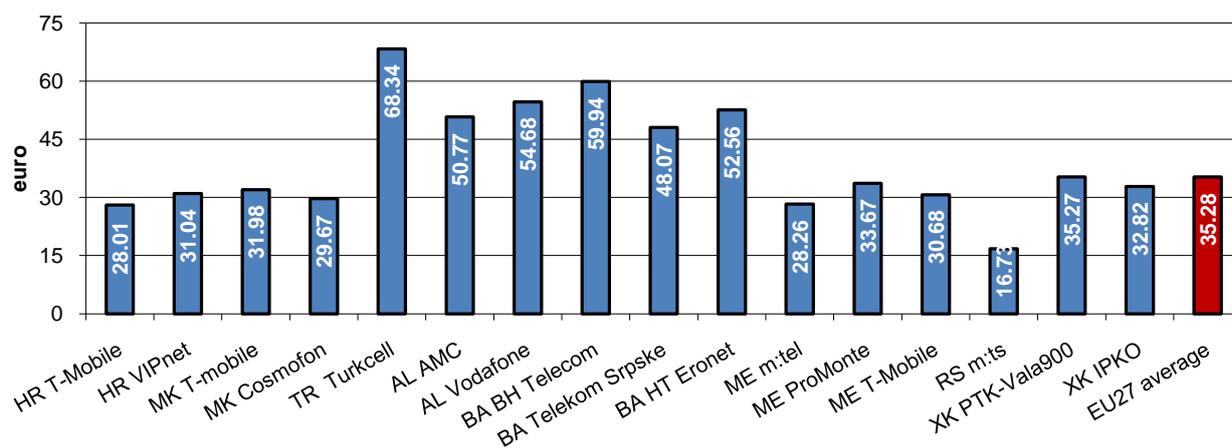


Figure 29 - High usage basket in euro per month, including VAT

## I. Leased lines retail prices

### 1. National leased lines

Assessment of leased lines retail prices in the monitored countries shows that regulation has not yet made a significant effect on leased lines pricing.

Leased lines are important telecommunications services for business customers. They are used to link their premises together nationally and internationally with dedicated private lines of fixed capacity.

Analysed in this report are retail prices for 2 km leased lines of 64 kbps, 2 Mbps and 34 Mbps transmission capacity. All prices are annual, excluding VAT and without any one-off or connection charges.

The 14<sup>th</sup> Implementation report shows that the EU average prices for 2 km leased lines have fallen by 28% for 2 Mbps and 19% for 34 Mbps over the last 10 years and now stand at €7,044 per year (excluding VAT) for 2 Mbps and €34,244 per annum for 34 Mbps<sup>67</sup>: However, there still remain large variations in leased lines pricing for offerings with the same functional characteristics in terms of capacity and distance across the EU member states.

In each of the monitored Enlargement countries, leased line prices have remained substantially unchanged over the last four years, as the charts below demonstrate. The range of charges for the same functional offering is very wide across the region.

For example, the annual prices for 2 km 64 kbps leased lines vary from €459 in Turkey to €1,939 in Albania.

<sup>67</sup> [http://ec.europa.eu/information\\_society/policy/ecomm/implementation\\_enforcement/index\\_en.htm](http://ec.europa.eu/information_society/policy/ecomm/implementation_enforcement/index_en.htm)

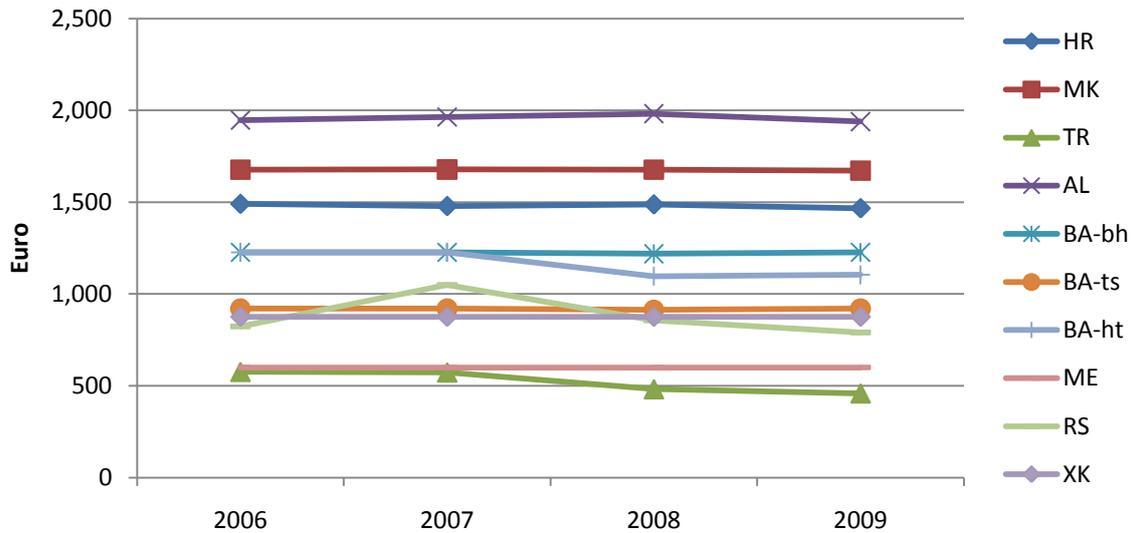


Figure 30 - Annual retail prices for 2 km 64 kbps leased lines

Turkey also has the lowest annual charges among the monitored countries for 2 km 2 Mbps leased lines of €2,418. The highest annual prices for these offerings are in FYROM of €12,148. The EU average in 2008 was €7,044 per year.

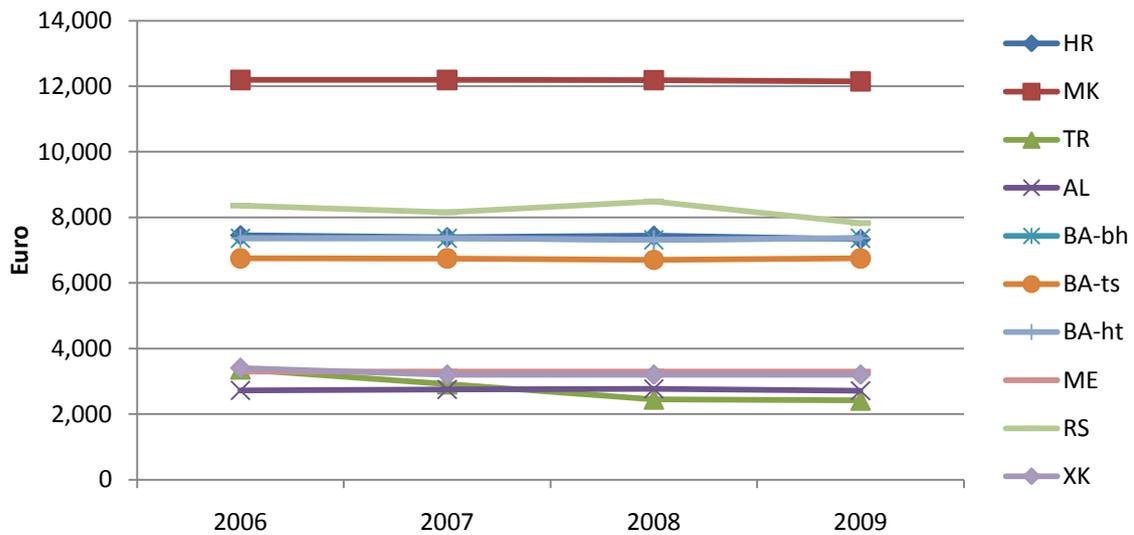


Figure 31 - Annual retail prices for 2 km 2 Mbps leased lines

For 34 Mbps, the lowest retail prices are in FYROM at 10,704 per year, followed by Turkey at €13,282 per year and Kosovo at €15,048 per year. The most expensive prices are in Serbia at €69,000 per year. The EU-27 average in 2008 was €34,244 per annum. In Albania, the prices for leased lines of 34 Mbps are not quoted.

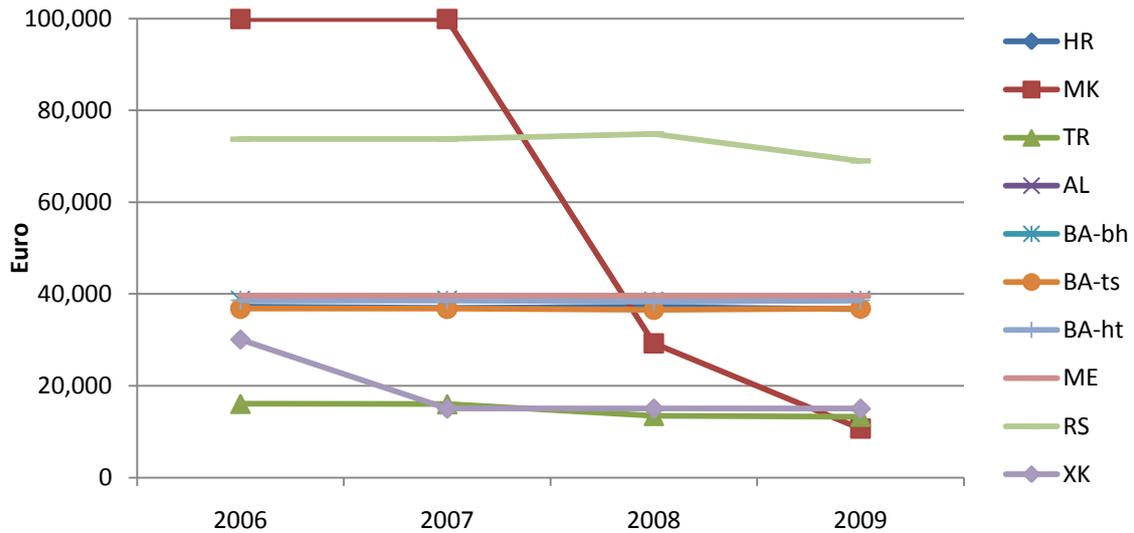


Figure 32 - Annual retail prices for 2 km 34 Mbps leased lines

## 2. International leased lines

International leased lines have traditionally been provided in the form of two half-circuits: one national half-circuit being connected to another half-circuit or to a transit circuit near the border, with the corresponding arrangement in the destination country. This report analyses half circuit tariffs to a near country and also to a distant country which, for this report, has been taken to be the UK.

Prices have been generally reducing over the last four years, except in Albania, where the incumbent operator kept its tariffs for leased line offerings largely unchanged since mid-2007.

For 64 kbps international half circuits to a near country, tariffs have fallen to below €10,000 in all countries except Albania. In FYROM, the recent price reductions have been very significant and are now among the lowest in the monitored countries at €6,900 per year. Both, retail and wholesale leased lines prices in FYROM were reduced following a regulatory intervention. In September 2008, the NRA adopted two bylaws: on regulation of the minimum set of leased lines and on regulation of terminating and trunk segments of leased lines. New reference offers for the minimum set of leased lines and for the terminating and trunk segments of leased lines prepared by the incumbent operator Makedonski Telekom based on the new bylaws were approved by the NRA in December 2008.

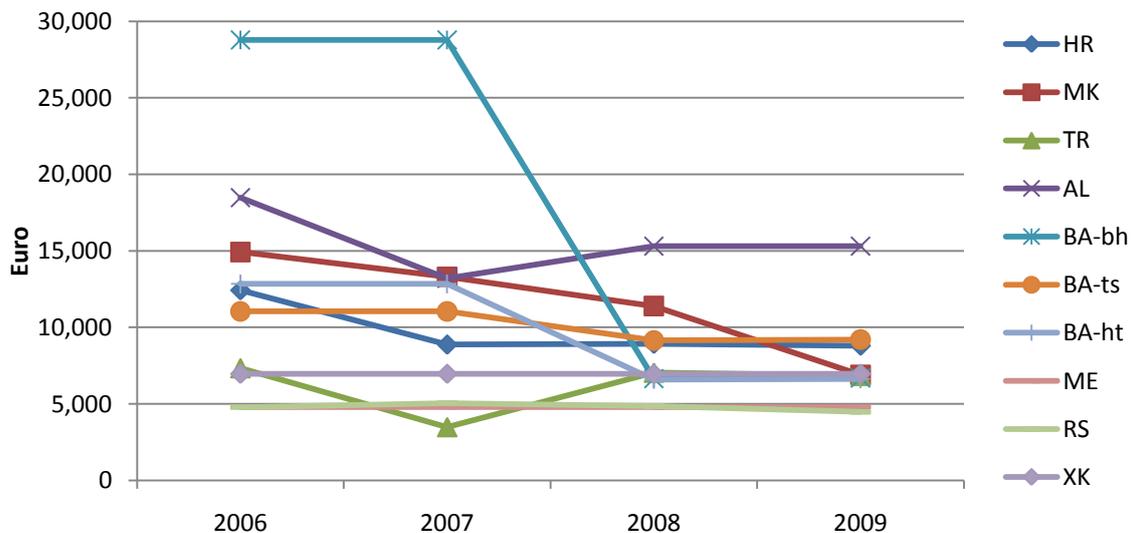


Figure 33 - Annual prices for international half circuits 64 kbps to near country

For 64 kbps half circuits to the UK, retail prices have not fallen so significantly. Charges in Albania and FYROM remain the highest in the region, with all other incumbent operators now charging below €13,000 per year.

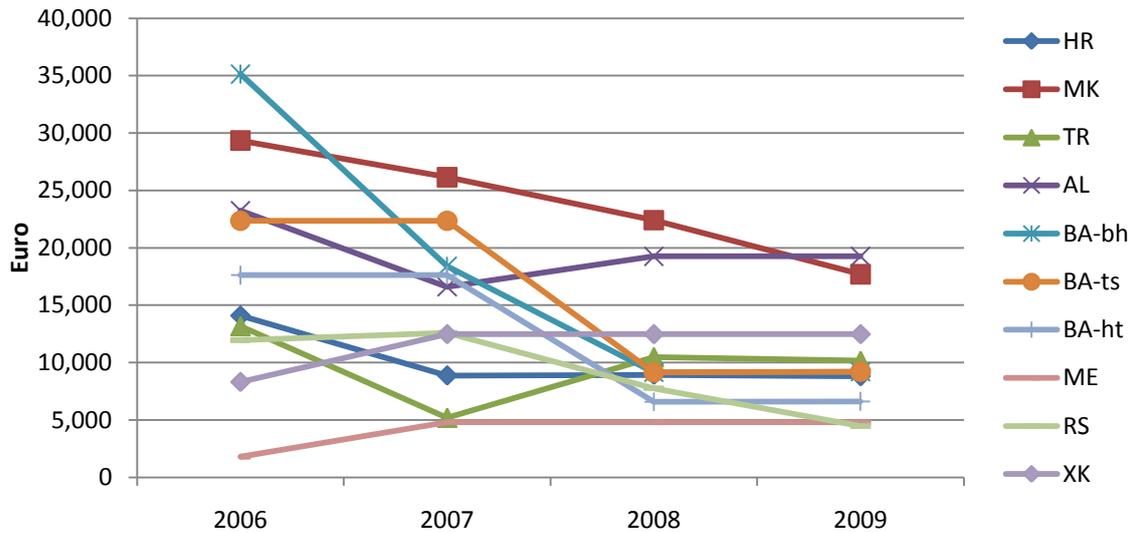


Figure 34 - Annual prices for international half circuits 64 kbps to the UK

For 2 Mbps half circuits to a near country, retail prices were reduced significantly, except in Albania, where they remain the highest in the region by a significant margin. All other incumbents have reduced charges to below €100,000 per year. In FYROM, prices were significantly reduced based on the bylaw adopted by the NRA in September 2008.

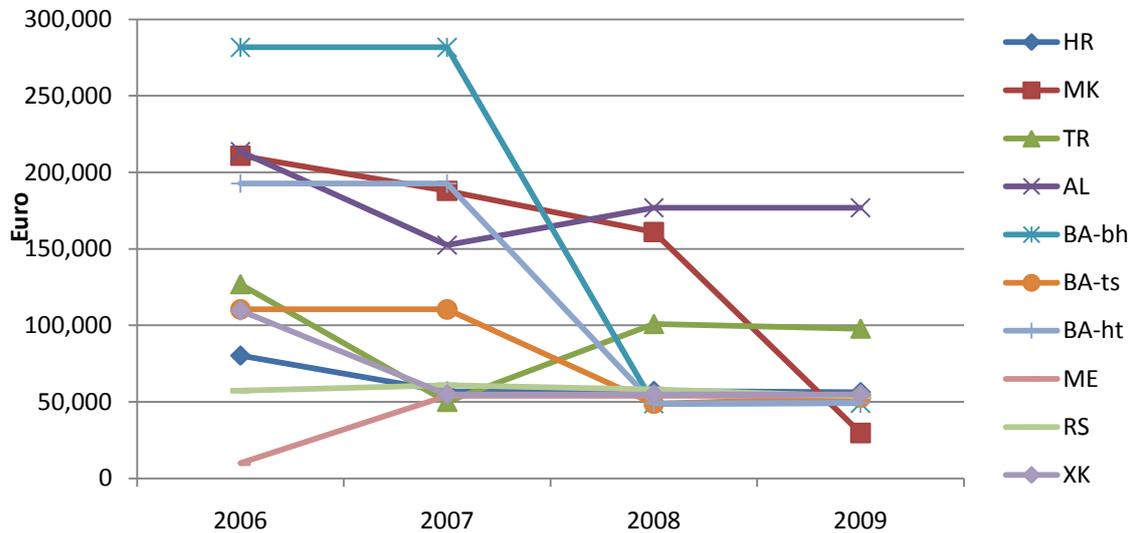


Figure 35 - Annual prices for international half circuits 2 Mbps to near country

In the case of 2 Mbps half circuits to the UK, charges have not fallen significantly, except in FYROM, Serbia and Bosnia & Herzegovina. Again, the Albanian incumbent's charges are significantly higher than in the rest of the region. Turkey also remains expensive at €165,000 per year. All other incumbents are keeping charges at below €100,000 per year.

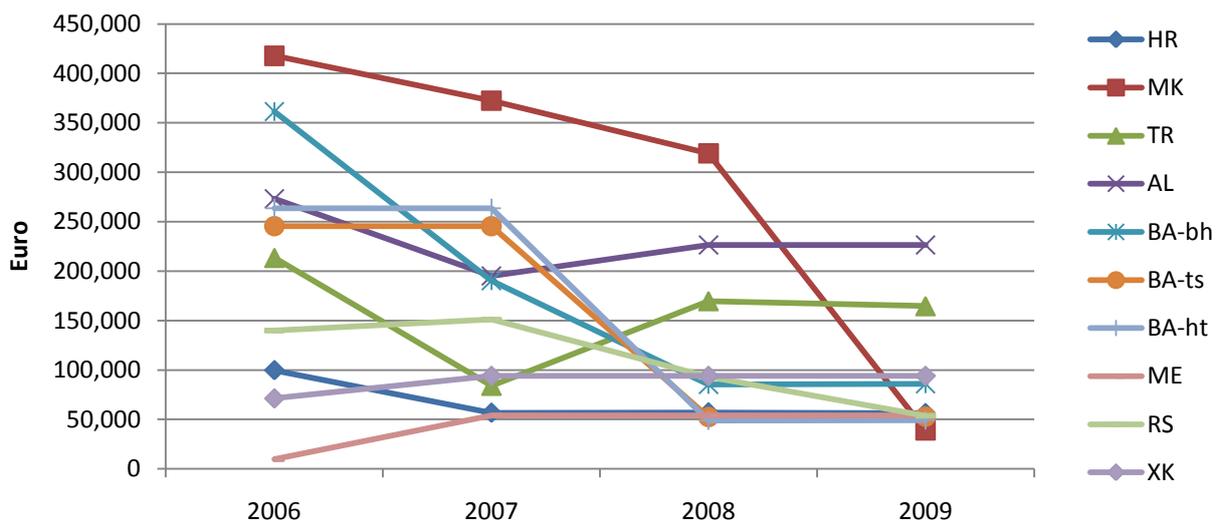


Figure 36 - Annual prices for international half circuits 2 Mbps to the UK

## J. Internet and broadband retail prices

### 1. Dial-up Internet access cost

Access to the Internet for households in the monitored countries has primarily been by dial-up on fixed telephone lines. While Albania, Turkey and Kosovo have moved into broadband as the major form of Internet access, dial-up service remains a significant form of access in Croatia, FYROM, Bosnia & Herzegovina, Montenegro and Serbia.

This report analyses the cost of 40 hours dial-up access to the Internet in peak time, including network usage and ISP charges. Prices are now reducing, reflecting growing competition from broadband. However, prices still vary considerably among countries and even within Bosnia & Herzegovina. The most expensive is FYROM at over €70 including VAT, followed by Croatia at just under €60. The remaining countries have reduced charges to between €20 and €40. Within Bosnia & Herzegovina, there is a range between BH Telecom at €21.72 and HT Mostar at €37.57.

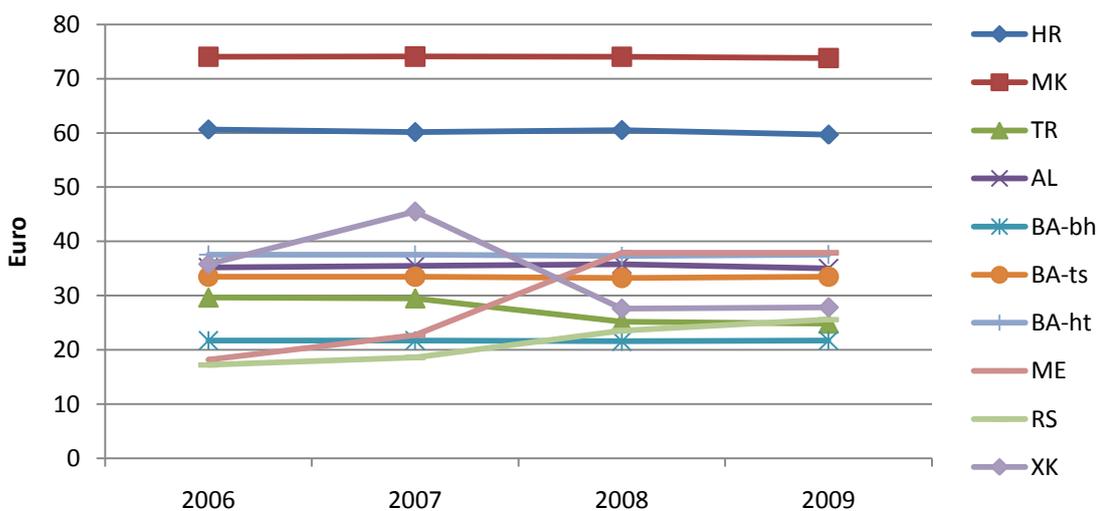


Figure 37 - Dial up Internet charges for 40 hours peak time, including VAT

## 2. Fixed broadband Internet access retail prices

According to a recent European Commission study on broadband Internet access cost, broadband subscription prices, with the exception of the lowest speed basket, on average decreased in the EU between April 2007 and April 2008.<sup>68</sup> As the lower speed offerings of 144-512 kbps are phased out, their prices are actually rising in the EU, making way for the higher speed offerings. Download speeds of 2 Mbps and above are becoming more common as a standard, but most countries still offer lower speeds. At the same time, in many of the EU member states broadband connections are now available with speeds above 10 Mbps.

The same study reports the EU-27 median retail prices for broadband subscriptions as of April 2008 calculated as total cost per month in €/PPP including VAT, for several baskets composed according to the offered speeds:

- Basket 144-512 kbps: €30.28 per month
- Basket 512-1024 kbps: €28.19 per month
- Basket 1-2 Mbps: €30.95 per month
- Basket 2-4 Mbps: €36.89 per month
- Basket 4-8 Mbps: €46.67 per month
- Basket 8-20 Mbps: €42.52 per month

This report analyses broadband offerings of the incumbent and the major alternative operator in each of the monitored countries with the following download speeds: 256 kbps, 512 kbps and 2 Mbps.

An assessment of the offerings available in the eight countries shows a situation similar to the one observed in the EU member states: the lower speed offerings are phased out by higher speeds. Broadband offerings with the speed limit of 256 kbps or lower are not available commercially in FYROM, Turkey and Montenegro, while in Croatia, Serbia and Kosovo they are only offered by the incumbent operators.

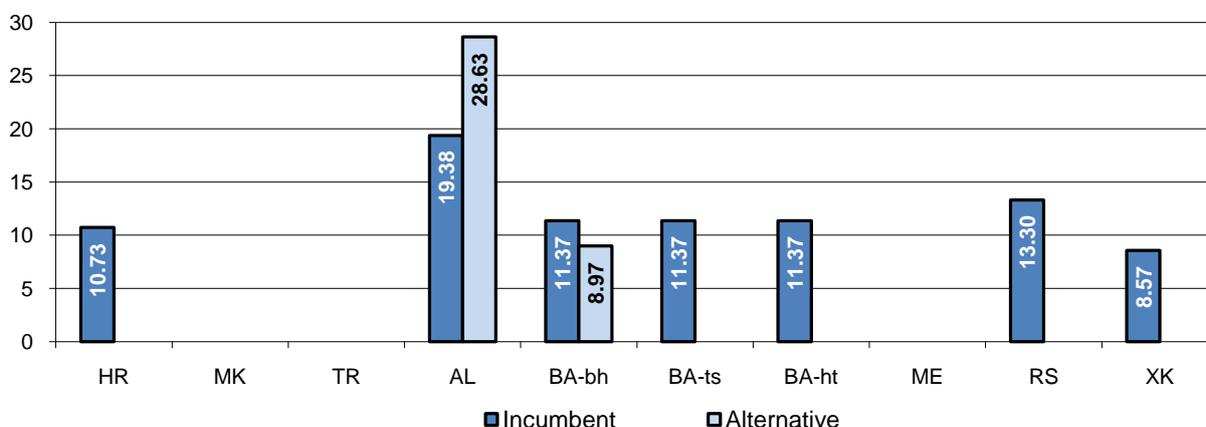


Figure 38 - Broadband 256 kbps monthly subscription charges in euro, including VAT

The monthly charges for a 256 kbps connection are rather similar in most of the countries, ranging from €8.57 in Kosovo to €13.30 in Serbia. The only exception is Albania with the highest charges among the monitored countries – above €19.

Broadband offerings with the speed limit of 512 kbps are available in most of the countries, with the exception of Turkey and Serbia. However, they are not offered commercially by alternative operators in Croatia and Kosovo. In Croatia, all alternative operators offer broadband connections with minimum download speed of 1024 kbps.

<sup>68</sup> BIAC - First half of 2008, Final report, December 2008, Van Dijk Management Consultants

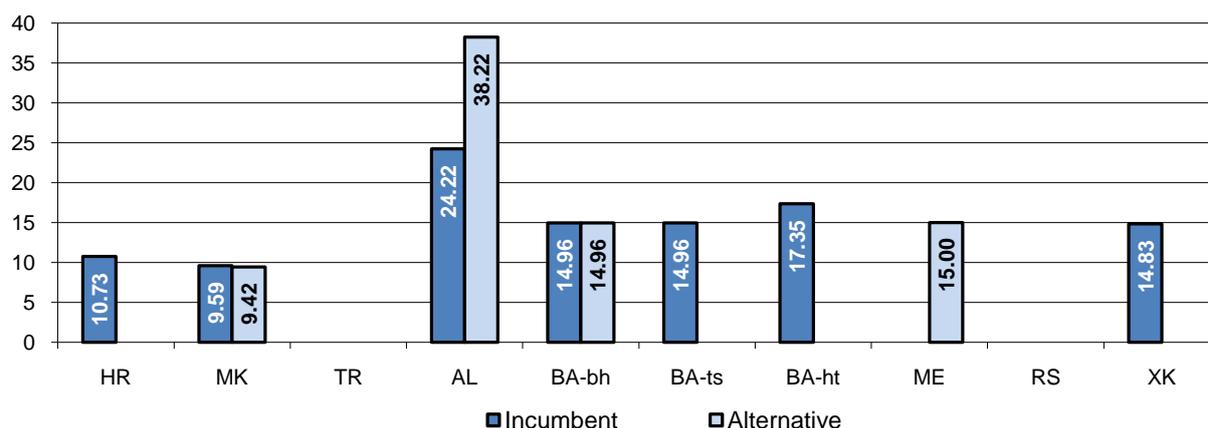


Figure 39 - Broadband 512 kbps monthly subscription charges in euro, including VAT

The lowest monthly charges for a 512 kbps connection are offered in FYROM – below €10. This charge, however, foresees a monthly quota of 10 GB. Once this quota has been exceeded, the access speed is reduced to 64 kbps. The Macedonian incumbent offers with 512 kbps speed with a wide range of data limits from 10 GB up to 30 GB at a maximum charge of €30.70 a month. In Croatia, 512 kbps connections are offered at the same monthly charge as 256 kbps connections. In Bosnia & Herzegovina, the three incumbents and a major alternative operator offer similar prices, however, the offering of BH Telecom foresees a monthly quota of 3 GB, HT Mostar – of 4 GB and an alternative operator – 8 GB, while Telekom Srpske offers a flat rate without any data limits. Albania has the highest monthly charges.

The offerings with 2 Mbps are not available in FYROM, while in Montenegro they are only offered by the alternative operators. The Montenegrin incumbent, however, offers broadband packages with higher download speeds of 3 Mbps and 6 Mbps.

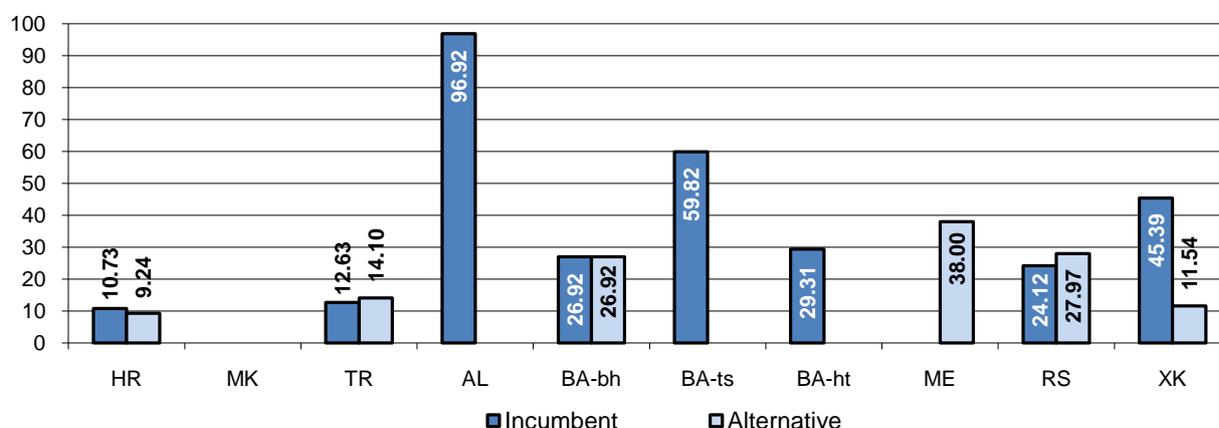


Figure 40 - Broadband 2 Mbps monthly subscription charges in euro, including VAT

The monthly charges for a 2 Mbps connection show a lot more significant variations between the countries. The lowest prices are offered in Croatia, with €10.73 for the incumbent and even lower price of €9.24 for the alternative operator. At the other end of the scale, Albania is again the most expensive country with the prices almost ten times higher than in Croatia. In Bosnia & Herzegovina, the monthly subscription of Telekom Srpske at €59.82 is almost two times more expensive than the offerings of two other incumbents and the alternative operator. However, similarly to its 512 kbps subscription, Telekom Srpske offers 2 Mbps connections without any quotas, while offerings of BH Telecom, HT Mostar and the alternative operator have quotas for data transfer of 8 – 12 GB per month.

The figure below compares broadband monthly subscription charges for 256 kbps, 512 kbps and 2 Mbps offerings of the incumbents in the monitored countries expressed in €/PPP, including VAT, with the EU-27 median offerings.<sup>69</sup> It does not include Montenegro, as the Montenegrin incumbent does not offer these speeds commercially to residential customers as explained above and it does not include Kosovo, as no €/PPP exchange rates are available for Kosovo yet.

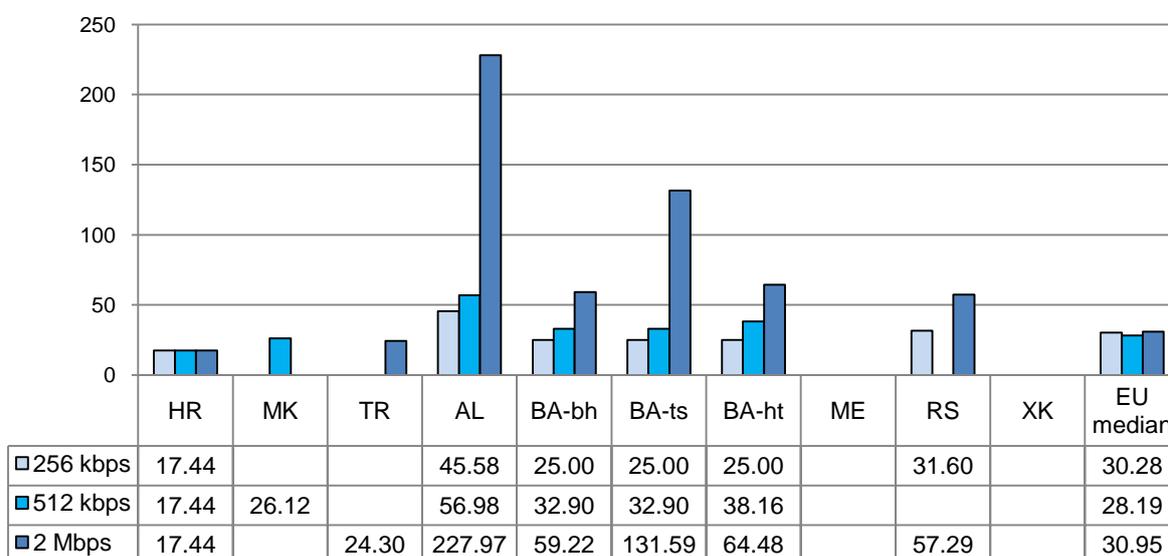


Figure 41 - Comparison of broadband monthly charges by incumbents with the EU median offerings in €/PPP, including VAT

While 256 kbps and 512 kbps offerings appear to be priced in line with the EU median values, 2 Mbps offerings are in general more expensive, in particular in Albania and in Republika Srpska of Bosnia & Herzegovina.

## K. Wholesale tariffs

### 1. Call termination on fixed networks

Assessment of call termination on fixed networks in the monitored countries shows that call termination charges are gradually converging towards the EU average level.

In some countries this has been the result of regulatory intervention and price controls that in the absence of more complex regulatory mechanisms such as cost accounting models typically apply benchmarking against the level of charges in the EU member states.

According to the 14th Implementation report, the weighted average EU-27 call termination charges on the incumbent’s fixed network between 2005 and 2008 fell by 6.6% at the local level, 8.5% at the single transit level and 16.6% at the double transit level<sup>70</sup>. As of October 2008, the weighted average EU-27 call termination charges were the following:

- Local level 0.57 eurocents per minute
- Single transit level 0.86 eurocents per minute
- Double transit level 1.16 eurocents per minute

In most of the monitored countries, the fixed incumbent operators apply the same termination charges regardless of whether the call originates on national fixed or mobile networks. The exceptions are Croatia and Kosovo where the termination of calls originating on mobile networks is higher than fixed call termination and is negotiated commercially between operators, outside the scope of RIOs.

<sup>69</sup> BIAC - First half of 2008, Final report, December 2008, Van Dijk Management Consultants

<sup>70</sup> [http://ec.europa.eu/information\\_society/policy/ecomm/doc/implementation\\_enforcement/annualreports/14threport/annex2.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/14threport/annex2.pdf)

In three of the monitored countries, call termination charges on the incumbent’s fixed network at the local level are set close to the EU average level (Croatia, FYROM and Albania). In Bosnia & Herzegovina and Serbia, the charges are about two times higher than the EU average, while in Montenegro and Kosovo, they are four and six times higher, respectively. In Turkey, call termination is not offered at the local level.

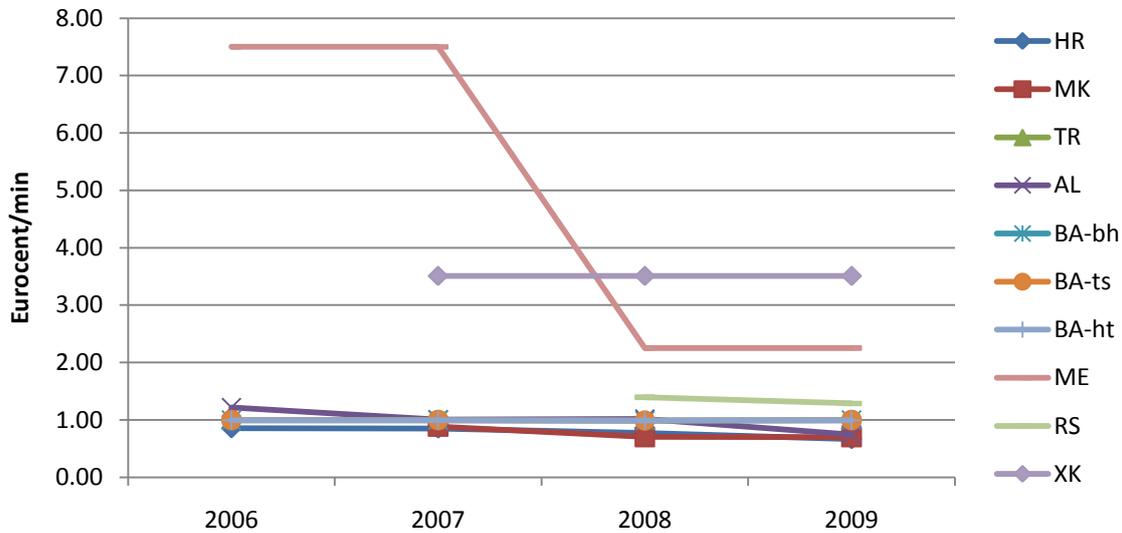


Figure 42 - Local call termination charges on the incumbent’s fixed network, peak time

At the single transit level, call termination charges on the incumbent’s fixed network are close to the EU average in FYROM and Turkey, about 40% higher in Croatia and 75% higher in Albania and Bosnia & Herzegovina. The charges in Serbia and Montenegro are about two and three times higher, respectively, than the EU average. In Kosovo, call termination is only offered at the local level.

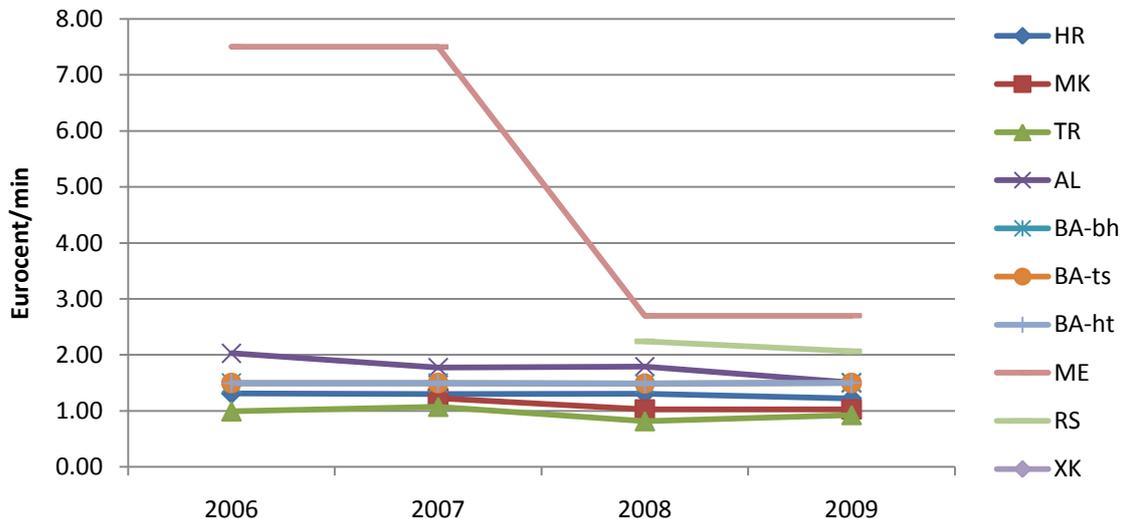


Figure 43 - Single transit call termination charges on the incumbent’s fixed network, peak time

At the double transit level, call termination charges on the incumbents’ fixed networks are some 25% higher than the EU average in FYROM and Turkey, some 60-75% higher in Croatia, Albania and Bosnia & Herzegovina and almost three times higher in Serbia.

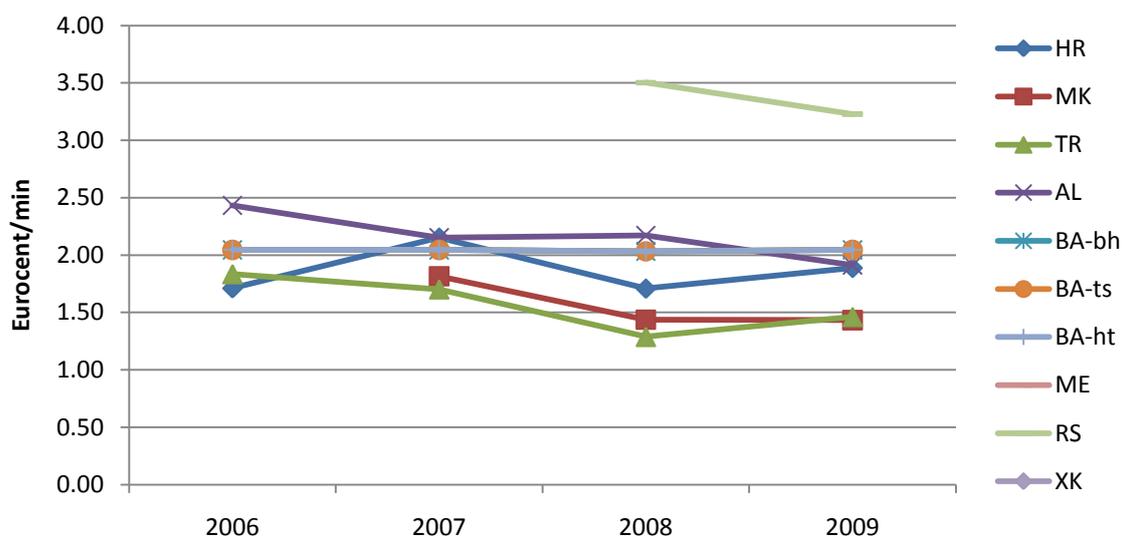


Figure 44 - Double transit call termination charges on the incumbent's fixed network, peak time

In general, fixed call termination charges in most of the monitored countries have remained relatively stable between 2006 and 2009. The major reductions, however, took place in FYROM, Albania and Montenegro. Certain fluctuations in other countries can be explained to some extent by the exchange rate changes, for example, in Croatia the national currency appreciated against euro between 2008 and 2009, which offsets some reductions in the termination rates. The highest level of fixed call termination charges has been reported in Montenegro and Kosovo.

Figure 45, Figure 46 and Figure 47 show call termination charges on the fixed networks of the incumbent and the major alternative operator in the monitored countries, in comparison with the EU-27 average values according to the 14<sup>th</sup> Implementation Report<sup>71</sup>.

In Croatia, Albania and Montenegro the alternative operators' fixed termination rates are set at the level slightly above the incumbent's single transit call termination. In Bosnia & Herzegovina the alternative operators' fixed termination rates are reciprocal with the incumbents' at the respective network level. Fixed to fixed call termination charges are also reciprocal in Kosovo, where call termination is only offered at the local level.

In Turkey and Serbia, there are no alternative fixed networks, while in FYROM interconnection charges of alternative fixed network operators are confidential.

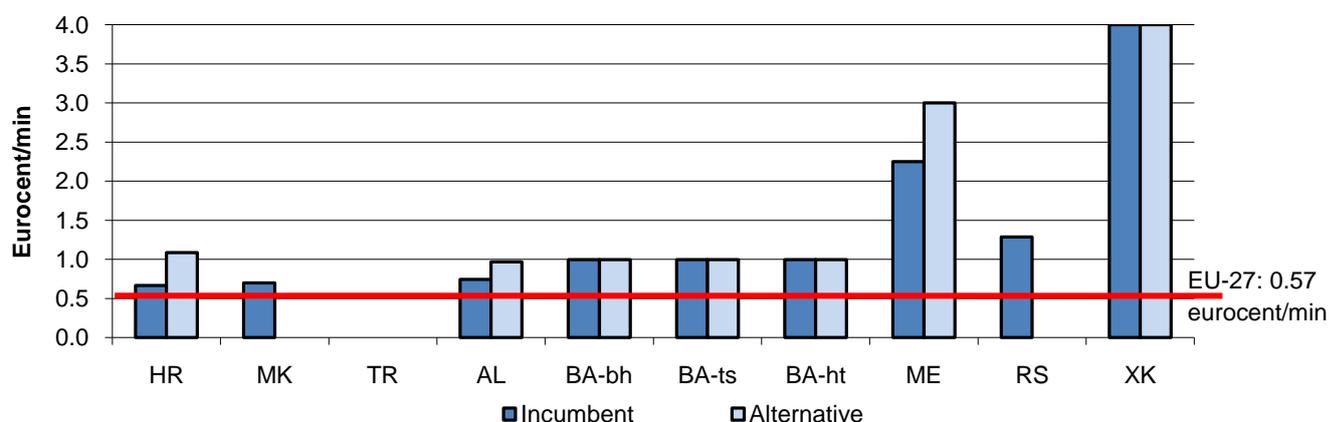


Figure 45 - Local call termination on the fixed incumbent and alternative network

<sup>71</sup> [http://ec.europa.eu/information\\_society/policy/ecomm/doc/implementation\\_enforcement/annualreports/14threport/annex2.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/14threport/annex2.pdf)

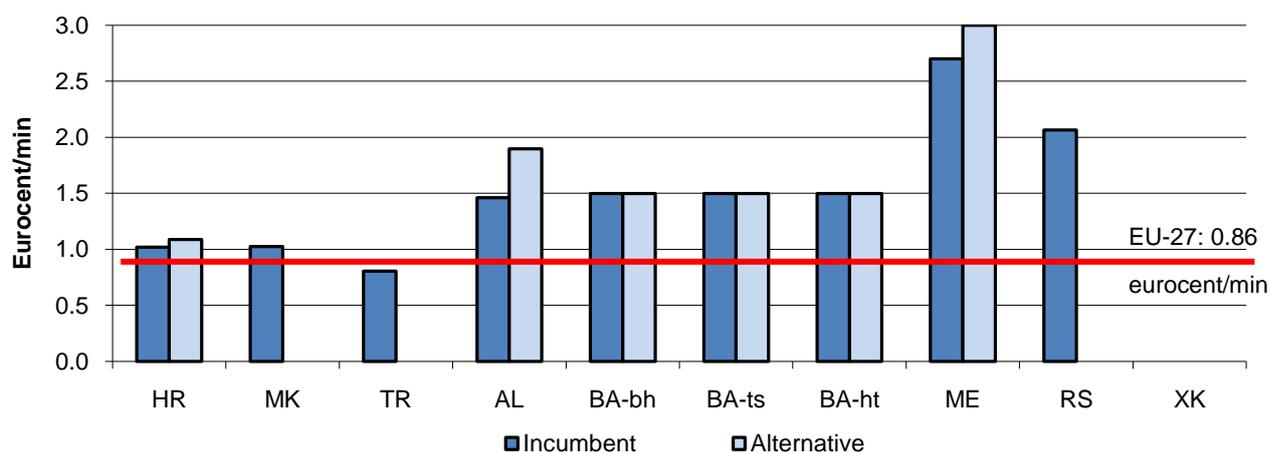


Figure 46 - Single transit call termination on the fixed incumbent and alternative network

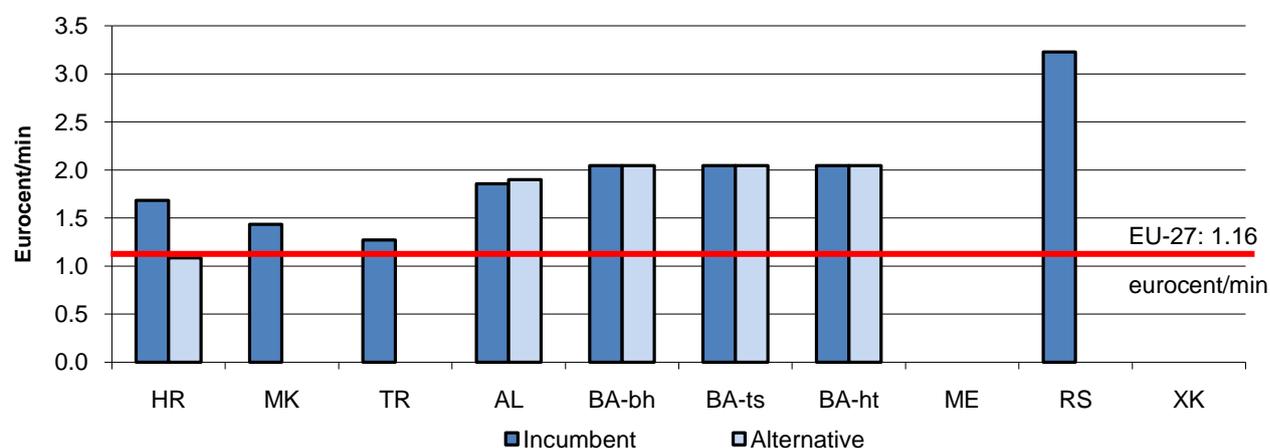


Figure 47 - Double transit call termination on the fixed incumbent and alternative network

## 2. Call termination on mobile networks

As in the EU, call termination charges on mobile networks in the monitored countries remain significantly higher than fixed network termination charges. At the same time, similar to the EU, mobile termination rates in these countries have been subject to substantial reductions over the last few years.

According to the 14<sup>th</sup> Implementation report, the weighted average EU-27 termination charges on mobile networks between 2005 and 2008 fell by 32%<sup>72</sup>. As of October 2008, the weighted average EU-27 mobile call termination charge was 8.55 eurocents per minute.

Figure 48 illustrates the developments in mobile termination rates in the monitored countries between 2006 and 2009. Where there are several mobile operators in a country with different termination rates, the lowest rate is presented that usually corresponds to the largest mobile operator. In most of the countries, mobile operators apply the same termination charges regardless of whether the terminated call originates on a national fixed or mobile network. The exception is Kosovo where fixed to mobile termination rates are set at the level symmetrical with the fixed termination rates of the incumbent operator, while more than two times higher rates are applied to the termination of mobile to mobile calls. In Bosnia & Herzegovina, it appears that there is no direct interconnection between the mobile networks and all calls are terminated

<sup>72</sup> [http://ec.europa.eu/information\\_society/policy/ecomm/doc/implementation\\_enforcement/annualreports/14threport/annex2.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/14threport/annex2.pdf)

through the fixed networks. The differences between fixed to mobile and mobile to fixed termination rates are further addressed in Figure 49.

In most of the countries, mobile operators do not differentiate between peak and off-peak termination rates, with the exception of Kosovo where off-peak call termination rates are slightly lower. Albania is the only country where mobile operators apply call set up charges in addition to per minute conveyance charges.

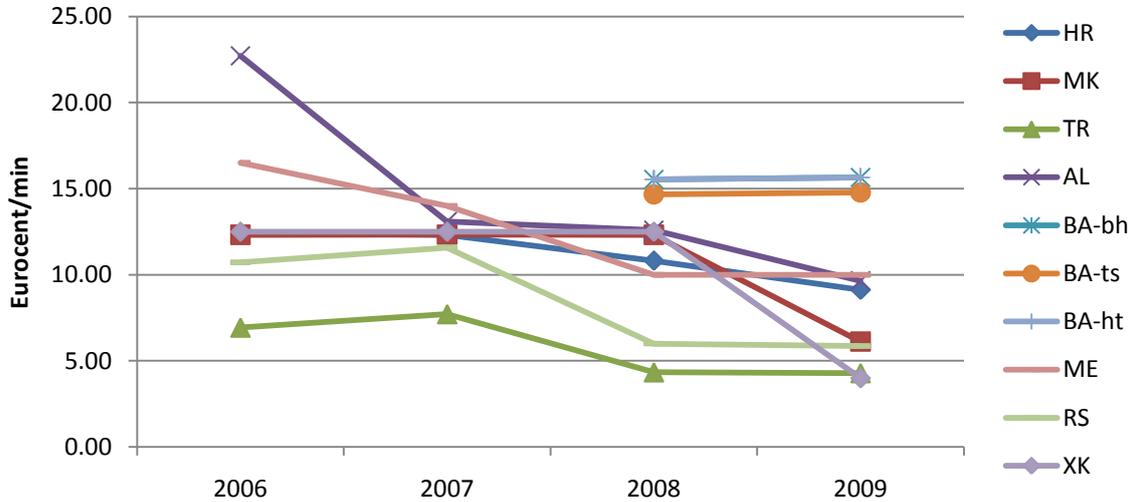


Figure 48 - Fixed to mobile termination rates, peak time

Between 2006 and 2009, mobile termination rates fell by more than half in Albania and FYROM, by some 80% in Serbia, by more than 60% in Turkey and Montenegro and by 36% in Croatia.

The figure below shows the current mobile termination rates of all mobile operators in the monitored countries that entered in force as of January 1, 2009 (or in some cases, a later date in early 2009). Mobile termination rates in FYROM, Turkey and Serbia are set at the level below the EU average, while in Croatia and Albania they are only slightly above the EU average. At the same time, in Bosnia and Herzegovina fixed to mobile termination rates are significantly higher than the EU average rate, in particular when the call originates on a network that does not belong to the same group as the mobile operator.

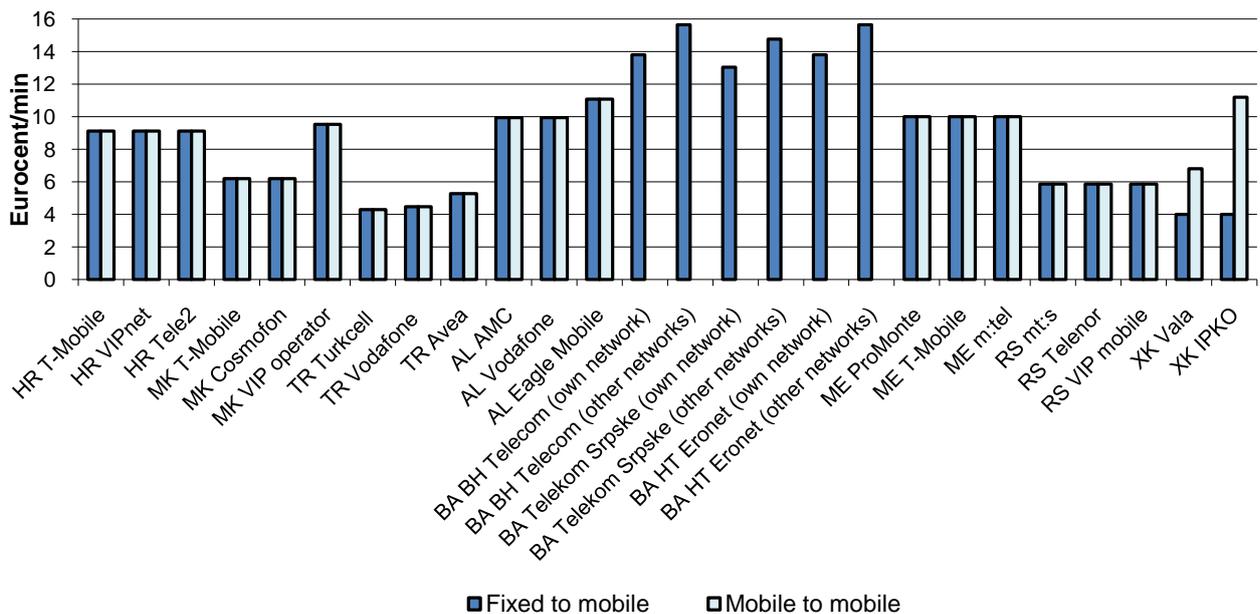


Figure 49 - Mobile termination rates as of January 1, 2009, peak time

### 3. Local loop unbundling charges

Local loop unbundling so far has been implemented only in three countries: Croatia, FYROM and Turkey. Figure 50 and Figure 51 below compare the one-off connection charges and monthly rental prices for full and shared LLU access in the three monitored countries and the EU-27 averages according to the 14<sup>th</sup> Implementation report.<sup>73</sup> The connection charges in Croatia and Turkey are comparable to the EU average, although the Croatian charges for shared access are almost 40% higher than the EU average. The connection charges in FYROM cannot be directly compared with the two other countries or with the EU average as the prices are set per a block of 100 loops. The Macedonian connection prices may further differ depending on the form of collocation – the option shown in the figure below uses physical collocation.

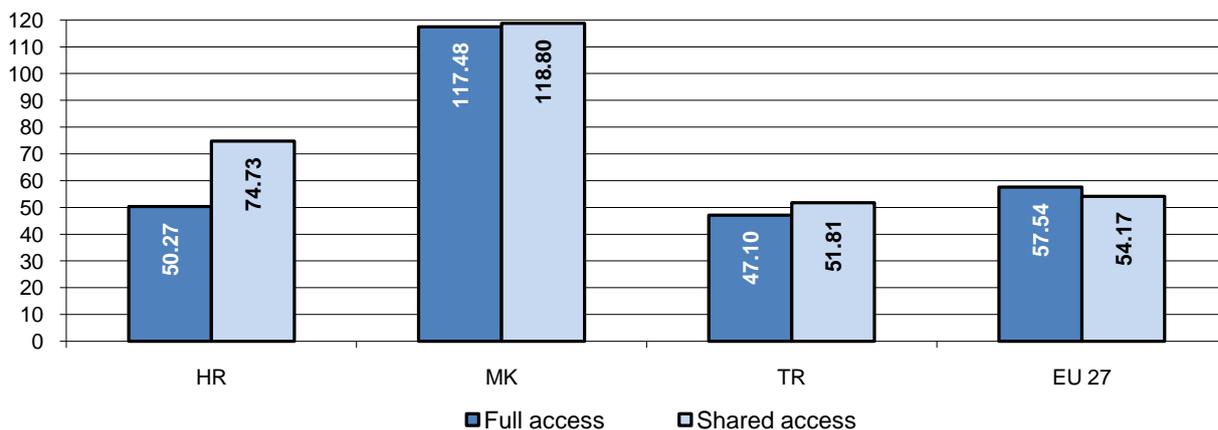


Figure 50 - Connection prices for fully unbundled loop and shared access

Monthly rental charges in all three monitored countries, for both full and shared LLU access are set at the level very close to the EU average.

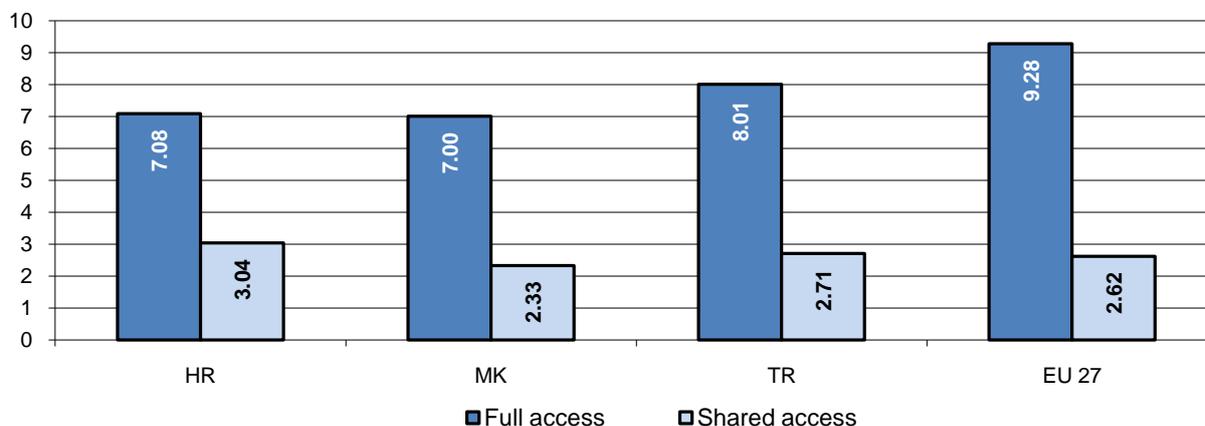


Figure 51 - Monthly rental prices for fully unbundled loop and shared access

<sup>73</sup> [http://ec.europa.eu/information\\_society/policy/ecomm/doc/implementation\\_enforcement/annualreports/14threport/annex2.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/14threport/annex2.pdf)

## L. Information society statistics

A Council Resolution<sup>74</sup> of 2003 and a Regulation<sup>75</sup> of the European Parliament and the Council adopted in 2004 defined indicators and required Member States to collect certain information in order to measure progress toward the objectives defined in Lisbon in March 2000 and the eEurope action plan of 2002. The collected data are published regularly by Eurostat.<sup>76</sup> The eEurope benchmarking is being further developed under the i2010 Benchmarking Framework<sup>77</sup>, as endorsed by the i2010 High Level Group in April 2006. Commission Regulations adjust the legal framework annually.<sup>78</sup>

### 1. Bodies responsible for information society statistics

In most of the monitored countries, the national statistics institutes are responsible for information society indicators. In Croatia, FYROM, Turkey and Serbia these institutes already gather and publish data. Their statistics are also integrated with Eurostat<sup>79</sup> data and publications, albeit not yet with the level of detail and the regularity used in EU Member States.

The national statistics institutes are also responsible for information society statistics in Albania and Kosovo, but as yet no data have been published. Albanian INSTAT has started to include information survey indicators in its household survey in 2008 and is planning to include such indicators in its periodic surveys of enterprises.

In two countries, Montenegro and Bosnia & Herzegovina, the body responsible for the development of the information society is or will be responsible for information society statistics, although data collection is done by other entities. In Bosnia & Herzegovina, the Agency for Development of the Information Society (ARID), which is not yet established, will be responsible for information society statistics. Data collection will be performed by the statistics institutes. In Montenegro, the recently established Ministry for Information Society is the responsible body. Montenegro provided data collected by the non-governmental organisation CEMI<sup>80</sup> (for this report) and by the independent economic institute ISSP<sup>81</sup> (for the previous reporting period).

### 2. Available data on information society statistics

The objective of the data collection efforts under the eEurope action plan and the i2010 Benchmarking Framework is to measure progress and to benchmark progress between countries. This needs common definitions, with best results occurring when the national statistics institutes have included information society statistics into their regular surveys and where these statistics are integrated in the Eurostat network.

Of the many indicators defined in the eEurope and i2010 framework, only a small sub-set is available in South-East Europe. FYROM, Turkey and Serbia collect data on the use of ICTs in households and enterprises and Croatia has started to collect these data.

Amongst the national statistical institutes, the Turkish Statistical Institute (TurkStat) and the Statistical Office of the Republic of Serbia have the most comprehensive data. This includes data on computer and internet usage by individuals, grouped by gender and age, by education level and by labour force status, and separately for rural and urban areas. For enterprises, both institutes have data on computer usage and Internet access grouped by economic activity and size of the company, also on the type of Internet connection, on the purpose of Internet usage and the proportion of enterprises which have a website.

No statistical institute collects data on other information society statistics such as supply and demand of e-government, e-learning and e-health services, buying and selling online or ICT skills.

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<sup>74</sup> Council Resolution of February 18, 2003 on the implementation of the eEurope 2005 Action Plan, 2003/C 48/02

<sup>75</sup> Regulation (EC) No 808/2004 of the European Parliament and the Council of April 21, 2004 concerning Community statistics on the information society

<sup>76</sup> See the Information society statistics, now a sub-category of the theme Industry, Trade and Services:

[http://epp.eurostat.ec.europa.eu/portal/page/portal/information\\_society/introduction](http://epp.eurostat.ec.europa.eu/portal/page/portal/information_society/introduction)

<sup>77</sup>

[http://ec.europa.eu/information\\_society/europe/i2010/docs/benchmarking/060220\\_i2010\\_benchmarking\\_framework\\_nov\\_2006.doc](http://ec.europa.eu/information_society/europe/i2010/docs/benchmarking/060220_i2010_benchmarking_framework_nov_2006.doc)

<sup>78</sup> See Commission Regulations (EC) No 1099/2005, 1031/2006, 847/2007 and 960/2008.

<sup>79</sup> <http://epp.eurostat.ec.europa.eu/>

<sup>80</sup> <http://www.cemi.cg.yu/english/razno/onama.php>

<sup>81</sup> <http://www.isspm.org/>

The eSEEurope Initiative collected data on broadband penetration, e-government services, and computers and Internet access in schools.<sup>82</sup>

### 3. Computer and Internet usage by individuals

The following figure shows the computer usage by individuals, as far as data is available in the monitored countries. For comparison, the graph also shows the EU-27 average and the statistics of other countries in the region as reported by Eurostat.

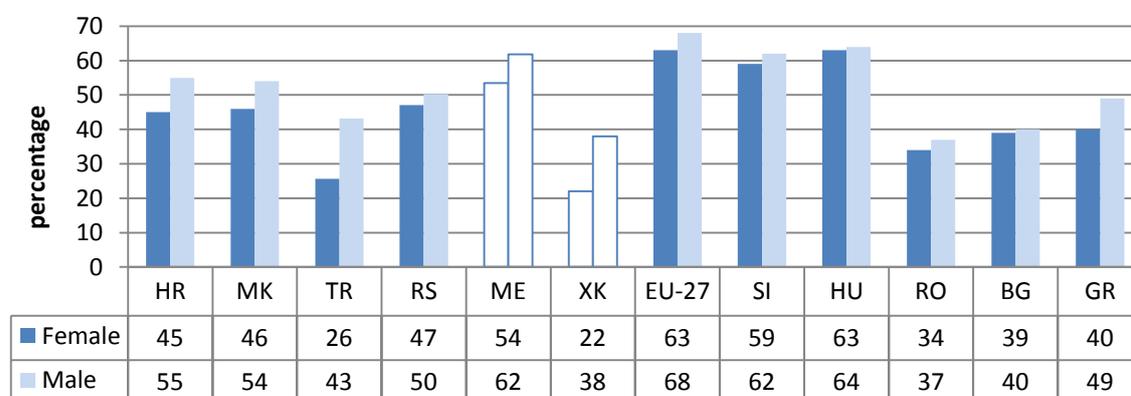


Figure 52 - Percentage of individuals regularly using computers

Croatia, FYROM, Turkey and Serbia reported new data from surveys conducted by the respective statistics institutes in early 2008. Montenegro also reported new data of July 2008, based on research of the Centre for Monitoring (CEMI), which cannot be directly compared to the data from other countries. In all countries which reported new data from 2008, the values are significantly higher than those of the previous report. According to the new data, in particular Montenegro, Croatia, FYROM and Serbia are now much closer to the EU-27 average and well above Romania and Bulgaria. However, it is unclear to what extent these differences are based on changes of the used methodology. The figure therefore only shows the most recent data and no time series. Montenegro and Kosovo are shown in a different colour, as the methodology is not comparable with other countries.

Obvious gaps between male and female computer usage exist in Turkey (18%), Kosovo (16%), Croatia (10%), FYROM (9%) and Montenegro (8%). These gender gaps are significantly larger than in most EU member states. Only Greece (40% female, 49% male), Italy (40% female, 51% male) and Portugal (42% female, 50% male) show similar differences, while Austria, Germany and Luxembourg have significant gender differences, but at higher levels of use. The data reported by Croatia shortly before the publication of this report show the following inconsistency that could not be resolved: according to the Croatian data, 45% of females and 55% of males regularly use computers, but only 46% of the total population.

The following figure shows Internet usage by individuals. Data on Croatia, FYROM, Turkey, Serbia and Montenegro stems from the same surveys as mentioned above. Kosovo submitted estimates. Montenegro and Kosovo are again shown in different colour, as the methodology cannot be compared with the other countries. For comparison, the figure also shows Eurostat data on the EU-27 average and other countries in the region.

<sup>82</sup> <http://www.stabilitypact.org/wt2/eSEEKeyDocuments.asp>

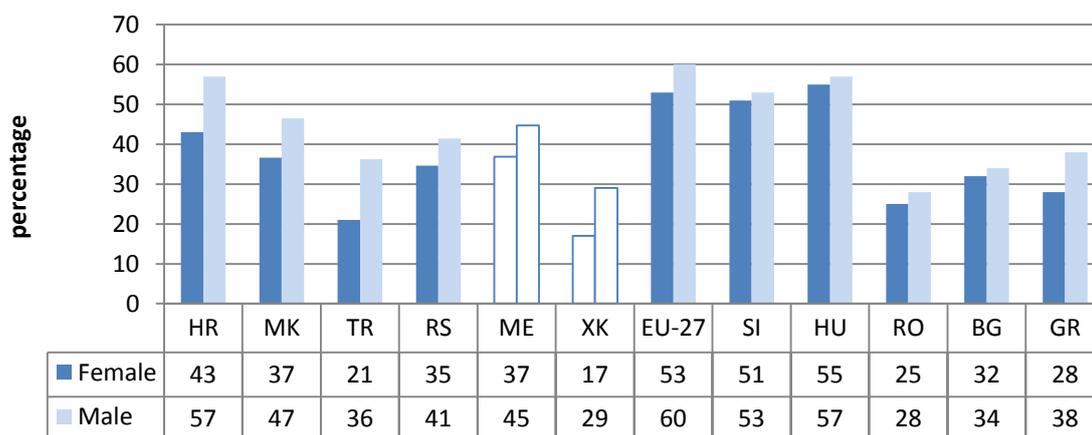


Figure 53 - Individuals regularly using the Internet

All monitored countries, where data are available, show significantly lower Internet usage than the EU-27 average. FYROM and Serbia reported a significant increase in comparison with the data of the previous report (about +15%). Both countries, as well as Montenegro, now have significantly higher Internet usage than Romania, Bulgaria and Greece. The value for Albania cannot be directly compared to data of other countries, because it is based on estimates by Internet service providers and not on a household survey.

Croatia, Kosovo and Turkey reported gaps of about 12-15% between female and male Internet usage. Again, the data delivered by Croatia shortly before the publication of the report show another inconsistency that could not be resolved: Croatia reported that 43% of females and 57% of males regularly use the Internet, but only 43% of the total population.

#### 4. Computer and Internet usage by enterprises

National statistics institutes collect data grouped by enterprise size: small enterprises (10 to 49 employees), medium enterprises (50 to 249 employees) and large enterprises (250 or more employees).

Reliable data on computer and Internet usage by enterprises is available in four of the monitored countries: Croatia, FYROM, Turkey and Serbia. In these four countries the national statistics institutes conduct surveys. Montenegro and Kosovo delivered for the previous report data from surveys of other institutes and both could not provide newer data. In Albania, INSTAT is planning to include such indicators into its periodic surveys.

The available data for Montenegro are not grouped by enterprise size and therefore not shown in the figures. According to the ISSP ICT survey of December 2007, 92.9% of Montenegrin enterprises used computers and 90.5% had Internet access.

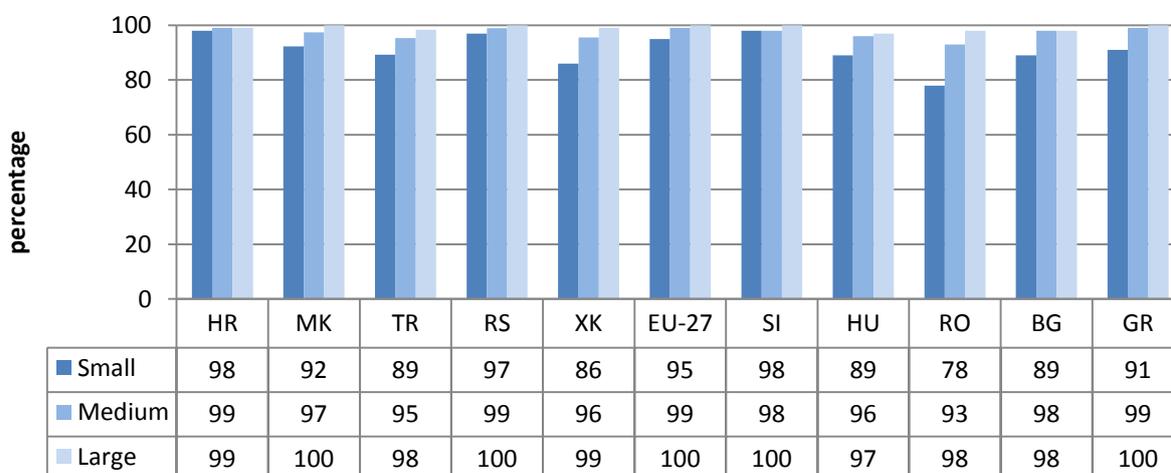


Figure 54 - Enterprises using computers

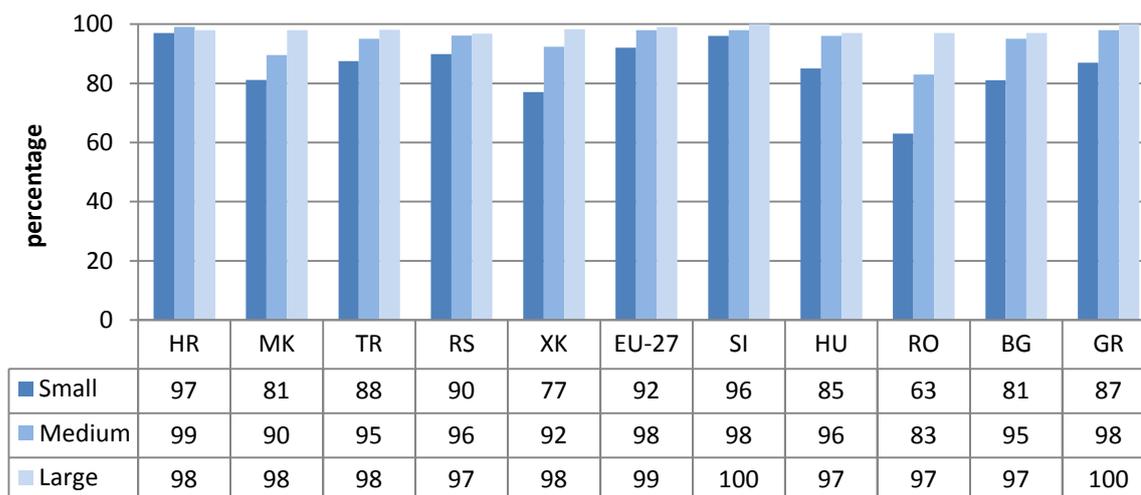


Figure 55 - Enterprises having access to the Internet

Almost all enterprises use computers and have access to the Internet. Significant differences between the monitored countries are only visible with regard to small enterprises, and Internet access is a more significant criterion than computer usage. In Croatia, almost all small enterprises use computers (98%) and the Internet (97%). Serbia also shows similarly high values as the EU-27 average and the newer data reported by Turkey are only some percent below.

In FYROM and Kosovo about a fifth of small enterprises does not have Internet access. In FYROM this value is based on a survey of December 2008, whereas data for Kosovo has not been updated since the previous report.

### M. Network and information security

To address security challenges to the information society, the European Union institutions have developed three main lines of action:

- the regulatory framework on electronic communications requires providers of publicly available electronic communications services to safeguard the security of their services, but also deals with specific questions such as spam and cookies (Directive on Privacy and Electronic Communications<sup>83</sup>);
- the fight against cybercrime, through the adoption of a framework decision<sup>84</sup> (which echoes the Council of Europe Convention on Cybercrime<sup>85</sup>) and some other initiatives more specifically aimed at protecting minors;
- specific network and information security measures.

This last line of action is being achieved through the development of an EU strategy for a secure information society, a dialogue with stakeholders and the setting up of the European Network and Information Security Agency (ENISA) whose tasks include the collection of information, the analysis of current and emerging network risks, the development of common methodologies and the promotion of exchanges of best practices as well as methods of alert.

#### 1. Network security obligations for providers of communications services

According to article 4 of the Privacy Directive (2002/58/EC), all providers of publicly available electronic communications services must take “appropriate technical and organisational measures” to safeguard security of their services. This is a general provision which does not prescribe specific security measures,

<sup>83</sup> Directive 2002/58/EC of the European Parliament and the Council of July 12, 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on Privacy and Electronic Communications).

<sup>84</sup> Council Framework Decision 2005/222/JHA of February 24, 2005 on attacks against information systems.

<sup>85</sup> Convention on Cybercrime, ETS No. 185.

but refers to the “state of the art”, the costs of implementation and a level of security “appropriate to the risk presented”.

All monitored countries have transposed this provision into their national legislation, where it can typically be found in the Telecommunications Law or the Electronic Communications Law, though in Turkey it is in secondary legislation. Albania, Croatia and Montenegro, which adopted new laws in 2008, already had such a provision in their previous laws. These obligations always apply to operators who offer their services “to the public” (in Turkey: “for profit”), although the detailed definition of the scope of providers covered by the legislation varies.

With one exception, the body responsible for supervision in all monitored countries is the NRA, rather than the data protection authority. In FYROM, the NRA is only responsible for technical measures. Data protection for consumers is within the responsibility of a newly established directorate for personal data protection.

Most countries have transposed the provision in the general form of the Privacy Directive, i.e. they require “appropriate” measures without specifying details, with the exception of Turkey.<sup>86</sup>

In Turkey, on July 20, 2008 a new bylaw on security of electronic communications was published. It applies to equity companies which provide electronic communications networks or services and obliges them to implement information security management systems according to the standard ISO/IEC 27001 and to be audited and certified annually on the basis of this standard. The bylaw also requires operators to conduct an annual risk assessment analysis and to report the results of this analysis to the regulator.

The standard ISO/IEC 27001 is currently the most important standard on information security management. It replaced the former ISO/IEC 17799 standard, which was based on the widely used British Standard BS 7799. Such standards on information security management require organisations to implement a high level management committee with responsibility for information security issues. A written security policy should be accessible to all employees. The standards usually refrain from specifying certain technical measures, but contain long lists of topics that should be taken into account by the management and addressed by the security policy in order to achieve an appropriate level of protection.

Turkey is only one of few European countries, where operators are obliged to implement information security management based on a standard. Another example is Iceland.<sup>87</sup> Turkey also has a bylaw on personal information processing which includes the typical unspecific obligation and has not been repealed by the new bylaw. In particular, the existing bylaw applies to those providers of telecommunications services for profit, which are not equity companies and therefore not within the scope of the new bylaw.

## 2. Cybercrime

The main EU actions on the fight against cybercrime have been:

- A Council Framework Decision<sup>88</sup> on attacks against information systems that provides that committing, commissioning, attempting, instigating or abetting the following acts, intentionally and unlawfully, is a criminal offence:
  - accessing the whole or part of an information system (i.e. 'hacking');
  - interfering with an information system (such as the sending of viruses or 'denial of service attacks') to seriously interrupt or hinder its functioning;
  - interfering with computer data (e.g. alteration, deletion, damaging of data) on an information system (even in the absence of damage to a person).

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<sup>86</sup> In Croatia, the Government Regulation on information security measures (Official Gazette 46/2008) makes obligatory implementation of standards ISO/IEC 27001 and ISO/IEC 17799 for central and local government and public authorities. These standards were adopted as national standards by the Croatian Standards Institute under the numbers HRN ISO/IEC 27001 and HRN ISO/IEC 17799. Similarly to Croatia, other countries in the region have also adopted ISO/IEC 27001 standard, without making it obligatory for providers of public electronic communications services.

<sup>87</sup> Regulation on the functionality of public communications networks, December 10, 2007, <http://www.pta.is/file.asp?id=1872>

<sup>88</sup> Council Framework Decision 2005/222/JHA of February 24, 2005 on attacks against information systems.

NB. This framework decision echoes the Council of Europe Convention on Cybercrime, which also covers other computer-related offences and some traditional offences that take place over networks as well as procedural measures and measures on international cooperation.

- Other more specific regulatory initiatives, in particular to fight sexual exploitation of children and child pornography (Framework Decision 2004/68), and to fight fraud and counterfeiting of non-cash means of payment (Framework Decision 2001/413).
- Recent policy initiatives address new forms of cybercrime (e.g. identity theft) and the improvement of cross-border enforcement cooperation.

Croatia, FYROM, Albania, Bosnia & Herzegovina and Serbia ratified the Convention on Cybercrime. Serbia and Montenegro signed the convention on April 7, 2005, about one year before the separation of the two countries. Serbia ratified it in April 2009, but Montenegro has not yet done so. In Kosovo, ratification is still in the first reading in parliament. Turkey has not signed the convention.

The table below shows whether specific acts are considered to be criminal offences, based on the list in the Convention on Cybercrime. Where the table shows a dot, we could identify a certain provision in the criminal code or some other national law, which matches a provision in the Convention on Cybercrime, although it might not exactly cover the same crimes. Where the table shows a horizontal bar, we could not identify such a provision.

	HR	MK	TR	AL	BA	ME	RS	XK
Illegal access	•	•	•	•	—	•	•	•
Illegal interception	•	•	•	•	—	—	•	—
Data interference	•	•	•	•	—	•	•	•
System interference	•	•	•	•	—	•	•	•
Computer-related forgery	•	•	•	•	—	—	—	—
Computer-related fraud	•	•	•	•	—	•	•	—
Offences related to child pornography	•	•	•	•	—	•	•	—
Offences related to infringements of copyright and related rights	•	•	•	•	—	•	•	—
• is considered as criminal offence, — is not considered as criminal offence								

Table 10 - Computer related criminal offences

In November 2008 the Albanian Parliament adopted several amendments to the Criminal Code in order to transpose the Convention on Cybercrime.

In addition to the computer related crimes listed in the table, in 2007 a Turkish law<sup>89</sup> introduced provisions on liability of content providers, host providers and access providers. Based on this law a court or the NRA can oblige providers to block access when the content of Internet broadcasts constitutes one of nine catalogue criminal offences.<sup>90</sup> The frequency of such blocking orders and the practice to block access to popular video web sites that hosted even a single infringing video clip has given rise to some international criticism.<sup>91</sup>

Most of the countries do not have an explicit policy framework for the fight against cybercrime. The exceptions are:

<sup>89</sup> Law no. 5651 on regulating broadcast in Internet and combating crimes committed through such broadcast

<sup>90</sup> The catalogue includes provocation to commit suicide, sexual harassment of children, to incite the usage of drugs, the supply of drugs which are dangerous to the health, obscenity, prostitution, the provision of places and opportunities for gambling and crimes defined in the Law on crimes against Atatürk.

<sup>91</sup> See the answer given by the European Commission to written questions E-6023/08 and E-6068/08 of members of the European Parliament, <http://www.europarl.europa.eu/sides/getAllAnswers.do?reference=E-2008-6023&language=EN>

- Turkey, where the Ministry of Justice has been charged with drafting a special law on the fight against cybercrime and where the Information Society Action Plan foresees actions on Internet security, in particular training and awareness raising;
- Albania, where the government's January 2008 sector strategy of public order foresees the establishment of a special organisational unit to deal with cybercrime and the improvement of cybercrime legislation; and
- Serbia, which has a special law on the organisation and competences of public authorities for fighting high technology crime.

### 3. Bodies in charge for security policy

Countries have many different ways of organising the bodies that are charged with security policy. In the monitored countries, the number of responsible bodies varies between zero and four, and there is a broad range of different responsibilities assigned to these bodies.

A closer look on the assigned responsibilities reveals that most of these functions deal with the security of the state's own networks, for example the responsibility to run governmental institutions network, to perform penetration tests of state institutions' systems, to improve e-government or to classify state documents as being "state secrets".

If we look only at those functions, where a state body significantly contributes to networks security outside the state's own networks, only two countries have such bodies:

- The Croatian Academic and Research Network (CARNET) operates a Computer Emergency Response Team (CERT) to prevent computer threats of public information systems. It provides the website [www.cert.hr](http://www.cert.hr) with up to date advisories on current threats and incidents in the Croatian language. Croatia also has a governmental CERT (ZSIS) and a National CERT overseeing both other CERTs.
- In Turkey, TR-CERT provides a similar function. Users can report incidents to TR-CERT and receive guidance. The national information security portal [www.bilgiguvenligi.gov.tr](http://www.bilgiguvenligi.gov.tr) advises on current threats in the Turkish language.

The table below shows the number of bodies and their responsibilities.

	HR	MK	TR	AL	BA	ME	RS	XK
Number of bodies responsible for network and information security	4	1	3	–	–	1	–	3
Country has a body responsible for network and security policy in general (that is, a body not only responsible for governmental networks)	●	●	●			●		●
Country has a computer emergency response team (CERT)	●		●					
Country provides an alert website or information security portal	●		●					

Table 11 - Bodies responsible for security policy

## N. Electronic commerce and electronic signatures

### 1. Market access and liability

The Electronic Commerce Directive 2000/31/EC established a general authorisation scheme for providers of information society services. It also supports such providers by limiting the providers' liability for actions of their customers.

- According to article 4 Member States shall ensure that the taking up and pursuit of the activity of an information society service provider may not be made subject to prior authorisation or any other requirement having equivalent effect.
- Articles 12 to 14 exempt certain activities of Internet service providers ('mere conduit', caching and hosting) from criminal and civil liability under certain conditions.

- According to article 15 Member States shall neither impose on providers a general obligation to monitor the information they transmit or store nor a general obligation to actively seek facts or circumstances indicating illegal activity.

Croatia, FYROM, Bosnia & Herzegovina, Montenegro and Kosovo have already transposed these requirements into their national legislation. On May 11, 2009 the Albanian Parliament adopted a Law on electronic commerce, which will come into force 15 days after publication. Turkey and Serbia are preparing legislation to transpose the Electronic Commerce Directive. A Turkish law<sup>92</sup> already contains provisions on liability of ISPs, but it is not a transposition of the Electronic Commerce Directive. Turkish ISPs are not obliged to actively monitor or seek for illegal activities, similar to the rules in article 15 of the Electronic Commerce Directive. But whereas the Electronic Commerce Directive limits the liability of access providers ('mere conduit'), the Turkish law obliges them to block access to websites if a court or the NRA has decided that the website constitutes a criminal offence (see chapter on [cybercrime](#) above).

The table below provides an overview of alignment with the mentioned provisions of the Electronic Commerce Directive:

	HR	MK	TR	AL	BA	ME	RS	XK
No prior authorisation for information society services	●	●	○	●	●	●	○	●
Limited liability for 'mere conduit', caching and hosting	●	●	○	●	●	●	○	●
No obligation to actively monitor or seek for illegal activities	●	●	●	●	●	●	○	●
● transposed, ○ draft being prepared								

Table 12 - Market access and liability of information society services

## 2. Legal recognition of electronic contracts and electronic signatures

The Electronic Commerce Directive requires Member States to remove any legal obstacles that would prevent the use of electronic contracts. A contract may not be deprived of legal validity on the grounds that it has been concluded electronically. The directive lists categories of contracts which would not automatically be legally valid and whose electronic conclusion can be restricted. These categories relate to contracts creating or transferring rights in real estate, requiring the involvement of courts or public authorities; of surety ship and collateral securities supplied by people acting for non-business purposes or that are governed by family law or by the law of succession.

The Electronic Signatures Directive 1999/93/EC distinguishes between ordinary electronic signatures and 'advanced electronic signatures' that are based on 'qualified certificates' and created by a 'secure signature-creation device' (these signatures are usually called 'qualified electronic signatures'). The technical requirements are based on public key cryptography, involving certification service providers.

The Directive specifies that there is no automatic legal recognition of ordinary electronic signatures but they cannot be denied legal effect or refused as evidence in courts solely on the grounds that they are in electronic format or they are not 'qualified signatures'.

Qualified electronic signatures on the other hand must be legally recognised as equivalent to hand-written signatures and admissible in courts.

All eight monitored countries have transposed these requirements into their legislation:

- All eight countries have an electronic signature law.
- In all eight countries it is generally possible to conclude an electronic contract, although in several countries some types of contracts cannot be concluded electronically.
- No country would in principle deny ordinary electronic signatures legal effect or refuse ordinary electronic signatures as evidence in court.

<sup>92</sup> Law no. 5651 on regulating broadcast in Internet and combating crimes committed through such broadcast

- Qualified electronic signatures are in all countries recognised as equivalent to hand-written signatures.

### 3. Market access, supervision and accreditation

According to Article 3 of the Electronic Signatures Directive, Member States

- shall not make the provision of certification services subject to prior authorisation;
- may introduce voluntary accreditation schemes aiming on enhanced levels certification service provision; and
- shall ensure the establishment of a supervision scheme for certification service providers issuing qualified certificates.

The requirement not to make the provision of certification services subject to prior authorisation has been transposed in Croatia, Albania and Kosovo. In the other countries, there are potential problems which might hinder market access:

- In FYROM certification service providers must register their activity with the Ministry of Finance 30 days prior beginning of their operation. According to the registration process as it is currently defined in secondary legislation, providers must wait for finalisation of the registration procedure before being allowed to issue certificates.
- In Montenegro providers of non-qualified certificates do not need prior authorisation, but providers of qualified certificates must apply for registration in the register of accredited certification-service providers. Although the law foresees that the supervisory authority must issue its decision within 15 days after the date on which a complete request is submitted, in practice the provider must wait for the end of the registration procedure if the authority needs more than these 15 days.
- Serbia requires prior authorisation of providers of qualified electronic signatures.
- Although Turkey does not require prior authorisation, providers of qualified certificates must notify their services two months in advance, which is unusually long. In case of an incomplete notification the authority may suspend the activity of the provider for the duration of a month.
- In Bosnia & Herzegovina the law also does not require prior authorisation, but market access might be hindered by the fact that the law requires providers to notify their services to a supervision body which has not been established.

Croatia is the only monitored country with its own voluntary accreditation scheme; which has been established under the Croatian Accreditation Agency following a July 2008 amendment to the Electronic signature act. Establishing a voluntary accreditation scheme is, however, not required by the Electronic Signatures Directive and only about half of the EU Member States have done so.

Supervision schemes have been established in Croatia (Ministry of Economy, Labour and Entrepreneurship and State Inspectors' Office), FYROM (Ministry of Finance), Montenegro (Ministry for Information Society), Serbia (Ministry of Telecommunication and Information Society) and Turkey (Information and Communication Technologies Authority). In Albania a supervisory body has recently been established, subordinate to the Ministry of the Interior. The authority's chairman has been nominated, its structure approved and its staff partly hired. In Bosnia & Herzegovina and in Kosovo, no supervisory body has yet been established.

### 4. Electronic signature market data

The available market data shows a picture similar to many other European countries: the legal framework for electronic contracts and electronic signatures exists, but there is little demand for certificates, at least for qualified certificates.

- In Turkey, there are four certification-service providers that issue qualified certificates, but in spite of the size of the country they have only issued about 111,000 qualified certificates.
- In FYROM, two certification-service providers issue qualified certificates, but no data on the number of certificates is available.

- In Croatia, the state-owned Financial Agency (Fina) is the only issuer of qualified certificates and has issued about 20,000 qualified certificates.
- The Serbian Post has started issuing qualified certificates on December 15, 2008. Serbia also reported significant usage of non-qualified certificates. Many banks offer e-banking based on non-qualified certificates. About 350,000 non-qualified certificates have been issued, which means that about 5% of the Serbian population use certificates.
- In the other four countries, no provider issues qualified certificates. In Montenegro, one provider issues non-qualified certificates for e-banking.

Table 13 below provides an overview of electronic signature regulations.

	HR	MK	TR	AL	BA	ME	RS	XK
Legal recognition requirements on electronic contracts and electronic signatures transposed	●	●	●	●	●	●	●	●
Prior authorisation not required before market access	●	X	○	●	○	X	X	●
Supervision system established	●	●	●	●	—	●	●	—
Voluntary accreditation scheme established	●	—	—	—	—	—	—	—
Number of certification-service providers issuing qualified certificates	1	2	4	—	—	—	1	—
○● (partly) transposed/established, — not established, X = national law in contradiction with the Directive								

Table 13 - Electronic signature regulation and market data

## O. Data protection and data retention

### 1. Protection of confidentiality of communications

According to Article 5 Privacy Directive 2002/58/EC, Member States shall ensure the confidentiality of communications and the related traffic data through national legislation. In particular, they shall prohibit listening, tapping, storage or other kinds of interception or surveillance of communications and the related traffic data by persons other than users, without the consent of the users concerned, with the exception of lawful interception.

This requirement has usually been transposed in the telecommunications law, by a provision in the privacy chapter that prohibits interception, and a misdemeanour provision that defines the penalties for infringements. Sometimes the telecommunications law only prohibits operators or their staff from interception, but does not impose penalties on third parties who intercept a communication. Often, a provision in the Criminal Code qualifies any form of illegal interception (whether it is the operator or somebody else) as a criminal offence.

Bosnia & Herzegovina is the only monitored country which does not have a provision against illegal interception. In FYROM there are provisions in the Law on electronic communications and in the Criminal Code, though not all forms of illegal interception are covered. If somebody who is not an operator intercepts a communication that is not an audio conversation (for example, intercepting e-mails or SMS), this is not covered by either of the two provisions.

The table below shows whether the penalties are imposed on illegal interception by the operator and/or illegal interception by third parties.

	HR	MK	TR	AL	BA	ME	RS	XK
Illegal interception by operators and their staff	●	●	●	●	—	●	●	●
Illegal interception by third parties	●	○	●	●	—	●	●	●
● = legal provisions exist, ○ = legal provision does not cover all cases, — = no legal provision								

Table 14 - Protection of confidentiality of communications

## 2. Traffic and location data

According to Article 6 of the Privacy Directive, traffic data relating to subscribers and users must be erased or made anonymous when it is no longer needed for the purpose of a communication, for billing and interconnection payments, or for lawful interception. All monitored countries except Bosnia & Herzegovina have transposed this provision. Most countries referred to the period during which the bill may be lawfully challenged or payment can be pursued (which is typically dependent on the contract between the operator and the subscriber).

Article 6(3) of the Privacy Directive requires the subscriber's informed consent before providers can use traffic data for marketing their own services or for the provision of value added services. All monitored countries except Bosnia & Herzegovina and Serbia have transposed this provision.

Article 9 of the Privacy Directive contains provisions to protect location data. In particular, the use of location data needs informed consent by the user or subscriber and even where consent has been obtained, the user or subscriber must be able to temporarily refuse the processing of location data. All monitored countries except Bosnia & Herzegovina have transposed this provision.

The following table provides an overview of the provisions made for traffic and location data.

	HR	MK	TR	AL	BA	ME	RS	XK
Maximum storage period for traffic data specified by law, for example: as long as needed for billing?	●	●	●	●	–	●	●	●
Informed consent required before traffic data may be used for marketing?	●	●	●	●	–	●	–	●
Informed consent required before location data may be used? Possibility to refuse temporarily, even if consent was given before?	●	●	●	●	–	●	●	●
● = transposed, – = not transposed								

Table 15 - Traffic and location data

## 3. Data retention

According to the Privacy Directive, providers typically have to erase traffic data as soon as they no longer need them for their legitimate purposes (in particular for billing, see Table 15 above). However, article 15(1) of the Privacy Directive establishes an exception to that principle and allows Member States to adopt legislation providing for the retention of data for a limited period where this constitutes a necessary, appropriate and proportionate measure in a democratic society to safeguard national security (state security), defence, public security, and the prevention, investigation, detection and prosecution of criminal offences or of unauthorised use of electronic communication systems.

Directive 2006/24/EC on Data Retention harmonises Member States' laws on the retention of traffic, location and identification data to ensure the investigation, detection and prosecution of 'serious crimes'. All categories of data covered by the directive must be retained for a minimum of six months and for a maximum of two years.

Data retention has proved to be a controversial topic, with many Member States having delayed its introduction, in particular with regard to retention of Internet data. On February 10, 2009 the European Court of Justice dismissed an action for annulment of the directive brought by Ireland.<sup>93</sup> However, the court only confirmed the legal basis of the directive. Further lawsuits are still pending at national courts.

The new laws in Croatia and Montenegro introduced data retention obligations both for telephony data and Internet data. The provisions in the Croatian law will come into force on July 1, 2009. Bosnia & Herzegovina already has a data retention obligation for telephony and Internet data. Albania has a data retention obligation for telephony data. Turkey, Kosovo and Serbia do not have data retention legislation. FYROM plans to define the types of data to be retained and the retention period in 2009 and Turkey has already drafted amendments to a bylaw. Serbia will regulate data retention in its future Law on electronic communications, but has already obliged operators by secondary legislation to install the necessary equipment.

<sup>93</sup> ECJ February 10, 2009, case C-301/06 Ireland v Parliament and Council

In all countries which oblige operators to retain data, operators have to bear the costs and are not entitled to ask for compensation.

The table below shows which countries have defined data retention obligations (in particular the data to be retained and the retention period) for telephony data and/or for Internet data.

	HR	MK	TR	AL	BA	ME	RS	XK
Telephony data	●			●	●	●		
Internet data	●				●	●		

Table 16 - Data retention obligations

#### 4. Spam

Article 13 of the Privacy Directive requires unsolicited commercial communications by e-mail to be subject to the individual's prior consent (opt-in), except for the sending of direct marketing emails to existing customers. For companies, EU member states are free to require an opt-in or an opt-out scheme.

NB. In addition to other requirements, Article 7 of the Electronic Commerce Directive states that if unsolicited commercial communications by e-mail is allowed, it must be clearly identifiable and service providers who send such communications must respect opt-out registers.

Most of the monitored countries prohibit spam, without making a distinction between unsolicited e-mail addressed to an individual or to a company. Only Bosnia & Herzegovina does not have explicit legislation on spam.

Kosovo is the only monitored country where unsolicited commercial communications is explicitly allowed. The relevant provision in article 20 of the Law on the Information Society Services transposes the conditions set out in article 7 of the Electronic Commerce Directive. It requires that unsolicited e-mails must be clearly identifiable and that the sender must respect opt-out registers. However, the law in Kosovo explicitly allows sending unsolicited e-mails, whereas on EU level the Electronic Commerce Directive left this question undecided and the Privacy Directive later required Member States to prohibit spam addressed to individuals.

#### 5. Itemised billing

Article 10 and Annex I of the Universal Service Directive give subscribers the rights to receive itemised bills in order to allow them to verify and control their charges, adequately monitor their usage and thereby exercise a reasonable degree of control over their bills. The details are to be laid down by the NRAs.

Article 7 of the Privacy Directive addresses privacy concerns in relation to itemised billing, in particular the rights of calling users (because telephones are often used by persons other than the subscriber) and called subscribers. It also gives subscribers the right to receive non-itemised bills.

All monitored countries have a right to receive itemised bills in their legislation.

In FYROM and Montenegro, this right however does not oblige the operator to show details for every call in the standard version of itemised bills. It only requires operators to show the number of accounting units accumulated in certain groups (local calls, national calls, international calls, calls to mobile networks, etc.). In FYROM, subscribers receive free fully itemised bills in practice on request.

All monitored countries with the exception of Albania and FYROM have transposed the provision of the Privacy Directive that gives subscribers the right to receive non-itemised bills.

The provisions in the Privacy Directive, which address the conflict of interest between subscribers (who have to pay and want to check the bill) and other users or called users (which might not want the subscriber to know their details), are vague and this is also reflected in the legislations of the monitored countries. No country obliges operators to anonymise the last digits in the numbers. Croatia, FYROM, Albania and Montenegro require operators not to include calls to toll-free numbers and emergency numbers in itemised bills, which gives some level of protection of privacy if a user calls a toll-free helpline and does not want the subscriber to know about this call. In Turkey, Bosnia & Herzegovina, Serbia and Kosovo the law does not foresee methods for the protection of privacy in the context of itemised billing.

The following table provides an overview of the provisions on itemised billing.

	HR	MK	TR	AL	BA	ME	RS	XK
Right to receive itemised bills	●	○	●	●	●	○	●	●
Right to receive non-itemised bills	●	—	●	—	●	●	●	●
Methods for protection of privacy, such as excluding calls to toll-free numbers	●	●	—	●	—	●	—	—
● = transposed, ○ = partly transposed, — = not transposed								

Table 17 - Traffic and location data

## P. Subscriber directories

### 1. Subscriber inclusion in directories

Article 25 (1) Universal Service Directive gives all subscribers the right to have a directory entry. The Privacy Directive addresses subscribers' privacy interests with regard to directories. According to article 12 (2) Privacy Directive, subscribers shall be given the opportunity to determine whether their personal data are included in a public directory, and if so, which data, and to verify, correct or withdraw such data. Not being included in a public subscriber directory, verifying, correcting or withdrawing personal data from it shall be free of charge.

In all monitored countries, subscribers have the right to be included in the directory, and in most countries it is explicitly stated that operators may not charge for inclusion. Subscribers also have the right not to be included in the directory. However, the laws in FYROM and Albania explicitly state that not being included may be charged on the basis of real costs. Kosovo has differing legislation in the Law on telecommunications and the Law on information society services.

In most countries the respective legislation applies to all subscribers, including subscribers of mobile services and subscribers with pre-paid contracts. Serbia does not have primary legislation on these topics; the rules only apply to fixed subscribers.

### 2. Availability of directories and directory enquiry services in practice

Traditionally, in many countries the incumbent operator published a printed directory and offered a directory enquiry service. When the market was liberalised, countries typically obliged all operators to establish their own subscriber directories, although this obligation did not include the obligation to publish the directory in printed form.

If each operator maintains its own directory, this information is not very useful for persons who are looking for a phone number. Interested users might have to try the directory enquiry services of several operators until they get the desired information. Users therefore need access to a comprehensive directory which includes the subscribers of all (or at least most) operators.

Such a comprehensive directory can be established in two ways:

- According to article 5 of the Universal Service Directive, at least one comprehensive directory (printed or in electronic form) and at least one comprehensive telephone directory enquiry service shall be available to end-users. NRAs may therefore select the provider of a comprehensive directory by means of designating a universal service provider after a public tender. This mechanism is foreseen in the laws of Croatia, FYROM, Albania and Montenegro.
- In many countries, directory enquiry services are offered by several providers on competitive basis. This requires that interested undertakings get access to the subscriber data under reasonable conditions. Often, NRA intervention is necessary, because operators are reluctant to provide the data or ask for unreasonably high charges. Another requirement for a competitive market of directory enquiry services is that no such service is provided below costs. In particular the incumbent may not cross-subsidise its own directory enquiry service. Again, this might need some intervention by the NRA or the competition authority.

In all countries except Serbia telephony operators are obliged to grant access to their subscriber database. In Croatia, Turkey, Bosnia & Herzegovina and Kosovo all undertakings that wish to publish directories or provide directory enquiry services are entitled to ask for access to subscriber data. In

FYROM, Albania and Montenegro only designated universal service provider can enforce access to subscriber data.

The collected data shows, that with the exception of Croatia none of the monitored countries has enforced these processes. In Croatia, the incumbent is designated universal service provider and obliged to provide a comprehensive directory. This directory includes subscribers of all fixed operators and of the incumbent’s own mobile branch. Negotiations with the other two mobile operators are ongoing.

FYROM has initiated a procedure to designate a universal service provider for a comprehensive telephone directory and directory enquiry services. However, this procedure is currently pending because FYROM intends to amend the provisions on directories in the legislation.

No monitored country has alternative providers of comprehensive directory services, although the laws of at least four countries would grant such undertakings the right to access operators’ subscriber databases.

### Q. Internet backbone infrastructure

Six countries could provide data on their international Internet bandwidth. The three countries who also provided data for the last report reported a remarkable increase. In Turkey and Montenegro the international Internet bandwidth doubled and in Kosovo it increased from 3 to 4 Gbps. However, it is unclear to what extent this is a real increase and to what extent the authorities only cover more of the already existing cross-border Internet backbone links in their statistics.

The following figure shows the International Internet bandwidth (most countries: end of 2008, FYROM: February 2009, Montenegro: 2007).

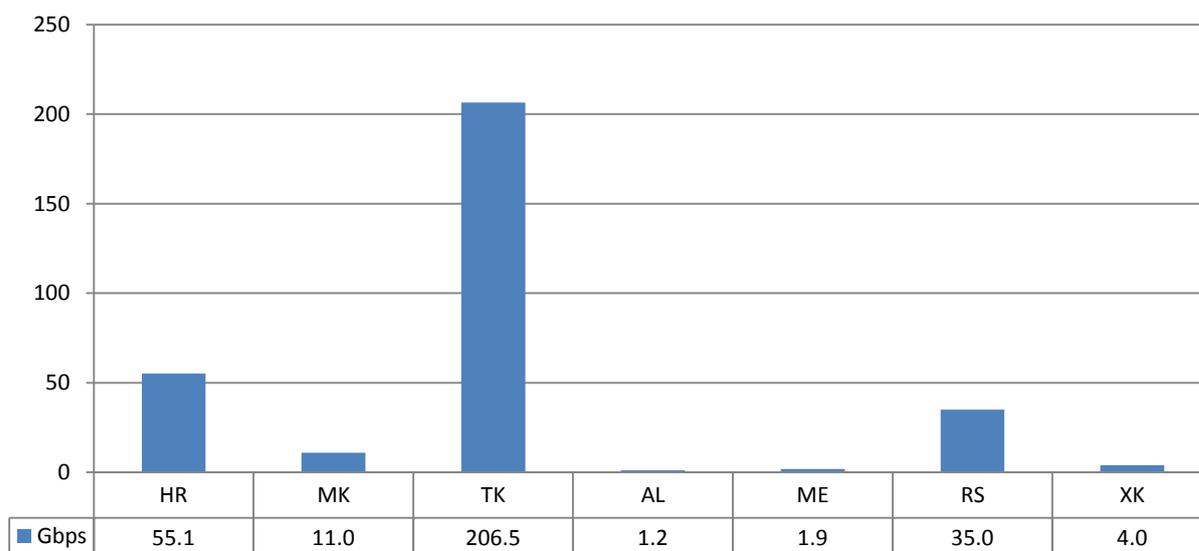


Figure 56 - International Internet bandwidth

An Internet exchange point (IXP) is a node where different Internet service providers (ISPs) exchange Internet traffic. An IXP typically consists of several network switches to which all participating ISPs connect. Often, the provider of the IXP is not an ISP itself, but a commercial data centre or a non-profit organisation like a university data centre. Many European IXPs are organised in the European Internet Exchange Association (Euro-IX).<sup>94</sup>

In 2007, a Euro-IX report listed 103 IXPs in 31 European countries. Only one of these was located in the countries covered by our analysis.<sup>95</sup> The University Computing Centre of the University of Zagreb operates the Croatian Internet eXchange (CIX) in Zagreb. Compared with other European IXPs, CIX is

<sup>94</sup> <http://www.euro-ix.net/>

<sup>95</sup> Euro-IX, Serge Radovic: 2007 Report on European IXPs, October 2007, available for download at [http://www.euro-ix.net/resources/2007/euro-ix\\_report\\_2007.pdf](http://www.euro-ix.net/resources/2007/euro-ix_report_2007.pdf)

relatively small. As of April 8, 2009, CIX connected 14 Croatian ISPs (three more prepared to become connected) and had an average traffic volume of about 0.2 Gbps.

NB. For comparison, as of August 2007, about one third of European IXPs had a traffic volume <1 Gbps, one third had a traffic volume from 1 to 5 Gbps, and one third had a traffic volume >5 Gbps.<sup>96</sup>

The Macedonian Academic Research Network (MARNet) intends to become a Macedonian IXP in the near future. Several local ISPs are already connected.

## R. Management of Internet domains

The management of Internet domains is (with the exception of the .eu domain) not regulated by EU legislation. Nevertheless, availability of domain names, easy registration processes and low prices are important for the creative industries of a country. If it is difficult to register or there are high prices, users will choose a domain name under a generic top-level domain or under the country code top-level domain of another country.

We can distinguish at least three different functions that might be regulated by law (but are often unregulated, in particular if the traditionally established system works satisfactorily):

- drafting and adopting the national domain name policy, in particular the rules on who can register a domain name, rules on accrediting registrars and dispute settlement provision;
- the function of the registry, that is the body which manages the central database and the domain name servers; and
- the function of registering the individual domain names, maintaining the customer contact and billing (registrar function).

### 1. National domain name registry and policy

In five of the monitored countries, an academic institution has the task of the national registry, in particular a university data centre (Bosnia & Herzegovina, Croatia, FYROM and Turkey) or an association of university institutions and ISPs (Serbia). In these countries there was traditionally no explicit legislation on domain name management. The typical legal basis of the national registry is a ministry or government decision which was the basis of the contract with IANA or ICANN. The national domain name policy is usually decided by the registry itself, for example in the form of the registry's statute or general business conditions. Croatia and Turkey introduced in their new laws the possibility to regulate domain names by secondary legislation, but have not yet adopted such bylaws.

In Albania the telecommunications regulator is the national registry and has, since June 2008, an explicit legal basis in the Law on electronic communications. Kosovo does not yet have a top level domain.

The most noteworthy example in the region is Montenegro, which is in the lucky situation to have a country code (ME) that is also a frequently used English word. This makes Montenegrin domain names attractive for English speaking users. Montenegro is the only country in the region that has taken a fully market based approach in its domain name policy. It has separated the policy function and the registry function:

- On the basis of the Law on the property of the Republic of Montenegro, the government adopted a decision establishing the Council for the ".me" domain. This council decides on the domain name policy.
- The Council announced a public invitation for selecting the agent for the registry function. In this international tender, a joint venture of GoDaddy (one of the largest players in the domain name business) and a Montenegrin company won the tender.

### 2. Registrars of domain names

By separating the function of the national registry and the registrars, a state can introduce competition on the domain name market. This not only reduces the price of registering domain names, it also makes

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<sup>96</sup> See p. 25 of the above mentioned 2007 Report on European IXPs.

access to domain names easier. Normally, domain name owners do not operate their own name servers and have to use the services of an ISP for this purpose. If this ISP also may act as registrar and has direct electronic access to the national domain name registry, the process of registering the domain name is significantly simplified.

The monitored countries can be clustered in two groups, as shown in the following table. Kosovo belongs to neither of the groups, because it does not have a top level domain yet.

	Competition model	“Registry is only registrar” model
Competition between registrars exists	Yes	No
Countries	BA, ME, RS, TR	AL, HR, MK
Who accredits registrars	The registry	–
Electronic interface exists	Yes	No
Number of registrars	ME: 103, RS: 36, BA: 19, TR: 13	1 (the registry)
Price per domain and year	BA: €22, ME: €10, RS: €3 to €17, TR: €2 to €10 Does not include registrar functions	AL: €25, HR: first domain free, other domains €24, MK: €9 Includes registrar functions

Table 18 - Registrars of domain names

Montenegro and Serbia are the only countries where foreign undertakings may become accredited registrars (in Serbia, however, it is required that the undertaking has a local presence). This and the attractiveness of the domain name .me for English speaking domain name users explain the large number of accredited registrars.

### 3. Cyber squatting and dispute resolution

All seven monitored countries that have their own top level domain have included policies against cyber squatting in their regulations or into the general business conditions of the registry.

Also, all seven countries introduced an out-of-court dispute resolution mechanism in the form of arbitration before a dispute goes to court. Two countries (Bosnia & Herzegovina and Montenegro) used ICANN’s Uniform Domain Dispute Resolution Policy as the basis of their dispute resolution mechanism.<sup>97</sup>

### 4. Domain market data

It is difficult to compare the numbers of registered domain names because the situation in the monitored countries is too different. However, the following figure shows the number of the registered sub domains of the relevant ccTLD. As far as available, data as of end of 2008 has been used. The figure shows the absolute number of domain names (left axis, columns) and the number of domain names per 1000 inhabitants (right axis, dots).

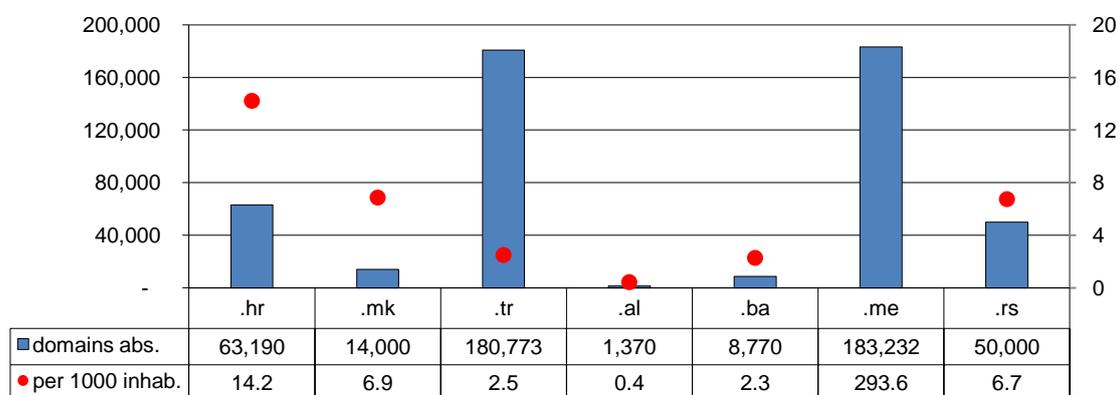


Figure 57 - Domain names, absolute and per 1000 inhabitants

<sup>97</sup> <http://www.icann.org/udrp/udrp.htm>

There are several remarkable developments:

- The .me top level domain is highly attractive for foreigners. Two days after open registration had started on July 17, 2008, more than 50,000 new domain names were registered. Montenegro reported 183,232 domain names by end of 2008, more than in Turkey. However, almost all of this interest in Montenegrin domain names comes from other countries. There are about 300 .me domain names per 1000 inhabitants, two orders of magnitude more than in other countries (and therefore not visible in the figure above).
- The .rs top level domain has also developed remarkably. 50,000 domains were registered in less than one year. This figure can be compared with the absolute number of .hr domains or with the domain names per population in FYROM.
- In comparison with population, usage of the .al, .ba and .tr top level domains is relatively low. Albania stands out with a particularly low figure. Turkey only has a large number of .tr domains due to the size of country.

The fast growth of .me and .rs domains has certainly been supported by the fact that the registries in Montenegro and Serbia use a competitive model with many registrars. doMEn cooperates with 103 registrars and RNIDS with 36. However, the registries in Croatia and FYROM, which hold a monopoly on registrar activities, have also managed to attract a large number of users.

## VII. COUNTRY PROFILES

### A. Croatia

#### 1. Legal and institutional framework

##### a) Electronic Communications Act

The Electronic Communications Act of June 19, 2008 (Official Gazette 73/2008) entered into force on July 1, 2008 as the principal legal instrument for the electronic communications sector, defining the institutional framework, including the responsibilities of the government, the ministry and the national regulatory authority. It replaced the Telecommunications Act of 2003 and is intended to bring the law into line with the principles of the EU 2003 regulatory framework.

##### b) Ministry of the Sea, Transport and Infrastructure

The Ministry of the Sea, Transport and Infrastructure (MMPI) is the government department responsible for electronic communications.<sup>98</sup> It develops and promotes general principles, strategies and policy objectives for the electronic communications sector, adopts some of implementing legislation as prescribed by the Electronic Communications Act and approves the Radio Frequency Allocation Table on the proposal of the Council of the NRA. The Ministry also carries out inspections for the enforcement of the Electronic Communications Act and its subsidiary regulations.

##### c) Croatian Post and Electronic Communications Agency

The Electronic Communications Act established the Croatian Post and Electronic Communications Agency (HAKOM) as the national regulatory authority that took over the tasks and responsibilities of the previous regulators for telecommunications (the Croatian Telecommunications Agency, HAT) and for postal services (the Postal Services Council).<sup>99</sup> HAKOM is an autonomous, independent body responsible for carrying out regulatory tasks defined under the Act, including the adoption and administration of implementing legislation within its competencies.

HAKOM is governed by a Council comprising seven members, of which two are appointed as the Chairman and Deputy Chairman. During their terms of office, the Council members are employed as full-time executives. The Council members are appointed and dismissed by the parliament acting on the proposals of the government. Appointment is for a period of five years with the possibility of reappointment. The NRA's administrative service which performs expert, administrative and technical tasks is managed by a Director, appointed by the Council for a period of four years, with the possibility of reappointment.

HAKOM is self-financed and is a non-profit legal entity with its own budget, funded from the three principal sources: addressing and numbering fees, radio spectrum usage fees and administrative fees determined as a percentage of the annual revenues of authorised undertakings. Any surplus at the end of the year is carried forward into the budget for the following year.

##### d) Information society

The Central State Administration Office for e-Croatia is a governmental office headed by a State Secretary. It is responsible for information society policy (in particular the e-Croatia Programme) and Croatia's e-government activities, based on the e-government strategy for the period of 2009 to 2012.

Other bodies that have information society responsibilities are the Central Bureau of Statistics (information society statistics), the Office of the Council on National Security (information security policy), the Institute for Information Systems Security (technical aspects of information security), the Croatian Academic and Research Network CARNet (it operates a Computer Emergency Response Team and is the national domain name registry), the Ministry of the Economy, Labour and Entrepreneurship (e-business and supervision of electronic signatures), the Croatian Accreditation Agency (accreditation of certification-

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<sup>98</sup> <http://www.mmpi.hr/default.aspx?id=777>

<sup>99</sup> <http://www.telekom.hr/Default.aspx>

service providers), the Ministry of Sea, Transport and Infrastructure (broadband), the Ministry of Health and Social Care (e-health), the Ministry of Justice (e-Justice) and the Ministry of Science, Education and Sports (e-education).

Croatia has implemented the Electronic Commerce Directive, the Electronic Signatures Directive and the Cybercrime Convention.

## 2. Regulatory independence

### a) Privatisation and operational independence

State involvement in ownership and control of the former monopoly operator, Hrvatske Telekomunikacije (T-HT), has been significantly reduced as the result of several stages of privatisation. These began in 1999 with adoption of the Act on Privatisation of Hrvatske Telekomunikacije. In October 1999 the government sold 35% of the shares to a strategic investor - Deutsche Telekom. Following the purchase of a further 16% of the shares in October 2001, Deutsche Telekom gained control of 51% of shares. In February 2005 the government transferred 7% of its shares to Homeland War Veterans Fund.

Following an IPO of 32% of the stock of T-HT in September 2007 and further sale of shares during 2008, the state's shareholding in the incumbent operator was reduced to 3.6%.

The Electronic Communications Act stipulates that the members of the Council of the NRA may not be owners or shareholders in regulated entities or perform any other tasks resulting in a conflict of interest.

### b) Administrative independence

The Electronic Communications Act of 2008 emphasises the separation of the NRA regulatory tasks from policy making and state administration. In particular, the administrative supervision of the NRA by the ministry which was a feature of the previous Telecommunications Act is now removed. Furthermore, the ministry is limited to publishing guidelines and instructions for HAKOM regarding policy objectives and goals, but these should not influence the NRA's decisions in individual cases.

The Act also excludes the regulatory activities of the NRA from the application of provisions on administrative supervision of the General Administrative Procedure Act, meaning that HAKOM's decisions cannot be overturned by the Ministry. Appeals against the NRA decisions can only be brought before the Administrative Court of the Republic of Croatia.

## 3. Market access and authorisations

Croatia was the first among the monitored countries to introduce full liberalisation of fixed public telephone networks and services on January 1, 2003.

The Telecommunications Act of 2003 provided for a regime combining individual licences and general authorisation. Depending on the service characteristics and the use of limited resources, three categories of authorisations were issued by the regulator:

- concessions – for the provision public telecommunications services with the use of spectrum;
- individual licences – for the provision of public telecommunications services in fixed networks, leased lines, cable TV services and PMR services.
- general authorisation with notification to the NRA – for the provision of all other services including Internet access, VoIP, Value Added Services and Premium Rate Services (PRS).

The Electronic Communications Act of 2008 introduced a regime in which electronic communications networks and services can be provided without individual licences, subject to a general authorisation with a notification submitted to the Agency at least 15 days before starting activities. The necessary implementing legislation was adopted and entered into force in December 2008.

Individual licences continue to be issued by HAKOM for the right to use radio spectrum.

## 4. Market structure

The incumbent operator T-HT remains the main provider of public fixed telephony networks and services. In May 2006 T-HT acquired Iskon Internet, one of the leading alternative providers, who after the

acquisition continues to provide voice telephony and Internet services in its own name. In addition to T-HT and Iskon, there are seven alternative operators active in the market.

At present, there are three mobile operators in Croatia that own their network infrastructure: T-Mobile (T-HT's mobile subsidiary), VIPnet (owned by mobilkom Austria) and Tele2 (controlled by the Swedish operator Tele2). T-Mobile and Tele2 have spectrum licences for provision of 2G services in the 900 MHz and 1800 MHz bands, while VIPnet – only in the 900 MHz. All three operators were issued spectrum licences in the 2100 MHz and have launched commercial 3G services.

## 5. Significant market power

Under the Telecommunications Act of 2003, the NRA analysed four national markets set out in line with the principles of the EU 1998 framework. The designation of operators with SMP was based on the application of the static threshold criteria of 25% market share (measured by revenue) in a relevant market combined with an assessment of other criteria specified in Article 51 of the Telecommunications Act of 2003. The regulatory obligations applicable to all operators with SMP were also pre-defined by that Act.

Accordingly, the NRA decisions of September 14, 2006 and March 30, 2007 designated the following operators as having SMP:

- T-HT (T-Com) and its 100% subsidiary, Iskon, as having joint SMP in public fixed telephone network and services (including voice services and services for transmission of voice, sound, data, documents, pictures, etc.);
- T-HT (T-Com) as having SMP in leased lines;
- T-Mobile and VIPnet as having SMP in public voice services on mobile networks;
- T-Com, T-Mobile and VIPnet as having SMP in interconnection.

The new Electronic Communications Act provides for a market analysis procedure, definition of relevant markets, SMP designations and the imposition of remedies on designated operators based on the principles of the national Law on Competition and the EU 2003 regulatory framework. The new law requires the NRA to carry out market analysis procedures at least once every three years. Until the NRA has completed its market analyses under the new framework, the previous SMP designations and regulatory obligations will remain in force.

Between March 2 and April 20, 2009 the NRA consulted on its analysis of nine relevant markets. In identifying the nine markets relevant for ex ante regulation, the NRA followed the seven markets of the 2007 European Commission recommendation and applied the three criteria test for additional markets. The consultation documents include analysis, SMP assessment and imposition or removal of regulatory obligations covering the following markets and SMP designations:

- wholesale call termination in public fixed networks – HT-Hrvatske Telekomunikacije (T-Com), Iskon Internet and seven alternative operators;
- wholesale broadband access – HT-Hrvatske Telekomunikacije (T-Com);
- wholesale call termination on individual mobile networks – T-Mobile Hrvatska, VIPnet, Tele2;
- wholesale SMS termination on individual mobile networks – none (three criteria test not met);
- wholesale infrastructure access at a fixed location - HT-Hrvatske Telekomunikacije (T-Com);
- wholesale call origination from public fixed networks - HT-Hrvatske Telekomunikacije (T-Com);
- public voice services in mobile networks – none (three criteria test not met);
- wholesale transit services in public fixed network – none (the three criteria test not met);
- wholesale access and call origination from public mobile networks – none (three criteria test not met).

According to HAKOM decision of July 9, 2008 on the markets relevant for ex ante regulation, two further markets will be analysed at a later stage covering access to public fixed telephony services at fixed location for residential and business customers as well as retail and wholesale leased lines.

## 6. Competitive safeguards

The key competitive safeguards foreseen under the EU 1998 regulatory framework have been implemented:

- CS/CPS in fixed networks has been available since February 2005 for all types of calls: local, national, international and to mobile numbers;
- number portability has been available in fixed networks since July 2005 and in mobile networks since October 2006;
- RIOs have been published by fixed and mobile operators with SMP;
- RUO has been available since October 2005 and regulated wholesale bitstream access reference offer since December 2007.

Interconnection and LLU charges are approved by the NRA on the basis of benchmarking against the EU-27 average levels.

## 7. Universal service and consumer issues

The NRA is the main body responsible for the implementation of the universal service and consumer issues, including the resolution of disputes between service providers and end users. It can designate one or more providers of universal service based on a public tender procedure. Alternatively, under the previous Telecommunications Act of 2003, a public voice telephony service provider with a market share greater than 80% could be required to provide universal service without a tender procedure. In November 2005 the NRA designated T-HT as the USO provider for a five-year period.

Article 36 of the new Electronic Communications Act provides for a designation mechanism of one or several universal service providers in line with the provisions of article 8 of the Universal Service Directive.

## 8. European Union

In November 2008, the European Commission noted that significant progress had been made, in particular with the adoption of the new Electronic Communications Act, seen as a significant step towards completing alignment with the *acquis communautaire*.<sup>100</sup> However, progress required to be sustained in order to ensure the proper functioning of the electronic communications market.

The Commission noted the growth of broadband, including the increase in the number of unbundled loops, and also of the numbers ported on both fixed and mobile networks. Mobile operators still faced problems in obtaining construction permits and in site sharing, seen as potential roadblocks for future growth.

The regulator had enhanced its capacity, but lacked “sufficient transparency” in enforcing regulations to secure competitive safeguards for alternative operators.

On December 19, 2008 the accession negotiations with Croatia under chapter 10 of the *acquis* on Information Society and Media were provisionally closed.

## 9. Outlook

Following the adoption of the Electronic Communications Act of 2008, based on the principles of the EU 2003 regulatory framework, most of the required implementing legislation has been either adopted or is in the process of public consultation. The main priorities of the regulator remain carrying out the market analyses under the new framework and developing methodologies for regulatory cost accounting to ensure effective wholesale price control mechanisms for fixed and mobile networks.

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<sup>100</sup> Croatia 2008 Progress Report. [SEC\(2008\) 2694](#).

## B. The Former Yugoslav Republic of Macedonia (FYROM)

### 1. Legal and institutional framework

#### a) Electronic Communications Law

The primary legislation for the telecommunications sector is the Electronic Communications Law of March 5, 2005, which is based on the EU 2003 regulatory framework. It establishes the national regulatory authority and defines its responsibilities along with those of the government and the relevant ministry.

#### b) Ministry of Transport and Communications

The Ministry of Transport and Communications is responsible for policies and for drafting legislation for the electronic communications sector, as well as for preparing the national strategy for the development of electronic communications and information technology.<sup>101</sup>

#### c) Agency for Electronic Communications

The Agency for Electronic Communications (AEC) was established in July 2005 as an autonomous, independent national regulatory authority responsible for carrying out tasks defined under the Electronic Communications Law, including the adoption and administration of implementing legislation within its competencies, managing spectrum and numbering resources, carrying out analyses of the relevant electronic communications markets and imposing regulatory obligations on operators designated as having SMP.

AEC is governed by a Commission consisting of five members, including the President, who acts as a chairperson of meetings of the Commission. The President and the other members of the Commission are appointed and dismissed by the parliament. AEC's day-to-day activities are managed by a Director, engaged as a professional full-time employee. The Director is appointed by the Commission following a public competition procedure. The terms of office of the AEC Commission members and its Director are five years, with a possible reappointment for an additional consecutive five-year term.

AEC is a self-financed and non-profit legal entity with its budget funded from frequency and numbering fees, and administrative fees set as a percentage of the annual revenues of the authorised electronic communications operators and service providers.

Following amendments to the Electronic Communications Law that entered into force in August 2008, the appeal procedures for the NRA decisions have been modified. Decisions of the AEC Director are now final in the administrative procedure and no longer subject to appeal to the AEC Commission. According to the new procedures, appeals must be brought before Administrative Court within 30 days from the delivery of the decision. The entire appeal process is regulated by the Law on Administrative Disputes of May 19, 2006.

#### d) Information society

The Ministry of Information Society, established in 2006, is the government institution responsible for information society policy and coordination of the activities defined in the National Strategy for Information Society Development adopted in April 2005.

The Statistical Office is responsible for information society statistics. The Ministry of Finance is supervisory authority for electronic signature. The Ministry of Internal Affairs is responsible for network and information security. The Macedonian Academic Research Network operates as the national domain name registry.

FYROM has transposed the Electronic Commerce Directive, the Electronic Signatures Directive and the Cybercrime Convention.

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<sup>101</sup> <http://www.mtc.gov.mk/>

## 2. Regulatory independence

### a) Privatisation and operational independence

The privatisation process of the incumbent operator, Makedonski Telekom, was launched in January 2000, when the Government agreed to sell 51% of the shares to Magyar Telekom, a major Hungarian telecommunication operator and part of the Deutsche Telekom Group. In 2006, further shares in Makedonski Telekom were sold to institutional investors. Currently, the Government controls a 34.81% stake plus one 'golden share' in the incumbent operator. The state ownership and control functions are exercised by the Ministry of Finance.

The Electronic Communications Law stipulates that the members of the AEC Commission and its Director may not be shareholders in regulated entities or perform any other tasks that would result in a conflict of interests.

### b) Administrative independence

Under the Law on Electronic Communications, AEC has been granted sufficient powers to perform its regulatory tasks. The government has no right to intervene in the adoption by the AEC of decisions on a discretionary basis. Its roles are limited to setting the amount of one-off fees for spectrum licences awarded in public tenders and the approval of the designation of a universal service provider selected by AEC in a public tender, though the agreement with the selected provider is concluded by AEC.

## 3. Market access and authorisations

The country introduced full liberalisation of public fixed telephone networks and services in the second half of 2005.

The Law on Electronic Communications establishes a general authorisation regime where electronic communications networks and services can be provided without individual licences, subject to a general authorisation with a notification submitted to AEC before the start of activities. AEC is required to issue a written confirmation of the notification within 15 days of its receipt. Individual licences are issued by AEC for the right to use radio spectrum.

Although the general authorisation regime was introduced in 2005, it was only on July 24, 2008 that the Parliament enacted amendments<sup>102</sup> to the Law on Electronic Communications cancelling the concession contracts of Makedonski Telekom and of the two mobile operators, T-Mobile and Cosmofon. In September 2008 AEC confirmed to the operators their notifications for provision of electronic networks and services according to their cancelled concession contracts, and issued registrations and radio frequency authorisations.

Registered providers of public electronic communications networks and/or services pay an annual administrative fee to AEC. The maximum amount of the fee may not exceed 0.5% of the gross annual revenues derived from the provision of public communications networks and/or services during the previous calendar year.

## 4. Market structure

The incumbent operator Makedonski Telekom is the main provider of public fixed telephony networks and services. In addition to Makedonski Telekom, there are seven major alternative network operators currently active in the market. The main competitors are On.Net and Cosmofon, the mobile operator that recently became active also in the fixed telephony market; both are controlled by Telekom Slovenije.

There are three mobile operators in FYROM with their own networks: T-Mobile (Makedonski Telekom's mobile subsidiary), Cosmofon and VIP (owned by mobilkom Austria). T-Mobile and Cosmofon have been active in the market since 2001, while VIP launched its operations in 2007. T-Mobile and Cosmofon have been assigned 2G spectrum in the 900 MHz band, while VIP operates in both the 900 MHz and 1800 MHz. In 2008, 3G spectrum in the 2100 MHz was acquired in separate auction procedures by Cosmofon and by T-Mobile.

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<http://www.aec.mk/Portals/0/20080807/ZAKON%20ZA%20IZMENUVAVWE%20I%20DOPOLNUVAVWE%20NA%20ZAKONOT%20ZA%20ELEKTRONSKITE%20KOMUNIKACII.pdf>

In January 2009, AEC launched auction procedures for one national broadband access licence in the 1800 MHz band and two national 3G licences in the 2100 MHz band. No final decisions have been adopted yet.

On October 16, 2008 the Macedonian Commission for Protection of Competition approved the acquisition of the controlling stake in OTE by Deutsche Telekom subject to the condition that OTE would have to sell its Macedonian subsidiary, Cosmofon. The condition was imposed to prevent the distortion of the effective competition, because after the transaction Deutsche Telekom group would control the two largest mobile operators in Macedonia, T-Mobile and Cosmofon. On March 30, 2009 OTE agreed to sell Cosmofon to Telekom Slovenije for €190 million. The sale was approved by the Macedonian Commission for Protection of Competition in April 2009. The transaction consolidates the market position of the Slovenian incumbent who already controls the largest alternative fixed operator On.Net.

## 5. Significant market power

The Electronic Communications Law provides for market analyses, definition of relevant markets, SMP designations and the imposition of remedies on SMP operators, based on the principles of the Law on Competition (as amended)<sup>103</sup> and the EU 2003 regulatory framework.

In August 2005, the AEC Commission adopted a Decision on the determination of relevant markets that sets out 18 product markets according to the EC Recommendation of 2003, all national in their geographic scope.

The Law requires AEC to carry out market analyses at least once every year, which has not been achieved in practice. So far, AEC has only completed its analysis of the wholesale call termination market for individual mobile networks, designating T-Mobile and Cosmofon as having SMP and imposing regulatory obligations in January 2008.

Until AEC has completed its market analyses, the transitional provisions of Article 146 of the Electronic Communications Law provide for the designation of Makedonski Telekom as having SMP in fixed voice telephone networks and services and data transmission and leased lines services. Makedonski Telekom is required to provide access to networks for data transmission and leased lines with the regulatory obligations of interconnection and access, CS/CPS, transparency, non-discrimination, publication of RIO, RUO and a reference offer for the minimum set of leased lines, accounting separation, price control and cost accounting obligations.

## 6. Competitive safeguards

The following competitive safeguards foreseen under the EU 1998 regulatory framework have been implemented in Macedonia:

- CS/CPS in fixed network has been available since January 2007 for national, international and calls to mobile numbers. In May 2008 AEC amended the RIO of Makedonski Telekom to enable CS/CPS for local calls.
- RIO of the fixed incumbent operator has been available since February 2006. First RIOs of the two mobile operators with SMP were submitted for approval to the AEC in April 2008. Following adoption of the new bylaw on interconnection in December 2008, RIOs were revised in February 2009.
- RUO has been available since May 2006 but so far there has been only one agreement on LLU between Makedonski Telekom and On.Net. Following adoption of the new bylaw on LLU in September 2008, revised RUO was approved by AEC in December 2008. One of the major changes is the possibility for alternative operators to offer 'naked DSL', i.e. broadband access without PSTN services offered over the same line.
- Wholesale line rental (WLR) was offered commercially since November 2008. The first regulated WLR offer was approved by AEC on March 16, 2009 in accordance with the new bylaw on WLR adopted in December 2008. WLR prices are regulated according to 'retail-minus' methodology with the discount set in the range of 20-35%. The prices in the WLR offer approved by AEC in March 2009 are set at 'retail minus 20%'.

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<sup>103</sup> <http://www.kzk.gov.mk/eng/law.asp>

- Wholesale bitstream access (BSA) with handover at IP-level and broadband resale had been offered commercially since 2007. The first regulated BSA and resale offers were presented for AEC approval in February 2009, following adoption of the new bylaw on wholesale bitstream access and resale in December 2008.
- Cost-oriented fixed interconnection and LLU charges based on forward-looking top-down LRIC methodology were approved in May 2008.
- Following adoption of a new bylaw on accounting separation in September 2008, Makedonski Telekom, T-Mobile and Cosmofon are required to submit to AEC their audited separate accounts prepared according to LRIC methodology by May 31, 2009.
- Number portability in fixed and mobile networks has been available since September 1, 2008. Recently the bylaw on number portability was amended to shorten the porting time from seven to two working days.

## 7. Universal service and consumer issues

The scope of universal service includes the following elements:

- access to publicly available telephone services at a determined geographical location, making and receiving local, national and international telephone calls, facsimile communications and data communications at a minimum speed of 2,400 bit/s;
- access to the single telephone directory and directory enquiry services;
- provision of public payphones;
- equivalent access to, and use of, publicly available telephone services for disabled end-users, including access to emergency calls services and information in single directory.

No universal service provider has been designated, although some of the elements have been provided by the incumbent operator within the scope of its concession agreement. AEC can designate one or more universal service providers based on a public tender. In January 2008, AEC launched a pre-qualification procedure for universal service providers. Two companies successfully passed the first phase but final selection phase has not been launched yet.

## 8. European Union

The European Commission noted significant progress, including enforcement measures that had created more competitive conditions for the benefit of consumers.<sup>104</sup> It found that the recent amendments to the Law of Electronic Communications have completed the alignment with the *acquis communautaire* with respect to appeal procedures and the authorisation regime, following the termination of the concession contracts.

Growing competition, with significant reductions in prices in the fixed and broadband markets, had been achieved by means of drastic reductions in interconnection rates, the introduction of number portability and the enforcement of obligations on SMP operators (e.g., interconnection offers, retail price control, cost accounting and accounting separation). While a third mobile operator had brought greater competition, the acquisition by Deutsche Telekom of OTE had increased its dominant position, requiring “corrective measures”. The emergency number 112 had yet to be introduced.

## 9. Outlook

The uncertainty concerning the appointment of the AEC Director was finally resolved in January 2009, when the AEC Commission appointed the new executive following a public tender procedure. Institutional capacity of the NRA remains one of the main issues with the planned recruitment of new staff during 2009.

Among other priorities of the AEC are market analyses, effective implementation of regulatory obligations, in particular regulatory cost accounting and wholesale price controls, as well as the implementation of the universal service framework.

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<sup>104</sup> The Former Yugoslav Republic of Macedonia 2008 Progress Report. [SEC\(2008\) 2695](#).

## C. Turkey

### 1. Legal and institutional framework

#### a) Electronic Communications Law

The new Electronic Communications Law (Law No. 5809)<sup>105</sup> initially vetoed by the President in August 2008 was finally accepted by the Parliament, approved by the President and published in the Official Gazette on November 10, 2008. The law brings important changes to the Turkish legal and institutional framework for electronic communications and is intended to improve the alignment with the EU regulations, in particular in the area of authorisations.

The new law came into force on the date of its publication, except for provisions on the general authorisation regime which enter into force on May 10, 2009.

#### b) Ministry of Transport

Ministry of Transport defines the state strategies and policies for the electronic communications sector aimed at promoting free competitive market, efficient use of scarce resources and development of electronic communications infrastructure and services in accordance with the objectives of public interest and national security.

According to the new Electronic Communications Law, the ministry is also responsible for promoting research, development and training activities for the needs of the electronic communications sector. The financing of such activities is foreseen through the transfer of funds from the national regulatory authority with an amount of up to 20% of its revenue.

Under the previous authorisation regime the ministry played an important role in defining tender procedures for concession agreements for provision of telecommunications services and infrastructures at the national level by a limited number of operators. Under the new law, the ministry remains responsible for determining the authorisation policy for the services that involve the use of spectrum resources and will be provided on the national scale by a limited number of operators. While determining the number of authorisations and their duration, as well as carrying out the tender procedures falls within the scope of the NRA competences, the law also reserves the right for the ministry to open tender procedures directly on its own to issue authorisations for services with the use of frequency resources on the national scale.

Under the Universal Service Law (No. 5369) of June 16, 2005, the ministry also remains responsible for the implementation of universal service and the management of the universal service fund.

#### c) Information and Communications Technologies Authority

The Electronic Communications Law changes the name of the national regulatory authority (formerly, Telecommunications Authority) to Information and Communication Technologies Authority (ICTA).

ICTA is an administratively and financially independent national regulatory authority, responsible for carrying out tasks defined under the Electronic Communications Law, including the adoption and administration of implementing legislation within its competencies, managing spectrum and numbering resources, carrying out analyses of the relevant electronic communications markets and imposing regulatory obligations on operators designated as having SMP, inspection and arbitration.

The decision-making body of ICTA is the Board, consisting of seven members, including a Chairman and a Vice Chairman. The Chairman is also responsible for the general management and representation of ICTA. Board members are appointed for a period of five years by the Council of Ministers, subject to the approval by the President of the Republic. They are nominated as follows:

- two by operators having at least 10% market share;
- one by the Ministry of Industry and Trade;
- one by the Union of Chambers of Commerce and Industry; and

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<sup>105</sup> [http://www.tk.gov.tr/Duzenlemeler/Hukuki/Kanunlar/2008/elektronik\\_haberlesme\\_kanunu.htm](http://www.tk.gov.tr/Duzenlemeler/Hukuki/Kanunlar/2008/elektronik_haberlesme_kanunu.htm)

- three by the Ministry of Transport.

The Board members can only be dismissed before the completion of their term by the Council of Ministers because of their inability to work, due to serious illness, professional misconduct or criminal offences.

ICTA has independent sources of finance, including annual administrative charges, numbering and frequency fees, fines levied on operators and revenues obtained through consultancy and training. Any surplus at the end of the year is transferred to the Treasury. The accounts of ICTA are audited by the Supreme Audit Council of the Prime Minister, the Ministry of Finance and the Council of Inspectors of the Prime Minister.

Appeals against ICTA regulations and Board decisions can be brought before the Council of State, the highest administrative court in Turkey.

#### d) Information society

The State Planning Organization (SPO) of the Prime Ministry has a broad scope of responsibilities. It prepares the Council of Ministers' long-term development plans and annual programmes for all kinds of state planning including setting macroeconomic goals and alignment with the EU policies in general. Developing the Information Society Strategy (which is in its current version valid for the period from 2006 to 2010) is one of the many planning tasks of the SPO. Such strategies are adopted by the High Planning Council composed of the Prime Minister, several other ministers and the Undersecretary of the SPO.

Other bodies with information society responsibilities are the Turkish Statistical Institute (information society statistics), TR-CERT (information security policy) and the National Research Institute of Electronics and Cryptology (UEKAE, monitoring threats to information security, including spam). ICTA is in charge of supervising electronic signatures. An organisational unit of the Middle East Technical University is the national domain name registry.

Turkey has transposed the Electronic Signatures Directive. It has not ratified the Cybercrime Convention, but the crimes listed in this convention are considered as criminal offences in the Turkish Criminal Code.

## 2. Regulatory independence

### a) Privatisation and operational independence

The framework for privatisation of Türk Telekom was established in 2001, stipulating that one golden share would be retained by the government. On July 1, 2005, 55% of the shares in Türk Telekom were sold at auction to a consortium led by Oger Telecom. On December 10, 2007 the Cabinet of Ministers decided to privatise an additional 15% of Türk Telekom shares through an IPO. Since May 15, 2008 shares of Türk Telekom have been traded on the Istanbul Stock Exchange.

The state currently owns 30% of shares of Türk Telekom, in addition to its golden share. It also controls the Turkish satellite and cable TV operator Türksat, and remains an important shareholder in the mobile operator, Avea, which is 81.1% owned by Türk Telekom. The ownership and golden share functions are exercised by the Treasury, while the Ministry of Transport is responsible for operational activities, in particular of Türksat. Therefore, the separation of regulation from ownership and control functions has yet to be achieved.

### b) Administrative independence

The new law provides for a more clear division between the responsibilities of the Ministry of Transport as the policy making body and the regulatory tasks of the national regulatory authority, although there remains a certain overlap of functions regarding authorisation procedures.

ICTA administrative independence is stipulated by the new provisions of article 5 of the Law on Establishment of Information Technologies and Communications Authority (Law No. 2813) amended by the Electronic Communications Law: *'ICTA is independent in performing its tasks. Not any body, office, authority or person could direct or instruct the Authority.'*

### 3. Market access and authorisations

#### a) Authorisations regime

From May 10, 2009 the new Electronic Communications Law introduces a general authorisation regime with a notification to ICTA. This replaces the previous complex regime consisting of authorisation agreements, concession agreements and individual licences issued for every specific service category, with the only exception of Internet services and some categories of value-added services that already now could have been provided subject to a general authorisation regime.

Individual rights of use will be issued only for the use of scarce resources, such as frequencies and numbers. Where the number of rights of use is not limited, the rights of use are issued by ICTA within 30 days from the application. Authorisations for the services where the number of rights of use is limited, such as frequency bands or satellite positions, will be issued based on a public tender procedure.

Operators who were authorised under the previous regime through an individual licence or a general authorisation will be regarded as having been notified to ICTA and assigned the rights of use when required. On the other hand, authorisation and concession agreements signed before the entry into force of the new law will remain in force until their termination due to expiry (i.e., up to 2029), annulment or cancellation for any other reason. The law does not contain any explicit requirement to bring them in line with the new authorisations regime within a short transitional period.

#### b) Market access

The provision of domestic long-distance and international telecommunications networks and services was liberalised from January 1, 2004, and the liberalisation of local services was formally introduced in July 2005. However, no licences have been issued so far to alternative operators for the provision of local telecommunications networks and services and Türk Telekom remains the only authorised provider.

In August 2007, the NRA had introduced an authorisation framework for fixed telecommunications services which covered the provision of voice telephony, data, payphones and value added services at the local level over the fixed network. This was seen as an important measure that would enable new entrants to enter the market for local voice telephony services. The regulator's decision was however overruled by the Council of State on the grounds that under this decision a single licence would enable the provision of more than one telecommunications service (i.e., voice and Internet).

On November 20, 2008 a new bylaw on telecommunications services and infrastructure setting out the authorisation regime for the provision of fixed telephony networks and services was published in the Official Gazette, after it had been revised in line with the objections raised by the Council of State. After the determination of minimal value of authorisation fees by the Council of Ministers, licences will be issued to alternative operators who would be able to offer local call services in competition with Türk Telekom. It seems that this new licensing regulation was not applied in practice before the general authorisation regime entered in force on May 10, 2009.

### 4. Market structure

The incumbent operator Türk Telekom remains the only authorised provider of public fixed telephony services with own network infrastructure. Competition has only emerged at the service level with alternative providers offering national long distance and international call services by means of CS/CPS and VoIP. The provision of Internet services is dominated by the incumbent's subsidiary TT Net providing over 90% of all fixed Internet connections. The competitors had been mainly using the wholesale broadband resale offer from Türk Telekom, and only recently most of them have migrated their customers to wholesale bitstream access offer with handover at IP-level following a campaign launched by the incumbent in late 2008.

There are three mobile operators in Turkey with their own network infrastructure: Avea (Türk Telekom's mobile subsidiary), Turkcell (37% owned by TeliaSonera) and Vodafone (owned by Vodafone group). Turkcell and Vodafone, both active on the market since 1998, have been assigned spectrum in the 900 MHz band, while Avea that was licensed in 2001 operates in the 1800 MHz band. On November 28, 2008 the regulator completed the auction procedure for four 3G UMTS licences in the 2100 MHz band, where Turkcell won the spectrum assignment for 40 MHz, Vodafone for 35 MHz and Avea for 30 MHz. The fourth licence for 25 MHz spectrum remained unassigned, as no bids were submitted. The three UMTS licences were officially awarded on April 30, 2009.

## 5. Significant market power

Although the previous legislation was largely based on the EU 1998 framework, the NRA decided in its 2005 work program to adopt the definitions of the 18 relevant markets according to the European Commission Recommendation of 2003 and conduct market analyses as foreseen under the EU 2003 framework. Market definitions and SMP designations were set out in the document published by the NRA in March 2005.

- In December 2005, the NRA completed its analysis of the wholesale markets for mobile access and call origination and for voice call termination on individual mobile networks, corresponding to markets 15/2003 and 16/2003, respectively. All three MNOs, Turkcell, Vodafone and Avea were designated as having SMP in the mobile call termination, with Turkcell also as having SMP in the mobile access and call origination.
- In March 2006, the NRA completed its analysis of the fixed markets, both wholesale and retail, corresponding to markets 2003/1-14, and designated Türk Telekom as having SMP in those markets.

The NRA, however, had little discretion in imposing regulatory obligations, with most remedies predefined by law and triggered automatically by SMP designation.

The new Electronic Communications Law foresees that market analysis procedures are to be carried out by ICTA in accordance with the EU 2003 regulatory framework. The law, however, contains no provisions on market analysis procedures, methods for identification of relevant markets, SMP designation and imposition of regulatory obligations. These aspects are to be addressed in the secondary legislation that is currently being drafted or revised by ICTA.

ICTA has decided to delay the new market analyses procedures until the secondary legislation required under the new law has been adopted. The regulatory obligations imposed on the operators with SMP will remain in force until new market analyses have been completed.

## 6. Competitive safeguards

The following competitive safeguards have been implemented:

- CS/CPS on fixed network has been available since 2006 for long-distance and international calls, as well as for call to mobile numbers; it is not yet available for local calls.
- RIOs have been published by Türk Telekom and by the mobile operators with SMP.
- RUO has been available since November 2006 and a regulated reference offer for wholesale bitstream access and resale since August 2007. Initially wholesale bitstream access was available only at IP-level, but in December 2008 ICTA approved the first reference offer for bitstream access at ATM level that will be valid from June 30, 2009.
- Number portability was implemented in November 2008 in mobile networks with over 1.2 million numbers ported within first four months from its introduction. Number portability in fixed network must be implemented by May 2009.

## 7. Universal service and consumer issues

Under the Universal Service Law (No. 5369) of June 16, 2005, the scope of universal service covers fixed telephone services, public payphones, printed or electronic directory services, emergency call services, basic internet services, passenger transport services to places that can be reached only through sea transport, and maritime emergency and security communications services.

In 2006, this list was extended by the Council of Ministers to include two further elements:

- services oriented to spread information technologies, including computer literacy, to help the development of information society (February 2006), and
- digital broadcasting services utilising various broadcast media and technology via digital terrestrial transmitters and covering the entire settlements countrywide (April 2006).

The Universal Service Law envisages a tender procedure for the designation of universal service providers that has not yet been implemented. In June 2006 the Ministry of Transport issued the Ordinance on Principles and Procedures for the Collection of Universal Service Revenues and Execution of

Expenditures that also clarifies the USO provider designation mechanism. First, the ministry determines the relevant elements of the universal services and the specific locations where these services are to be provided. Then the providers of the universal services are designated on the basis of a tender procedure. In rural regions, where the cost of service provision is high, the ministry is also authorised to impose temporary obligations on providers that have more than 70% market share in a given geographic market.

As universal service legislation has not been applied in practice, universal service is currently provided by Türk Telekom in accordance with requirements set out in its concession agreement. At the same time, contributions to the universal service fund are collected from several sources:

- 2% of the authorisation fees collected by the NRA;
- 1% of net sales revenues of all operators, except for GSM operators;
- 10% of payments by GSM operators to the Treasury;
- 20% of administrative fines collected by the NRA;
- 20% of what remains in the NRA budget after all expenditures have been deducted.

These can be increased by up to 20% by the Council of Ministers. The revenues are collected by the Treasury and allocated to the budget of the Ministry of Transport, although no payments have been made to operators.

## 8. European Union

Alignment with the *acquis communautaire* remained “limited”, requiring the adoption of further legislation.<sup>106</sup> The European Commission in particular commented on the long-drawn adoption process of the new Electronic Communications Law, which was initially vetoed by the President in August 2008, before its final adoption and entry into force in November 2008.

The Commission noted some progress concerning competitive safeguards imposed on dominant operators. However, despite strong growth in mobile and fixed, competition was described as “marginal”, for example, with more than 95% of broadband Internet access being provided by the incumbent.

New regulations on access and interconnection for SMP operators had been adopted, including the provision of RIOs. While there was a RUO for the incumbent, there had been only “limited progress” towards equitable and transparent conditions for fixed wholesale broadband access. Implementation of number portability was also well under way. However, according to the Commission, “no progress” had been made on accounting separation and cost accounting of the fixed incumbent.

High taxation on communication services, unrelated to the administrative costs of regulating the sector, was seen as a “problem”. The scope and implementation of universal service obligations were incompatible with the *acquis communautaire*. Liberalisation of local telephony had not been implemented, undermining competition in the fixed and broadband markets.

While the regulator was well staffed and self-financed, it lacked independence, in particular in the authorisation process. Its decision-making processes were not seen as transparent.

New regulations on the provision of Internet services at public places and on the principles and procedures concerning the regulation of broadcasts on the Internet had been adopted. Implementation of these had the “potential to violate freedom of expression”.

## 9. Outlook

Following the adoption of the Electronic Communications Law, one of the key priorities of the NRA is adoption of the necessary secondary legislation, which would ensure a sound legal basis for application of the principles of the EU 2003 regulatory framework.

Other aspects include the authorisation regime, in particular the authorisation of alternative local telephone networks and services, the problem of high communications taxes imposed on operators which are detrimental to market entry, the implementation of universal service in compliance with the EU framework and the effective independence of the regulatory authority.

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<sup>106</sup> Turkey 2008 Progress Report. [SEC\(2008\) 2699](#).

## D. Albania

### 1. Legal and institutional framework

#### a) Law on Electronic Communications

The Law on Electronic Communications (Law No. 9918 of May 19, 2008) that entered in force on June 26, 2008 is the principal legal instrument for the regulations of the electronic communications sector and defines the institutional framework, including the responsibilities of the government, the relevant ministry and the national regulatory authority. It replaced the previous Law on Telecommunications (Law No. 8618 of June 14, 2000) and is intended to bring Albanian law into line with the EU 2003 regulatory framework for electronic communications.

#### b) Ministry of Public Works, Transport and Telecommunications

The Ministry of Public Works, Transport and Telecommunications is the central state administration body competent for electronic communications and postal services.<sup>107</sup> The Directorate of Post and Telecommunications carries out the day-to-day work.

The ministry is responsible for drafting policies for electronic communications sector subject to approval by the Council of Ministers, drafting relevant primary and secondary legislation and preparing the National Radio Frequency Plan. It also approves tender procedures for frequency assignment and the designation of universal service providers, based on proposals by the regulator.

In April 2009, the ministry presented to the Council of Ministers for approval the new National Radio Frequency Plan developed in accordance with the European Common Allocation table. The plan was approved by the Council of Ministers on May 6, 2009. With EBRD assistance the ministry has recently prepared a draft policy on electronic communications for the period from 2009 to 2014. After a public consultation the policy will be submitted to the Council of Ministers.

#### c) Authority of Electronic and Postal Communications

The Law on Electronic Communications established the Authority of Electronic and Postal Communications (AKEP) as the new regulatory authority that took over the tasks and responsibilities of the previous regulator, the Telecommunications Regulatory Entity (TRE).<sup>108</sup> AKEP is a public, independent, non-budgetary legal entity responsible for carrying out regulatory tasks defined by the Law on Electronic Communications, including adoption and administration of implementing legislation within its competencies.

AKEP is managed by a Governing Council composed of five members appointed for a five year office term, by the Assembly of the Republic of Albania, on the proposal of the Council of Ministers, with the right of reappointment for one further term. The Assembly designates one of the members of the Governing Council as the Chairman, who also acts as the Executive Director of AKEP.

AKEP is a self-financed entity funded from the annual market supervision fees paid by operators and service providers. It is required at the beginning of each financial year to present its forecast budget for approval by the Council of Ministers. Any surplus of revenues over is at the end of the year is transferred to the state budget.

AKEP is accountable for its activities before the Assembly. At the end of each year, AKEP is required to submit to the Assembly an annual report on its activities.

In appeal procedures, AKEP decisions could be initially submitted as an administrative appeal for the review by the Governing Council. In this case there is a suspension of one month provided for under the Code of Administrative Procedures. Within this month the administrative appeal has to be considered and a final decision taken by AKEP. As the next step, the appeal can be brought before the Tirana District Court (the Court of First Instance).

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<sup>107</sup> [www.mpptt.gov.al/](http://www.mpptt.gov.al/)

<sup>108</sup> [www.ert.gov.al](http://www.ert.gov.al)

d) Information society

The National Agency on Information Society (NAIS)<sup>109</sup> was established by a decision of the Council of Ministers in April 2007 and became operational in September 2007. Its overall objective is to coordinate the government's activities in the field of information society and communication technologies. In particular, NAIS is responsible for proposing the national strategy on the information society, drafting information society legislation, coordinating ICT projects of the government, standardising technical requirements for governmental IT equipment and providing technical assistance to other government bodies. On January 21, 2009 the Council of Ministers approved the new national strategy on information society.

The Institute of Statistics (INSTAT) is responsible for information society statistics, but such statistics are not yet available. A national authority on electronic signature has recently been established under the Ministry of the Interior. Albania has not designated a body responsible for network and information security in general. AKEP is also the national domain name registry.

Albania has transposed the Electronic Signatures Directive and the Cybercrime Convention. On May 11, 2009 the Parliament adopted a law transposing the Electronic Commerce Directive.

2. Regulatory independence

a) Privatisation and operational independence

On June 19, 2007, after a two-year period of negotiations over the privatisation of Albtelecom, the incumbent operator, Calik Enerji and the Albanian Ministry of Economy, Trade and Energy, signed an agreement for the sale of a 76% stake to a joint venture of Calik Enerji and Türk Telekom. The deal also included Eagle Mobile, the third mobile operator. The privatisation agreement was ratified by the Albanian Parliament on July 19, 2007. Currently, the state retains 24% of shares in Albtelecom and Eagle Mobile. The ownership functions are exercised by the Ministry of Economy, Trade and Energy.

Albanian Mobile Communications (AMC), a major mobile operator, was privatised in 2000 through the sale of 85% shares to Cosmote, a mobile subsidiary of the Greek incumbent operator. In February 2009, the government agreed to sell the rest of its stake in AMC to Cosmote, who following the transaction will control, directly and indirectly, 95% of AMC.<sup>110</sup>

b) Administrative independence

The Law on Electronic Communications substantially extends the powers of AKEP to issue secondary legislation and perform its regulatory functions without any intervention by the ministry or by the government. In particular, AKEP is authorised to set out administrative fees, to impose price control obligations (along with other regulatory obligations) on operators with SMP and set out methodologies for regulation of tariffs without any requirement for the ministry approval.

The administrative independence of AKEP is undermined by legal provisions restricting its ability to decide independently on its organisation structure and the salary levels. As with the previous Law on Telecommunications, the new Law on Electronic Communications maintains the requirement for AKEP organisational structure and salary levels to be approved by the Assembly on the proposal of the Council of Ministers. So far, however, all proposals submitted by AKEP have been approved by the Council of Ministers. For example, in November 2008, the Council of Ministers approved AKEP's proposal regarding the salaries of its Council members.

Another factor undermining NRA independence is the record of repeated dismissals of its Council members. The grounds for these actions had not always been stated in a clear and transparent manner, giving rise to concerns that they may have been politically motivated.

The current Council, which is in office since March 2008, has been hampered by conflicts between Council members. Some of the decisions adopted by a majority of the Council members were obstructed by staff under the control of the Executive Director. In March 2009 these conflicts escalated and brought

<sup>109</sup> <http://www.akshi.gov.al>

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[http://www.cosmote.gr/cosmote/cosmote.portal?locale=en\\_US&\\_nfpb=true&\\_pageLabel=press\\_releases&path=%2FSCSDevRepository%2Fcontent%2Fen%2Fsections%2Fpressoffice%2Fpressrelease%2F240409eng.xml&breadcrumbTitle=Announcement](http://www.cosmote.gr/cosmote/cosmote.portal?locale=en_US&_nfpb=true&_pageLabel=press_releases&path=%2FSCSDevRepository%2Fcontent%2Fen%2Fsections%2Fpressoffice%2Fpressrelease%2F240409eng.xml&breadcrumbTitle=Announcement)

the decision-making process at the Council level to a complete standstill. As the law defines most regulatory topics as a competence of the Council, the ongoing problem hinders AKEP from fulfilling its regulatory tasks.

### 3. Market access and authorisations

The liberalisation of fixed electronic communications networks and services was introduced gradually: starting with rural local networks in 1998, then domestic long-distance networks in July 2003 and international networks in January 2005. Amendments to the Law on Telecommunications adopted in November 2006 introduced a new concept of regional licences for rural, urban, and domestic long distance networks and effectively opened urban local networks for competition. The relevant implementing legislation was approved by the regulator only in April 2007.

Before the entry into force of the new Law on Electronic Communications came into force in June 2008, no effective competition has emerged in the provision of international interconnection connectivity.

The Law on Electronic Communications introduced a general authorisation regime where electronic communications networks and services that do not require the use of limited resources can be provided without individual licences. These services can now be provided subject to a notification submitted to AKEP who must complete the registration within 15 days. AKEP adopted secondary legislation on the notification procedure in September 2008. Individual authorisations are issued by AKEP for the right to use radio spectrum and numbers.

In December 2008, at the end of a six months transition period, AKEP harmonised all existing licences with the authorisation framework of the new law. All operators that were previously issued regional licences may freely extend the provision of their services over the entire territory of the Republic of Albania both by extending the geographic coverage of their networks and by interconnecting with other networks.

### 4. Market structure

The incumbent operator Albtelecom remains the dominant player in the provision of fixed telephony services. In the provision of international services, its market share by minutes of traffic is currently 96%, while in the provision of national services, where it faces some competition from the regional operators its market share is about 72%. In the provision of Internet services, several regional competitors have emerged offering broadband services over own fibre, cable and wireless networks, mainly in the major cities.

There are three mobile operators in Albania with own their network infrastructure: AMC, Vodafone and Eagle Mobile, all licensed to operate 2G mobile services in the 900 MHz and 1800 MHz bands. AMC has been operational since 1996, Vodafone since 2001, while Eagle Mobile licensed in 2004 launched its commercial services in March 2008 following its privatisation in 2007.

In February 2009, AKEP held a tender procedure to award the forth 2G mobile spectrum licence in the 900 MHz and 1800 MHz bands. Two undertakings participated in the tender: a consortium led by Post and Telecom of Kosovo (PTK) with the bid of €7.2 million and Universal PG with the bid of €5 million. In April 23, 2009 the Albanian parliament through Law No. 10118 of April, 2009 awarded the licence to the PTK consortium. The spectrum licence is valid for 15 years.

No decision on the award of 3G licences in the UMTS band has been taken yet.

### 5. Significant market power

Under the Law on Telecommunications of 2000, the NRA had discretion to define relevant markets applying competition law principles. The designation of SMP was on the basis of the static 25% market share threshold, sometimes combined with assessment of other criteria. Basic remedies applicable to all operators with SMP were specified by the Law on Telecommunications, while some further discretionary remedies were specified in the TRE Regulation on Access and Interconnection of December 7, 2007.

In November 2007 the regulator designated the mobile operators, AMC and Vodafone, as having SMP in the markets for wholesale call termination on individual mobile networks and retail public mobile services, imposing the regulatory obligations of access and interconnection, non-discrimination, transparency including the requirement to publish a RIO, price control, accounting separation and cost accounting.

On November 13, 2007 the regulator designated Albtelecom as having SMP in six markets, covering retail access and publicly available phone calls at a fixed location, wholesale call termination on geographic

numbers on the Albtelcom fixed network, wholesale call origination on the public fixed telephone network, national transit services in the public fixed telephone network and international transit services in the public telephone network. The scope of regulatory obligations includes: CS/CPS, access and interconnection, non-discrimination, transparency (including the requirement to publish a RIO), price control, accounting separation and cost accounting.

The new law provides for market analyses, the definition of relevant markets, SMP designations and the imposition of remedies on SMP operators based on the principles of the Law No. 9121 on the Protection of Competition and the EU 2003 regulatory framework.<sup>111</sup> It also requires AKEP to carry out market analyses at least once every two years. Until the NRA has completed its first round of market analyses under the new framework, the previous SMP designations and regulatory obligations remain in force. AKEP plans to undertake its market analyses in 2009 after adopting the new regulation on market analysis and SMP designation.

## 6. Competitive safeguards

Implementation of the key competitive safeguards has started in Albania only recently.

- The first RIOs of Albtelcom, AMC and Vodafone were submitted to the NRA for approval in March 2008. Following several revisions, RIOs were finally approved and published on February 18, 2009.
- The price control regulations of retail and wholesale tariffs of the three operators with SMP, Albtelcom, AMC and Vodafone, were approved by the Council of Ministers on June 18, 2008 (as part of its competencies under the previous law). The new tariffs were approved by AKEP on August 28, 2008. Retail price controls for both fixed and mobile services are price cap methodologies that apply from September 1, 2008 until August 31, 2010.
- The main objective of the tariff regulation for Albtelcom retail services is tariff rebalancing of fixed tariffs. As a result of the regulation implemented on September 15, 2008, tariffs for residential customers changed as follows:
  - 20% increase in the monthly rental fee;
  - 12% increase in local calls tariffs;
  - 17-57% reduction in national calls (to fixed networks) tariffs;
  - 13-24% reduction in tariffs for calls to mobiles;
  - Up to 63% reduction for international calls.

For business customers, monthly rental and retail calls tariffs were increased, while the tariffs for national and international calls were reduced by up to 63%.

- The NRA adopted a Regulation on Access and Interconnection in December 2007 that includes the rules for publication and content of RUO, but there is no obligation yet for Albtelcom to provide LLU or to publish its RUO.
- CS/CPS was imposed as an SMP obligation on Albtelcom but no decision on its implementation has been taken.
- No decision on implementation of number portability has been adopted so far. The new law provides that it should be implemented within 12 months, i.e. by June 2009.

## 7. Universal service and consumer issues

Under the Law on Electronic Communications, AKEP can designate one or more universal service providers based on a public tender procedure, subject to the Ministry approval. The scope of universal service includes the following elements:

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<sup>111</sup> <http://go.worldbank.org/BKB2R8ZAT0>

- access to the telephone service available to the public from a defined geographic location, enabling the user to make and receive local, national and international calls, facsimile communications and data communication at a minimum speed of 32 kbps;
- telephone directory;
- public payphones; and
- equivalent access to and use of telephone service made available to disabled end-users, including access to emergency calls services and information in telephone directory.

No decision on the designation of the universal service providers has been taken so far.

## 8. European Union

The European Commission noted only “some” progress, including new primary legislation in line with the *acquis communautaire*.<sup>112</sup> However, an electronic communications strategy, related policy documents and secondary legislation had yet to be adopted. Market liberalisation and competition were “still at an early stage”.

There was a lack of competitive safeguards such as tariff rebalancing, RIO, CS/CPS and RUO. The legislation allowing operators to apply for urban and regional licences in addition to the rural and national licences had not increased competition.

There was “insufficient administrative capacity” in the ministry and in the regulator, while the latter also needed to develop the “necessary expertise” to implement and to enforce the new legislation.

## 9. Outlook

Among the outstanding issues is the full implementation of the Law on Electronic Communications and adoption of the required secondary legislation under the new law. Competitive safeguards, such as number portability, CS/CPS, local loop unbundling and cost accounting models for the introduction of cost-based tariffs remain to be introduced. AKEP needs to strengthen and deepen its expertise. Available spectrum needs to be assigned to operators and the legislation must be aligned closer with the EU framework.

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<sup>112</sup> Albania 2008 Progress Report. [SEC\(2008\) 2692](#).

## E. Bosnia and Herzegovina

### 1. Legal and Institutional framework

#### a) Law on Communications

The Law on Communications of October 21, 2002 defines the institutional framework in respect of the policy making and the regulation of the electronic communications sector. Within the scope of the law are included telecommunications, radio and TV broadcasting, cable television, and associated services and facilities.

#### b) Council of Ministers and Ministry of Communications and Transport

The Council of Ministers is responsible for adopting policies for communications. The Ministry of Communications and Transport drafts policies and prepares primary and secondary legislation. Under the Law on Communications, the Council of Ministers is also responsible for defining the scope of the universal service, designating the providers and establishing the funding mechanism, based on proposals of the NRA.

Telecommunications Sector Policy adopted by the Council of Ministers is the main policy document that sets out the priorities for telecommunications services and infrastructure development, defines specific regulatory objectives and an action plan for their implementation by the Ministry of Communications and Transport and the NRA. Following the expiry of the previous sector policy in December 2007, adoption of the new policy by the Council of Ministers was delayed by over a year. This resulted in a regulatory vacuum during 2008, as no important decision were taken, addressing for example, 3G licences, number portability, LLU implementation.

The new Telecommunications Sector Policy for the period from 2008 to 2012 was finally approved by the Council of Ministers on December 18, 2008.<sup>113</sup>

#### c) Communications Regulatory Agency

The Law on Communications establishes the Communications Regulatory Agency (RAK) as a functionally independent and non-profit institution, responsible for regulating broadcasting and public telecommunications networks and services. Its responsibilities include licensing, tariffs, interconnection issues and conditions for the provision of common national and international communications facilities; planning, co-ordinating, allocating and assigning the radio frequency spectrum; management of the numbering plan and assignment of numbering resources to telecommunications operators.

Strategic and policy implementation issues are decided by RAK Council. It consists of seven members nominated by the Council of Ministers and appointed by the Parliament. RAK Council adopts codes of practice and rules for broadcasting and telecommunications, as well as its own internal rules.

RAK is headed by a Director General, who is proposed by RAK Council and approved by the Council of Ministers. He is responsible for all regulatory and administrative functions of RAK and manages its day-to-day operations, including implementation of relevant laws and policies, technical oversight, industry affairs and staffing.

The Parliament has the sole authority to dismiss the members of RAK Council before completion of their mandate. Similarly, the Council of Ministers has the sole authority to dismiss the Director General before completion of his or her term. Both, members of RAK Council and the Director General have terms of four years and can be re-appointed only once.

Appeals against decisions made by the Director General can be submitted to RAK Council who acts according to the Law on Administrative Procedures making a full review of the decision. Pending the outcome of the appeal, the effect of the decision is not suspended. Decisions of RAK Council are final in the administrative procedure. Legal review of the decision can be brought before the State Court.

RAK has its own independent budget financed through fees for authorisations, numbering and spectrum.

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<sup>113</sup> <http://www.rak.ba/bs/telecom/sector-policy/?cid=2387>

d) Information society

The Ministry of Communications and Transport is in charge of information society policy. According to strategic documents (Policy for Development of the Information Society, Strategy for Development of the Information Society and Action Plan for Development of the Information Society), an Agency for Development of the Information Society of Bosnia & Herzegovina (ARID) shall be established. A draft law has been prepared, but not adopted by parliament. If established, ARID would also become responsible for information society statistics.

Bosnia & Herzegovina has neither designated a body responsible for network and information security nor established a supervisory body for electronic signatures. The University Teleinformatic Centre is the national domain name registry.

Bosnia & Herzegovina has transposed the Electronic Commerce Directive and the Electronic Signatures Directive. It has also ratified the Cybercrime Convention, but still needs to amend its Criminal Code accordingly.

## 2. Regulatory independence

a) Privatisation and operational independence

There are three incumbent operators, one in each of the three territories. The Federation government of Bosnia & Herzegovina retains 90% ownership in BH Telecom (Sarajevo) and 50.10% in Hrvatske Telekomunikacije – HT (Mostar), with the ownership functions performed by the Federal Ministry of Transport and Communications. The third incumbent operator, Telekom Srpske in the Republika Srpska is now fully privatised. In December 2006, the Serbian incumbent operator, Telekom Srbija, won the tender for the privatisation of 65% of Telekom Srpske with a bid of €646 million. The privatisation was finished in July 2007, after the Competition Council approved the transaction in April 2007. Twenty percent of the remaining shares are traded on the national stock exchange, 10% is held by a pension fund and 5% by a restitution fund.

b) Administrative independence

The Law on Communications provides for substantial administrative and financial independence of RAK. In particular, it ensures that neither the Council of Ministers, nor any individual minister may in any way interfere in the decision-making of the Agency in individual cases.

Under the Law on Communications RAK Council was also authorised to decide on the salary structure for its staff, including grades and any bonuses. The new Law on Salaries and Allowances for Civil Servants adopted on June 23, 2008, may hinder RAK's independence and administrative capacity by bringing the salary levels of its employees within the pay scales for civil servants. Under this law RAK must follow the established scales for the basic salary levels and will only be able to increase salaries of its employees through an additional "regulatory" bonus scheme.

A further factor that undermines the independence of RAK is the present uncertainty over the Director General, which complicates and slows down decision-making processes at RAK. After the mandate of the Director General had expired in 2007, RAK Council proposed to re-appoint him for another term. On September 27, 2007 the Council of Ministers rejected this proposal and requested RAK to repeat the selection procedure for the appointment of the new Director General. No new procedure has been initiated so far, and the Director General retains his position without the formal approval of the Council of Ministers.

## 3. Market access and authorisations

The liberalisation of the telecommunications sector was completed on January 1, 2006 with the opening for competition of international voice telephone services. According to the present licensing framework, the provision of fixed voice telephone networks and services is subject to an individual licence, while the provision of Internet services is subject to a general (class) licence.

The one-off administrative charges for fixed and mobile telephony networks and services are BAM 1,000 (€511) and BAM 500 (€255) for Internet services. The annual fees depend on the scope of provided services: BAM 500,000 (€255,600) for public fixed telephone services with own network infrastructure; BAM 70,000 (€35,800) for public fixed telephone services without own networks; BAM 5,000 (€2,500), BAM 10,000 (€5,000) and BAM 50,000 (€25,000) for operators of local, regional and national networks,

respectively. The annual fee paid by 2G mobile network operators is BAM 600,000 (€307,000), while ISPs pay BAM 4,000 (€2,100) a year.

On March 27, 2009 RAK published for consultation draft proposals to reduce annual fees from BAM 500,000 to BAM 450,000 for public fixed telephone services with own network infrastructure; from BAM 70,000 to BAM 55,000 for public fixed telephone services without own networks; and from BAM 600,000 to BAM 550,000 for 2G mobile network operators.

#### 4. Market structure

The specific aspect of Bosnia & Herzegovina is the existence of three regional incumbent operators on each of the three ethnic territories: BH Telecom based in Sarajevo, Telekom Srpske in Banja Luka and Hrvatske Telekomunikacije in Mostar. Each of the three incumbent operators operates its own public fixed telephony network.

The incumbents retain the dominant position in the provision of public fixed telephony services with combined market share close to 99%. Few new entrants have become operational since liberalisation of the sector: 10 alternative providers currently offer public fixed telephony services over the incumbents' network infrastructure based on CS or VoIP. No new licences for provision of fixed telephony services with own network have been granted.

There are three 2G mobile networks in Bosnia & Herzegovina that are also operated by the three incumbent operators. All of them are licensed to operate in both the 900 MHz and 1800 MHz bands. On March 26, 2009 RAK issued three 3G/UMTS licences, with 15 years validity period, to the three existing mobile operators without any tender procedure. Each will pay €15 million over seven years for the 3G licence, after a two-year grace period.

#### 5. Significant market power

The undertakings with SMP are designated by RAK on the basis of the static 25% market share threshold. Basic remedies for operators with SMP, such as access, interconnection and non-discrimination, are set out in the Law on Communications, but RAK has discretionary powers to decide on a further set of specific regulatory obligations.

On September 27, 2007 RAK designated the three incumbent operators, BH Telecom, Telekom Srpske and HT Mostar as having SMP in public fixed telephone networks and services and in public mobile telephony services. The scope of regulatory obligations includes: non-discrimination, cost orientation, transparency, access and interconnection, price control, RIO, and for fixed networks, provision of CS/CPS.

#### 6. Competitive safeguards

The following key competitive safeguards foreseen under the EU 1998 regulatory framework have been implemented in Bosnia & Herzegovina.

- CS/CPS was introduced in July 2007 but remains at an early stage with only four alternative operators providing CS services.
- RIOs for the three fixed incumbent operators have been available since November 2005.
- RUOs are expected to be published before the end of 2009, RAK regulations on LLU adopted in 2008.
- Number portability in fixed and mobile networks is expected to be implemented before the end of 2009.
- The new Telecommunications Sector Policy foresees adoption of the necessary authorisation framework and amendment of RIOs of the mobile operators to enable market entry for MVNOs.

#### 7. Universal service and consumer issues

The Law on Communications states that the Council of Ministers shall define the scope of universal service, the funding mechanism and the designation of the universal service providers, which has not yet been decided.

Currently, the requirement to offer the minimum scope of universal services is included in the licences of the three incumbent operators. This covers provision of the following services: connections to the public fixed telephone network at a fixed location and access to public fixed telephone services at affordable prices, allowing users to make and receive national and international calls, supporting speech, facsimile and/or data communications; provision of directories and directory enquiry services; public pay phones; free access to emergency services.

A draft regulation on a more comprehensive universal service framework has been submitted by the NRA for approval by the Council of Ministers.

## 8. European Union

According to the European Commission, progress was held to be “limited” with few new entrants having become operational since liberalisation of the sector and no new licences for fixed telephony services having been granted.<sup>114</sup>

While rules on number portability and local loop unbundling had been adopted by the regulator, the timeframe for implementation was delayed pending adoption of the new sector policy by the Council of Ministers. Tariff rebalancing was still at an “early stage”.

The regulator required human, financial and technical resources in order to support the development of the sector.

The new Law on Wages and Allowances challenged the independence of the regulator, as did the unresolved issue of the nomination of its Director-General and difficulties with decisions of the regulator having to be submitted to the Council of Ministers. The Commission called on all stakeholders to work constructively to solve the outstanding issues and to guarantee the independence of the regulator.

## 9. Outlook

Among the key priorities for the sector remain implementation of number portability and LLU, tariff rebalancing, adoption of the universal service framework, licensing of 3.5 GHz spectrum band for fixed wireless access.

A prerequisite for effective functioning of the national regulatory and policy-making authorities is the resolution of the uncertainty around the appointment of the Director General of RAK and strengthening of the institutional capacity of both the NRA and the Ministry of Transport and Communications.

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<sup>114</sup> Bosnia and Herzegovina 2008 Progress Report. [SEC\(2008\) 2693 final](#).

## F. Montenegro

### 1. Legal and institutional framework

#### a) Law on Electronic Communications

The new Law on Electronic Communications that was adopted on July 29, 2008 (Official Gazette 50/2008) and entered into force on August 27, 2008, defines the legal and institutional framework for the electronic communications sector, including the responsibilities of the government, the relevant ministry and the national regulatory authority. It replaced the previous Law on Telecommunications of 2000 and is intended to bring Montenegrin law into line with the EU 2003 regulatory framework for electronic communications.

#### b) Ministry of Maritime Affairs, Transportation and Telecommunications

The Ministry of Maritime Affairs, Transportation and Telecommunications is the government department overseeing the telecommunications sector.<sup>115</sup> Its main responsibilities include:

- developing national strategies and legislation for telecommunications;
- adopting secondary legislation within the legal framework;
- supervision of the implementation of the law and secondary legislation; and
- review of the NRA decisions subject to the administrative appeal procedures.

#### c) Agency for Electronic Communications and Postal Services

The Agency for Electronic Communications and Postal Services (EKIP) is established as a national regulatory authority, functionally independent of all entities operating electronic communications networks or providing services.

Initially founded in 2001 as a national regulator for telecommunications sector, its responsibilities were extended in 2005 to cover postal services and under the new Law on Electronic Communications adopted in 2008 the agency also took over the task of spectrum assignment for the broadcasting sector. EKIP is now the single regulatory body responsible for spectrum assignments in both telecommunications and broadcasting sectors, while the Broadcasting Agency is only responsible for broadcasting content issues. To be able to perform these new responsibilities, EKIP has also taken over part of the staff and the fixed assets of the Broadcasting Agency.

The new law changes the management structure of the NRA. Previously, the head of the Agency was a Director appointed by the government for a period of four years, with the possibility of reappointment for a second consecutive term. Under the new Law, the NRA is governed by the Council, consisting of the President and four members, while its professional services are managed by the Executive Director. The Council is a decision making body of EKIP that adopts its statutes, internal rules and procedures, approves its work plan, financial plan and annual report presented to the government, and adopts the regulatory measures and the decisions of the NRA. The Executive Director is responsible for organising and managing the professional service of the NRA.

The Council is appointed by the government upon the ministry proposal for a 5 years term of office. The Executive Director is appointed by the Council for a 4 years term of office. Neither the Council members, nor the Executive Director may hold office for more than two consecutive terms.

On December 11, 2008 the government appointed the Council of the NRA. The President and three of the Council members are engaged as full-time employees, and one member – part-time. On January 21, 2009, the Council appointed the Executive Director of EKIP who became the former director of the NRA.

EKIP is established as a self-financing entity, funded from three main sources: administrative fees, numbering and spectrum fees. The amount of fees to be paid to the NRA budget by authorised operators and service providers under the new law is approved annually by the government after the NRA has presented its financial plan and proposed fees. If the funds collected by the NRA exceed its expenditure

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<sup>115</sup> <http://www.vlada.cg.yu/eng/minsaob/>

for a fiscal year, the law no longer requires to transfer the surplus to the state budget but allows to move it in the next year's budget.

The new law has modified the appeal system for EKIP decisions. If in the past the decisions of the NRA were considered as final in the administrative procedure and could only be appealed to the Supreme Administrative Court of Montenegro, the new Law gives the ministry the power of the review of the NRA decisions in the administrative appeal procedure, before filing an appeal before the court.

d) Information society

The Ministry for Information Society established in December 2008 took over the tasks of the former Secretariat for Development. The ministry's main areas of responsibility are e-government, information society strategy and IT infrastructure. Its competencies include information security policy, information society statistics and electronic signature. Surveys for information society statistics are conducted by different non-governmental institutions. In February 2009 the ministry published the Strategy for Information Society Development of Montenegro for the period 2009–2013.<sup>116</sup>

The Council for „me“ domain has been established by a government decision. It decides on the domain name policy and selects the agent for the registry.

Montenegro has transposed the Electronic Commerce Directive and the Electronic Signatures Directive. It has not ratified the Cybercrime Convention, but most crimes listed in the convention are considered as criminal offences in the Criminal Code.

## 2. Regulatory independence

a) Privatisation and operational independence

Montenegro no longer has state ownership in any of the telecommunications operators. In March 2005, the Government of Montenegro sold its 76.53% shareholding in Crnogorski Telekom to Magyar Telecom, a Hungarian subsidiary of Deutsche Telekom. Private investors hold the remaining 23.47% of the shares which are listed on the stock exchange. The government stake in ProMonte, a major mobile operator, now owned by the Norwegian operator Telenor, was sold in 2001.

b) Administrative independence

The Law on Electronic Communications redefines the key functions of the ministry and the regulator making a clear division between the legislative and policy-making tasks carried out by the ministry (and the government) and the regulatory tasks performed by EKIP.

However, the procedures for the appointment and the dismissal and the members of EKIP Council through a government decision raise serious concerns about the administrative independence of the NRA. Another factor undermining the NRA independence is the new role of the ministry as an appellate body for EKIP decisions along with its powers under article 130 of the new law to perform “supervision of legality and purposefulness” of the NRA activities.

## 3. Market access and authorisations

Montenegro formally introduced full liberalisation of local, domestic long-distance and international networks and services on January 1, 2004. However, the high licensing fees, especially for international services, created a barrier to entry. Only in April 2007 the annual fee for international services was reduced from €100,000 to €1,000 effectively enabling a competitive market entry.

The Law on Electronic Communications introduces a general authorisation regime where electronic communications networks and services that do not require the use of limited resources can be provided without individual licences. These services can now be provided subject to a notification submitted to EKIP who must complete the registration within seven days. The one-off registration fee, according to the NRA financial plan for 2009, has been set at €1,000. Individual authorisations are issued by EKIP for the right to use radio spectrum and numbers.

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<sup>116</sup> <http://www.gov.me/files/1235731125.pdf>

Under the transitional provisions of article 141 of the Law on Electronic Communications, EKIP was required within a nine months period to harmonise all individual licences issued under the previous law with the new authorisation framework and complete the registration procedure of the existing operators.

#### 4. Market structure

In practice, competition has only emerged in mobile networks, with the market entry of Promonte in 1996, and T-Mobile, the incumbent's mobile subsidiary in 2000 (Monet, at that time). A third mobile operator, m:tel, owned by the Serbian incumbent Telekom Srbija entered the market in 2007. All three operators have been issued spectrum licences for provision of 2G services in the 900 MHz and the 1800 MHz bands, and 3G services in the 2100 MHz band.

The fixed telephony market continues to be dominated by the incumbent operator Crnogorski Telekom. First licences for the provision of fixed voice telephony services by alternative operators were issued in late 2007 and early 2008. Following several successive public tender procedures, the NRA issued eight licences for the provision of VoIP services and four for FWA services in the 3.4-3.8 GHz band. The minimum one off-fee for FWA licence was set at €175,000 and the winning offers ranged from €1,050,000 to €175,000. The total proceeds of VoIP tender amounted to €60,000 with winning bids ranging from €10,500 to €15,000. So far, only one alternative provider, m:tel has started commercial provision of fixed voice telephony services on a large scale.

#### 5. Significant market power

So far no comprehensive market analysis has been carried out by the NRA. Under the provisions of the Telecommunications Law of 2000, the fixed incumbent operator, Crnogorski Telekom, was deemed to have SMP in the markets for fixed networks and services and in Internet services, while T-Mobile and Promonte had SMP in mobile networks and services. None of the SMP obligations foreseen in the Telecommunications Law had been applied to mobile operators.

The new Law on Electronic Communications of July 29, 2008 contains new transitional provisions that designate Crnogorski Telekom as having SMP in the markets for fixed voice telephone networks and services including the markets for data transmission services and leased lines. Under the same provisions, all fixed and mobile network operators are deemed to have SMP in the markets for call termination in their respective networks, while the national broadcasting operator in the market for broadcasting transmission services. The law, however, does not define any specific regulatory obligations that apply to the operators as a result of these SMP designations.

The new law provides for market analyses, the definition of relevant markets, SMP designations and the imposition of remedies on SMP operators based on the principles of the EU 2003 regulatory framework. Under the transitional provisions of article 143 of the Law on Electronic Communications, the NRA must complete its first market analysis within one year from the entry into force of the law, i.e. by August 27, 2009. In February – March 2009, the NRA held its first consultation on the market analysis procedures and definition of the relevant markets.

#### 6. Competitive safeguards

Only a few of the key competitive safeguards foreseen under the EU 1998 regulatory framework have been implemented in Montenegro.

- The first RIO of Crngorski Telekom was published in December 2004. In April 2008, the NRA approved a new RIO introducing some reductions to interconnection charges based on the EU benchmarks.
- No RIOs have been published by mobile operators with SMP, T-Mobile and Promonte.
- CS/CPS regulation was introduced in December 2007 and applies to both fixed and mobile networks. However, only Crngorski Telekom has introduced CS in its RIO so far.
- No clear deadlines are established for the implementation of number portability and local loop unbundling.

## 7. Universal service and consumer issues

No universal service provider has been designated so far.

The Law on Electronic Communications provides legal basis for the universal service and defines its scope as comprising: access to public fixed telephone services at affordable prices; equal access to publicly available telephone services at affordable prices for disabled users and users with special social needs; telephone directories and directory enquiry services; public pay phones; free access to emergency services.

Under the article 144 of the Law on Electronic Communications the NRA was required within 6 months from the entry into force of the law to adopt the necessary regulations and initiate tender procedure for the designation of the universal service provider. This was not achieved in practice, as the secondary legislation is still under preparation.

## 8. European Union

The European Commission noted “some progress”, including new legislation aimed at alignment with the *acquis*, though it had been presented to parliament without prior public consultation.<sup>117</sup>

The procedures for appointing the board of the new regulatory authority, the division of responsibilities between the new regulatory authority and the ministry, as well the financing of the regulatory authority, gave “cause for serious concern about the NRA independence”. The administrative capacity of the Department for Telecommunications Policy within the Ministry of Maritime Affairs, Transportation and Telecommunications was assessed as “weak”. The majority of the new secondary legislation had yet to be drafted.

In the field of fixed networks and services, the regulatory authority issued licences for the provision of VoIP and for fixed wireless access (FWA), however most of the licences went to the three existing mobile operators and only one of them has so far launched commercial operations. So effectively, there had been no change in the level of competition.

## 9. Outlook

Adoption of the new secondary legislation required under the new Law on Electronic Communications remains slow. Only two of the required secondary acts so far have been adopted by the ministry on the proposal of the NRA: the rulebook on the annual fees for the use of frequencies and the rulebook on the annual fees for the use of numbering resources and addresses. The institutional and administrative capacity of the ministry and the NRA needs to be improved in order to enable them to manage this task.

Other issues that must be addressed are the implementation of competitive safeguards, market analysis procedures and methodologies for price control of wholesale tariffs.

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<sup>117</sup> Montenegro 2008 Progress Report. [SEC\(2008\) 2696](#).

## G. Serbia

### 1. Legal and institutional framework

#### a) Telecommunications Law

The Telecommunications Law adopted in April 2003 defines the legal and institutional framework for the telecommunications sector, including the responsibilities of the government, the relevant ministry and the national regulatory authority.

In December 2008 the Ministry for Telecommunications and Information Society initiated the work on drafting the new Law on Electronic Communications that is intended to harmonise Serbian law with the EU 2003 regulatory framework for electronic communications. Public consultations on the draft law are expected to be completed in September 2009 and its adoption is scheduled towards the end of 2009.

#### b) Ministry of Telecommunications and Information Society

The Ministry of Telecommunications and Information Society is the central state administration body competent for telecommunications, postal services and Information Society. In the field of telecommunications, the ministry is responsible for:

- drafting national strategy for telecommunications and relevant legislation;
- defining the scope of the universal service;
- preparing the Radio Frequency Bands Allocation Plan and adopting the Radio Frequency Assignment Plan based on the proposal made by the regulator;
- deciding on the number of individual licences for the provision of public telecommunications networks and services where the number of licences is limited, the timing of tender procedures and specific conditions for issuing these licences, and the minimum reserve amount for the one-off licence fees;
- executing state ownership functions in Telekom Srbija through the Public Enterprise of PTT Serbia.

#### c) Republic Telecommunications Agency

The Telecommunications Law of 2003 establishes the Republic Telecommunications Agency (RATEL) as a national regulatory authority for telecommunications. RATEL is an autonomous legal entity, not subordinated to any government authority and functionally independent of any entity engaged in operating telecommunications networks and providing services. The primary task of RATEL is implementing the national telecommunications development strategy and the regulatory framework for telecommunications, adopting implementing legislation within its competencies and monitoring the compliance of telecommunications service providers with legal and licence requirements.

RATEL is managed by the Managing Board that consists of a Chairman and four Members who are appointed and dismissed by the National Assembly, at the proposal of the Government. Their term of office is five years with a possibility of a reappointment for one more consecutive term. The Managing Board of RATEL appoints the Executive Director who is responsible for the administration and operational issues.

RATEL is a self-financed and non-profit legal entity with its own budget funded from annual licence and authorisation fees (one-off licence fees are paid directly into the government budget), spectrum and numbering fees and other fees, such as certification and technical inspection. Every year, the Managing Board of RATEL approves its financial plan. If its annual accounts at the end of the year show a surplus of total revenue over expenditures, it is transferred into the Government budget.

The statute of RATEL, approved by its Managing Board regulates its internal organisation and procedures. The regulations governing the salaries of civil servants do not apply to its Managing Board and employees, which enables the regulator to decide on the salary level.

Decisions made by RATEL are final in the administrative procedure. However, it is possible to submit an appeal against a decision of RATEL to the Supreme Administrative Court.

d) Information society

The Ministry for Telecommunications and Information Society is responsible for information society issues, in particular for developing the information society development strategy and for e-government. The ministry is also the supervisory authority for electronic signatures.

The National Information Technology and Internet Agency is subordinate to the ministry and responsible for the monitoring of electronic government development and standardisation in the fields of ICT, ICT security and Internet use. The Statistical Office is responsible for information society statistics. RNIDS, a non-profit association of Internet service providers and academic institutions is the national domain name registry. Domain name policy is not regulated by law, but is set out in RNIDS' general terms and conditions.

Serbia has transposed the Electronic Signatures Directive. It has not ratified the Cybercrime Convention, but most crimes listed in this convention are considered as criminal offences in the Serbian Criminal Code. A draft law on electronic commerce has been submitted to the Parliament and the government plans to adopt a draft law on electronic documents in June 2009.

## 2. Regulatory independence

### a) Privatisation and operational independence

The government currently controls 80% of Telekom Srbija and retains a 'golden share' with the power to veto all the important decisions of the company. The ownership function is exercised through the Public Enterprise of PTT Traffic "Srbija", commonly known as PTT, or the Post Office, while the government unit responsible for the 'golden share' is not explicitly defined.

The Greek incumbent operator, OTE controls the remaining 20% of the capital in Telekom Srbija.

### b) Administrative independence

While the Telecommunications Law of 2003 provides for substantial administrative independence of RATEL in exercising its regulatory tasks and adopting implementing legislation within its competences, the provisions of the Law on State Administration require RATEL to obtain from the Ministry for Telecommunications and Information Society an opinion on compliance of the regulation with the Constitution, other relevant laws and regulations. The Law on State Administration also allows the Ministry as the supervisory authority to take over the performance of RATEL's activities for a maximum period of 120 days if RATEL fails to perform its functions properly or timely.

These provisions can potentially undermine the administrative independence of RATEL, as it was illustrated by a recent development. Following major disagreements and coordination problems preventing the proper functioning of regulatory and legislative mechanisms, in June 2008 the ministry decided to temporarily take over RATEL's responsibilities. The government subsequently repealed the ministry's decision, clarifying that the ministry had incorrectly interpreted its supervisory powers foreseen in the Law on State Administration.

## 3. Market access and authorisations

Under the Telecommunications Law of 2003, the fixed incumbent operator was granted exclusive rights until June 9, 2005 to provide all types of fixed telecommunications services, with the only exception of Internet and cable TV services that had been open to competition. In practice, Telekom Srbija remained until the end of 2008 the only licensed public fixed voice telephony operator and the only operator authorised to interconnect with international telecommunications networks.<sup>118</sup> Among the main reasons for the delayed liberalisation of the sector was the lack of the necessary implementing legislation on licensing and interconnection aspects.

Under the Telecommunications Law, provision of any services that require use of limited resources such as frequencies and numbers from the national numbering plan would be subject to an individual licence issued by RATEL based on a public tender procedure. The minimum one-off licence fee, the number of licences to be issued and the timing of the tender procedure are decided by the ministry. Other type of

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<sup>118</sup> Mobile network operators have been also authorised to interconnect with international networks.

services that do not require the use of limited resources can be provided subject to an authorisation issued by RATEL upon an application submitted by the operator.

Only in October 2008 a set of bylaws adopted by RATEL entered into force, following their publication in the Official Gazette, covering terms and conditions and issuance procedures of the authorisations for:

- the provision of international network interconnection;
- the operation of public telecommunications networks; and
- the provision of voice transmission services over the Internet (VoIP, without use of numbers from the national numbering plan).

On December 22, 2008 RATEL in accordance with the new regulations issued three authorisations for public fixed telecommunications networks operators, nine authorisations for VoIP providers and four authorisations for international interconnection.<sup>119</sup>

In March 2009, the ministry announced plans to launch a tender procedure for the second fixed telephony licence in June 2009.

#### 4. Market structure

So far Telekom Srbija remains the only licensed provider of public voice telephony services over its own fixed network infrastructure. First authorisations for the provision of VoIP services were issued only in December 2008. To certain extent, there is some competition in provision of Internet services. Most of the ISPs, however, have been providing ADSL services based on the incumbent's wholesale offer and relying on its international connectivity.

The competition has only emerged in mobile services where two operators, Telenor (owned by the Norwegian mobile operator) and VIP mobile (owned by mobilkom Austria), licensed by RATEL in 2006, are providing services in competition with the incumbent's mobile subsidiary. All three operators have been issued spectrum licences for provision of 2G services in the 900 MHz and the 1800 MHz bands, and 3G services in the 2100 MHz band. Market access conditions for new entrant mobile operators remain problematic as obtaining construction permits for network rollout is subject to complex bureaucratic procedures.

#### 5. Significant market power

RATEL has discretion to define relevant markets applying competition law principles. The undertakings with SMP, however, are designated on the basis of the static 20% market share threshold, measured by number of subscribers, which RATEL may modify to 25%. Basic remedies for operators with SMP are set out in the Telecommunications Law, but RATEL has discretionary powers to decide on the application of specific obligations.

On March 3, 2006 RATEL designated Telekom Srbija as having SMP in public fixed telephone network and services and imposed obligations of network access and interconnection, non-discrimination, cost orientation, transparency, prohibition of cross-subsidisation and retail price control. On February 19, 2007 RATEL designated SBB, the major cable TV operator, as having SMP in radio and television program distribution via cable network and imposed obligations of accounting separation and retail price control.

On April 22, 2008 RATEL adopted a decision identifying six markets relevant for ex ante regulation, comprising the four markets defined under the ONP framework and two additional markets: fixed telephony, mobile telephony, leased lines, interconnection, Internet services and provision of cable distribution systems.<sup>120</sup> The new market analysis is expected to be undertaken by RATEL in the third quarter of 2009.

#### 6. Competitive safeguards

None of the key competitive safeguards foreseen under the EU 1998 regulatory framework have been implemented in Serbia. The first RIO was prepared by the fixed incumbent operator in August 2008 in

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<sup>119</sup> [http://www.ratel.rs/index.php?page=novosti&id=2320&target=news\\_malo&item=68&get\\_treeroot=54&lang=eng](http://www.ratel.rs/index.php?page=novosti&id=2320&target=news_malo&item=68&get_treeroot=54&lang=eng)

<sup>120</sup> [http://www.ratel.rs/editor\\_files/File/Regulativa/Odluke/ODLUKA-analiza%20trzista.pdf](http://www.ratel.rs/editor_files/File/Regulativa/Odluke/ODLUKA-analiza%20trzista.pdf)

accordance with RATEL regulations on interconnection of public telecommunications networks adopted in May 2008.<sup>121</sup> In practice, RIO applies only to interconnection with mobile networks, as there are no alternative fixed network operators. In March 2009, Telekom Srbija published a separate RIO for interconnection with VoIP providers.

Only recently, the first steps towards tariff rebalancing as one of the prerequisites for the liberalisation of the fixed telephony services, have been undertaken. In October 2008 RATEL approved Telekom Srbija's proposal to increase from November 1, 2008 fixed line monthly rental fees for residential and business customers by 100% to RSD 195.00 (€2.20) without VAT and to apply uniform call charges for residential and business customers. At the same time, RATEL approved an increase of call impulse charges, starting from December 1, 2008.<sup>122</sup>

The National Strategy for Development of Telecommunications from 2006 to 2010 adopted by the government in October 2006 did not set out any specific deadlines for the liberalisation of the telecommunications sector and implementation of the necessary competitive safeguards. On January 15, 2009, the government adopted the Action Plan for implementation of the National Strategy for Development of Telecommunications.<sup>123</sup> The action plan foresees adoption of the necessary regulations on CS/CPS and number portability for fixed and mobile networks before the end of 2009, but does not set out any explicit deadline for their implementation. The Action Plan also foresees the implementation of cost accounting methodologies and calculation of cost-oriented tariffs for operators with SMP in the third quarter of 2009.

## 7. Universal service and consumer issues

Under the transitional provisions of the Telecommunications Law, Telekom Srbija was required to provide "the initial scope" of universal services until expiry of its exclusivity rights in June 2005. The initial scope of universal services was defined as comprising access to a public fixed telephone service enabling functional Internet access; special measures for disabled and socially disadvantaged users; free access to emergency services; public payphones and access to telephone directory and directory enquiry services.

Following the expiry of Telekom Srbija's universal service obligations, the ministry must define the scope of the universal service at the proposal of RATEL, while RATEL has to designate the universal provider and establish the universal service fund. None of this has been achieved yet.

## 8. European Union

The European Commission noted that "little progress" had been made, in particular due to insufficient coordination among responsible bodies.<sup>124</sup> The 2010 telecommunications strategy lacked timelines for the various objectives, including liberalisation measures. There had been "major disagreements" between the ministry and the regulator, "preventing the proper functioning of regulatory and legislative mechanisms". Relations had improved following the revocation by the government of the decision by the ministry to take over the responsibilities of RATEL on a temporary basis.

The Commission considered the legislative and regulatory framework for fixed telecommunications was "to a large extent inadequate for the entrance of new operators in the market". Although a set of decisions on VoIP, international connectivity, licensing and operators and tariff rebalancing had been adopted, further regulation was needed to specify competitive safeguards and ensure network access. International connectivity still posed a major problem for many operators. The regulation of Internet services remained inadequate and made the entry of new providers difficult. Internet penetration rates were rising, but remained low. Tariff rebalancing and the development of cost models were outstanding issues. A universal service policy had yet to be adopted.

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<sup>121</sup> [http://www.ratel.rs/editor\\_files/File/Regulativa/Pravilnici/Pravilnik\\_o\\_interkonekciji.pdf](http://www.ratel.rs/editor_files/File/Regulativa/Pravilnici/Pravilnik_o_interkonekciji.pdf)

<sup>122</sup>

[http://www.ratel.rs/editor\\_files/File/Regulativa/Odluke/ODLUKA\\_o\\_davanju\\_saglasnosti\\_Preduzecu\\_za\\_telekomunikacije\\_%27%27T\\_elekom%20Srbija%27%27\\_da\\_izvrsi\\_promenu\\_cena\\_u\\_fiksnoj\\_telefoniji.pdf](http://www.ratel.rs/editor_files/File/Regulativa/Odluke/ODLUKA_o_davanju_saglasnosti_Preduzecu_za_telekomunikacije_%27%27T_elekom%20Srbija%27%27_da_izvrsi_promenu_cena_u_fiksnoj_telefoniji.pdf)

<sup>123</sup> [http://www.ratel.rs/editor\\_files/File/Regulations/Action%20plan%202006-2010\\_20090130.pdf](http://www.ratel.rs/editor_files/File/Regulations/Action%20plan%202006-2010_20090130.pdf)

<sup>124</sup> Serbia 2008 Progress Report. SEC(2008) 2698.

## 9. Outlook

In general, Serbia is still at a very early stage of liberalisation. The adoption of the necessary implementing legislation has been very slow which is often due to the insufficient administrative capacity and level of expertise of the relevant authorities, which needs to be strengthened. The Ministry has announced that it started drafting a new legislation based on the EU 2003 regulatory framework.

The key outstanding issues that must be addressed are: liberalisation of the fixed voice telephony networks and services, tariff rebalancing and implementation of the competitive safeguards. There is also a need to develop cost models in order to set cost-oriented interconnection tariffs.

## H. Kosovo (under UN Security Council Resolution 1244)

### 1. Legal and institutional framework

#### a) Introduction

Since 1999, the institutional arrangements in Kosovo have been governed by United Nations Security Council Resolution 1244 (UNSCR 1244), adopted on June 10, 1999. This affirmed the commitment to the sovereignty and territorial integrity of the Federal Republic of Yugoslavia (now the Republic of Serbia), but also called for substantial autonomy and meaningful self-administration for Kosovo.

UNSCR 1244 established the United Nations Interim Administration Mission in Kosovo (UNMIK), headed by the Special Representative of the Secretary General (SRSG). Under the constitutional framework promulgated by the SRSG, administrative responsibilities in Kosovo were divided between UNMIK and the Kosovar Provisional Institutions of Self-Government (PISG), comprising the President, the Assembly and the cabinet of ministers, headed by the Prime Minister.

In February 2008, the Assembly unilaterally declared Kosovo's independence as the Republic of Kosovo. The new constitution for the Republic of Kosovo approved by the Assembly in April came into force on June 15, 2008. However UNSCR 1244 is still in force, which means that ultimate responsibility for the administration of Kosovo still falls on the SRSG, even after the proclamation of independence.

As of April 2009, the independence of Kosovo had been recognised by 57 countries. The UN Security Council remains divided on the issue: of the five permanent members the USA, the UK, and France recognised the declaration of independence, while Russia and China have not. The European Union has no official position on the status of Kosovo, although a majority of its Member States have formally recognised Kosovo (22 out of 27).

#### b) United Nations Interim Administration Mission in Kosovo (UNMIK)

Under the constitutional framework established by the international administration, specific responsibilities were reserved for UNMIK, including two aspects relevant for telecommunications:

- administration of state-owned and socially-owned companies by the Kosovo Trust Agency (KTA), including the incumbent fixed and mobile operator, Post and Telecom of Kosovo (PTK); and
- management of spectrum by the Frequency Management Office (FMO) with assignment performed by the national regulator, TRA.

The declaration of independence facilitated the anticipated transfer of these responsibilities from UNMIK to the national institutions. In particular, the supervision of PTK has been transferred to the Ministry of Transport and Communications, while spectrum management functions to TRA.

#### c) Telecommunications Law

The Telecommunications Law passed by the Assembly in December 2002 and approved by the SRSG on May 12, 2003 as UNMIK Regulation 2003/16, remains the principal legal instrument that defines the legal and institutional framework for the telecommunications sector in Kosovo.<sup>125</sup>

On June 13, 2008 the Assembly adopted a set of amendments to the Telecommunications Law removing all references to UNMIK, clarifying certain institutional aspects and strengthening the independence of the NRA.

#### d) Ministry of Transport and Communications

The Ministry of Transport and Communications (MTC)<sup>126</sup> is responsible for developing policies and drafting legislation for the telecommunications and ICT sectors. In the field of telecommunications, the ministry also supervises the operations of the state-owned incumbent operator, PTK.

<sup>125</sup> [http://www.unmikonline.org/regulations/2003/RE2003\\_16%20.pdf](http://www.unmikonline.org/regulations/2003/RE2003_16%20.pdf)

<sup>126</sup> <http://www.mtppt.org/>

e) Telecommunications Regulatory Authority

The Telecommunications Regulatory Authority (TRA) was established under the Telecommunications Law of May 2003 and began operations in January 2004. TRA is responsible for implementing the telecommunications sector policy in compliance with the relevant legislation, the adoption of regulations under the Telecommunications Law, issuing licences and authorisations for the provision of telecommunications networks and services, management of the numbering and spectrum resources.

TRA is managed by a board comprising five members who are appointed to and relieved from office by the Assembly, acting on the proposal of the government and the recommendation from the Minister of Transport and Communications. Their term of office is five years with the possibility of reappointment for one further consecutive term. The Minister of Transport and Communications, in consultation with the Prime Minister, designates one member of the Board to be Chairman, who is responsible for administrative and operational issues.

TRA is established as a self-financed and non-profit legal entity, with the main sources of funding based on fees collected under the Telecommunications Law, including authorisations, licensing, numbering and spectrum fees. TRA budget is approved by the Assembly and any surplus funds collected by TRA are transferred at the end of the year to the Kosovo consolidated budget.

Official acts and decisions of TRA can be appealed before the Administrative Court.

f) Information society

The Ministry of Transport and Communications is in charge of information society policy, although some of the competencies (in particular network and information security policy) are shared between this ministry and the Ministry of Public Services.

The Statistical Office is responsible for information society statistics. Kosovo has not established a body responsible for electronic signature. According to the Telecommunications Sector Policy, TRA will become responsible for domain name policy and will select the agent for the registry when Kosovo will acquire its own ccTLD.

The Law on the Information Society Services transposes in several chapters most of the relevant EU legislation on electronic commerce, electronic signatures, distance contracts, electronic invoicing, data protection in general (Directive 95/46/EC) and data protection in electronic communications<sup>127</sup>. It also contains a chapter on cybercrime. Kosovo is in the process of ratifying the Cybercrime Convention.

## 2. Regulatory independence

a) Privatisation and operational independence

The incumbent operator, PTK, is 100% state-owned and until recently, under the control of the Kosovo Trust Agency, within the UNMIK administration. Now the state ownership and control functions are exercised by the Ministry of Transport and Communications who is also in charge of telecommunication sector policies.

Although the issue of PTK privatisation was addressed in the Telecommunications Sector Policy, adopted by the government in June 2007, it is unlikely that PTK will be fully or partially privatised in the near future.

b) Administrative independence

TRA was established under the Telecommunications Law as an independent regulatory body, with competencies to issue regulations for implementation of the law. Nonetheless, its operations had been subject to political and administrative interference, by both UNMIK and the government.

Another factor undermining the status of the NRA as an independent institution has been unclear or inconsistent provisions in the Telecommunications Law, in particular:

- Section 4(1) of the Law stating that TRA is a body “within the Ministry” and

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<sup>127</sup> The Privacy Directive 2002/58/EC is transposed both in the Law on the Information Society Services and in the Law on Telecommunications, which may lead to some confusion.

- Section 5(4) stating that “all funds collected by TRA shall be deposited pursuant to the applicable budget procedures pertaining to all Government funds in Kosovo.”

These have been interpreted as barring TRA from collecting and keeping its own funds and from having its own bank account. As a result, TRA was required by the Ministry of Economy and Finance to make all its payments through the treasury, in the same way as other budgeted agencies, so that, in practice, it has been unable to manage its funds independently. Furthermore, under the treasury payment procedures, the salaries of TRA staff are linked to civil servant pay scales, making it impossible for TRA to decide independently on salaries and thus being unable to recruit and to retain qualified professionals.

On June 13, 2008 the Assembly adopted a set of amendments to the Telecommunications Law intended to strengthen the independence of the NRA. In particular, the amendments:<sup>128</sup>

- remove all references to UNMIK, its Frequency Management Office (FMO) and to the SRSB;
- establish TRA effectively as the sole authority to allocate radio frequency spectrum, subject to “Assembly review and approval in writing” of the TRA spectrum plan;
- remove the definition of TRA as a body “within the Ministry”.

### 3. Market access and authorisations

The telecommunications market in Kosovo was formally liberalised following the adoption of the Telecommunications Law in May 2003, but the practical implementation was significantly delayed.

Although the first authorisations to three national ISPs were issued in May 2005, a comprehensive authorisation framework for telecommunications operators was adopted only in September 2005. This framework represents a system of class licences with specific conditions and licence fees set depending on the specific service. The one-off licence are ranging from €87,500 for national public fixed telephony services, €50,000 for international telecommunications facilities and €35,000 for international telecommunications services to €5,000 for Internet services.

PTK maintained its exclusive right over access to international gateway facilities until December 31, 2007.

### 4. Market structure

PTK maintains its dominance in the provision of public fixed telephony services. However, two alternative network operators have recently entered the market. On September 8, 2006 IPKO, controlled by Telekom Slovenije, was granted the second licence for the provision of national public fixed telephone networks and services. IPKO launched commercial services in 2008. In January 2009, the third licence was issued to Konet that has not yet become operational.

Much more competitive is the Internet services sector, where the incumbent ISP's market share by number of connections is only around 18%. The majority of the broadband connections in Kosovo are offered by alternative ISPs over cable infrastructure.

There are two 2G mobile network operators licensed by TRA. The incumbent's mobile subsidiary, Vala was issued the first GSM licence in the 900 MHz spectrum in July 2004. On March 6, 2007, following an international tender procedure, TRA granted the second GSM licence in the 900 MHz and 1800 MHz to IPKO. No decision on 3G/UMTS licences has been adopted yet.

Following the adoption of the regulatory framework for MVNOs in May 2008, TRA issued two MVNO licences in June 2008. One of the MVNOs, Dardafone, operates based on a network access agreement with Vala, while the second, Dukagjini Telecommunications, has concluded an agreement with IPKO.

In addition to the operators licensed by TRA, two mobile operators licensed in Serbia maintain their presence in Kosovo without authorisation from the Kosovar authorities.

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<sup>128</sup> [http://inclive.org/m/file.php?file=LAW\\_AMENDING\\_THE\\_LAW\\_ADOPTED\\_BY\\_THE\\_ASSEMBLY\\_OF\\_KOSOVO\\_2008\\_03-L085\\_en.pdf](http://inclive.org/m/file.php?file=LAW_AMENDING_THE_LAW_ADOPTED_BY_THE_ASSEMBLY_OF_KOSOVO_2008_03-L085_en.pdf)

## 5. Significant market power

Under the Telecommunications Law, the NRA has discretion to define relevant markets by the application of competition law principles. Undertakings with SMP are designated on the basis of a simple 25% market share threshold, sometimes combined with the assessment of other criteria.

Basic remedies for all operators with SMP are defined by the Law, including the obligations of network access and interconnection, transparency, cost orientation and the requirement to publish all the necessary information related to provision of access and interconnection.

So far no comprehensive market analyses have been carried out by TRA. By the provisions of the Telecommunications Law, the fixed incumbent operator, PTK, is deemed to have SMP in fixed networks and services, while its mobile subsidiary, Vala, has SMP in mobile networks and services.

## 6. Competitive safeguards

Kosovo is still lagging behind with implementation of the key competitive safeguards foreseen under the EU 1998 regulatory framework.

- The first RIO of the fixed incumbent operator, PTK, was approved by TRA on January 12, 2007.
- TRA mediated in an interconnection dispute between Vala and IPKO, and set out mobile termination rates, using a benchmark.

There is no clear timeframe for the implementation of CS/CPS, number portability and local loop unbundling. The implementation of number portability is delayed by the fact no country code has been assigned to Kosovo by ITU-T. Currently the Serbian country code (+381) continues to be used for the fixed network, while mobile operators use two other codes: Vala uses Monaco (+377) and IPKO uses Slovenia (+386).

## 7. Universal service and consumer issues

There is no established framework for universal service in Kosovo. The Telecommunications Law provides that TRA shall adopt a comprehensive framework for the provision of universal service covering its scope, the designation of providers and the funding mechanism. The Telecommunications Sector Policy adopted by the government in June 2007 envisaged that within 12 months, the Ministry and TRA would present a proposal for the implementation of universal service for consultation.

According to the policy, the minimum scope of the universal service should include:

- access to publicly available telephone services enabling users to make and receive local, national and international telephone calls, and fax communications, plus functional Internet access, at reasonable prices;
- access to information in the single directory;
- access to public pay telephones from which it is possible to make emergency calls without having to use any means of payment;
- measures for disabled end users that enable equivalent access to publicly available telephone services.

According to the policy, one possible alternative would be the inclusion of universal service obligations in the licences of telecommunications operators and service providers.

No proposal has been yet presented by the authorities. In the absence of an explicit universal service framework, several elements of the universal service have been included as obligations within the scope of the licence conditions of the incumbent operator, PTK, and the new entrant alternative operator, IPKO.

## 8. European Union

The European Commission reported some progress.<sup>129</sup> For example, a second mobile operator had become active on the market and two MVNO licences were issued following the introduction of a regulatory framework for MVNOs.

Amendments to the telecommunications law had strengthened the independence of the regulator and gave it responsibility for spectrum allocation and management. The implementation of the sector policy had been delayed, due to a lack of cooperation between the relevant authorities. There had been “no progress” on increasing competition in the fixed telephony market. Kosovo was still seen as being at an “early stage” of liberalisation, with none of the competitive safeguards in place.

The administrative capacities of the ministry and of the regulator were held to be “insufficient”, lacking the necessary levels of human resources and expertise.

## 9. Outlook

The main challenge is to ensure the functioning of TRA as a truly independent institution, in line with the recently adopted amendments to the Telecommunications Law. A closely related issue is improving its expertise and administrative capacity. Following the expiry of the mandates of TRA Board Members at the end of 2008, no decision has been made on the new appointments.

The administrative capacity of the Ministry of Transport and Communications also needs to be strengthened.

Other outstanding issues are the adoption of the secondary legislation and the effective implementation of competitive safeguards.

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<sup>129</sup> Kosovo 2008 Progress Report. [SEC\(2008\) 2697](#).