REPORT I

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

September 30, 2008

Executive Summary

The market for electronic communications in the Western Balkans and Turkey in 2007 was worth €15.8 billions, a 20% increase on the previous year. Growth is expected to continue. The sector represents 3.2% of the Turkish economy and 5.2% of economies of the Western Balkans and average revenues of €150 per capita in Turkey and €200 in the Western Balkans.

The strong growth of the mobile telephony market has continued across the region, matching the penetration rates of the EU-27 and sometimes surpassing them. Mobile now represents almost 60% of the electronic communications sector's revenues, a proportion likely only to increase.

Building on their success with GSM, a number of operators in Croatia, FYROM, Montenegro and Serbia have obtained licences for 3G and some services have been launched, using both UMTS and HSDPA. Their target appears to be 3G LTE.

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 two established players typically controlling over 80 – 90 per cent of the market. In 2007, additional market players have entered the mobile markets in FYROM, Montenegro, Serbia and Kosovo contributing to further growth in mobile subscriber numbers and reductions in prices. The costs for consumers are still relatively high.

Mobile number portability is only available in Croatia and being slowly deployed in FYROM and Turkey. National roaming has been used in a few cases to support market entry. Complex and lengthy procedures for granting rights of way and construction permits by local authorities remain a major obstacle for mobile new entrants rolling out their networks. Further action will be required to open markets and to reduce the dominance of a small number of large players.

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. In Serbia, fixed voice telephony services de facto have not been opened to competition, while in Turkey, there is no effective competition in the provision of fixed voice telephony networks and services at the local level.

The provision of fixed broadband Internet access remains limited, with some emerging competition in Croatia and FYROM. Unbundled local loops are not yet proving attractive to alternative operators – there are too few lines, the unbundling too uncertain and the prices too high. Few fixed wireless access services have shown any significant progress. There are some broadband offers with speeds of 4-16 Mbits/second available, but at high prices and consequently few customers.

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. 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 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 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 identify appropriate remedies. To date, progress has been extremely limited. There has been continued reliance on the old 25% market share threshold, rather than dominance and too often prescribed lists of remedies have been applied. The result is very inflexible systems.

The evidence from the collection of data for this report suggests that there is a lack of transparency in the operation of regulators, with only limited reporting of market conditions and often with significant delays. They require to improve and to accelerate their data collection procedures and their ability to authenticate the data.

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 level. 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 developing information society statistics, but only for basic indicators. 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 large gaps between male and female usage of computers and the Internet.

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

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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, Deprecation 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	*Groupe Speciale Mobile* 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
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 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.[1]

Telecommunications policies have come to occupy an important position in the economic development of nations.[2] 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. State ownership was no longer considered essential for the achievement of national goals and it was recognised as a potential obstacle to fair competition. Privatisation has 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,[3] 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 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.[4] 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 was 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, while regulators were given a choice of the remedies to apply to such operators.
   - all electronic communications networks and services were regulated, including broadcasting transmission networks.[5]

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[1] http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm

[2] http://www.oecd.org/dataoecd/49/28/40839436.pdf

[3] The legislation now refers to "electronic communications" to reflect convergence, for example, it applies to broadcasting networks. In this report, the term electronic communications is used when describing aspects that relate specifically to the 2002 regulatory framework. Otherwise, the term telecommunications is used to describe general aspects that do not relate to a specific regulatory framework.

[4] Greece, Ireland, Portugal and Spain had derogations on their introduction.

This became known as the "2003 *acquis"*.[6]

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

   The most important of the original EC proposals were:[8]

   – Creation of the European Electronic Communications Market Authority (EECMA), with roles in market analysis, radio spectrum, numbering and network security.

   – Changes to the market analysis procedures, including deadlines and a role for EECMA if a country was 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 radio spectrum management with technology and service neutrality. Spectrum trading would 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 would be adopted in early 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.

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).[9] 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:

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)

In doing so they must inform the EC and obtain consent for any market definition.

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[5] 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.
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32007L0065:EN:NOT

[6] 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.

[7] COM(2007) 696 final.

[8] http://ec.europa.eu/information_society/policy/ecomm/library/proposals/index_en.htm

[9] 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
See also the explanatory note:
http://ec.europa.eu/information_society/policy/ecomm/doc/library/proposals/sec2007_1483_final.pdf

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			
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 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.[10] While this is now part of the *acquis communautaire*, its application outside member states is complicated by the need for reciprocal agreements amongst operators.

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 legislations, for example by the Television without Frontiers Directive[11] (1989) and the Data Protection Directive[12] (adopted in 1995, but the Commission published its first draft in 1990).

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".[13] Creating "an information society for all" became one of the main means to prepare this dynamic knowledge-based economy. The information society aspects of the Lisbon Strategy were addressed in more detail by the *e*Europe 2002 and 2005 Action Plans. In June 2005 *e*Europe was replaced by the i2010 Strategy, which is the current information society policy framework.[14] The eSEEurope Initiative[15] extends the EU's related activities to the SEE countries.

The Electronic Commerce Directive[16] adopted in 2000 ensures that Member States legally recognise electronic contracts. It also grants providers of information society services free market access and established rules on advertising. The directive's rules on liability provide a safer legal environment for Internet service providers, because they limit the providers' liability for infringements by their subscribers or users. Some of the provisions of the E-Commerce Directive, in particular on transparency of online offers, have been preceded by the Directive[17] on the protection of consumers in respect of distance contracts.

The Electronic Signatures Directive[18] adopted in 1999 established the legal framework for electronic signatures that are legally equal to handwritten signatures. 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 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 thirteenth report was adopted by the Commission in March 2008.[19] 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:[20]

- Communications Committee (COCOM)
- European Regulators Group (ERG)

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[10] 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. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:171:0032:0040:EN:PDF

[11] 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.

[12] 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.

[13] See these Council conclusions and later amendments at http://ec.europa.eu/growthandjobs/european-councils/index_en.htm.

[14] See http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm.

[15] See http://www.eseeinitiative.org/.

[16] 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).

[17] 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.

[18] Directive 1999/93/EC of the European Parliament and of the Council of December 13, 1999 on a Community framework for electronic signatures.

[19] COM(2008) 153 final.

[20] http://circa.europa.eu/Public/irc/infso/Home/main

- 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 candidate countries had to transpose before they became member states.

As part of the preparation for EU enlargement, monitoring of their 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 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 first 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[21] 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. However, it is not recognised under this name by some countries. The EU refers to it using the provisional reference under which it was admitted to the United Nations: "the Former Yugoslav Republic of Macedonia". This does not prejudge 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: • The Federation of Bosnia & Herzegovina • Republika Srpska A separate federal district of Brčko belongs to both. In the monitoring 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

[21] http://www.iso.org/iso/country_codes

Country	Code	Comments
		Telekom Srpske a.d. Banja Luka (BA-ts) based in Banja Luka, Republika Srpska
Montenegro	ME[22]	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	-
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.23 On February 17, 2008 the Kosovo Assembly, elected in December 2007, adopted a resolution declaring Kosovo to be independent.24 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.25 Kosovo does not have an officially assigned ISO code. However, the structure allows for so-called user assigned codes. The code "XK" is used by Eurostat and some other organisations26.

Table 2 - Entities covered in the report

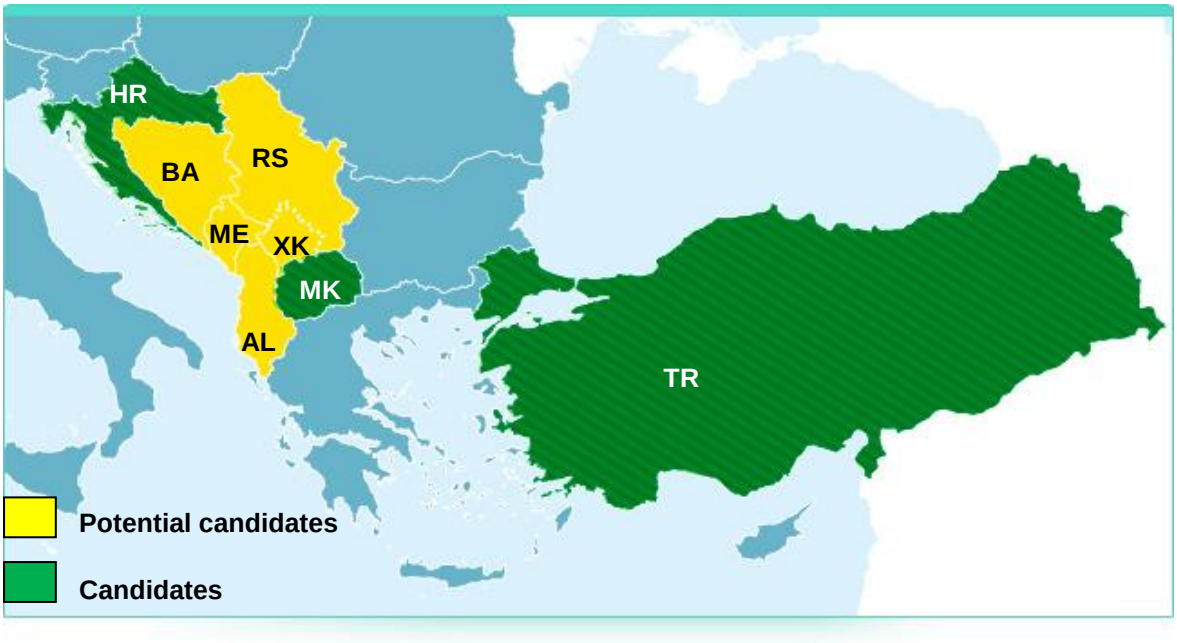

Figure 1 - Map of South-East Europe

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.[27]

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[22] http://www.iana.org/reports/2007/me-report-11sep2007.html
[23] http://daccess-ods.un.org/access.nsf/Get?Open&DS=S/RES/1244%20(1999)&Lang=E&Area=UNDOC
[24] http://www.assembly-kosova.org/?krye=home&lang=en
[25] http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressdata/en/gena/98818.pdf
[26] 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

The previous 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 13th Implementation Report by the European Commission and have also been subject to infringement proceedings for failures and errors in transposition and implementation. They are no longer included in the monitoring exercise in South-East Europe.

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

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.

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

- Croatia: 2008/119/EC[28]
- FYROM: 2008/212/EC[29]
- Turkey: 2008/257/EC[30]

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[31]
- Bosnia & Herzegovina: 2008/211/EC[32]
- Montenegro: 2007/49/EC[33]
- Serbia: 2008/213/EC[34]
- Kosovo: 2008/213/EC[35]

They have undertaken to:

- align their telecommunications legislation with that of the EU;
- achieve competitive markets; and

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[27] 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

[28] Previous agreements are: 2006/145/EC, 2005/40/EC and 2004/648/EC.

[29] Previous agreements are: 2006/57/EC, 2004/518/EC and 2001/0049 (ACV).

[30] Previous agreements are: 2006/35/EC, 2003/398/EC and 2001/235/EC.

[31] Previous agreements are: 8164/06, 8154/06, 2006/54/EC and 2004/519/EC.

[32] Previous agreements are: 2006/55/EC and 2004/515/EC.

[33] Previous agreements are: 2006/56/ECand 2004/520/EC.

[34] Previous agreements are: 2006/56/EC and 2004/520/EC.

[35] Previous agreements are: 2006/56/EC and 2004/520/EC, included as part of the agreement with Serbia.

- 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 Western Balkans is known as the Stabilisation and Association Process (SAP).[36] The central element of the 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.

The 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 and Herzegovina in June 2008. Before their entry into force, SAAs must be ratified by all the EU Member States.

As part of the process of the agreement and the movement towards membership, annual progress reports are produced (see Table 3).

Country	2007	2006	2005
Croatia	SEC(2007) 1431	SEC(2006) 1385	SEC(2005) 1424
FYROM	SEC(2007) 1432	SEC(2006)1387	-
Turkey	SEC(2007) 1436	SEC(2006) 1390	SEC(2005) 1426
Albania	SEC(2007) 1429	SEC(2006) 1383	SEC(2005) 1421
Bosnia & Herzegovina	SEC(2007) 1434	SEC(2006) 1384	SEC(2005) 1422
Montenegro	SEC(2007) 1434	SEC(2006) 1389, SEC (2006) 1386	SEC(2005) 1428
Serbia	SEC(2007) 1435	SEC(2006) 1389, SEC (2006) 1386	SEC(2005) 1428
Kosovo	SEC(2007) 1433	-	SEC(2005) 1423

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.[37] Turkey, and as of 2004 Croatia, have also been eligible to Programme of Community aid to the countries of Central and Eastern Europe [Phare].[38] For the period from 2007 to 2013, both instruments were replaced by the Instrument for Pre-Accession (IPA).[39]

Since its launch in 1999, The Stability Pact for South Eastern Europe has recognized the potential of the information and communication technologies (ICTs) to foster economic development and facilitate cooperation in the region. Electronic South East Europe (or eSEE) Initiative was established as one of the activities within the framework of the Second Working Table (Economy). In 2002, during the "South Eastern Europe Conference on Policy and Cooperation in Telecommunications" in Belgrade, regional ministers signed an eSEE Agenda for the Development of the Information Society. This document 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 region signed the eSEE Agenda + for the Development of Information Society in SEE from 2007 to 2012. Implementation of these documents is monitored and facilitated by the eSEE Secretariat established in Sarajevo with the funding of

[36] Although Croatia and FYROM have been granted candidate country status they remain part of SAP.

[37] 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

[38] 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

[39] Council Regulation (EC) No 1085/2006 of July 17, 2006 establishing an Instrument for Pre-Accession Assistance – IPA

UNDP. In 2008, the Centre for eGovernance Development was established in Ljubljana, with an aim to provide support and coordination for the implementation of eSEE Agenda + in the region through education and training, knowledge base and web portal, workshops and seminars and support for preparing project proposals.

The ITU has a programme of training events for officials from regulators and ministries in Eastern Europe.[40] 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.[41] It also provides some training on telecom and ICT issues for regional authorities.

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 Table 4. Some additional information has been taken from Eurostat.

Country	Electronic communications	Information society services
Croatia	Croatian Agency for Post and Electronic Communications (HAKOM), previously the Croatian Telecommunications Agency (HAT)	Central State Administrative Office for e-Croatia
FYROM	Agency for Electronic Communications (AEC)	Agency for Electronic Communications (AEC)
Turkey	Telecommunications Authority (TA)	State Planning Organization (SPO)
Albania	Authority for Electronic Communications and Post (AECP), previously the Telecommunications Regulations Entity (TRE)	National Agency on Information Society (NAIS)
Bosnia & Herzegovina	Communications Regulatory Agency (RAK)	Communications Regulatory Agency (RAK) Ministry of Communications and Transport
Montenegro	Agency for Telecommunications and Postal Services	Secretariat for the Development of Montenegro
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 covering 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.

[40] http://www.itu.int/ITU-D/hrd/coe/eur/index.asp
[41] http://www.inatelecom.org/

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 April 1, 2008, for quarterly data and December 31, 2007, for annual data. Regulatory and institutional data were as at June 1, 2008, 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 to the end of May 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 13th Implementation Report.[42] 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 indicators for electronic communications services closely follows the previous reports on "Monitoring the telecommunications services sector and related aspects in South East Europe" in the period 2005 to 2007.[43] These reports were used as models with appropriate changes and additions, taking utmost account of the Commission's 12th and 13th Implementation Reports.

The indicators address 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 of major undertakings (fixed, mobile and ISP) by foreign investors with the key financial ratios of the incumbent operators.

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[42] http://ec.europa.eu/information_society/policy/ecomm/implementation_enforcement/index_en.htm

[43] http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=2310

- National regulatory authorities: the indicators were revised, taking into account some elements used in the ECTA Regulatory Scorecard 2007.[44] New indicators have been 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 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 mechanism to designate the provider(s), funding and quality of service.
- Retail tariffs:
  - Fixed tariffs: tariff rebalancing and regulation of retail tariffs, call charging systems and minimum cost of call, monthly subscription fees and one-off connection charges, tariffs of the incumbent and alternative operators for local, long-distance, fixed to mobile and international calls;
  - Mobile tariffs: based on the OECD 2002 mobile baskets;[45]
  - 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

This interim study report includes, for the first time, indicators for "information society services"[46]. These have been chosen to address the following:

- A Council Resolution[47] adopted in 2003 and a Regulation[48] 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 *e*Europe action plan of 2002. The collected data are published regularly by Eurostat[49]. The *e*Europe benchmarking is being further developed under the i2010 Benchmarking Framework[50], as endorsed

[44] ECTA Regulatory Scorecards are available at: http://www.ectaportal.com/en/basic651.html

[45] Following the practice of the EC Implementation Reports, the revisions made to the OECD baskets have been ignored. See DSTI/ICCP/CISP(2006)1 at http://www.olis.oecd.org/olis/2006doc.nsf/ENGDATCORPLOOK/NT00003A5E/$FILE/JT03212157.PDF

[46] 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". http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1998:217:0018:0026:EN:PDF

[47] Council Resolution of Febr. 18, 2003 on the implementation of the eEurope 2005 Action Plan, 2003/C 48/02

[48] Regulation (EC) No 808/2004 of the European Parliament and the Council of April 21, 2004 concerning Community statistics on the information society

[49] See the Information society statistics, a sub-category of the theme Science and Technology: http://epp.Eurostat.ec.europa.eu/portal/page?_pageid=2973,64549069,2973_64554066&_dad=portal&_schema=PORTAL

[50] http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/060220_i2010_benchmarking_framework_nov_2006.doc

by the i2010 High Level Group in April 2006. Commission Regulations regularly adjust the legal framework.[51] Not all of this information was available in the monitored countries. Therefore only the key indicators of computer and Internet usage by individuals and by enterprises have been reported. Other parts of the report cover broadband penetration. The national body responsible for information society statistics is identified, as are the types of statistical data that are available.

- 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[52], the responsible authority for security policy, the existence of alert systems in case of threats and the national policy;
- Electronic contracts and electronic signatures: 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.

[51] Such as Commission Regulation (EC) No 1099/2005 for the survey year 2006 and Commission Regulation (EC) No 1031/2006 for the survey year 2007.

[52] Council of Europe, Convention on Cybercrime, ETS No. 185, Nov. 23, 2001. http://conventions.coe.int/Treaty/EN/Treaties/Html/185.htm

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 €15.5 billion in 2007, almost a 18% increase from the previous year. For comparison, in the EU-27, the electronic communications market revenue in 2007 was €293 billion with a modest 2% growth from €289 billion in 2006. The fastest growing sectors in the region in 2007 were Internet services with a 40% annual growth and mobile communications showing a 26% growth. However, in terms of revenue, mobile services amounted to 57% and Internet services to 6% of the region's electronic communications market value. Fixed voice telephony had a limited growth with 4.5% but represented 34% of the market value.

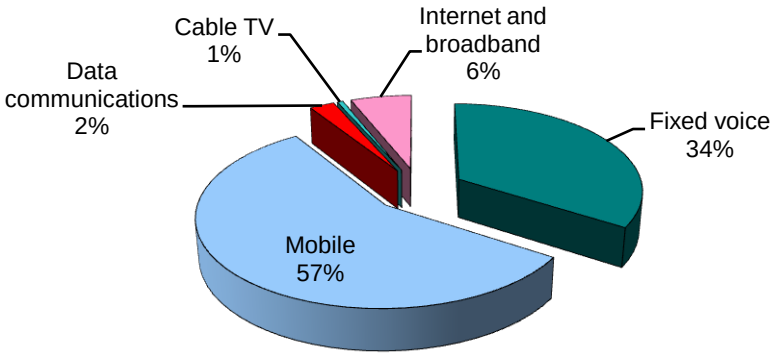


Figure 2- Electronic communications market in 2007, by sector

Breaking down the markets by countries, the patterns are inevitably dominated by the size of the Turkish market. Croatia, Serbia and Turkey accounted for 87% of the region's market value, at the same time as they accounted for 88% of the region's 96 million population.

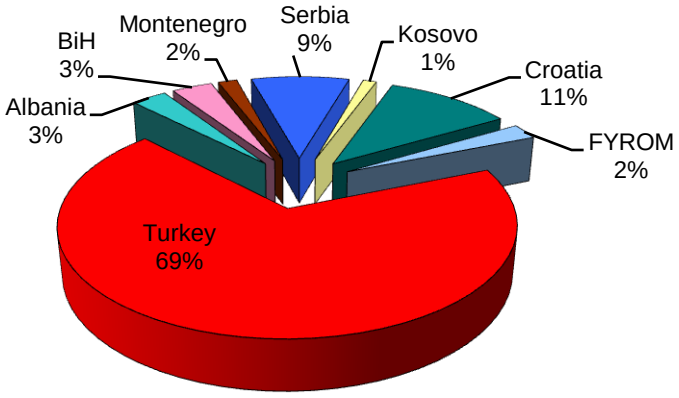
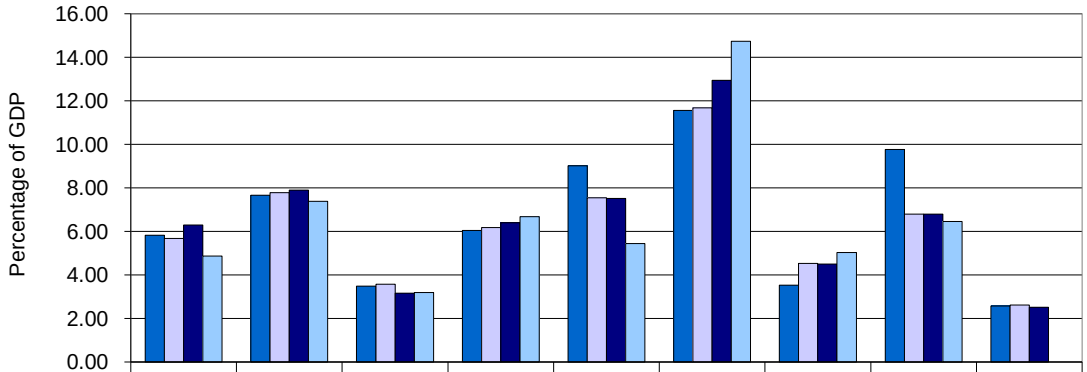


Figure 3 - Electronic communications market in 2007, by country

Electronic communications as a percentage of GDP reflect the different level and patterns of spending, of production and supply within the economy. The high value for Montenegro may indicate an underestimation of the GDP though it may match the high household spending on communications. The average value of GDP for all the countries is 3.6%. It is heavily weighted by the lower Turkish value. Excluding it gives an average of 5.2%, which is double the EU25 average in 2006 (2.5%).



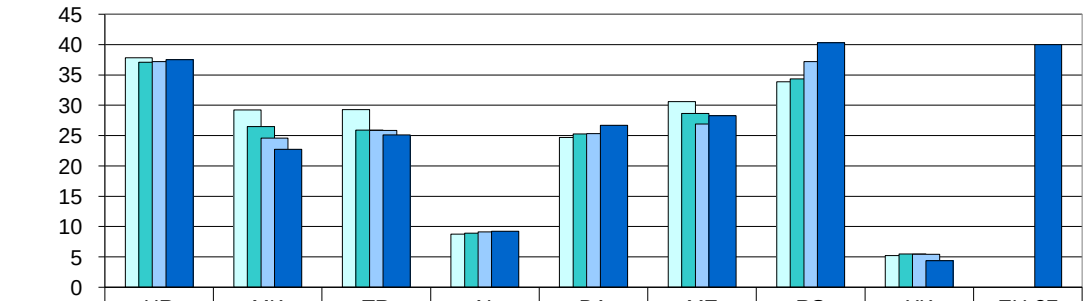
	HR	MK	TR	AL	BA	ME	RS	XK	EU-25
2004	5.83	7.66	3.48	6.04	9.01	11.56	3.53	9.76	2.57
2005	5.68	7.78	3.58	6.18	7.55	11.67	4.53	6.79	2.62
2006	6.29	7.89	3.16	6.40	7.52	12.94	4.50	6.79	2.51
2007	4.87	7.38	3.19	6.67	5.44	14.74	5.03	6.45	

Figure 4 - Electronic communications as a percentage of GDP

2. Fixed telephony market

The total number of fixed lines (25 millions) is split between Turkey (18 millions), Serbia (3 millions), Croatia (1.7 millions), Bosnia & Herzegovina (1 millions), FYROM (460 thousand), Albania (300 thousand), Montenegro (175 thousand) and Kosovo (90 thousand).

When balancing these figures with the population, there are considerable differences in the levels of penetration of the fixed network with Albania and Kosovo at relatively low levels, while Croatia and Serbia have the highest level of penetration comparable to the EU-27 average. FYROM sees a continuous decrease of the penetration since 2005 while Serbia has a reverse trend with an increased penetration.



	HR	MK	TR	AL	BA	ME	RS	XK	EU-27
Jan-05	37.82	29.21	29.28	8.78	24.71	30.60	33.89	5.20	
Jul-06	37.11	26.50	25.89	8.93	25.29	28.64	34.35	5.50	
Jan-07	37.18	24.58	25.83	9.14	25.33	26.88	37.20	5.44	
Jan-08	37.52	22.74	25.12	9.25	26.67	28.25	40.32	4.40	40

Figure 5 - Fixed lines per 100 population

All the countries have initiated the process of converting analogue networks to digital. In 2007, Croatia, Montenegro and FYROM have been joined by Kosovo where the incumbent operator has been rolling out a modern network. Turkey and Bosnia & Herzegovina have almost reached the target, while Serbia should reach 100% by 2010.

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 value added services (broadband) and to local loop unbundling. Croatia, Kosovo and Turkey have no party lines. Serbia has the highest level of party lines (7.4%) and to a less extent Albania (4.8%), Bosnia & Herzegovina (4%) and Montenegro (1.8%).

The development of competition in fixed networks and services in each country has been determined by individual liberalisation processes. Albania and Turkey are examples where competition at the local and the national levels had not been introduced at the same time. In Albania, rural local networks and services were liberalised before national services. Moreover, no alternative operator has been issued a licence to provide national services. Currently there are 60 local or regional operators, but only the incumbent operator provides services nationally. In Turkey, on the other hand, national networks and services were liberalised before local ones. Therefore, there are 32 operators providing long distance services, but local networks and services are only provided by the incumbent. In Serbia, fixed voice telephony services de facto have not been opened to competition.

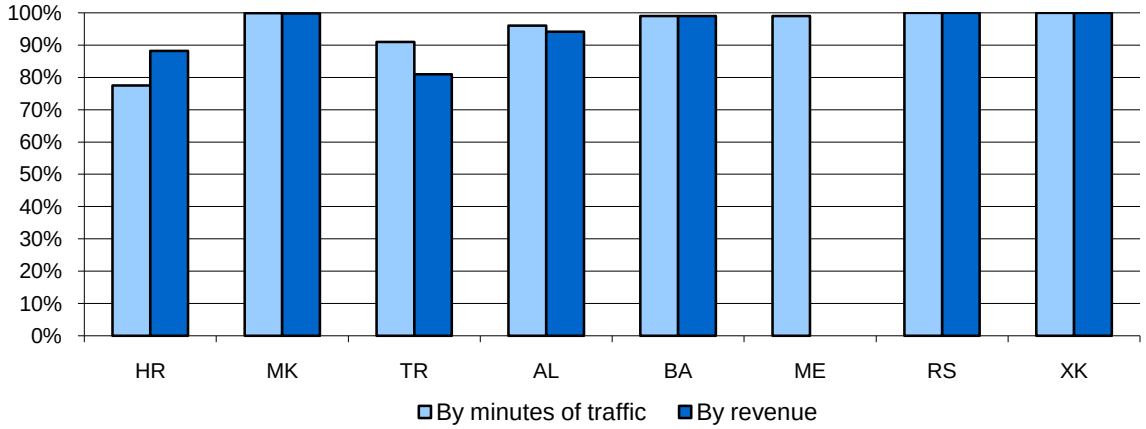


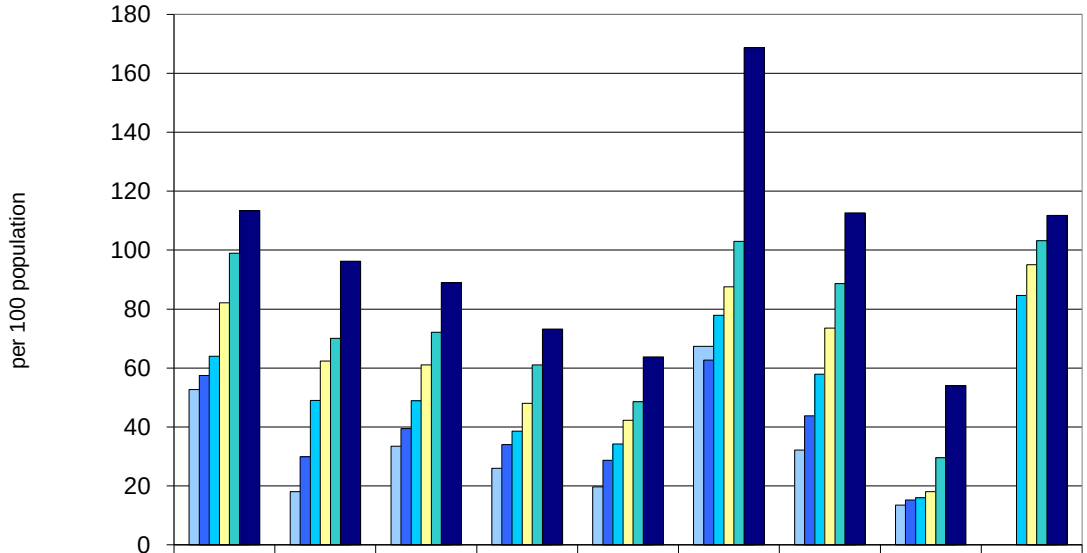
Figure 6 – Incumbent operators' market share in fixed telephony

In all countries, the dominance of the incumbent operators is clear. 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. Another effective way for the competitors to take market share from the incumbent is using carrier selection or carrier pre-selection. 21% of the subscribers in Croatia and 13% of the subscribers in Turkey are using an alternative operator as a percentage of total lines. In the other countries, the figure is below 1%.

3. Mobile market

At the end of 2007, there were 85 million subscribers of mobile services. 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 since operators use periods varying between 3 months up to 13 months.

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.



	HR	MK	TR	AL	BA	ME	RS	XK	EU-27
Jan-2003	52.7	18.0	33.5	26.0	19.7	67.4	32.1	13.5	
Jan-2004	57.5	29.9	39.4	34.0	28.7	62.7	43.8	15.2	
Jan-2005	64.0	49.0	48.9	38.6	34.2	77.9	57.9	16.0	84.6
Jan-2006	82.1	62.4	61.1	48.0	42.3	87.6	73.5	18.0	95.0
Jan-2007	99.0	70.1	72.2	61.0	48.6	103.0	88.6	29.5	103.2
Jan-2008	113.4	96.2	89.0	73.2	63.8	168.7	112.7	54.0	111.8

Figure 7 - Rise of mobile penetration in 2003 – 2007

In 2007 a significant increase in mobile penetration was observed in FYROM, Montenegro, Serbia and Kosovo which was triggered by the entry of new mobile operators. A third operator entered the market in FYROM (VIP), Montenegro (M:Tel) and Serbia (VIP), while a second operator was introduced in Kosovo (IPKO).

The majority of the customers use pre-paid services. In most countries, typically over 80% of mobile users are prepaid, with the exception of Croatia where the level of postpaid subscribers is slightly higher. In Kosovo and Albania, nearly all mobile users are prepaid. This high level of prepaid customers may raise questions regarding a future move to mobile broadband and value added services since a different business model may be necessary.

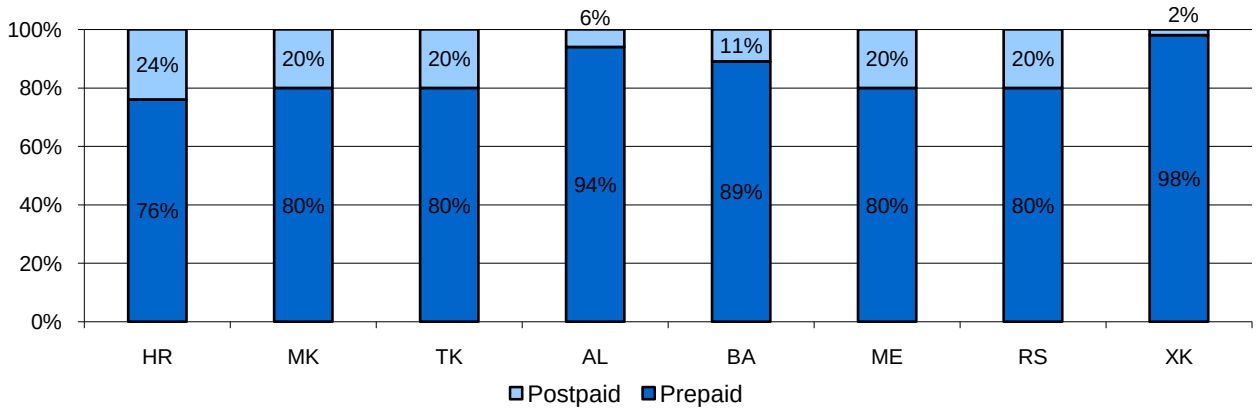
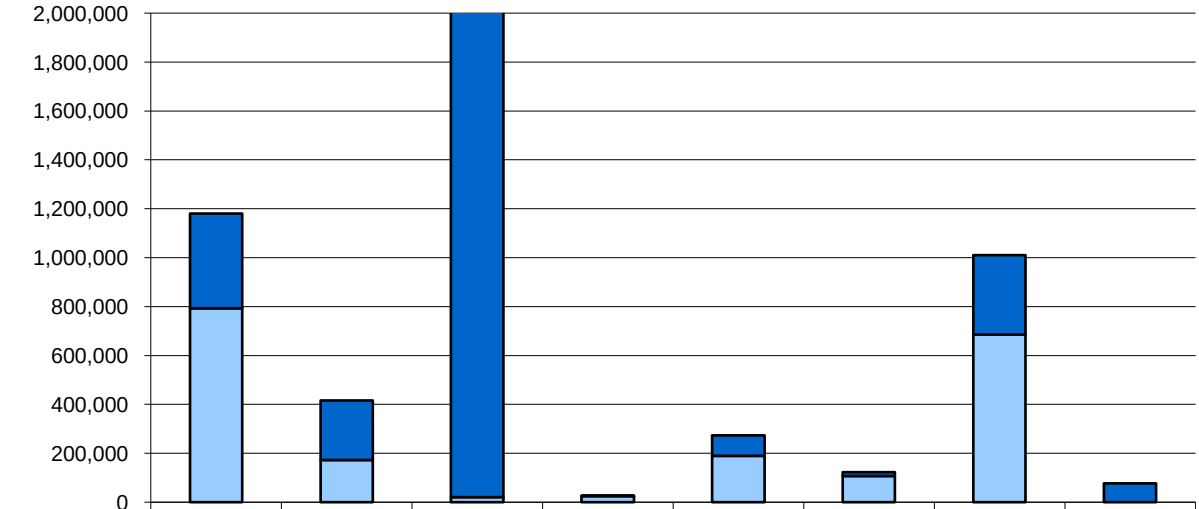


Figure 8 - Mobile subscribers - prepaid and postpaid

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. 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, Albania, Bosnia & Herzegovina, Montenegro and Serbia. FYROM has a majority of broadband, but still has significant numbers of dial-up lines. Turkey has few dial-up customers, possibly in areas where broadband is not accessible. Kosovo has a significant level of broadband but mainly due to the presence of cable and overall Internet penetration level is low in comparison with the other countries.



	HR	MK	TK	AL	BA	ME	RS	XK
Broadband	387,000	243,287	4,616,296	2,056	84,693	16,135	325,730	76,370
Narrowband	793,300	173,132	20,917	25,000	189,059	106,696	685,397	

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

The number of ISPs active on the market may appear impressive in most of the countries. However, where figures are available, the majority of the market is controlled by the incumbent operators and invariably with higher revenue, suggesting that they hold the higher spending customers.

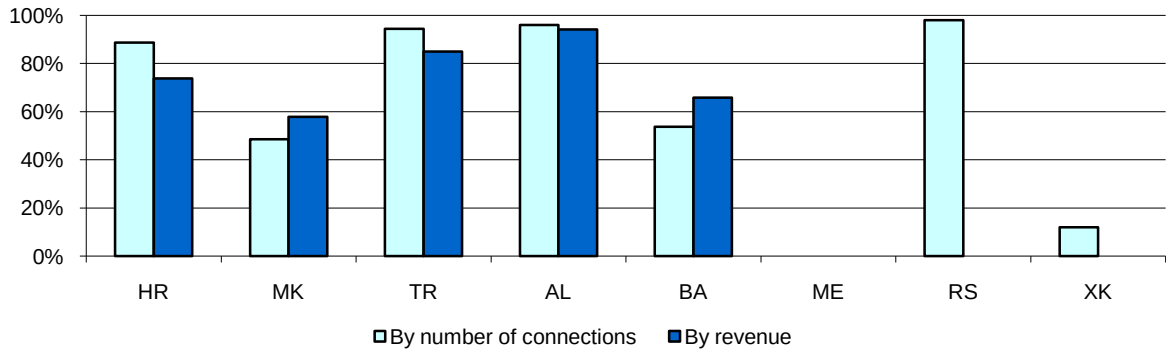


Figure 10 - Incumbent ISP's market share

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 2008 was 20%. The average broadband penetration rate for eight countries was 5.80%. The highest broadband penetration level was observed in Croatia (8.71%) and Turkey (6.30%), which is comparable to the level of Romania and Bulgaria that joined the EU in 2007.

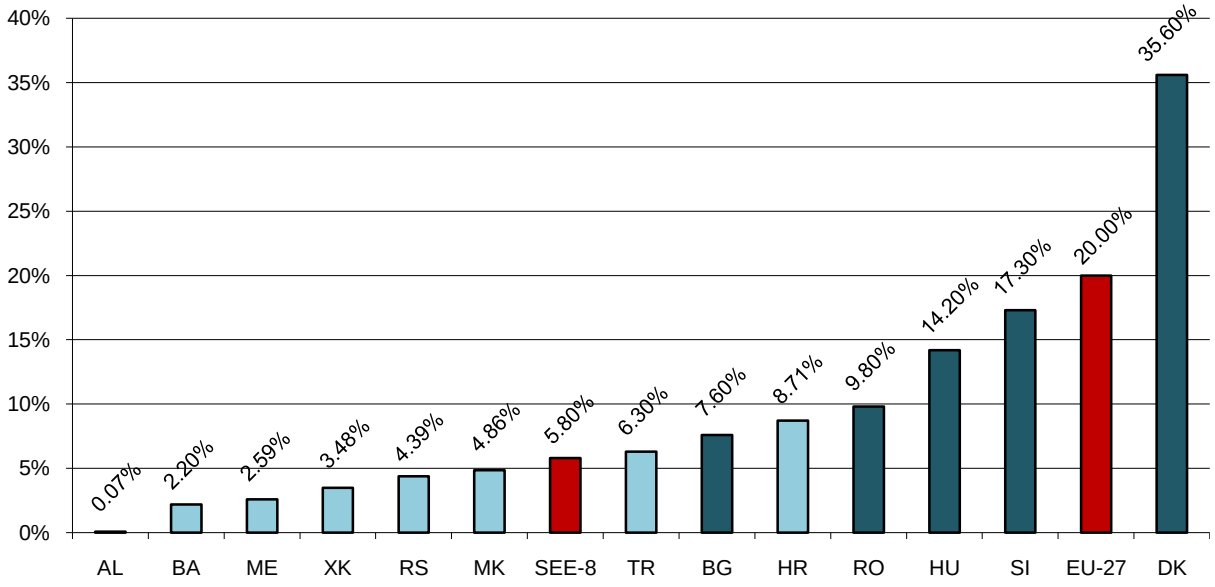
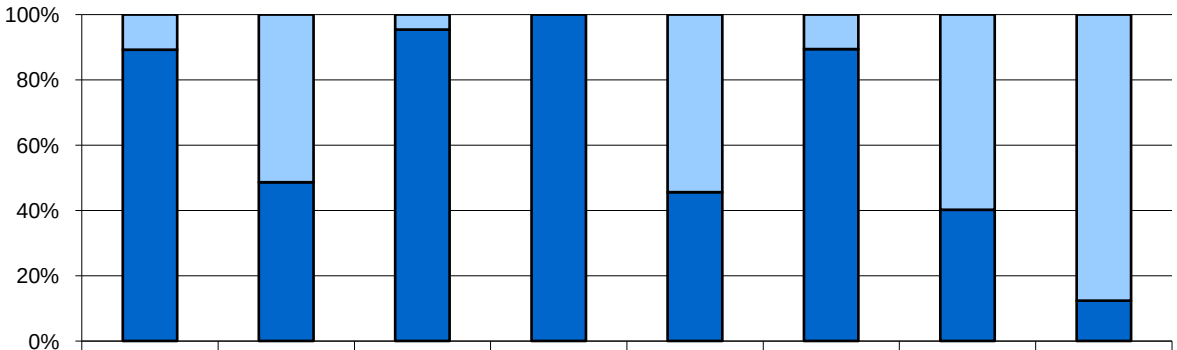


Figure 11 - Broadband penetration rate, January 2008

Broadband markets are dominated by fixed incumbent operators in Croatia, Turkey, Albania and Montenegro, where xDSL is the main access technology. A different situation is observed in FYROM, Bosnia & Herzegovina, Serbia and in particularly in Kosovo, where competitors are using alternative infrastructures – cable and to some extent also fixed wireless access networks.



	HR	MK	TK	AL	BA	ME	RS	XK
Alternative	41,622	50,892	211,898		46,109	1,707	194,664	76,370
Incumbent	345,397	48,214	4,360,466	2,056	38,584	14,428	131,066	10,786

Figure 12 – Fixed retail broadband connections by incumbent and alternative operators

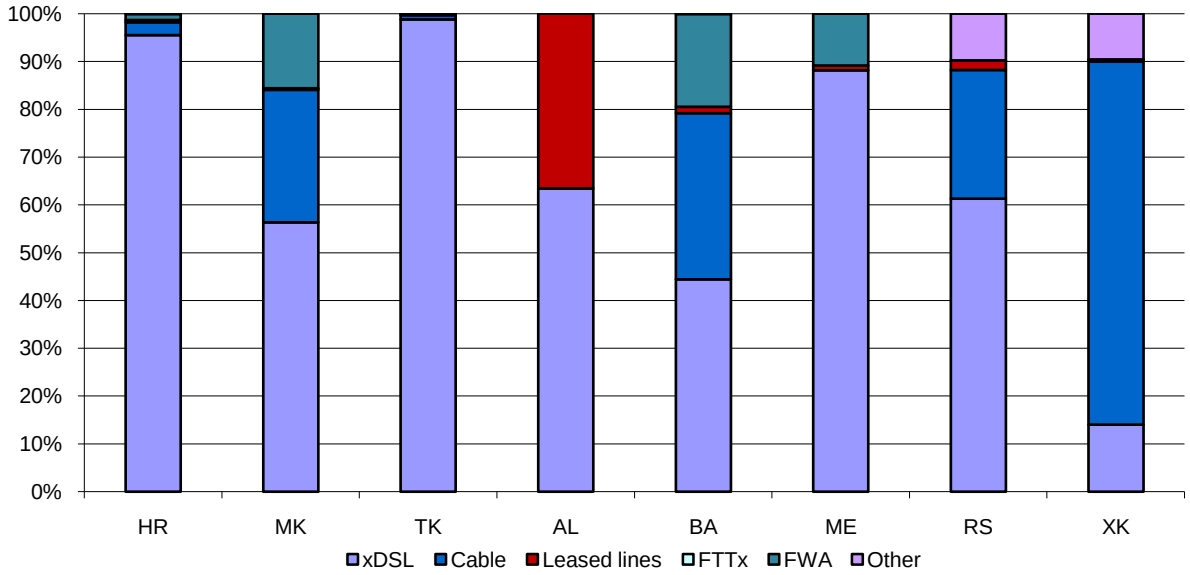


Figure 13 – Fixed retail broadband connections by technology

In terms of mobile broadband, spectrum licences for provision of 3G/UMTS services have been issued in Croatia, FYROM, Montenegro and Serbia. Further 3G spectrum assignments are expected to take place in the near future in FYROM and Bosnia and Herzegovina. Croatia has already achieved a significant number of 685.000 UMTS subscribers, while Serbia has 250,000 active UMTS subscribers.

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, the incumbent operator that also controls 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; 85% of AMC, a major Albanian mobile network operator; and holds 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 has already been approved by the European Commission, the Greek Parliament in Athens, the Greek Inter-Ministerial Privatisation Committee and the supervisory board of Deutsche Telekom. Approvals by the national competition authorities are expected in the course of October 2008. The transaction raises competition concerns about overlapping interests in the mobile market in FYROM, and to some extent in Bosnia & Herzegovina (where Telekom Srbije controls one of the three incumbent operators, Telekom Srpske).

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

Vodafone group has 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.

Telekom Slovenije, the Slovenian incumbent operator, controls 75% of the major alternative provider of fixed and mobile services in Kosovo, IPKO. It also holds 83% of the largest alternative fixed network operator in FYROM, On.Net and has invested in Internet service providers in Albania and Bosnia and Herzegovina.

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. Except in Montenegro and Croatia, all the other countries have a State shareholding ranging from 25% up to 100%.

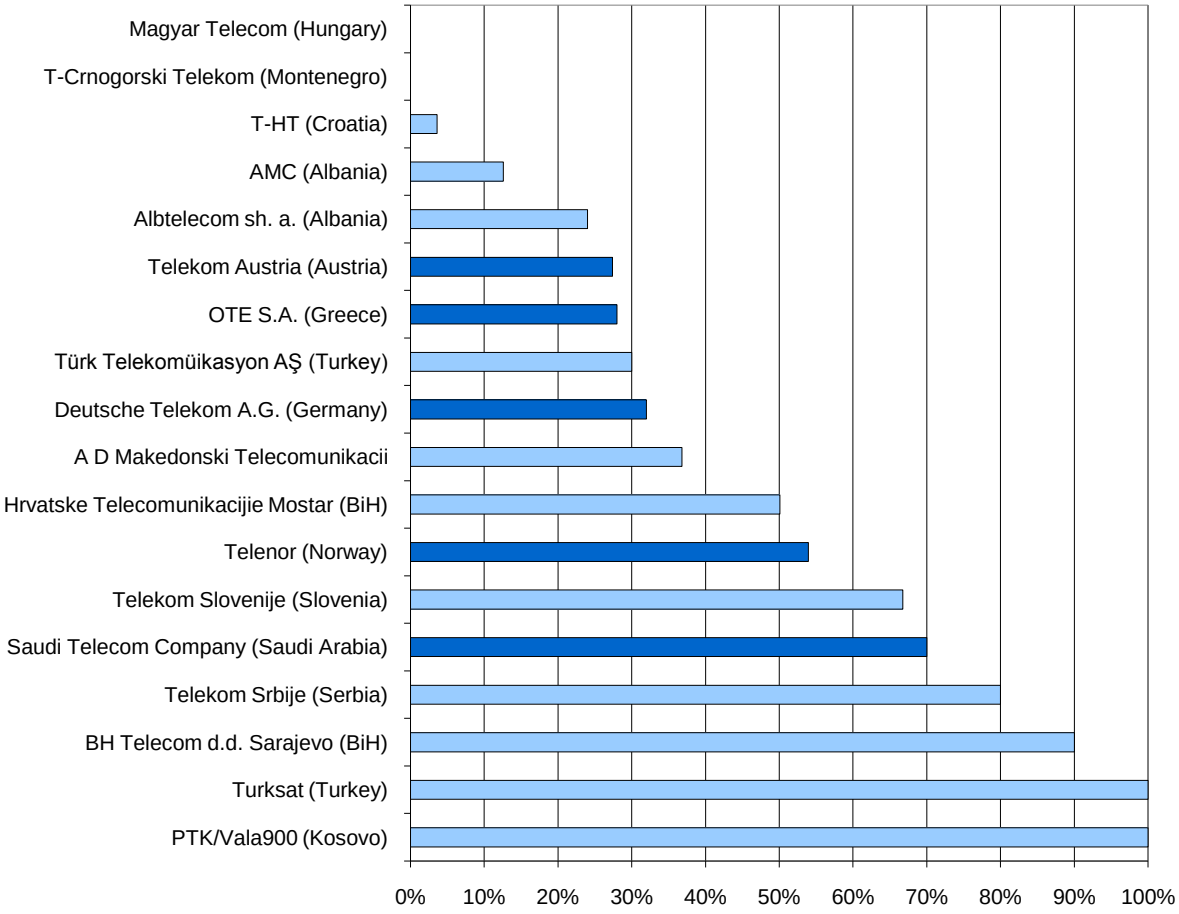


Figure 14 - State ownership of telecommunications operators (government)

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 for 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 10 year 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.

Nevertheless, the situation is far from being completely satisfactory and varies from country to country: (i) relative effective independence of the NRA (Croatia), (ii) obligation for the NRA to obtain the opinion from the Ministry about the constitutionality or the legality of the regulation (Serbia) and (iii) independence of the NRA with the exception of the granting of certain licenses and universal services obligations (Turkey). In Montenegro, the new law redefined 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 the NRA. At the same, the law gives the Ministry the powers of judicial review of the NRA decisions as the first appeal instance, effectively undermining the NRA independence.

There is, however, a general positive trend with the adoption of a series of new laws which in general have increased 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 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. Croatia has a five-year period with the possibility of reappointment while Albania has the same period but it is limited to one term of office.

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 below €2 millions (Kosovo, Albania) to € 9 millions (Croatia, Serbia) with the exception of Turkey where the budget was €49 millions in 2007 (no figures are available for 2008).

With the exception of Croatia and FYROM, most of the NRAs relied for a large part on one-off authorisation/notification fees. This may rise to nearly 100% in Montenegro and Kosovo. With the introduction of annual revenue based and spectrum fees in 2008, the situation in Kosovo is expected to change. The other main sources of financing essentially rely on spectrum (FYROM, Turkey, and Albania). In Serbia, 55% of the NRA funding comes from one-off authorisation fees while 40% - from spectrum usage fees. The Croatian NRA, in particular, relies on a well-balanced funding from (i) revenue based annual fees, (ii) spectrum and (iii) numbers.

4. NRA staffing

The average number of staff in 2008 is between 50 and 100 (up to 125 for Croatia) with two exceptions: Albania with a team of 30 and Turkey with a team of nearly 600. 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 for Kosovo (11), 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 in FYROM where the NRA may initiate a procedure under the Law on Misdemeanours and the Law on Criminal Procedures. 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 (€15,000), 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. At first glance, it seems that this enforcement power is used more often than financial penalties. 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 4 months (extendable to 6 in Turkey). Some countries specify a minimum unsuccessful negotiation period from 45 days up to 90 days) before the

dispute is passed to the NRA. Some countries impose a short deadline: in Bosnia & Herzegovina, the NRA has to issue a binding decision within 6 days (in exceptional cases 10 days) from receiving the request, in Kosovo, the NRA issues a binding decision within 6 weeks. While this short timeframe may seem impressive in theory, the practicality of such a short timeframe may be questioned.

Croatia, Bosnia & Herzegovina, Albania 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, Serbia, FYROM, and Turkey request the NRA to publish it. The new law in Montenegro also introduces a requirement for 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 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 with the Government. Bosnia & Herzegovina is an exception and the NRA only reports to the government on the tasks performed.

8. Appeal procedures

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

All the countries have an appeal procedure. However, since it is closely linked to the national judicial system, the mechanisms are different. The appeal body is a court acting as a first instance or second instance after an appeal in first instance handled by the NRA managing board. The exception is Montenegro, where the first instance in the appeal procedure 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. Croatia, Turkey, Bosnia & Herzegovina, Montenegro, and Kosovo do not automatically suspend the appealed decision while FYROM, Albania, and Serbia have such automatic suspension.

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 and Bosnia & Herzegovina where the court is limited to the correct application of the law.

Lastly, most of the countries allow a third party to appeal a decision if they have a legal interest in the case. Only FYROM, Turkey, and Kosovo exclude third parties.

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 5 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 and Serbia. 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 its 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 has been introduced by the new law: 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 allocation and 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.

Even if there is a specific broadcasting authority responsible for content, in most of the countries, it is the NRA that assigns frequencies (except for Turkey and Albania). In most countries, there is a cooperation agreement between the NRA and the broadcasting authority. The exceptions are 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 deadline before the end of 2012, except for Turkey (2014) and Serbia (2015). Nevertheless, only Croatia with an early deadline of 2011 has a review under way. No decision on the analogue to digital switchover has been adopted in Albania.

13. Cooperation between the NRA and the NCA

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 the other countries, such cooperation has not yet been formalised. Interestingly, in Turkey, the NCA is obliged to take account of the opinion of the NRA but the reverse is not mentioned.

C. Market access conditions in electronic communications

1. Liberalisation of public fixed telecommunications networks and services

At least in theory, all countries 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.

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 practice, competition only emerged at the level of rural local networks, with no alternative fixed network operators having been licensed to supply long distance and international services. In November 2006 the Telecommunications Law 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. The new Law on Electronic Communications that entered into force on June 26, 2008 is intended to achieve alignment with the principles of the EU 2003 regulatory framework and introduces a general authorisation regime for any type of electronic communications services.

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 and the only operator authorised to interconnect with foreign telecommunications networks. Serbia has a significant tariff rebalancing problem, with the policy document of October 2006 taking a very cautious approach to the practical implementation of full liberalisation. Despite applications for fixed voice telephony licences submitted by several operators, no decision on the tender procedure for the new licences has been adopted.

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. The implementing legislation under the new authorisation regime is still being drafted in all of the three countries.

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 and Turkey have the most complex authorisation regimes combining different categories of individual licences and general authorisations. The authorisation regimes in both countries envisage 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 and Kosovo have the highest fee at 1%. The NRA in Kosovo, however, intends to reduce the annual fee to 0.3% in 2009, after the introduction of annual spectrum usage fees.

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 typically 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 can take up to 359 days and application procedures for location permits – up to 559 days. In Serbia, the same procedures very often may 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.

To make a more comprehensive analysis of the situation in all monitored countries, it may be necessary to address the issue in more detail in the subsequent monitoring reports, covering: (i) procedures to access public and private land, (ii) other approvals/certificates/technical permits required and (iii) timeframe.

D. Implementation of the EU regulatory framework

Four 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 and Montenegro have introduced the principles of the EU 2003 regulatory framework in their national legislation in 2008. The regulatory frameworks in other four 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 or 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, Montenegro, 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).

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 EU 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 this 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).

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 applications. 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. The NRA intends to apply the EC Recommendation on relevant markets of 2007 for identifying the relevant markets and also apply the three criteria test to a few additional markets covering retail mobile telephony services, wholesale access and call origination in mobile networks and the wholesale fixed transit services.

In FYROM, the NRA has defined in August 2005 18 product markets according to the EC 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 competed 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 forces 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 in early 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 the application of competition law principles. Consequently, one may expect a new round of market analyses to be initiated shortly.

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 work of 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.

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, without specifying the applicable remedies.

E. 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	●	○	●	●	●	○	○	○
Regulatory cost accounting - fixed	○	●	○	○	○	○	○	○
Regulatory cost accounting - mobile	○	●	○	○	○	○	○	○
Legend: ● implemented - ○ not implemented - ⭘ commercial offer								

Table 5 - Implementation of competitive safeguards

1. 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, 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	July 2006 (CS) Jan 2005 (CPS)	July 2006 (CS) Jan 2005 (CPS)	July 2006 (CS) Jan 2005 (CPS)	July 2006 (CS) Jan 2005 (CPS)
FYROM	May 2008	January 2007	January 2007	January 2007
Turkey	Not available	April 2006	April 2006	April 2006
Albania	Not available	Not available	Not available	Not available
Bosnia & Herzegovina	July 2007	July 2007	July 2007	July 2007
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 January 2005 for all types of calls: local, national, international and mobile numbers. In practice, however, alternative operators were offering CPS from January 2005 and CS – only from July 2006. Currently there are four providers offering CPS services and two 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/CPS has been available in the fixed network since the second half of 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 eight providers offering CS.

In Bosnia & Herzegovina, CS/CPS was introduced in July 2007 but is still at an early stage with only two alternative operators offering CS services.

In Montenegro, CS/CPS was introduced in December 2007 and applies to both fixed and mobile networks. 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 three providers.

In Albania, CS/CPS was imposed as a regulatory obligation on Albtelecom, but implementation is not foreseen until 2009. However, Albtelecom's users have been able to use prepaid calling cards from service providers for national and international calls since 2002.

The introduction of CS and CPS is not yet foreseen in Serbia. There also is no clear timeframe for the implementation of CS/CPS in Kosovo, although a public consultation is planned for 2008.

2. Number portability

Another important competitive safeguard is number portability, which enables a subscriber to maintain the 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 fixed and mobile networks.

Croatia is the first country in the region that has successfully implemented number portability for fixed and mobile numbers. Fixed number portability has been available since July 2005. Mobile number portability was delayed until October 2006 because of the technical complications. As of first quarter 2008, the Croatian NRA reported nearly 200,000 ported fixed numbers and over 41,000 ported mobile numbers.

In FYROM, number portability in fixed and mobile network was foreseen from July 2007 but was delayed because of the complications in the procurement procedures for the centralised database. Number portability in both fixed and mobile networks was finally implemented in September 2008.

Turkey adopted a regulation on number portability in February 2007. Following the implementation of the centralised reference database in May 2008, number portability is to be implemented by November 2008 for mobile networks and by May 2009 for fixed networks.

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 by June 2009.

No clear deadlines have been established for the implementation of number portability in Bosnia & Herzegovina, Montenegro, Serbia and Kosovo.

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 such numbers to or from another operator. 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[53] voice, respectively 075 and 078.

3. 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.

With the exception of Serbia, 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 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. In April 2008, the NRA approved, with changes, the RIOs for the MNOs with SMP. Both MNOs have appealed against the changes of the NRA. The RIOs will be published following the final decision on the appeals.

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

In Albania in March 2008, Albtelecom and the two MNOs with SMP, AMC and Vodafone, submitted their first RIOs to the regulator for approval. Albtelecom's RIO was approved by the NRA in August 2008 and published on September 16, 2008. A decision on the compliance of RIOs of the two mobile operators is pending.

[53] The term 'nomadic services' refers to services where the user can connect their VoIP phone to 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.

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

In Serbia, the first draft RIO of the fixed incumbent operator was prepared in August 2008, but it has not been approved by the NRA and not published yet.

4. 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 slightly over 55,000 unbundled loops as of first quarter 2008, with five LLU agreements in place. Although Turkey has had an RUO since November 2006 and there are nine LLU agreements, so far only about 120 loops have been unbundled 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.

In Bosnia & Herzegovina, RUOs for the three fixed incumbent operators are to be published in October 2008. No clear deadlines have been established for the implementation of local loop unbundling in Albania, Montenegro, Serbia and Kosovo.

5. 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 were relatively simple models for bitstream access at first, but these have been developed by operators and NRAs into complex systems that offer a more flexible range of xDSL traffic handover

options. 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. However, T-Com had been providing an ADSL Transport service, similar to IP level handover since 2006.

While an obligation to provide bitstream access was imposed on Turk Telekom as early as 2004, the first reference offer was available only in August 2007. It was further modified in early 2008 to include two forms of bitstream access and a resale product.

In FYROM, Makedonski Telekom offers wholesale ADSL on a commercial basis, providing IP level handover and a resale product. A new regulation on the provision of wholesale bitstream access and resale services is expected to be adopted shortly, following a consultation concluded by the NRA in September 2008.

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

6. 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.

To date, WLR has not been imposed upon and is not commercially available from any SMP operators in any of the monitored countries.

7. 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 and Turkey 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 2007, the NRA adopted a policy framework for MVNO operators 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.

8. 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. However, the Directive does not define which cost accounting methodology is to be used.

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, initial regulated fixed interconnection and LLU charges based on a benchmarking methodology were approved by the NRA. 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 FDC methodology with current cost.

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

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

F. Universal service

All monitored countries have some form of universal service being delivered by one or more operator, 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 undertakings or sets of 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.

Croatia has a comprehensive universal service regime in place, and T-HT has been designated as USO provider for a 5-year period from November 2005.

In FYROM, the NRA has launched a tender procedure to designate one or more universal service providers. In the interim, some of the USO elements have been provided by the incumbent operator, Makedonski Telekom, within the scope of its concession agreement that was terminated in September 2008.

In Turkey, the universal service legislation has not been applied in practice and universal service is still provided by Türk Telekom in line with requirements set out in its concession agreement. The Universal Service Law 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 yet.

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.

Legislation is still under preparation for a universal service framework in Montenegro. The NRA will prepare the Draft Rulebook for Universal Service by the end of 2008, following an ongoing public consultation.

Serbia has only set out general requirements that do not include specific details for access to networks and telephony services. The Ministry for Telecommunications and Information Society intends to define the scope of universal service more specifically at a later date.

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.

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, FYROM and Serbia have adopted legislation that will allow them to introduce compensation schemes in the future. Albania, Bosnia & Herzegovina, Montenegro and Kosovo are in the process of adopting legislation that will allow compensation of universal service providers' cost.

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 (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. Some countries have published the requirements or the methodologies for measurements without providing the actual results.

The NRA in Montenegro intends to include QoS targets in the Draft Rulebook for Universal Service by the end of 2008, following an ongoing public consultation.

In Turkey, mobile network operators are also obliged to fulfil QoS targets.

G. Fixed retail telephony tariffs

The reference date for the information in this section is April 1, 2008.

In a traditional monopoly, fixed monthly charges and local call tariffs were often priced significantly below cost in an effort to make telephony affordable for a large number of consumers. Because they had monopoly rights, the operators could recoup any lost revenue by charging more for long distance and international calls. Such calls were primarily made by business, so the pricing was intended to be a transfer from business to consumers. Such an approach becomes untenable with the introduction of competition. Therefore, the need for tariff rebalancing is well understood. Governments have generally allowed several years for the transition. In order to soften the consequences for consumers, it has been common to differentiate tariffs between businesses and consumers, most often in monthly rentals. At the end of the process, businesses and most consumers will normally pay less for their total communications bill and or will use more communications services.

1. Tariff rebalancing and regulation of retail tariffs

Rebalancing of the incumbent operator's retail tariffs focuses on fixed voice telephony in all countries. FYROM also covers leased lines and telegraph & telex services. Albania also covers leased lines.

All countries have included a requirement for formal advance notification of the new retail prices to the NRA with a notice period ranging from 8 to 30 days.

Assessment methodology: some countries are using a price cap mechanism to achieve tariff rebalancing while (i) Croatia has a price squeeze test based on the SMP operator's own costs (retail prices have to cover the SMP operator's own network and commercial costs) and (ii) Serbia and Kosovo are using a cost based assessment. A cost based approach is theoretically closer to the philosophy of the EU regulatory framework while the price cap has the advantage of being easier to use. The specific details of the approach applied by the regulators in Serbia and Kosovo are not available, but it is understood that none of them has implemented a comprehensive costing model.

Montenegro is the only country that has completed tariff rebalancing. In all the other countries, tariff rebalancing is ongoing. See the next section for the countries that have opted for the price cap approach.

2. Retail price caps

Five of the eight countries have opted for a price cap approach. The cap includes international calls which are usually the first services to benefit from competition. Consequently, one may question the pertinence of including international calls or alternatively the effectiveness of competition.

FYROM has included a price cap mechanism in Makedonski Telekom's concession from January 1, 2001 to December 31, 2018. The cap has been fixed at Retail Price Index (RPI) + 6% for one off connections and monthly subscription fees. Additionally, there is Consumer Price Index (CPI) + 35% for local and long distance calls and CPI+25% for monthly residential subscription fees. Following an amendment to the Law on Electronic Communications adopted in July 2008, the concession agreement has been cancelled in September 2008 and the price cap is no longer valid. The NRA stated that it may impose a new price cap regulation, once it has carried out its analysis of the retail fixed telephony markets.

Turkey has included a price cap mechanism from January 1, 2007 to December 31, 2008 (with a possible extension of one year). The cap has been fixed at CPI + 3.3%.

Albania concluded a consultation on a rebalancing methodology with comments due in May 2008. The NRA has to make a formal proposal to the Ministry, which will be considered for approval by the Council of

Ministers. In the meantime, a price cap has been implemented from September 1, 2008 to August 31, 2010. The price cap has been set at RPI-RPI (effectively 0). Sub-caps have been defined: (i) RPI+20% for monthly rental residential, (ii) RPI+10.5% for local calls, (iii) RPI-15% national calls and (iv) RPI -15% for international calls. Additionally, a price cap mechanism has been imposed on mobile operators.

Montenegro considers that it completed its tariff rebalancing by August 31, 2007. A consultation on a draft rulebook for tariffs in public telecommunication service (prepared with technical assistance from the European Bank of Reconstruction and Development (EBRD)) is ongoing. A price cap method has been defined but has not been applied yet.

3. Call charging system

In Croatia, there are two call charging systems. In one of them (used by tariff plans Start and Mini), the minimum charging unit is 60 seconds for the calls on the national network, but for calls to mobile networks and the international calls the minimum charging unit is 15 seconds. The other tariff plan called Super has two different alternatives. One applies the minimum charging unit of one second with a call setup cost. The other alternative has a minimum charge of one minute and thereafter per second charging. These two methods apply to all type of calls.

In FYROM, the minimum charging unit is 60 seconds.

In Turkey the minimum charging unit is 60 seconds for local, long distance and international call and 20 seconds for fixed to mobile. Turkey has a Special Communications Tax of 15%, which applies to all charge elements related to fixed telephony. The tax applies equally to residential and business subscribers.

In Albania, the charging methodology for local calls is still based on a charging unit of two minutes in peak time and three minutes in off-peak hours. The reported values are for residential users. Prices for business users are 50% higher than those for residential users. The proposed methodology for tariff rebalancing that has been under public consultation, introduces the obligation on Albtelecom to change the charging system for local calls from units of 2 and 3 minutes to per-second billing, starting from the second 6-month period under the regulation. For long distance, international and fixed to mobile, the charging unit is already on a per second basis.

In Bosnia & Herzegovina, the charging unit is on a per second basis.

Montenegro applies the charging unit on a per second basis but with a minimum charge of 1 minute. The aim is to move to the same pricing for residential and business customers.

In Serbia, the charging system is based on pulses. The pulse duration varies depending on the type of call: for local calls – one pulse is 1 minute in peak time and 2 minutes in off-peak; for long distance calls - one pulse is 12 seconds in peak time and 24 seconds in off-peak; for calls to mobile networks – one pulse is 2 seconds in peak time and 4 seconds in off-peak; for calls to a fixed network in Montenegro 2 seconds and to a mobile network in Montenegro 1 second.

In Kosovo, the charging system is based on pulses. The pulse duration varies depending on the type of call: for local and long distance calls – one pulse is 4 minutes, for fixed to mobile – one pulse is 15 seconds and for international calls – one pulse is 9.2 seconds.

The effect of these charging mechanisms on the minimum price for a local call is presented in Figure 15 below.

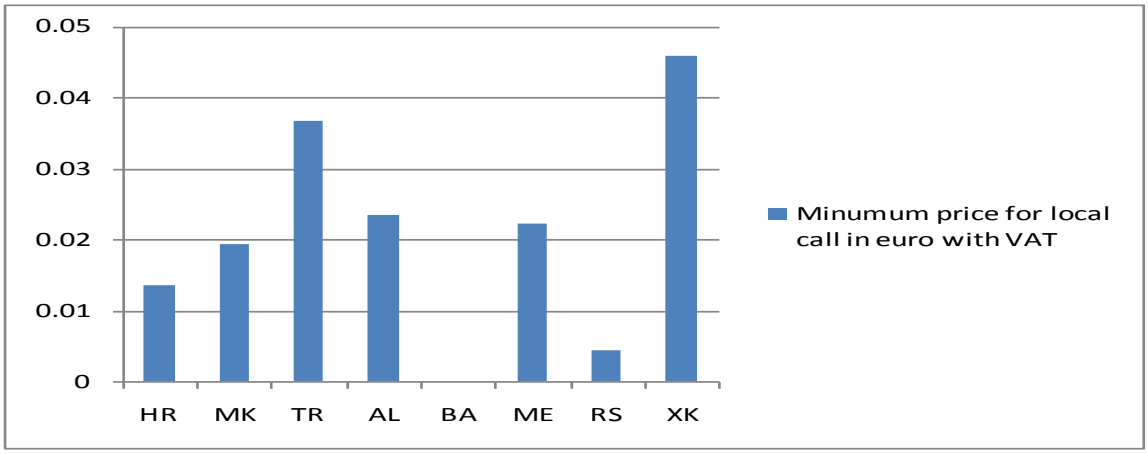


Figure 15 – Minimum price for a local call

4. Monthly subscription fees for residential and business users

This section reviews the monthly rental prices for PSTN lines in the fixed network for residential subscribers in nominal euro with value added tax included. The first item is related to residential and the second to business subscribers. The classification 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
Serbia	< €1	-	Same as residential + 150 pulses
Albania	< €2	-	€6.7
Bosnia & Herzegovina	€4 (with 160 min)	< €2 (with 160 min)	€ 8.3 (with 160 min)
Montenegro	€5 (with 100 min)	€2.5	Same as residential
FYROM	€6.5 (with 100 min)	€3.6	€11.5
Turkey	€6.75	€4.25 (with 100 min)	Same as residential
Kosovo	€7 (with 250 pulses)	€3.5	€ 21.7 (with 2500 pulses)
Croatia	€8.3	€4.1	€9.7

Table 7 – Monthly subscription fees

Serbia and Albania do not have low usage residential monthly rental but their standard monthly rates are lower than the low usage alternatives of the other countries.

Residential subscribers pay less than business subscribers in most of the countries, particularly in FYROM, 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, there have been no major changes since July 2007 with the exception of: (i) Turkey where prices have decreased, (ii) Bosnia & Herzegovina and Kosovo where prices have increased.

On the evolution of the prices for business monthly rental, there have been no major changes since July 2007 with the exception of Turkey with significant price reductions.

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, which can be expressed as relative price levels. Taking these price levels into account means that the prices for consumers in this region appear higher than that expressed through the nominal exchange rate. The chart below shows the differences in standard monthly rentals when presented in nominal euro and in PPP values.

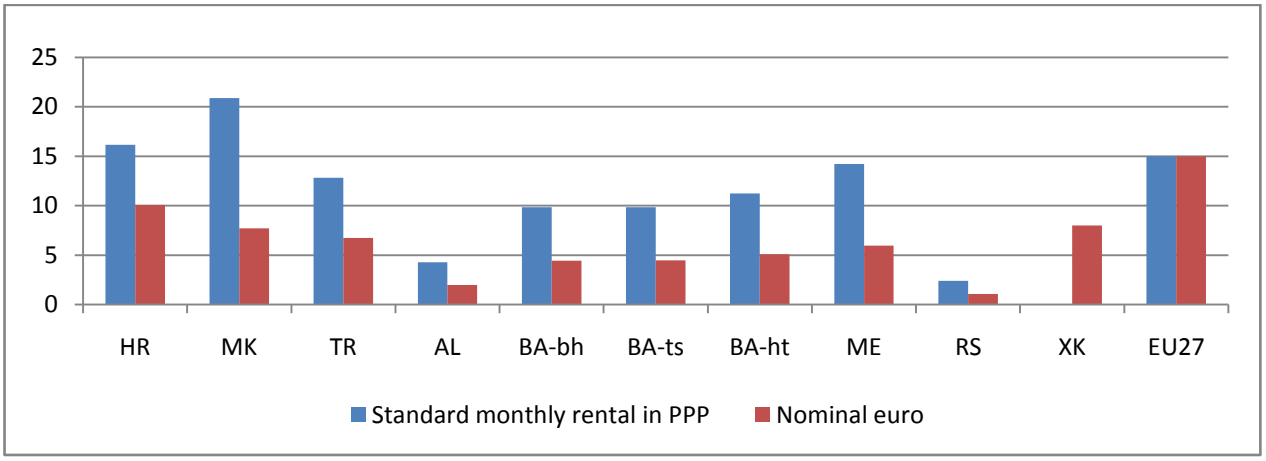


Figure 16 – Standard monthly rental in PPP and nominal euro

5. One-off connection charges

This section analyses the initial costs for the installation (new line connection) and reconnection for residential and business subscriptions. The installation (new line connection) costs are the cost of a new installation in a location that has not been connected before. The reconnection cost is the cost 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 classification starts 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
FYROM	€20	0	Same as residential	Same as residential
Bosnia & Herzegovina	€30 to €45	0	Same as residential	Same as residential
Kosovo	€9	< €2	Same as residential	Same as residential
Turkey	< €4	< €4	Same as residential	Same as residential
Serbia	€61	€4.5	€122	Same as residential
Croatia	€70	€8	Same as residential	Same as residential
Montenegro	€55	€11	Same as residential	Same as residential
Albania	€115	€115	Same as residential	Same as residential

Table 8 – Connection charges

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

In general, a new line connection is more expensive than a reconnection charge with the exception of Turkey and Albania where the prices are similar (but also the highest in Albania). The reconnection charges vary from 0 (FYROM, Bosnia & Herzegovina), < €5 (Kosovo, Turkey and Serbia), < €11 (Croatia and Montenegro) up to €115 in Albania. The new line connection charges vary from €20 to €70 with lower prices in Kosovo (€9) and Turkey (< €3) and are the highest in Albania (€115).

There is no evident relationship between the price level of the connection charges and the monthly rental fees: Albania has one of the cheapest monthly rental fees (<€2) but the most expensive connection charge (€115) while Serbia, with a monthly rental fee of < €1, has a reconnection charge of €4.5. In Croatia, the monthly rental fee is roughly the same as the reconnection charge (€8) while in Montenegro the monthly rental fee (€5) is double that of the reconnection charge (€11). FYROM and Bosnia & Herzegovina have a monthly rental fee of around €6.5 and €4 respectively while the reconnection charge

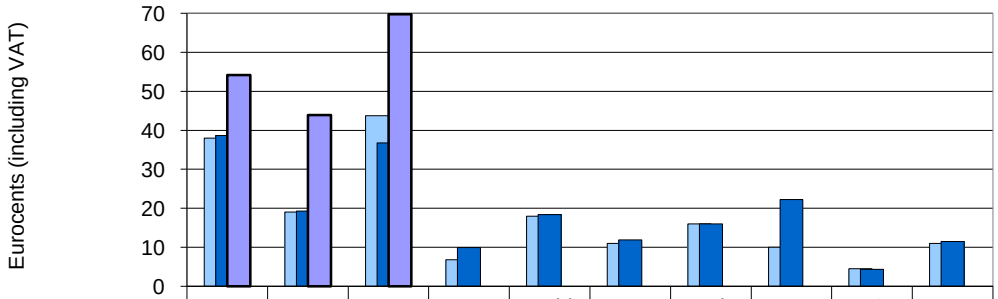
is €0. Kosovo has a different approach with a cheaper reconnection charge (< €2 while the monthly rental fee is around €7). Turkey used to have the same pattern as Kosovo (low reconnection charge and a much higher rental fee) but since the decrease in price for monthly rental fees this difference has decreased (€7 monthly rental fee, with < €4 reconnection charge).

On the evolution of the prices since 2005, there have been few major changes, but in Kosovo and Bosnia & Herzegovina prices have dropped quite dramatically. The level in Albania is both high and unchanged.

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

In general, competition is in its infancy. In Turkey, local calls are only provided by the incumbent. In Serbia, there is no alternative operator. In Montenegro, the competitor is the third mobile operator (M:Tel) which also has a license for WIMAX. In Kosovo and in Croatia competition has been introduced via VoIP while in FYROM (Skopje) it is a mix of LLU and WiFi.

There is a considerable variation in the prices, with Croatia and Turkey being more expensive, while Serbia is the cheapest. Between July 2007 and April 2008, prices have remained stable with the exception of Albania and Montenegro where they have increased.



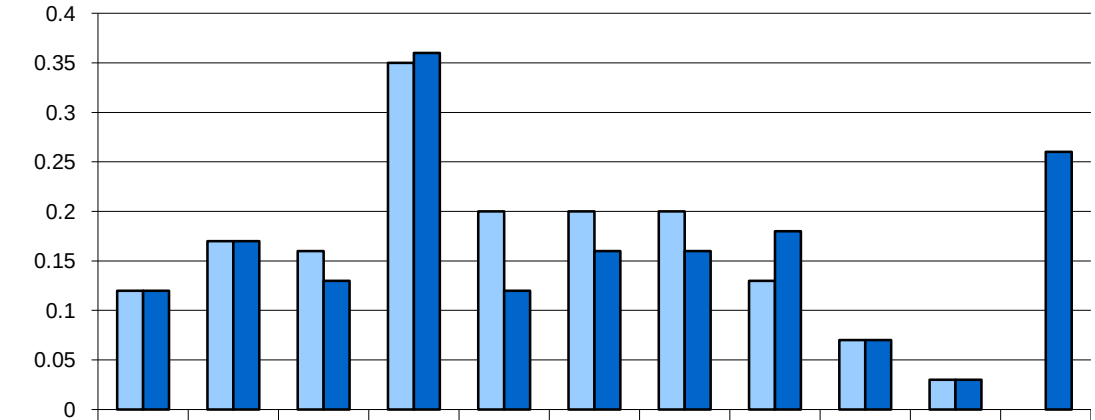
	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
Jul-07	38.0	19.0	43.7	6.8	18.0	11.0	16.0	10.0	4.5	11.0
Apr-08	38.66	19.28	36.75	9.91	18.42	11.88	16.04	22.23	4.39	11.5
PPP apr.08	54.15	43.92	69.79							

Figure 17 - Cost of a ten minute local call (2007-2008)

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

Between July 2007 and April 2008, there have been more changes in long distance tariffs than for local calls with increases and decreases in prices.

On the evolution of prices between July 2007 and April 2008, they have increased in Albania and Montenegro (same trend as for local calls). However, on a positive note, prices have decreased in Turkey and Bosnia & Herzegovina.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.12	0.17	0.16	0.35	0.2	0.2	0.2	0.13	0.07	0.03	
Apr-08	0.12	0.17	0.13	0.36	0.12	0.16	0.16	0.18	0.07	0.03	0.26

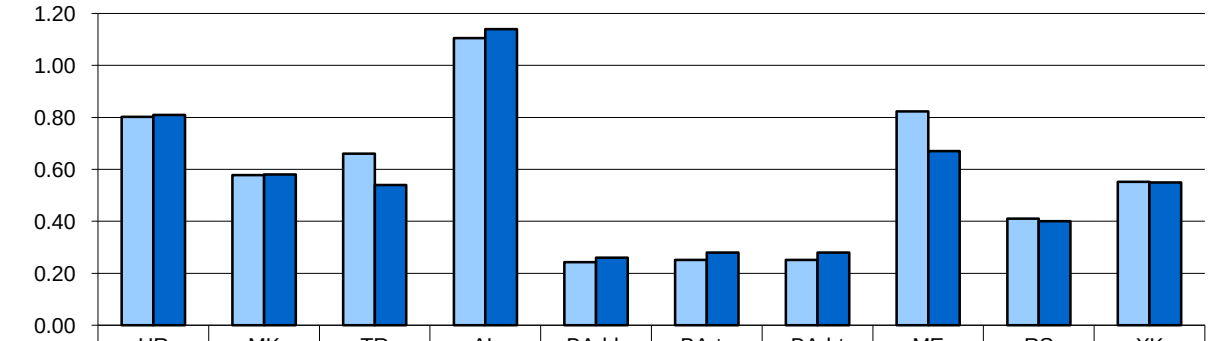
Figure 18 - Residential long distance charges for 3 minute calls

8. Fixed to mobile tariffs

In general, fixed to mobile prices are much more expensive than national long distance calls.

Based on a sample of 3 minute calls, the majority of the prices are between €0.4 and €0.6 with the lowest tariff in Bosnia & Herzegovina (<€0.3) and highest in Croatia (€0.8) and Albania (€1.14).

On the evolution of prices between July 2007 and April 2008, prices have (i) increased in Albania (same trend as for fixed local and long distance calls), (ii) decreased in Turkey (same trend as for fixed long distance calls) and (iii) decreased in Montenegro (opposite trend than for local and long distance calls).



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
Jul-07	0.80	0.58	0.66	1.10	0.24	0.25	0.25	0.82	0.41	0.55
Apr-08	0.81	0.58	0.54	1.14	0.26	0.28	0.28	0.67	0.40	0.55

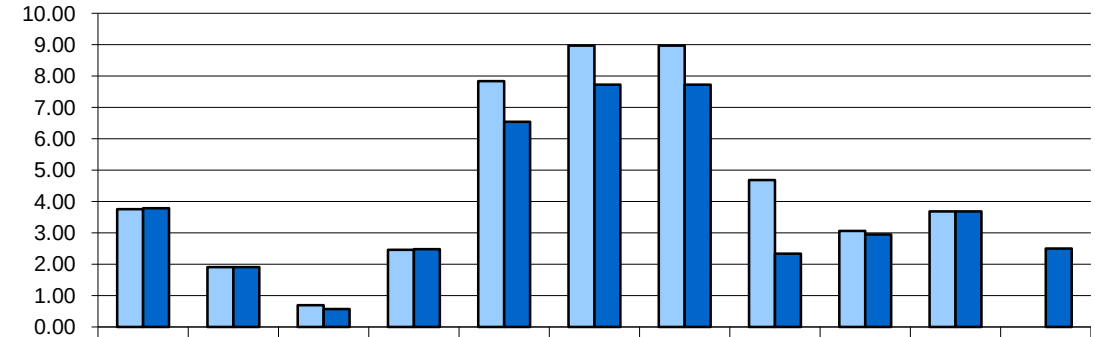
Figure 19 - Residential charges for 3 minute fixed to mobile calls

9. International tariffs

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

Between July 2007 and April 2008, there has been no increase in prices. Most of the prices have remained stable with decreases in (i) Turkey (where prices are already low – the same trend as for fixed long distance and fixed to mobile prices), (ii) Bosnia & Herzegovina (where prices are the most expensive

– same trend as for fixed long distance), (iii) Montenegro (proportionally the largest decrease – same trend as for fixed to mobile and the opposite trend than for fixed and long distance calls) and (iv) Serbia.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU27
Jul-07	3.76	1.91	0.69	2.45	7.84	8.97	8.97	4.68	3.06	3.68	
Apr-08	3.78	1.91	0.57	2.48	6.54	7.73	7.73	2.34	2.95	3.68	2.50

Figure 20 - 10 minute call to UK by using the incumbent operator for residential users

H. Mobile retail tariffs

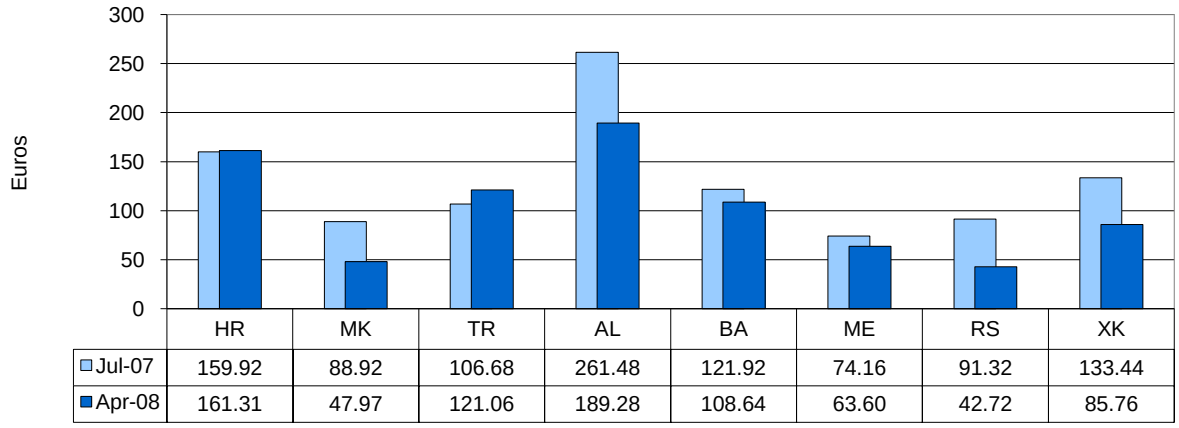
Mobile network operators provide a range of tariff options that are quite complicated and difficult to compare. Consumers have to take into account a significant number of parameters, including the initial activation charge, monthly subscription charge, peak and off-peak tariffs, “free” calls and text 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 members states the OECD constructed a set of mobile tariff “baskets” building on its work in fixed telephony baskets. These baskets have been updated to better 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.

The European Commission adopted the OECD 2006 baskets in its 13th Implementation Report, reporting a wider range of data for operators and different tariff packages. It should be noted that the EC uses monthly and not annual results. While some critics have argued for the creation of a “Balkan basket” or set of baskets that might better reflect local usage patterns, this would make any comparisons with the EU or with OECD impossible. Indeed, it would be likely to make historical comparisons very difficult, unless the old results could be recalculated.

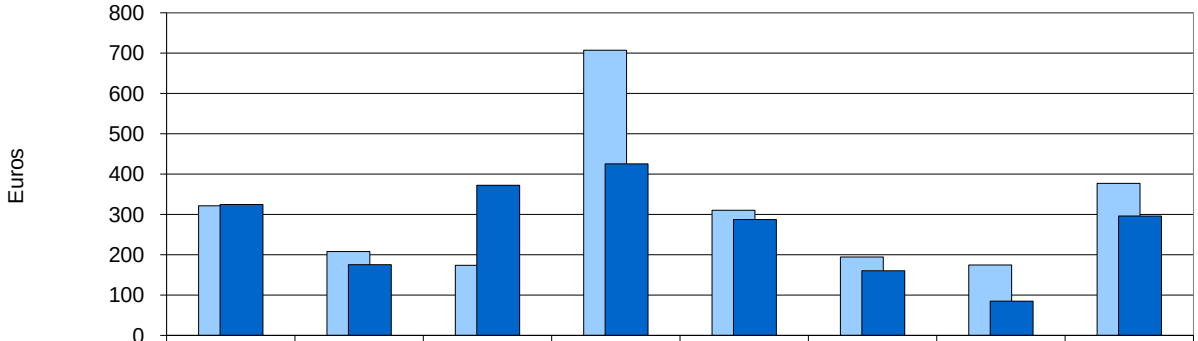
This report maintains the OECD 2002 basket in order to be able to present a historical comparison.

Between July 2007 and April 2008, there has been a significant decreasing trend for all types of usages in Albania, Serbia, and Kosovo (but the prices in Albania and Kosovo were the highest in comparison with the other countries). In Montenegro, prices have decreased slightly for all types of user (however, prices are already in the lowest range in comparison with the other countries). In FYROM, prices have also decreased but with a specific focus on low usage mobile users. In Turkey, prices have increased but specifically for medium usage mobile users. In Croatia, after recalculation of the baskets from July 2007 and April 2008, the cost of the basket is the same in national currency, but a small increase in euro due to exchange rate differences.



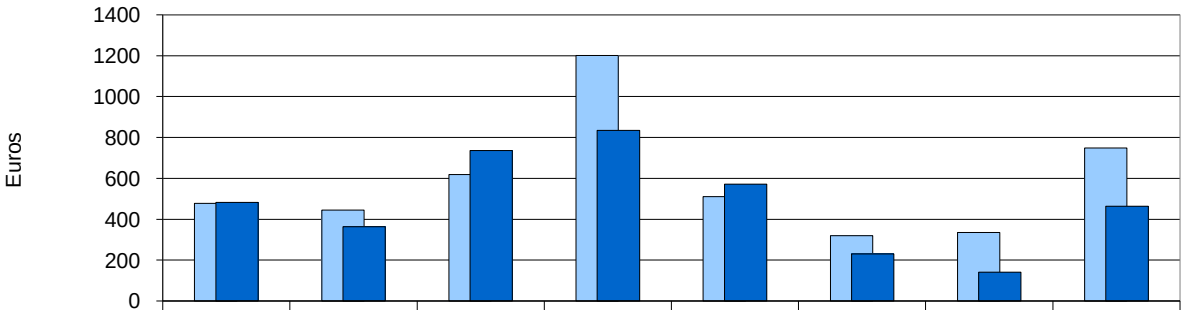
	HR	MK	TR	AL	BA	ME	RS	XK
Jul-07	159.92	88.92	106.68	261.48	121.92	74.16	91.32	133.44
Apr-08	161.31	47.97	121.06	189.28	108.64	63.60	42.72	85.76

Figure 21 - Low usage mobile basket (2007-2008)



	HR	MK	TR	AL	BA	ME	RS	XK
Jul-07	321.47	208.20	173.76	706.92	309.96	194.28	174.60	376.68
Apr-08	324.26	175.25	372.45	425.67	286.91	160.56	84.72	295.70

Figure 22 - Medium usage mobile basket (2007-2008)



	HR	MK	TR	AL	BA	ME	RS	XK
Jul-07	478.15	444.12	619.08	1200.36	510.60	320.16	334.80	748.92
Apr-08	482.31	364.03	736.65	834.53	572.15	230.76	141.48	463.83

Figure 23 - High usage mobile basket (2007-2008)

I. Special cross-border arrangements for retail fixed and mobile tariffs

The political, economical and social events in the last fifteen years in South-Eastern Europe, in particular in the territory of the former Yugoslavia, created specific entities and territories some of which still have a provisional status. This has resulted in many special tariff arrangements that cross territorial boundaries. For example, there have been preferential rates between the Serb population in Bosnia & Herzegovina and Serbia. Similarly, there have been preferential rates for the Croatian population in Bosnia & Herzegovina and Croatia. Such arrangements are gradually being phased out and replaced by more conventional country tariffs.

However, there are still special tariff arrangements for calls from Montenegro to Serbia and Kosovo, and from Serbia to Montenegro and Republika Srpska in Bosnia and Herzegovina. It may be noted that calls from Serbia to Kosovo are still regarded as national calls in Serbia.

These remaining arrangements are probably more a result of common operator ownership rather than politics.

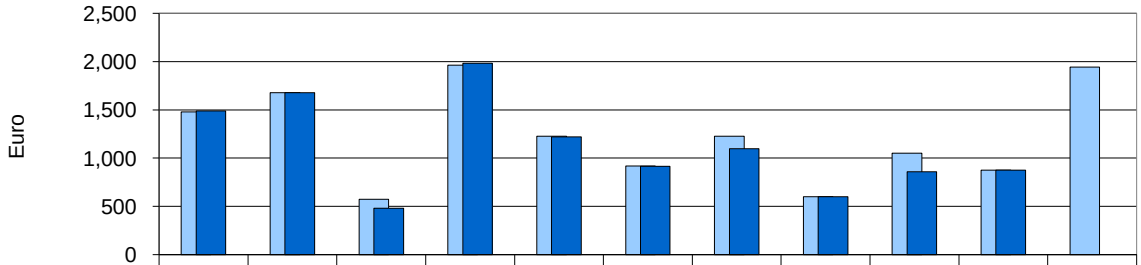
J. Leased lines retail tariffs

1. National leased lines

Leased lines are the building blocks for alternative networks that compete, directly or indirectly, with the incumbent operators' networks. In the following figures, the tariffs for national leased lines are shown for (i) 64 Kbps: 2 km and 200 km, (ii) 2 Mbps:2 km and 200 km and (iii) 34 Mbps: 2 km and 200 km. All prices are annual and retail, excluding VAT and without any one-time or connection charges.

64 kbits/s short distance (2 km): Montenegro and Turkey are relatively cheap. Croatia and FYROM are expensive in terms of South-East Europe, but reasonable in terms of the EU while Albania, which has the highest price, is at the same level as the EU average.

On the evolution of prices between July 2007 and April 2008, they have remained relatively stable with decreases in Turkey (which already had the lowest prices of all countries), one operator in Bosnia & Herzegovina, and Serbia.

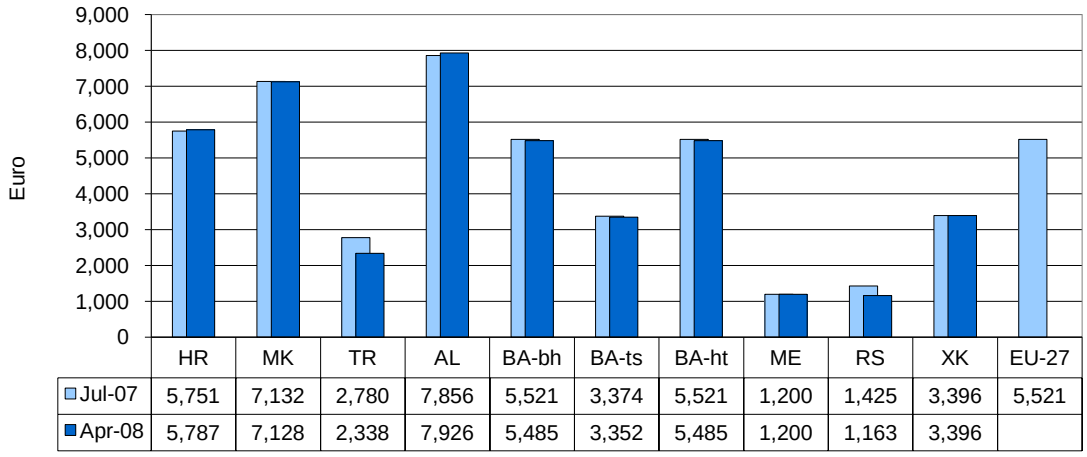


	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	1,479	1,678	573	1,964	1,227	920	1,227	600	1,050	876	1,944
Apr-08	1,488	1,677	482	1,982	1,219	914	1,097	600	857	876	

Figure 24 - Annual prices for a 2 km 64 Kbps leased line

64 Kbps long distance (200 km): the differences in the prices are similar to those for short distance (see above) but with prices in three countries (Croatia, FYROM, and Albania) above the EU average. Montenegro and Serbia are cheaper for long distance.

The evolution of prices between July 2007 and April 2008 is broadly similar to short distance with prices relatively stable with decreases in Turkey (which already had the lowest prices) and Serbia.

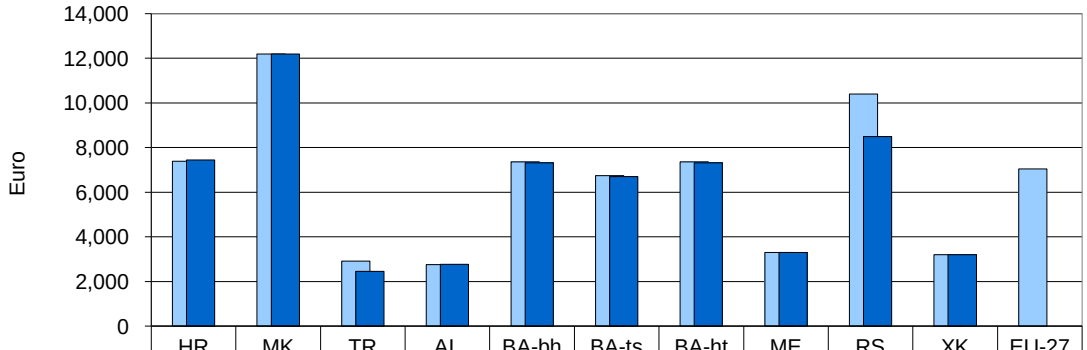


	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	5,751	7,132	2,780	7,856	5,521	3,374	5,521	1,200	1,425	3,396	5,521
Apr-08	5,787	7,128	2,338	7,926	5,485	3,352	5,485	1,200	1,163	3,396	

Figure 25 - Annual prices for a 200km 64 Kbps leased line

2 Mbps short distance (2 km): there is a significant difference between a group of cheaper countries (Turkey, Albania, Montenegro and Kosovo) with prices at half the EU average while the second group is more expensive with prices at or higher than the EU average (Croatia, FYROM, Bosnia & Herzegovina and Serbia). Albania offers the cheapest prices with Turkey while it has the most expensive prices for 64 Kbps.

On the evolution of prices between July 2007 and April 2008, they have remained relatively stable with a decrease in Turkey (which already had lower prices in comparison with other countries) and in Serbia. This trend is identical with the 64 Kbps.

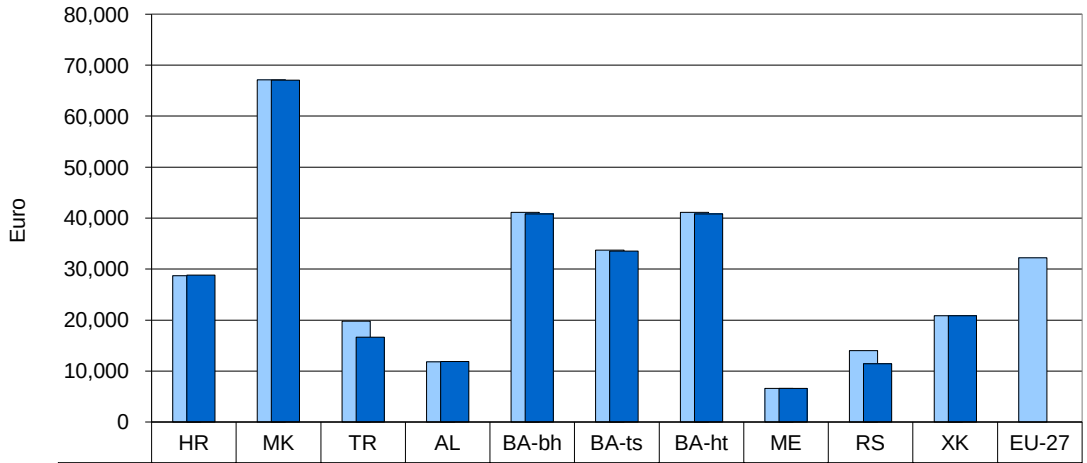


	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	7,394	12,190	2,914	2,750	7,362	6,748	7,362	3,300	10,395	3,204	7,037
Apr-08	7,440	12,187	2,450	2,774	7,314	6,704	7,314	3,300	8,487	3,204	

Figure 26 - Annual prices for a 2km 2Mbps leased line

2 Mbps long distance (200 km): the variations in the prices are broadly similar to short distance (see above) with the exception of Serbia being comparatively cheaper and below the EU average.

The evolution of prices between July 2007 and April 2008 is similar to the evolution for short distances.

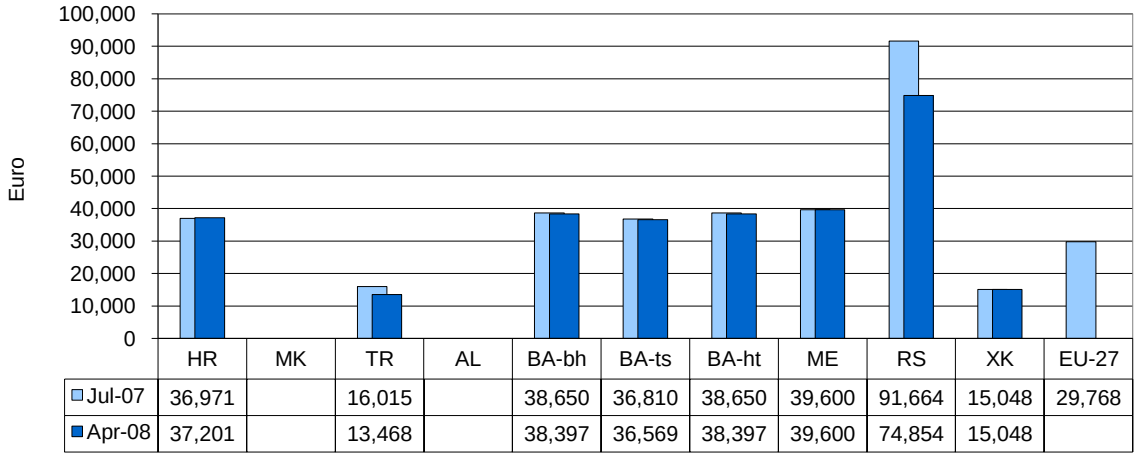


	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	28,675	67,120	19,775	11,785	41,104	33,742	41,104	6,600	14,025	20,844	32,219
Apr-08	28,851	67,084	16,632	11,890	40,835	33,522	40,835	6,600	11,450	20,844	

Figure 27 - Annual prices for a 200km 2Mbits/s leased line

34 Mbps short distance (2 km): not in the price list in FYROM and in Albania. The prices in Kosovo and Turkey are lower than the EU average, while the other countries are more expensive than the EU average and Serbia is the most expensive.

On the evolution of prices between July 2007 and April 2008, the prices have remained relatively stable with a decrease in Serbia (but the prices are the highest of all the countries and above the EU average).



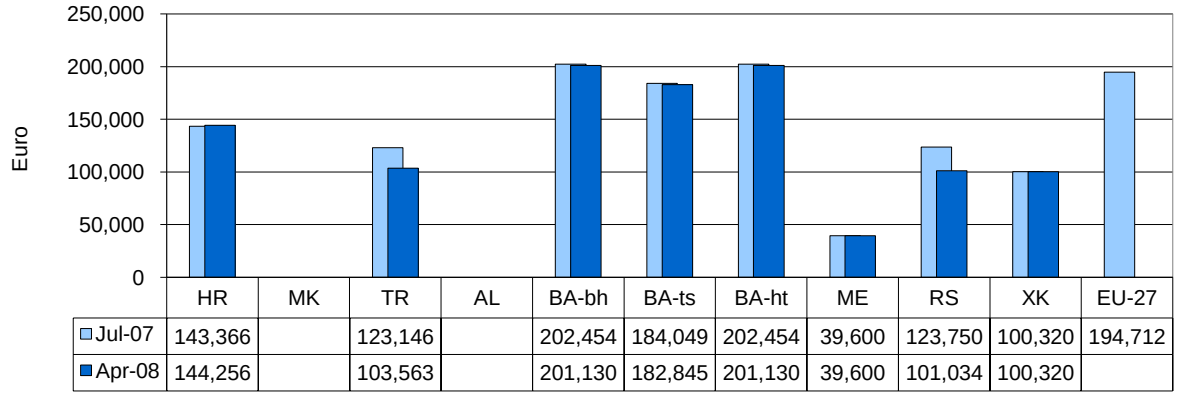
	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	36,971		16,015		38,650	36,810	38,650	39,600	91,664	15,048	29,768
Apr-08	37,201		13,468		38,397	36,569	38,397	39,600	74,854	15,048	

Figure 28 - Annual prices for a 2km 34Mbps leased line

34 Mbps long distance (200 km): not in the price list in FYROM and in Albania. In general terms, all prices are below the EU average except in Bosnia & Herzegovina.

As for 64 Kbps and 2 Mbts, Serbia and Bosnia & Herzegovina have relatively cheaper prices for longer distance while being much more expensive than the other countries for shorter distances. But Bosnia & Herzegovina is at the same level or more expensive than the EU average while Serbia is cheaper than EU average for short distance but more expensive for long distance. Montenegro has the cheapest prices in all categories.

On the evolution of prices between July 2007 and April 2008, the prices have remained relatively stable with the same decrease trend in Turkey and Serbia. In Serbia, one must note that the prices have decreased proportionally as have short and long distance while the short distance are the most expensive in comparison with the other countries and above the EU average while the long distance are comparable with the average prices in the other countries and below the EU average.



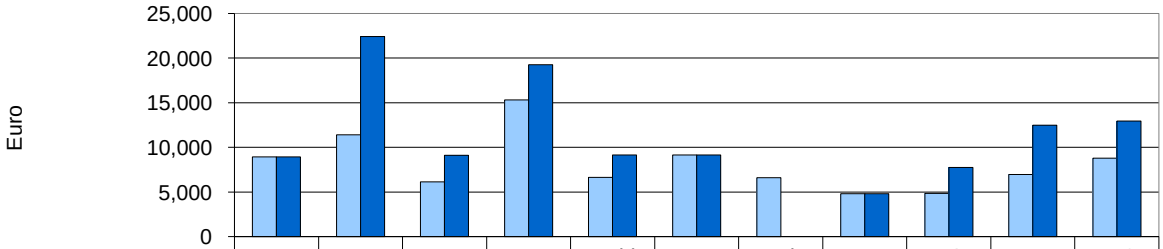
	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	143,366		123,146		202,454	184,049	202,454	39,600	123,750	100,320	194,712
Apr-08	144,256		103,563		201,130	182,845	201,130	39,600	101,034	100,320	

Figure 29 - Annual prices for a 200km 34Mbps leased line

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. These are to a near and to a distant country which, for this report, has been taken to be the United Kingdom.

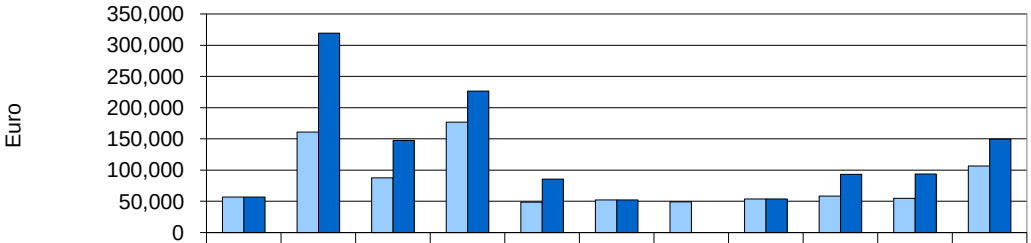
64 kbps international half circuit: mostly below the EU average with FYROM and Albania being the most expensive countries to a near country (and Bosnia & Herzegovina to a certain extent). To the UK, FYROM and Albania are still the most expensive countries and Kosovo is higher than the EU average.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
To a near country	8,928	11,393	6,119	15,305	6,643	9,142	6,582	4,800	4,852	6,960	8,793
To the UK	8,928	22,407	9,117	19,255	9,142	9,142		4,800	7,763	12,480	12,960

Figure 30 - Annual prices for a 64 kbps international half-circuit

2 Mbps international half circuits: globally the trends are similar to 64 kbps with the exception of Croatia and Bosnia & Herzegovina, which are proportionally cheaper than 64 kbps and the other countries.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
To a near country	57,041	161,02	87,701	176,86	48,759	52,416	49,002	54,000	58,225	54,816	106,37
To the UK	57,041	319,01	147,59	226,38	85,328	52,416		54,000	93,160	93,960	149,51

Figure 31 - Annual prices for a 2Mbps international half-circuit

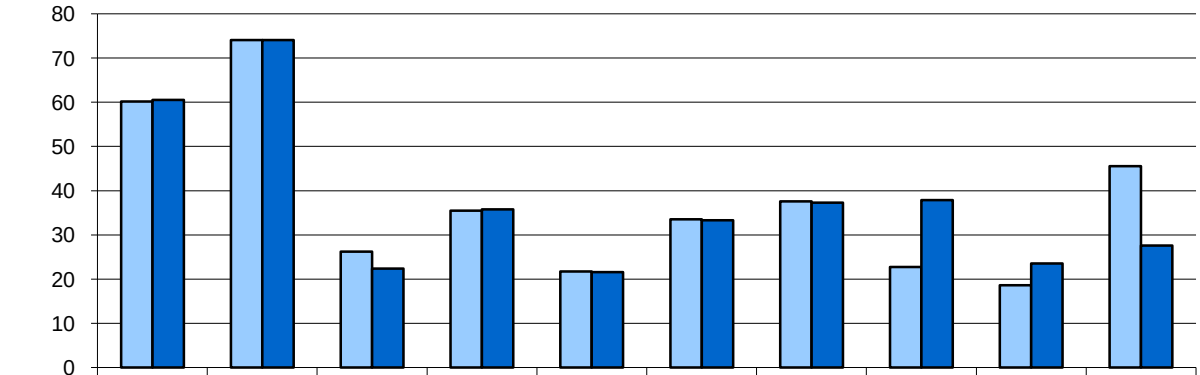
K. Internet and broadband retail prices

1. Dial-up Internet access cost

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

This report analyses the cost of forty hours dial-up access to the Internet. The prices in Euros differ considerably between countries and even within Bosnia. The most expensive is the FYROM followed by Croatia. The cheapest are Turkey and Serbia and one operator in Bosnia & Herzegovina.

On the evolution of prices between July 2007 and April 2008, the prices have remained relatively stable except they have increased in Montenegro and Serbia, and decreased in Kosovo and Turkey.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
Jul-07	60.14	74.08	26.18	35.48	21.71	33.50	37.56	22.72	18.60	45.51
Apr-08	60.51	74.03	22.34	35.80	21.57	33.28	37.32	37.88	23.55	27.60

Figure 32 - 40 hours peak time use of Internet (2007-2008)

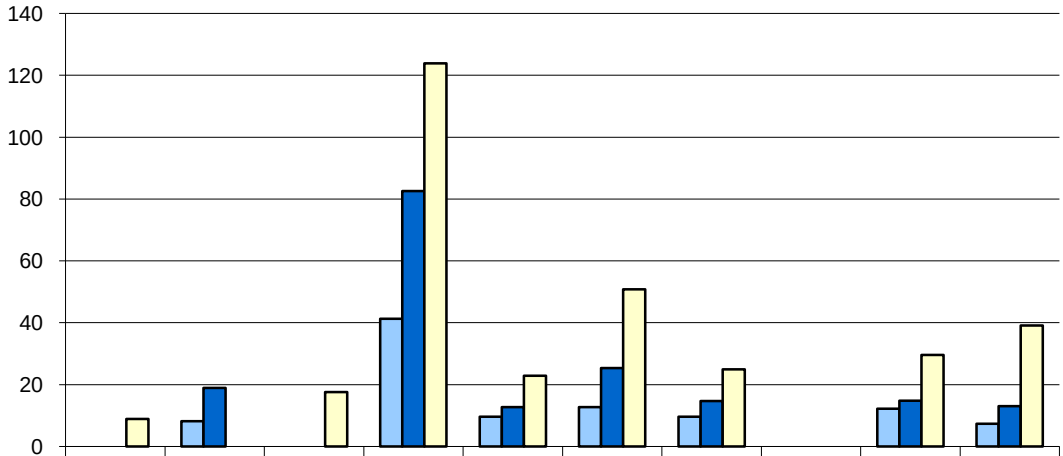
2. Broadband Internet access cost

This report analyses broadband download speed at 256 kbps; 512 kbps and 2 Mbps. The incumbent is offering these speeds in most countries, but in Croatia only 2Mbps is available.

In general, looking at the incumbent's prices, Albania has the highest prices for all speeds (from €41 up to €124). At the other end of the scale, Turkey has the cheapest prices with €18 for 2 Mbps from the incumbent and €7 from a competitor (and €3.6 for 256 kbps). The range of prices between 256 kbps and 512 kbps is generally proportional while there are significant price differences for 2 Mbps.

Within Bosnia & Herzegovina there are important differences in prices between the different regions.

All countries have competitive alternatives although they do not exist in all of the regions of Bosnia & Herzegovina. In FYROM, the alternative operator offers higher speeds (2 Mbps) than the incumbent operator. In the other countries, the alternative operator offers lower prices than the incumbent for the same category of speed.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
Incumbent 256kb/s		8.15		41.28	9.65	12.70	9.65		12.23	7.39
Incumbent 512kb/s		18.89		82.57	12.70	25.40	14.73		14.79	13.04
Incumbent 2 Mbits/s	8.92		17.58	123.85	22.86	50.79	24.89		29.58	39.13

Figure 33 - ADSL Incumbent monthly subscription charges

On the incumbents' initial connection charges for broadband Internet access, excluding any refundable deposits, modems, routers and other charges, vary from (i) 0 in Serbia and FYROM, (ii) to a majority of countries < €10.5; (iii) to around €25 in Croatia and Montenegro; and (iv) up to €58 in Albania. Competition is pushing these charges down to 0 in most countries except in Turkey where the initial connection is at the same level as the incumbent's (but prices are already in the lowest range of all the countries and competition is driving monthly fees down as well) and Albania where the connection charge is even higher (€85) than the incumbent's.

L. Wholesale tariffs

The information in this section has a reference date of April 1, 2008.

1. Call termination on fixed networks

The local level interconnection tariffs for termination on the incumbents' networks are in line with, although slightly higher than, the EU average.

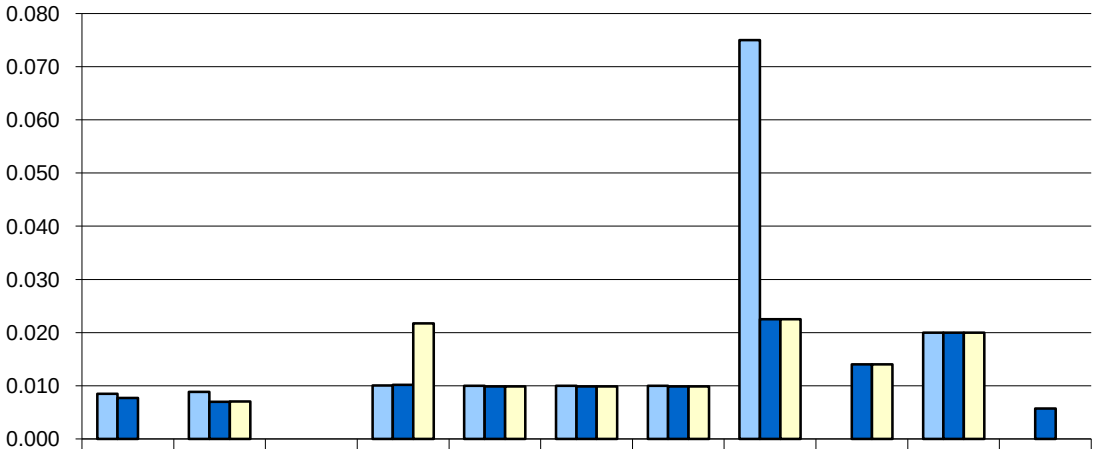
These charts include the additional information on the termination charges for traffic from the mobile operators for those countries where this information is available. According to the EU framework, the

termination charges should be the same regardless of the originating network. The graph shows that this is the case for Bosnia & Herzegovina, FYROM, Montenegro and Kosovo. For Albania, the tariffs are different for local and single transit termination as the mobile operators always pay the double transit charge. In Croatia, the fixed incumbent's RIO applies only to calls originating in fixed networks, while its termination rates for calls originating in mobile networks are confidential. In Serbia and Turkey, currently there are no alternative fixed networks.

In Turkey, the fixed incumbent operator sets its interconnection charges at two levels: intra access versus extra access areas, which refer to the level at which physical interconnection is made in the network hierarchy. This two-way classification is different from the three-way classification commonly used by the operators in the EU, namely local, single transit and double transit. As a rough approximation, intra access area can be taken as being between the local and single transit switches, and extra access area as a level between single and double transit. In Kosovo, the fixed incumbent operator offers interconnection only at the local level, while in Montenegro – at the local and single transit levels.

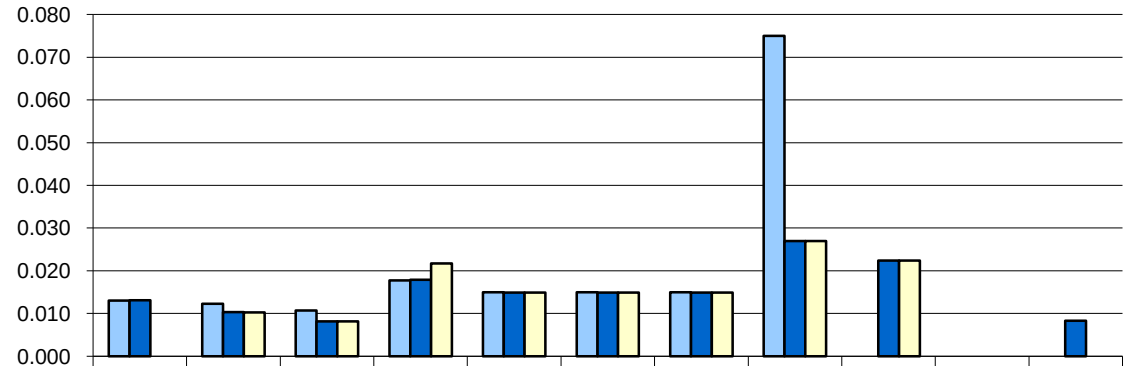
In Bosnia & Herzegovina, fixed call termination charges for calls originating on mobile networks are not available.

On the evolution of prices between July 2007 and April 2008, the tariffs have remained relatively stable with some decreases: (i) a significant decrease in Montenegro, (ii) decreases in FYROM and Turkey and (iii) a decrease in double transit termination charges in Croatia.



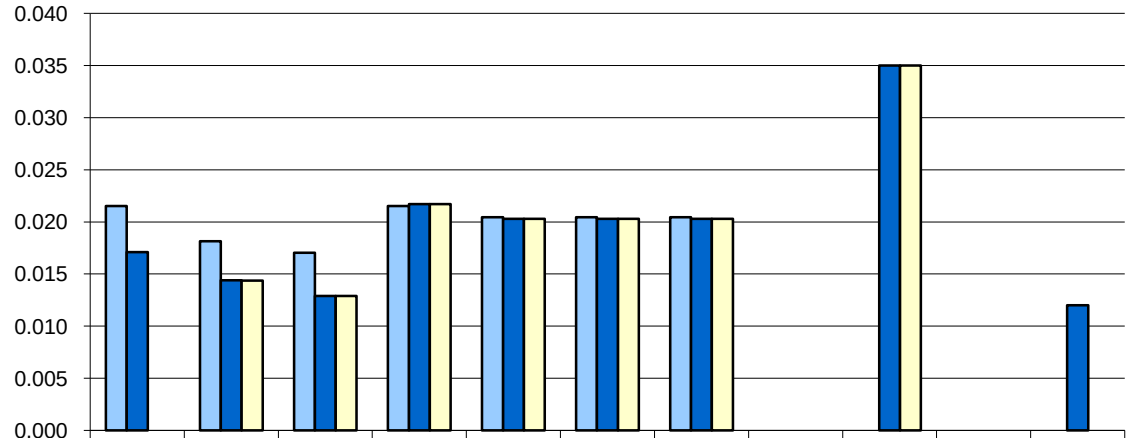
	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.008	0.009		0.010	0.010	0.010	0.010	0.075		0.020	
Apr-08	0.008	0.007		0.010	0.010	0.010	0.010	0.023	0.014	0.020	0.006
Mobile to fixed		0.007		0.022	0.010	0.010	0.010	0.023	0.014	0.020	

Figure 34 - Fixed incumbent local termination in peak hours



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.013	0.012	0.011	0.018	0.015	0.015	0.015	0.075			
Apr-08	0.013	0.010	0.008	0.018	0.015	0.015	0.015	0.027	0.022		0.008
Mobile to fixed		0.010	0.008	0.022	0.015	0.015	0.015	0.027	0.022		

Figure 35 - Fixed incumbent single transit termination in peak hours



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.022	0.018	0.017	0.022	0.020	0.020	0.020				
Apr-08	0.017	0.014	0.013	0.022	0.020	0.020	0.020		0.035		0.012
Mobile to fixed		0.014	0.013	0.022	0.020	0.020	0.020		0.035		

Figure 36 - Fixed incumbent double transit termination in peak hours

2. Call termination on mobile networks

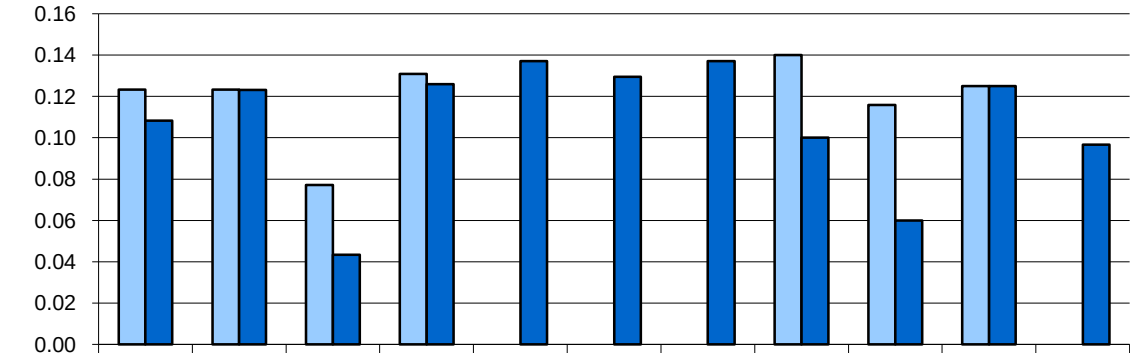
Kosovo has two mobile operators. All the other countries have a competitive situation with three operators.

Albania is the only country with a tariff system that includes setup charges.

Interconnection charges are symmetric in FYROM (until August 2008), Montenegro, and Serbia. Asymmetry has been implemented in various forms: (i) only the last entrant is benefiting from higher termination rates in Albania and Kosovo, (ii) in Turkey the asymmetry principle is applied progressively to the second and third operators and (iii) in Croatia the last entrant is charging higher termination rates during peak hours but lower termination rates during off peak hours. From August 2008, asymmetric termination rates also apply in FYROM, where similarly to Croatia the last entrant is charging higher termination rates during peak hours but lower termination rates during off peak hours

The chart below presents the development in the termination costs in mobile networks from July 2007 to April 2008. Where mobile operators in a country have different termination rates, the lowest rate is

presented in the chart. Significant reductions have taken place in Turkey, Montenegro, and Serbia and to a lesser extent in Croatia. Also in FYROM, mobile to mobile termination rates of the two largest operators have been significantly reduced in August 2008 (the change is not reflected in the chart below). However, with the exception of Turkey and Serbia, prices are higher than the EU average, which is already considered by the European Commission[54] as being relatively high.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.123	0.123	0.077	0.131				0.140	0.116	0.125	
Apr-08	0.108	0.123	0.043	0.126	0.137	0.130	0.137	0.100	0.060	0.125	0.097

Figure 37 – Fixed to mobile termination rates in peak hours

[54] See draft Recommendation on *"the regulatory treatment of fixed and mobile termination rates in the EU"* at http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/termination.pdf

M. Information society statistics

A Council Resolution[55] of 2003 and a European Parliament and Council Regulation[56] of 2004 defined indicators and required Member States to collect certain information to measure progress toward the objectives defined in Lisbon in March 2000 and the *e*Europe action plan of 2002. This data is published regularly by Eurostat.[57] The *e*Europe benchmarking is being further developed under the i2010 Benchmarking Framework[58], as endorsed by the i2010 High Level Group in April 2006. The EC regularly updates the regulations in line with the changing data requirements.[59]

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. Moreover, their statistics are integrated with Eurostat data and publications.[60]

The national statistics institutes are also responsible for information society statistics in Albania and Kosovo, but as yet no data have been published.

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 Secretariat for Development is the responsible body, though an independent economic institute, ISSP, already conducts an annual ICT survey on usage of computers, telephony and Internet access, e-education, e-commerce, e-government and other information society topics.[61]

2. Available data on information society statistics

The objective of the data collection efforts under the *e*Europe 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 *e*Europe 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) has 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, the institute has 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.

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55 Council Resolution of February 18, 2003 on the implementation of the eEurope 2005 Action Plan, 2003/C 48/02

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

57 See the Information society statistics, a sub-category of the theme Science and Technology: http://epp.Eurostat.ec.europa.eu/portal/page?_pageid=2973,64549069,2973_64554066&_dad=portal&_schema=PORTAL

58 http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/060220_i2010_benchmarking_framework_nov_2006.doc

59 Such as Commission Regulation (EC) No 1099/2005 for the survey year 2006 and Commission Regulation (EC) No 1031/2006 for the survey year 2007.

60 http://epp.eurostat.ec.europa.eu/

61 http://www.isspm.org/

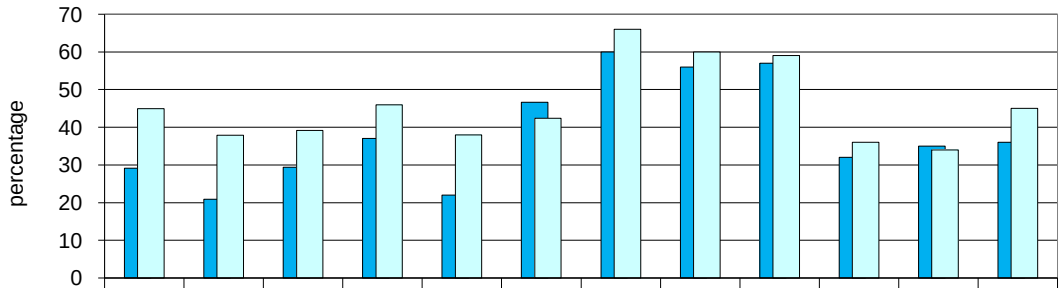
No statistical institute collects data on other information society statistics such as supply and demand of e-government, e-learning and e-health services, buying and selling online or ICT skills.

However, such data are collected in Montenegro by ISSP. It is difficult to compare these data with the statistics of other countries, because ISSP does not use the Eurostat definitions.

The eSEEurope Initiative collects data on broadband penetration, e-government services, and computers and Internet access in schools.[62]

3. Computer and Internet usage by individuals

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



	MK	TR	RS	RS-E	XK	ME	EU-27	SI	HU	RO	BG	GR
Female	29	21	29	37	22	47	60	56	57	32	35	36
Male	45	38	39	46	38	42	66	60	59	36	34	45

Figure 38 - Percentage of individuals regularly using computers

Note: Serbia is shown twice, with the data published by the Serbian authorities (RS) and the significantly higher data of Eurostat (RS-E). The Serbian authorities did not provide an explanation for these differences.

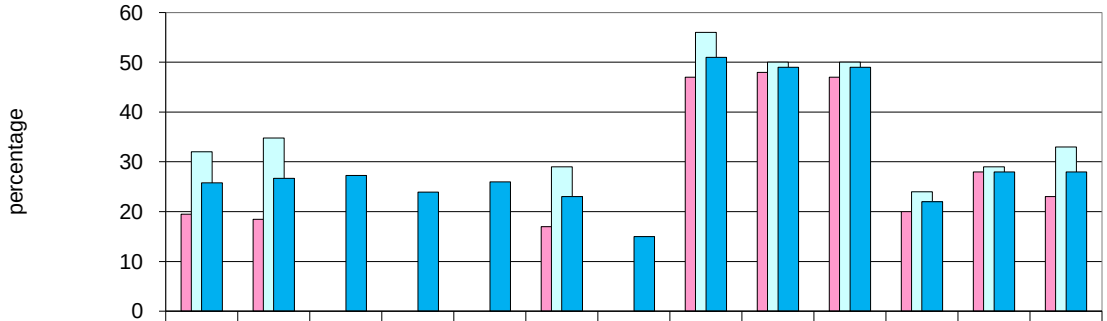
In all monitored countries where data is available, the percentage of regular computer users is significantly below the EU27 average, but is broadly comparable with the levels in Bulgaria, Greece and Romania. The values for Montenegro cannot be directly compared to data of other countries, because the survey in Montenegro asked “Are you a PC user?” and not about regularity of use.

The figure shows obvious gaps between male and female computer usage of about 15-17% in Kosovo, FYROM and Turkey, and about 9% in Serbia. These gender gaps are significantly larger than in most EU member states. Only Greece (36% female, 45% male) and Italy (37% female, 48% male) show similar differences, while Austria and Luxembourg have significant gender differences, but at higher levels of use.

Montenegro is the only country showing higher female than male computer usage.

With regard to Internet usage, the following figure shows a similar picture. All monitored countries, where data are available, have significantly lower Internet usage than the EU average, but similar values to Bulgaria, Greece and Romania. 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. Kosovo, FYROM and Turkey show gaps of about 12-16% between female and male Internet usage.

[62] See the Matrix of fulfillment of the eSEE Agenda Plus of June 2008, http://www.eseeinitiative.org/sadrzaj/RelatedDocuments/sadrzaj/terms/eSEE%20Plus%20Matrix%20LONG%20May.pdf



	MK	TR	BA	RS	RS-E	XK	AL	EU-27	SI	HU	RO	BG	GR
Female	19	18				17		47	48	47	20	28	23
Male	32	35				29		56	50	50	24	29	33
Average	26	27	27	24	26	23	15	51	49	49	22	28	28

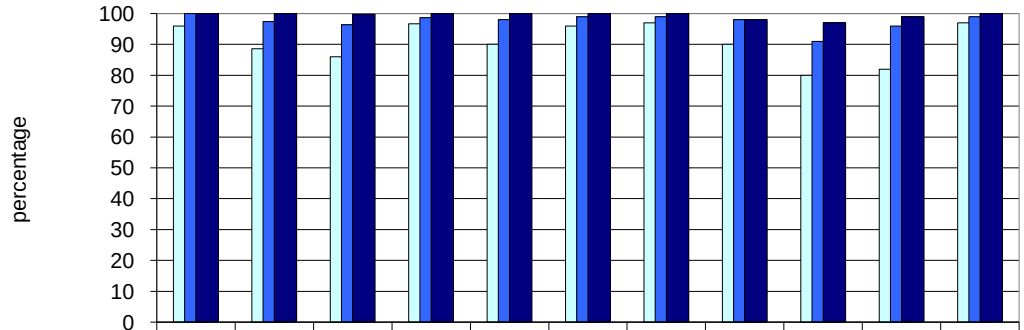
Figure 39 - Individuals regularly using the Internet

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).

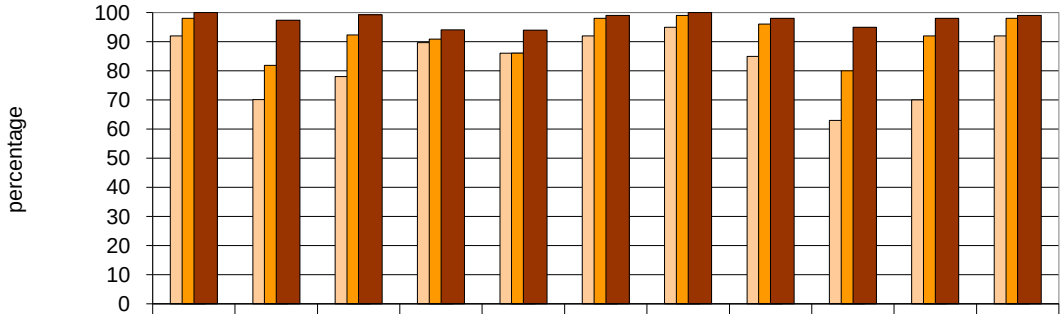
Reliable data on computer and Internet usage by enterprises is only available in three of the monitored countries: Croatia, FYROM and Turkey. We have two sets of data on Serbia, one published by the Serbian authorities and one from the Eurostat website. The two data sets show significant differences with regard to computer usage by small enterprises and both have unusually low values for Internet access by large enterprises (only 94%, which would be the lowest value of all countries covered by Eurostat).

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



	HR	MK	TR	RS	RS-E	EU-27	SI	HU	RO	BG	GR
Small	96	89	86	97	90	96	97	90	80	82	97
Medium	100	97	96	99	98	99	99	98	91	96	99
Large	100	100	100	100	100	100	100	98	97	99	100

Figure 40 - Enterprises using computers



	HR	MK	TR	RS	RS-E	EU-27	SI	HU	RO	BG	GR
Small	92	70	78	90	86	92	95	85	63	70	92
Medium	98	82	92	91	86	98	99	96	80	92	98
Large	100	97	99	94	94	99	100	98	95	98	99

Figure 41 - Enterprises having access to the Internet

Comparing the available country data shows that Croatia has almost identical values to the EU-27 average. Serbia and Montenegro also have high computer usage near to the EU-27 average and slightly lower Internet access. FYROM and Turkey are significantly below the EU-27 average, but above Bulgaria and Romania.

N. 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[63]);
- the fight against cybercrime, through the adoption of a framework decision[64] (which echoes the Council of Europe Convention on Cybercrime[65]) 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 its services. This is a general provision which does not prescribe specific security measures,

[63] 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).
[64] Council Framework Decision 2005/222/JHA of February 24, 2005 on attacks against information systems.
[65] 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 recently adopted new laws, 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[66].

In Turkey, on July 20, 2008 a new by-law on the security of electronic communications networks and/or services 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 by-law 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.[67] Turkey also has a by-law on personal information processing which includes the typical unspecific obligation and has not been repealed by the new by-law. In particular, the existing by-law applies to those providers of telecommunications services for profit, which are not equity companies and therefore not within the scope of the new by-law.

2. Cybercrime

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

- A Council Framework Decision[68] 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');

[66] 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.

[67] Regulation on the functionality of public communications networks, December 10, 2007, http://www.pta.is/file.asp?id=1872

[68] Council Framework Decision 2005/222/JHA of February 24, 2005 on attacks against information systems.

- 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).

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 and Bosnia & Herzegovina have 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, though neither has ratified the convention. In Kosovo, ratification is at the first reading in parliament. Turkey has not signed the convention.

Table 9 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, ○ draft law								

Table 9 - Computer related criminal offences

In addition to the computer related crimes listed in the table**Error! Reference source not found.**, a urkish law prohibits a range of publications on the Internet including: 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.[69] The last of these has given rise to some international criticism, because Turkey has blocked access to popular video web sites that hosted even a single video clip violating that law.

[69] Law no. 5651 of May 23, 2007 on the prevention of crimes in the computer domain.

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

- Turkey, where the Ministry of Justice has been charged with drafting a special law on the fight against cybercrime and where the Information Society Strategy foresees actions on Internet security, in particular training and awareness raising; and
- 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.

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 three, 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 with up to date advisories on current threats and incidents in the Croatian language.
- 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 advises on current threats in the Turkish language.

Table 10 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	3	–	1	2	–	2	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	●		●					
Country has a body responsible for e-government or the government institutions network	●		●	●		●	●	●
Country has a body responsible for classifying documents as state secrets			●	●				

Table 10 - Bodies responsible for security policy

O. Electronic contracts and electronic signatures

1. Legal recognition

The Electronic Commerce Directive 2000/31/EC 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 suretyship 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' (the latter 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.
- Qualified electronic signatures are in all countries recognised as equivalent to hand-written signatures.

2. 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, Turkey, Montenegro and Kosovo. In Albania, 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. In FYROM, Bosnia & Herzegovina and Serbia the law requires providers to register their services in advance.

None of the monitored countries has established its own voluntary accreditation scheme. This is, however, not required by the Electronic Signatures Directive and only about half of the EU Member States operate a voluntary accreditation scheme.

Supervision schemes have been established in Croatia (Ministry of Economy, Labour and Entrepreneurship), FYROM (Ministry of Finance), Montenegro (Secretariat for Development), Serbia (Ministry of Telecommunication and Information Society) and Turkey (Telecommunications Authority). In

Albania a supervisory body will be established, subordinate to the Ministry of the Interior. In Bosnia & Herzegovina and Kosovo, no supervisory body has yet been established.

3. 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 36,000 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. Statistics on the number of certificates are not available.
- In the other five countries, no provider issues qualified certificates. In Serbia, this might be due to a slow registration process for certification service providers. In Montenegro, one provider issues non-qualified certificates for e-banking.

Table 11 provides an overview of electronic signature regulation.

	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	●	●	●	○	–	●	●	–
Number of certification-service providers issuing qualified certificates	1	2	4	–	–	–	–	–
○● (partly) transposed/established, – not established, X = national law in contradiction with the Directive								

Table 11 - Electronic signature regulation and market data

P. 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 Electronic Communications Act 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.

Table 12 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 12 - 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) 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 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.

Table 13 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, ? = unclear								

Table 13 - Traffic and location data

3. Data retention

According to the Privacy Directive, providers typically have to erase traffic data as soon as they do not need them any more for their legitimate purposes (in particular for billing, see the table above). However, article 15(1) 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 specifies the principles, the types of data to be retained and the retention periods.

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. The Republic of Ireland has asked to European Court of Justice to annul the Directive (case C-301/06).[70]

The new laws in Croatia and Montenegro introduce 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. Turkey and Albania have a data retention obligation for telephony data. FYROM, Kosovo and Serbia do not have data retention legislation.

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

Table 14 shows which countries have data retention obligations for telephony data and/or for Internet data.

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

Table 14 - 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, 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. Albania and Montenegro had no explicit provisions on spam in their telecommunications law, but prohibit spam in their recently adopted new electronic communications laws. Bosnia & Herzegovina and Serbia do not have explicit legislation on spam.

Only in Kosovo 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 or the E-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 E-Commerce Directive left this question undecided and the Privacy Directive later required Member States to prohibit spam addressed to individuals.

[70] Pending before the ECJ.

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 in case of complaints.

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. Most countries do not have any rules on this subject in their legislation. In particular, no country obliges operators to anonymise the last digits in the numbers. Albania, Croatia and FYROM 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.

Q. 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 have the right not to be included in the directory. However, the law in FYROM and the new Albanian law 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.

With regard to the question, whether subscribers who do not explicitly state their opinion should be included, the legislation in many countries is not entirely clear, perhaps due to ambiguity in the Privacy Directive. When the Privacy Directive was being adopted, it was disputed whether it should impose an opt-in principle (only subscribers are included who explicitly want it) or an opt-out principle (all subscribers are automatically included unless they explicitly do not want it). The final agreement allowed for both, but required operators to inform subscribers in advance and to give them the opportunity to decide.

Table 15 shows the legislation or practice on this question in the monitored countries.

	Opt-in principle	**No explicit provision**	**Opt-out principle**
Description	The law states that subscribers may only be included if they explicitly want it.	Subscribers must be informed and given the opportunity to decide, but the law leaves it to the operator whether he	The law states that all subscribers must be included unless they explicitly do not want it.

	Opt-in principle	No explicit provision	Opt-out principle
		includes subscribers who do not state their opinion	
Countries	Kosovo (Law on telecommunications) Turkey (opt-in not required by law, but used in practice)	Albania FYROM Kosovo (Law on information society services)	Bosnia & Herzegovina Croatia Montenegro Serbia

Table 15 - Subscriber inclusion in directories

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.
- 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.

The collected data shows, that neither of these processes has taken place in the monitored countries. No monitored country has a comprehensive directory or a comprehensive directory enquiry service.

In FYROM, a procedure to designate a universal service provider for a comprehensive telephone directory and directory enquiry services is ongoing.

R. Internet backbone infrastructure

Little data are available on the monitored countries' Internet backbone infrastructure. Not more than three countries could provide data on their international Internet bandwidth. Although it is likely that most of the monitored countries have only a few cross-border Internet backbone links. Montenegro reported an international bandwidth of 0.9 Gbps, Kosovo 3 Gbps and Turkey 102 Gbps.

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).[71]

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.[72] The University Computing Centre of the University of Zagreb operates the Croatian Internet eXchange (CIX) in Zagreb. Compared with other European IXPs, CIX is relatively small. As of July 31, 2008, CIX connected 15 Croatian ISPs (three more prepared to become connected) and had an average traffic volume of about 0.16 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.[73]

S. 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 is no explicit legislation on domain name management or it has only been recently introduced (e.g., Croatia). 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, either in the form of an ordinance or in the form of general business conditions.

In Albania the telecommunications regulator is the national registry and, since June 2008 has an explicit legal basis in the Electronic Communications Act. 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.

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[71] http://www.euro-ix.net/

[72] Euro-IX, Serge Radovcic: 2007 Report on European IXPs, October 2007, available for download at http://www.euro-ix.net/resources/2007/euro-ix_report_2007.pdf

[73] See p. 25 of the above mentioned 2007 Report on European IXPs.

- 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 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: 87, RS: 35, BA: 20, TR: 7 (20 expected)	1 (the registry)
Price per domain and year	BA: €35, ME: €12, RS: €18, TR: €2 to €10 Does not include registrar functions	AL: €24, HR: €24, MK: €8.50 Includes registrar functions

Table 16 - Registrars of domain names

Montenegro is the only country where foreign undertakings may become accredited registrars. This and the attractiveness of the domain name .me for English speaking domain name users explain the large number of accredited registrars.

Table 16 shows that the competitive model does not automatically introduce low prices. Bosnia & Herzegovina has the highest annual prices although the prices do not cover the registrar functions. On the other hand, the registry in FYROM is amongst the cheapest in the region, although it has a monopoly on domain name registration.

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.[74]

4. Domain market data

It is difficult to compare the numbers of registered domain names per country due to the following reasons:

- The top-level domains of Serbia and Montenegro only became available recently and the sunrise period in both countries started in spring 2008.

[74] http://www.icann.org/udrp/udrp.htm

- Kosovo does not have a top-level domain at all.
- The .me 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, about the same number as in Croatia and significantly more than in Serbia. However, most of this interest in Montenegrin domain names comes from other countries. It remains unclear, how many Montenegrin customers would have registered a domain, if the top-level domain would not be as attractive.

In spite of the difficulties to compare the domain name markets it is obvious, that Albania (850 domain names in March 2008) and Bosnia & Herzegovina (7,000 domain names by end of 2007) reported unusually small numbers of domain names.

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.[75] It is responsible for developing and promoting the general principles, strategies and policy objectives for the electronic communications sector, the adoption of some implementing legislation as prescribed by the Electronic Communications Act and approval of 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 establishes the Croatian Post and Electronic Communications Agency (HAKOM) as the national regulatory authority, combining the tasks and responsibilities of the previous regulators for telecommunications (the Croatian Telecommunications Agency, HAT) and for postal services (the Postal Services Council).[76] The Agency 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.

The Agency is governed by a Council comprising seven members, of which two are the Chairman and Deputy Chairman, who are full-time executives of the Agency during their terms of office. 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 Agency'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.

The Agency 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 2007 Programme) and Croatia's e-government activities.

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

[75] http://www.mmpi.hr/default.aspx?id=777

[76] http://www.telekom.hr/Default.aspx

domain name registry) and the Ministry of the Economy, Labour and Entrepreneurship (electronic signature).

Croatia has implemented the E-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, with 51% of shares. In February 2005 the government transferred 7% of its shares to Homeland War Veterans Fund.

On September 24, 2007 the government sold 32.5% of the shares through an IPO, with 25% reserved for Croatian citizens and the remaining 7.5% of shares for institutional investors. Currently the Government holds 3.6% of shares, following a June 2008 distribution of shares to the former and present T-HT Group employees.

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 new Electronic Communications Act emphasises the separation of the Agency's regulatory tasks from policy making and state administration. In particular, the administrative supervision of the Agency 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 the Agency regarding policy objectives and goals, but these should not influence the Agency's decisions in individual cases.

The Act also excludes the regulatory activities of the Agency from the application of the General Administrative Procedure Act, meaning that the Agency's decisions cannot be overturned by the Ministry on the basis of administrative supervision. Appeals against the Agency's 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 authorisations. Depending on the characteristics of the service and the use of limited resources, three categories of authorisations were issued by the Croatian Telecommunications Agency:

- 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 Agency – for the provision of all other services including Internet access, VoIP, Value Added Services and Premium Rate Services (PRS).

The Electronic Communications Act 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.

However, individual licences will continue to be issued by the Agency for the right to use radio spectrum.

4. 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:

- public fixed telephone network and services (including voice services and services for transmission of voice, sound, data, documents, pictures, etc.);
- leased lines;
- public voice services in mobile networks;
- interconnection.

The Ordinance on conditions and procedures for the definition of relevant markets of October 2005 (Official Gazette 127/2005) provided a market definition procedure to be carried out by the NRA, based on the EU 2002 regulatory framework and the EC Recommendation on relevant markets of 2003. It had not, however, been put in practice yet.

Instead, 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.

The following operators have been designated as having SMP, in accordance with the Agency decisions of September 14, 2006 and March 30, 2007:

- 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 (T-HT's mobile subsidiary) 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 Agency to carry out market analysis procedures at least once every three years. Until the Agency has completed its market analyses under the new framework, the previous SMP designations and regulatory obligations will remain in force.

In August 2008, the Agency adopted regulations on identifying the markets susceptible to ex ante regulation on the basis of the seven markets listed in the EU Recommendation on relevant markets of 2007. In addition, the Agency intends to assess whether three further markets meet the three criteria test and should be added to the list of relevant markets: the retail market for public voice telephony services in mobile networks, the wholesale market for access and call origination in mobile networks and the wholesale market for fixed transit services.

5. Competitive safeguards

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

- CPS on fixed networks has been available since January 2005, and CS since July 2006 for all types of calls: local, national, international and to mobile numbers;
- number portability has been available on fixed networks since July 2005 and on mobile networks since October 2006;

- RIOs have been published by fixed and mobile operators with SMP;
- The RUO has been available since October 2005 and regulated wholesale bitstream access reference offer since December 2007.

The interconnection and LLU charges were approved by the Agency on the basis of benchmarking.

6. 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.

All public telecommunications networks are required to provide free access to emergency services.

7. European Union

In late 2007, the EC noted that Croatia had improved its ability to take on the obligations of membership and progress in many areas. In particular:[77]

> Some progress has been made in the area of information society and media. However, further efforts are needed for effective liberalisation of the telecoms market, including introduction of a new primary law and further strengthening of the Agency. Overall, Croatia has reached a good level of alignment with the *acquis* in this chapter.

In a Council Decision of February 12, 2008, a number of priorities were identified for Croatia.[78] The key priorities included judicial reform, public administration reform and the implementation of the anti-corruption programme. Work on competition law was required in the alignment of state aid rules and legislative measures for effective anti-trust control in the setting of fines and judicial control.

For the information society, the priorities were to:

- complete the alignment with the *acquis* concerning electronic communications, commerce, signatures and media, information security and the Television without Frontiers Directive;
- ensure sufficient administrative capacity to enforce the *acquis*, in particular in the field of electronic communications and provide a track record of the enforcement of obligations on operators with significant market power and the rights of new entrants on the electronic communications market, including rights of way, co-location and facility sharing; and
- complete the planned review of audiovisual media legislation on the basis of public consultation, to ensure regulatory independence and guard against undue political interference.

8. Outlook

Following the adoption of the Electronic Communications Act of 2008, based on the principles of the EU 2003 regulatory framework, the main priorities are the adoption of the implementing legislation, carrying out the market analyses and the development of regulatory cost accounting methodologies to ensuring effective wholesale price control mechanisms for fixed and mobile networks.

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[77] Communication from the Commission to the European Parliament and the Council Enlargement Strategy and Main Challenges 2007-2008. COM(2007) 663 final

[78] Council Decision (2008/210/EC) of 12 February 2008 on the principles, priorities and conditions contained in the Accession Partnership with Croatia and repealing Decision 2006/145/EC.

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.[79]

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 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.

The Agency 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.

An appeal against a decision of the AEC Director may be filed with the AEC Commission within eight days from receipt of the decision, with an obligation on the Commission to decide on the appeal within fifteen days. The decision of the Commission upon the appeal is final and can only be appealed before the Administrative Court.

d) Information society

A Commission for Information Technology was established in 2002. It is responsible for information society policy and coordinates the country's information society activities. In particular, it prepared the national strategy for information society development and action plan (current version of April 2005).

The Statistical Office is responsible for information society statistics. The Ministry of Finance is supervisory authority for electronic signature. FYROM has not designated a body responsible for network and information security. The Macedonian Academic Research Network operates as national domain name registry.

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

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[79] 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 36.81% 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 owners of or shareholders in regulated entities or perform any tasks that would result in a conflict of interests.

b) Administrative independence

Under the Electronic Communications Law, the AEC has been granted the 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.

The administrative capacity of the AEC has been undermined by uncertainty concerning the appointment of its Director. Following the dismissal of the previous Director in September 2007, his successor, until July 2008, has been operating as the Acting Director, and no new permanent appointment has been made by the AEC Commission until October 2008. This has contributed to delays in the adoption of some important regulatory decisions.

3. Market access and authorisations

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

The Electronic Communications Law 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 the AEC before the start of activities. It 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.

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.

Some aspects of the implementation of the Electronic Communications Law have been delayed, due to the concessions previously issued by the Government under the Telecommunications Law to Makedonski Telekom, its subsidiary T-Mobile and to the rival mobile operator, Cosmofon. While the Electronic Communications Law introduced a general authorisation regime, the concessions were to be harmonised with the new law within nine months from its entry into force in May 2005. That process has not been completed and the provisions set out in the concessions covering authorisations for the use of frequencies, requirements in terms of quality of service and the regulations of end user prices remain in force.

Only on July 24, 2008 the Parliament enacted amendments[80] to the Law of Electronic Communications (published in Official Gazette 98/08 on August 4, 2008). Amendments cancel the concession contracts of Makedonski Telekom AD-Skopje, T-Mobile and Cosmofon AD. In September 2008 AEC confirmed to the operators their notifications for provision of electronic networks and services according to their cancelled concession contracts and issue in 15 days corresponding registrations and radio frequency authorisations.

4. 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)[81] 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 are 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 (market 16/2003), 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. It 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.

5. 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, and in May 2008 AEC amended the RIO of Makedonski Telekom to enable CS/CPS for local calls;
- The RIO of the fixed incumbent operator has been available since February 2006, while RIOs of the two mobile operators with SMP were submitted for approval to the AEC in April 2008 and will be published as soon as the final decisions have been taken;
- The RUO has been available since May 2006 but so far there has been only one agreement on LLU between Makedonski Telekom and the major alternative operator On.Net, owned by Telekom Slovenije;
- Initially, the regulated fixed interconnection and LLU charges were approved by AEC on the basis of a benchmarking methodology, but in May 2008 AEC amended the RIO and RUO of Makedonski Telekom to introduce cost-oriented charges based on forward-looking top-down LRIC methodology;
- Number portability in fixed and mobile networks initially foreseen for July 2007 was delayed until September 2008, due to the cancellation of a procurement exercise for the central database equipment.

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80 http://www.aec.mk/Portals/0/20080807/ZAKON%20ZA%20IZMENUVAWE%20I%20DOPOLNUVAWE%20NA%20ZAKONOT%20ZA%20ELEKTRONSKITE%20KOMUNIKACII.pdf

81 http://www.kzk.gov.mk/eng/law.asp

6. 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 for universal service providers. Two companies successfully passed the first phase and AEC is now preparing the tender documentation.

All public telecommunications networks operators are required to provide free access to emergency services.

7. European Union

In late 2007, the EC noted that the Former Yugoslav Republic of Macedonia had made progress in its economic reforms. It faced "major shortcomings" in implementation and enforcement, in part due to large scale replacement of qualified staff following political changes. Competition law was mostly in line with the *acquis*, and the capacity and the independence of the competition authority had been strengthened.[82]

In particular, progress has been made in aligning the legislation with the *acquis* and in strengthening competition in the area of *information society and media*. However, in the field of electronic communications, the country is still in breach of its obligations under the Stabilisation and Association Agreement. In all sectors, implementation and enforcement of the legislation remains weak, while the independence of the regulators is not sufficiently ensured.

In a Council Decision of February 18, 2008, a number of priorities were identified for FYROM.[83] The key priorities included strengthening the independence and capacity of the judicial system, implementation of anti-corruption legislation, ensuring recruitment and career advancement of civil servants was not subject to political interference and enhance the general business environment by further improving the rule of law, strengthening the independence of regulatory and supervisory agencies, speeding up legal procedures and continuing registration of property rights. While there had been good progress in the anti-trust aspects of competition law there had been none state aid legislation and monitoring.

For the information society, the priorities were to:

- end the breach of the Stabilisation and Association Agreement by taking all necessary measures to fulfil the obligation to liberalise the electronic communications sector, including adoption of all the secondary legislation required and further strengthening of the regulatory bodies;
- enforce competitive safeguards for operators with significant market power;
- reinforce the independence and administrative capacity of the regulatory authorities for electronic communications and media;

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[82] Communication from the Commission to the European Parliament and the Council Enlargement Strategy and Main Challenges 2007-2008. COM(2007) 663 final

[83] Council Decision (2008/212/EC) of 18 February 2008 on the principles, priorities and conditions contained in the Accession Partnership with the Former Yugoslav Republic of Macedonia and repealing Decision 2006/57/EC.

- ensure a stable and sustainable source of funding for the public service broadcaster and the Broadcasting Council.

8. Outlook

The main priorities of the AEC remain the implementation of competitive safeguards, in particular LLU, number portability and reference interconnection offers for the mobile operators with SMP. Other issues include the market analyses, effective enforcement of regulatory obligations and the implementation of the universal service framework.

C. Turkey

1. Legal and institutional framework

The long-awaited Electronic Communications Law (Law No. 5803)[84] was adopted by the Parliament on August 1, 2008. The law changes the name of the national regulatory authority (formerly the Telecommunications Authority) to Information Technology and Communications Authority (ITCA). Overall, the law brings the Turkish regulatory framework closer to the EU 2003 framework, especially in the area of authorisations.

The entry into force of the new law was, however, vetoed by the President who refused to sign it and returned to the parliament with a list of objections. The objections do not focus on the economic or technical aspects of the regulatory framework but rather on some logical inconsistencies of the law, or on some institutional and personnel issues at ITCA. Here are some examples:

- Article 59 which ends up requiring independent audit and inspection organisations to recruit inspectors exclusively from former inspectors of ITCA.
- Article 60/1 states that administrative fines, imposed by ITCA for non-compliance of authorisation conditions, are limited to 5% of the previous year's net sales revenue for the "relevant service". The presidency has objected that such penalties may be too low and that the law does not explain how the 'net sales of the relevant service' may be calculated as operators often sell services in bundles.
- Two of the objections relate to privileges that board members or authority officials would continue to receive once their terms are terminated.

a) Ministry of Transport

The Ministry of Transport defines the state policies and strategies for the telecommunications sector. The Ministry is also responsible for implementation of universal service and plays a key role in establishing the authorisation regime for the telecommunications services and infrastructure subject to concession agreements. Under the authorisation framework, the NRA prepares and submits to the Ministry proposed schemes including the description and scope of the service, possible timing of any tender and the number of concessions to be issued. The Ministry then presents such schemes for an approval by the Council of Ministers, only then is tender procedure executed by the NRA.

b) Telecommunications Authority

The Telecommunications Authority (TA) is an administratively and financially independent national regulatory authority for the telecommunications sector.

The decision making body of TA is the Telecommunications Board, consisting of seven members, including a Chairman and a Vice Chairman. The Chairman is also responsible for the general management and representation of TA. Board members are appointed for a period of five years by the Council of Ministers, such 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
- three by the Ministry of Transport.

[84] http://www.tbmm.gov.tr/kanunlar/k5803.html

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.

TA has independent sources of finance, including frequency fees, pre-determined contributions from operators, 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 TA are audited by the Supreme Audit Council of the Prime Minister, the Ministry of Finance and the Council of Inspectors of the Prime Minister.

The TA's responsibilities cover issuing of authorisations for telecommunications networks and services, regulation, inspection and arbitration. TA has three main types of legal instruments at its disposal to execute its regulatory intervention in descending legal hierarchy:

- ordinances (or Regulations);
- communiqués; and
- decisions of the Board.

Secondary legislation and Board decisions can be appealed at district administrative courts or the Council of State, the highest administrative court in Turkey. There has been an intention to make the Council of State the sole appellate body for the decisions of TA, but this has yet to be accomplished.

c) 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 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, which is composed of the Prime Minister, various other ministers and the Undersecretary of the SPO.

Other bodies that have 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, awareness raising against security threats including spam). The Telecommunications Authority is also in charge for supervising electronic signature. 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 Penal Code.

2. Regulatory 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 share of Türk Telekom have been trading on the Istanbul Stock Exchange.

The Government currently retains 30% of shares of Türk Telekom, in addition to its golden share. It also controls the Turkish satellite and cable TV operator Turksat, 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 Turksat. Therefore, the separation of regulation from ownership and control functions has yet to be achieved.

3. Market access and authorisations

Depending on the scope of telecommunications activities, the Turkish authorisation regime currently provides for four different types of individual authorisations issued by the Authority:

- authorisation agreement – issued to operators where state ownership is more than 50%;

- concession agreement – issued, following a tender, to a limited number of companies providing telecommunications services or operating telecommunications networks on a national level;
- Type 1 licence – issued, following a tender procedure, to a limited number of companies providing telecommunications services or networks at a local level;
- Type 2 licence – issued to companies providing telecommunications services or networks, where the number of providers is not limited. This category includes long distance telephony services (A, B and C-types), cable television, satellite, public phones, intelligent networks and value added services.

Individual licences under each of the four types of authorisations are limited to narrowly defined services or activities that are set out in 14 annexes to the Ordinance on Authorisations. Each annex defines specific authorisation conditions for a specific service.

One-off licence fees for long distance telephony services under Type 2 licence are the following:

- A-type (CPS services) - TRY 571,446 (€286,000);
- B-type (CS services) - TRY 253,976 (€127,000); and
- C-type (services provided through a 10-digit number assigned by the TA) - TRY 126,988 (€64,000).

The annual fee is 0.5% of net sales, plus a further annual administrative fee of 0.35% of net sales.

A general authorisation regime with notification to the Authority currently applies only to ISPs and operators providing value-added SMS-based services over mobile networks. The one-off fee for this type of services is set at TRY 2,730 (€1,365).

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. In practice, the licensing framework for local services was only adopted in August 2007.

In August 2007, TA had introduced a licence 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 (including of both carrier selection codes and the assignment of E.164 numbers).

On January 23, 2008 the 13th Chamber of the Council of State issued an injunction against the decision on the grounds that a single licence was used to enable the provision of more than one telecommunications service (i.e. voice and Internet). So far, no licences for the provision of local telephone services have been issued and Türk Telekom remains the only provider.

Between August 12 and 28, 2008 TA ran a consultation on a draft amendment to the authorization ordinance that introduces a new annex for the authorization of fixed telephone services.

Although the new law, when it will come into force provides for a general authorisation regime, several months will be necessary for TA to issue the necessary secondary legislation. In order to speed up the opening of the market, TA wants to find a short term solution.

4. Significant market power

Although the EU 2003 regulatory framework has not been formally implemented into law, TA decided in its 2005 work plan to adopt the definition of the 18 relevant markets according to the EC Recommendation of 2003 and conduct market analyses as foreseen under the EU framework. Market definitions and SMP definition in accordance with the EU 2003 framework are set out in the document on relevant markets and SMP published by the Authority in March 2005.

- In December 2005, TA 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

2003/15 and 2003/16, respectively. 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, TA 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.

TA has some discretion in imposing regulatory obligations, but certain remedies are predefined by law.

The Ordinance on Access and Interconnection, adopted in 2007, provides that once an interconnection obligation has been imposed on an operator with SMP, non-discrimination, transparency and cost-orientation obligations are triggered automatically.

5. Competitive safeguards

The following competitive safeguards have been implemented in Turkey:

- CS/CPS on fixed network has been available since the second half of 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 fixed and mobile operators with SMP;
- The RUO has been available since November 2006 and a regulated reference offer for wholesale bitstream access since August 2007;
- number portability, following the implementation of the centralised reference database in May 2008, is to be implemented by November 2008 for mobile networks and by May 2009 for fixed networks.

6. 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. Apparently the passenger transport services relate to two islands in the Aegean where private companies are not willing to provide services during the winter.

This list was extended by the Council of Ministers to include two further elements:

1) services oriented to spread information technologies, including computer literacy, to help the development of information society (February 2006), and

2) services for the provision of the digital broadcasting by the utilisation of various broadcast media and technology via digital terrestrial transmitters to cover 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 still 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 Telecommunications Authority;
- 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 Telecommunications Authority;
- 20% of what remains in the budget of the Telecommunications Authority budget after all expenditures are 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 it has yet to make any payments to operators.

7. European Union

In late 2007, the EC noted that Turkey need a comprehensive reform programme to address structural weaknesses in its economy.[85] In particular with regard to *information society and media*, Turkey made some progress. Market liberalisation in the electronic communications and information technologies continued.

In a Council Decision of February 18, 2008, a number of priorities were identified for Turkey.[86] The reform of public administration was needed to ensure greater efficiency, accountability and transparency, plus a fully operational ombudsman system and the adoption and implementation of legislation on the court of auditors.

For the information society, the priorities were to:

- adopt a new Electronic Communications Law aligned with the current EU Regulatory Framework;
- complete the adoption and implementation of the key 'starting conditions' for the 2002 EU regulatory framework; and
- continue alignment of legislation in the field of audiovisual policy, in particular with regard to the Television without Frontiers Directive.

In the medium term to:

- continue the transposition and implementation of the *acquis* in the electronic communications area and prepare for full liberalisation of the markets,
- further align with the audiovisual *acquis* and strengthen the independence and administrative capacity of the regulatory authority.

8. Outlook

One of the key outstanding issues has been the adoption of the new electronic communications law, pending since October 2005, 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 and addressing 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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[85] Communication from the Commission to the European Parliament and the Council Enlargement Strategy and Main Challenges 2007-2008. COM(2007) 663 final

[86] Council Decision (2008/157/EC) of 18 February 2008 on the principles, priorities and conditions contained in the Accession Partnership with the Republic of Turkey and repealing Decision 2006/35/EC.

D. Albania

1. Legal and institutional framework

a) Law on Electronic Communications

The new 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.[87] The Directorate of Posts and Telecommunications within the Ministry carries out the day-to-day work.

The Ministry is responsible for preparing and presenting for the approval by the Council of Ministers policies concerning electronic communications, 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.

c) Authority of Electronic and Postal Communications

The Electronic Communications Act established the Authority of Electronic and Postal Communications (AEPC) as the new regulatory authority that took over the tasks and responsibilities of the previous regulator for telecommunications, the Telecommunications Regulatory Entity (TRE). AEPC is a public, independent, legal entity, outside the state budget responsible for carrying out regulatory tasks defined by the Law on Electronic Communications, including adoption and administration of implementing legislation within its competencies.

AEPC has a Governing Council composed of five members appointed for a 5 year office term, by the Assembly of the Republic of Albania, on the proposal of the Council of Ministers, and having the right for no more than 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 AEPC.

AEPC 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.

AEPC is accountable for its activities before the Assembly. At the end of each year, AEPC is required to submit to the Assembly an annual report on its activities.

Appeals against decisions of the Governing Council may be brought before the Tirana District Court (the Court of First Instance).

d) Information society

The National Agency on Information Society (NAIS)[88] 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

[87] http://www.moi.gov.al/english/
[88] http://www.akshi.gov.al

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.

The Institute of Statistics (INSTAT) is responsible for information society statistics, but such statistics are not yet available. A national authority on electronic signature will be established under the Ministry of the Interior. Albania has not designated a body responsible for network and information security in general, but two directorates (one accountable to the Council of Ministers and one to the State Information Service) are responsible for policy and security of state secrets. AEPC is also the national domain name registry.

Albania has transposed the Electronic Signatures Directive and ratified the Cybercrime Convention.

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 Energi 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 and 12.6% shares in the mobile operator AMC. The ownership functions are exercised by the Ministry of Economy, Trade and Energy.

The Law on Electronic Communications stipulates that the members of AECP Governing Council may not be owners or shareholders in regulated entities or to perform any other tasks resulting in a conflict of interest.

However, the complete separation of operational from regulatory functions has not yet been accomplished as officials of the Ministry of Public Affairs, Transport and Telecommunications are represented on the managing boards of the former state-owned operators.

b) Administrative independence

The Electronic Communications Act substantially extends the powers of AECP to issue regulations and perform its regulatory functions without any intervention by the Ministry or by the Government. In particular, AECP is now 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 AECP 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 AECP organisational structure and salary levels be approved by the Assembly on the proposal of the Council of Ministers.

Another factor undermining NRA independence is the recent record of repeated dismissals of its Council members. The grounds for these actions have not always been stated in a clear and transparent manner, giving rise to concerns that they may have been politically motivated.

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. In practice, competition has only emerged at the level of rural local networks, as no alternative fixed network operators have been licensed to supply long distance and international services in competition with the incumbent operator Albtelecom and no licensing framework had been established for urban local networks.

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 adopted by the regulator in April 2007.

The new Law on Electronic Communications introduces a general authorisation regime in which electronic communications network and services that do not require the use of limited resources can be provided without individual licences. This is subject to a notification submitted to AECP which must complete the registration within 15 days.

Individual licences are issued by AECP for the right to use radio spectrum.

There are plans to licence a fourth GSM mobile operator in compliance with the provisions of the new law.

4. 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.

On September 18, 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 Albtelecom 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 of July 28, 2003 and the EU 2003 regulatory framework.[89] It also requires the AECP to carry out market analyses at least once every two years. Until the Agency has completed its first round of market analyses under the new framework, the previous SMP designations and regulatory obligations remain in force.

5. Competitive safeguards

Most of the key competitive safeguards foreseen under the EU 1998 regulatory framework have not been implemented in Albania.

- In March 2008 Albtelecom, AMC and Vodafone submitted their first RIOs to the regulator for approval and the decision on compliancy of RIOs will be adopted following a public consultation.
- In June 2008 the Council of Ministers (which was still competent for this kind of decisions under the old law) adopted the price control measures for retail and wholesale tariffs of Albtelecom, AMC and Vodafone. Subsequently, the NRA decided that the measures will come into force on September 1, 2008.

[89] http://go.worldbank.org/BKB2R8ZAT0

- The NRA adopted Regulation in December 2007 on Access and interconnection that includes the rules for publication and content of the RUO, but there is no obligation yet for Albtelecom to provide LLU or to publish its RUO.
- CS/CPS was imposed as a regulatory obligation on Albtelecom but implementation is not foreseen before 2009.
- 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.

6. Universal service and consumer issues

Under the Law on Electronic Communications, AECP 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:

- 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 kbit/s;
- 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.

All public telecommunications networks operators are required to provide free access to emergency services.

7. European Union

In late 2007, the EC noted that:[90]

> *Work towards fulfilling Albania's SAA commitments on information society and media is lagging behind. Market liberalisation in the areas of electronic communications and information technologies remains at an early stage. The regulatory framework is not yet in line with the acquis and the telecommunications regulator needs to develop its capacity.*

In a Council Decision of February 18, 2008, a number of priorities were identified for Albania.[91]

Amongst the key priorities were the strengthening of administrative capacity and public-sector governance, increasing the independence, accountability and transparency of the justice system and the implementation of the 2007-2013 anti-corruption strategy. In the short-term action was required on competition law, to improve alignment with the *acquis communautaire* and to strengthen the administrative capacity of the competition authority.

For the information society the short-term priorities were to:

- ensure that electronic communications legislation is in line with the *acquis* and is enforced and take measures to achieve a competitive market for electronic communications networks and services.
- strengthen the expertise and capacity of the Telecommunications Regulatory Entity.

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[90] Communication from the Commission to the European Parliament and the Council Enlargement Strategy and Main Challenges 2007-2008. COM(2007) 663 final

[91] Council Decision (2008/210/EC) of 18 February 2008 on the principles, priorities and conditions contained in the European Partnership with Albania and repealing Decision 2006/54/EC.

- align Albanian legislation with the European Convention on Transfrontier Television and the Television without Frontiers Directive.
- strengthen the administrative capacity of the National Council on Radio and Television and adopt the strategy for development of the radio and television sector and an updated national analogue and digital frequency plan for radio and television.

In the medium-term the priorities were:

- further transpose and implement the EU framework for electronic communications.
- continue the process of alignment with the European Convention on Transfrontier Television and the Television without Frontiers directive.

8. Outlook

Among the outstanding issues is the adoption of the implementing legislation under the Law on Electronic Communications and a closer alignment of the legislation with the EU framework. Competitive safeguards, such as number portability, CS/CPS, local loop unbundling and costing models for the introduction of cost-based tariffs remain to be introduced. AECP needs to strengthen and deepen its expertise.

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, broadcasting, cable television, and associated services and facilities.

b) Council of Ministers

The Council of Ministers is responsible for adopting policies for communications. The Ministry of Communications and Transport develops policies and prepares primary and secondary legislation.

Under the Law on Communications, the Council is also responsible for defining the scope of the universal service, designating the providers and establishing the funding mechanism, based on proposals of the national regulatory authority.

c) Communications Regulatory Agency

The Law on Communications establishes the Communications Regulatory Agency (RAK) as a functionally independent and non-profit institution. RAK is responsible for regulating broadcasting and public telecommunications networks and services, including licensing, tariffs, interconnection, and defining the basic conditions for the provision of common national and international communications facilities; planning, co-ordinating, allocating and assigning the use of the radio frequency spectrum; and management of the numbering plan and assignment of numbering resources to telecommunications operators.

Strategic and policy implementation issues are decided by the RAK Council. It consists of seven members nominated by the Council of Ministers and appointed by the Parliament. The 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 the 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 the 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 the RAK Council and the Director General have terms of 4 years and can be re-appointed only once.

Appeals against decisions made by the Director General can be submitted to the Council of the Agency which 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 the 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 authorisation, numbering and spectrum.

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 law has been drafted, but not adopted by parliament. ARID shall also be become responsible for information society statistics.

Bosnia & Herzegovina has not designated a body responsible for network and information security and not established a supervisory body for electronic signature. The University Teleinformatic Centre is the national domain name registry.

Bosnia & Herzegovina has transposed the Electronic Signatures Directive and ratified the Cybercrime Convention.

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 and Herzegovina retains 90% ownership in BH Telecom (Sarajevo) and 50.10% in Hrvatske Telekomunikacije (Mostar), with the ownership functions performed by the Federal Ministry of Transport and Communications. The third incumbent operator, Telekom Srpske in the Republika Srbska is now fully privatised. In December 2006, the Serbian incumbent operator, Telekom Srbija, won the tender for the privatisation of the state-controlled 65% of the Republika Srpska's incumbent telecommunications operator Telekom Srpske with a bid of €646m. 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% is held 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. The Law also enables the RAK Council 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 by bringing the salary levels of its employees within the pay scales for civil servants. Under this law RAK will have to 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 factor that to some extent 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 previous Director General had expired in 2007, the Council of RAK 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 Director General. No new procedure has been initiated so far, and the previous 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 licence fees are set at the level of €511, while the annual fees are determined by the scope of provided services: €255,600 for each of the three incumbent operators for the provision of public fixed telephone networks and services; €35,800 paid by public fixed telephone service providers without own networks; €2,500, €5,000 and €25,000 for local, regional and national networks, respectively.

4. 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 network 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.

5. Competitive safeguards

The following key competitive safeguards foreseen under the EU 1998 regulatory framework have been implemented in Bosnia and Herzegovina.

- CS/CPS was introduced in July 2007 but remains at an early stage with only two alternative operators providing CS services;
- RIOs for the three fixed incumbent operators have been available since November 2006;
- RUOs are expected to be published by October 2008;
- the timeframe for implementation of number portability in fixed and mobile networks has so far has not been decided (pending adoption of the new sector policy by the Council of Ministers).

6. 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 covered by the terms of licences of the three incumbent operators. This includes the requirement to offer: connections to the fixed public telephone network at a fixed location and access to fixed public 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.

7. European Union

In late 2007, the EC noted that Bosnia and Herzegovina had made little progress towards establishing a functioning market economy and that major reforms would be needed to enable it to cope with competitive pressures and market forces within the EU.[92]

In particular:

> As regards *information society and media*, some progress has been made in terms of liberalisation of the telecommunication sector and approximation of audiovisual legislation with the *acquis* by the Communications Regulatory Agency. No progress has been made on public broadcasting and the establishment of a State-level information agency.

In a Council Decision of February 18, 2008, a number of priorities were identified for Bosnia and Herzegovina.[93] The key priorities included federal public broadcasting legislation, public administration reform and ensure that state-level ministries and institutions were adequately financed and staffed.

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[92] Communication from the Commission to the European Parliament and the Council Enlargement Strategy and Main Challenges 2007-2008. COM(2007) 663 final

[93] Council Decision (2008/211/EC) of 18 February 2008 on the principles, priorities and conditions contained in the Accession Partnership with Bosnia and Herzegovina and repealing Decision 2006/55/EC.

For the information society, the short term priorities were to:

- adopt the Law on the Information Society Agency and establish the Agency;
- implement and enforce the regulations on telecommunications/electronic communications aiming at a fully liberalised and competitive market. Introduce the necessary competitive safeguards in the market; and
- maintain the independent position of the Communications Regulatory Authority. Strengthen its administrative capacity.

In the medium term to:

- fully implement public broadcasting legislation and complete the structural reform of the public broadcasting sector;
- align legislation with the EU regulatory framework for electronic communication networks and services and ensure implementation and enforcement; and
- align with the European Convention on Trans-frontier Television and the Television without Frontiers directive.

8. Outlook

Following the expiry of the Telecommunications Sector Policy in December 2007, one of the key priorities for the telecommunications sector remains the adoption of the new sector policy by the Council of Ministers that is expected to provide a clear time frame for implementation of competitive safeguards. 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.

Other outstanding issues include implementation of local loop unbundling and RUO, tariff rebalancing, adoption of the universal service framework, licensing of UMTS and the 3.5 GHz spectrum band for fixed wireless access.

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) entered into force on August 27, 2008 and is the new principal legal instrument for the regulations of the electronic communications sector. It 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 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.[94] 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
- judicial review of the NRA decisions, in the first instance.

c) Agency for Electronic Communications and Postal Services

The Agency for Telecommunications and Postal Services was founded in 2001 by a decision of the government as a regulatory body, functionally independent of all entities operating telecommunications networks or providing telecommunications services.

The new Law on Electronic Communications changes the name of the regulator into the Agency Electronic Communications and Postal Services. It also 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 the Agency. The new Law also makes the Agency a single regulatory body responsible for spectrum assignments in both telecommunications and broadcasting sectors, while the Broadcasting Authority will now be only responsible for broadcasting programme content issues.

The new Law changes the management structure of the Agency. Until now, the head of the Agency is 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 Agency will be governed by the Council, consisting of the President and four members, while its professional services will be managed by the Executive Director. The Council will be appointed by the Government upon the Ministry proposal to a term of office of 5 years. The Executive Director will be appointed by the Council, for a term of office of 4 years. They shall not hold office for more than two consecutive terms.

The Agency is established as a self-financing entity, funded from three main sources: administrative fees, numbering fees and spectrum fees. The amount of fees to be paid to the Agency budget by authorised operators and service providers under the new Law will be approved annually by the government after the Agency has presented its financial plan and proposed fees calculated according to the methodology approved by the Ministry. If the funds collected by the Agency exceed its expenditure for a fiscal year, the new Law no longer requires the Agency to transfer the surplus to the state budget allowing to move it in the next year's budget.

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[94] http://www.vlada.cg.yu/eng/minsaob/

The new Law also modifies the appeal system for the Agency decisions. If in the past the decisions of the Agency 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 judicial review of the Agency decisions in the first instance.

d) Information society

The Secretariat for the Development of Montenegro is a government office lead by a state secretary. It is responsible for several state planning tasks, amongst others information security policy, information society statistics, e-government and electronic signature. Surveys for information society statistics are conducted by an independent economic institute (ISSP). A Council for Information Society has been established as high level consultative body. It has regular sessions at the cabinet of the Prime Minister.

The Council for „.me“ domain has been established by a government decision. It decides on domain name policy and selected the agent for the registry.

Montenegro has transposed the Electronic Signatures Directive. It has not ratified the Cybercrime Convention.

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 (formerly Mátav), a subsidiary of Deutsche Telekom. Private investors hold the remaining 23.47% of the shares which are quoted on the stock exchange.

b) Administrative independence

Until now, the Agency has been able to exercise its functions with relatively little political or arbitrary intervention by the government or specifically by the Ministry, despite the fact that the government appoints the senior management of the Agency.

It remains to be seen the extent to which the powers of the Agency and its independence will be preserved under the new Law on Electronic Communications adopted in July 2008. Article 130 of the new Law authorises the Ministry to perform “supervision of legality and purposefulness” of the NRA activities. A commentary to this article in particular clarifies that this supervisory function should not be applied to the regulatory decisions and regulatory rules adopted by the NRA, where the NRA must be independent.

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.

In practice competition has only emerged in mobile networks, with the market entry in 1996 of Promonte, owned by the Norwegian operator, Telenor 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 operator entered the market in 2007.

First licences enabling 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 Agency 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 launched commercial provision of fixed voice telephony services on a large scale.

4. Significant market power

Under the Telecommunications Law of 2000, the Agency has discretion to define relevant markets using 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.

Specific access and interconnection obligations that apply to all operators with SMP are set out in the Ordinance on Access and Interconnection of October 10, 2006.

To date, no comprehensive market analysis procedures have been carried out by the Agency. Under the provisions of the Telecommunications Law of 2000, the fixed incumbent operator, Crnogorski Telekom, is deemed to have SMP in the markets for fixed networks and services and in Internet services, while T-Mobile and Promonte have SMP in mobile networks and services. The regulator, however, refrained from applying the SMP obligations 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.

5. 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 EU benchmarks. The first RIOs of T-Mobile and Promonte are expected to be submitted for approval by the NRA during 2008.

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 have been established for the implementation of number portability and local loop unbundling.

6. Universal service and consumer issues

There is no established framework for the universal service.

7. European Union

In late 2007, the EC noted that in Montenegro the public administration was weak and inefficient, requiring further efforts to ensure its impartiality and to strengthen its capacity. Some progress had been made in reforming of the judicial system. Corruption was widespread and constituted a “very serious problem”.[95]

In particular:

> There has been some progress in the area of *information society and media*. Legislative measures are needed to effectively liberalise the electronic communications market and to align with the *acquis* on information society services. While the broadcasting agency has become fully operational and has an independent status, its capacity needs to be strengthened. Montenegro has not yet ratified the UNESCO Convention on cultural diversity and has not signed and ratified the European Convention on Transfrontier Television. Preparations in this area are at an early stage.

[95] Communication from the Commission to the European Parliament and the Council Enlargement Strategy and Main Challenges 2007-2008. COM(2007) 663 final

In a Council Decision of January 22, 2007, a number of priorities were identified for Montenegro.[96] The key priorities included a new constitution, continued efforts to reform the public administration, reform of the judicial system and enhancing the fight against organised crime and corruption.

For the information society, the short term priorities were to:

- strengthen the agency for telecommunications to foster competition in the market by applying the relevant legislation, in particular in relation to the introduction of the necessary competitive safeguards in the market;
- improve the administrative capacity of the Ministry of Economy in the area of electronic communications. Take further steps in tariff balancing, further address the terms and conditions of interconnection tariffs, and address the issue of licence fees;
- guarantee the operational independence of the broadcasting authority;
- ensure a smooth transformation of Montenegrin radio and television into a public service provider, and ensure means for its efficient functioning.

In the medium term to:

- finalise transposition into national legislation of the EU 2002 framework for electronic communications;
- establish a competitive electronic communications market through progressive implementation of legislation, and by applying competitive safeguards and addressing any existing market entry barriers;
- maintain the independence of the regulatory authorities and ensure there are sufficient resources and expertise to execute their tasks; and
- fully align legislation to the audiovisual *acquis*.

8. Outlook

The key outstanding issues that must be addressed are implementation of competitive safeguards, market analysis procedures and methodologies for price control of wholesale tariffs.

The independence of the regulatory body might be a significant problem following the adoption of new Law on Electronic Communications. The institutional and administrative capacity of the Ministry will have to be improved in order to enable it to manage its new tasks in a credible manner.

[96] Council Decision (2007/49/EC) of 22 January 2007 on the principles, priorities and conditions contained in the Accession Partnership with Montenegro.

G. Serbia

1. Institutional framework

a) 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 functions of Public Enterprise of PTT Serbia.

b) Republic Telecommunications Agency

The Telecommunications Law of 2003 establishes the Republic Telecommunications Agency (RATEL) is an independent 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 relieved from office 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 of the Agency who is responsible for the administration and operational issues.

RATEL is 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 in the administrative procedure are final. However, it is possible, to submit an appeal against a decision of RATEL to the Supreme Administrative Court.

c) Information society

One of the sectors of 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 signature.

The National Information Technology and Internet Agency is subordinate to the ministry and responsible to improve and monitor electronic government development and to standardise 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 university institutions is the national domain name registry. Domain name policy is not regulated by law, it is part of 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 law on e-commerce is under preparation.

2. Regulatory independence

a) Privatisation and operational independence

Although, RATEL is functionally and institutionally separated from the state-controlled incumbent operator, the effective separation of the regulatory functions from operational activities has not been achieved in practice. Currently, the Ministry responsible for the telecommunications policy is also in charge of the state ownership functions in the incumbent operator, Telekom Srbija.

Presently, the government controls 80% of the company and retains a ‘golden share’ that gives the power to veto all the important decisions of the company. 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, some of the provisions of the Law on State Administration require RATEL to obtain from the relevant ministry (in this case, the Ministry of 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, despite multiple warnings, fails to perform its functions properly or timely. These provisions can potentially undermine the administrative independence of RATEL, as illustrated by a recent development.

On June 12, 2008 the Minister of Telecommunications and Information Society passed a decision, whereby the Ministry would take over for 120 days, starting June 13, 2008, all the powers and responsibilities performed by RATEL. The arguments presented by the Ministry contained allegations of illegality, irregularities and delays in performance of RATEL. In particular, the Ministry referred to an illegal allocation of an access code to one of the mobile operators and the failure of RATEL to comply with the Ministry instructions requiring the regulator to amend some of its proposed draft regulations in compliance with the Ministry opinion and to suspend publication in the Official Gazette of any RATEL’s regulations not covered by positive opinion of the Ministry. On June 19, 2008 the government, however, decided to revoke the Ministry decision, clarifying the application of the supervisory powers of the Ministry under the Law on State Administration. In particular, the government stated that RATEL is under no obligation to amend its regulations in line with the Ministry opinion. If RATEL is of the view that it should not act along the Ministry proposal, it is still authorised to adopt the regulation. In such a case, the Ministry would be obliged to propose to the government to revoke RATEL’s regulation (if it is considered not compliant with regulations or general enactments of Parliament or the government) or to suspend the regulation initiating the procedure before the Constitutional court (if is not compliant with the Constitution and the law). The government concluded that the Ministry decision of June 12, 2008 violated the Law on State Administration.

3. Market access and authorisations

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 only exception of Internet and cable TV services that had been open to competition. In practice, Telekom Srbija remains the only licensed public fixed voice telephony operator and the only operator authorised to interconnect with international telecommunications networks.

The competition has only emerged in mobile services where two operators, Telenor and VIPnet, licensed by RATEL in 2006, are providing services in competition with the incumbent's mobile subsidiary. Market access conditions for new entrant mobile operators remain problematic as obtaining construction permits for network rollout is subject to complex bureaucratic procedures.

To certain extent, there is some competition in provision of Internet services. Most of the ISPs, however, provide ADSL services based on the incumbent's wholesale offer and relying on its international connectivity.

The delayed liberalisation of the sector is largely due to the lack of political will to introduce competition into the fixed telephone services and delayed adoption of the implementing legislation on licensing and interconnection aspects. Effective rebalancing of the incumbent's tariffs would be one of the prerequisites for the liberalisation, but so far, there have been no initiatives from the Serbian government to enable any significant changes to Telekom Srbija's retail tariffs that are subject to price caps set by the Ministry of Finance. (For comparison, Telekom Srbija's fixed telephone monthly rental fee is the lowest in among the eight SEE countries and is about 1/15 of the EU 27 average).

Another factor is the lack of licensing framework for fixed telephony services. 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. Despite applications for fixed voice telephony licences from interested parties, no decision has been taken so far on a tender procedure.

4. 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.

5. 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, but it has not been approved by the regulator yet. In practice, RIO applies only to interconnection with mobile networks, as there are no alternative fixed network operators.

A Strategy for the development of telecommunications in the Republic of Serbia from 2006 to 2010 was adopted by the Government in October 2006. Although the document recognises the importance of liberalisation, the objectives in the Strategy and the Action Plan are not accompanied by any deadlines for their fulfilment. This means that there is still no basis for the entry of alternative operators, since it is unclear when the necessary competitive safeguards will be introduced.

6. 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.

7. European Union

In late 2007, the EC noted that in Serbia the regulatory bodies need to be strengthened to ensure the necessary oversight and enforcement of legal obligations, while judicial reform had been delayed. Reforms were required to build an impartial, accountable and efficient civil service. Moreover corruption was widespread and a serious problem.[97]

In particular:

> There has been little progress in the area of *information society and media*. The national Broadcasting Agency needs to improve overall transparency and accountability.

In a Council Decision of February 18, 2008, a number of priorities were identified for Serbia.[98] The key priorities included ensure that the constitution was in line with European standards and to continue reform of the public administration and of the judiciary, in order to guarantee its independence, accountability, professionalism and efficiency. The fight against corruption had to be enhanced at all levels

For the information society, the short term priorities were to:

- ensure full liberalisation of the electronic communications sector and the independence of the regulatory bodies;
- ensure that the strategy adopted is put into effect, including adoption and implementation of the necessary laws and policies, and strengthen administrative capacity;
- start approximation to the *acquis* on the audiovisual sector and improve transparency and accountability, particularly of the Republican Broadcasting Agency; and
- sign and ratify the European Convention on Transfrontier Television.

In the medium term to:

- start implementation of the EU framework for electronic communications and continue alignment with the EC *acquis* for the audiovisual sector

8. 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, alignment with the R&TTE Directive, 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.

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[97] Communication from the Commission to the European Parliament and the Council Enlargement Strategy and Main Challenges 2007-2008. COM(2007) 663 final

[98] Council Decision (2008/213/EC) of 18 February 2008 on the principles, priorities and conditions contained in the European Partnership with Serbia including Kosovo as defined by United Nations Security Council Resolution 1244 of 10 June 1999 and repealing Decision 2006/56/EC

H. Kosovo

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 (*Kuvendi*) 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. A new constitution for the Republic of Kosovo was approved by the Assembly in April, coming to force on June 15, 2008

As of June 2008, the independence of Kosovo had been recognised by 43 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 (20 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 of 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, the TRA.

The declaration of independence facilitated the anticipated transfer of these responsibilities from UNMIK to the national institutions. In particular, KTA is being transformed into the Kosovo Privatisation Agency (KPA) under the Ministry of Economy and Finance, while spectrum management functions are being transferred to the TRA.

c) Ministry of Transport and Communications

The Ministry of Transport and Communications (MTC) has responsibility for developing policies and legislation for the provision of services and facilities in telecommunications and information technology. In the field of telecommunications, the Ministry monitors compliance with the European best practices including tariffs and fees, quality of service and technical standards, developing policies to promote competition and better services for consumers.

d) Authority of Electronic and Postal Communications

The Telecommunications Regulatory Authority (TRA) was established under the Telecommunications Law of May 2003 (UNMIK Regulation 2003/16[99]) and began operations in January 2004. The TRA is responsible for implementing the telecommunications sector policy in compliance with the relevant

[99] http://www.unmikonline.org/regulations/2003/RE2003_16%20.pdf

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 (the latter, until recently, in coordination with UNMIK).

The 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, acting 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-funded body and non-profit legal entity, with the main sources of finance collected from fees under the Telecommunications Law, including authorisation, licensing, and assignment of numbers and rights to use spectrum resources. The TRA budget is approved by the Assembly and any surplus funds collected by the 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 by any party with standing.

e) Information society

The Ministry of Transport and Communications is in charge for 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[100]. 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. KTA is being transformed into the Kosovo Privatisation Agency under the Ministry of Economy and Finance which will be operationally separate from both MTC and TRA.

Although the issue of the privatisation of PTK 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

The 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 have been subject to political and administrative interference, by both UNMIK and the government.

[100] 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.

One example was the intervention by UNMIK to cancel the tender procedure for the second mobile licence being conducted by the TRA in 2004. The basis for this was the responsibility for spectrum management reserved to UNMIK.

Another factor undermining the status of the NRA as an independent institution is unclear or inconsistent provisions in the Telecommunications Law, in particular:

- Section 4(1) of the Law stating that the TRA is a body "within the Ministry" and
- Section 5(4) stating that "all funds collected by the TRA shall be deposited pursuant to the applicable budget procedures pertaining to all Government funds in Kosovo."

These have been interpreted as barring the 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 was unable to manage its funds independently. Furthermore, under the treasury payment procedures, the salaries of TRA staff have been linked to civil servant pay scales, making it impossible for the 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 that are intended to strengthen the independence of the NRA. In particular, the amendments:[101]

- remove all references to UNMIK, its Frequency Management Office (FMO) and to the SRSG;
- establish the 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.

The first authorisations for three national ISPs were issued in May 2005. A comprehensive licensing framework for telecommunications operators was adopted only in September 2005. PTK maintained its exclusive right over access to international gateway facilities until December 31, 2007.

On March 6, 2007 the TRA granted a licence to a second 2G mobile operator, following an international tender procedure. The winner was IPKO, a company in which the majority of the stock was held by Telekom Slovenije. On September 8, 2006 IPKO was also granted the second licence for the provision of national public fixed telephone networks and services. Since the beginning of 2008, the TRA has granted four international services licences.

In addition to the operators licensed by TRA, two mobile operators licensed by Serbia maintain their presence in Kosovo without authorisation from the Kosovar authorities.

4. 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.

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[101] Law on Amending UNMIK Regulation No. 2003/16 on the Promulgation of a Law adopted by the Assembly of Kosovo on Telecommunications - 2008/03-L085
http://www.assembly-kosova.org/common/docs/ligjet/2008_03-L085_en.pdf

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 the 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.

5. 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 the TRA on January 12, 2007.
- The TRA mediated the interconnection dispute between Vala and IPKO, and set out mobile termination rates, using a benchmark.
- In May 2007, the TRA adopted a policy framework for MVNO operators and issued licences to two MVNOs. While there are no legal obligations concerning access, MVNOs can be launched on the basis of a commercial agreement with one of the two MNOs.

There is no clear timeframe for the implementation of CS/CPS, number portability and local loop unbundling. The implementation of number portability was 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).

6. 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 the 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.

7. European Union

In late 2007, the EC noted that in Kosovo the efficiency of public administration had improved, but that the judicial system remained weak and unstable. Corruption was widespread and constituted a "very serious problem".[102]

In particular:

> There has been little progress in the area of *information society and media*. Effective liberalisation and enhancement of competition in the electronic communications market remain to be achieved. Progress was made in media reform, but the stable and sustainable funding of the public service broadcaster, independent media commission and the minority media fund needs to be addressed.

There is no individual partnership agreement with Kosovo, it continues to be included with Serbia.[103] A separate annex identifies priorities including ensuring democratic governance of public services, establishing a professional, accountable, accessible and representative public administration, one free from undue political interference.

The short term priorities were:

- adopt and begin implementing policy concerning electronic communication networks and services aimed at enforcing full liberalisation and creating a stable open and competitive environment in order to attract foreign investments and improve the quality of the service;
- strengthen the administrative capacity of the regulatory authority. Reinforce its position and ensure its operational and financial independence; and
- ensure stable and sustainable funding of the Public Service Broadcaster RTK, the Independent Media Commission and the media fund.

The medium term priorities were:

- align with the regulatory framework and implement the legislation on electronic communication networks and services to create a more open and competitive environment and strengthen the position and operational and financial independence of the telecommunications regulator.

8. Outlook

The main challenge is to ensure the functioning of the 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. 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 that is being drafted and the effective implementation of competitive safeguards.

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[102] Communication from the Commission to the European Parliament and the Council Enlargement Strategy and Main Challenges 2007-2008. COM(2007) 663 final

[103] Council Decision (2008/213/EC) of 18 February 2008 on the principles, priorities and conditions contained in the European Partnership with Serbia including Kosovo as defined by United Nations Security Council Resolution 1244 of 10 June 1999 and repealing Decision 2006/56/EC

REPORT I

ANNEX
CROSS-COUNTRY TABLES

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

September 30, 2008

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A. Electronic communications market overview

1. General economic background

Any assessment of telecommunications markets has to be seen against the general performance of the economy, its level compared to other economies and the relative growth rates. This requires data on the size and growth of the economy and also the population. Additionally, it helps to consider the distribution of income within an economy, together with unemployment, poverty and literacy which might all be expected to be correlated with the adoption of ICTs.

a) Currencies, inflation, exchange rates and VAT

In order to compare the economies, markets prices and other indicators between the eight entities and with the EU-27 it is necessary to make adjustments for different exchange rates (see Table A.1).

Country	Currency	Code	Avg. exchange rate		Exchange rate
			2006	2007	April 1, 2008
Croatia	Croatian Kuna	HRK	7.24	7.30	7.26
FYROM	Macedonian Denar	MKD	61.19	61.17	61.21
Turkey	New Turkish Lira	TRY	2.02	1.76	2.10
Albania	Albanian Leke	ALL	123.27	122.20	121.11
Bosnia & Herzegovina	Bosnian Marka	BAM	1.96	1.96	1.97
Montenegro	Euro	EUR	1.00	1.00	1.00
Serbia	Serbian Dinar	RSD	85.00	78.67	81.66
Kosovo	Euro	EUR	1.00	1.00	1.00

Table A.1 - Exchange rates

Currency fluctuations can have significant effects when comparing prices, spending patterns and operator revenues. The decline in the value of New Turkish Lira and of the Serbian Dinar between 2006 and 2007, followed by their subsequent rise, had significant effects. As noted in the previous report, the apparent decline in value of the Turkish market was due to currency movements.

In addition to converting other currencies into Euros, in order to facilitate comparisons, it is helpful to adjust prices using Purchasing Power Parities (PPPs). This is an indicator of the differences in price levels across countries. PPPs measure how many currency units a given quantity of goods and services will cost in different countries. It has been popularised by *The Economist* as the Big Mac Index, measuring its cost in many countries.[1]

PPPs are derived by relatively complex processes. Work on determining PPPs in the Western Balkans has been supported by international collaboration between UNECE, OECD and Eurostat.[2] The PPPs for candidate and potential candidates are published by Eurostat (see Table A.2). In the absence of values for 2007 for Bosnia & Herzegovina and Serbia, 0.89 and 0.42 have been used as approximations. There are no plausible values or estimates for Kosovo.

Country	2005	2006	2007
Croatia	4.6523	4.6516	4.5292
FYROM	22.5333	22.8318	22.5470
Turkey	1.0265	1.0716	1.1033
Albania	57.4044	57.3171	56.0875
Bosnia & Herzegovina	0.8592	0.8900	0.89
Montenegro	0.4325	0.4227	0.42
Serbia	32.1667	35.1943	36.8923
Kosovo	-	-	-
EU-27	1.0000	1.0000	1.0000

Table A.2 - Purchasing Power Parities (PPPs)[3]

Note:
2007: Values for Bosnia & Herzegovina and for Serbia have been estimated.

Prices can vary because of the different levels of taxation. It is therefore important to be able to identify, compare and, if necessary, remove this element from any charges. Operators, service providers and business customers can usually reclaim VAT, so that this can be discounted from any charges.

[1] http://www.economist.com/markets/bigmac/index.cfm
[2] http://www.stat.si/radenci/program_2004/roberts-1.doc
[3] European Commission > Eurostat home page > Economy and finance > Prices
http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136173,0_45570701&_dad=portal&_schema=PORTAL

The rates of Value Added Tax (VAT) in South-East Europe range from 15 to 22% (see Figure 1). These are close to the general range of the EU-27.

There are some additional retail taxes, notably the Special Communications Tax (SCT) of 15% on fixed network services in Turkey.

Figure 1 - Rates of Value Added Tax

b) Population and households

The three candidates and five potential candidates together represent 96 million people or about 19.5% of the EU-27 population (see Table A.3). The greatest part of that population is represented by Turkey, nearly ten times the size of Serbia, the next largest. Montenegro has much the smallest population, only 35 per cent larger than Luxembourg. Consequently, it is necessary to be careful when comparing the eight much smaller markets with Turkey. At the time of writing, population data for 2007 were not available from Eurostat.

Country	Population 2006	Inhabitants per sq km	Percentage of EU-27 total	Households 2006	Persons per household
Croatia	4.443	78.5	0.90%	1.477	3.0
FYROM	2.039	79.3	0.41%	0.564	3.6
Turkey	72.520	93.1	14.71%	18.492	3.9
Albania	3.149	109.8	0.64%	0.753	4.2
Bosnia & Herzegovina	3.843	75.1	0.78%	1.034	3.7
Montenegro	0.624	45.1	0.13%	0.191	3.3
Serbia	7.425	95.7	1.51%	2.521	2.9
Kosovo	2.070	188.8	0.42%	0.311	6.7
Total	96.113	95.67	19.50%	25.343	3.8
EU-27	492.965	113.8	100%	-	2.4

Table A.3 - Populations and households (millions)

Notes:
Source: Eurostat Pocketbook on candidate and potential candidate countries 2008 edition. KS-PF-08-001-EN-N.
EU-27: Household composition is for the EU-25 in 2003.[4]

The population in the EU-27, as well as Turkey, Montenegro and FYROM have been increasing since 1996 as, since 2000, has Albania. While the EU-27 population grew by almost 3.3%, the growth of Turkey was 16.3%. Montenegro and FYROM grew slightly faster than the EU-27, while Albania was slightly slower. However, Serbia has seen a reduction in its population.

There has been considerable migration in recent years both within and beyond the region. These movements may not be fully reflected in the figures and the patterns may not yet be fully documented and understood.

The household composition is quite different from the existing EU member states, which have an average of 2.4 members per household. In South-East Europe, households are significantly larger, notably in Turkey and Albania respectively 3.9 and 4.2. The figure for Kosovo is extremely high, being 2.8 times the EU average, a level normally associated with some of the least developed countries. According to *Kosovo in figures in 2006* the average number of household members in rural areas was 7.8.[5] Higher numbers of persons in a household would suggest that, cultural factors being equal, fixed telephone and broadband lines would be available to a larger number of people than in the EU-27.

c) Gross Domestic Product

The Gross Domestic Product (GDP) is defined as the total market value of all final goods and services produced within in country in a year.[6] There is long-standing evidence that GDP and GDP growth correlate with telecommunications and telecommunications network growth.[7] There are problems of determining the value of GDP accurately in some economies, given the existence of "informal" sectors that must be estimated.

The values shown in Table A.4 indicate the very different sizes of the economies of the region. At the time of writing, the actual GDP values for 2007 were not available.

Country	2001	2002	2003	2004	2005	2006	2007 (estimate)
Croatia	22,171	24,468	26,232	28,681	31,263	34,220	37,497
FYROM	3,839	4,001	4,105	4,325	4,676	4,957	*5,155*
Turkey	161,836	192,803	212,268	242,262	290,503	318,586	*340,887*
Albania	4,541	4,705	5,048	5,883	6,582	…	*7,326*
Bosnia & Herzegovina	5,930	6,559	7,416	8,071	8,655	9,769	*10,257*

[4] http://epp.eurostat.ec.europa.eu/tgm/printTable.do?tab=table&plugin=1&language=en&pcode=cdb10000&printPreview=true
[5] http://www.ks-gov.net/ESK/esk/pdf/english/general/kosovo_figures_06.pdf
[6] http://circa.europa.eu/irc/dsis/nfaccount/info/data/ESA95/ESA95-new.htm
[7] Lars-Hendrik Röller & Leonard Waverman (2001) "Telecommunications infrastructure and economic development: a simultaneous approach" *The American Economic Review* **91** (4) 909-923

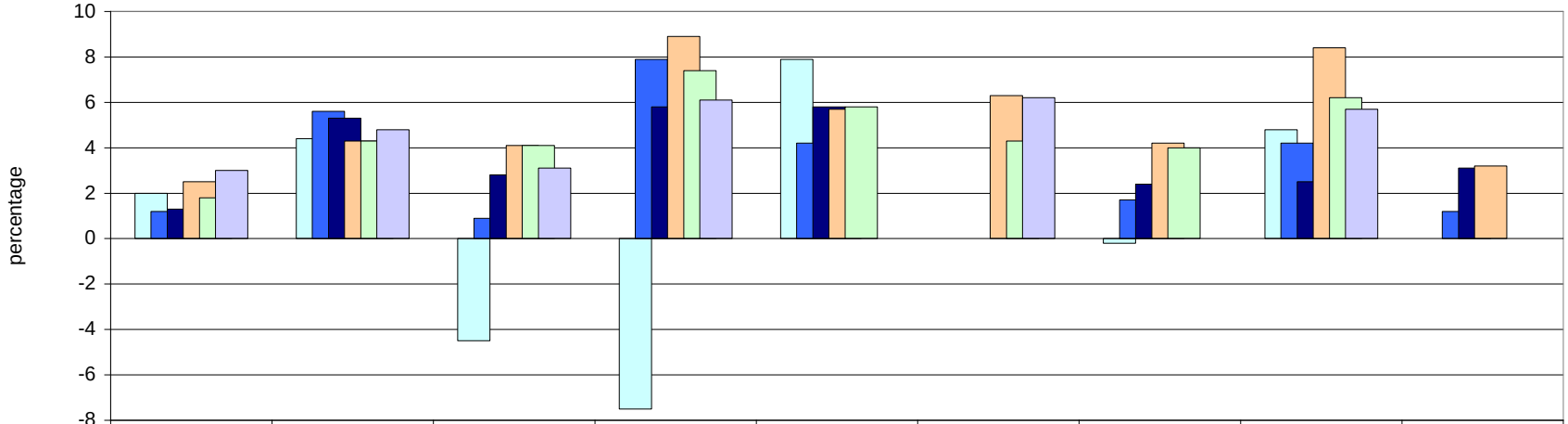
Country	2001	2002	2003	2004	2005	2006	2007 (estimate)
Montenegro	1,245	1,302	1,392	1,565	…	…	*1,760*
Serbia	13,186	16,811	18,007	19,723	21,113	25,499	*27,029*
Kosovo	1,624	1,735	1,797	1,895	2,207	2,273	2,378

Table A.4 - Gross domestic product (millions of Euros)[8]

Notes:
2007: Estimated on the basis of growth of 4.5%, 4.0%, 7.0%, 5.5%, 5.0%, 4.0%, 6.0% and 3.0% respectively.

In the period from 2000 to 2006 GDP growth in constant prices was considerably higher in most of the candidates and potential candidates than in the EU. The average growth in the EU-27 was 2.2%, less than half that achieved by Croatia. Other economies managed 5 or even 6 per cent. Figure 2 shows the GDP growth rates over recent years, compared to that of the EU-27. The data are incomplete, but give a clear sense of the patterns of growth.

[8] Source: Table 5.1 in Eurostat Pocketbook on candidate and potential candidate countries 2008 edition. KS-PF-08-001-EN-N.

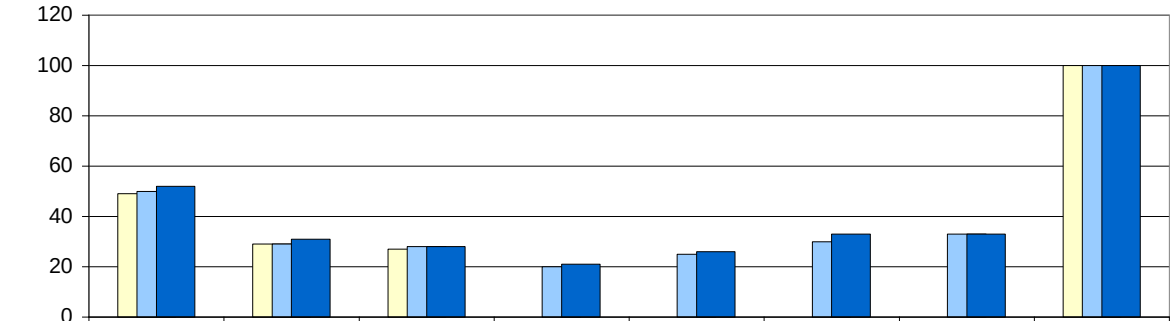


	EU-27	HR	MK	TR	AL	BA	ME	RS	XK
2001	2.0	4.4	-4.5	-7.5	7.9		-0.2	4.8	
2002	1.2	5.6	0.9	7.9	4.2		1.7	4.2	1.2
2003	1.3	5.3	2.8	5.8	5.8		2.4	2.5	3.1
2004	2.5	4.3	4.1	8.9	5.7	6.3	4.2	8.4	3.2
2005	1.8	4.3	4.1	7.4	5.8	4.3	4.0	6.2	
2006	3.0	4.8	3.1	6.1		6.2		5.7	

Figure 2 - GDP growth rates[9]

Comparing the GDP volume indices of South-East Europe with the existing member states, all are substantially below the average level of the EU-27 (see Figure 3). Some are around one quarter of that level and making only modest rates of improvement.

[9] Source: Table 5.1 in Eurostat Pocketbook on candidate and potential candidate countries 2008 edition. KS-PF-08-001-EN-N.



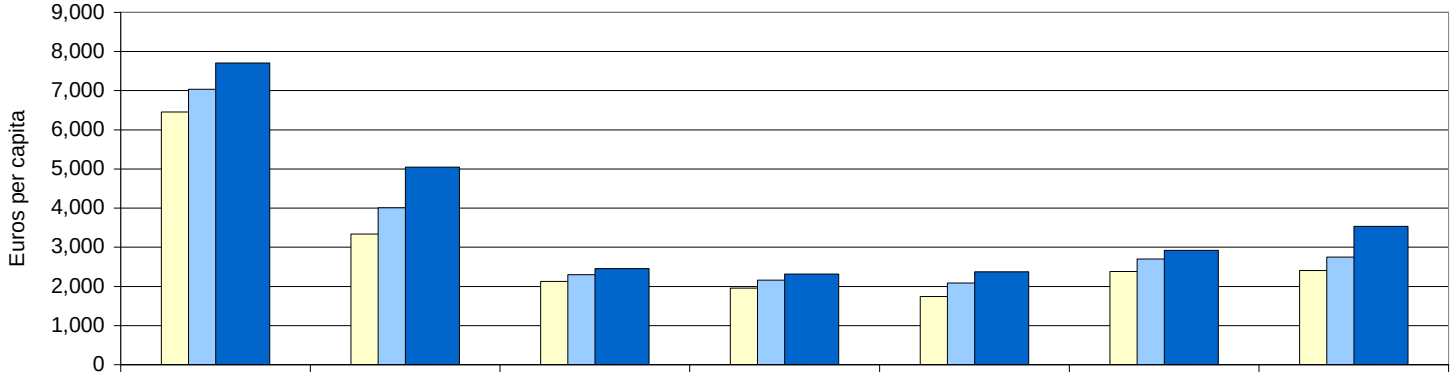
	HR	TR	MK	AL	BA	ME	RS	EU-27
2004	49	29	27					100
2005	50	29	28	20	25	30	33	100
2006	52	31	28	21	26	33	33	100

Figure 3 - Volume index of GDP[10]

There is a wide range of values for GDP per capita (see Figure 4). Croatia had the highest amongst the candidates and potential candidates at around one third of the EU-27 level. Turkey came next at around 57% of Croatia or 18% of the EU-27. Kosovo, not shown in the figure, had almost the lowest GDP per inhabitant of between €2,100 and €2,500, one-tenth of the EU-27 value.[11]

[10] Table 1 in Eurostat *Statistics in focus* 3/2008.

[11] Eurostat uses an IMF estimate for these numbers

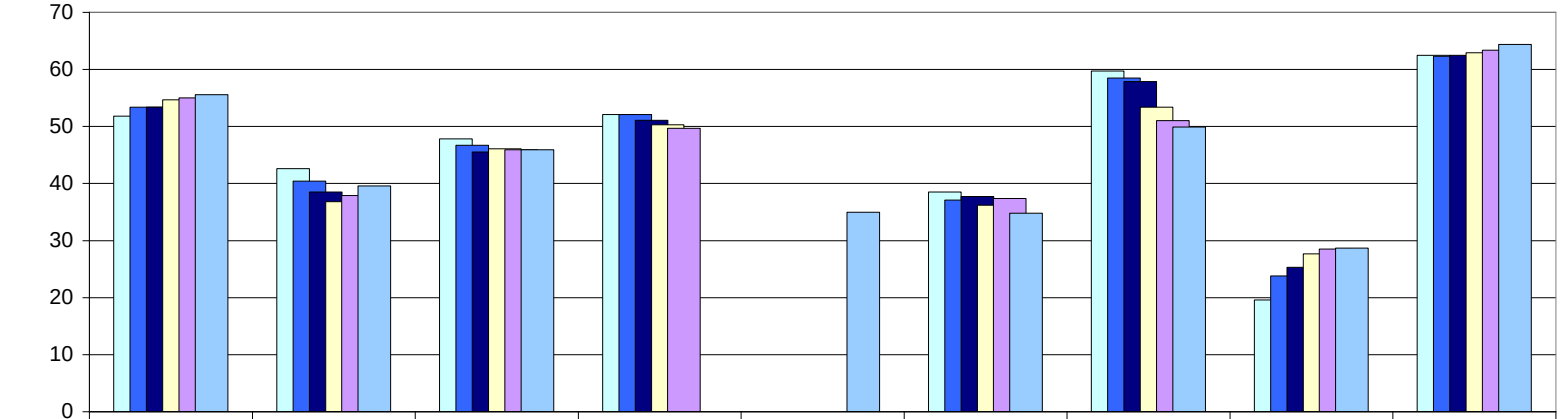


	HR	TR	MK	AL	BA	ME	RS
2004	6456	3341	2126	1954	1739	2378	2408
2005	7037	4006	2297	2156	2086	2704	2746
2006	7705	5045	2454	2319	2371	2917	3535

Figure 4 - GDP per capita[12]

The candidates and potential candidates all have significantly lower employment rates than the EU-27 (see Figure 5). Kosovo has consistently had the lowest level of employment, at less than half that of the EU-27, though it has shown some improvement. Part of the explanation for the low levels of employment is due to involvement with the 'grey' or 'unofficial' economy. This is expected to decline with the growth of the official economy and with the continuing fight against corruption.

[12] Taken from the previous CI report.



	HR	MK	TR	AL	BA	ME	RS	XK	EU-27
2001	51.8	42.6	47.8	52.1		38.5	59.7	19.6	62.5
2002	53.4	40.4	46.7	52.1		37.1	58.5	23.8	62.3
2003	53.4	38.5	45.5	51.1		37.7	57.9	25.3	62.5
2004	54.7	36.8	46.1	50.3		36.2	53.4	27.7	62.9
2005	55.0	37.9	45.9	49.7		37.4	51.0	28.5	63.4
2006	55.6	39.6	45.9		35.0	34.8	49.9	28.7	64.4

Figure 5 - Percentage of the population aged 15-64 in employment[13]

The unemployment rate in the EU-27 in 2006 was 7.9%. In the candidates and potential candidates, unemployment rates were relatively high, with values of 45% in Kosovo, 36% in FYROM and 31% in Bosnia & Herzegovina in 2006, while in Croatia and Turkey the rates were closer to the EU at 11% and 10% respectively. In the EU-27, the youth unemployment rate was more than double the general unemployment rate, while a range of similar multipliers, from 1.7 in FYROM and Kosovo to 2.6 in Croatia.

The Gini index is a measure of dispersion used to represent inequality of income distribution. A low Gini index indicates more equal income distribution, while a high index indicates more unequal distribution. 0 corresponds to perfect equality and 100 corresponds to perfect inequality. For the EU-15, Eurostat has reported relatively constant values of the Gini Index at around 29 and 30 over the first half of this decade, while for the ten new member states, the figure has risen from 29 to 32. There is only limited evaluation of the Gini index in South-East Europe, in part because of the complex

[13] Source: Table 4.1 in Eurostat Pocketbook on candidate and potential candidate countries 2008 edition. KS-PF-08-001-EN-N.

processes involved. Eurostat reported Croatia in 2003 having 29, while Turkey had 46 and 45 in 2002 and 2003 respectively. The UNDP for 2007-08 reported data for five entities, confirming the high value for Turkey, but also suggesting a relatively high value for FYROM (see Table A.5). With the exception of Turkey, the literacy rates are quite high.

Country	Gini Index	Adult literacy rate
Croatia	29.0	98.1
FYROM	39.0	96.1
Turkey	43.6	87.4
Albania	31.1	98.7
Bosnia & Herzegovina	26.2	96.7
Montenegro	…	…
Serbia	…	…
Kosovo	30.0	94.3

Table A.5 - Gini and literacy rates[14]

The price levels of consumer electronic goods within Europe are very closely grouped, with the index numbers for 27 of 37 countries in the range 90 to 110, reflecting their easy tradability across borders. South-East Europe is mostly within the same range, though Montenegro has a significantly lower price level (see Figure 6).

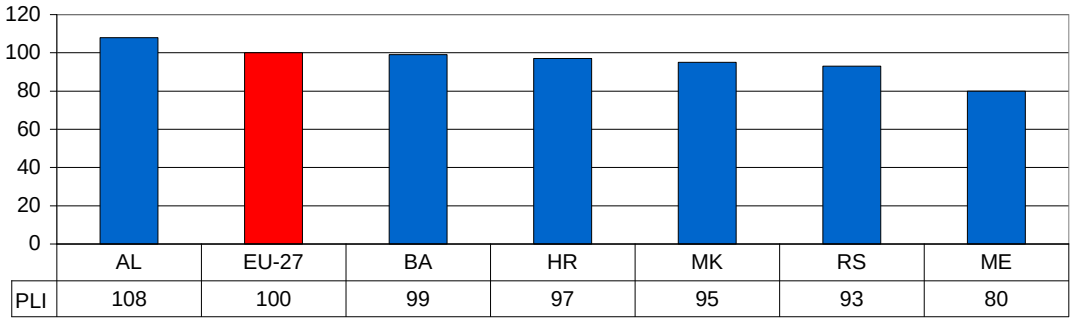
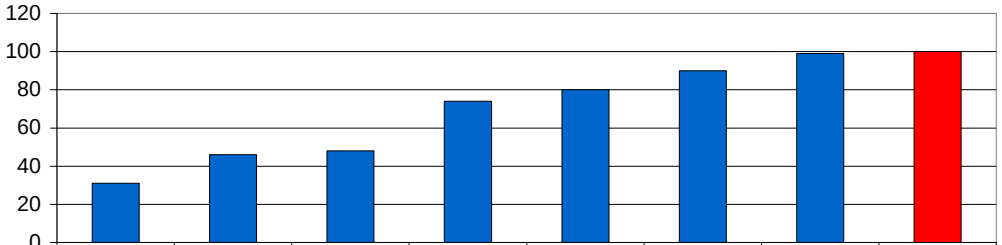


Figure 6 - Price level index for consumer electronic goods (2007)[15]

[14] http://hdrstats.undp.org/indicators/147.html

However, the price level indices in 2006 for communications show much greater variation than for goods (see Figure 7). The countries of the Western Balkans show some substantially lower prices than the EU-27 average.



	RS	BA	ME	MK	HR	AL	TR	EU-27
PLI	31	46	48	74	80	90	99	100

Figure 7 - Price level index for communications (2006)[16]

Cultural and economic factors lead to considerable variations in household spending patterns (see

Figure 8). Communications (the topmost segment) account for anywhere from 2.3% of household spending in Kosovo to 5.7% in Montenegro. For comparison, in the EU-27 communications represent 2.8% of an average household spending.

[15] Eurostat *Statistics in focus* 63/2008.
[16] Eurostat *Statistics in focus* 36/2008.

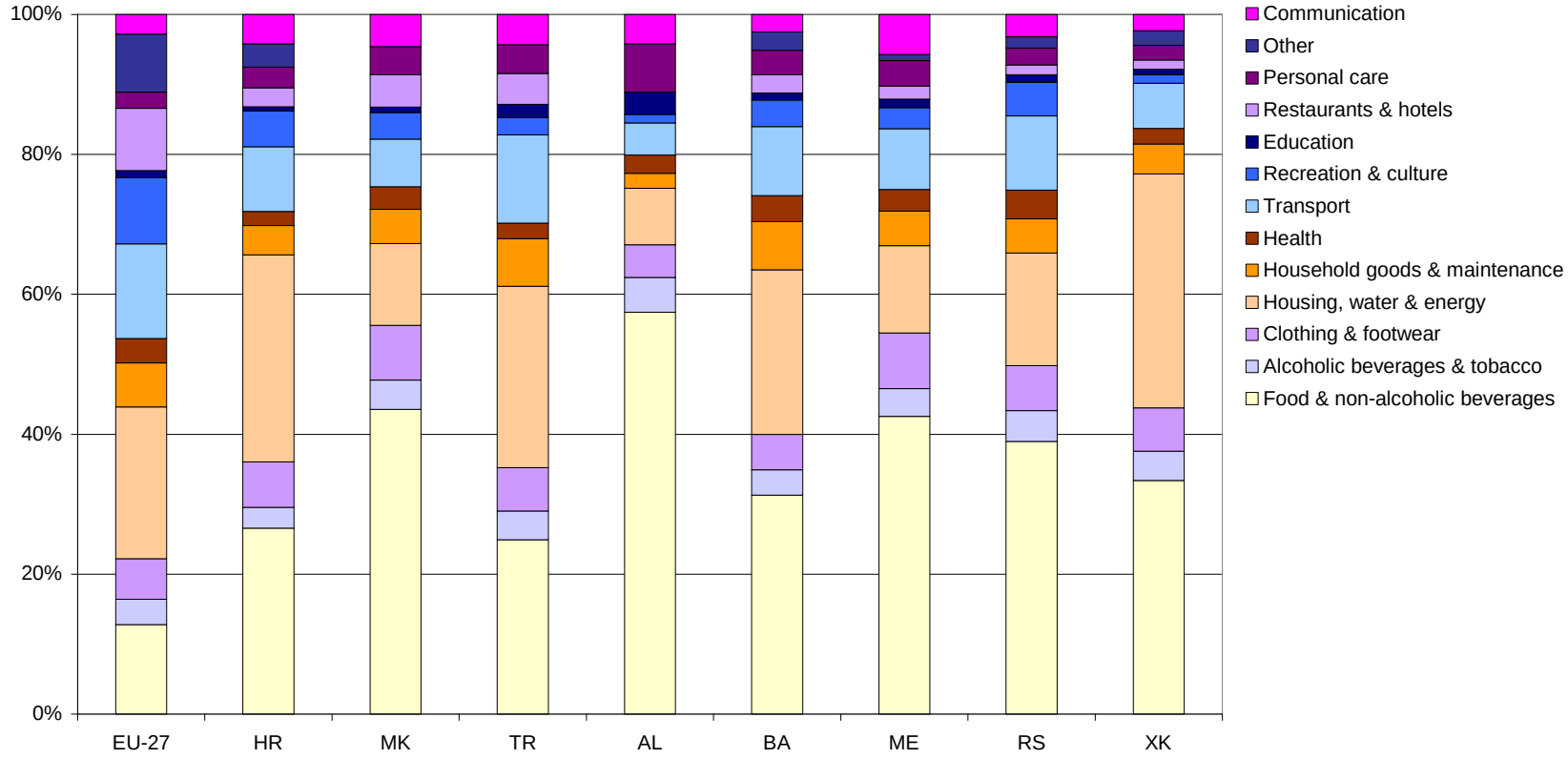


Figure 8 - Breakdown of household expenditure (2006)[17]

[17] Table 3.3 of Eurostat Pocketbook on candidate and potential candidate countries 2008 edition. KS-PF-08-001-EN-N.

2. Electronic communications market value

The total value of the electronic communications market is estimated at €15.8 billion in 2007, a substantial increase from the previous year (see Table A.6). The strong growth of mobile and Internet services over recent years have continued and seem likely to do so into the future.

	2006	2007	2006-07 growth
Fixed voice telephony	5,063,455,024	5,394,233,619	6.53%
Internet services	686,811,535	963,492,108	40.28%
Mobile telecommunications	6,986,614,747	9,001,313,454	28.84%
Data communications	377,447,015	394,970,576	4.64%
Cable TV (excl. Internet)	91,440,462	90,819,534	-0.68%
Total	13,205,768,783	15,844,829,291	19.98%

Table A.6 - Total electronic communications markets revenues (Euro)

The greatest share of the market is represented by mobile telecommunications (see Figure 9). The next largest part is fixed voice, with much smaller shares for the Internet, data communications and cable television.

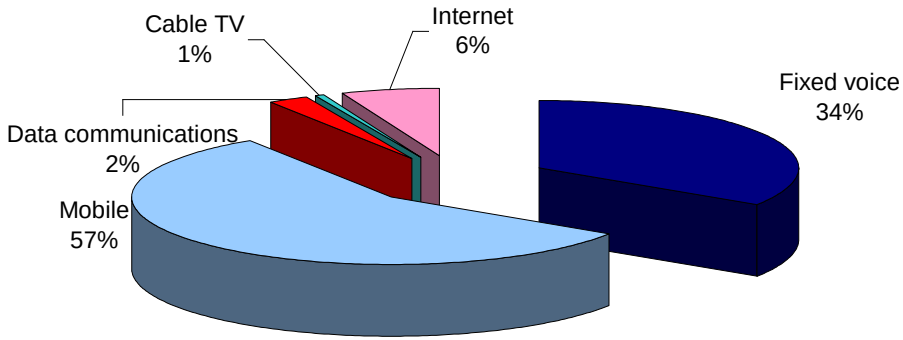


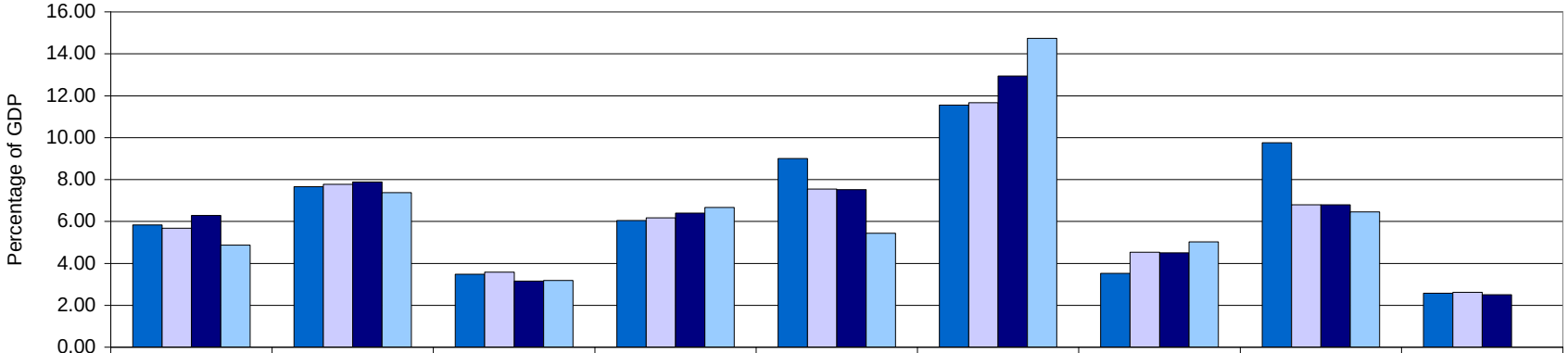
Figure 9 - Electronic communications market in 2007

Electronic communications represents quite different proportions of the various economies (see Figure 10). While this reflects different levels and patterns of spending and of production and supply within an economy it may also be affected by the accuracy of the measurement of the GDP.

The high values for Montenegro may indicate underestimation of the GDP though it is does match the high household spending on communications (see

Figure 8).

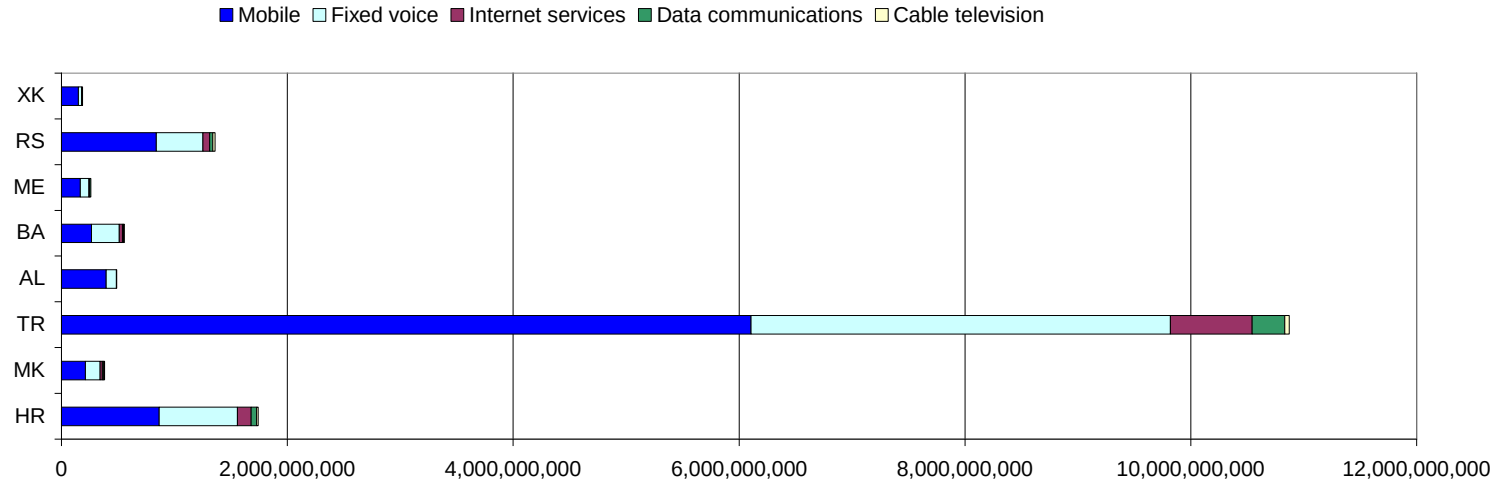
Taking the individual GDPs from Table A.4 gives a total of €430 billion, which at €15.8 billion for electronic communications gives an average value of 3.7%. This is heavily weighted by the lower Turkish value, excluding which the average is 5.2%.



	HR	MK	TR	AL	BA	ME	RS	XK	EU-25
2004	5.83	7.66	3.48	6.04	9.01	11.56	3.53	9.76	2.57
2005	5.68	7.78	3.58	6.18	7.55	11.67	4.53	6.79	2.62
2006	6.29	7.89	3.16	6.40	7.52	12.94	4.50	6.79	2.51
2007	4.87	7.38	3.19	6.67	5.44	14.74	5.03	6.45	

Figure 10 - Electronic communications as a percentage of GDP

Breaking down the markets by economies and sectors, the patterns are inevitably dominated by the size of the Turkish markets (see Figure 11). To remove the effect of the different sizes, the same data are presented as percentages in Figure 12.



	HR	MK	TR	AL	BA	ME	RS	XK
Cable television	14,604,755	6,258,493	39,401,249		10,219,008	500,000	19,836,029	0
Data communications	47,672,126	10,867,374	288,832,732	384,761	8,664,825	10,867,873	26,990,885	690,000
Internet services	121,522,587	21,077,338	722,486,805	660,535	26,223,030	4,182,868	59,260,945	8,078,000
Fixed voice	691,245,827	130,126,912	3,715,485,086	92,235,415	247,887,124	76,042,141	414,111,114	27,100,000
Mobile	866,365,111	212,062,744	6,104,860,656	395,404,330	265,186,299	167,942,815	839,160,499	150,331,000

Euro

Figure 11 - Telecommunication markets in 2007

Note:
Albania: No revenue data reported for cable TV services.
Montenegro: Actual revenue data for 2007 are not available. The stated figures are estimated by Cullen International.
Kosovo: No revenue data reported for cable TV services.

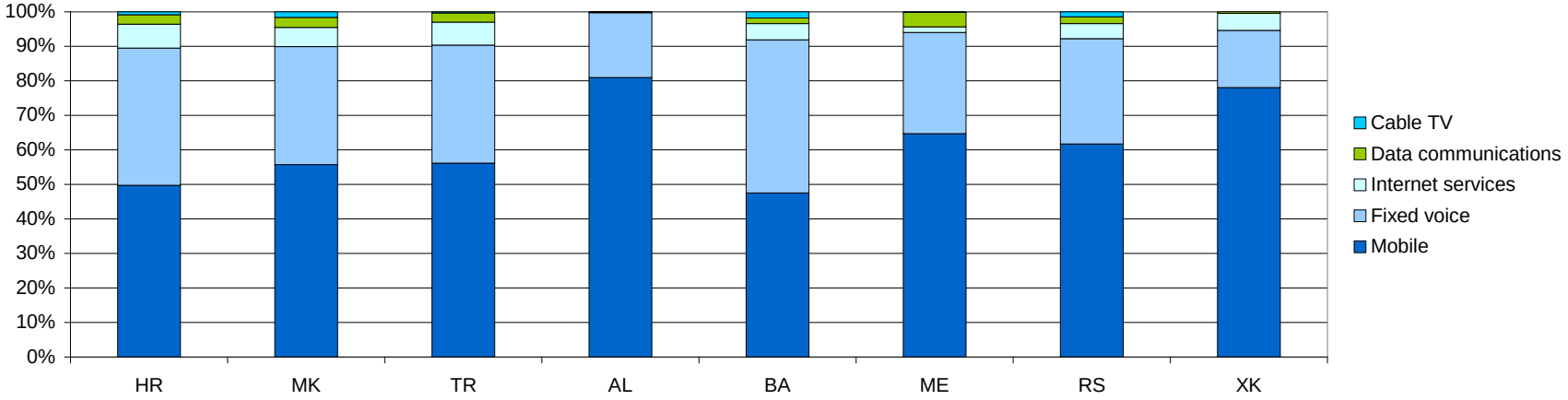
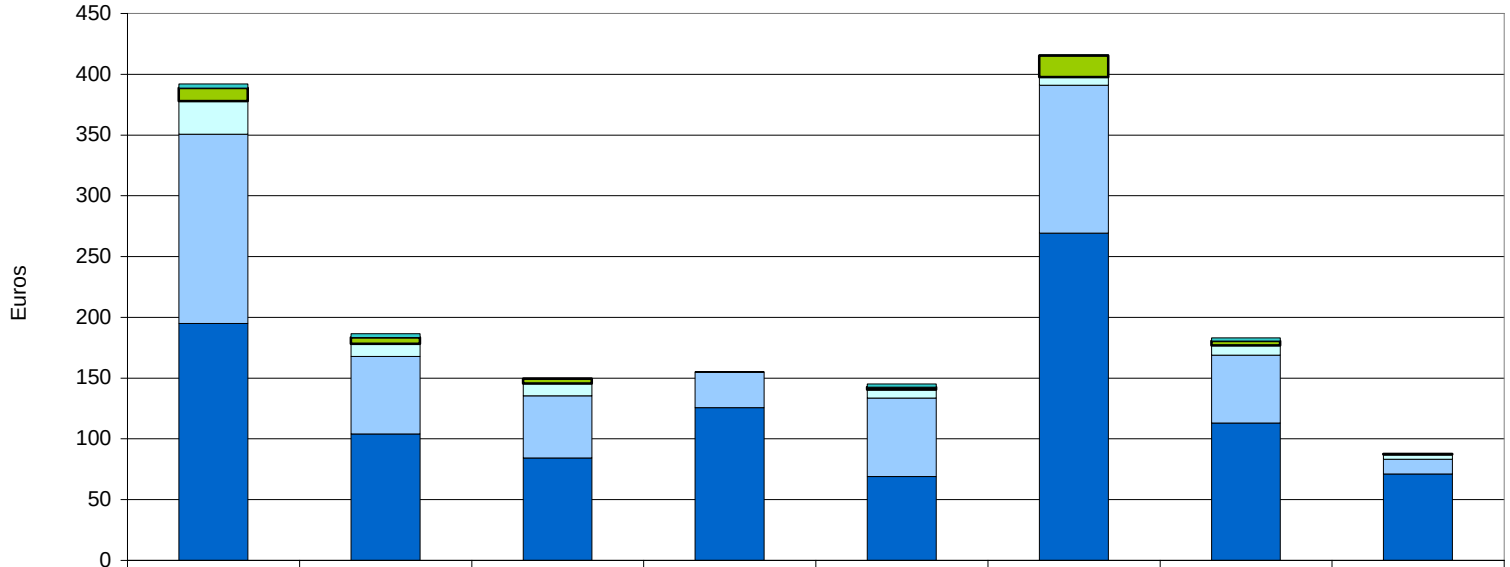


Figure 12 – Composition of telecommunications markets in 2007

Looking at the same data calculated as per capita revenues (see Figure 13), gives yet another view of the markets. Turkey drops down to an average level, while it is Croatia that shows the much larger size of market per capita. Again, it is Kosovo that has the lowest value.



	HR	MK	TR	AL	BA	ME	RS	XK
Cable TV	3.29	3.07	0.54	0.00	2.66	0.8	2.67	0.00
Data communications	10.73	5.33	3.98	0.12	2.25	17.42	3.64	0.33
Internet services	27.35	10.34	9.96	0.21	6.82	6.7	7.98	3.90
Fixed voice	155.58	63.82	51.23	29.29	64.50	121.86	55.77	12.09
Mobile	195.00	104.00	84.18	125.57	69.01	269.14	113.02	71.15

Figure 13 - Revenues per capita by sector

3. Fixed telephony market

a) Fixed network penetration and digitalisation rate

The numbers of active subscriber fixed lines are given in Table A.7, by technology and by type of customer. These are shown as penetration rates, i.e., as lines per 100 population, in Figure 14. Several fixed networks have shown declines in penetration rate as customers express a preference for GSM, which is more personal and offers more flexible use and payment schemes. There are considerable differences in the levels of penetration of the fixed network, with Albania and Kosovo at relatively low levels, while Croatia and Serbia have higher levels, but still substantially below the EU-27 average and well below those of the EU-15.

Country	Total number of fixed lines	By technology		By user category	
		PSTN	ISDN	Residential	Business
Croatia	1,667,100	1,551,500	115,600	1,467,000	200,100
FYROM	463,597	441,249	15,703	407,453	49,499
Turkey	18,216,271	18,201,006	15,265	18,029,185	187,086
Albania	291,146	290,298	848	265,570	25,576
Bosnia & Herzegovina	1,024,942	993,544	30,741	877,366	146,919
Montenegro	176,289	157,393	18,896	154,059	22,230
Serbia	2,993,403	2,552,615	78,905	2,528,537	326,013
Kosovo	91,000	-	-	91,000	-
Total	24,923,748	24,187,605	275,958	23,820,170	957,423

Table A.7 - Fixed network lines by technology and by user category in 2007

Notes:

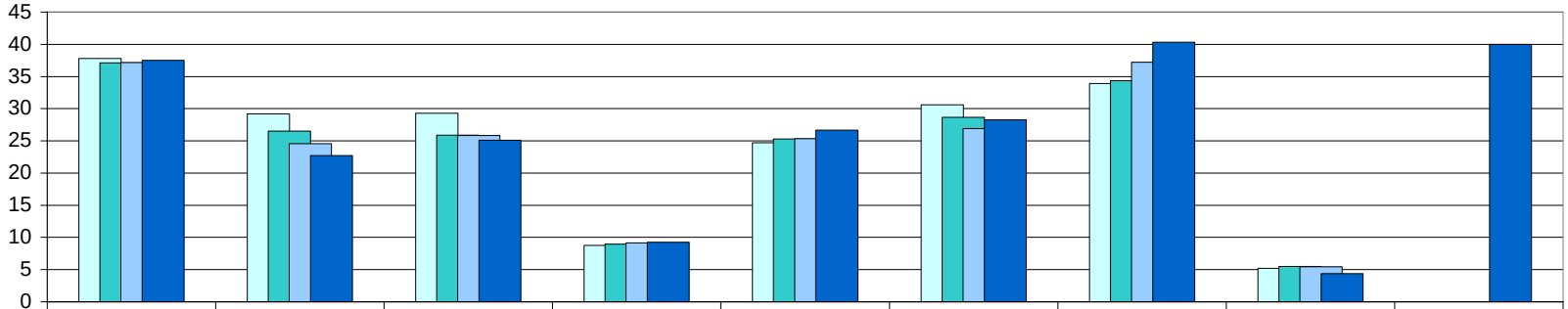
ISDN: ISDN is offered in two forms: Basic Rate Access (BRA) and Primary Rate Access (PRA). BRA lines allow two telephone numbers and two simultaneous calls, being used by households and smaller organisations. PRA lines enable 32 simultaneous calls and are normally used for larger organisations. The number of ISDN lines is weighted for BRA and PRA.

FYROM: The total includes 6,645 other lines representing public payphones, internal and test lines of the incumbent operator.

Montenegro: The number of ISDN subscriptions at the end of 2007 was 7,278. On December 31, 2007 the number of ISDN-BA lines was 7,123 and number of ISDN-PRA lines was 155. Thus, the total number of ISDN channels was (2 x 7,123) + (30 x 155) = 18,896.

Serbia: Fixed lines are given as “main lines”.

Kosovo: Ipko, an alternative fixed network operator, was due to start its fixed telephony service in 2008, with only a few pilot projects in place during 2007.



	HR	MK	TR	AL	BA	ME	RS	XK	EU-27
Jan-05	37.82	29.21	29.28	8.78	24.71	30.60	33.89	5.20	
Jul-06	37.11	26.50	25.89	8.93	25.29	28.64	34.35	5.50	
Jan-07	37.18	24.58	25.83	9.14	25.33	26.88	37.20	5.44	
Jan-08	37.52	22.74	25.12	9.25	26.67	28.25	40.32	4.40	40

Figure 14 - Fixed lines per 100 population

The process of converting analogue networks to digital has been relatively slow, but should be completed within the period of the present monitoring project. Table A.8 shows the levels in 2006 and 2007. Croatia, Montenegro and FYROM have had fully digital networks since the start of the previous monitoring project in 2005. They were joined by Kosovo during that project, which had to rebuild its network and in doing so achieved full digitalisation. Turkey and Bosnia & Herzegovina have almost reached the target. Serbia, which had less than 70 per cent in 2005, has made significant progress and should reach 100 per cent by 2010.

Country	2006	2007
Croatia	100.0	100.0
FYROM	100.0	100.0
Turkey	98.3	99.0
Albania	98.0	98.4
Bosnia & Herzegovina	98.4	99.0
Montenegro	100.0	100.0
Serbia	88.6	93.3
Kosovo	49.0	100.0

Table A.8 - Fixed network digitalisation rate (%)

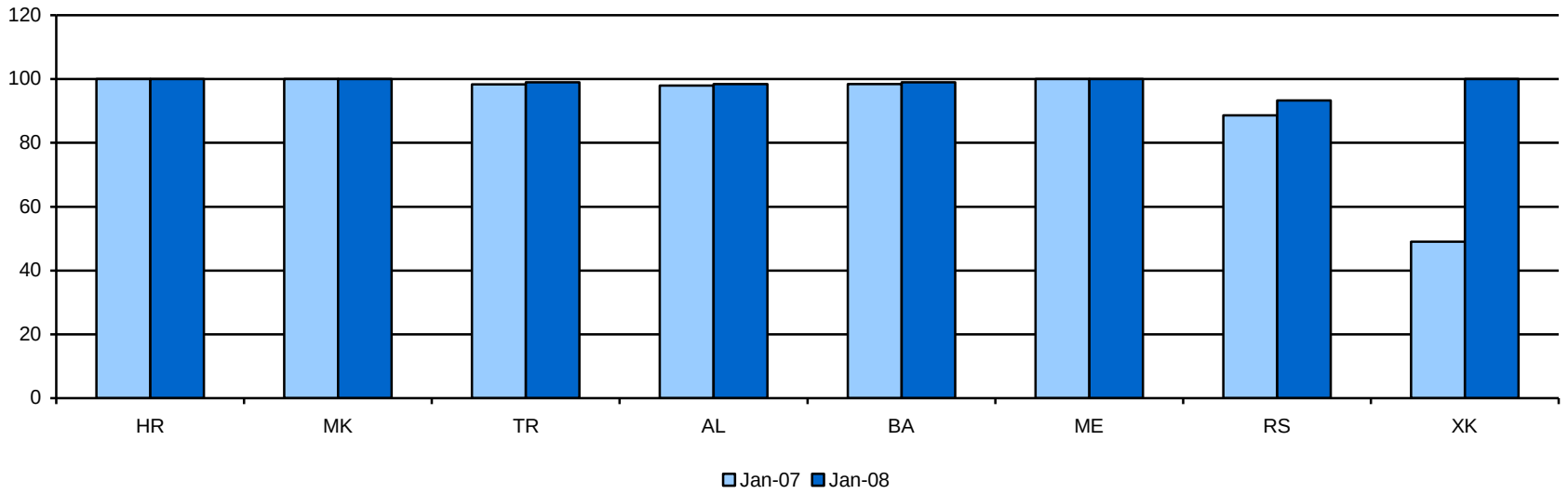


Figure 15 - Fixed network digitalisation rate (%)

Party or group lines serve two or more subscribers and remain a significant factor in the region (see Table A.9). These lines are a potential barrier to any intensive use of the telephone service, such as dial-up Internet access and value added services. They are also an obstacle to local loop unbundling and thus to broadband Internet access. Croatia, FYROM, Kosovo and Turkey now have no party lines. However, small but significant percentages are still found in Montenegro, Bosnia & Herzegovina and Albania. Serbia has much the highest level of party lines and will take some time to replace these.

Country	Multiple party lines	
	Total number	As percentage of total fixed lines
Croatia	0	0.0
FYROM	0	0.0
Turkey	0	0.0
Albania	12,600	4.8
Bosnia & Herzegovina	41,002	4.0
Montenegro	3,244	1.8
Serbia	223,030	7.4
Kosovo	0	0.0

Table A.9 - Multiple party lines

b) Competition

The development of competition in fixed networks and services in each country has been determined by individual liberalisation processes. In some cases, it has been gradual, with local and domestic long distance services being opened to competition at different times. Consequently, it is necessary to consider separately the local and the national operators (see Table A.10). Public network operators are defined as those installing, managing and operating a telecommunications transmission network to provide public telephony services or public network services.

Albania and Turkey are examples where competition at the local and the national level was not introduced at the same time. In Albania, rural local networks and services were liberalised before national services. Currently there are 60 local or regional operators, but only the incumbent operator provides services nationally. In Turkey, on the other hand, national networks were liberalised before local. Therefore, there are 32 operators providing long distance services, but local services are only provided by the incumbent.

Country	Local/regional public network operators		National public network operators	
	Authorised operators	Operators active in the market	Authorised operators	Operators active in the market
Croatia	15	10	15	10
FYROM	35	1	8	6
Turkey	1	1	1	1
Albania	60	60	1	1
Bosnia & Herzegovina	64	64	15	15
Montenegro	2	2	2	2
Serbia	1	1	1	1
Kosovo	2	1	2	1

Table A.10 - Competition in fixed telephony - public network operators

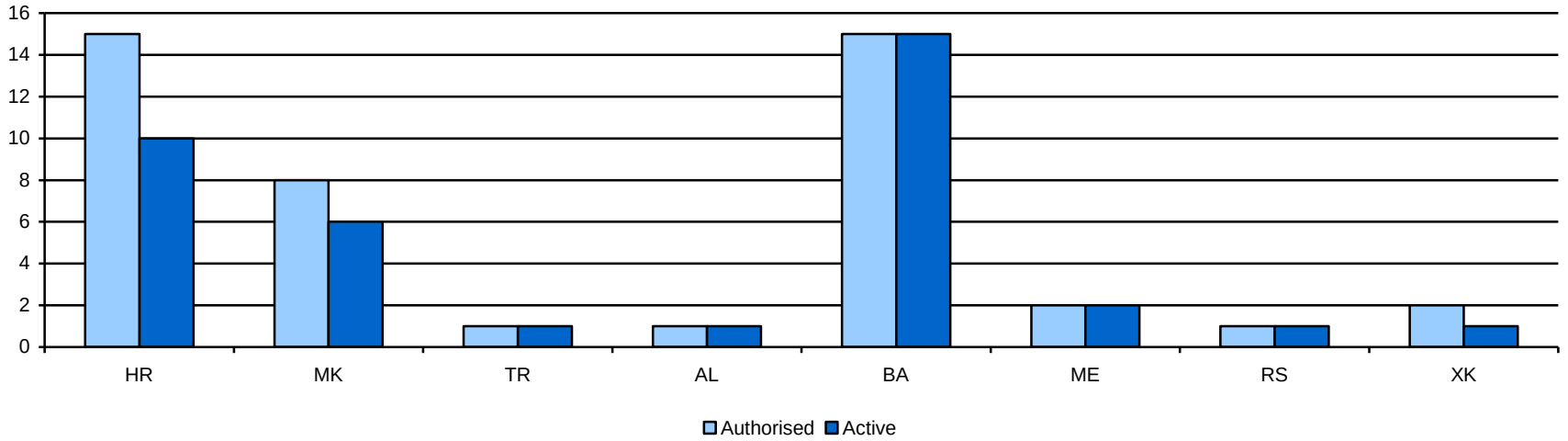


Figure 16 – National public fixed network operators

Notes:

Croatia:	As at March 31, 2008.
FYROM:	As at December 31, 2007.
Turkey:	Only Türk Telekomünikasyon A.Ş. is authorised to provide these services. The only competitors are long distance operators using CS/CPS calls licensed under Type 2 licences (see Table A.11).
Montenegro:	There are only two licensed fixed operators: T-Com Montenegro (formerly Telecom Montenegro), the incumbent, and M:Tel, a mobile operator that also provides fixed wireless access using WiMAX.
Serbia:	Telekom Srbija is the only licensed fixed network operator on the market.
Kosovo:	Ipko Telecommunications is the second authorised operator with a fixed telephony service due to commence commercial operations in 2008.

Country	Local/regional public fixed voice telephony providers		National public fixed voice telephony service providers	
	Total number of authorised service providers	Number of providers active in the market	Total number of authorised service providers	Number of providers active in the market
Croatia	52	40	52	40
FYROM	39	1	69	37
Turkey	1	1	32	32
Albania	60	6	1	1
Bosnia & Herzegovina	15	11	15	11
Montenegro	2	2	2	2

Country	Local/regional public fixed voice telephony providers		National public fixed voice telephony service providers	
	Total number of authorised service providers	Number of providers active in the market	Total number of authorised service providers	Number of providers active in the market
Serbia	1	1	1	1
Kosovo	2	1	2	1

Table A.11 - Competition in fixed voice telephony – voice service providers

Notes:
Croatia: Status as of Q1 2008, includes licensed public fixed telephony network operators and authorised VoIP providers.
FYROM: Status as at December 31, 2007.
Bosnia & Herzegovina: There are three incumbent operators.
Montenegro: There are two licensed fixed operators: T-Com Montenegro (formerly Telecom Montenegro) the incumbent and M:Tel, a mobile operator that provides fixed wireless access using WiMax.
Serbia: Telekom Srbija is the only licensed fixed network operator.

Country	VoIP	Cable TV
Croatia	37	2
FYROM	29	…
Turkey	32	0
Albania	N/A	0
Bosnia & Herzegovina	8	-
Montenegro	8	1
Serbia	0	0
Kosovo	…	…

Table A.12 - Competition in fixed voice telephony - VoIP and Cable TV providers

Notes:
Croatia: As at Q1 2008.
FYROM: As at December 31, 2007.
Bosnia & Herzegovina: A fixed public telephone services can be deployed based on the principle of technology neutrality. All of the 8 licensed alternative voice telephony providers offer VoIP services.
Montenegro: PTT Inzenjering is the only cable television operator that provides VoIP services – it is included in the 8 licensed operators. The NRA granted 5 licences for VoIP in September 2007 and a further 3 in February 2008.

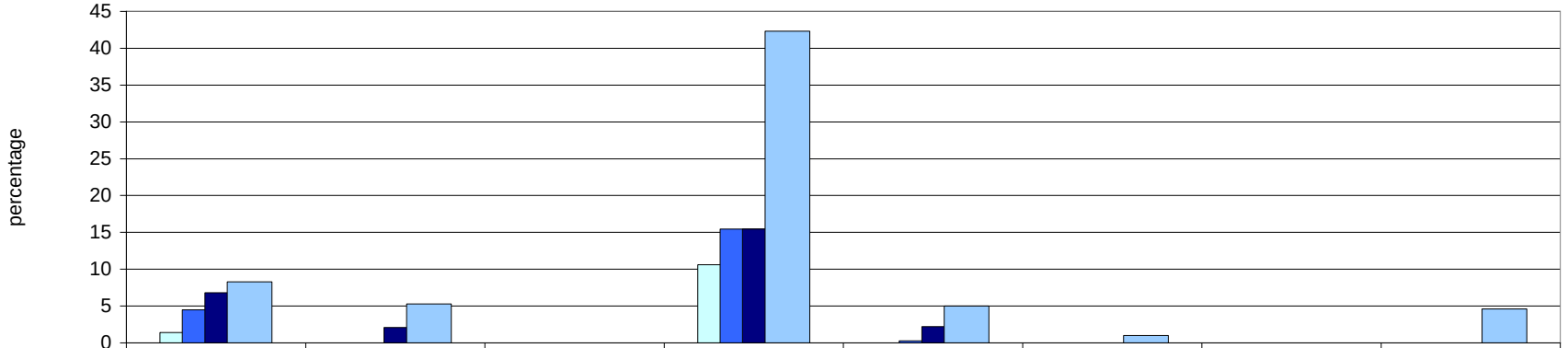
Table A.13 shows the proportion of fixed subscriber numbers allocated to incumbent and alternative operators. It is an important indicator of the state of competition in the fixed market, though it is not to suggest that all of the allocated numbers are in immediate use.

Country	Fixed incumbent operator (%)	Alternative operators (%)
Croatia	91.7	8.3
FYROM	94.7	5.3
Turkey	100.0	0.0
Albania	57.7	42.3
Bosnia & Herzegovina	95.0	5.0
Montenegro	99.0	1.0
Serbia	100.0	0.0
Kosovo	95.4	4.6

Table A.13 - Competition in fixed telephony - numbers allocated by NRA

Figure 17 shows the trends over time of the numbers allocated to alternative providers.

The overall numbers given to alternative operators is still very small and in the cases of Turkey and Serbia no numbers has ever been allocated. By contrast, Albania has assigned almost half of its fixed numbers, indicating a very strong basis for competition.



	HR	MK	TR	AL	BA	ME	RS	XK
Jan-05	1.40	0.00	0.00	10.60	0.00	0.00	0.00	0.00
Jul-06	4.47	0.00	0.00	15.44	0.30	0.00	0.00	0.00
Jan-07	6.81	2.08	0.00	15.44	2.20	0.00	0.00	0.00
Apr-08	8.30	5.30	0.00	42.30	5.00	1.00	0.00	4.60

Figure 17 - Percentage of fixed numbers allocated to alternative operators

Market shares can be measured in many different ways, by numbers of lines, customers, minutes of traffic and revenues. Table A.14 show the market share of the respective incumbent operators by revenues and by minutes of traffic. It is given for both national calls and international calls, then as the overall figure, the sum of the two other markets.

The continued dominance of the incumbent operators is very clear in every case for which there are data. 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. Alternative operators using carrier selection or VoIP ought to be able to claim significant market shares with limited investment.

Country	Overall market share		National calls		International calls	
	By retail revenue	By minutes of traffic	By retail revenue	By minutes of traffic	By retail revenue	By minutes of traffic
Croatia	82.2	77.5	82.2	77.1	82.4	86.3
FYROM	99.8	99.9	100.0	100.0	97.6	99.4
Turkey	81.0	91.0	N/A	92.0	N/A	78.0
Albania	94.2	96.0	N/A	85.0	N/A	98.0

Country	Overall market share		National calls		International calls	
	By retail revenue	By minutes of traffic	By retail revenue	By minutes of traffic	By retail revenue	By minutes of traffic
Bosnia & Herzegovina	99.0	99.0	100.0	100.0	98.0	98.0
Montenegro	N/A	99.0	N/A	N/A	N/A	N/A
Serbia	100.0	100.0	100.0	100.0	100.0	100.0
Kosovo	100.0	100.0	100.0	100.0	100.0	100.0

Table A.14 - Competition in fixed telephony - Incumbent operator's market share (%)

Notes:
Bosnia & Herzegovina: Four alternative operators began to provide fixed telephony services (mostly international calls) at the end of 2007.
Montenegro: The financial data for 2007 is not yet available, because annual reports of operators are not published until July 1 of the following fiscal year. Most of the operators had not yet adopted their annual reports at the time of data collection. The same is true for traffic data.

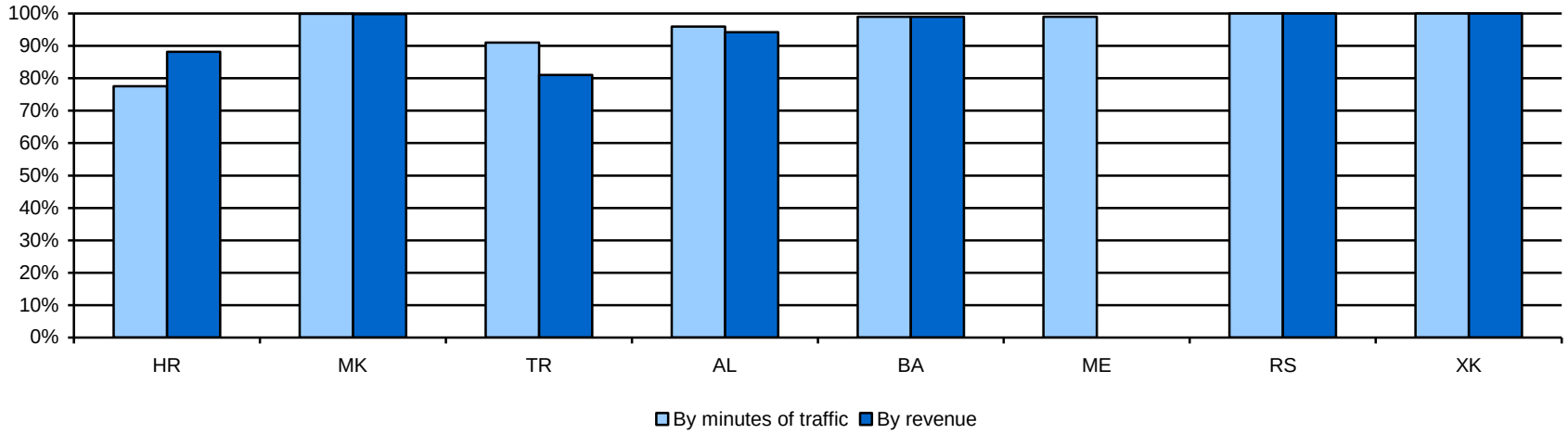


Figure 18 – Incumbent operators' market share in fixed telephony in 2007

Voice over Internet Protocol (VoIP) is now a well established service in the EU-27 and one frequently advertised in South-East Europe. Yet the market shares for operators using VoIP appear to be relatively small (see Table A.15). The differences between the columns reflect the unit prices, so that cheaper VoIP calls will show as a lower percentage of revenues than minutes of traffic. Unfortunately, there are no data for Bosnia and Herzegovina, Montenegro and Turkey.

Country	By retail revenue	By minutes of traffic
Croatia	1.8	5.7
FYROM	0.357	12.3
Turkey	N/A	N/A
Albania	5.8	4.0
Bosnia & Herzegovina	N/A	N/A
Montenegro	N/A	N/A
Serbia	0.0	0.0
Kosovo	0.0	0.0

Table A.15 - Market share of VoIP operators (%)

Notes:
Croatia: Internet traffic is not included.
Turkey: Long distance service providers can provide VoIP services. There is no different licence type for VoIP services.

A cost-effective way for alternative carriers to take market share from incumbent operators is using carrier selection (CS) and carrier pre-selection (CPS). Table A.16 shows the levels of adoption of both, broken down by national and international call destinations.

Country	Subscribers using an alternative provider for voice telephony services through CS/CPS and/or direct access for national and international calls			Total fixed lines	Subscribers using an alternative provider as a percentage of total lines
	Total number of subscribers using an alternative provider	Subscribers using an alternative provider for national calls	Subscribers using an alternative provider for international calls		
Croatia	345,200	N/A	N/A	1,667,100	20.7%
FYROM	4,881	N/A	N/A	463,597	1.1%
Turkey	2,367,320	N/A	N/A	18,216,271	13.0%
Albania	…	…	…	291,146	…
Bosnia & Herzegovina	7,958	283	7,675	1,024,942	0.8%
Montenegro	1,707	1,707	1,707	176,289	1.0%
Serbia	...	...	…	2,993,403	0.0%
Kosovo	...	…	…	91,000	…

Table A.16 - Subscribers using alternative providers for voice telephony services

Notes:
FYROM: The NRA asked for the total number of subscribers using carrier selection, without requiring that they be broken down by the destination of the call. In May 2008 a regulation was adopted introducing carrier selection for local calls.
Bosnia & Herzegovina: The reference date is February 2, 2008.
Montenegro: On December 31, 2007 alternative fixed operator M:Tel had 1,707 subscribers or 0.97% of total number of fixed subscribers.

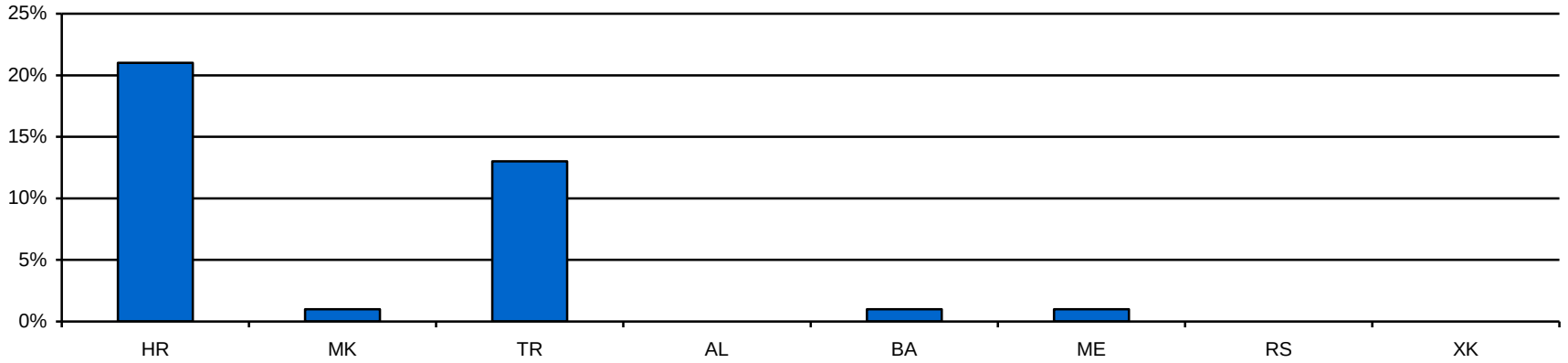


Figure 19 - Subscribers using alternative providers as percentage of total number of fixed lines

4. Mobile market

a) Mobile subscribers

At the end of 2007 there were 85 million subscribers of mobile services (see Table A.17). The rise in the levels of mobile penetration rates has been rapid and sometimes dramatic (see Figure 20). The most significant growth in the penetration rates in 2007 was observed in four countries where new operators entered the mobile market in 2007: Montenegro (by 65%), the FYROM (by 26%), Serbia (by 24%) and Kosovo (by 24%). Most of the entities will soon catch up with the EU-27 average and can be expected to exceed that level, joining Serbia and Montenegro.

However, these numbers are not to be taken to mean that everyone in South-East Europe has a mobile phone. There appear to be significant numbers of plastic roamers that is people with multiple SIM cards who switch to a local operator on moving between the entities or on moving into South-East Europe from the rest of the Europe. Some others may have multiple domestic SIM cards in order to exploit particularly attractive tariffs or to ensure network coverage.

Country	Total number of active subscribers	Penetration rate (%)
Croatia	5,034,600	113.4
FYROM	1,946,716	96.2
Turkey	62,874,885	89.0
Albania	2,322,436	73.2
Bosnia & Herzegovina	2,450,425	63.8
Montenegro	1,045,981	168.7
Serbia	8,452,642	112.7
Kosovo	1,080,000	54.0

Table A.17 - Mobile subscribers

Notes:

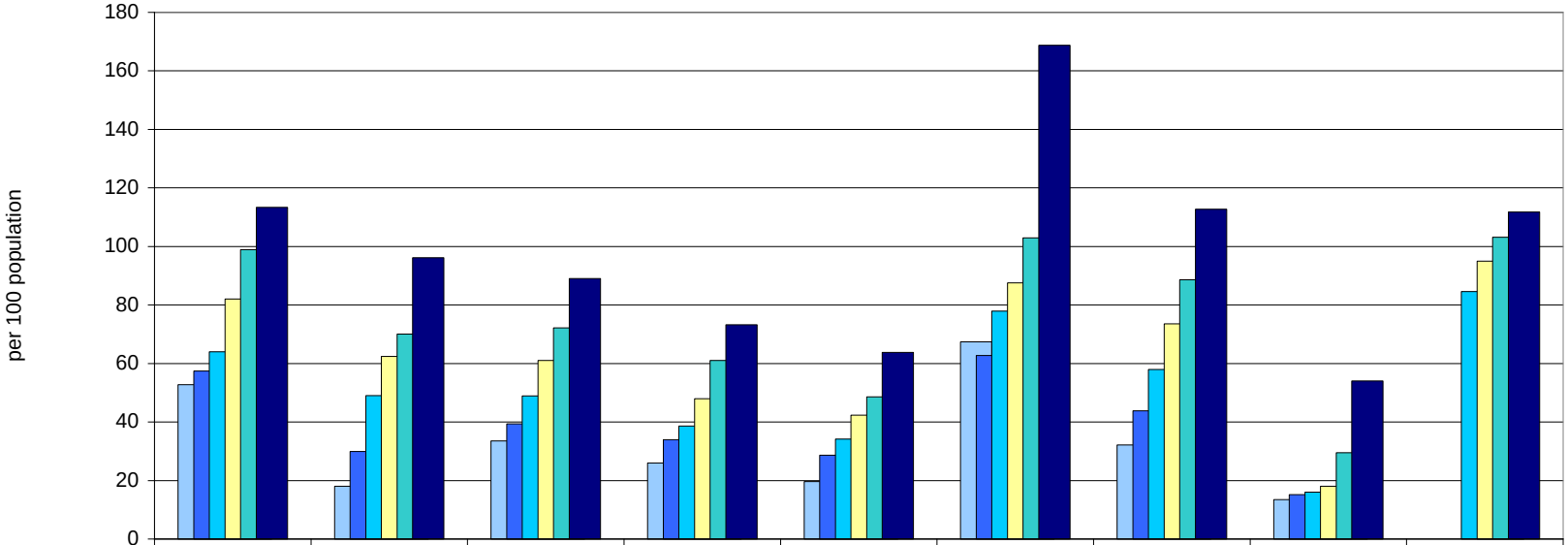
Albania: The definition of active subscribers is given for two mobile operators, based on the terms of use of recharging cards for pre-paid users.
AMC: The ALBAKARTA service can be used for 12 months from activation. If the credit is used up before this period then a customer continues to receive calls for another 6 months.
Vodafone Albania: The subscriber can make as many phone calls as are allowed by the value of its credit, until 6 months after the activation of the SIM card. Airtime duration is for 6 months and cannot be transferred to another SIM card. If the credit of the SIM card has finished, the subscriber can still receive phone calls until 6 months from the card activation. If the SIM card credit has not been consumed within 6 months, the subscriber loses its right to use the remaining credit.

Montenegro: As at January 1, 2008. Pre-paid card subscribers are dropped after 12 months of inactivity. The main tourist season is June to August when large numbers of pre-paid cards are sold. The penetration is calculated using the most recent official data on population: 620,145 at the end of 2003.

Serbia: Telenor (formerly Mobi63) is for the territory of Serbia excluding the Kosovo and Metohia regions. Telekom Serbia includes a number of subscribers in the Kosovo and Metohia regions.

Kosovo: Ipko has 250,000 mobile subscribers and Vala has 830,000 subscribers. Other unlicensed or “illegal” operators are not included.

Discrepancies also arise from different practices in defining an “active” pre-paid customer. For example, Telenor uses three months, while Vodafone uses thirteen months. In Bosnia & Herzegovina the periods are 90 days for BH Telecom and 9 months for m:tel, while in Kosovo they are one year for IPKO and four months for Vala. Promonte, in Montenegro, uses different periods depending on the tariff option, ranging from 90 days to almost one year.



	HR	MK	TR	AL	BA	ME	RS	XK	EU-27
Jan-2003	52.7	18.0	33.5	26.0	19.7	67.4	32.1	13.5	
Jan-2004	57.5	29.9	39.4	34.0	28.7	62.7	43.8	15.2	
Jan-2005	64.0	49.0	48.9	38.6	34.2	77.9	57.9	16.0	84.6
Jan-2006	82.1	62.4	61.1	48.0	42.3	87.6	73.5	18.0	95.0
Jan-2007	99.0	70.1	72.2	61.0	48.6	103.0	88.6	29.5	103.2
Jan-2008	113.4	96.2	89.0	73.2	63.8	168.7	112.7	54.0	111.8

Figure 20 - The rise of mobile penetration

Note:
EU-27: The values are for October of the previous year, as reported in the annual EC implementation reports.

The great majority of customers use the prepaid service, rather than the subscription or postpaid service (see Table A.18). In Kosovo nearly all the customers are prepaid, with the second operator only recently launching a postpaid option. Albania has a slightly lower level at 94 percent.

The very high levels of pre-paid customers raises questions about the move to broadband and mobile value added services, where a different business model may be necessary.

Country	Prepaid mobile subscribers (%)	Postpaid (monthly paid) mobile subscribers (%)
Croatia	75.96	24.04
FYROM	79.86	20.14
Turkey	79.90	20.09
Albania	93.84	6.16
Bosnia & Herzegovina	89.26	10.74
Montenegro	79.97	20.03
Serbia	80.00	20.00
Kosovo	98.46	1.54

Table A.18 - Mobile subscribers - prepaid and postpaid

Notes:
Croatia: Information is for 2007.
Turkey: 50,237,153 prepaid mobile subscribers and 11,738,654 postpaid mobile subscribers.
Montenegro: 836,509 prepaid subscribers; 209,472 postpaid subscribers.
Kosovo: PTK has 98% prepaid mobile subscribers and 2 % postpaid mobile subscribers. IPKO has 100% prepaid mobile subscribers. IPKO launched postpaid services on June 4, 2008.

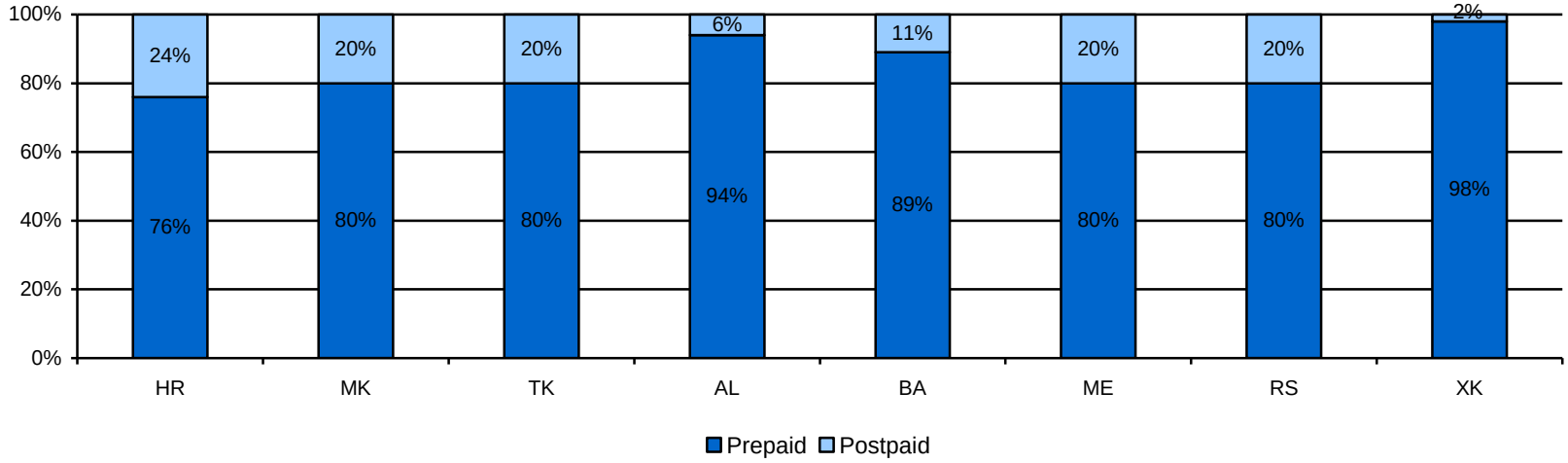


Figure 21 - Mobile subscribers - prepaid and postpaid

b) Licensed mobile operators

With the exception of Kosovo, there are now three network operators licensed to serve each market (see Table A.19). In Serbia, FYROM and Montenegro the operators have also been assigned 1.9 and 2.1 GHz bands for use for 3G services. Turkey had attempted to license spectrum for 3G, but had generated little interest. Now that MNP will be available and with the Zain Group expressing an interest, a successful 3G auction should be possible, and the regulator announced plans to grant three 3G licences before the end of 2008.

Country	Operators licensed for provision of public mobile communications services				
	Operator	System/Technology	Spectrum (MHz)	Licence (date of issue)	Date of expiry
Croatia	T-Mobile Hrvatska	GSM	900 & 1800	September 16,1999	September 16, 2009
		UMTS	1900 & 2100	October 18, 2004	October 18, 2024
	VIPnet	GSM	900	July 1, 1999	July 1, 2009
		UMTS	1900 & 2100	October 18, 2004	October 18, 2024
	Tele2	GSM	1800	December 22, 2004	December 22, 2024
		UMTS	1900 & 2100	December 22, 2004	December 22, 2024
FYROM	T-Mobile (former Mobimak)	GSM	900	June 5, 2001	2018
	Cosmofon	GSM	900	November 22, 2001	2023
		UMTS	1900 & 2100	February 2008	2018
	VIP Operator (former Nov Operator)	GSM	900 & 1800	March 26, 2007	2017
Turkey	Turkcell Communications Services	GSM	900	April 27, 1998	2023
	Vodafone Communications Services	GSM	900	April 27, 1998	2023
	Avea Communications Services	GSM	1800	January 11, 2001	2026
Albania	Albanian Mobile Communications	GSM	900 & 1800	August 19,1999	2014
	Vodafone Albania	GSM	900 & 1800	June 9, 2001	2016
	Eagle Mobile	GSM	900 & 1800	March 1, 2004	2019
Bosnia & Herzegovina	BH Telecom (BH Mobile)	GSM	900 & 1800	October 12, 2004	2019
	Telekom Srpske (M:Tel)	GSM	900 & 1800	October 12, 2004	2019
	HT Mostar (HT Eronet)	GSM	900 &1800	October 12, 2004	2019
Montenegro	T-Mobile Montenegro	GSM	900 & 1800	January 1, 2002	2017
		UMTS	1900 & 2100	April 11, 2007	2022
	M:Tel	GSM	900 & 1800	April 21, 2007	2022
		UMTS	1900 & 2100	April 21, 2007	2022
	ProMonte	GSM	900 & 1800	January 1, 2002	2017
		UMTS	1900 & 2100	April 13, 2007	2022

Country	Operators licensed for provision of public mobile communications services				
	Operator	System/Technology	Spectrum (MHz)	Licence (date of issue)	Date of expiry
Serbia	MTS – Mobilna Telefonija Srbije	GSM, UMTS	900 & 1800, 1900 & 2100	July 28, 2006	July 28, 2016
	Telenor	GSM, UMTS	900 & 1800, 1900 & 2100	August 31, 2006	August 31, 2016
	VIP	GSM, UMTS	900 & 1800, 1900 & 2100	December 1, 2007	December 1, 2017
Kosovo	Vala	GSM	900	July 30, 2004	2019
	IPKO	GSM	900 & 1800	March 6, 2007	2022

Table A.19 - Licensed mobile operators

Notes:
Albania: Eagle Mobile is currently using only 900 MHz but has the right to use 1800 MHz which it is expected to do during the course of 2008.
Croatia: http://www.telekom.hr/Default.aspx?sec=22
Serbia: All three operators can automatically extend the period of the validity of the licences for additional 10 years.

c) Market shares of mobile operators, by revenue and by subscribers

Measuring market shares for mobile networks is more difficult than for fixed, given the problems with accurate and comparable customer numbers. Table A.20 shows the various market shares, based on subscriber numbers and on revenues. There are considerable variations between the two columns, reflecting different types of customers, for example, high spending business customers and the rural poor. Operators later in entering the market struggle to get a proportionate share of higher spending customers.

Country	Operator	Mobile operators' market shares (%)	
		Based on subscribers	Based on revenues
Croatia	T-Mobile Hrvatska	43.37	51.98
	VIPnet	43.29	42.81
	Tele2	9.34	5.21
FYROM	T-mobile	62.29	72.09
	Cosmofon	30.46	27.20
	VIP	7.25	0.69
Turkey	Turkcell Communications Services	57.00	65.00
	Vodafone Communications Services	27.00	21.00
	Avea Communications Services	16.00	14.00
Albania	Albanian Mobile Communications	51.46	51.70
	Vodafone Albania	48.54	48.30
	Eagle Mobile	N/A	N/A

Country	Operator	Mobile operators' market shares (%)	
		Based on subscribers	Based on revenues
Bosnia & Herzegovina	BH Telecom (BH Mobile)	43.64	45.74
	Telekom Srpske (M:tel)	35.92	33.57
	HT Mostar (HT Eronet)	20.44	20.69
Montenegro	T-Mobile Montenegro	33.81	38.03
	M:Tel	24.90	5.36
	ProMonte	41.30	56.61
Serbia	MTS – Mobilna Telefonija Srbije	59.39	55.24
	Telenor	34.58	43.07
	VIP mobile	6.03	1.69
Kosovo	Vala	76.85	99.39
	Ipko	23.15	0.61

Table A.20 - Market shares of mobile operators

Notes:
Albania: Eagle Mobile launched its service on March 13, 2008 so that its market share was very small. The latest number of users was about 1,000, compared to 2.3 million mobile users of the other networks in Albania.
Montenegro: On December 31, 2007 the number of mobile subscribers (pre-paid and post-paid) was: 353,606 for T-Mobile, 260,403 for M-Tel and 431,972 for ProMonte. The financial data for 2007 had not been available at the time of data collection, revenue based market shares estimated by Cullen International.

The level of concentration of a market can be measured in a number of different ways. The Herfindahl-Hirschmann Index (HHI), the sum of the squares of the market shares, is commonly used in assessing concentration in competition law. In any mobile market the value of the HHI will depend on the number of players licensed and operational, thereafter the value reflects to the degree of concentration or market power. In a market with three players with equal market shares the HHI would be $33.33^2 + 33.33^2 + 33.33^2 = 3333$, which is the lowest value possible for all the entities, except Kosovo where the lowest value possible would be 5000.

Figure 22 shows the HHIs for SE Europe using the operator revenues, where these are available. Only Bosnia comes close to an even distribution of market shares, with some of the other values relatively high. If, in the medium term, the HHIs do not decline, it would suggest the need to consider measures to increase competition.

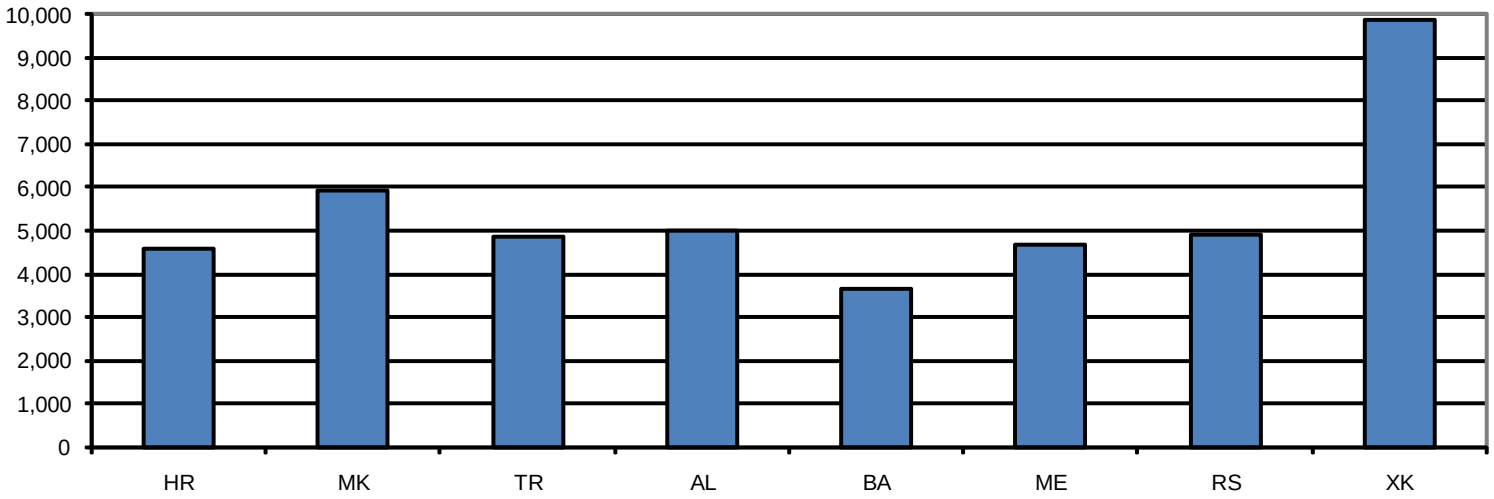


Figure 22 - Mobile market concentration levels

Table A.21 shows the fees and charges for the 3G/UMTS mobile network licences (that have been granted in Croatia, FYROM, Montenegro and Serbia), usually some sort of one-off fee, usually decided by auction, and annual fees, typically set as percentages of revenues.

<table>
<tr><th>Country</th><th>Licensees</th><th>One-off fees</th><th>Annual fees</th><th>Deadline for service launch</th><th>Coverage and roll-out obligations</th></tr>
<tr><td rowspan="2">Croatia</td><td>October 2004:
• T- Mobile Hrvatska
• VIPnet</td><td>HRK 132m (€18m)</td><td>Spectrum fee of HRK 5m (€688,900) for 5 MHz frequency block
1% revenue from UMTS service</td><td>June 2005</td><td>• 25% of population within two years
• 50% of population within five years</td></tr>
<tr><td>December 2004:
Tele2</td><td>HRK 172m (€24m) for a combined 2G/3G concession</td><td>Spectrum fee of HRK 5m (€688,900) for 5 MHz frequency block
1% revenue from UMTS service</td><td>August 2005</td><td><table><tr><th>year</th><th>population</th><th>territory</th></tr><tr><td>1</td><td>14%</td><td>1%</td></tr><tr><td>2</td><td>33%</td><td>7%</td></tr><tr><td>3</td><td>50%</td><td>19%</td></tr><tr><td>4</td><td>65%</td><td>36%</td></tr><tr><td>5</td><td>71%</td><td>51%</td></tr></table></td></tr>
</table>

Country	Licensees	One-off fees	Annual fees	Deadline for service launch	Coverage and roll-out obligations
FYROM	February 11, 2008: Cosmofon	€10,050,000	€21,000 per 1 MHz	August 2008	• 50% of population within one year • 80% of population within three years
Turkey	No UMTS licences	-	-	-	-
Albania	No UMTS licences	-	-	-	-
Bosnia & Herzegovina	No UMTS licences	-	-	-	-
Montenegro	April 13, 2007: Promonte	€4.01m (offered in public tender procedure)	1% of annual revenue	July 1, 2007	By the end of each successive year: 40.0%, 60.0%, 75.0%, 87.0% and 97.0% of the population.
	April 11, 2007: T-Mobile Montenegro	€2.4m (offered in public tender procedure)	1% of annual revenue	November 1, 2007	By the end of each successive year: 11.0%, 20.0%, 28.0%, 37.0%, 53.0% of the population.
	April 21, 2007: M-Tel	€16m for combined GSM 900/1800 and UMTS licence (offered in public tender procedure)	1% of annual revenue	July 1, 2007	GSM - by the end of each successive year: 95.9%, 98.8%, 99.2%, 99.4% and 99.5% of the population. UMTS - by the end of each successive year: 75.2%, 80.5%, 83.9%, 86.3% and 89.1% of the population.
Serbia	July 2006: • MTS	MTS: €0 (replacement of the previously issued licence)	• RSD 80m (€1m) for 2007 • 0.9% of annual revenue thereafter	January 2007	• 25% of population within 24 months • 60% of population within 36 months
	August 2006: • Telenor	€1.54bn for a combined 2G/3G licence (including operations of the former Mobi 063)	• RSD 55m (€720,000) for 2007 • 0.9% of annual revenue thereafter	February 2007	• 25% of population within 24 months • 60% of population within 36 months
	December 2007: VIP mobile	€320m for a combined 2G/3G licence	0.9% of annual revenue, starting from 2008	May 2008	• 25% of population within 24 months • 60% of population within 36 months
Kosovo	No UMTS licences	-	-	-	-

Table A.21 - Mobile operators licensed to offer 3G/UMTS services

Notes:
Montenegro: Licences were offered in public tender procedures. The first year of the coverage commitments started on the date the licence entered into force. One-off fees: Determined by public tender procedure, minimum set by the Ministry of Maritime affairs, Transportation and Telecommunications to €2,000,000 for 3G and €6,000,000 for 2G/3G. Prices offered on tender are: €4,010,000 (ProMonte for 3G licence), €2,400,042 (T-Mobile for 3G licence) and €16,000,000 (M-Tel for 2G/3G licence).

5. Internet and broadband

a) Fixed broadband access

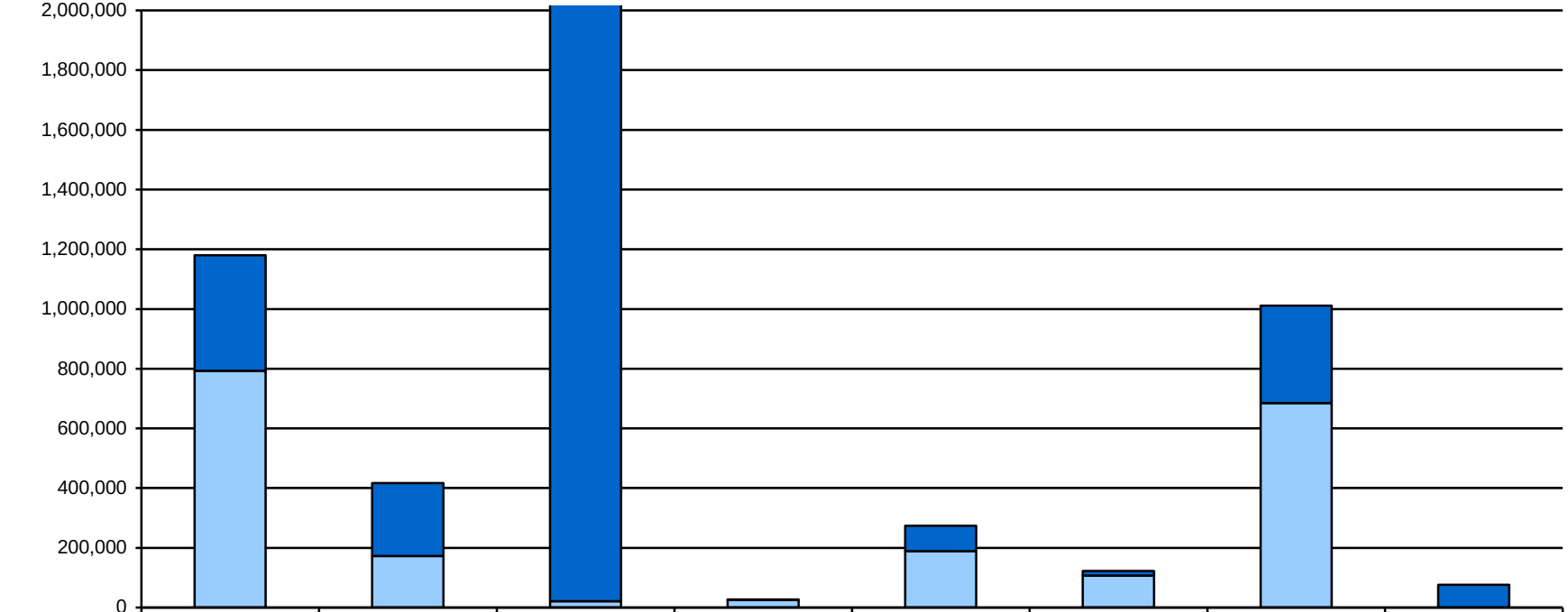
The division between broadband and narrowband connections is shown in Table A.22. In line with EC practice in recent Implementation Reports and statistics, broadband capacity is defined as equal to, or more than, 144 kbit/s.

Dial-up is still predominant in Bosnia & Herzegovina, Croatia, Montenegro and Serbia. FYROM has a majority of broadband, but still has significant numbers of dial-up lines. Turkey have few dial-up customers, possibly in areas where broadband is not accessible.

Country	Total number of Internet connections	
	Narrowband (dial-up) connections	Broadband connections (all technologies)
Croatia	793,300	387,000
FYROM	173,132	243,287
Turkey	20,917	4,616,296
Albania	25,000	2,056
Bosnia & Herzegovina	189,059	84,693
Montenegro	106,696	16,135
Serbia	685,397	325,730
Kosovo	-	76,370

Table A.22 - Total number of Internet connections

Notes:
Bosnia & Herzegovina: Dial up connections are connections to the Internet via analogue modem and connections via ISDN.
Montenegro: In 2007 the number of registered internet subscribers in Montenegro was 95,816 (T-Com Montenegro: 95,816; MontSky: 10,500 and MNNews: 380). Total number of ADSL lines was 14,428 = 10,863 residential + 3,565 business. There were also 1,707 WiMAX users (M:Tel).
Kosovo: All connections offered by all ISPs in Kosovo are broadband (only PTK-Dardanet still offers dial-up, although presumably a negligible proportion).



	HR	MK	TK	AL	BA	ME	RS	XK
Broadband	387,000	243,287	4,616,296	2,056	84,693	16,135	325,730	76,370
Narrowband	793,300	173,132	20,917	25,000	189,059	106,696	685,397	

Figure 23 - Number of Internet connections

Table A.23 shows the number of ISPs active on the market. Although some of these numbers appear impressive, the market shares held by the incumbent operator, where available, suggest that these ISPs are not having an easy time. In almost all cases the incumbent operator has a majority of the market, sometimes with fewer connections, but invariably with higher revenues, suggesting it holds the higher spending customers.

Country	Total number of ISPs	Incumbent ISP's market share	
		By revenue	By number of connections
Croatia	37	73.80%	88.66%
FYROM	99	57.83%	48.48%
Turkey	77	85.02%	94.46%
Albania	32	N/A	N/A
Bosnia & Herzegovina	60	65.81%	53.72%
Montenegro	6 active (13 licences issued)	N/A	N/A
Serbia	159	N/A	9.8%
Kosovo	9	N/A	12%

Table A.23 - Internet users and connections - ISPs

Notes:
FYROM: The number of companies which have submitted a notification to the NRA that they will provide data communications networks/services.
Montenegro: The first two licences were issued to Internet Crna Gora (now T-Com Montenegro) and MontSky. In July 2005 the NRA issued 3 licences for Wi-Fi operators, offering local services: Zirex in Kotor, Mina Infomont in Podgorica, Neboelectronic in Herceg Novi. In February 2006 the NRA licensed VIP Broadband Montenegro Ltd. Niksic. In December 2006 it licensed: Dasto Montel Ltd. Cetinje and Cabling d.o.o. Budva. In 2007 the NRA issued WiMAX licences to Broadband Montenegro Podgorica, T-Mobile Montenegro and M:Tel, then in 2008 to ProMonte and an ISP licence to PTT Inzenjering. Only 6 ISP provide internet services at this moment: T-Com Montenegro, MontSky, Mina Infomont, T-Mobile, ProMonte and M-Tel.

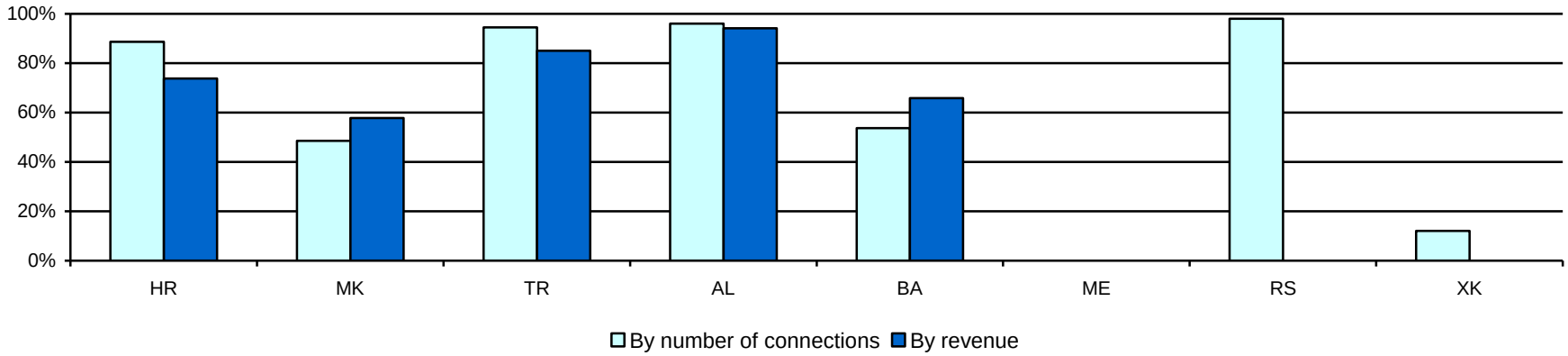


Figure 24 - Incumbent ISP's market share

The following section provides information on the deployment of fixed broadband access lines by incumbent operators and their subsidiaries or partners and by new entrants (alternative telecommunication operators or ISPs) to end-users (see Table A.24). Mobile broadband connections, including UMTS and HSDPA cellular wireless data communications, are covered in a separate section.

Country	Operator	Total number of broadband connections (all technologies)	xDSL connections	Cable modem	Leased lines	FTTx	FWA	Other
Croatia	Incumbent	345,397	344,925	-	472	-	-	-
	Alternative operators	41,622	24,833	10,369	1,385	-	4,914	121
FYROM	Incumbent	48,214	48,214	-	149	-	-	-
	Alternative operators	50,892	7,818	27,565	206	-	15,509	-
Turkey	Incumbent	4,360,466	4,353,255	-	7,211	-	-	-
	Alternative operators	211,898	156,694	41,109	-	-	-	6,884
Albania	Incumbent	2,056	1,305	N/A	751	-	-	-
	Alternative operators	N/A	N/A	N/A	N/A	-	-	-
Bosnia & Herzegovina	Incumbent	38,584	37,635	-	949	-	-	-
	Alternative operators	46,109	-	29,412	191	-	16,448	58
Montenegro	Incumbent	14,428	14,428	0	167	0	64	0
	Alternative operators	1,707	0	0	0	0	1,707	0
Serbia	Incumbent	131,066	130,088	0	407	0	-	571
	Alternative operators	194,664	69,574	87,731	6,057	0	-	31,302
Kosovo	Incumbent	10,786	10,720	N/A	66	0	2,842	-
	Alternative operators	76,370	-	58,033	95	210	-	4,470

Table A.24 - Number of fixed broadband connections with breakdown by operator and technology

Notes:
FTTx: This includes Fibre To The Curb (FTTC), Fibre To The Home (FTTH), Fibre To The Premises (FTTP), etc.
Montenegro: In 2007 total number of ADSL was 14,428 (10,863 residential and 3,565 business users). M:Tel also had 1,707 WiMAX users.
Kosovo: Other technologies are represented by WiFi connections.

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 2008 was 20%. The average broadband penetration rate for eight countries was 5.80%. The highest broadband penetration level was observed in Croatia (8.71%) and Turkey (6.30%), which is comparable to the level of Romania and Bulgaria that joined the EU in 2007.

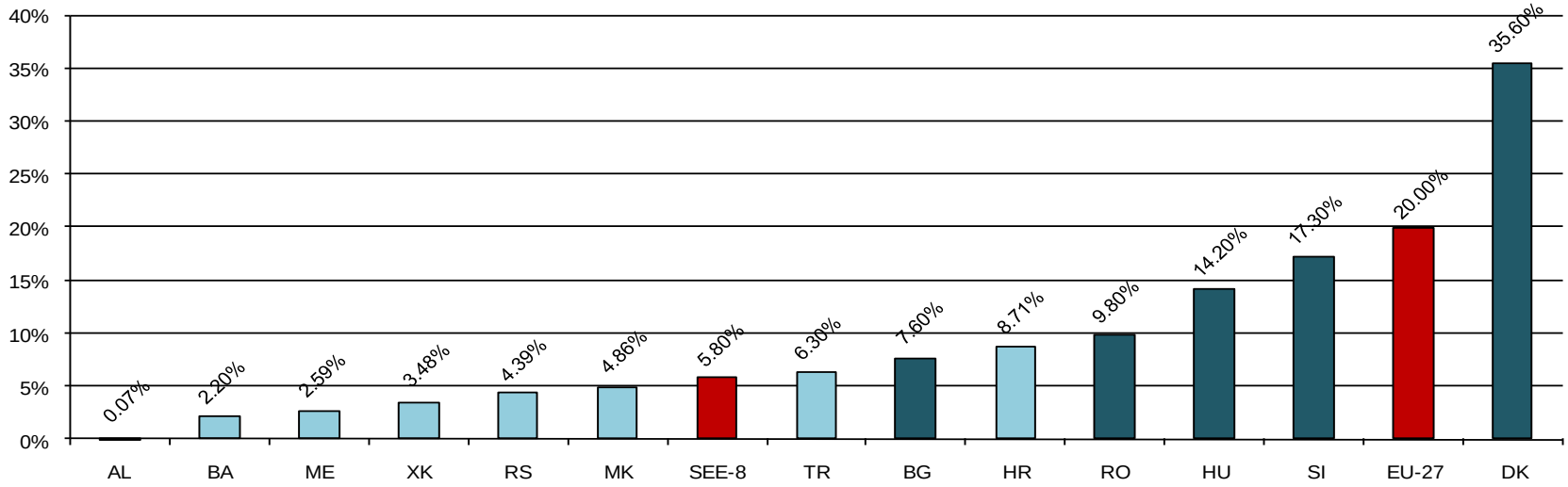
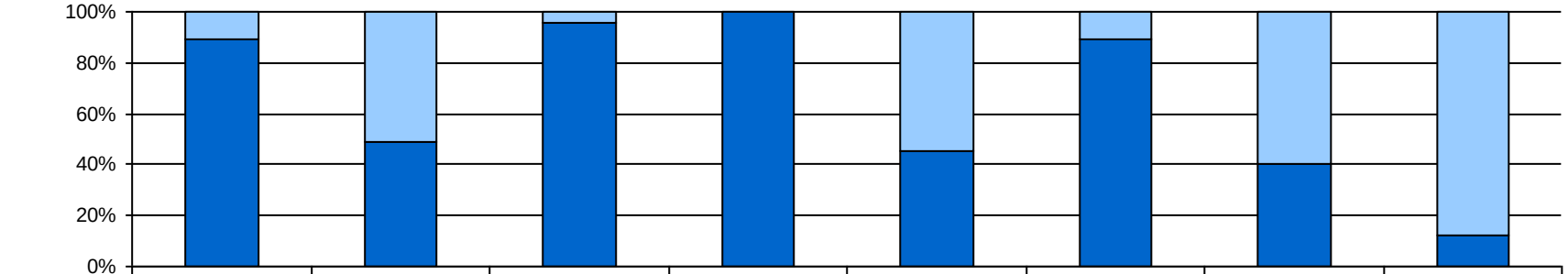


Figure 25 - Broadband penetration rate, January 2008



	HR	MK	TK	AL	BA	ME	RS	XK
Alternative	41,622	50,892	211,898		46,109	1,707	194,664	76,370
Incumbent	345,397	48,214	4,360,466	2,056	38,584	14,428	131,066	10,786

Figure 26 – Fixed retail broadband connections by incumbent and alternative operators

Broadband markets are dominated by fixed incumbent operators in Croatia, Turkey, Albania and Montenegro, where xDSL is the main access technology. A different situation is observed in FYROM, Bosnia and Herzegovina, Serbia and in particularly in Kosovo, where competitors are using alternative infrastructures – cable and to some extent also fixed wireless access networks.

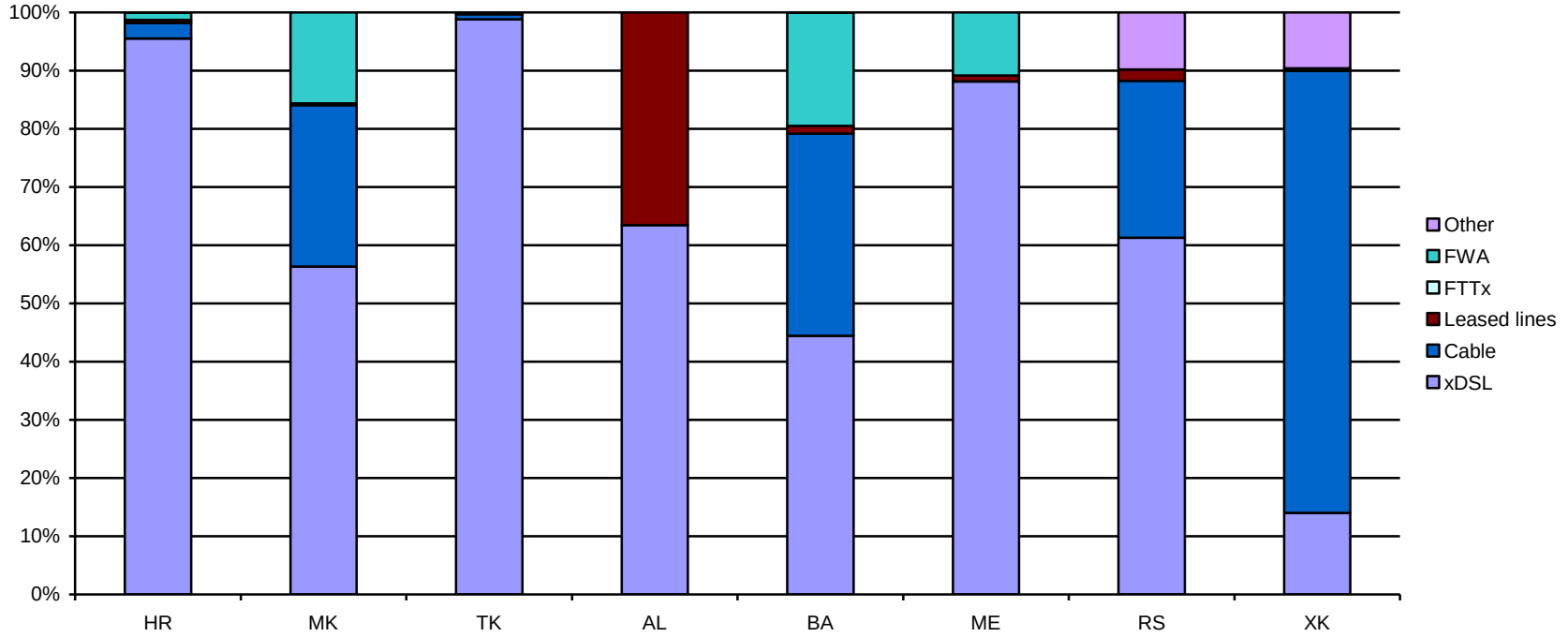


Figure 27 – Fixed retail broadband connections by technology

Table A.25 shows the retail DSL lines supplied by the incumbent operator and by an alternative operator. The lines from alternative operators are then broken down by those supplied using one of three types of wholesale offer from the incumbent operator and those delivered on its own network.

In Croatia, the position of the incumbent operator is extremely strong, with the alternative operators having only 6.7% of the market. Even then, most of those lines are supplied by the incumbent as a wholesale BSA product. By comparison, the position in Serbia is more equitable, with the incumbent having 51%, but then it has 100% of the wholesale market, as it supplied the BSA to the alternative operators.

Country	Incumbent operator's retail xDSL lines	Total number of retail xDSL lines by alternative operators	Breakdown of alternative operators' xDSL lines by the type of access				
			Full LLU access	Shared access	Bitstream access	Resale	Own network
Croatia	344,925	24,833	2,671	355	16,842	-	4,965
FYROM	48,214	7,818	-	-			
Turkey	5,000,000	250,000	-	-	8,206	250,000	-
Albania					-	-	-
Bosnia & Herzegovina	37,635	-	-	-	-	-	-
Montenegro	14,428	-	-	-	-	-	-
Serbia	62,783	58,732	-	-	58,732	-	-
Kosovo	10,720	-	-	-	-	-	-

Table A.25 – Competition in retail xDSL

Notes:
FYROM: The commercial launch of LLU was on May 12, 2008.
Turkey: The incumbent operator Turk Telekom (TT) does not provide DSL service at the retail level but only provide services for resale, including to its own ISP subsidiary, TTNet . TTNet has approximately 5 million subscribers as of July 08. The alternative operators have approximately 250 000 subscribers which have been acquired by resale method. The operators plan to migrate most of their subscribers from resale to BSA method during the next few months. LLU process has been initiated in January 2008 with a few hundred subscribers.
Bosnia & Herzegovina: The NRA adopted its LLU Rule in May 2008.

The figure below show the level of competition in xDSL broadband in Croatia, FYROM, Serbia and Turkey with the type of wholesale access offers used by the alternative operators. These are the four countries where there is an emerging competition in the provision of retail xDSL services on the basis of wholesale offers from the incumbent operators.

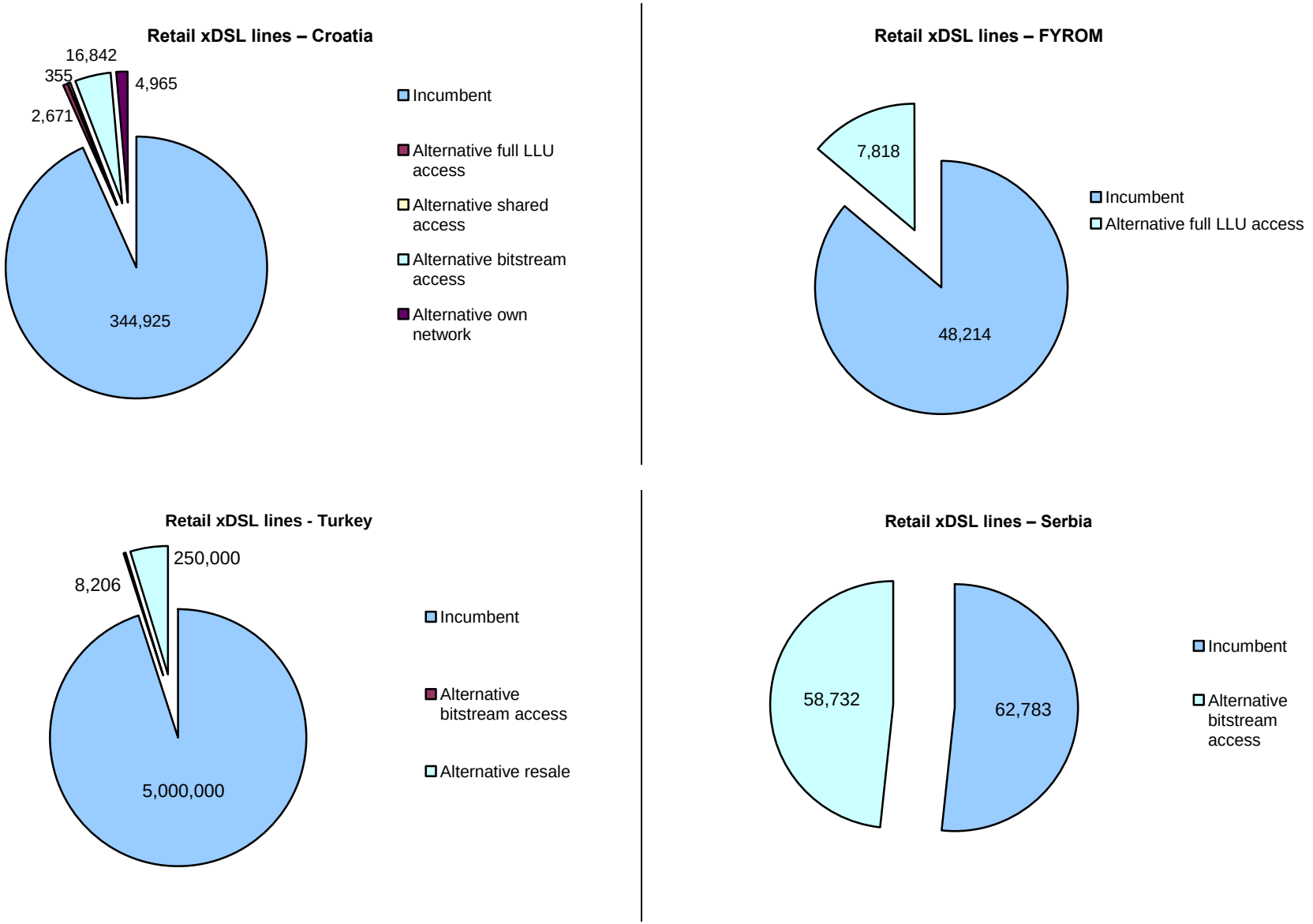


Figure 28 – Competition in retail xDSL in Croatia, FYROM, Serbia and Turkey

Table A.26 shows the highest speeds available for broadband Internet access. Croatia is much the fastest, with offers of 16 Megabits per second to the customer on both DSL and cable, though with non-incumbent operators lagging significantly behind the incumbent operator.

Country	Incumbent operator over DSL		Largest alternative operator over DSL		Cable operator		FWA operator		FTTH operator	
	downstream	upstream	downstream	upstream	downstream	upstream	downstream	upstream	downstream	upstream
Croatia	16 Mbps	768 kbps	6 Mbps	640 kbps	16 Mbps	1 Mbps	3 Mbps	512 kbps	-	-
FYROM	4 Mbps	512 kbps	2 Mbps	512 kbps	4 Mbps	512 kbps	1.5 Mbps	384 kbps	-	-
Turkey	4 Mbps	1 Mbps	4 Mbps	1 Mbps	N/A	N/A	N/A	N/A	N/A	N/A
Albania	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bosnia & Herzegovina	4 Mbps	256 kbps	-	-	4 Mbps	384 kbps	4 Mbps	384 kbps	-	-
Montenegro	2 Mbps	256 kbps	-	-	-	-	2 Mbps	256 kbps	-	-
Serbia	1.5 Mbps	192 kbps	1.5 Mbps	192 kbps	1.5 Mbps	512 kbps	N/A	N/A	N/A	N/A
Kosovo	4 Mbps	512 kbps	-	-	8 Mbps	512 kbps	N/A	N/A	N/A	N/A

Table A.26 - Fastest advertised retail broadband connection

Notes:
FYROM: The providers are, from left to right: Makedonski Telekom, On.Net, Cabletel and Wi-Fi On.Net.

The OECD published data on speeds available from operators across its thirty members for October 2007 (see Figure 29).[18] In order to make the figure readable, the value of 1 Gigabit per second, the fastest incumbent speed in Japan, has been excluded.

[18] http://www.oecd.org/sti/ict/broadband

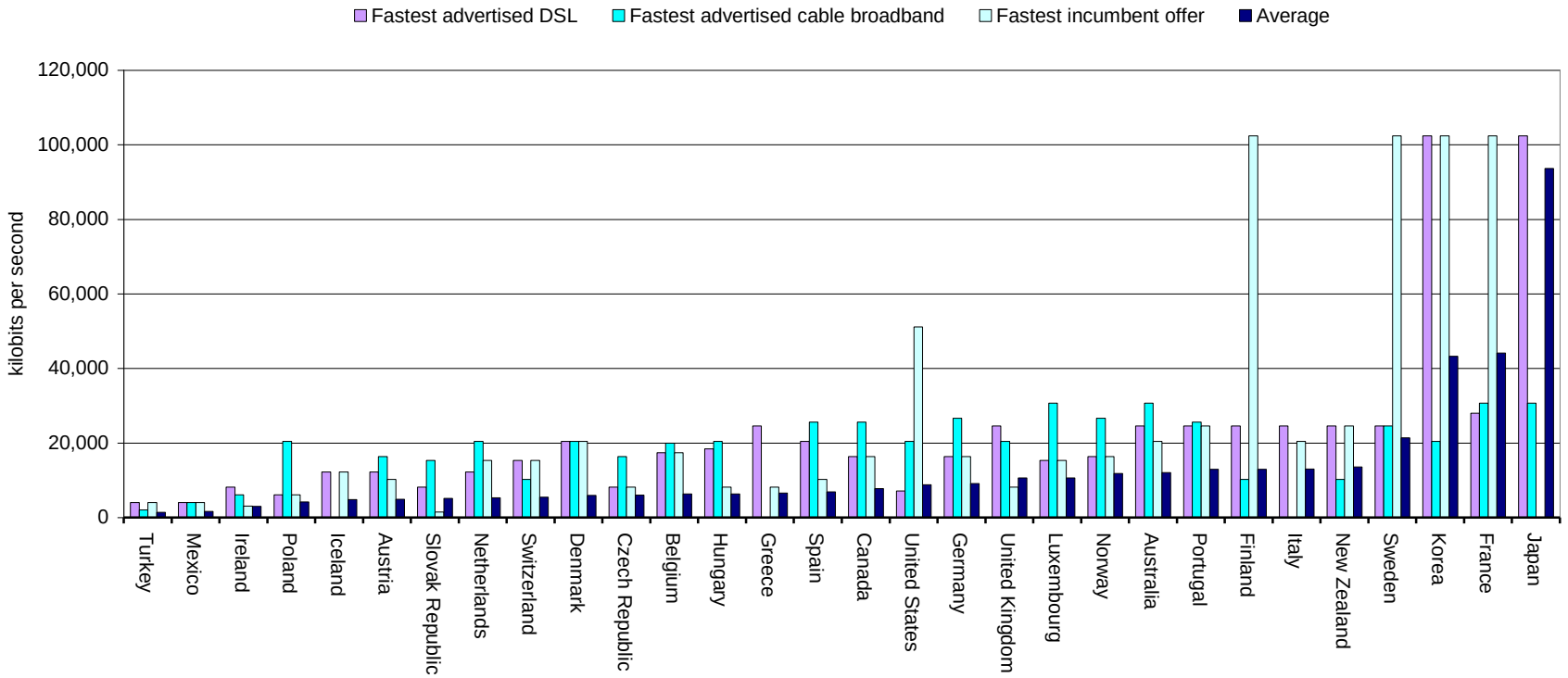


Figure 29 - Average and fastest broadband speeds in the OECD

Turkey has the slowest average speed in the OECD. By comparison, Croatia would be in the middle of the OECD range for DSL, while Serbia would be at the bottom, alongside Slovakia. However, the cable modem speeds are all at the slower end of the range, with 20-30 Megabits per second being typical top speeds.

b) Mobile broadband

As noted in Table A.19 a significant number of assignments of 3G licences have been made and more are likely to issued in the near future.

So far, spectrum licences for provision of 3G/UMTS services have been issued in Croatia, FYROM, Montenegro and Serbia. Further 3G spectrum assignments are expected to take place in the near future in FYROM and Bosnia and Herzegovina. Croatia has already achieved a significant number of 685.000 UMTS subscribers from all the three mobile operators, while Serbia has 250,000 active UMTS subscribers using services of two mobile operators, MTS and Telenor. In FYROM, Cosmofon has launched commercial UMTS services in August 2008. The information about the number of active UMTS subscribers in Montenegro is not available.

c) Broadband wireless access (BWA) – licences

Table A.27 shows the status of BWA spectrum licensing (also referred to as wireless local loop). The table does not include Wi-Fi networks operated in the 2.4 GHz and 5 GHz frequency bands.

Country	Frequency bands (GHz)	Status and number of licences National/Regional	Size of the spectrum block	Period of licence	Restrictions on operators applying for BWA licences (e.g. fixed, mobile, nomadic)
Croatia	3.4-3.6	By April 2008, the NRA had issued 50 regional concessions for BWA in the 3.5 GHz band in 20 Croatian counties and the District of Zagreb. In each of 14 counties 3 concessions have been issued, 4 concessions have been issued for a region of 4 neighbouring counties, 2 concessions have been issued for a region of 2 neighbouring counties and 2 concessions in the District of Zagreb. 11 concession requests are currently being considered. One operator, Novi Net has launched commercial WiMAX services.	2 x 21 MHz or 2 x 14 MHz per licence For each licensing region, there are 3 blocks of 2 x 21 MHz and 1 block of 2 x 14 MHz.	Regional – 8 years County – 8 years	No
FYROM	3.4-3.6	By September 2007, the AEC had issued 20 frequency authorisations for BWA spectrum in the 3.5 GHz band: • 2 (two) of them are for national coverage • 18 (eighteen) are regional: 3 (three) frequency authorisations per each of 6 regions	2 x 14 MHz per each frequency authorisation	10 years	Only fixed services should be provided through BWA.
Turkey	-	-	-	-	-
Albania	-	-	-	-	-
Bosnia & Herzegovina	-	-	-	-	-
Montenegro	3.4-3.6 3.6-3.8	3 national licences issued in April 2007 1 national licence issued in October 2007	2 blocks of 2 x 21 MHz and 1 block of 2 x 14 MHz 2 x 21 MHz	5 years	No
Serbia	3.4-3.6 3.6-3.8	No FWA license issued yet. Licensing process is under consideration. Number of licences has not been decided yet. The available spectrum blocks are defined in Official Gazette No. 17 of Feb. 13, 2008.	Proposed: 3 blocks of 2 x 21 MHz and 1 block of 2 x 24.5 MHz 4 blocks of 2 x 21 MHz and 1 block of 2 x 14 MHz	-	-

Country	Frequency bands (GHz)	Status and number of licences National/Regional	Size of the spectrum block	Period of licence	Restrictions on operators applying for BWA licences (e.g. fixed, mobile, nomadic)
Kosovo	3.4-3.6	No FWA license issued yet. TRA has prepared Consultation on a national strategy for implementing FWA. The consultation was opened for comments from March 5 to April 5, 2008.	Proposed: 4 blocks of 2 x 21 MHz	-	-

Table A.27 - Broadband wireless access (BWA) – licences

Notes:
Montenegro: There are 4 national licences in the 3.4-3.6 GHz awarded (M-Tel, Broadband Montenegro, T-Com Montenegro, ProMonte). The Rulebook on the issuing and general register and special licences (Official Gazette No. 08/2002) describes in details the procedure and way of issuing the licenses. Frequency bands for WLL (FWA) are defined in Frequency Allocation Plan (Official Gazette No. 11/2005).

d) Public Wireless Local Area Networks (WLAN)

Country	Full frequency bands available		Licensing requirements for provision of access to public network	Availability of commercial services	
	2.4 GHz	5 GHz		Number of WiFi providers	Number of registered hotspots
Croatia	Yes	Yes	General authorisation with notification to the NRA	10	-
FYROM	Yes	Yes	General authorisation with notification to the NRA	14	N/A
Turkey	Yes	Yes (indoor only)	General authorisation for provision of Internet services	N/A	N/A
Albania	Yes	Yes	General (class) licence From July 1, 2008 under the new Law on Electronic Communications, general authorisation with notification to the NRA is foreseen	-	N/A
Bosnia & Herzegovina	Yes	No	General (class) licence for provision of Internet services	All providers with a general licence have the right to provide Wi-Fi.	N/A
Montenegro	Yes	Yes	Individual licence for provision of Internet services	2	29 (21+8)
Serbia	Yes	Yes	General authorisation without notification	N/A	659
Kosovo	Yes	Partially	Individual licence	>100	N/A

Table A.28 - Public Wireless Local Area Networks (WLAN/WiFi)

Notes:
FYROM: Currently, the questionnaire used by the NRA does not request the number of hotspots deployed by WiFi providers.
Bosnia & Herzegovina: ISPs have no obligation to register hot spots, but the NRA estimates that there are about 1,000 hotspots.
Kosovo: Part of the 5 GHz spectrum is being used by KFOR, therefore it is only partially available.

6. Control of major operators by foreign investors

This table shows which key foreign strategic investors have a controlling interest in fixed and mobile operators, and ISPs, with the percentage of shares held, where available.

Country	Investor	Operators		
		Fixed	Mobile	ISP
Croatia	Deutsche Telekom	HT- Hrvatske Telekomunikacije - 51%	T-Mobile Hrvatska – 51%	HT- Hrvatske Telekomunikacije - 51% Iskon – 51% (100% owned by HT)
	Tele2 Sweden	-	Tele2 - 93%	-
	Telekom Austria/Mobilkom	VIPNet - 100%	VIPNet - 100%	VIPNet - 100%
FYROM	Deutsche Telekom	Makedonski Telekom – 33.60% (56.67% owned by Magyar Telekom)	T-Mobile – 33.60% (100% owned by Makedonski Telekom)	Makedonski Telekom – 33.60%
	Cosmote (OTE)		Cosmofon – 100%	
	Telekom Austria/Mobilkom		VIP mobile – 100%	
	Telekom Slovenia	On.Net - 83.38%		On.Net - 83.38%
	Akton Slovenia	Akton – 100%		
	Nexcom Telecommunications LLC USA	Nexcom Macedonia - 100%		
Turkey	Oger Telecom	Türk Telekomünikasyon A.Ş - 55%	Avea - 44.55%	
	TeliaSonera		Türkcell – 13.07%	
	Vodafone Group		Vodafone - 100%	
Albania	Cosmote (OTE)		AMC - 85%	
	Vodafone Group		Vodafone Albania - 100%	
	Calik Enerji Telecommunications (consortium of Calik Enerji and Turk Telecom)	Albtelecom – 76%	Eagle Mobile - 76%	
	Telecom Slovenije	Albania Online (AOL) - 75%		Albania Online (AOL) - 75% Albanian Fibre Backbone (AFB) - 66% (through AOL)

Country	Investor	Operators		
		Fixed	Mobile	ISP
Bosnia & Herzegovina	Telekom Srbije	Telekom Srpske - 65%	M:Tel – 65% (100% owned by Telekom Srpske)	Teol – 65% (100% owned by Telekom Srpske)
	HT- Hrvatske Telekomunikacije (Croatia)	HT Mostar - 39.1%	HT Eronet - 44.33%	
	Telecom Slovenije			Aneks – 100%
Montenegro	Deutsche Telekom	T-Com Montenegro – 45.53% (76.53% owned by Magyar Telecom)	T-Mobile Montenegro – 45.53% (76.53% owned by Magyar Telecom)	T-Com Montenegro – 45.53% (76.53% owned by Magyar Telecom)
	Telenor		ProMonte - 100%	
	Telekom Srbije		M-Tel - 90%	
Serbia	OTE	Telekom Srbija - 20%	m:ts - 20%	
	Telenor		Telenor - 100%	
	Telekom Austria/Mobilkom		VIPmobile - 100%	
Kosovo	Telekom Slovenije/Mobitel	IPKO - 75%	IPKO - 75%	IPKO - 75%

Table A.29 - Control of major undertakings by foreign investors

7. Key financial ratios of the fixed incumbent operators

The most commonly used financial ratios in the assessment of the performance of telecommunications operators are:

- Return on Capital Employed (ROCE) - the net profit before interest and taxes divided by the total capital employed;
- Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) margin - EBITDA divided by operating revenues; and
- Earnings Before Interest and Taxes (EBIT) margin – the EBIT divided by operating revenues.

Return on Capital Employed (ROCE) is a measure of the returns that an operator realises from the capital it uses. The ratio can represents the efficiency with which capital is being used to produce revenue. ROCE is used both to compare the performance of different businesses and to assess whether a business generates sufficient returns to pay for its cost of capital.

ROCE compares earnings with capital invested in the company, taking into account sources of financing. Net assets or capital employed are examined rather than total assets. Capital employed can have many definitions, though, in general, it is the capital investment necessary for a business to function. It is commonly represented as the total assets less the current liabilities or fixed assets plus working capital. The main drawback is that it measures return against the book value of assets. As these are depreciated, the ROCE will increase even though cash flow has remained the same. Thus, older businesses with depreciated assets will tend to have higher ROCE than newer, possibly better businesses. In addition, while cash flow is affected by inflation, the book value of assets is not. Consequently, revenues increase with inflation while capital employed generally does not (as the book value of assets is not affected by inflation).

The net income of a company is affected by decisions that the company made in previous years. This is because of the differences between accrual accounting and cash-based accounting. Some purchases can be depreciated or amortized over 20 years or more, with a negative impact on the net income long after the actual financial effects of the purchases have ceased.

The use of Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) does not suffer from this distortion, allowing investors a better understanding of the profitability of the company. Depreciation and amortization are non-cash charges, so that EBITDA is seen as a better proxy than earnings from the cash that flows through a company. Essentially, EBITDA measures the core income that a company earns before it covers its debt payments and pays its income taxes. Investors can also use this measure to compare the profit growth of companies that operate in different tax regimes. EBITDA can also assist lenders when estimating the cash flows that a company will have available to service its debt as it measures the amount of cash that a company has available for interest payments. Finally, EBITDA can provide a more accurate cash flow picture in industries where substantial non-cash depreciation and amortization expenses might otherwise distort earnings.

Earnings before interest and taxes (EBIT), also known as operating income and operating profit, is a term used to describe a company's earnings. To calculate EBIT, basic expenses (e.g., the cost of goods sold, selling and administrative expenses) are subtracted from revenues. Profit is later obtained by subtracting interest and taxes from the result.

Country	Fixed incumbent operator	Key financial ratios and performance indicators for 2007				
		ROCE	EBITDA margin in %	EBIT margin in %	Average number of employees	Number of fixed lines per employee
Croatia	HT- Hrvatske Telekomunikacije	12.4%	42.2%	21.1%	5,485	293
FYROM	Makedonski Telekom	8.6%	41.2%	21.7%	1,723	298
Turkey	Türk Telekomünikasyon	82.0%	52.6%	36.6%	37,035	492
Albania	Albtelecom	- 5.4%	29.8%	-6.9%	2,243	116
Bosnia & Herzegovina	BHT Sarajevo	10.1%	57.6%	42.5%	2,250	250
	Telekom Srpske	13.0%	44.0%	24.0%	2,163	142
	HT Mostar	8.0%	61.0%	11.0%	837	152
Montenegro	T-Com Montenegro	N/A	N/A	N/A	N/A	N/A
Serbia	Telekom Srbija	0.1%	39.8%	20.4%	9,962	300
Kosovo	PTK	25.78%	62.7%	48.96%	2,547	36

Table A.30 - Key financial ratios of the fixed incumbent operators

Notes:
FYROM: Status as at December 31, 2006.
Montenegro: The financial data for 2007 are not available.

The number of fixed lines per employee has long been used as an indicator by the ITU and OECD, as a proxy for the efficiency of a telecommunications operator, on the assumption that the more fixed lines per employee the more efficient the operator. The problem of calculation and interpretation of these numbers has grown in recent years, where it is important to understand how employees are attributed across different parts of the business.

Equally, with activities devolved to or purchased from manufacturers, business process outsourcers, call centres and the like, many of those performing roles for the operator may not be employees. Consequently, great care has to be taken in comparing operators or examining historical trends.

B. National regulatory authorities

This section examines the effectiveness of the institutional framework and environment. The specific issues covered are not only concerned with the NRA, but also address other relevant institutional actors such as the legislative and policy-making bodies, national competition and broadcasting authorities (if different from the NRA) and the national appeal systems. In relation to the NRA, this section seeks to cover the issues associated with the standards of good governance such as independence, accountability, transparency, participation and effectiveness. Additionally, this section also addresses other relevant institutional actors such as the legislative and policy making bodies, national competition and broadcasting authorities.

1. NRA independence

The establishment of an independent regulatory authority is a cornerstone of the EU regulatory framework for electronic communications. Independence remains a critical issue in ensuring predictability and stability in the regulatory environment. Independence involves two elements:

- separation of the NRA from the regulated firms and
- 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). Both issues are addressed in the three following tables.

Article 3 of the Framework Directive requires that regulatory tasks must be carried out by competent bodies that are legally distinct and functionally independent from any organisations providing electronic communications networks and services. Furthermore, where the state retains control of undertakings providing electronic communications networks and services, the activities associated with the state ownership and control must be structurally separate from regulatory functions.

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. Nevertheless, in countries where the state is no longer the owner of any electronic communications undertakings, the subject of regulatory independence is usually a lesser concern.

a) State ownership of telecommunications operators

Table B.1 provides information about state ownership and the control of fixed and mobile telecommunications operators. This includes any ‘golden shares’, i.e., special powers granted to the state by law or by the articles of association of a company that allow it to maintain a special influence in privatised companies. Figure 30 shows the state ownership for those operators present in the region, including parent firms such as the Austrian, German and Saudi incumbent operators.

In the autumn of 2007 the government of Croatia conducted an IPO selling 32.5% of the stock of T-Hrvatski Telekom (T-HT) the incumbent operator, retaining only 9.5%. It had planned to divest no more than 23%, but had been encouraged by the popularity of the sale. Following a sale of shares to present and former T-HT Group employees in June 2008, the State’s share was further reduced to 3.6%. The Croatian War Veteran’s Fund owns a

further 7%, transferred from government holdings in 2005. Deutsche Telekom remains the majority owner of T-HT with 51% which is acquired in two tranches in 1999 and 2001. The remaining 32.5% floats on the Zagreb and London stock exchanges.

In FYROM, the government owns 36.81% ownership in the incumbent Makedonski Telekom A.D. - Skopje (MakTel). A 51% stake is held by Magyar Telekom, a subsidiary of Deutsche Telekom AG. The remaining 12.1% is held by investors.

In April 2008, the government of Turkey conducted an IPO of 15% of the stock of Turk Telecom raising USD 1.9 billions (TRY 2.42 billions), retaining 30%. In 2005, it had previously sold 55% to Saudi Oger Ltd for USD 6.6 billions, the largest ever foreign acquisition of a Turkish company. In January 2008, the Saudi Telecom Company (STC) acquired 35% of Saudi Oger – STC is 70% owned by the Kingdom of Saudi Arabia.

The Turkish Treasury performs the ownership function of the State's remaining shareholding in Türk Telekom, while the Ministry of Transportation is responsible for Türk Telekom's operational activities ("golden share" function). The Turkish government has an interest of 24.3% in Avea Telecommunications, a mobile operator that is 81% owned by Türk Telekom.

Turksat Satellite Communication and Cable TV Operation AS (Turksat) is wholly owned by the government.

In Albania, in June 2007, after a two-year period of negotiations Calik Enerji A.S., a Turkish group, and the Albanian Ministry of Economy, Trade and Energy, signed an agreement for the sale of a 76% stake in the state-owned incumbent operator, Albtelecom. The deal also included Eagle Mobile, the third mobile telephony licensee that was not then operational. The purchaser is a joint venture owned by Calik Energi (80%) and Türk Telekom (20%). The agreement was ratified by the Albanian Parliament on July 19, 2007.

In Bosnia & Herzegovina, there are incumbent operators in each of the three territories. The Federation government of Bosnia and Herzegovina retains 90% of BH Telecom (Sarajevo) and 50.10% of Hrvatske Telekomunikacije (Mostar), with the ownership functions performed by the Federal Ministry of Transport and Communications. The third incumbent operator, Telekom Srpske in the Republika Srbska is fully privatised. In December 2006, the Serbian incumbent operator, Telekom Srbija, won the tender for the privatisation of the 65% holding of Republika Srpska in its incumbent operator Telekom Srpske with a bid of €646 millions. This was completed in July 2007, following the approval of the Competition Council of Bosnia & Herzegovina. Of the remaining shares, 20% float on the national stock exchange, 10% are held by a pension fund and 5% are held by a restitution fund.

Montenegro no longer has state ownership of operators. In March 2005, the government of Montenegro sold its 76.53% shareholding in Crnogorski Telekom to Magyar Telecom (formerly Mátav), a subsidiary of Deutsche Telekom. Private investors now hold 23.47% of the shares which are quoted on the stock exchange.

In Serbia, the government controls 80% of Telekom Srbija through the Public Enterprise of PTT. It also owns a "golden share" with the power to veto all important decisions of the company. The Greek operator OTE owns the remaining 20% of Telekom Srbija, itself partly owned by the Greek state (28%) and by Deutsche Telekom AG (20.15%).

In Kosovo, UNMIK was responsible for the 100% state ownership of PTK, the incumbent operator, through the Kosovo Trust Agency (KTA), a provisional body established by UNMIK regulation 2002/12. Following the unilateral declaration of independence by Kosovo in February 2008 and entry into force of the Constitution of Kosovo on June 15, 2008, the Kosovar government will take over the UNMIK roles. In particular, the KTA will be transformed into a Kosovo Privatisation Agency and function under the umbrella of the Ministry of Economy and Finances. Any privatisation of PTK is, however, unlikely to take place in any near future.

	Name of operator	State shareholding	Golden share	Government unit responsible for ownership functions
Croatia	HT - Hrvatske Telekomunikacije d.d.	3.6%		Not defined
FYROM	Makedonski Telekom A.D. - Skopje	36.81%	Yes	Ministry of Finance
Turkey	Türk Telekomünikasyon A.Ş. Avea	30.0% 24.3%	Yes	Treasury is responsible for ownership and golden share functions Ministry of Transport is responsible for operational functions
	Turksat	100.0%		Treasury is responsible for ownership functions Ministry of Transport is responsible for operational functions
Albania	Albtelecom sh.a. Eagle Mobile	24.0% 24.0%		Ministry of Economy, Trade and Energy
	AMC sh.a.	12.6%		Ministry of Economy, Trade and Energy
Bosnia & Herzegovina	BH Telecom d.d. Sarajevo	90.0%		Entity government in Federation of B&H
	Telekom Srpske a.d. Banja Luka	0.0%		-
	Hrvatske Telekomunikacije d.o.o. Mostar	50.1%		Entity government in Federation of B&H
Montenegro	-	-		-
Serbia	Telekom Srbija a.d.	80.0%	Yes	Ministry for Telecommunication and Information Society
Kosovo	PTK (Post and Telecommunications Enterprise of Kosovo)	100.0%		Kosovo Privatisation Agency (Ministry of Economy and Finance) and Ministry of Transport and Communications

Table B.1 - State ownership and control of telecommunications operators

Notes:
Croatia:
FYROM: Starting from May 1, 2008 the fixed incumbent operator A.D. Makedonski Telekomunikacii, changed its name to Makedonski Telekom A.D. Skopje.
Turkey: Türk Telecom owns 81% of Avea, a leading mobile operator.
Bosnia & Herzegovina: Telekom Srpske of the Republika Srbska is fully privatised. In December 2006, Telekom Srbija, won the tender for the privatisation of the state-controlled 65% of the Republika Srpska‟s incumbent telecommunications operator Telekom Srpske. 20% of the remaining shares are traded on the national stock exchange, 10% is held by a pension fund and 5% is held by a restitution fund.
Montenegro: The Government sold its controlling share (51.12%) in the incumbent operator to Magyar Telecom (former Mátav) in March 2005. In 2001, the former Telecom Montenegro (at that time a state owned enterprise) sold its share (about 9%) in ProMonte to the majority shareholders.
Serbia: Members of the Managing Board are appointed by the Government.

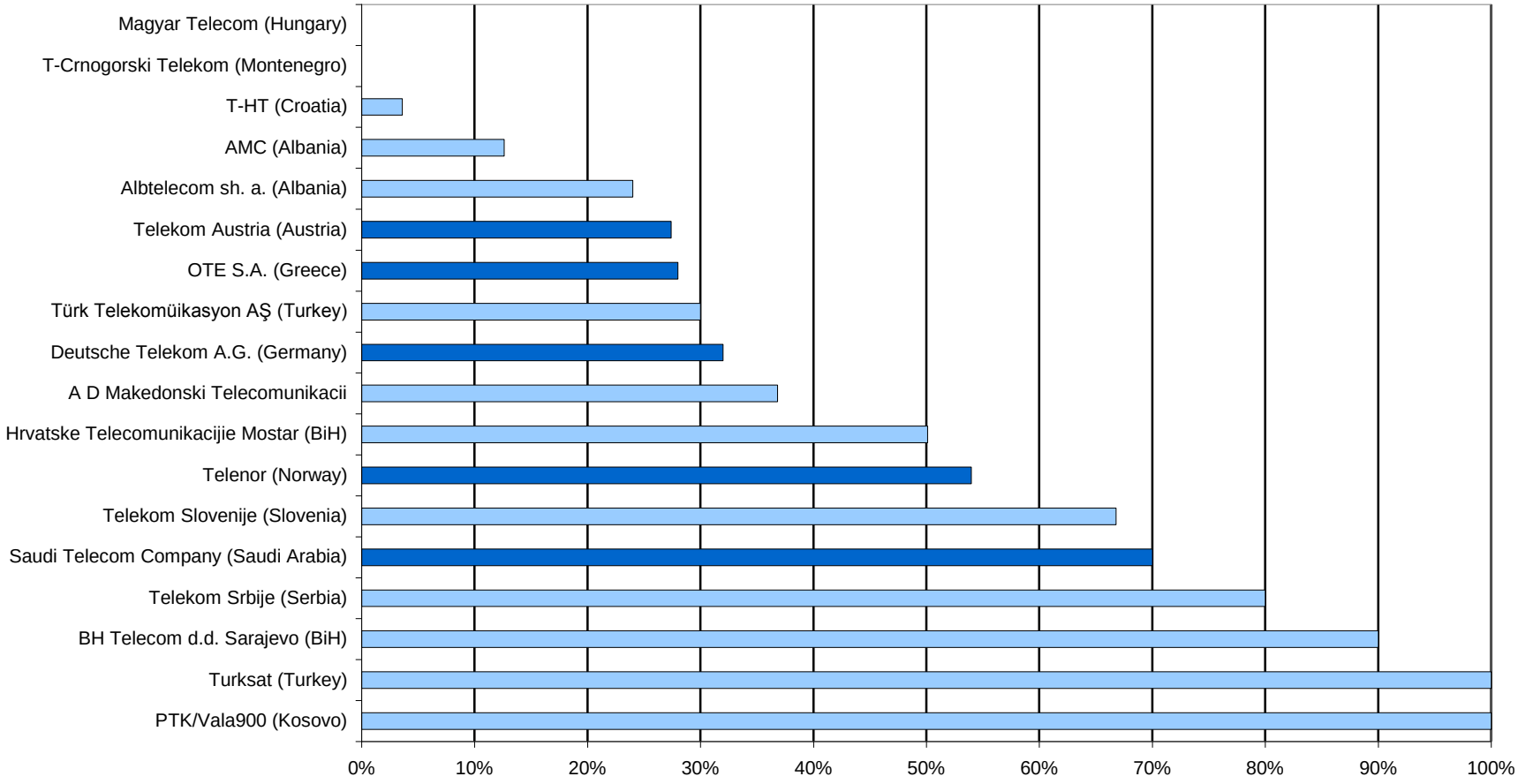


Figure 30 - State ownership of telecommunications operators

b) Responsibilities of the NRA and policy-making bodies

Political influence is the most direct means of influencing the NRA. The mere possibility of political intervention may put the regulator 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. The issue of political independence can be assessed, *inter alia*, on the basis of: the extent to which the NRA discretion has been limited by law, the potential and actual extent of political intervention, the rules for appointment and dismissal of the NRA management and its duration of office.

The table below addresses:

- the division of the key responsibilities between the NRA and the ministry (or other government body) responsible for the electronic communications policy;
- powers of the Ministry or the government to give binding directions to the NRA; and
- whether certain NRA decisions are subject to prior or subsequent approval by the ministry or by another governmental institution.

Country	NRA and its responsibilities	Ministry (government) and its responsibilities	Ministry (government) powers to give instructions to NRA? Government intervention required for adopting certain decisions?
Croatia	Article 12, Electronic Communications Act of June 19, 2008 The Croatian Post and Electronic Communications Agency responsibilities include: • Adoption of implementing legislation • Monitoring and regulation of prices and general business terms and conditions of operators • Market analysis, designation of undertakings with SMP an imposition of regulatory obligations • Designation of universal service providers • Adoption of the Numbering Plan, Addressing Plan and drafting the Frequency Allocation Table • Issuing individual spectrum licences • Dispute resolution involving operators, service providers, end users • *Expert* supervision over application of the Act and regulations adopted under the Act *(perfo*rmed by the NRA's supervisors)	Article 4, Electronic Communications Act of June 19, 2008 Government: • Adopts strategies, studies, guidelines and programmes establishing general principles and policy objectives for the development of electronic communications The Ministry of the Sea, Transport and Infrastructure: • Drafts proposals for strategies, studies, guidelines and policy objectives • Coordinates and supervises the work of all authorities responsible for implementation of the policy objectives • Prepares and adopts implementing legislation, including the ordinance on the allocation of spectrum and the Frequency Allocation Table • Carries out *inspection* supervision in electronic communications (performed by the Ministry inspectors)	Article 4, Electronic Communications Act of June 19, 2008 The Ministry • may give guidelines and instructions to the NRA concerning the implementation of the established principles and policy objectives for the development of electronic communications; • may not influence the adoption of the NRA decisions in individual cases The administrative supervision of the NRA by the Ministry which established by Article 3(6) of the previous Telecommunications Act of 2003 was removed from the new Electronic Communications Act of 2008. Article 18(4) of the new Act states that final decisions and other administrative acts of the NRA may not be annulled or repealed on the basis of supervision rights, or repealed under emergency procedures, or be made null and void by a competent body.

Country	NRA and its responsibilities	Ministry (government) and its responsibilities	Ministry (government) powers to give instructions to NRA? Government intervention required for adopting certain decisions?
FYROM	Article 9, Law on Electronic Communications of 2005 Agency for Electronic Communications (AEC) is responsible for: • adoption and implementation of the secondary legislation • spectrum management, including allocation and assignment of frequencies • number management • market analysis; designation of undertakings with SMP and imposition of regulatory obligations • approval of reference interconnection and unbundling offers • regulation of wholesale and retail prices • universal service: designation of providers and management of the US fund • dispute resolution in commercial disputes • consumer complaints	Government: Approves the minimum one-off fee for frequency authorisations issued subject to tender procedures Article 6, Law on Electronic Communications of 2005 The Ministry for transport and communications: • prepares the National Strategy for development of electronic communications and information technology • prepares legislation for electronic communications	Article 7, Law on Electronic Communications of 2005 The NRA, *"in its work and in taking the decisions within the scope of its competencies is independent and not subordinated to any state body or other public legal person or trade company engaged in operating in the field of electronic communications and is impartial towards them."* Under Article 63, Law on Electronic Communications of 2005, the Government approves the minimum one-off fee for frequency authorisations issued subject to tender procedures Under Article 35, the Ministry approves the universal service provider selected by the NRA in a public tender procedure.
Turkey	Law No 4502 of January 27, 2000 Telecommunications Authority is responsible for: • adoption of the secondary legislation (ordinances, communiqués and decisions of the Board) • price control of retail and wholesale tariffs • adoption of national numbering and spectrum plans • market analysis, designation of undertakings with SMP and imposition of regulatory obligations • issuing concessions and licences and executing public tender procedures • inspection • arbitration	The Ministry of Transport • develops the state policies and strategies for the telecommunications sector • prepares legislation for telecommunications • develops and implements the universal service framework • on the NRA proposal defines tender procedures for issuing concessions and Type 1 licences for telecommunications services and infrastructures and submits to the approval by the Council of Ministers	Article 14 of Law No 4502 (amending article 5 of Law No. 2813) states that the NRA is an *"independent budget entity having public legal personality and administrative and financial autonomy"* However, issuing of Type 1 licences and implementation of universal service require government intervention

Country	NRA and its responsibilities	Ministry (government) and its responsibilities	Ministry (government) powers to give instructions to NRA? Government intervention required for adopting certain decisions?
Albania	Article 8, Law on Electronic Communications (Law No. 9918 of May 19, 2008) Authority of Electronic and Postal Communications is responsible for: • Regulation of access and interconnection • Approval of reference offers for access and interconnection • Market analysis, designation of undertakings with SMP and imposition of regulatory obligations • Registration of notified undertakings • Assignment of frequencies for electronic communications services • Preparing the National Numbering Plan and assignment of numbers • Price control of wholesale and retail tariffs • Management of the universal service fund and carrying out of the designation procedures of the universal service providers • Management of national top level domain names	Article 5, Law on Electronic Communications (Law No. 9918 of May 19, 2008) Directorate of Posts and Telecommunications within the Ministry of Public Affairs, Transport and Telecommunications is responsible for: • preparing and presenting for the approval by the Council of Ministers policies concerning electronic communications • drafting relevant primary and secondary legislation • preparing the National Radio Frequency Plan • approval of tender procedures for frequency assignment and the designation of universal service providers, based on proposals by the NRA	Under the previous Law on Telecommunications of 2000, the Council of Ministers or Minister's approval was required for: • Tariff regulation methodology that was proposed by the NRA to the Ministry and approved by the Council of Ministers • Issuing of Class I national licences by the NRA, required the decision on the number of licences and format of the tender procedures to be adopted by the Council of Ministers and the orders on the start of the procedures and approval of the winners to be adopted by the Minister • Minister was responsible for issuing implementing regulations on interconnection agreements, CS/CPS and number portability, interoperability of networks, facility sharing, numbering Under the new Law on Electronic Communications, the above decisions fall within the scope of the NRA competencies. Article 6, Law on Electronic Communications provides that the NRA '*in its work and decision-making within its competencies is independent.*'
Bosnia & Herzegovina	Article 3, Law on Communications of 2002 Regulatory Authority for Communications (RAK) is responsible for: • regulating broadcasting and public telecommunications networks and services • licensing • tariffs regulations • interconnection • defining the basic conditions for the provision of common national and international communications facilities • planning, co-coordinating, allocating and assigning the use of the radio frequency spectrum • management of the numbering plan and assignment of numbering resources to telecommunications operators.	The Council of Ministers is responsible for: • Developing and adopting policy in line with the existing legislation • Defining the scope of the universal service, designating the providers and establishing the funding mechanism, based on proposals of the NRA • Determining the representation of Bosnia and Herzegovina in international forums concerned with communications • The Ministry performs the coordination of functions which are the Council of Ministers responsibility.	In order to carry out the constitutional provisions in respect of communications the Council of Ministers (Government) shall be responsible for policy-making, and the Agency shall be responsible for the regulation. As policy maker, the Council of Ministers issues obligatory political guidelines, but without influence in decision making process.

Country	NRA and its responsibilities	Ministry (government) and its responsibilities	Ministry (government) powers to give instructions to NRA? Government intervention required for adopting certain decisions?
Montenegro	Article 8, Law on Electronic Communications of July 29, 2008 Agency for Electronic Communications and Postal services: • prepares draft bylaws and regulations that are adopted by the Ministry • adopts rules and procedures for the implementation of the Law and bylaws • prepares draft national radio frequency bands allocation plan that is adopted by the Government • adopts the national addressing and numbering plans • organises tender procedures and issues authorisations to use frequencies, numbers and addresses • presents for the government approval the amount of fees to be paid by authorised operators and service providers, calculated based on the methodology developed by the Ministry • performs market analyses, designation of providers with SMP and imposition of regulatory obligations • dispute settlement • designation of the universal service provider and management of the universal service fund • *expert* supervision over activities over activities of registered operators	Article 4, Law on Electronic Communications of July 29, 2008 The Government: • adopts development strategy on decade bases • adopts the national radio frequency bands allocation plan • adopts the NRA statute, approves its annual action plan and financial plan • adopts yearly activity report by the NRA, including the financial report • periodically determines the scope of universal service • determines conditions for utilizing networks for electronic communications in state of emergency. Article 5, Law on Electronic Communications of July 29, 2008 Ministry of Maritime affairs, Transport and Telecommunications: • develops legislation and adopts bylaws and regulations under the Law on Electronic Communications • drafts sector development strategy • approves QoS requirements for the universal service on the NRA proposal • determines methodology to be applied by the NRA when setting authorization fees and fees for use of limited resources • authorizes institutions responsible for certification of R&TTE equipment • performs *inspection* supervision of the implementation of the Law and secondary legislation adopted under the Law	Article 130, Law on Electronic Communications of July 29, 2008 authorises the Ministry to perform "supervision of legality and purposefulness" of the NRA activities. A commentary to this article clarifies that this supervisory function should not be applied to the regulatory decisions and regulatory rules adopted by the NRA, where the NRA must be independent. The new Law on Electronic Communications the separation of legislative functions which are now been completely transferred to the Ministry from strictly regulatory activities performed by the NRA. Under the previous Telecommunications Law (Official Gazette of the Republic of Montenegro, No. 59/2000), the NRA had more powers to adopt secondary legislation, independently from the Ministry.

Country	NRA and its responsibilities	Ministry (government) and its responsibilities	Ministry (government) powers to give instructions to NRA? Government intervention required for adopting certain decisions?
Serbia	Article 9, Telecommunication Law RATEL's responsibilities include: • adoption of technical regulations • market analysis and designation of operators with SMP • licensing and authorisation of telecommunications network operators and service providers, including the conducting of public tenders for individual licenses in accordance with the Ministry's resolution on the number, timing and minimum conditions for granting such licenses • settlement of disputes between telecommunications operators and between operators and end users • drafting proposals for the Radio Frequency Allocation Plan and the Radio Frequency Assignment Plan • price control of undertakings with SMP • assignment of radio frequencies • adopting the Numbering Plan and assigning numbers • managing the universal service fund.	Article 5, Telecommunication Law Government: • Defines the policy and strategy of telecommunications development on proposal of the Ministry • adopts the Radio Frequency Bands Allocation Plan. Article 6, Telecommunication Law The Ministry of telecommunications and information society is authorized to: • supervise the implementation of the Law and regulations adopted on the basis of this Law • prepare a proposal of the strategy for telecommunications development • prepare a proposal of the Radio Frequency Bands Allocation Plan and adopt the Radio Frequency Assignment Plan based on the NRA's proposal • decide on the number and timing of individual licenses to be granted for public telecommunications networks or services through a public tender procedure, including the minimum amount of a one-off licence fee • define the scope of universal services based on the proposal made by RATEL	Under Article 7, Telecommunication Law, the NRA is defined as *"an autonomous legal entity, functionally independent of and not subordinated to any government authority, as well as of any organization and person engaged in operating telecommunications networks and equipment or providing services."* The Ministry, however, performs a supervisory function in over the activities of the NRA. Article 56, par 2 of the Law on State Administration provides that if the NRA fails, despite multiple warnings, to start performing business or start performing it properly or timely, the Ministry as a supervisory body of the state administration may take over its competencies but for a period no longer than 120 days. Under Article 57, par 1 of the Law on State Administration, the NRA is obliged, before publication of its proposed regulation, to get the opinion from the Ministry of constitutionality and legality of the regulation. According to a clarification provided by the Government in June 2008, the NRA is, however, *"under no obligation to act along the proposal of the Ministry."*

Country	NRA and its responsibilities	Ministry (government) and its responsibilities	Ministry (government) powers to give instructions to NRA? Government intervention required for adopting certain decisions?
Kosovo	Under Telecommunications Law No. 2003/16, TRA is authorised to: • issue licenses and authorizations for provision of telecommunications services • implement the policies of the Ministry pursuant to the Law on Telecommunications, and other implementing legislation • issue regulations and instruction for the implementation of the present Law • assign rights to use spectrum resources and numbers • issue price regulations • adopt a numbering plan and assign numbers • prepare a spectrum resource plan subject to Assembly review and approval • perform market analysis and designate operators with SMP • define the scope, requirements and funding mechanisms of the universal service on recommendation by the Ministry.	The Ministry of Transport and Communications • develops policies for the Telecommunication sector, including the development of legislation • supervises the work of PTK in cooperation with the Privatization Agency. The Assembly is responsible for: • review and approval of the spectrum resource plan • approval of the NRA budget.	No The new Law No. 03/L-085 of June 13, 2008 amending the Law on Telecommunications No 2003/16 deletes references to UNMIK, its Frequency Management Office (FMO) and SRSG (Special Representative of the Secretary General). The new law establishes the NRA as the sole authority to allocate radio frequency spectrum, subject to "Assembly review and approval in written" of the TRA spectrum resource plan. The new law further ensures the NRA administrative independence by removing the provisions in the Telecommunications Law that enabled the Ministry to issue instructions to the NRA to amend a licence.

Table B.2 - The division of responsibilities between the Ministry and the NRA

2. Appointment and dismissal of the directors of the NRA

The rules and procedures for appointment and dismissal of the NRA management are covered in the table below, addressing:

- eligibility criteria for the NRA management (e.g. professional background, restrictions on interest in any of the market participants);
- government bodies involved in the appointment of the NRA management and specific procedures;
- duration in office of the NRA directors; and
- grounds and procedures for removal of the NRA management.

Country	Rules and procedures for appointment and dismissal	Eligibility criteria for appointment
Croatia	• The NRA is governed by the Council consisting of seven members, including a Chairman and a Deputy Chairman, who are full-time employees of the NRA during their term of office. • The Council members are appointed and dismissed by Parliament upon proposal of the Government. • The appointment is for a period of five years with the possibility of reappointment. • The NRA's administrative service performing expert, administrative and technical tasks is managed by the Director appointed by the NRA Council for a period of four years with the possibility of reappointment. • Dismissal in the cases of: resignation, provision of false information at the time of the appointment, serious professional misconduct, inability to perform professional duties for more than 6 months in a row, permanent loss of ability to perform professional duties, conviction of criminal offence, failure to fulfil objectives and tasks defined in the NRA annual work programme, conflict of interest.	The members of the NRA Council must fulfil the following criteria: • to be Croatian citizen domiciled in the Republic of Croatia • with university education or specialised university education in electronic communications, postal services, law or economics • adequate work experience • active knowledge of at least one foreign language (English, French or German) • at least two members must have a completed an undergraduate course or a specialised undergraduate course in law, and two in economics • five members must have at least five years of work experience in the electronic communications sector, and two members of must have at least five years of work experience in the postal services sector • may not be state officials, persons on positions in bodies of political parties, units of local and regional self-government or unions or persons employed, having influence or performing other tasks in electronic communications and postal undertakings • may not be owners, stockholders or shareholders in regulated entities or perform other tasks that may result in conflict of interest.
FYROM	• The NRA is governed by a Commission that consists of five members, including the President and Vice President. • The President and the members of the Commission are appointed and dismissed by Parliament. • The NRA'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 term of office of the Commission members and its Director is five years, with a possible reappointment for an additional consecutive term of office. • Dismissal of the Commission members prior to the expiration of the term of office in the cases of: own request, sentence of longer than six months for a criminal act, absence from three consecutive meetings or five meetings during any 12 months period during the term of office, failure to submit the NRA annual report to the Assembly.	• The President and members of the NRA Commission may not be: deputies of the Assembly, members of the Government, perform duties in bodies of the political parties, members of managing and supervisory bodies in public companies, or members of any other form of association of legal and natural persons that might lead to a conflict of interests and may not hold equity directly or indirectly in any undertaking performing activities in electronic communications sector. • The Director appointed through a public competition procedure must be: a citizen of the Republic of Macedonia and a holder of university degree in the field of science, law or economics with professional experience of more than 5 years and have organizational and managing abilities.
Turkey	• The decision making body of the NRA is the Telecommunications Board that consists of seven members, including a Chairman and a Vice Chairman. • The Chairman is also responsible for the general management and representation of the NRA. • Board members are appointed for a period of five years by the Council of Ministers. Two of them are nominated by operators having at least 10%	• University degree in relevant fields • Ten years of experience in public or private sector • Eligibility for public service • No connections to political parties • No conflict of interest

Country	Rules and procedures for appointment and dismissal	Eligibility criteria for appointment
	market share, one member – by the Ministry of Industry, one – by Trade and the Union of Chambers and Industry, and three members – by the Ministry of Transport. • Appointments require approval by the President of the Republic. • The Board members can only be dismissed before expiration of a term by the Council of Ministers for inability to work due to serious illness, professional misconduct or criminal offences.	
Albania	• The NRA is governed by the Governing Council composed of five members appointed for a 5 year office term, by the Assembly of the Republic of Albania, on the proposal of the Council of Ministers, and having the right for no more than one office term. • The Assembly appoints one of the members of the Governing Council as the Chairman, who also acts as the Executive Director of the NRA. • Dismissal in the case of physical or mental incapability, conviction for a criminal act, appointment as a Member of Parliament or a local government body, inability to exercise professional duties for more than 6 months.	• Member of the Governing Council shall be graduates and qualified experts, with a minimum of 7 years experience and shall represent the sector of the electronic communications, postal, economic, and juridical. • Upon appointment shall resign from any official positions or functions, give up any for-profit activity, as well as to sell and liquidate any financial interest in undertakings active in electronic communications or postal sectors. • May not have family ties to the Council of Ministers, have been convicted for a criminal act or excluded by law from holding public positions.
Bosnia & Herzegovina	• Strategic and policy issues at the NRA are decided by the Council of seven (7) members nominated by the Council of Ministers and appointed by Parliament. Parliament shall accept or reject these nominations within thirty (30) days after submission of the nominations. • The NRA is headed by the Director General, who is elected by the Council of the Agency and approved by the Council of Ministers. He is responsible for all regulatory and administrative functions and manages day to day operations. • The Parliament has the sole authority to dismiss the members of the Council before completion of their mandate. • The Council of Ministers has the sole authority to dismiss the Director General before completion of the mandate. • Both, members of the RAK Council and the Director General have a term of 4 years and can be re-appointed only once. • Dismissal before the end of the mandate due to serious illness, conviction of a serious crime, a conflict of interest, resignation, failure to participate in three or more consecutive meetings.	• Members of the Council of the NRA must demonstrate exceptional legal, economic, technical or other relevant expertise and experience for the fields of telecommunications and/or broadcasting . • The Director General must have relevant experience in the fields of telecommunications and/or broadcasting and proven management skills. • No conflict of interest.
Montenegro	• Under the Telecommunications Law of 2000 (Official Gazette, No. 59/2000), the NRA has been managed by the Director appointed by the Government for a period of four years, with a Deputy Director appointed on the same conditions. Director and his Deputy could not be appointed more than two successive terms. • The new Law on Electronic Communications of July 29, 2008 introduces a new management structure, consisting of the Council and the Executive Director.	Under the Law on Electronic Communications of July 29, 2008 • President of the Council, its members and the Executive Director shall hold Montenegrin citizenship and have permanent residence in Montenegro, and have higher education in telecommunications, electronics, economy or law, at least 5 years of experience, covering positions in the field of telecommunications and active English language skills. • They may not hold equity nor have other interests in any organisation active

Country	Rules and procedures for appointment and dismissal	Eligibility criteria for appointment
	• The Council of the NRA shall have the President, engaged as professional employee of the NRA, and 4 members of the Council who could be part time or professionally engaged employees of the NRA. • The Executive Director shall be engaged as professional full-time employee. • President of the Council and members of the Council shall be appointed by the Government upon the Ministry proposal to a term of office of 5 years. The Executive Director shall be appointed by the Council, for a term of office of 4 years. They shall not hold office for more than two consecutive terms. • Dismissal before the expiration of the term of office due to resignation, conviction of a crime, permanent loss of ability to perform duties, conduct damaging to the reputation of the independence of the NRA.	in the field of electronic communications. • They may not be Members of Parliament or Deputies, officials or members of political parties' bodies.
Serbia	• The NRA is managed by the Managing Board that consists of a Chairman and four Members who are appointed and relieved from office 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 appoints the Executive Director of the Agency who is responsible for the administration and operational issues. • Dismissal before the expiration of the term of office due to resignation, illness causing the loss of the ability to perform professional duties for longer than 6 months, conviction of a crime or corruption, provision of incorrect data at the time of appointment, conflict of interest.	• Managing Board members must demonstrate professional knowledge and experience relevant to the activities falling within the responsibility of the NRA, in particular in the field of engineering, economics and law, and the proposal must include at least two candidates from the field of engineering and at least one candidate from the field of economics and one from the field of law.
Kosovo	• The NRA is managed by the Board that consists of five Members who are appointed and relieved from office by the National Assembly, at the proposal of the Government with the recommendation from the Minister of Transport and Communications. • Their term of office is five years with a possibility of a reappointment for one more consecutive term. The Minister of Transport and Communications, acting in consultation with the Prime Minister designates one member of the Board to be the Chairman, who is also responsible for the administration and operational issues. • Upon a two-third vote of the members, the Board shall remove a Member on the ground of professional incompetence, misconduct or a conflict of interest. Dismissal is subject to approval by the Assembly.	• Members of the Board shall be university graduates with specialized knowledge in the area of politics, frequencies, interconnections, tariffs, law, economics, standardizations, or have at least ten (10) years experience in the telecommunications sector. • A member shall, if applicable, resign from public or elected office or other employment and shall not engage in any other commercial activity regardless of whether the Member receives compensation for such activity. In addition, a Member shall be required to terminate any business activities and financial interests in enterprises that are under the jurisdiction of the Board, and otherwise comply with the provisions of the NRA's standards of conduct.

Table B.3 - Appointment and dismissal of the directors of the NRA

Notes:
Croatia: The new Electronic Communications Act of June 19, 2008 establishes the Croatian Post and Electronic Communications Agency (HAKOM) as a new regulatory authority that takes over the tasks and responsibilities of the previous regulators for telecommunications (the Croatian Telecommunications Agency, HAT) and for postal services (the Postal Services Council). Members of the Council of the HAT and the Chairman of the Postal Services Council

will continue as Members of the Council of HAKOM until the expiry of their term of office. The former HAT Council Chairman will be the HAKOM Council Chairman and the former Postal Services Council Chairman will be HAKOM Council Deputy Chairman.

Albania: Article 138 of the new Law on Electronic Communications No. 9918 of May 19, 2008 states that the present NRA, TRE, will continue its activities as the Authority of Electronic and Postal Communications (AEPC), and TRE Governing Council Members will continue as AEPC Governing Council Members until the expiry of their term of office.

Montenegro: Article 142 of the new Law on Electronic Communications adopted on July 29, 2008 states that the present NRA,, the Agency for telecommunications and postal services will continue its activities as the Agency for electronic communications and postal services. The Government is required to appoint the president of the Agency Council and its Members within 60 days from the entry into force of the new Law. Within 30 days from the appointment of the Council, its Members will be required to appoint the Executive Director.

3. NRA budget and sources of financing

The NRA financial and operational means play an important role in ensuring a stable and predictable regulatory environment. Therefore, 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 EU regulatory framework requires that the NRAs are self-financing and that their fees only cover their administrative costs, except when allocating limited resources. Furthermore, under the EU 2002 framework, the general authorisation regime applies to all activities in the electronic communications sector with the exception of those requiring the use of limited resources. Therefore, the NRA fees associated with authorisations, such as registration fees, are set a modest level.

The table below presents information on the operational budgets of the NRAs in 2007 and 2008, as well as the sources of their financing. In this table, the term “authorisation fees” is used to describe fees related to the issue of all types of authorisations, including individual licences.

Country	Operational budget € (000s)		Sources of financing				
	2007	2008	Operator revenue-based fees	One-off authorisation/ notification fees	Spectrum	Numbers	Others
Croatia	9,376	11,055	36%	-	18%	43%	3%
FYROM	7,420	7,281	11%	-	70.92%	11.45%	6.63%
Turkey	48,911	N/A	6%	24%	61%	-	9%
Albania	1,572	1,928	-	30.8%	68.8%	0.2%	0.2%
Bosnia & Herzegovina	3,706	4,218	-	63.21%	6.18%	30.14%	0.47%
Montenegro	6,649	3,000	-	98%	2%	-	-
Serbia	8,241	8,984	-	55%	40%	-	5%
Kosovo	519	2,242	-	99.14%	-	-	0.86%

Table B.4 - Operational budget of the NRA and its sources of financing

Notes:

FYROM: At the beginning of 2008, the Commission of the NRA adopted a decision to decrease the fees for frequencies, numbers and market supervision by 30%.

Albania: The new Law on Electronic Communications No. 9918 of May 19, 2008 changes the sources of the NRA funding from License and Frequency levies and fees to an annual administrative fee ('annual income contribution to AECP'). Frequency and numbering fees will be approved by the Council of Ministers on the NRA proposal, collected by the NRA and transferred to the state budget.

Montenegro: The revenue of the NRA for 2007 was about €27,372 millions, mostly comprised by one-off fees for 2G/3G and WiMAX licences. The NRA also had income from permits to use frequencies amounting to some 1-2% of annual income. Of this amount, €14,960 were transferred to the state budget. The exact amount of the NRA budget in 2007 is still not known, because the financial statements for fiscal year 2007 have not been published. The operational budget for 2008 is given as an estimate.

4. NRA staffing

The table below shows:

- the total NRA staff in 2008
- sub-divided into the number of qualified employees dealing with
  - general regulatory issues;
  - frequency monitoring tasks; and
- legal or financial restrictions on the NRA's ability to set the level of remuneration of its staff (e.g., salaries tied to civil service rates).

Country	Total	Handling electronic communications regulatory tasks	Handling frequency monitoring tasks	Restrictions on the NRA's ability to set salary levels
Croatia	125	47	18	No legal restriction
FYROM	99	14	22	No legal restriction
Turkey	594	444	150	The highest salary cannot exceed that of the highest salary of a governmental official
Albania	52	30	10	The structure and the level of salaries is approved by the Parliament based on a proposal from the Council of Ministers.
Bosnia & Herzegovina	101	24	24	The new Law on Salaries and Allowances for Civil Servants adopted on June 23, 2008 brings the salary level of the NRA staff within the pay scales for civil servants. Under this law the NRA will have to 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.
Montenegro	42	15	13	No legal restriction
Serbia	89	29	25	No legal restriction
Kosovo	30	11	4	Salary levels are regulated subject to pay scales and a system of grades that applies to all civil servants in Kosovo.

Table B.5 - Staffing and salary levels of NRAs

Notes:
Albania: Electronic communications tasks include the following: market regulation, licensing, technical (excl. frequencies), legal department, inspection and decision-making, the board of the NRA.
Approval of the new statute for the NRA took almost two years, taking effect only when the previous board was dismissed. Since April 2008 the organizational structure and the position of experts in the new structure has been under consideration by the Board of the NRA.
Bosnia & Herzegovina: There are 12 experts in each of the Telecommunication and Broadcasting Sectors, 13 in the Frequency Department and 11 in the Monitoring Department.
Montenegro: The number of employees handling telecommunications regulatory tasks does not include employees engaged in inspection, secretaries, drivers, administration, archives, accounting, translators, household and security. It also excludes personnel on a one-year work trial.

5. NRA enforcement powers

The NRA bears the primary responsibility of ensuring compliance with the obligations imposed on operators either directly by the law, or by the NRA after carrying out a market analysis procedure. To that effect, the NRA should have specific investigatory and sanctioning powers.

In order to ensure effective compliance with SMP-obligations, the NRA sanctioning powers should, in particular, allow it to impose fines with a sufficient deterrent effect and to order the suspension of non-compliant commercial offers. Sanctions should be sufficiently stringent, taking into account the substantial commercial benefits from the illegal practice. Moreover, the threat of sanctions should also be sufficiently real to ensure SMP operators conform to their regulatory obligations.

Table B.6 itemises the:

- powers of the NRA to impose fines, specific instances when a fine can be imposed and the level;
- powers of the NRA to suspend non-compliant commercial offers; and
- examples of fines imposed by NRAs.

Country	NRA powers to impose fines	NRA powers to suspend commercial offers	Applied in practice
Croatia	Yes The range of fines is 1% to 5% of the total annual gross income generated by the provision of telecommunications services and activities, in the fiscal year preceding the year in which the violation was committed.	Yes Article 63, Telecommunications Act of 2003 Article 118, Electronic Communications Act of June 19, 2008	No financial penalty has ever been imposed. Suspension of commercial offers has been regularly applied by the NRA.: • On November 27, 2006 the NRA requested the mobile operator VIPnet to modify the tariffs of its 'Option Fixed' prepaid package that according to the NRA constituted predatory pricing, effectively suspending the launch of the offer. • On February 12, 2007 the NRA requested T-Com, the incumbent operator, to modify its fixed tariff plan called 'Non stop'. According to the NRA, the incumbent operator had practiced a price squeeze by offering fixed voice

Country	NRA powers to impose fines	NRA powers to suspend commercial offers	Applied in practice
			services at retail tariffs set below its wholesale charges.
FYROM	No power to impose fines directly. Instead the NRA may initiate a procedure under the Law on Misdemeanours or the Law on Criminal Procedures. According to the Law on Electronic Communications, the maximum fine may be up to 7 to 10% of the total annual revenues in the year prior the year when the misdemeanour was committed performed or of the total revenue for a shorter period of the year preceding the misdemeanour, provided that the legal entity commenced its operations during that year.	Yes Article 49 of the Law on Electronic Communications	In April 2007, the NRA submitted an application for a misdemeanour procedure to the court against Makedonski Telekom for failure to implement an amended RUO.
Turkey	Yes Up to 3% of annual revenue	Yes. If the proposed tariff of the SMP operator is not approved by the NRA, the offer is suspended and the SMP operator must propose a new tariff in accordance with the NRA requirements. This is also valid for reference broadband and LLU offers.	During the approval process of TT's ADSL wholesale resale tariffs in spring 2008 the NRA had suspended the proposed TTNet's retail ADSL prices.
Albania	Yes, up to 10% of annual revenue, depending on the type of violation as defined in Article 137 of the Law on Electronic Communications No. 9918 of May 19, 2008	Yes Articles 55-57 of the Law on Electronic Communications No. 9918 of May 19, 2008	No
Bosnia & Herzegovina	The maximum fine is BAM 150,000 (ca. €75,000) for the first violation, with a maximum of BAM 300,000 (ca. €150,000) for a repeated offence.	Yes Article 20 of the Law on Communications of 2002	The NRA regularly uses its right to impose fines. However, it tries to use mediation in order to avoid the direct imposition of contractual terms and conditions.
Montenegro	Yes. Maximum fine is two hundred times the minimum salary in Montenegro (about €10,000). The new Law on Electronic Communications of July 29, 2008 increases the maximum fine to three hundred times the minimum salary in Montenegro (about €15,000).	Yes Article 5 of the Law on Electronic Communications of July 29, 2008	No
Serbia	According to Article 96 of the Telecommunication Law: a fine in the range of RSD 300,000 (€3,674) to RSD 3,000,000 (€36,740) can be imposed on a public telecommunications operator if it sets tariffs contrary to those defined by the NRA for the services subject to a price control.	Yes The NRA has a power to suspend the commercial offer only for the SMP operator and after the cost based analysis.	The NRA refused to accept the proposal of Telekom Srbija to raise the fixed telephone tariffs by its decision from April 17, 2006. The offer was suspended by the NRA.

Country	NRA powers to impose fines	NRA powers to suspend commercial offers	Applied in practice
Kosovo	The Ministry's Administrative Instruction No. 2004/3 on telecommunications fees and fines authorised the NRA to impose fines to a maximum of €250,000. It may also issue written orders requiring operators to correct defective actions within a specified time period (Law on Telecommunications, section 15 (5) a).	Yes PTK's fixed telephony licence contains provision stating that *'the Licensee may not increase the tariffs of any existing licensed Regulated Service or set a price for any new licensed Regulated Service in Kosovo without the prior written approval of the NRA'.*	When PTK and IPKO failed to reach an interconnection agreement, tariffs for the termination of calls were imposed (Decision No. 276.07 of December 12, 2007).

Table B.6 - Enforcement powers of the NRA

Notes:
Albania: As prescribed in the new Electronic Communications Law (No. 9918) there is a new chapter in the law (Chapter XVI) which stipulates the inspection procedures and frequency monitoring .Article 134 prescribes sequestration of illegal equipments and systems by AECP inspectors. There is a better elaboration of the cases where AECP may impose fines and administrative measures in case electronic communications network service providers and other providers do not abide by the rules and regulations.

6. Dispute resolution

Article 20 of the Framework Directive establishes a requirement for the NRAs to be able to issue binding decisions to resolve commercial disputes between undertakings arising from obligations under the regulatory framework. The maximum timeframe for resolving a dispute may not exceed 4 months. Table B.7 shows whether the NRAs are authorised to resolve commercial disputes. It also and describes the applicable procedures and the timeframe.

Country	Type of commercial disputes that can be resolved by NRAs	Dispute resolution procedures and deadlines	Publication of disputes by the NRA
Croatia	• Disputes between operators and between operators and providers of services. • Disputes between providers and end-users	Telecommunications Law of 2003, article 56 provided a detailed procedure: • NRA intervention after 45 days of unsuccessful negotiations on request of the involved operators • NRA issues binding decision within 45 (in exceptional cases 75) days from receiving the request • NRA decision must be implemented within 15 days from the day of its issue to the parties unless a different term is determined by decision. The new Electronic Communications Act of June 19, 2008, article 20 is less detailed on the procedural aspects and extends the deadline for the NRA to resolve a dispute within 4 months.	NRA decisions must be published in the Official Gazette and on its website, and also be published in the NRA's official journal or in any other appropriate manner, taking into account the confidentiality of business information.
FYROM	Disputes involving operators of communications networks and providers of communications services	Law on Electronic Communications, article 122: • NRA can resolve conflicts on the request of the parties, or take action on its own • Maximum time for NRA to reach a decision is 4 months • Disputes can be settled applying mediation or arbitration procedure	Article 122 of the Law on Electronic Communications requires the NRA to publish decisions, taking into account the confidentiality of business information.

Country	Type of commercial disputes that can be resolved by NRAs	Dispute resolution procedures and deadlines	Publication of disputes by the NRA
		• Mediator chosen by the parties or by NRA within 7 days • Arbitrators appointed by NRA Commission, the Minister and other interested parties for 5 years. • Result of arbitration is binding, final and enforceable	
Turkey	Disputes involving providers of telecommunications services and network operators on interconnection, network access and interconnection Applicable provisions are set out in Telegraph and Telephone Law No. 406, Article 10(4), By-law on Access and Interconnection, Article 18, Roaming Ordinance of March 8, 2002.	Access and interconnection: • Parties may call in the NRA after 3 months of failed negotiations • After calling in the NRA, the parties still have 6 weeks (extendable to 10) to reach an agreement • NRA decides within 4 months (extendable to 6) Roaming: • NRA has 15 days to decide if a request is accepted or not • NRA expects parties to reach agreement in 4 weeks • If agreement is not reached, NRA will decide	No. Currently only the relevant parties to the dispute are informed about the decision.
Albania	The previous Law No. 8618 on Telecommunications, Articles 43 and 52(11): • failure to reach an interconnection agreement; • disputes on numbering. NRA may intervene on its own initiative if operators with SMP fail to satisfy the requirements defined in Article 42, or if market competition principles are violated, under Article 45. Article 120 of the new Law on Electronic Communications (Law No. 9918 of May 19, 2008) contains a general provision on the NRA powers to resolve disputes between undertakings of electronic communications networks and services.	Law No. 8618 on Telecommunications, Article 43: • NRA involvement after 2 months of failed negotiations between the negotiating parties • NRA can issue a binding order to resolve the dispute within one month after a failure to reach agreement has been filed Article 120 of the new Law on Electronic Communications (Law No. 9918 of May 19, 2008) requires the NRA to apply the provisions of the Code of Administrative Procedures to the dispute resolution.	NRA is obliged to publish decisions relating to disputes, where it must take into account the prohibition on publication of the business secrets of parties.
Bosnia & Herzegovina	• Disputes between operators and between operators and providers of services. • Disputes between providers and end-users	Law on Communications, Article 16: • NRA intervention after 6 weeks of failed negotiations on request of one of the parties • NRA issues binding decision within 6 (in exceptional cases 10) days from receiving the request	No There is no obligation in Law on communications for publication of disputes by the NRA.

Country	Type of commercial disputes that can be resolved by NRAs	Dispute resolution procedures and deadlines	Publication of disputes by the NRA
Montenegro	• Disputes between electronic communications market actors • Disputes between service providers and end users	Telecommunication Law, Articles 33, 37 and 60: • NRA intervention after 90 days of unsuccessful negotiations on request of other party to the dispute • NRA issues a decision within 60 days (in the case of leased lines dispute, 30 days) from receiving the request. • If the dispute is not resolved by NRA, operators may submit it to the administrative court. Under Article 20 of the new Law on Electronic Communications, NRA may resolve disputes between electronic communications network operators and service providers applying either mediation or arbitration rules. NRA shall resolve the disputes upon the request from one of the parties. NRA must decide on a dispute on access and interconnection within 30 days upon submitting the request, which in some cases may be extended to 60 days (e.g. shared use of facilities).	No
Serbia	Telecommunications Law, article 9: • Disputes between telecommunications operators about interconnection, special access and provision of leased lines • Disputes between operators and end users	Telecommunications Law, article 47: • NRA intervention after 3 months of unsuccessful negotiations on request of the parties • NRA issues binding decision within 60 days from receiving the request.	Telecommunications Law, Article 47: NRA shall create and maintain a database of all its decisions, including complaints relating to those decisions, as well as any and other information of importance for the telecommunications sector. This database is available on the NRA website, including dispute resolutions.
Kosovo	Law on Telecommunications 2003/16, section 11(2): • Disputes involving service providers, end users, owners of land and facilities. • Failure to reach an interconnection agreement (Law on Telecommunications, section 56, paragraph 7).	Law on Telecommunications 2003/16, section 11(2): • NRA may undertake dispute resolution procedure either on request of one of the parties or on its own motion. • NRA issues binding decision within 6 weeks from receiving the request. • Service providers must comply with the NRA decision within 30 days. NRA issued Regulation on Dispute Resolution in June 2007 (TRA Regulation No183/07 of 11 June 2007.	No

Table B.7 - Dispute resolution powers of the NRA

7. NRA accountability

Independence needs to be reconciled with measures to ensure that the regulator is accountable for its actions. Such measures may include establishing procedures whereby the NRA performance is reviewed against specific objectives, ensuring that the regulator provides a report of its activities and its use of financial resources.

Table B.8 shows the requirements for:

- publication by the NRA of an action plan setting specific targets and deliverables;
- reporting by the NRA of its activities and the use of financial resources (e.g., annual report); and
- review of the NRA performance by an independent body.

Country	Publication of an action plan	Financial and regulatory reporting requirements	Review of the NRA performance
Croatia	Upon the proposal of the Government, the Parliament shall adopt the Strategy for the Development of Telecommunications, which shall represent a basic document establishing, on a long term basis, the fundamental principles and guidelines for the development of telecommunications and radio communications, and shall set the national priorities in planning the development of telecommunications services and activities.	With the prior approval of the Government, the Council of the NRA adopts its annual financial plan, the annual financial statement and the annual programme of operations and development. The annual report on the tasks performed is submitted to Parliament.	Ministry of Sea, Transport and Infrastructure
FYROM	Yes	According to Article 10 of the Law for Electronic Communications, the Agency is responsible for its work to the Parliament. According to Article 10 of the Law for Electronic Communications, the AEC Commission adopts an Annual Financial Plan for the NRA and submits it to the Assembly for its approval. The Annual Financial Plan of the Agency contains information on the revenues and costs, as well as audits and financial reports for the previous year and the anticipated capital and operational costs for the coming year. The Agency is obliged to submit an annual report, its accounts and the status of the Universal Service Fund, plus a work programme for the coming year to Parliament not later March 31 of the following year. The annual report of the NRA, after its approval by the Parliament, shall be made available to the public.	An audit shall be performed by an external and independent auditor.
Turkey	Yes. According to 'Ordinance on TA's Organizational Structure, Duties and Working Rules and Procedures' and 'Rules and Procedures on Preparation of Work Plans by TA' adopted by Telecommunications Board, the NRA (TA) prepares and publishes annual work plans. The NRA's annual report also sets out activities	Yes. According to Article 7 of Public Financial Management And Control Law No. 5018 In order to ensure supervision in the acquisition and utilization of all types of public resources, the public shall be informed timely. Accordingly, the following are compulsory: • to clearly define the duties, authorities and responsibilities, • to prepare government policies, development plans, annual programs, strategic plans and budgets; to negotiate them with the authorized bodies; to carry out their implementation and to make the implementation results and the relevant reports available and	There are three types of review imposed over the NRA: Judicial Review, Council of State and reporting to the Commission of Planning and Budget under the National Assembly of Turkey. Public (including public, consultations, annual work plans and annual reports) Auditing: Court of Accounts, Inspection Council of Prime Ministry and the State

Country	Publication of an action plan	Financial and regulatory reporting requirements	Review of the NRA performance
	completed and plans for future activities.	accessible to the public, • to publicize the incentives and subsidies provided by the public administrations within the scope of general government, in periods not exceeding one year, • to establish public accounts in line with a standard accounting system and an accounting order in accordance with generally accepted accounting principles.	Inspection Council of Presidency of Turkish Republic
Albania	The NRA annual report that must be made available to the general public should contain a detailed work programme for the coming year.	By a Parliamentary Resolution of March 2007 the periodicity of reporting before the Parliamentary Commission on Production Activities, Trade and Environment has been set for every six months instead of annually. In September 2007 the NRA provided the Parliamentary Commission with an eight months reporting for the period January 2007 to August 2007. Article 9 of the new Law on Electronic Communications (Law No. 9918 of May 19, 2008) states that the NRA is accountable for its work before the Assembly. At the end of each year the NRA must submit to the Assembly a report on its activities during the year, its financial performance, a work programme for the coming year and implementation status of the universal service.	The use of funds by the NRA is subject to review by the State Audit (High State Control).
Bosnia & Herzegovina	There are no the requirements for publication of an action plan setting specific targets and deliverables. The NRA publishes the Telecommunications Sector Policy adopted by the Council of Ministers that contains a detailed action plan on its web site.	Law on Communications, Article 44 (4), (5): The NRA shall prepare an annual report of its finances and activities, and shall submit it to the Council of Ministers. The Council of Ministers shall consider the Agency's annual report and publish it not later than four months after the end of each financial year.	The use of funds by the NRA shall be subject to review by the Supreme Audit Institution and in addition audited by an independent auditor every year.
Montenegro	Article 13 of the new Law on Electronic Communications requires the NRA to submit for the Government approval before November 1 of each year its financial plan and a work programme for the next calendar year. The financial plan must be also submitted for the Assembly approval before December 1. The financial plan and the work programme must be made public.	Article 16 of the new Law on Electronic Communications requires the NRA to prepare an annual report on its activities together with its financial report. The reports must be approved by the Government and published on the NRA's website.	Annual audit procedure of the NRA financial statements by an independent authorised auditor, appointed by the Government ,is defined in Article 14 of the Law on Electronic Communications
Serbia	The NRA publishes an action plan on its web site at the beginning of each year.	Article 20 of the Telecommunication Law requires the NRA to prepare and to submit to the Government and to the National Assembly an annual report (including financial statements) on its activities, and in particular: • the development of telecommunications • the implementation of tariff policy principles pertaining to regulated	According to the Article 18 of the Telecommunication Law the financial plan of the NRA shall be approved by the Government. The financial plan shall be published in the

Country	Publication of an action plan	Financial and regulatory reporting requirements	Review of the NRA performance
		services • the progress in realization of universal service, including an assessment of the degree to which users' needs have been satisfied; and • the allocation and assignment of radio frequencies for civilian use. The NRA must also make public, in the manner stipulated in the statutes, the following: • annual report (including financial statements) for each year; • financial plan for each year • information on the allocation and assignment of radio frequencies • information on public tenders for licenses, including the main terms and conditions • information about licences granted • decisions taken on licenses and concluded interconnection contracts • information and/or decisions pertaining to special tariff regimes and/or tariff policy, including changes in tariffs for regulated services; and • decisions on the numbering plan.	manner stipulated by the Statutes of the Agency. The Agency shall have all of its revenue and expenditure accounts audited annually by an authorized independent auditor. The audited accounts shall be published not later than three months after the end of the relevant fiscal year. The NRA (RATEL) is established under the Telecommunications Law. The Ministry for Telecommunications and Information Society supervises the implementation of the Law and regulations adopted on the basis of this Law (Article 6 of the Telecommunications Law).
Kosovo	Yes. Telecommunications Sector Policy, proposed by the Ministry of Transport and Communications and approved by the government. This document provides a provisional timetable for the implementation of the various telecommunications tasks.	Article 5 of the Law on Telecommunications requires that the Ministry of Telecommunications will propose and the Parliament will approve the elementary financial plan Report -To the parliament of Kosovo	Review by the Supreme Audit Institution and in addition by an independent auditor, every year.

Table B.8 - NRA regulatory and financial reporting requirements and review procedures

Notes:
Kosovo: In the Government of Kosovo's Telecommunications Sector Policy, Section 3.5.d1, "... *the TRA is directed to develop a realistic Action Plan to address the instances where previously mandated timelines and milestones have not been met and to revise associated timelines and milestones*."

8. Appeal procedures

Article 4 of the Framework Directive sets out a requirement for effective mechanisms enabling any party affected by an NRA decision to submit an appeal against the decision to an body that is independent of the parties involved. It sets out a similar requirement of independence for the appellate body as exists for the NRA itself. The Article also establishes requirements for the appeal mechanism:

- The appellate body may be a court or a non-judicial body. In the latter case, the second appeal instance must be a court or a tribunal.

- An appeal of the NRA decision shall not automatically suspend the application of the appealed decision.
- The appeal body must be able to consider the merits of the case and not only procedural matters.

The timeframe for an appeal is important given the uncertainty and potentially retroactive effects.

Table B.9 provides an overview of the national appeal mechanisms against NRA decisions.

Country	Appellate body	Automatic suspension of the NRA decision on appeal?	Can the appellate body rule on merits of a case?	Third party rights of appeal?	Average duration of an appeal procedure
Croatia	Administrative Court	No	Yes	Yes, if it can prove that it has a legal interest in the case	5 years
Former Yugoslav Republic of Macedonia	• First instance: Commission of the Agency for Electronic Communications • Second instance: Administrative Court (since May 28, 2007, according to the Law on Administrative Disputes of May 19, 2006)	Yes	No, the appeals body can only judge the correct application of the laws and by-laws.	No, only a directly involved party can appeal.	According to Article 137 of the Law on Electronic Communications, an appeal against the decision of the Director in a case of the violation of the provisions of the Law determined by the NRA inspector may be filed by the affected party to the Commission within 8 days from the date of receipt of a decision. The Commission must decide upon the appeal within fifteen (15) days from the date of receipt of an appeal. On other decisions of the Director, according to the Law on General Administrative Procedure, an affected party may submit an appeal to the Commission within 15 days from the date of receipt of a decision. In this case, the Commission must decide upon the appeal within sixty (60) days from the date of receipt of an appeal.

Country	Appellate body	Automatic suspension of the NRA decision on appeal?	Can the appellate body rule on merits of a case?	Third party rights of appeal?	Average duration of an appeal procedure
Turkey	• First instance: District administrative courts • Second instance: Council of State, the highest administrative court in Turkey.	No	Yes	No, only a directly involved party can appeal or an organisation involved in consumer rights protection.	According to Article 7 of Administrative Jurisdiction Rules Law No. 2577, a party can appeal the NRA's decision within 60 days from the date of receipt of the decision. There is no time limit for appeal procedure set by law.
Albania	Article 136 of the Law on Electronic Communications (Law No. 9918 of May 19, 2008) An appeal against the fine imposed by the NRA inspectors may be filed to AEPC Governing Council within 10 days from the date of its imposition. The Governing Council makes a decision within 30 days from the appeal date. An appeal against the decision of AEPC Governing Council may be made within 30 days from the announcement date to the district court, in whose jurisdiction such violation is committed. Against AEPC Governing Council decisions, according to point 3, Article 134, of this law may be appealed to Albanian Court of First Instance (Tirana District Court) within 30 days from the decision date. Under the previous Law on Telecommunications No. 8618 TRE decisions that nullify or amend the terms and conditions of licences: ***First instance***: Minister of Public Works, Transport and Telecommunications ***Second instance:*** Albanian Court of First Instance Complaints on fines issued by inspectors: ***First instance:*** Board of TRE ***Second instance:*** Albanian Court of First Instance	Yes In the case of administrative appeals, the decision is normally suspended once it has been filed with the court.	Yes	Yes	No data available

Country	Appellate body	Automatic suspension of the NRA decision on appeal?	Can the appellate body rule on merits of a case?	Third party rights of appeal?	Average duration of an appeal procedure
Bosnia & Herzegovina	***First instance:*** Council of the NRA ***Second instance:*** State Court of Bosnia & Herzegovina	No Appeals against the decisions of the Director General shall not suspend their effect.	No, only on the correct application of the law	Yes If it can prove that it has a legal interest in the case.	30-60 days, depending of Council of the Agency sessions. On the second instance e.g. State Court of Bosnia and Herzegovina an average duration of an appeal procedure may be one year or more.
Montenegro	Telecommunications Law of 2000 Supreme Administrative Court New Law on Electronic Communications of July 29, 2008: ***First instance:*** Ministry of transport, maritime and telecommunications ***Second instance:*** Supreme Administrative Court	No NRA decision stands until the end of the appeal.	The Ministry can rule on the merits of the case. The Supreme Administrative Court can only judge on the correct application of the law.	Yes If it can prove that it has a legal interest in the case.	An appeal on the Decision of the NRA can be lodged to Ministry not later than 15 days upon receiving the Decision.
Serbia	Supreme Court. Appeal against the decision can also be submitted to the Managing Board of RATEL (the NRA) asking it to reconsider its decision	Yes	Yes	Yes If it can prove that it has a legal interest in the case.	More than one year
Kosovo	Initially, an appeal against the NRA decision is submitted to the Managing Board of TRA (the NRA) for reconsideration (Law on Telecommunications, Article 11). The next appeal instance are the Kosovo Administrative Courts: • Municipal Court • District Court Supreme Court of Kosovo	Yes	Yes The appeals body can rule both on the merits of the case and on the correct application of the law.	Yes If it can prove that it has a legal interest in the case.	More than one year

Table B.9 - Appeal procedures against NRA decisions

9. NRA transparency and participation

Article 3 of the Framework Directive requires NRAs to exercise their powers impartially and transparently. Lack of transparency undermines legal certainty and increases the potential for political interference. Furthermore, according to the commitment to participation, regulatory processes should allow formal consultation of the stakeholders before decisions are made.

The table below examines the transparency of the NRA decision-making process and the ability of all stakeholders to contribute to decision-making. The criteria for assessing the NRA transparency include:

- the existence of a consultation process and the scope of the covered decisions or issues of general interest;
- the time given for comments;
- the existence of a period for reply comments; and
- the obligation to publish adopted decisions with a reasoned opinion.

Country	NRA policies for public consultations on specific decisions	Time period for comments	Publication of decisions adopted by the NRA
Croatia	Article 22, Electronic Communications Act of June 19, 2008 (Official Gazette 73/2008) Public consultation procedure is foreseen before adopting implementing legislation, NRA decisions and other administrative acts with significant influence on the relevant market, as well as the NRA Statute, the annual financial plan and work programme.	Not less than 30 days	Yes, on NRA website in an appropriate format
FYROM	Article 105 of the Law for Electronic Communications requires the NRA prior to recommending regulations or adopting regulations to publish the proposed instrument and seek the submission in writing of opinions from all interested parties. These must be published prior to adoption of the measure. The Agency may also hold public hearings on proposed regulations, at which representatives of interested parties may be invited to present their views and opinions.	Not less than 30 days	Yes, on NRA website in an appropriate format
Turkey	Draft legislation prepared by the NRA usually involves the participation of operators through joint committees. A consultation mechanism is established and documents on issues that have an effect on the sector are published on the NRA's web site and also sent to the relevant operators, industry NGOs, etc. The responses are published and taken into consideration by the NRA. Draft legislation is also published on the web site.	Usually 30 days	Currently there is no legal obligation for NRA to publish all its decisions. It is decided on case by case basis.
Albania	Article 35, Law on Electronic Communications (Law No. 9918 of May 19, 2008 requires AEPC to conduct the public consultation with the interested parties regarding the conclusions reached on market designation and market analysis. Article 110 contains a general requirement for AEPC to consult on regulatory	60 days for market analysis, not shorter than	Yes. All decisions taken by the NRA after public consultation and with answers to the comments by interested parties have

Country	NRA policies for public consultations on specific decisions	Time period for comments	Publication of decisions adopted by the NRA
	documents and decisions that will significantly influence electronic communications market.	30 days otherwise	been published on the web site.
Bosnia & Herzegovina	Article 38 of the Law on Communications requires RAK to publish its draft regulations (rules) for consultation.	At least 14 days	Official Gazette and the NRA's website
Montenegro	This is not defined by law, but there is a standard operational procedure in the NRA to hold public consultations on specific decisions, draft regulations etc.	Usually 3 months	Yes, NRA's website
Serbia	On August 28, 2007 the Managing Board of RATEL adopted guidelines for public consultation procedures for adoption of its regulations.	15 to 30 days	All regulations are published in the Official Gazette, and all other decisions are published on the NRA's web site.
Kosovo	The NRA may initiate public consultation on all substantive telecommunications matters, either on its own initiative or upon the written request from the Ministry (Law on Telecommunications, section 10(1)).	30 days	Yes, NRA's website

Table B.10 - Transparency and participation in the NRA decision-making

10. Frequency management

Table B.11 provides information on the bodies which are responsible for:

- frequency allocation, including the decision on the national frequency plan; and
- frequency assignments, covering individual authorisations to use frequencies in the national frequency plan. Frequencies for the military sector are normally decided outside this framework.

Country	Frequency allocation	Frequency assignment	Legal basis
Croatia	Ministry of the Sea, Transport and Infrastructure (on the basis of a proposal by the NRA)	Croatian Post and Electronic Communications Agency	Articles 81-82, Electronic Communications Act of June 19, 2008 (Official Gazette 73/2008)
FYROM	Agency for Electronic Communications	Agency for Electronic Communications	Law for Electronic Communications, Chapter 6 Plan of radio frequency band allocations (No.13/70, December 28, 2005) Plan of radio frequency assignments and utilisation (No. 11-123/1, 09.10.2007)

Country	Frequency allocation	Frequency assignment	Legal basis
Turkey	Telecommunications Authority (TK)	• Telecommunications Authority (TK) assigns spectrum for telecommunications. • TK allocates frequency blocks for broadcasting to the Radio and Television Supreme Council (RTUK). • RTUK assigns spectrum to individual broadcasters	Wireless Law No. 2813, Articles 9 and 11 Telegram and Telephone Law No. 406, articles 2-3
Albania	Council of Ministers (on the basis of a proposal of AEPC, the NRA to the Ministry)	• Albanian Authority of Electronic and Postal Communications (AEPC) – for telecommunications • AEPC also allocates the block of broadcasting frequencies to National Radio and Television Council (KKRT) • KKRT assigns broadcasting spectrum to individual broadcasters, although they must apply to AEPC for spectrum for links between sites.	Article 8 of Law on Electronic Communications (Law No. 9918 of May 19, 2008) The national plan of radio frequencies was approved by the Council of Ministers (Decision No. 379 of May 31, 2001, amended by Decision No. 123 of March 2, 2006).
Bosnia & Herzegovina	Communications Regulatory Agency	Communications Regulatory Agency	Law on Communications, Official Gazettes of Bosnia and Herzegovina, No 31/03 of October 21, 2003, articles 30-32
Montenegro	Government of Montenegro (on the basis of a proposal of the NRA to the Ministry)	Under the Telecommunications Law of 2000, the NRA was responsible for assigning spectrum for telecommunications, while the Broadcasting Agency - for broadcasting. Under the new Law on Electronic Communications of July 29, 2008, the Agency for electronic communications and postal services, the NRA is the sole authority responsible for spectrum assignment.	Old regime: Article 12 (9) of Telecommunications Law of 2000 (Official Gazette No. 59/2000) Broadcasting Law (Official Gazette No. 51/2002). New regime: Chapter VIII, Law on Electronic Communications of July 29, 2008 (Official Gazette No. 50/2008)
Serbia	The Ministry of Telecommun-ications and Information Society decides on the frequency allocation plan and adopts frequency assignment plan (on the proposal of the Republic Telecommunication Agency)	Republic Telecommunications Agency (RATEL)	Telecommunication Law (Official Gazette, No 44/03 and 36/06) and Frequency Allocation Plan (Official Gazette, No 112/04)
Kosovo	TRA, subject to review and approval by Kosovo Assembly	• TRA for telecommunications • TRA in coordination with Independent Media Commission (IMC) for broadcasting	Law on Telecommunications (UNMIK/REG 2003/16), Articles 22 and 36 Law No. 03/L-085 of June 13, 2008 amending UNMIK Regulation No 2003/16 on the promulgation of the Law on Telecommunications deletes references to UNMIK and its Frequency Management Office (FMO) and SRSG (Special Representative of the Secretary General).

Table B.11 - Frequency allocation and assignment

Notes:

FYROM: The Plan of radio frequency bands allocation in the Republic of Macedonia shall establish the radio frequency bands allocation to certain radio services and shall enable technically and economically optimal planning and utilization of radio frequencies, taking into account that the radio frequency spectrum and the geostationary orbit are naturally restricted resources
The Plan of radio frequency assignments and utilisation in the Republic of Macedonia shall particularly determine the conditions and manner of radio frequency use to certain radio frequency bands. The Plan shall particularly establish the channel arrangement of the frequency bands for certain radio services.

11. Regulatory framework for broadcasting networks

The EU 2002 *acquis communautaire* brought all forms of electronic communications networks under the same regulatory framework. This was driven by the convergence of new digital technologies so 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. While the EU framework does not rule out that regulatory tasks can be shared among two or more authorities in a well-defined manner, the thrust of this legislation is to bring all forms of electronic communications networks, including broadcasting networks, under a common regulatory framework.

The table below shows whether the spectrum assignments for broadcasting networks are covered by the same regulatory framework as electronic communications, listing:

- the authorities involved in regulating broadcasting content;
- the legal basis for broadcasting regulations; and
- whether frequency assignments for broadcasting are carried out by the same authority as for electronic communications.

Country	Broadcasting authority responsible for content issues	Legal basis	Frequency assignments carried out by the same authority for broadcasting as for telecommunications?	Cooperation agreement between NRA and broadcasting authority? (e.g. on spectrum issues, licensing, etc.)
Croatia	Council for Electronic Media	Law on Electronic Media, Official Gazette No. 122, July 30, 2003	Yes, by HAKOM, the NRA	No
FYROM	National Broadcasting Council	Law on broadcasting activity of November 29, 2005 Law amending and supplementing the Law on broadcasting activity of February 12, 2007	Yes, by AEC, the NRA	Yes Signed in October 2007
Turkey	Radio and Television Supreme Council (RTUK)	Law No.3984 of April 13 on establishment of radio and television companies and their broadcasting	No TK, the NRA, allocates frequency blocks for broadcasting to The Radio and Television Supreme Council (RTUK). RTUK assigns spectrum to individual broadcasters.	Yes Protocol dated March 24, 2006.

Country	Broadcasting authority responsible for content issues	Legal basis	Frequency assignments carried out by the same authority for broadcasting as for telecommunications?	Cooperation agreement between NRA and broadcasting authority? (e.g. on spectrum issues, licensing, etc.)
Albania	National Radio and Television Council (KKRT)	Law on Radio and Television No. 8410 of September 30, 1998 (as amended)	No AEPC, the NRA allocates the block of broadcasting frequencies to National Radio and Television Council (KKRT). KKRT assigns broadcasting spectrum to individual broadcasters, although they must apply to AEPC for spectrum for transmission links between sites.	No
Bosnia & Herzegovina	Communications Regulatory Agency (RAK)	Law on Communications (Official Gazette No. 33/02, November 12, 2002)	Yes, by RAK, the NRA	RAK is a converged regulator, responsible for telecommunications and broadcasting.
Montenegro	Broadcasting Agency (ARD)	Broadcasting Law of April 2004	Under the Telecommunications Law of 2000, the Broadcasting Agency assigned spectrum to broadcasters. Under the new Law on Electronic Communications of July 29, 2008, the Agency for electronic communications and postal services, the NRA is the sole authority responsible for spectrum assignment.	Yes
Serbia	Republic Broadcasting Agency (RRA)	Broadcasting Law of July 2002 (as amended)	Yes, by RATEL, the NRA	There is a protocol between the two agencies which defines the process of issuing the permits for broadcasters, and the process for their subsequent control.
Kosovo	Independent Media Commission (IMC)	Law on Independent Media Commission and Broadcasting, promulgated by the SRSG on July 8, 2005	The Law on Independent Media Commission and Broadcasting foresees that the IMC shall coordinate the assignment of broadcasting spectrum with TRA. The practical aspects of this coordination have not been defined yet.	No

Table B.12 - Regulatory treatment of broadcasting networks

Notes:

FYROM: The Broadcasting Council grants a licence to broadcast on the basis of a public competition. The licence is an authorization providing the right to transmit and to distribute a radio or television programme service intended for public reception, regardless of the technical means of transmission. The NRA, on the basis of the decision to grant a broadcasting licence issues a licence for the use of the radio frequency.

Turkey: Studies on possible amendments to the related laws in connection to the responsibilities of RTUK and TK have been sent to the Parliament.

12. Digital switchover plans

After the switching off of terrestrial analogue television services, the frequencies will be released and allocated to other applications. The table below shows:

- the planned date for the analogue switch-off;
- whether the review/consultation on the digital dividend (DD) has been launched;
- what, if any, are the applications "officially" intended to be allocated DD frequencies; and
- comments on national debate and on spectrum refarming costs and complexity.

Country	Date for analogue switch-off	Review underway?	Applications to benefit from DD	Comments
Croatia	2011	Yes	• UHF band: DVB-T (more SDTV content, introduction of HDTV content), DVB-H, and IMT2000 in upper UHF band • VHF band: DVB-T, DVB-H, T-DAB or DMB	On July 31, 2008 the Government adopted the Strategy for switchover from analogue to digital TV broadcasting.
FYROM	2012	No	Most likely to be DVB-T, mobile DVB-H and interactive services	The Broadcasting Council on November 27, 2007 adopted the Strategy for the Development of the Broadcasting in the Republic of Macedonia for the period 2007-2012. According to this, the switchover from analogue to digital TV broadcasting was to begin in 2008 and to be complete by 2012.
Turkey	2014	Yes	Most likely DVB-T, mobile DVB-H	On March 2005, the Radio and Television Supreme Council adopted the Strategy and Application Schedule for switchover from analogue to digital TV broadcasting.
Albania	No decision	No	-	-
	2012	No	-	There is no strategy document according to digital switchover plans yet. DTT Forum is preparing the Draft of strategy.
Montenegro	December 31, 2012	No	DVB-T, interactive services	On April 10, 2008 the Council of the Broadcasting Agency adopted a strategy for switchover from analogue to digital broadcasting systems.
Serbia	2015	Yes	DVB-T for television and T-DAB for radio	2015 is a deadline for the analogue switch-off in accordance with the RRC-06 ITU conference. The Strategy for switchover from analogue to digital TV broadcasting is being drafted. There are some plans to bring the date forward to 2012.

Country	Date for analogue switch-off	Review underway?	Applications to benefit from DD	Comments
Kosovo	2012	No	Most likely DVB-T, mobile DVB-H and interactive services	No information has been released. It is under discussion at the Parliamentary Commission on Media in association with the new draft law on Digital Transmission.

Table B.13 - Digital switchover plans

Notes:
FYROM: The Broadcasting Council and the NRA have created a joint body to develop the procedure for awarding the first multiplexes for digital TV broadcasting transmission.
Turkey: Studies on digital dividend have been undertaken by the authorities, broadcasters, telecommunications operators and others. A position will be taken after ITU WRC-2011.
Bosnia & Herzegovina: The DTT Forum was established in May 2006.

13. Cooperation between NRA and the national competition authority

The EU 2002 *acquis communautaire* for electronic communications applies during the transition from a regulated monopoly to normal competition, governed only by general competition law. Sector specific ex ante regulation and competition law serve as complementary instruments to achieve their respective policy objectives in the electronic communications sector and address the lack of effective competition. At the same time, a principle underlying the regulatory framework is that ex ante regulation should only be imposed where competition law remedies would be insufficient and rolled back when they are no longer required.

Furthermore, the use of sector specific regulation, when it is found to be justified, relies extensively on the competition law principles in defining relevant markets that are susceptible to ex ante regulation, in assessing market dominance and in formulating remedies to address anticipated competition law breaches.

NRAs are advised to consult with their national competition authorities (NCAs) when deciding whether the use of both complementary regulatory tools is suitable to deal with a specific topic, or whether competition law instruments are sufficient. NRAs are also required to carry out analysis of the relevant markets in close collaboration with NCAs. In a practical application, it is considered advisable for both authorities to conclude an agreement covering the scope of their cooperation in the electronic communications sector and the division of specific responsibilities.

Table B.14 examines the degree of cooperation established between NRAs and NCAs.

Country	Competition authority	Formal agreement between NRA and Competition Authority
Croatia	Croatian Competition Agency (CCA)	Yes On July 14, 2006 CCA and the NRA concluded an agreement on co-operation in the area of competition law in telecommunications markets. Under the 2003 Telecommunications Law, certain activities were excluded from the jurisdiction of the CCA. Determining the existence of a dominant position and any abuse of dominance in telecommunications markets is the exclusive responsibility of the NRA. However, CCA remains responsible for anti-

Country	Competition authority	Formal agreement between NRA and Competition Authority
		competitive agreements between undertakings and merger control in telecommunications markets. In order to eliminate any possible conflict of jurisdiction the agreement specifies the methods of communication and coordination between the two authorities.
FYROM	The Commission for Protection of Competition	The NRA and the Commission for Protection of Competition signed a Memorandum of Cooperation in February 2007. The Commission for Protection of Competition is responsible for enforcing the Law on Protection of Competition (Official Gazette No. 04/05). It is responsible for competition law in general, including the electronic communications sector.
Turkey	The Competition Authority	No However, the Competition Authority is obliged to take account of the opinion of the NRA in terms of Law No. 4502. The Competition Authority was created in1997 under Law No. 4054.
Albania	The Competition Authority	No However, the NRA and the Competition Authority cooperate on specific topics, but have yet to sign a Memorandum of Understanding. The Competition Authority was created in February 2004, under the Law on Protection of Competition No. 9121 of July 28, 2003. The Authority is responsible for competition in general, including the electronic communications sector.
Bosnia & Herzegovina	Competition Council of Bosnia and Herzegovina	No
Montenegro	No such authority	The NRA is responsible for competition in the electronic communications sector.
Serbia	Competition Commission	No The Competition Commission was created by the Law on the Protection of Competition (Official Gazette, No. 79/05). Article 10 of the Telecommunications Law states that the NRA is authorized to prevent anti-competitive or monopolistic activities and behaviour of public telecommunications operators, unless they are subject to procedures conducted by the Competition Commission.
Kosovo	No such authority	The NRA is responsible for competition in the electronic communications sector.

Table B.14 - Cooperation between the NRA and the competition authority

Notes:
Albania: Under the provisions of Articles 12 and 38 of the new Electronic Communications Law.
Kosovo: Article 20 (1) of the Law on Competition No. 2004/36 (UNMIK Reg. 2004/44) requires the establishment of an independent competition regulatory body to be known as the Kosovo Competition Commission (KCC).

C. Market access conditions in electronic communications

The information in this section reflects the situation as at May 1, 2008, except where otherwise stated.

This section provides information on the status of liberalisation and on the frameworks for authorisations for:

- public fixed telecommunications networks
- voice telephony services
- data services

It also provides an overview of competition in the fixed and mobile markets.

1. Liberalisation of public fixed telecommunications networks and services

Table C.1 summarises the legal framework for the liberalisation of public fixed telecommunications networks and services in three markets:

- local;
- domestic long distance; and
- international services.

Practical implementation can be assessed, for example, by the number of licensed operators and by the distribution of numbering resources shown in Table A.10, Table A.11 and Table A.13.

Country	Status of liberalisation of public fixed voice telephony networks and services			Legal basis
	Local	Domestic long distance	International	
Croatia	January 2003	January 2003	January 2003	Telecommunications Act of 2003. Electronic Communications Act of June 19, 2008 introduced a general authorisation regime for all types of service.
FYROM	March 2005	March 2005	March 2005	Law for Electronic Communications of March 2005) (with amendments) introduced full liberalisation and general authorisation regime for all types of service.
Turkey	Formally liberalised from July 2005 Licensing framework adopted in August 2007. No licences issued so far.	January 2004	January 2004	Law No. 4052 of January 29, 2000.
Albania	Rural areas: February 1998. Urban areas: April 2007, through regional licences	July 2003	January 2005	Law No. 8287 of February 18, 1998 liberalised rural local network provision. This was replaced by Law No. 8618 of June 14, 2000. Council of Ministers Decision No. 464 of July 3, 2003 liberalised domestic long-distance and international services. Law No. 9637 of November 6, 2006 introduced the concept of regional licensing for rural and urban areas, for both local and domestic long-distance services, in effect completing liberalisation. The NRA adopted the implementing rules on April 2, 2007.

Country	Status of liberalisation of public fixed voice telephony networks and services			Legal basis
	Local	Domestic long distance	International	
				In practice, no alternative operators were licensed to provide either international or local urban services. Law No. 9918 of May 19, 2008 introduced a general authorisation regime for all types of service.
Bosnia & Herzegovina	July 2002	July 2002	January 2006	Telecommunications Sector Policy approved by Council of Ministers in March 2002.
Montenegro	January 2004	January 2004	January 2004	Telecommunications Law of 2000 (Official Gazette No. 59/2000).
Serbia	June 9, 2005	June 9, 2005	June 9, 2005	Articles 32 and 109 of Telecommunication Law of April 2003 granted Telekom Srbija exclusive rights for all fixed services until June 9, 2005.
Kosovo	May 2003	May 2003	January 2008	Liberalisation formally introduced by Law on Telecommunications (UNMIK Regulation 2003/16) of May 2003. The licensing framework was implemented in 2006, following the TRA Board decision of September 7, 2005.

Table C.1 - Liberalisation of public fixed telecommunications networks and services

2. Liberalisation of data networks and services

Table C.2 shows the status of liberalisation of data networks and services.

Country	Liberalisation status for data networks and services		Legal basis
	National	International	
Croatia	1999	1999	Law on Telecommunications of 1999 (Official Gazette No. 76/99)
FYROM	1998	Services – 1998 Networks – 2000	Articles 23, 24 and 25 of the Telecommunications Law of 1996 (Official Gazette Nos. 33/96, 17/98, 28/2000, 4/2002 and 37/2004). Until April 2000 there was a requirement to use international leased lines from the incumbent operator.
Turkey	Services – June 1994 Networks – January 2004	Services – June 1994 Networks – January 2004	Article 2/c, Telegram and Telephone Law No. 406 of February 4, 1924 (with amendments)
Albania	1998	1998	Article 4, Law No. 8287 of February 18, 1998
Bosnia & Herzegovina	July 2002	July 2002	Telecommunications Sector Policy approved by Council of Ministers in March 2002
Montenegro	January 2004	January 2004	Article 27 of the Telecommunications Law of 2000 (Official Gazette No. 59/2000)
Serbia	Services – April 2003 Networks – June 2005	June 2005	Articles 32 and 109 of Telecommunication Law of April 2003 granted Telekom Srbija exclusive rights for all fixed services until June 9, 2005, except for Internet and Cable TV services.

Country	Liberalisation status for data networks and services		Legal basis
	National	International	
			Until June 9, 2005 there was a requirement to use international leased lines from the incumbent operator.
Kosovo	May 2003	Services - May 2003 Networks – January 2008	First ISP authorisations issued to Dardanet (PTK subsidiary), IPKOnet, and Kujtesa on May 18, 2005 at one-off fees of €150,000. The present authorisation framework (with a €5,000 one-off licence fee) implemented in 2006 by a TRA Board decision of September 7, 2005.

Table C.2 - Liberalisation of data networks and services

3. Authorisation regime for electronic communications services

Article 3 of the Authorisation Directive 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.

The provision of electronic communications networks and services, under either a general authorisation or an individual licence, may be subject to authorisation fees. In many countries, such fees were often quite high in the period immediately after the ending of monopoly rights. This level of fees may have been triggered by the perception that the telecommunications sector represented an easy source of revenues for the state, as much as protection of the state-owned incumbent operator. Regardless of the purpose, high authorisation fees are a barrier to market entry and send a signal that the market is not yet fully liberalised.

The EU regulatory framework requires authorisation fees to be limited to a level necessary to cover the administrative costs of the regulatory authority. Only those fees that are paid for access to limited resources may deviate from this criterion. In practice, the exceptions are for:

- radio frequencies, where demand exceeds supply.
- numbers. Normally, the national numbering plan must be managed so that there are enough numbers for all operators. Since the potential numbering space available is unlimited, the only limited resource in the longer term is special short numbers represented by a limited number of digits. The other constraint is the disruption caused by the need to change existing numbers.
- rights of way. In theory, these can be a limited resource under certain circumstances but normally, the availability of land and rights of way does not represent a limited resource.

Table C.3 describes the authorisation regimes, including:

- authorisation types defined in the national legislation: individual authorisation/licence; class licence, general authorisation with/without notification to the NRA;
- networks and services covered by the specific authorisation type;

- authorisation charges or other administrative fees paid by authorised undertakings (one-off and annual fees);
- specific fees related to authorisations to use limited resources such as spectrum and numbers are not covered in this table. However, where mobile networks are subject to specific authorisation requirements (e.g., spectrum licence plus individual authorisation to offer public services), these are listed as a separate authorisation type.

Country	Authorisation type:	Networks/services	Authorisation charges and administrative fees	
			One-off fees	Annual fees
Croatia	Telecommunications Act of 2003 (in force until June 30, 2008):			
	Concession	Public telecommunications services using spectrum	Depends on the type of service and the geographical coverage	Between 0.1% and 0.5% of revenue
	Individual licence	Public telecommunications services including fixed networks, leased lines, cable TV services and PMR	Depends on the service category and geographical coverage, with a maximum of HRK 20,000 (€2,740) for national fixed voice telephony services	0.1% of revenue
	General authorisation with notification to the NRA	All other services including Internet access, VoIP, value added services (Premium Rate Services) and wireless access.	Between HRK 5,000 (€685) and HRK 2,000 (€274) depending on the type of service	0.1% of revenue
	The Electronic Communications Act of June 19, 2008 (Official Gazette 73/2008) entered into force on July 1, 2008 introducing a general authorisation regime where electronic communications network and services can be provided without individual licences, subject to a general authorisation with a notification submitted to the NRA at least 15 days prior to commencing activities. Individual licences, however, will continue to be issued by the NRA for the right to use radio spectrum.			
FYROM	General authorisation with notification to the NRA	Public electronic communications services without use of spectrum	None	Annual market supervision fees are up to 0.5% of annual gross revenues earned from the provision of public electronic communications networks and services. However, the fee may not exceed €250,000. Based on the total annual revenue, providers are divided into 5 categories: • Up to MKD 1m (€16,500) - 0.1% • MKD 1m - MKD 10m (€16,500 - €165,000) - 0.2% • MKD 10m - MKD 100m (€165,000 - €1.65m) - 0.3% • MKD 100m - MKD 500m (€1.65m - €8.2m) - 0.4% • Above MKD 500m (€8.2m) - 0.5%
Turkey	Concession agreements	Public telecommunications services and infrastructure using spectrum and numbers and which are national in scope	Determined through a public tender procedure	Administrative fee is 0.35% of annual net sales

Country	Authorisation type:	Networks/services	Authorisation charges and administrative fees	
			One-off fees	Annual fees
	Authorisation agreements	Operators with more than 50% state ownership: Turksat (satellite operator) and the Directorate-General of Coastal Safety	No authorization fee	Turksat pays 0.35% of annual net sales while the Directorate-General of Coastal Safety does not pay a fee
	Individual licences	1st Type Telecommunication Licence: Public telecommunications services using fixed networks, leased lines, cable TV services and PMR with regional or local coverage, based on the allocation of scarce resources to a *limited* number of operators	Determined through a public tender procedure	Administrative fee is 0.35% of annual net sales
		2nd Type Telecommunication Licence: Public telecommunications services using fixed network (including long distance telephony services (A, B and C-type)), leased lines, cable TV, satellite services and PMR with national or regional coverage, based on the allocation of scarce resources to an *unlimited* number of operators.	• A-type (CPS services) - TRY 571,446 (€286,000) • B-type (CS services) - TRY 253,976 (€127,000) • C-type (calling cards services provided through a 10-digit access code) - TRY 126,988 (€64,000) For other services, the one-off fee depends on the service category and the geographical coverage, with a maximum of TRY 571,446.65 (€294,560) for cable TV services in Marmara Region	Annual fee is 0.5% of net sales, plus an administrative fee of 0.35% of net sales.
	General authorisation with notification to the NRA	All other services including Internet access, value added services and public WLAN (Wi-Fi) services.	TRY 2,730.00 (€1,407)	Annual authorization fee is TRY 2,730 (€1,407) No administrative fee.
Albania	Law on Telecommunications No. 8618 of June 14, 2000 (in force until June 25, 2008):			
	Individual licence	Category I – public national fixed telephony networks and services and public mobile telephony services. The number of licences is decided by the government.	Determined through a public tender procedure	ALL 7m (€56,370)
		Category II – public local and regional fixed telephony networks and services, paging, PMR/PAMR services	-	ALL 20,000 (€160) per commune (for rural network operators) ALL 100,000 (€800) per municipality (for regional operators)

Country	Authorisation type:	Networks/services	Authorisation charges and administrative fees	
			One-off fees	Annual fees
	General (class) licence	Internet services, data transmission services, value added services, public payphones (coins or prepaid cards)	-	ALL 25,000 (€200) per POP ALL 75,000 (€600) for local ISP ALL 150,000 (€1,200) for regional ISP ALL 200,000 (€1,600) for national ISP ALL 2m (€16,050) for backbone ISP
	The new Law on Electronic Communications No. 9918 of May 19, 2008 (came into force on June 26, 2008) introduces 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 the NRA before the start of activities. Individual licences, however, will continue to be issued by the NRA for the rights of use of the radio spectrum. Annual fees to be paid by notified operators may not exceed 0.5% of annual gross revenue, and will be defined by the NRA in a separate regulation.			
Bosnia & Herzegovina	Individual licence	Fixed and mobile public telephony networks and services (licences issued to the three incumbent operators)	BAM 1,000 (€511)	Public fixed telephony network and services: BAM 500,000 (€255,600) Public mobile GSM networks and services: BAM 700,000 (€358,000)
		Public fixed telephony services	BAM 1,000 (€511)	BAM 70,000 (€35,800)
		Public fixed telecommunication networks	BAM 1,000 (€511)	• local: BAM 5,000 (€2,600) • regional: BAM 10,000 (€5,200) • national: BAM 50,000 (€26,000)
	General (class) licence	Provision of Internet services	BAM 500 (€255)	BAM 4,000 (€2,100)
Montenegro	Law on Telecommunications of 2000 (Official Gazette No. 59/2000), Article 3 of the Rulebook on determination of registration fees and license fees of telecommunication operators and providers of telecommunication services (Official Gazette No. 08/2002, No. 68/2004).			
	Individual (special) licence	Fixed and mobile public telephone networks and services	Registration fee: €1,000 One-off fee determined through a public tender procedure Maximum €6 million	1% of annual revenue €1,000 fee for international traffic
		VoIP services	Registration fee: €1,000 One-off fee determined through a public tender procedure Minimum is set by the Ministry: €10,000	1% of annual revenue
		Fixed wireless access services in the 3.4-3.8 GHz	Registration fee: €1,000 One-off fee determined through a public tender procedure Minimum is set by the Ministry: €175,000	1% of annual revenue
	General licence	All other services including Internet access (but not VoIP) and wireless access	Registration fee: €1,000 One-off fee: €10,000	-

Country	Authorisation type:	Networks/services	Authorisation charges and administrative fees	
			One-off fees	Annual fees
	The new Law on Electronic Communications adopted on July 29, 2008 introduces 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 the NRA before the start of activities. Individual licences, however, will continue to be issued by the NRA for the rights of use of the radio spectrum.			
Serbia	Individual licence (issued for services that require use of numbers or frequency resources)	Public mobile telecommunications network services using spectrum	RSD 25,000 (€320) licence application processing fee One-off fee determined through a public tender procedure Minimum is set by the Ministry	• RSD 70,000,000 (€900,000) in the first year of operations • 0.9% of annual revenues thereafter
		Public voice services offered on a commercial basis as real time voice transfer between network termination points	RSD 25,000 (€320) licence application processing fee One-off fee determined through a public tender procedure Minimum is set by the Ministry	• RSD 20,000 (€256) for every 1000 subscribers in the first year • 0.1% of annual revenues thereafter
		Public data transmission services provided through a public data transmission network	RSD 25,000 (€320) licence application processing fee One-off fee determined through a public tender procedure Minimum is set by the Ministry	• RSD 25,000 (€320) for every 100 subscribers in the first year • 0.5% of annual revenues thereafter
		Cable distribution network services for distribution of radio and television programs, or any other telecommunications services, based on wireless access	RSD 25,000 (€320) licence application processing fee One-off fee determined through a public tender procedure Minimum is set by the Ministry	• RSD 30,000 (€384) for every 500 subscribers in the first year • 0.2% of annual revenues thereafter
		Paging services	RSD 25,000 (€320) licence application processing fee One-off fee determined through a public tender procedure Minimum is set by the Ministry	• RSD 10,000 (€128) for every 1000 subscribers in the first year • 0.1% of annual revenues thereafter
		Internet services based on own fixed wireless access infrastructure	RSD 25,000 (€320) licence application processing fee One-off fee determined through a public tender procedure Minimum is set by the Ministry	• RSD 50,000 (€640) for every 1000 subscribers in the first year • 0.1% of annual revenues thereafter
		Other services using numbers from the National Numbering Plan	RSD 25,000 (€320) licence application processing fee One-off fee determined through a public tender procedure Minimum is set by the Ministry	• RSD 50,000 (€640) in the first year • 0.1% of annual revenues thereafter

Country	Authorisation type:	Networks/services	Authorisation charges and administrative fees	
			One-off fees	Annual fees
	General authorisation with notification to the NRA	Access and transport networks for which an individual licence is not required, provision of Internet services; value added services; closed user group services, call back services, cable TV network services	RSD 10,000 (€128) notification processing fee	0.1% of annual revenues and not less than RSD 50,000 (€640)
Kosovo	Individual licence	Public telecommunications services using fixed network, VOIP	National fixed telephone services licence: €87,500 International telecommunications facilities licence: €50,000 International telecommunications services licence: €35,000 Internet services: €5,000	1% of gross annual turnover attributable to the licensed activity

Table C.3 - Authorisation regimes for electronic communications networks and services

Notes:

Turkey: Mobile communications are subject to a further set of taxes, which include the Special Communication Tax, the Stamp Duty, a Handset License Fee and a Handset Usage Fee (paid by the end user) and the Treasury Share Premium (paid by the operator) – a total of over 60% of end user annual revenue.

Albania: Under the provisions of the Electronic Communications Act (Law No. 9918 of May 19, 2008, Article 14 defines a notification process, while Article 13 stipulates the right to offer electronic communications networks and services for profit making purposes to any undertaking. The NRA has yet to publish the forms and the requirements for notification as required by Articles 14 and 15.

The status of VoIP in the EU was set out in the Commission Communication on the Status of voice on the Internet under Community Law, in particular under Directive 90/388/EC.[19] The intention was not to regulate VoIP services in the same way as voice telephony if they were not substitutable. The regulatory framework reinforced the principle of technology neutrality, so that there is no specific regime for VoIP or for voice telephony. Under the EU 2003 directives, VoIP providers operate under the same general authorisation regime as any other communications providers.

The European Regulators Group adopted a common position on the regulation of VoIP at the end of 2007.[20] In March 2008, the European Commission received the final report of a study on VoIP regulation it commissioned from WiK.[21]

Different rights and obligations may apply to VoIP services depending on which category they belong to, whether electronic communications services (ECS) or publicly available telecommunications services (PATS). ECS are defined in the Framework Directive as services normally provided for remuneration and consist wholly or mainly in the conveyance of signals on electronic communications networks. PATS are a subset of ECS defined in the Universal Service Directive (2002/22/EC) as services:

[19] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:c:1998:006:0004:0008:en:PDF

[20] http://www.erg.eu.int/doc/publications/erg_07_56rev2_cp_voip_final.pdf

[21] http://ec.europa.eu/information_society/policy/ecomm/doc/library/ext_studies/voip_f_f_master_19mar08_fin_vers.pdf

- available to the public
- enabling originating and receiving of national and international calls and access to emergency services
- through a number or numbers in a national or international telephone numbering plan.

PATS providers have additional rights and obligations compared to publicly available ECS providers: number portability, calls to emergency services, carrier selection and pre-selection and the right of customers to have an entry in the publicly available directory.

Table C.4 summarises authorisation requirements for public VoIP services, covering:

- authorisation requirements specific for VoIP services (e.g., VoIP is defined as separate licensing category or there are specific notification requirements for VoIP under general authorisation regime);
- classification of VoIP based on PATS/ECS or any other definitions (e.g., public voice telephony services);
- any restriction to rights and obligations specific to VoIP providers.

NB. Table E.6 below shows where VoIP providers are allowed to use geographic and non-geographic numbers from the national numbering plan.

In Croatia, under the Telecommunication Law of 1999, VoIP was considered to be an Internet service, so that no further authorisation was needed. Under the Law of 2003, VoIP has been defined as separate service requiring a general authorisation with notification. Moreover, the authorisation fees for VoIP were initially kept unusually high: a €33,000 one-off fee plus an annual fee of 1% of revenue. The by-law on payments of fees for provision of telecommunication services amended on February 17, 2005, lowered the one-off fee by a factor of 50 to €670, and the annual fee was lowered tenfold, to 0.1%. The new Electronic Communications Law that entered into force on July 1, 2008 introduces an authorisation framework aligned with the Authorisation Directive.

FYROM has an authorisation framework that is aligned with the Authorisation Directive.

Also in Turkey, the provision of VoIP requires a long distance telephony service licence and is subject to the same conditions as the fixed voice telephony service.

In Albania, the law adopted in November 2006 clarified the status of VoIP services, introducing a technology neutral definition of publicly available telephony services, subject to the same licensing regime, regardless of the underlying technology. The new Law on Electronic Communications that entered into force on June 26, 2008 introduces an authorisation framework aligned with the Authorisation Directive.

In Bosnia & Herzegovina and in Kosovo, the provision of VoIP is subject to the same individual licence as for other fixed voice telephony services.

In Montenegro, the provision of VoIP is a separate service category that requires an individual (special) licence. The Montenegrin regulator issued 8 licences for VoIP following two tender procedures launched in July 2007 and in December 2007.

In Serbia, the authorisation rules (individual licence or general authorisation) depend on whether the service involves the use of numbering resources and real-time transmission of voice between termination points in a public telecommunications network.

Country	Authorisation requirements	Classification of VoIP	Any restrictions to rights and obligations of VoIP providers
Croatia	Individual licence (under the Telecommunications Law of 2003) General authorisation with notification to the NRA (new regime under the Electronic Communications Law, in force from July 1, 2008)	Technology neutral definition of Publicly Available Telephone Services (PATS)	-
FYROM	General authorisation with notification to the NRA	Technology neutral definition of Publicly Available Telephone Services (PATS)	VoIP providers are obliged in their advertising, marketing and subscriber agreements to provide information about any limitations to the quality of the offered services and access to emergency services, calling line identification and number assignment.
Turkey	Type 2 telecommunications licence	Long distance telephony services (LDTS), authorised through Annex A.9 of the Ordinance on the authorisation of telecommunications services and infrastructure sets out licensing and authorisation requirements (Official Gazette No 25565 of August 26, 2004, amended on April 17, 2007 and on August 17, 2007).	No subscriber number allocation. The scope of services under the Type 2 licence is limited to the right to “connect the traffic originating from PSTN, Internet and other networks except GSM to national and/ or international networks using any infrastructure and technology.”
Albania	Individual licence (under the Telecommunications Law of 2000) General authorisation with notification to the NRA (new regime under the Electronic Communications Law No. 9918, in force from June 26, 2008)	Technology neutral definition of Publicly Available Telephone Services (PATS)	To be defined under the new Law on Electronic Communications
Bosnia & Herzegovina	Individual licence for public fixed voice telephony services	Public fixed voice telephony services	No
Montenegro	Individual licence for provision of public voice telephony services over IP protocol	Public fixed voice telephony service	No
Serbia	Individual licence for public fixed voice telephony services (if numbering resources are used) General authorisation with notification to the NRA (if numbering resources are not used)	Public fixed telephony services	Not defined
Kosovo	Individual licence for public fixed voice telephony services	Public fixed telephony services	No

Table C.4 - Authorisation requirements and classification for VoIP services

Notes:

FYROM: VoIP providers wanting to serve customers through a local exchange can conclude an access agreement with the network operator. In such cases, call origination can *only* be provided using a freephone or "green" number (0800-9abcd). If the traffic volume on a voice channel is higher than 0.12 Erlangs, then the VoIP provider must conclude an interconnection agreement under which it has the right to provide both call origination and termination.

Albania: There was some work by the NRA in mid-2006 and again in early 2008 concerning VoIP rules and regulations. With the enactment of the new Electronic Communications Law (No. 9918) the NRA is expected to introduce rules for nomadic numbering and addressing, with the draft of the forms for numbering series as stipulated in Articles 81 and 82.

Serbia: The NRA (RATEL) has adopted a draft ordinance regulating VoIP services without numbers from numbering plan. This has been sent to Ministry for approval.

Authorisation for cable television networks and services are sometimes more complex than for other electronic communications services as they can involve two regulatory authorities: the NRA and the broadcasting regulator. Table C.5 summarises the authorisation requirements for cable television networks in South-East Europe.

In Albania and Serbia an authorisation from both national authorities is required: one each from the national broadcasting authority for the provision of content over the cable TV network and one from the NRA for the construction of cable infrastructure.

In Montenegro and in Kosovo, cable TV networks are outside the scope of the telecommunications legislation. They are subject to an individual licence issued by the broadcasting authority.

In Turkey, the Council of State cancelled the authorisation of cable platform services set out in Annex 10 to the Ordinance on Authorisations approved by the NRA in February 2005. Services authorised through a Type 2 telecommunications licence under this annex were defined as "one-way and two-way provision of all type of sound, data, image, and radio/TV signals over the cable platform network", hence it included telephone services as well as radio, TV, Internet and data. The Council of State argued that the authorisation in its current form gives the cable TV operators the possibility to offer more than one service, while according to the existing authorisation regime separate authorisations must be issued for the provision of each individual type of service. The NRA has appealed the Council of State's decision and a final decision is pending. On May 25, 2007 the NRA issued a statement that according to the Council of State's decision the existing authorisations for cable platform services only covered radio and TV broadcasting, and that the cable operators could apply for authorisations for additional services.

Country	Authorisation requirements	Additional authorisation required to offer other electronic communications services (e.g. Internet access)
Croatia	Individual licence (under the Telecommunications Law of 2003) General authorisation with notification to the NRA (new regime under the Electronic Communications Law, in force from July 1, 2008)	General authorisation with notification to NRA for additional services
FYROM	General authorization with notification to the NRA *plus* programming permission from the Broadcasting Council, according to the Broadcasting Law (Official Gazette No. 100/2005)	General authorisation with notification to NRA for additional services such as data communications and telephony
Turkey	Type 2 Telecommunication Licence	General authorisation with notification to the NRA for provision of Internet services
Albania	Individual licence from the National Council of Radio and Television. Prior authorization for the construction and final certification of cable network from the NRA (Law No. 8410 on Private and Public Radio and Television of September 30, 1998. Articles 123 and127).	General authorisation with notification to the NRA for provision of Internet services

Country	Authorisation requirements	Additional authorisation required to offer other electronic communications services (e.g. Internet access)
Bosnia & Herzegovina	General authorisation for the distribution of radio and TV programs from the NRA	Network operator license Additional authorisation required to offer other electronic communications services is network operator license.
Montenegro	Individual licence issued by the Broadcasting Agency	There is a separate procedure under the Telecommunication Law 2000 (Official Gazette, No. 59/2000) if the cable TV provider wants to provide other electronic communications services. The NRA has the authority to issue the required licences.
Serbia	General authorisation from the NRA for services and networks *plus* an individual licence from the Republic Broadcasting Agency (RRA) for content.	General authorisation from the NRA
Kosovo	Individual licence from the Independent Media Commission (IMC) under the Regulation on Cable Distribution of Radio and TV in Kosovo (CIMC 2007/04) of July 6, 2007.	If the cable TV operator wants to provide other electronic communications services then the NRA has the authority to issue the required licences.

Table C.5 - Authorisation requirements for Cable TV networks and services

Notes:
Montenegro: All regulations concerning cable television (e.g., conditions and licences) are determined by the Broadcasting Agency.
Kosovo: The IMC Council on May 8, 2008 awarded cable television licences to all ten applicants under Regulation 2007/04. Cable operators have the right to broadcast only those channels for which they have valid contracts.

4. Rights of way

Rights of way are necessary to establish electronic communications infrastructure, in particular, for new fixed network infrastructure access to install cables and ducts, across public and private land. Construction permits for mobile network infrastructure can also present a problem. Article 11 of the Framework Directive requires that applications for the development of infrastructure shall be handled by the relevant authorities in a transparent, non-discriminatory manner and without delay. The Framework Directive also requires that the authorities issuing building permits must be structurally separated from the network operators that apply for them. Expropriation procedures must be available – justified as a safeguard mechanism for access to private as well as to public land.

There are steps that can be taken to streamline application procedures, for example, in defining the maximum time periods for dealing with applications and making rules for the free use of or easy access to public domains.

Table C.6 below sets outs the regime for rights of way. It shows:

- whether there are clear and non-discriminatory procedures in place enabling operators to apply for rights of way; and
- procedures for access to public land, responsible authorities and the timescale for dealing with applications; and
- procedures for access to private land and expropriation.

Country	Non-discriminatory rights of way?	Procedures and timescale for access to public land and estimated time frame	Procedures for access to private land and estimated time frame
Croatia	Yes Article 21 of Telecommunications Law states that all broadcasters and telecommunication operators have a right to access public land. Similar provisions are contained in Article 27 of the new Electronic Communications Law.	Telecommunications Law, article 21(1) provides for the use of public land after obtaining approval from the state administration body responsible for that resource. Article 21(2) ensures that, in cases where this approval could not be obtained, and in which a public interest can be established, there is a possibility of expropriation of the public or private land, under the General Expropriation law. Article 27(4) of the new Electronic Communications Law 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.	The operator must have permission from the landowner. A request for approval can be made under article 21(1) of the Telecommunications Law, or an expropriation procedure under the General Expropriation Law, according to article 21(2). In accordance with the provisions of the General Expropriation Law, operators can acquire ownership or *usufruct* (right of use), when it is of interest of the Republic of Croatia. Article 27(4) of the new Electronic Communications Law 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.
FYROM	Yes All public network operators have non-discriminatory rights of way established by the Law for Electronic Communications	State land may be used by public operators upon application to the responsible department within the Ministry of Finance for the purpose of establishing the right of use or defining the expropriation procedures	Expropriation procedures may be used. For the purpose of establishing the right of use and easement under Article 90 of the Law for Electronic Communications, an operator must submit a proposed contract to the owner of the real estate. The proposed contract must state the financial compensation for the right of use and easement of the real estate, which must be equal to the market value payment for the equivalent right of use which they could receive in an ordinary commercial transaction of the same type and scope of rights, without taking into account unusual or personal circumstances and interest. If the owner of the real estate fails to agree within ten days of receipt of the proposed contract, the operator may request that the administrative body responsible for decisions concerning expropriation of real estate establish the right of use and easement of the real estate.
Turkey	Yes For public land and land under common usage.	The evaluation of applications for the use of rights of way must be carried out in a manner that is non-discriminatory, transparent and without any delay. Where parties cannot reach an agreement, settlement of disputes is provided by the courts.	Parties are free to make commercial agreements concerning rights of way, always provided they abide by the relevant legislation, authorisation and concession agreements, telecommunication licences, general authorisation and institutional arrangements and provided that Civil Law No. 4721 of November 22, 2001 is observed.
Albania	Yes Defined in the Law No. 8618 of June 14, 2000, article 12	Public land may be used by operators upon application to the regional authorities. Disputes between a public licensed operator and the relevant authorities are resolved by the courts.	A public telecommunications operator, may, in conformity with the legislation in force, enter into agreements with private persons to use their land and facilities for the installation and maintenance of telecommunication networks and equipment.

Country	Non-discriminatory rights of way?	Procedures and timescale for access to public land and estimated time frame	Procedures for access to private land and estimated time frame
Bosnia & Herzegovina	Yes, subject to the obligation to apply for construction permission from the relevant Municipal Authority and if telecommunication infrastructure corridors (routes for laying a network) are planned in Country Plan for that Municipality.	If construction permission is obtained, the operator may use public land. Articles: 9, 14, 22, 34, 36 and 49 of the Law on Country Planning and Use of Land (Official Gazette FBiH No. 52/02). Law on Country Planning in Republic Srpska (Official Gazette RS No. 84/02). Law on City Construction Land (Official Gazettes FBiH No. 67/05), Law on City Construction Land (Official Gazette RS No. 86/03). Municipal authorities will advise applicants on procedure.	The construction and planning laws and regulations do not differ private and public land, then the same laws and regulations as mentioned for public land applies for private land. The procedure defined in the Law (listed for public land) must be applied to access private land. In a case that the landowner refuse authorization, and if the public interest is established, expropriation may be applied for – otherwise, if construction is not in public interest, the operator must have permission from the landowner.
Montenegro	Yes For all public network operators, as specified in Telecommun-ications Law 2000, Chapter VI.	Yes Public land may be used by public operators upon application to an appropriate state or municipal administration. Disputes between a public licensed operator and the relevant authorities are resolved at courts.	Yes A public telecommunications operator, may, in conformity with the legislation in force, enter into agreements with private persons to use their land and facilities for the installation and maintenance of any telecommunication equipment.
Serbia	Telecommunication law (article 87) specifies that all public network operators have non-discriminatory rights of way.	Article 87 (4, 5, 6) of the Telecommunications Act provides legal support for access to public land. All procedures are defined in the Contract between the public operator and local municipality.	Article 87 (4, 5 & 6) of the Telecommunications Act provides legal support for access to private land. All procedures are defined in the contract between the public operator and owner of the private land. Expropriation is not used.
Kosovo	Yes All licensed operators have non-discriminatory rights of way established by Article 27 of the Law on Telecommunications	Yes Public land may be used by operators upon application to municipal authorities. Under Article 27 of the Law on Telecommunications, TRA may establish rules for the use of publicly and privately controlled property for telecommunications services and service providers.	A licensed telecommunications operator, may, in conformity with the legislation in force, enter into agreements with private persons to use their land and facilities for the installation and maintenance of telecommunication networks and equipment. Expropriation procedures may be used. The Kosovo Assembly adopted a Law on Expropriation (No 02/L-97) on February 8, 2007. However, it has never been promulgated by the SRSG and therefore has not entered into force.

Table C.6 - Rights of way

Notes:

Albania: In the new Electronic Communications Law (No. 9918), articles 21 and 22 stipulate the provisions to build and maintain the electronic communication networks and conditions for the joint use of assets and facilities. Article 23 makes reference to the use of the networks of entities or corporations that own such networks and intend to lease such networks for profit making purposes. If they decide to do so they should notify the NRA and complete the appropriate forms.

Montenegro: Articles 43-57 of Telecommunications Law (Official Gazette No. 59/2000) defines the conditions for building, maintenance, safety and use of telecommunications networks, facilities and equipment.

Article 12 of the Access Directive establishes that, based on a market analysis, NRAs can impose obligations on operators with SMP to meet reasonable requests for access to network elements and associated facilities. The NRA may do so where it finds denial of access or unreasonable terms and conditions would hinder the emergence of a competitive market at the retail level or would not be in the end-users' interest. Operators may be required, inter alia, to provide collocation or other forms of facility sharing, including ducts, buildings or masts.

Article 12 of the Framework Directive calls NRAs to encourage the sharing of facilities and access to properties by electronic communications network operators . In particular, where undertakings are deprived of access to viable alternatives because of the need to protect the environment, public health, public security or to meet town and country planning objectives, the sharing of facilities or property (including physical co-location) or specific measures to facilitate the coordination of public works can be mandated subject to a prior public consultation. Such sharing or coordination arrangements may include rules for apportioning the costs of facility or property sharing.

Table C.7 shows:

- obligations to provide access to ducts, imposed as a result of market analyses or based on specific legislation (e.g., national rules for electronic communications or competition law); and
- alternative obligations if the provision of access to duct is not possible (e.g., access to dark fibre, wave division multiplexing (WDM), provision of backhaul facilities).

Country	Obligations to provide access to ducts		Alternatives to duct access
	Market analysis	Other basis	
Croatia	No	Telecommunications Act, Article 22: • The NRA shall stimulate the shared use of the telecommunications infrastructure already constructed • Where the ownership of telecommunications infrastructure is not identified, the NRA may issue a temporary decision until the final ownership rights are determined The NRA has made a decision on conditions of using existing telecommunications ducts. The NRA has defined the procedure for regulating cables laid without the prior agreement, and also made a decision on conditions under which it is to be initiated and implemented.	-
FYROM	Yes Public communication network operators shall provide access to specified network elements and supplementary facilities upon the request of other public communication network operators and public electronic communication service providers, for which they may charge a fee. Operators with SMP are obliged to meet the demands for access to and the use of specified network elements and/or supplementary facilities at any technically feasible point on its network.	Under article 51 of the Law for Electronic Communications and the Rules for Access and Utilization of Specific Network Facilities, the NRA may impose infrastructure sharing because of the need to protect public health, the environment or to meet planning objectives	No

Country	Obligations to provide access to ducts		Alternatives to duct access
	Market analysis	Other basis	
	An operator with SMP shall provide general conditions for access and the use of specific network elements and/or supplementary facilities and shall publish them on its website.		
Turkey	Recently TA requested TT to prepare a common annex to the interconnection, bit stream access and LLU reference offers. This obligation depends on the SMP decision of TT based on fixed market analyses. No specific market analyses carried on. Currently this annex is on the public consultation. (http://www.tk.gov.tr/Basin_Duyurular/Duyurular/kamuoyu/2008/EK3b2008.pdf)		No
Albania	No	Article 22 of the new Law on Electronic Communications No. 9918 In cases where the economic use of space, city planning and protection of environment requires so, operators of the public electronic communications networks that have the right to construct and install communication equipments in the private or public property shall construct or install them in such way as to enable their joint use.	No
Bosnia & Herzegovina	No	No Article 13 of the licence for the provision of fixed telephony networks and services allows the licensee to conclude contracts based on commercial and technical conditions with any other operator for the sharing of infrastructure and collocation.	No
Montenegro	No	Rulebook on the Joint Use of Telecommunications Infrastructure (Official Gazette No. 65/2005) Article 1 of the Rulebook defines telecommunications infrastructure as land, buildings and other constructions, ducts, antenna masts and other necessary infrastructure needed for their use.	No
Serbia	No	Article 87 (2) of Telecommunications Law If technically feasible, the NRA may order sharing of infrastructure by two or more telecommunications operators. It may order the infrastructure owner to share its infrastructure in return for fair compensation.	No

Country	Obligations to provide access to ducts		Alternatives to duct access
	Market analysis	Other basis	
Kosovo	No	Section 3.6.3 of the Telecommunications Sector Policy supports the sharing of infrastructure facilities "... between and among PTO's (including, but not limited to, backbone facilities, towers, ducts, and premises), should be mandatory, to the extent practicable and consistent with the provisions of the Telecommunications Law. Section 27 of the Telecommunication Law, on shared use of facilities and public rights of way, states that "The TRA shall establish rules for the use of publicly and privately controlled property with respect to telecommunications services and service providers ..."	No

Table C.7 - Access to ducts

D. Implementation of the EU 2002 regulatory framework

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. It may subsequently be subject to specific *ex ante* regulatory obligations or remedies.

Table D.1 below examines the national frameworks used by NRAs for market analyses. It specifies the discretion an NRA has in exercising the functions foreseen under the EU 2003 regulatory framework, including the powers to:

- collect relevant information and any restrictions on this power;
- define relevant markets applying competition law principles;
- designate operators with SMP;
- impose regulatory obligations on operators with SMP, i.e.
  - remedies are pre-defined by law or
  - the NRA has discretion to impose remedies according to the identified competition problems; and
- how often the NRA is required to carry out market analysis.

The use of the old and rigid rule of 25% market share together with equally rigid lists of remedies or obligations has been common practice in recent years under most regimes. In the case of FYROM, the level is 40% taken from its domestic competition law, while in Serbia it is 20%, though with the option for the NRA to use 25%.

The timing of this report finds legal changes coming into effect, which should bring the approaches being applied much closer to that of the EU regulatory framework. Additional rows for the new laws of Croatia, Albania and Montenegro have been included, though these are not yet fully implemented.

Country	Restrictions on NRA powers to collect information	Definition of relevant markets: In law or by NRA.	Basis for SMP designation: Competition law or 25% market share threshold?	Imposition of remedies: Pre-defined or by NRA discretion	Timeframe for market analysis
Croatia	No restrictions Undertakings performing telecommunications activities are required to submit at the request of the NRA all data related to their activities, including financial data and data considered to be commercial in confidence (Article 15 of Tele-communications Law of 2003).	Under the Telecommunications Act of 2003, the NRA analysed four national markets set out in line with the principles of the EU 1998 framework: • public fixed telephone network and services (covering voice services and services for transmission of voice, sound, data, documents, pictures, etc.) • leased lines • public voice services in mobile networks • interconnection . The Ordinance on conditions and procedures for relevant markets definition of October 2005 (Official Gazette 127/2005) provided for the market definition procedures by the NRA based on the EU 2002 regulatory framework and European Commission recommendation on relevant markets of 2003, but has not been applied in practice.	25% market share (measured by revenue) in a relevant market, combined with an assessment of other criteria defined in Article 51 of Telecommunications Law of 2003	Remedies applicable to all operators with SMP are defined in Chapter VII of Telecommun-ication Law of 2003.	Once a year (Article 51 of Telecommunications Law of 2003)
Croatia – new law	No restrictions (Articles 53 (3), 54(2) of the Electronic Communications Act of 2008)	The NRA has discretion to define relevant markets taking into account the European commission recommendation on relevant markets and applying the three criteria test (Article 53 of the Electronic Communications Act of 2008).	Competition law principles, taking into account market shares and other relevant criteria, and EC guidelines (Article 55 of the Electronic Communications Act of 2008)	Discretionary remedies can be imposed by the NRA (listed in Articles 58 to 65 of the Electronic Communications Act of 2008).	At least once every three years (Article 52 of the Electronic Communications Act of 2008)

Country	Restrictions on NRA powers to collect information	Definition of relevant markets: In law or by NRA.	Basis for SMP designation: Competition law or 25% market share threshold?	Imposition of remedies: Pre-defined or by NRA discretion	Timeframe for market analysis
FYROM	No restrictions Operators of electronic communications networks and service providers are required to submit at the request of the NRA all information related to their activities. Such a request has to be justified, based on reasonable grounds and proportionate to its purpose (Article 23 of Law on Electronic Communications).	Under Article 41 of the Law on Electronic Communications, the NRA defines relevant product, service and geographic markets in accordance with the Law on Protection of Competition. In August 2005, the NRA adopted a Decision on the determination of relevant markets that sets out 18 relevant product markets according to the EC Recommendation of 2003, all are national in their geographic scope.	According to the provisions of the Law on Protection of Competition, a company has a dominant position on a relevant market if it has market share of over 40%. The NRA in its assessment of SMP in a relevant market takes into account this provision of the Law on Protection of Competition, combined with other criteria defined in Article 40 of Law on Electronic Communications.	Discretionary remedies can be imposed by the NRA.	Once a year (Article 42 of Law on Electronic Communications)
Turkey	According to the Regulation on Principles and Procedures for Identification of the Operators with Significant Power, the NRA can demand any information without restriction during the market analysis. NRA can use public surveys, studies of the third parties and international comparisons in its studies.	The NRA has discretion to define relevant markets applying competition law principles.	The Regulation on the Principles and Procedures for Identification of the Operators with Significant Power states that when determining which operators have SMP in a relevant market, market shares of the operators are considered as the primary criterion. The determination of the market shares of the operators can be made based on revenue, subscriber or user numbers, traffic volume, transmission capacity and transmission line number, as long as they are appropriate and available. In addition to market shares, SMP assessment can be based on a number of other criteria defined in Article 8 of the Regulation on Principles and Procedures for Identification of the Operators with Significant Power.	Under Article 10 of the Regulation on Principles and Procedures for Identification of the Operators with Significant Market Power, the NRA may impose on operators with SMP the following remedies: • transparency • publication of reference access and interconnection offers • non discrimination • accounting separation • tariff regulation • cost accounting. NRA has some discretion in imposing regulatory obligations, but certain remedies are predefined by law. The Ordinance on Access and Interconnection provides that once an interconnection obligation has been imposed on an operator with SMP, non-discrimination, transparency and cost-orientation obligations are triggered automatically.	At least once every three years (Article 6 (1) of the Regulation on Principles and Procedures for Identification of the Operators with Significant Power)

Country	Restrictions on NRA powers to collect information	Definition of relevant markets: In law or by NRA.	Basis for SMP designation: Competition law or 25% market share threshold?	Imposition of remedies: Pre-defined or by NRA discretion	Timeframe for market analysis
Albania	Under Article 19 of Telecommunications Law of 2000, public operators must provide the NRA with 'statistical data'. The NRA has the authority to define the type of data and the timing for its provision.	The NRA has discretion to define relevant markets applying competition law principles, according to TRE Regulation on SMP designation of Sept. 16, 2005.	25% market share as threshold in a relevant market combined with an assessment of other criteria defined in Article 17 of Telecommunications Law of 2000, and TRE Regulation on SMP designation of Sep. 16, 2005.	Basic remedies that apply to all operators with SMP are defined by Telecommunications Law Further discretionary remedies can be imposed on SMP operators by the as defined in TRE Regulation on Access and Interconnection of December 7, 2007.	At least once every two years (TRE Regulation on Access and Interconnection of December 7, 2007)
Albania – new law	No restrictions (Article 16 of the Law on Electronic Communications of May 19, 2008)	The NRA has discretion to define relevant markets applying competition law principles (Article 32 of the Law on Electronic Communications of May 19, 2008).	Competition law principles, taking into account market shares and other relevant criteria (Article 33 of the Law on Electronic Communications of May 19, 2008)	Remedies are discretionary imposed by the NRA (listed in Articles 39-45, 56 of the Law on Electronic Communications of May 19, 2008).	At least once every two years (Article 31 of the Law on Electronic Communications of May 19, 2008)
Bosnia & Herzegovina	Licence conditions of all licensed operators and service providers contain an obligation to provide to the NRA any requested information in a timely fashion.	Discretionary definition by the NRA (Article 14 of the Law on Communications)	25% market share as threshold in a relevant market combined with an assessment of other criteria	Basis regulatory obligations are defined in the law and licenses of the three incumbent operators. Further discretionary remedies can be imposed by the NRA (Article 14 of the Law on Communications).	Once every year (Article 14 of the Law on Communications)
Montenegro	No restrictions, according to the statutes of the NRA	Discretionary definition by the NRA	25% market share, measured by number of subscribers, as threshold for SMP designation in a relevant market combined with an assessment of other criteria (Articles 3(42) and 12(28) of Telecommunications Law of 2000)	Specific obligations related to access and interconnection that apply to all operators with SMP are set out in the Ordinance on Access and Interconnection of Oct. 10, 2006	Not defined
Montenegro – new law	No restrictions (Article 18 of the Law on Electronic Communications of July 29, 2008)	Discretionary definition by the NRA (Article 41 of the Law on Electronic Communications of July 29, 2008)	Competition law principles, taking into account market shares and other relevant criteria (Article 47 of the Law on Electronic Communications of July 29, 2008)	Remedies are discretionary imposed by the NRA (listed in Articles 48-51, 56 of the Law on Electronic Communications of July 29, 2008).	Not defined

Country	Restrictions on NRA powers to collect information	Definition of relevant markets: In law or by NRA.	Basis for SMP designation: Competition law or 25% market share threshold?	Imposition of remedies: Pre-defined or by NRA discretion	Timeframe for market analysis
Serbia	No restrictions Public telecommunications operators are required to submit at the request by the NRA all information related to their activities (Article 21 of Telecommunications Law).	Discretionary definition by the NRA	20% market share, measured by number of subscribers, which the NRA may raise to 25% (Article 4(49) of the Telecommunications Law)	SMP obligations are set out in Articles 9, 10, 39, 40, 43, 48, 53 and 111 of the Telecommunications Law.	Not defined
Kosovo	The NRA has the authority to collect and maintain information, including but not limited to statistics, financial, employment and network performance reports or other reports that it requires in order to fulfil its responsibilities (Telecommunications Act (UNMIK Regulation 2003/16), Section 12).	Discretionary definition by the NRA	25% market share in a relevant market, combined with an assessment of other criteria (Telecommunications Act (UNMIK Regulation 2003/16), Section 44)	Basic access and interconnection obligations are set out in Telecommunications Act and operators' licences. Further discretionary remedies can be imposed by the NRA.	Subject to NRA discretion or upon request of any service provider

Table D.1 - Market analysis and the discretionary powers of NRAs

Notes:

Croatia: Chapter VIII of the new Electronic Communications Act of 2008 (Official Gazette 73/2008) that entered in force on July 1, 2008 provides for the market analysis procedures, definition of relevant markets, SMP designations and imposition of remedies on SMP operators based on the EU 2003 regulatory framework. Article 52 of the new law requires the NRA to carry out market analysis procedures at least once every three years.

Albania: Chapter VI of the new Law on Electronic Communications of May 19, 2008 (Law No. 9918, Official Gazette No. 84) that entered in force on June 26, 2008 provides for the market analysis procedures, definition of relevant markets, SMP designations and imposition of remedies on SMP operators based on the principles of the Law on Competition and the EU 2003 regulatory framework. Article 31 of the new law requires the NRA to carry out market analysis procedures at least once every two years.

2. Analysis of relevant markets by NRAs

Table D.2, below, shows the analyses of relevant retail and wholesale markets conducted by the NRAs.

Country	Relevant market	Geographic scope	Operator(s) with SMP	Remedies imposed on SMP operator(s)	Legal basis Reference to relevant legislation or NRA decision
Croatia	Public fixed telephone network and services, covering: • Voice services • Services for transmission of voice, sound, data, documents, pictures, etc.	National	Joint SMP: • HT- Hrvatske Telekomunikacije (T-Com) • Iskon (100% owned by T-Com)	• Network access and interconnection • non-discrimination • transparency • publication of reference offer • price control and cost-orientation • accounting separation	HAT SMP decision of Sept. 14, 2006 Chapter VII of Telecommunication Law of 2003
	Leased lines	National	• HT- Hrvatske Telekomunikacije (T-Com)		HAT SMP decision of March 30, 2007 Chapter VII of Telecommunication Law of 2003
	Public voice services in mobile network	National	• T-Mobile Hrvatska • VIPnet		HAT SMP decision of March 30, 2007 Chapter VII of Telecommunication Law of 2003
	Interconnection services	National	• HT- Hrvatske Telekomunikacije (T-Com) • T-Mobile Hrvatska • VIPnet		HAT SMP decision of March 30, 2007 Chapter VII of Telecommunication Law of 2003
FYROM	Wholesale call termination in individual mobile network (market 16/2003)	National	• T-Mobile Macedonia • Cosmofon Skopje	• Interconnection and access • transparency • non-discrimination • accounting separation • price control and cost accounting obligations • access to and use of specific network facilities	AEC decision of Jan. 18, 2008

Country	Relevant market	Geographic scope	Operator(s) with SMP	Remedies imposed on SMP operator(s)	Legal basis Reference to relevant legislation or NRA decision
	• Fixed voice telephone networks and services • Access to networks for data transmission and leased lines	National	• Makedonski Telekom	• Interconnection and access • transparency • non-discrimination • publication of RIO, RUO, reference offer for minimum set of leased lines • accounting separation • price control and cost accounting obligations • CS/CPS	Article 146, Transitional provisions of Electronic Communications Law
Turkey	Wholesale call termination in individual mobile network (market 16/2003)	National	• Turkcell • Vodafone • Avea	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2005/880, Official Gazette of December 28, 2005 (SMP designations for GSM mobile markets: M15-M16/2003)
	Wholesale mobile access and call origination (market 15/2003)	National	• Turkcell	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2005/880, Official Gazette of December 28, 2005 (SMP designations for GSM mobile markets: M15 - M16/2003)
	Retail access to the public telephone network at fixed location (markets 1-2/2003)	National	• Türk Telekom	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2006/DK-10/142, Official Gazette dated 17/03/2006 (SMP designation for fixed markets: M1-14/2003)

Country	Relevant market	Geographic scope	Operator(s) with SMP	Remedies imposed on SMP operator(s)	Legal basis Reference to relevant legislation or NRA decision
	Retail publicly available national, local and international telephone calls at fixed location (markets 3-6/2003)	National	• Türk Telekom	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2006/DK-10/142, Official Gazette dated 17/03/2006 (SMP designation for fixed markets: M1-14/2003)
	Wholesale call termination to on public telephone networks provided at a fixed location (market 9/2003)	National	• Türk Telekom	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2006/DK-10/142, official gazette dated 17/03/2006 (SMP designation for fixed markets: M1-14/2003)
	Wholesale call origination on the public telephone network provided at a fixed location (market 8/2003)	National	• Türk Telekom	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2006/DK-10/142, Official Gazette dated 17/03/2006 (SMP designation for fixed markets: M1-14/2003)
	Transit services in the public telephone network provided at fixed locations (market 10/2003)	National	• Türk Telekom	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2006/DK-10/142, Official Gazette dated 17/03/2006 (SMP designation for fixed markets: M1-14/2003)

Country	Relevant market	Geographic scope	Operator(s) with SMP	Remedies imposed on SMP operator(s)	Legal basis Reference to relevant legislation or NRA decision
	Wholesale unbundled access (including shared access) to local loops and sub loops for the purpose of providing broadband and voice services (market 11/2003)	National	• Türk Telekom	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2006/DK-10/142, Official Gazette dated 17/03/2006 (SMP designation for fixed markets: M 1-14/2003)
	Wholesale broadband access including bit-stream access (market 12/2003)	National	• Türk Telekom	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2006/DK-10/142, Official Gazette dated 17/03/2006 (SMP designation for fixed markets: M 1-14/2003)
	Wholesale terminating and trunk segments of leased lines (market 13-14/2003)	National	• Türk Telekom	• Non-discrimination • Cost accounting • Accounting separation • Transparency • Publication of reference access and interconnection offer • Subject to tariff regulation	TA Decision no. 2006/DK-10/142, Official Gazette dated 17/03/2006 (SMP designation for fixed markets: M 1-14/2003)
Albania	Wholesale call termination in individual mobile network	Geographic extent of each mobile network	• Albanian Mobile Communications • Vodafone Albania	• Non-discrimination • Cost orientation • Transparency • Access and interconnection • Respect confidentiality • Price control • RIO	TRE decision of September 18, 2007
	Retail public mobile services	National	• Albanian Mobile Communications • Vodafone Albania		TRE decision of September 18, 2007
	Retail access to the public telephone network at fixed location	National	• Albtelecom	• CS/CPS	TRE decision of November 13, 2007

Country	Relevant market	Geographic scope	Operator(s) with SMP	Remedies imposed on SMP operator(s)	Legal basis Reference to relevant legislation or NRA decision
	Retail publicly available telephone calls at fixed location	National	• Albtelecom	• Non-discrimination • Cost orientation • Transparency • Access and interconnection • Respect confidentiality • Price control • RIO	TRE decision of November 13, 2007
	Wholesale call termination to geographic numbers in Albtelecom fixed network	National	• Albtelecom		TRE decision of November 13, 2007
	Wholesale call origination on the public telephone network provided at a fixed location	National	• Albtelecom		TRE decision of November 13, 2007
	National transit services in the public telephone network provided at fixed locations	National	• Albtelecom		TRE decision of November 13, 2007
	International transit services in the public telephone network provided at fixed locations.	National	• Albtelecom		TRE decision of November 13, 2007
Bosnia & Herzegovina	Fixed telephony services	Geographic extent of each fixed network	• BH Telecom • Telekom Srpske • HT Mostar	• Non-discrimination • Cost orientation • Transparency • Access and interconnection • Respect confidentiality • Price control • RIO • CS/CPS	RAK decision of September 27, 2007 (Official Gazette of BiH 81/2007)
	Mobile telephony services		• BH Telecom • Telekom Srpske • HT Mostar	• Non-discrimination • Cost orientation • Transparency • Access and interconnection • Respect confidentiality • Price control • RIO	RAK decision of September 27, 2007 (Official Gazette of BiH 81/2007)
Montenegro	Public fixed telephone networks and services	National	• Crnogorski Telekom (T-Com)	• Non-discrimination • Cost orientation	Articles 3(42) and 12(28) of Telecommunications Law of 2000
	Internet services	National	• Crnogorski Telekom (T-Com)		

Country	Relevant market	Geographic scope	Operator(s) with SMP	Remedies imposed on SMP operator(s)	Legal basis Reference to relevant legislation or NRA decision
	Mobile telephone networks and services	National	• Promonte • T-Mobile	• Transparency • Access and interconnection • Respect confidentiality • Price control • RIO	
Serbia	Public fixed telephone networks and services	National	• Telekom Srbija	• Network access and interconnection • Non-discrimination • Cost orientation • Transparency • Prohibition of cross-subsidisation • Retail price control	RATEL decision of March 3, 2006
	Radio and television programme distribution via cable network	National	• SBB	• Retail price control • Accounting separation	RATEL decision of February 19, 2007
Kosovo	Public mobile services	National	• PTK (Vala)	• Non-discrimination • Cost orientation • Transparency • Network access • Respect confidentiality • RIO	Telecommunications Act (UNMIK Regulation 2003/16), Section 44
	Public fixed telephone networks and services	National	• PTK	• Non-discrimination • Cost orientation • Transparency • Network access • Respect confidentiality • RIO	

Table D.2 - Analyses of retail and wholesale markets

Notes:

Montenegro: Chapter Article 143 of the 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.

E. Competitive safeguards

1. Carrier selection and pre-selection

Article 19 of the Universal Service Directive (2002/22/EC) states that NRAs must require operators with SMP in the markets for the provision of connection to and use of the public telephone network at a fixed location to enable their subscribers to access the services of any interconnected provider of publicly available telephone services:

- on a call-by-call basis by dialling a carrier selection code; and
- by means of carrier pre-selection, with a facility to override any pre-selected choice on a call-by-call basis by dialling a carrier selection code.

Table E.1 details the regulatory obligations to offer CS and Table E.2 the obligations for CPS on the fixed networks of incumbent operators. These basic access services are not available in Albania, Serbia or Kosovo. In other cases, although available CS and CPS are relatively recent offers, a matter of months in Montenegro and one year in Bosnia & Herzegovina. It is only in Croatia where the services have been available for two years. While CPS has been introduced into Montenegro, the incumbent operator has not yet been obliged to include this in its RIO, leaving service providers to negotiate terms and conditions with Crnogorski Telekom.

Country	CS implementation for different type of calls				Operators required to provide CS	Call origination for CS included in RIO?
	Local	National	International	Calls to mobile		
Croatia	July 2006	July 2006	July 2006	July 2006	T-Com	T-Com RIO, Section 4.2
FYROM	May 2008	January 2007	January 2007	January 2007	Makedonski Telekom	Makedonski Telekom RIO, Annex 3D
Turkey	Not available	April 2006	April 2006	April 2006	Türk Telekom	Türk Telekom RIO, Sections 2.1.1.2 and 3.1.6
Albania	Not available	Not available	Not available	Not available	-	-
Bosnia & Herzegovina	July 2007	July 2007	July 2007	July 2007	• BH Telecom • Telekom Srpske • HT Mostar	Yes
Montenegro	December 2007	December 2007	December 2007	December 2007	All public telecommunications operators, both fixed and mobile	Crnogorski Telekom RIO, Section 2.5
Serbia	Not available	Not available	Not available	Not available	-	-
Kosovo	Not available	Not available	Not available	Not available	-	-

Table E.1 - Obligations to provide carrier selection

Notes:
FYROM: In May 2008 the NRA implemented changes to Makedonski Telekom's RIO to ensure the availability of CS for local calls.
Albania: Users of Albtelecom have been able to use prepaid calling cards from service providers for national and international calls since 2002.
Kosovo: A public consultation on carrier selection regulations is to be launched during 2008.

Country	CPS implementation for different type of calls				Operators required to provide CPS	Call origination for CPS included in RIO?
	Local	National	International	Calls to mobile		
Croatia	January 2005	January 2005	January 2005	January 2005	T-Com	T-Com RIO, Section 4.2
FYROM	May 2008	January 2007	January 2007	January 2007	Makedonski Telekom	Makedonski Telekom RIO, Annex 3D
Turkey	Not available	April 2006	April 2006	April 2006	Türk Telekom	Türk Telekom RIO, Sections 2.1.1.2 and 3.1.6
Albania	Not available	Not available	Not available	Not available	-	-
Bosnia & Herzegovina	July 2007	July 2007	July 2007	July 2007	• BH Telecom • Telekom Srpske • HT Mostar	Yes
Montenegro	December 2007	December 2007	December 2007	December 2007	All public telecommunications operators, both fixed and mobile	No Only CS is included in Crnogorski Telekom's RIO, Section 2.5
Serbia	Not available	Not available	Not available	Not available	-	-
Kosovo	Not available	Not available	Not available	Not available	-	-

Table E.2 - Obligations to provide carrier pre-selection

Notes:
FYROM: In May 2008 the NRA implemented changes to Makedonski Telekom's RIO to ensure availability of CPS for local calls.

Where carrier selection and pre-selection have been available for some time, then service providers have entered the markets, but in very small numbers (see Table E.3). There has been only limited adoption of these services by consumers and businesses. It would appear that only carrier selection in Croatia can, so far, be considered to be a success.

Country	CS implementation		CPS implementation	
	Alternative operators offering CS	Number of CS users	Alternative operators offering CPS	Number of CPS users
Croatia	2	N/A	4	252,700
FYROM	2	4,881	-	-
Turkey	8	N/A	11	N/A
Albania	-	-	-	-
Bosnia & Herzegovina	2	N/A	-	-
Montenegro	3	N/A	-	-

Country	CS implementation		CPS implementation	
	Alternative operators offering CS	Number of CS users	Alternative operators offering CPS	Number of CPS users
Serbia	-	-	-	-
Kosovo	-	-	-	-

Table E.3 - Implementation of carrier selection and pre-selection

Notes:
Croatia: The number of CPS users at the end of Q1 2008. The CPS providers are: AMIS, H1, Metronet, Optima.
Turkey: There are 8 CS and 11 CPS interconnection agreements signed between Türk Telekom and alternative operators. 8 CS agreements do not mean that 8 operators are providing national CS services. Currently four are running national advertising campaigns, while the other four are concentrating on business customers and some selected end users (households). None of the operators that have signed the CPS agreement are marketing their services country-wide, instead they offer CPS for business customers and some selected end users (households).
Montenegro: The NRA has assigned CS access codes (1011, 1012 and 1013) to three VoIP operators: PTT Inzenjering, VOIP Telecom and Alliance Telecom.

2. Number portability

Number portability in fixed networks is required to allow customers to switch operators, usually away from the incumbent to a rival, while retaining the value and familiarity of an existing number. The EU legal framework requires that it be available for both:

- geographic numbers; and
- non-geographic numbers.

There are a number of possible technical solutions. With **onward routing**, a call to a ported number is routed to the donor network (i.e. the network to which the called party previously subscribed to), which then forwards the call to the recipient network (i.e. the network providing service to the subscriber after porting). Whereas, with **direct routing**, a central or distributed database of ported numbers is used for routing calls to ported numbers directly to the recipient network:

- **All calls query – ACQ**

  The originating operator consults the database for all calls.

- **Query on release – QoR**

  The originating operator consults the database only when the call to the ported number is rejected by the donor network:

  - for countries where an NP centralized database solution has been implemented, the method of its financing is shown; and
  - ported numbers statistics.

Table E.4 summarises the implementation of number portability. It is still very early in the introduction of this service, with the obvious exception of Croatia where nearly 200,000 numbers have already been ported.

Country	Implementation		Deadline and legal basis	Inter-operator charge per ported number	Technical solution	NP database financing	Ported numbers statistics
	Geographic numbers	Non-geographic numbers					
Croatia	July 2005	July 2005	Article 72 of the Telecommunications Law of 2003 Ordinance on number portability and carrier pre-selection of December 2004 (Official Gazette 183/04) The NRA Decision on number portability and carrier pre-selection of August 26, 2005 (with amendments)	No	Direct routing, ACQ with centralised database	Centralised database is operated by the NRA and funded from the NRA budget.	188,600 fixed numbers ported as of 1Q 2008
FYROM	September 2008	September 2008	Articles 84 and 85 of the Law on Electronic Communications By law on Number Portability of December 21, 2006 (with amendments) Technical description of the transactions and communication interface between the CRDB and operators approved by the NRA in March 2007.	No	Direct routing, QoR with centralised database	Centralised database is to be operated by the NRA and funded from the NRA budget.	-
Turkey	May 2009	May 2009	Number Portability Ordinance (Official Gazette No 26421, February 1, 2007). Centralised reference database established on May 9, 2008.	One-off charges per ported number have to be cost-oriented. The NRA may establish an upper limit for charges.	ACQ with centralized database (but other methods are not excluded)	Centralised database is to be operated by the NRA and the operation is to be funded from the NRA budget.	-
Albania	Not decided	Not decided	The new Law on Electronic Communications (Law No. 9918 of May 19, 2008) provides that it should be implemented within 12 months from its entry into force, i.e. by June 2009.	-	-	-	-
Bosnia & Herzegovina	Not decided	Not decided	Implementation deadline will be set out in the new Telecom Sector Policy (awaited)	Max. BAM 30.00 (€15)	ACQ with centralized database	Centralised database is to be financed by telecom operators	-

Country	Implementation		Deadline and legal basis	Inter-operator charge per ported number	Technical solution	NP database financing	Ported numbers statistics
	Geographic numbers	Non-geographic numbers					
			Law on Communications (Official Gazette No. 31/2003, Art. 8, 27, 38 and 39) RAK Rule on Number Portability No. 32/2008				
Montenegro	Not decided	Not decided	-	-	-	-	-
Serbia	Not decided	Not decided	-	-	-	-	-
Kosovo	Not decided	Not decided	-	-	-	-	-

Table E.4 - Availability of fixed number portability

Notes:

FYROM: Fixed and mobile number portability were to be implemented by July 1, 2007. In April 2007, the NRA began a public tender for procurement of the Centralised Reference Database (CRDB), but the procedure was cancelled by the government in October 2007 following appeals from several rejected bidders. The NRA has completed the renewed procurement procedure with the implementation postponed until September 1, 2008.

Turkey: The CRDB was established on May 9, 2008, and fixed operators are obliged to complete their preparations for fixed number portability within 12 months. Operator number portability for fixed geographic and non-geographic numbers will start on May 9, 2009.

Montenegro: The NRA has completed drafting the Rulebook on number portability. The Electronic Communications Law (adopted in late July by the parliament) contains provisions setting out the obligation for operators to provide number portability.

Table E.6 summarises the implementation of mobile number portability. Again, Croatia is very much in the lead, have implemented the obligation two years ago and having already ported almost 1 per cent of mobile numbers.

Country	Implementation	Implementation deadline and legal basis	Inter-operator charge per ported number	Technical solution	NP database financing	Use	
						Ported numbers statistics	% of total mobile numbers
Croatia	October 1, 2006	Article 72 of the Telecommunications Law of 2003 By law on number portability and carrier preselection of Dec. 2004 (Official Gazette 183/04) HAT Decision on number portability and carrier pre-selection of August 26, 2005 (with amendments)	No	Direct routing, ACQ with centralized database	Centralised database is operated by CTA and funded from the CTA budget.	41,400 as of Q1 2008	0.80%

Country	Implementation	Implementation deadline and legal basis	Inter-operator charge per ported number	Technical solution	NP database financing	Use	
						Ported numbers statistics	% of total mobile numbers
FYROM	September 2008	Articles 84 and 85 of the Law on Electronic Communications By law on Number Portability of Dec. 21, 2006 (with amendments) Technical Description of the Transactions and Communication Interface between the CDB system and operators approved by AEC in March 2007.	No	Direct routing, QoR with centralized database	Centralised database is to be operated by the NRA and funded from the NRA budget.	-	-
Turkey	November 2008	Number Portability Ordinance (Official Gazette No 26421, Feb. 1, 2007). Centralised reference database established on May 9, 2008.	One-off charges per ported number have to be cost-oriented. The NRA may establish an upper limit for charges.	ACQ with centralized database (but other methods are not excluded)	Centralised database is to be operated by TA and the operation is to be funded from the TA budget.	-	-
Albania	Not decided	-	-	-	-	-	-
Bosnia & Herzegovina	Not decided	Implementation deadline will be set out in the new Telecom Sector Policy (awaited). Law on Communications (Official Gazette No. 31/2003, Art. 8, 27, 38 and 39) RAK Rule on Number Portability No. 32/2008	Max. BAM 30.00 (€15)	ACQ with centralized database	Centralised database is to be financed by telecom operators.	-	-
Montenegro	Not decided	-	-	-	-	-	-
Serbia	Not decided	-	-	-	-	-	-
Kosovo	Not decided	-	-	-	-	-	-

Table E.5 - Availability of mobile number portability

Notes:

FYROM: Fixed and mobile number portability were to be implemented by July 1, 2007. In April 2007, the NRA began a public tender for procurement of the Centralised Reference Database (CRDB), but the procedure was cancelled by the government in October 2007 following appeals from several rejected bidders. The NRA has completed the renewed procurement procedure with the implementation postponed until September 1, 2008.

Turkey: The CRDB was established on May 9, 2008, and mobile operators are obliged to complete their preparations for MNP within 6 months. Operator MNP will start on November 9, 2009.

Montenegro: The NRA has completed drafting the Rulebook on number portability. The Electronic Communications Law (adopted in late July by the parliament) contains provisions setting out the obligation for operators to provide number portability.

Kosovo: A public consultation on mobile number portability is to be held during 2008.

Table E.6 shows where VoIP providers are allowed to use geographic and non-geographic numbers from the national numbering plan and where they are allowed to port such numbers to or from another operator. In most cases, in the absence of general number portability, it is not available for VoIP. Croatia and Montenegro have created dedicated number ranges for non-nomadic voice, respectively 075 and 078,

The term 'nomadic services' refers to services where the user can connect their VoIP phone to any network termination point and make or receive calls using the same number. Nomadic VoIP services are therefore 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.

Country	Access to numbers for VoIP				Number portability			
	Geographic		Non-geographic dedicated range(s) for VoIP		Geographic		Non-geographic	
	Non-nomadic VoIP	Nomadic VoIP	Non-nomadic VoIP	Nomadic VoIP	Non-nomadic VoIP	Nomadic VoIP	Non-nomadic VoIP	Nomadic VoIP
Croatia	Yes	No	Yes (075)	No	No	No	Yes	No
FYROM	Yes	No	No	No	NP not implemented		NP not implemented	
Turkey	No	No	No	No	NP not implemented		NP not implemented	
Albania	Yes	No	No	Yes	NP not implemented		NP not implemented	
Bosnia & Herzegovina	Yes	No	No	No	NP not implemented		NP not implemented	
Montenegro	No	No	Yes (078)	No	NP not implemented		NP not implemented	
Serbia	No	No	No	No	NP not implemented		NP not implemented	
Kosovo		No	No	No	NP not implemented		NP not implemented	

Table E.6 - Availability of numbers and number portability for VoIP

Notes:

Croatia: Providers authorised through individual fixed voice telephony licence have access to geographic numbers. VoIP providers authorised through general authorisation with notification have access to non-geographic numbers only.

FYROM: 58,000 geographic numbers have been issued to alternative fixed operators that offer voice telephony services based on LLU or WiMAX as access technologies; 6,000 geographic numbers to CableTV operators offering voice telephony services. The NRA also issued 29 non-geographic free-phone numbers (0800-9abcd) to VoIP providers that offer outgoing international calls using pre-paid calling cards (these numbers are not assigned to the subscribers and do not offer the possibility of receiving calls).

Albania: Article 90(3) of the new Law on Electronic Communications provides for the use of non-geographic numbers by nomadic VoIP services.

Serbia: Telekom Srbija, the fixed incumbent operator is currently the only authorised provider of voice telephony services. Draft ordinance on VoIP published by the NRA for consultation in December 2007 contains a proposal to allocate non-geographic numbers for VoIP.

3. Reference interconnection offer

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

Table E.7 gives an overview of fixed and mobile operators with SMP that are required to publish Reference Interconnection Offers (RIOs) and the number of interconnection agreements made, grouped by the type of interconnection. While considerable work has been undertaken on the preparation and approval of RIOs, there are a significant number of gaps, especially for MNOs. In the case of FYROM, there is an appeal underway against changes introduced by the NRA.

Country	Status of RIO		Number of interconnection agreements		
	Fixed operators with SMP	Mobile operators with SMP	Fixed – Fixed	Fixed – Mobile	Mobile - Mobile
Croatia	T-HT (Hrvatske Telekomunikacije, T-Com) T-HT RIO approved by the NRA on September 7, 2007 and valid from November 1, 2007. RIO applies only to interconnection with fixed networks. The first RIO was published in February 2005.	T-Mobile Hrvatska and VIPnet RIOs for were approved by the NRA in October 2007 and valid from November 1, 2007. The first RIOs was published in February 2005.	36	19	3
FYROM	Makedonski Telekom On Dec. 1, 2005 the NRA approved the technical and legal part of the first RIO, the financial part was approved in February 2006. Several amendments were approved during 2006-07. In May 2008 the NRA amended the RIO to enable CS for local calls and to modify cost-oriented interconnection prices based on a LRIC methodology.	T-Mobile and Cosmofon On January 18, 2008 the NRA designated both mobile operators as having SMP for call termination. The scope of remedies included publication of an approved RIO. In April 2008 the NRA approved, with changes, both RIOs. Both have appealed against the changes to the Commission of the NRA. The RIOs will only be published after the final decision.	6	6	3
Turkey	Türk Telekom Valid from April 2007	Turkcell, Vodafone and Avea Valid from October 2007	35	53	3
Albania	Albtelecom, valid from September 16, 2008 In March 2008 Albtelecom submitted its first RIO to the NRA for approval. Following a public consultation, the NRA approved the RIO with changes on August 11, 2008.	No RIO published In March 2008 AMC and Vodafone submitted their first RIOs for approval. The NRA decision on is to be adopted following a public consultation. TRE Regulation No 416 of Dec. 7, 2007 allows the NRA to make changes to the RIO.	53	3	3
Bosnia & Herzegovina	BH Telecom, valid from February 2008 HT Mostar, valid from October 2007 Telekom Srpske, valid from October 2007 (with annexes)	No RIO published BH Telecom, Telekom Srpske and HT Mostar are designated as having SMP in mobile telephony services	13	-	-

Country	Status of RIO		Number of interconnection agreements		
	Fixed operators with SMP	Mobile operators with SMP	Fixed – Fixed	Fixed – Mobile	Mobile - Mobile
Montenegro	Crnogorski Telekom, valid from April 2008 The first RIO published in December 2004	No RIO published ProMonte and T-Mobile are designated as having SMP in mobile telephony services. First RIOs expected to be submitted for approval in 2008.	1	6	3
Serbia	No RIO published The first draft RIO prepared by Telekom Srbija in August 2008. Not yet approved by the NRA.	No RIO published No operator designated as having SMP	0	2	3
Kosovo	PTK, valid from January 2007 Approved by the NRA on January 12, 2007	No RIO published Vala has SMP in public mobile services market	1	1	1

Table E.7 - RIOs for fixed and mobile operators and number of agreements

Notes:
Turkey: There are no alternative fixed networks in Turkey. All interconnection agreements with alternative fixed operators are concluded with long distance carriers.

4. Reference unbundling offer

Table E.8 below shows the legal basis for a Reference Unbundling Offer (RUO), with the set-up and monthly charges for a fully unbundled local loop and a shared loop. The levels of adoption by alternative operators are shown in terms of both the number of operator agreements and the numbers of loops that have been unbundled.

The number of loops unbundled to date is very small, being almost exclusively in Croatia. Although Turkey has had an RUO since August 2007, there are still only about 120 unbundled loops from a network of around 18 million lines.

Albania, Bosnia & Herzegovina, Serbia and Kosovo have yet to adopt RUOs.

Country	Status of RUO	One-off and monthly prices		Implementation	
	Legal basis	Fully unbundled loop	Shared loop	Number of LLU agreements	Number of unbundled loops
Croatia	T-Com RUO approved with changes by the NRA on January 11, 2008. The first RUO was published in October 2005 in accordance with LLU Ordinance of April 6, 2005 (amended August 2005).	• One-off: HRK 370 (€51.00) • Per month: HRK 52.14 (€7.19)	• One-off: HRK 550 (€75.80) • Per month: HRK 22.37 (€3.08)	5	55,700

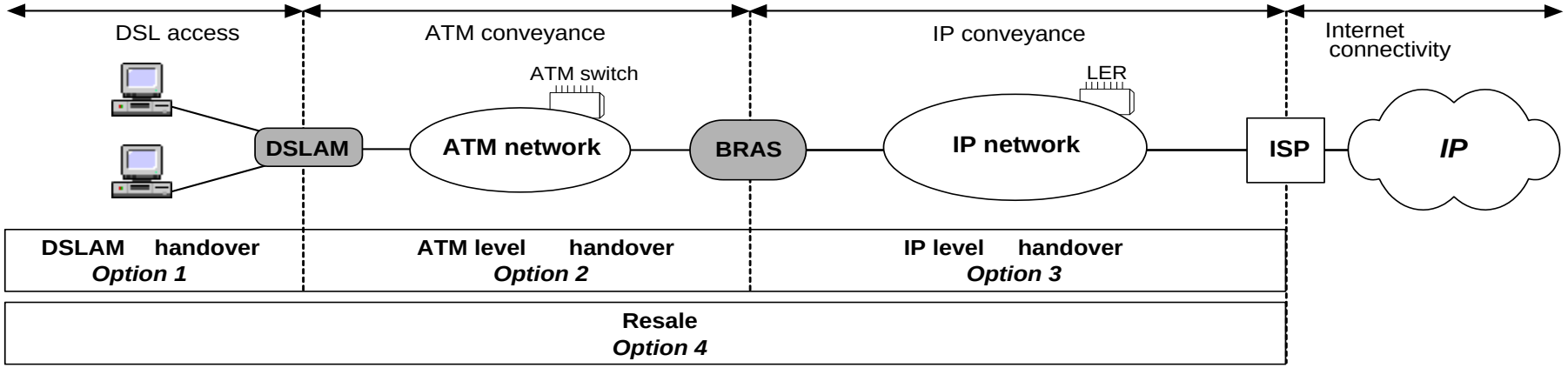
Country	Status of RUO Legal basis	One-off and monthly prices		Implementation	
		Fully unbundled loop	Shared loop	Number of LLU agreements	Number of unbundled loops
FYROM	Makedonski Telekom RUO In May 2006 AEC approved the first RUO. On February 11, 2008 the NRA approved a set of amendments to the RUO, including reduction of monthly rental charges for full and shared access. In May 2008 the NRA amended RUO to modify cost oriented LLU prices based on LRIC methodology.	• One-off (for a block of 100 loops with physical collocation): MKD 10,014 (€163.69) • One-off (for a block of 100 loops with distant collocation): MKD 7,594 (€124.13) • Per month: MKD 478 (€7.81)	• One-off (for a block of 100 loops with physical collocation): MKD 9,662 (€157.94) • One-off (for a block of 100 loops with distant collocation): MKD 7,242 (€118.38) • Per month: MKD 142.85 (€2.33)	1	-
Turkey	Türk Telekom RUO The first RUO was published in November 2006 and updated with regard to prices in August 2007 in accordance with the Communiqué on LLU of July 20, 2004.	• One off: TRY 100 (€50.00) • Per month: TRY 17 (€8.50)	• One off: TRY 110 (€55.00) • Per month: TRY 5.75 (€2.90)	9	~ 120
Albania	RUO not available The NRA adopted TRE Regulation No 416 of Dec. 7, 2007 on Access and interconnection including rules for the publication and content of RUO, but there is no obligation yet on Albtelecom to provide LLU or to publish an RUO.	-	-	-	-
Bosnia & Herzegovina	RUO not available According to the NRA Regulation on LLU adopted on May 27, 2008, RUOs of operators with SMP must be published within 4 months from entry into force of the rule (i.e. by October 2008).	-	-	-	-
Montenegro	RUO not available Regulations on LLU and RUO are expected to be adopted in 2008.	-	-	-	-
Serbia	RUO not available	-	-	-	-
Kosovo	RUO not available	-	-	-	-

Table E.8 - Status of the RUO and local loop unbundling charges

Notes:
FYROM: The commercial activities of the alternative operator On.Net using LLU were launched on May 12, 2008.

5. Wholesale broadband access

Initially, there were relatively simple models for unbundling, but these have been developed by operators and NRAs into complex systems that offer a more flexible range of options. Figure 31 shows the various possible handover points for DSL traffic between an incumbent operator and an alternative operator or ISP.



DSLAM: DSL Access Multiplexer / ATM: Asynchronous Transfer Mode / BRAS: Broadband-Remote Access Server / LER: Router

Figure 31 - DSL interconnection

DSL interconnection services – bitstream access (BSA)

Option 1 – handover at the DSLAM.

Option 2 – handover at the ATM network level, either at:

- the 'parent' ATM switch (i.e., the ATM switch closest to the DSLAM); or
- one or more 'distant' switches in the ATM network (involving additional conveyance across the ATM network by the incumbent);

Option 3 – handover at one or more points on the IP network of the incumbent.

Resale service

Option 4 – resale of end-to-end DSL service between the end-user and the ISP.

Table E.9 shows where bitstream access and resale are available, either on a commercial basis or mandated by the NRA. It shows the availability of the four options shown in Figure 31.

The extent of the adoption of the various options is shown in the final columns. Croatia has had some success with Option 3, while Turkey has had some with Option 4, though the size of the Turkish network means the effect on overall competition is limited. Serbia has done well, with nearly 70,000 lines using Option 1.

Country	Legal basis	Option 1	Option 2	Option 3	Option 4	Implementation	
	BSA/resale offered on commercial basis if not mandated?	DSLAM level	ATM/Ethernet handover	IP handover	End-to-end resale	Number of BSA/resale agreements	Number of broadband lines with BSA/resale by alternative operators
Croatia	In December 2007 the NRA approved T-Com's reference offers for wholesale broadband access included as Annex to the existing RIO for ISPs. Two types of service are offered: • ADSL Transport, which covers the transmission capacity from DSLAM to BRAS with handover in the incumbent's IP network, and • Wholesale ADSL access, which covers the bitstream access from DSLAM to the customer. These are first reference offers for wholesale broadband access, although T-Com had been providing ADSL Transport service since 2006, which corresponds most closely to ERG Option 3, but where the retail customer is charged by T-Com for the ADSL line.	Yes Wholesale ADSL access (see Annex to the RIO for ISP's)	Not available	Yes ADSL Transport (see Annex to the RIO for ISPs)	Not available	5 (Option 3)	16,842
FYROM	Makedonski Telekom offers wholesale ADSL on commercial basis. AEC plans to introduce BSA into regulation for LLU. BSA and naked-DSL are under consideration.	Not available	Not available	Yes Commercial offer	Yes Commercial offer	1 (Option 4)	N/A

Country	Legal basis	Option 1	Option 2	Option 3	Option 4	Implementation	
	BSA/resale offered on commercial basis if not mandated?	DSLAM level	ATM/Ethernet handover	IP handover	End-to-end resale	Number of BSA/resale agreements	Number of broadband lines with BSA/resale by alternative operators
Turkey	The obligation to provide wholesale bitstream access at IP level and resale was imposed on Türk Telekom by the TA board Decision No. 2004/535 of Oct. 6, 2004. The wholesale tariffs for bitstream access were approved in July 2005. The first reference offers were approved in August 2007. In July 2007, the TA also requested Türk Telekom to prepare by Jan.1, 2008 a wholesale BSA offer with handover at the ATM level (Option 2).	Not available	Yes	Yes Türk Telekom's Reference Bitstream Access offer published on Jan.16, 2008	Yes Türk Telekom's Reference Resale ADSL/ G.SHDSL offer published on Jan. 16, 2008	10 (Option 3) 13 (Option 4)	1,200 (Option 3) 200,000 (Option 4)
Albania	No	Not available	Not available	Not available	Not available	-	-
Bosnia & Herzegovina	No	Not available	Not available	Not available	Not available	-	-
Montenegro	No	Not available	Not available	Not available	Not available	-	-
Serbia	Telekom Srbija offers wholesale ADSL on commercial basis	Yes Commercial offer	Not available	Not available	Not available	-	69,574
Kosovo	No	Not available	Not available	Not available	Not available	-	-

Table E.9 - Availability of wholesale fixed broadband access offers

6. 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.

Table E.10 shows the availability of WLR, the legal basis, the prices and the adoption. For the present, WLR is not available from any fixed incumbent operator.

Country	Available since when?	Legal basis for the imposition of WLR	Pricing rule set by NRA?	Publication of a reference offer	Implementation	
					Number of WLR agreements	Number of WLR lines
Croatia	No	None	-	-	-	-
FYROM	No	None	-	-	-	-
Turkey	No	None	-	-	-	-
Albania	No	None	-	-	-	-
Bosnia & Herzegovina	No	None	-	-	-	-
Montenegro	No	None	-	-	-	-
Serbia	No	None				
Kosovo	No	None	-	-	-	-

Table E.10 - Availability of wholesale line rental

7. Implementation of wholesale offers in practice

Table E.11 summarises the state of play with all types of wholesale offer. The large number of blank entries indicates the lack of progress.

Nonetheless, Croatia with fully unbundled loops and bitstream access is in a strong position, gaining experience for all parties. Turkey has some success with BSA, but much will depend on the growth being achieved by the rival operators.

Country	Fully unbundled lines		Shared lines		Bitstream access		Broadband resale		Wholesale line rental	
	Number of agreements	Number of lines	Number of agreements	Number of lines	Number of agreements	Number of lines	Number of agreements	Number of lines	Number of agreements	Number of WLR lines
Croatia	5	55,700	1	355	5	16,842	-	-	-	-
FYROM	1	-	1	-	-	-	1	-	-	-
Turkey	9	-	9	120	10	1,200	13	200,000	-	-
Albania	-	-	-	-	-	-	-	-	-	-
Bosnia & Herzegovina	-	-	-	-	-	-	-	-	-	-
Montenegro	-	-	-	-	-	-	-	-	-	-
Serbia	-	-	-	-		69,574	-	-	-	-
Kosovo	-	-	-	-	-	-	-	-	-	-

Table E.11 - Implementation of wholesale offers in practice

8. National roaming, mobile access and call origination

Table E.12 shows the commercial and mandated offers of access to mobile networks.

Country	Legal obligation to offer		Commercial reality
	Mobile access and call origination for MVNOs and service providers	National roaming	
Croatia	Mobile operators with SMP are required to provide open access to their networks. However, there are no specific obligations regarding access for service providers.	2G operators are obliged to provide national roaming for new 2G operators for at least three years from the time that the new operator reaches 20% coverage of the population.	National roaming 2G-2G: Tele2 on VIPnet (from June 2005 until June 2008) Tele2 on T-Mobile (from June 2008 until June 2011)
FYROM	No Analysis of the market for wholesale mobile access and call origination services is underway	No Analysis of the market for wholesale mobile access and call origination services is underway	National roaming 2G-2G: VIP on T-Mobile (from September 2007)
Turkey	No No MVNO regulation enacted.	2G operators are required to satisfy reasonable, economically proportionate, and technically feasible roaming requests of other operators working in the same field to permit the use of the customer equipment of the requesting operator on their telecommunication system.	No
Albania	Access and Interconnection regulation provides for obligation on mobile operators, regarding access to mobile network for MVNO.	No	No
Bosnia & Herzegovina	No	Mobile 2G operators were required to have national roaming with each other to ensure national coverage.	National roaming 2G-2G: Between all the three mobile operators
Montenegro	No	No	No
Serbia	No	No	National roaming 2G-2G: VIP – mt:s (Telekom Srbija)
Kosovo	No specific obligations, but MVNO operations can be launched subject to a commercial agreement between an MNO and a service provider. The NRA issued an MVNO framework in February 2008 (amended in May 2008) that clarifies licensing, numbering, interconnection and other service provision aspects for MVNO operations.	No	Two MVNO licences are issued. Dardafone was licenced on June 12, 2008 and Dukagjini telecommunications was licenced on June 24, 2008. Dardafone has made an agreement with the MNO - Vala, whereas Dukagjini has made an agreement with the MNO - Ipko.

Table E.12 - National roaming, mobile access and call origination

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

Where an operator is designated as having SMP in a wholesale market, 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. However, the Directive does not prescribe which cost accounting methodology is to be used.

Table E.13 indicates the markets in which price controls have been imposed on operators having SMP. It also identified the type of price control applied by the NRA and the specific Cost Accounting System (CAS) it has mandated:

LRAIC: Long Run Average Incremental Costs

LRIC: Long Run Incremental Costs

FDC: Fully Distributed Costs

EDC: Embedded Direct Costs

Where the LRIC model is used, it shows whether the costs have been calculated using:

TD: a top-down model (starting from the SMP operator's accounting data);

BU: a bottom-up model of an efficient network; or

BU/TD a reconciliation of the other two models.

A description of the CAS and an annual statement concerning compliance are required to be published (Article 13(4) of the Access Directive).

Country	Markets/activities	Pricing rule set by NRA?	Methodology mandated by NRA			Legal basis
			Cost base	Cost standard	BU, TD or reconciliation	
Croatia	Fixed interconnection and LLU	Benchmarking	-	-	-	Telecommunications Law of 2003, article 56 (16) requires fixed and mobile operators to set cost-oriented wholesale prices
	Mobile call termination	Benchmarking	-	-	-	
FYROM	LLU, interconnection, leased lines (terminating segments)	Cost orientation	Current cost Forward-looking cost	FDC (from 2006 until LRIC is implemented) LRIC (new prices approved in May 2008)	Top-down	• Law on Electronic Communications, • Rules on the manner of recording the accounting separation related to interconnection and /or access activities, adopted in December 2005, • Rules on establishing the level of information detail to be published in the referent interconnection offers and the manner of their publication, adopted in July 2005, • Rules of establishing the level of the information detail to be published in the reference offer for unbundled access to local loop, adopted in October 2005.

Country	Markets/activities	Pricing rule set by NRA?	Methodology mandated by NRA			Legal basis
			Cost base	Cost standard	BU, TD or reconciliation	
	Call termination on individual mobile networks	Cost orientation	Current cost	FDC	Not applicable	• According to the "Rules on establishing the level of information detail to be published in the referent interconnection offers and the manner of their publication", adopted in July 2005, one (1) year after being designated as SMP operator on relevant market, mobile operator should use LRIC methodology • AEC Decision of January 18, 2008 designating T-Mobile and Cosmofon as having SMP on mobile call termination market.
Turkey	Leased Lines	Cost orientation	Forward-looking	LRIC	Reconciliation	Articles 29-30 of Telephone and Telegraph Law no 406, Article 10 of Tariff By-Law
	LLU	Benchmarking Retail Minus				Articles 7 and 11 of Access and Interconnection Ordinance and Communiqué on LLU. Turk Telekom has the obligation based on the market analyses.
	Fixed interconnection	Benchmarking Evaluation of TD costs				Article 11 of Access and Interconnection Ordinance. Turk Telekom has the obligation in fixed call originating and fixed call termination markets in which it has SMP.
	Mobile call termination	Benchmarking Evaluation of TD costs				Article 11 of Access and Interconnection Ordinance. Turkcell, Vodafone and Avea have the obligation for mobile calls having SMP in individual mobile call termination markets.
Albania	Fixed interconnection	Benchmarking (EU 2006 average)				Tariff Regulation Methodologies for SMP operator (Albtelecom), approved by Council of Ministers on June 18, 2008 Implementation of BU-LRAIC is foreseen.
	Mobile call termination	Benchmarking (EU 2007 average)				Tariff Regulation Methodologies for SMP operators (AMC and Vodafone), approved by Council of Ministers on June 18, 2008 Implementation of BU-LRAIC is foreseen.
Bosnia & Herzegovina	Fixed interconnection	Benchmarking			-	RAK regulation on interconnection of March 11, 2002
Montenegro	Fixed interconnection	Benchmarking	-	-	-	NRA decision of April 15, 2008 approving RIO of Crnogorski Telekom
Serbia	None	None	-	-	-	-

Country	Markets/activities	Pricing rule set by NRA?	Methodology mandated by NRA			Legal basis
			Cost base	Cost standard	BU, TD or reconciliation	
Kosovo	Fixed interconnection	Benchmarking	-	-	-	Based on section 6, paragraph 4, section 53, 57 on Law on Telecommunication UNMIK/REG/2003/16 and also based on section 9 of the License for fixed national services granted to PTK the NRA approved PTK's RIO on January 12, 2007.
	Mobile call termination	Benchmarking	-	-	-	PTK ruling of December 12, 2007 setting MTRs in a dispute between PTK Mobile (Vala) and Ipkonet mobile

Table E.13 – Price control and regulatory cost accounting obligations

F. Universal service

1. Scope of universal service and provider designation mechanism

Universal Service Directive 2002/22/EC 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 may also designate different undertakings or sets of undertakings to provide different elements of universal service and/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.

The table below shows the designation of the universal service providers in SEE countries:

- the scope of universal service defined by national legislation;
- which operator(s) has been designated to provide the US obligations or where no designation procedure has been carried out – which providers are currently required to provide the entire scope or specific elements of the universal service;
- the designation mechanism for the US providers and the legal basis;
- technology neutrality of the universal service obligation (e.g., whether there are any restrictions on mobile operators bidding for the provision of a connection to the public telephone network at a fixed location).

Country	Scope of US (specify individual elements)	Universal service providers	Designation mechanism for the US provider(s)	Technology neutral?
Croatia	• Access to the public voice telephone service through a connection at a fixed location	HT- Hrvatske Telekomunikacije d.d.	The NRA Council can impose an obligation on one or more providers of public voice services to provide USO, or it can select the	Yes

Country	Scope of US (specify individual elements)	Universal service providers	Designation mechanism for the US provider(s)	Technology neutral?
	• Access of end users to at least one comprehensive subscriber directory • Directory enquiry services • Provision of public payphones in the licensed areas • Access to emergency services to all subscribers free of charge • Lower tariffs for services provided to disabled people		most favourable bidder for providing universal services on the basis of a public tender. If a public voice service provider has a market share above 80%, HAT Council oblige that provider to provide USO, without public tender. The public tender procedure can be invoked even if there is public voice service provider with market share above 80% in justified cases, especially for geographically limited areas or on the request of other public voice service providers. On November 28, 2005, the NRA designated T-HT as a USO provider for 5 years term, without public tender.	
FYROM	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	None Some of the elements have been provided by the incumbent operator, Makedonski Telekom, within the scope of its concession agreement.	Under article 35 of the Law for Electronic Communications, Agency may designate one or several universal service providers, following a public tender procedure. In January 2008, Agency had started a public tender with pre-qualification for Universal Service provider nomination. Two companies have passed the first phase and the Agency prepares the tender documentation for the second phase.	Yes
	Ensuring access to information in the single directory and directory enquiry services	None		Yes
	Provision of public pay telephones	None		Yes
	Ensuring conditions for 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	None		Yes
Turkey	Access to emergency services to all subscribers free of charge	Türk Telekom	No designation mechanism – the requirement is set out in the Concession Agreement of Türk Telekom.	No
	Telephone directory services to be provided in the printed or electronic media	Türk Telekom		No
	Provision of public payphones	Türk Telekom		No

Country	Scope of US (specify individual elements)	Universal service providers	Designation mechanism for the US provider(s)	Technology neutral?
	Access to public fixed telephony services	Türk Telekom	Türk Telekom is assigned for provision of this service. Project studies continue.	No
	Provision of satellite services to Turkish Red Crescent Society	Türksat	Türksat is assigned for provision of these services (voice and data via satellite). Project studies continue.	No
	Digital broadcasting (DVB-T services)	-	No designation mechanism - the technical and legal studies continue.	No
	Access to basic internet services	Türksat, Türk Telekom	Türk Telekom and Türksat are assigned to establish the infrastructure of the basic internet services for training associations located in rural, high cost areas. Project studies continue.	No
Albania	Access to emergency services to all subscribers free of charge	All public telecommunications operators	No designation mechanism	Yes
	Lower tariffs for services provided to disabled people.	Albtelecom (fixed incumbent) has an obligation to offer lower tariffs for services provided to disabled people.	Subsidised from State budget	No
	Provision of public payphones	Public fixed telecommunication operators have obligations to provide public payphones in the licensed areas. The number of public payphones for the administrative zones are part of the licence.	Part of Albtelecom Licence (Annex 5) The number of public payphones for each administrative zone are part of the licence.	No
Bosnia & Herzegovina	Access to emergency services to all subscribers free of charge	All operators	No designation mechanism – the requirement is set out in the license terms	Yes
	Provision of public payphones	• BH Telecom • Telekom Srpske • HT Mostar	No designation mechanism – the requirement is set out in the license terms of the three fixed incumbent operators	No
	Lower tariffs for services provided to disabled and persons with special social needs	• BH Telecom • Telekom Srpske • HT Mostar	No designation mechanism – the requirement is set out in the license terms of the three fixed incumbent operators	No
	Connections to the fixed public telephone network at a fixed location and access to fixed public 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	• BH Telecom • Telekom Srpske • HT Mostar	No designation mechanism – the requirement is set out in the license terms of the three fixed incumbent operators	No

Country	Scope of US (specify individual elements)	Universal service providers	Designation mechanism for the US provider(s)	Technology neutral?
Montenegro	The minimum scope must include: Access to a public fixed telephone service; equal access to and affordability of publicly available telephone services for disabled users and users with special social needs; access to emergency services free of charge; access to telephone directory and directory enquiry services.	Not defined	Not defined	Not defined
Serbia	The minimum scope must include: 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	Not defined	Not defined	Not defined
Kosovo	Access to emergency services to all subscribers free of charge	All public telecommunications operators	No designation mechanism – the requirement is set out in the licence	Yes

Table F.1 – Universal service scope and provider designation mechanism

Notes:

Turkey: 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. Apparently the passenger transport services relate to two islands in the Aegean where private companies are not willing to provide services during the winter. This list was extended by the Council of Ministers to include two further elements:1) services oriented to spread information technologies, including computer literacy, to help the development of information society (February 2006), and 2) services for the provision of the digital broadcasting by the utilisation of various broadcast media and technology via digital terrestrial transmitters to cover 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.

Albania: Under the Law on Electronic Communications, AECP 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: 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 kbit/s; 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.

Bosnia & Herzegovina 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. The NRA has submitted a draft decision covering the scope of universal service, undertakings the designation and the funding mechanisms and the requirement for the NRA to set QoS parameters and terms for defining USO funding mechanism. The draft is examined by several government bodies, as part of standard procedure before its adoption by the Council of Ministers.

Montenegro: Secondary legislation is under preparation. The NRA will compile a draft Rulebook for Universal service by the end of 2008, the public consultation is underway, and then it will be submitted to the Ministry for adoption.

Serbia: 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 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. None of this has yet been achieved.

Kosovo: The Law on Telecommunications, Section 21.6, allows the NRA to establish additional conditions for authorizations, based upon the class or category of services, which may include special arrangements for disabled people. Under Section 49, the NRA is also authorized to adopt secondary legislation on the scope of the USO, which may include specific measures for people with disabilities.

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.

Table F.2 shows the legal basis for any calculations and reimbursement of costs for the universal service, the method of funding (if any) and the status of implementation.

Country	Legal basis for calculation and reimbursement of USO costs	Method of funding	Implementation
Croatia	Ordinance on universal telecommunications services (Official Gazette 123/2005)	The mechanism is not activated while the provider has a market share greater than 80%. When it drops below 80%, contributions will be in proportion to individual market shares from all voice telephony providers that have more than 5% market share. The total annual funding requirement will be determined by the NRA to cover any unfair financial burdens from USO obligations.	Not implemented
Croatia – new law	Articles 39-40 of the Electronic Communications Act of June 19, 2008 (Official Gazette 73/2008)	Cost sharing The reimbursement of net costs for universal service provision is to be financed by all operators of publicly available telephone services with revenue exceeding 2% of the total revenue in this market. The amount of contributions to be paid by individual operators is to be set in proportion to their market shares.	-
FYROM	Bylaw on the method of establishing prices for universal service Bylaw on the method of calculating real costs and intangible benefits for the provision of universal service Bylaw on the determination of the level of compensation for the real costs for the provision of the universal service	Cost sharing The reimbursement of net costs for universal service provision is to be financed by the operators and providers with minimum annual gross revenues of €100,000. The contribution may not exceed 1% of the operator's gross revenue received from the provision of public electronic communications networks and services.	Not implemented Since there no universal service provider has yet been nominated, the compensation scheme cannot be implemented.
Turkey	Law No.5369 on 'The Provision of Universal Services and Making Changes on Some Laws' (Official Gazette No. 25856, June 25, 2005)	According to article 6 of the Universal Service Law of June 2005, contributions to the universal service fund consist of the following: • 2% of the authorization fees collected by the Telecommunications	Funds are being collected but there has been no decision on compensation payments

Country	Legal basis for calculation and reimbursement of USO costs	Method of funding	Implementation
	Ordinance on Principles and Procedures for the Collection of Universal Service Revenues and Execution of Expenditures (Official Gazette No. 26213, June 29, 2006)	Authority • 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 Telecommunications Authority • 20% of what remains in the budget of the Telecommunications Authority budget after all expenditures are deducted Percentages can be increased by up to 20% by the Council of Ministers. These revenues are collected in the public budget and allocated to the budget of the Ministry of Transport.	
Albania	Not defined	Not defined	Not implemented
Bosnia & Herzegovina	Does not exist yet, necessary decision and rules will be adopted during 2008 and 2009.	Contributions will be required from all participants in the sector. The amount of contribution depends of participant's revenues. Only undertakings designated as USO providers will be allocated by fund.	Not implemented
Montenegro	Not defined	Not defined	Not implemented
Serbia	USO cost compensation is foreseen by the Telecommunications Law (Article 50).	Not decided	Not implemented
Kosovo	USO cost compensation is foreseen by the Law on Telecommunications, Section 49	No	Not implemented

Table F.2 – Universal service funding

Notes:
Bosnia & Herzegovina: Some assumptions from the draft Decision of the Council of Ministers: USO providers have no rights to ask for assets from the Fund till the end of 2009. The NRA will prepare the proposal for establishing the fund for USO by the end of 2009. The proposal will describe the functioning of the Fund according to Communication Law, Policy of Telecommunication Sector of B&H and actual B&H circumstances. In establishing the Fund, the NRA will respect the principles of transparency, least distortion of competition, non-discrimination and proportionality.
Montenegro: Secondary legislation is still under preparation. The NRA will compile the Draft Rulebook for Universal service by the end of 2008, the public consultation is in progress, then submit it to the Ministry.

3. Quality of service

Article 11 Universal Service Directive (2002/22/EC) provides that NRAs may set specific performance targets 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 (April 2000).

Table F.3 shows the quality of service targets set for operators, together with any work done to assess compliance.

Country	NRA imposed performance targets/QoS requirements	Operators subject to QoS requirements	QoS measured according to which standard?	Actual performances against targets published? (date + weblink)	Penalties for non-compliance
Croatia	Yes	HT – Hrvatske telekomunikacije d.d.	ETSI EG 201 769-1	April 2008. http://www.telekom.hr/lgs.axd?t=16&id=847	-
FYROM	Yes	Every operator or provider of public voice telephony services has an obligation to publish its QoS parameters for the previous year on its website and to inform the NRA about the measured QoS parameters.	ETSI EG 201 769-1	After the check and validation of the reported data for QoS parameters, AEC will publish them on its website.	No
Turkey	Yes	Yes	ITU-T E. 800 Rec. and ETSI TS 102 250-2 V.1.1.1 (2003-10)	No	-
Albania	Yes		ETR 138/1994 ITU-T E.426 WTDR-1994*		
Bosnia & Herzegovina	Yes	SMP operators	ETSI EG 201	-	-
Montenegro	Yes (Draft version of rulebook)	All public operators	ETSI EG 201 (Draft version of rulebook)	Not available	Not defined
Serbia	No	-	-	-	-
Kosovo	Yes	-	ETSI EG 201 769-1	-	-

Table F.3 – Application of Quality of Service requirements

Notes:

FYROM: In June 2006, the NRA prepared and adopted a by-law document on QoS parameters for public voice telephony services

Turkey: GSM operators are obliged to fulfil QoS requirements: call block rate must be less than 5% of total calls and call drop rate must be less than 2% of total calls.

Montenegro: The NRA will issue a Rulebook for Quality of Service by the end of 2008, a public consultation is underway.

Serbia: Universal service in not yet implemented so the quality of service is not specified.

Table F.4 shows the results of QoS measurements for key parameters according to ETSI indicators (1-5).

Country	Supply time for initial connection	Fault rate per access line per year	Fault repair time (hours: minutes)	Unsuccessful call ratio	Call set-up time (seconds)
Croatia	95% of requests are fulfilled within 42 days	11%	30 hours for 80% on target date for faults on access lines 74 hours for 95% on target date for faults on access lines; 25 hours for 80% on target date for all other faults 68 hours for 80% on target date for all other faults.	0.903% for national calls within fixed network 2.067% for international calls	1.625 seconds for 95% for national calls 5.000 seconds for 95% for international calls
FYROM	95% of requests are fulfilled within seven calendar days. 99% of requests are fulfilled within fourteen calendar days.	13%	80% of reported faults are repaired within 23:12:49 hours. 95% of reported faults are repaired within 51:29:25 hours.	2.74% for national calls 0.01% for international calls	0.936 sec for national calls 3.166 sec for international calls
Turkey	Not reported	5.56%	80% of faults on access lines are repaired within 24 hours	1.2% for national calls	Not reported
Albania	Not reported	4.4%	50 minutes	0.15% for local calls 1.73% for national calls 1.73% for international calls	Not reported
Bosnia & Herzegovina	8-22 days It depends on technical possibilities.	13-26%	80% faults - 28:00 - 51:30 95% faults - 125:18	3.01% for national calls 4.47% for international calls 1.15% for fix to mobile calls	0.05 - 4 seconds
Montenegro	Normally 1-2 days Maximum 7 days, if technical conditions are fulfilled.	Not available	4 hours	0.1% for local Not available for long distance	0.2 sec for local calls
Serbia	15 days (if technically possible)	30%	61 50 (latest)	1.01% for local calls 5.7% for long distance calls	1.50
Kosovo	6.4 days	0.003	24 hours	0.2%	0.50

Table F.4 – Quality of service measurements of fixed incumbent operators

G. Fixed retail telephony tariffs

The reference date for the information in this section is April 1, 2008.

One of the main objectives of a pro-competitive telecommunications policy is to provide all kinds of users, consumers, business and other organisations with improvements to telecommunications services in terms of price, quality and choice.

Retail prices represent one of the most important indicators to judge the results of policies. In a traditional monopoly, fixed monthly charges and local call tariffs were often priced significantly below cost in an effort to make telephony affordable to a larger number of consumers. Because they had monopoly rights, the operator could recoup any lost revenue by charging higher and even exorbitant prices for long distance and international calls. Such calls were primarily used by business, so the pricing was intended to be a transfer from business to consumers.

Such an approach becomes untenable with the introduction of competition, since new alternative operators will concentrate on high profit services and avoid those which would be unprofitable. The pressure to reduce the prices of long distance and international calls was increased by advances in technology that greatly reduced the cost of distance.

The need for tariff rebalancing is therefore been understood for some years, even though the implementation was obviously going to be painful for many consumers and for operators. Consequently, government have generally allowed several years for the transition. In order to soften the consequences for consumers, it has been common to differentiate tariffs between businesses and consumers, most often in monthly rentals.

At the end of the process, businesses and most consumers will normally pay less for their total communications bill and or will consume more communications services.

However, some consumers, typically families with low incomes, find that their total communications costs increase. The policy response has been to protect such users with special tariff packages. These typically have much cheaper monthly rentals than normal tariffs and usually include a limited number of free or cheaper minutes of calls. Once this has been exhausted, the user will have to pay tariffs that are significantly more expensive than the normal tariff. Therefore, special tariff packages are unattractive for other consumers, but may meet the basic communications needs of a family or household with limited income.

1. Tariff rebalancing and regulation of retail tariffs

Table G.1 shows the extent of the regulation of retail prices of fixed operators having SMP. In particular, it identified progress towards rebalancing of the retail tariffs of the incumbent operator. Any requirements for the advance notification of new retail prices to the NRA or the ministry are specified, together with the approval process, whether it must be granted or whether tacit approval is possible, after a period of notification has elapsed.

The methodologies to approve proposed retail prices, where this is required, include one or more of the following:

- compliance with a price cap regulation that has been set for the specific service(s)
- price squeeze tests, one or both of:
    - Test 1: SMP operator’s own costs: There is a price squeeze when the proposed retail prices would not cover the SMP operator’s own network and commercial costs.

- Test 2: Costs of an "efficient alternative operator": There is a price squeeze where the proposed retail prices could not be replicated by an alternative operator using the most efficient combination of its own network, commercial infrastructure and wholesale services purchased from the SMP-operator with prices fixed in the wholesale reference offer.

- benchmark comparison with prices for the same services in other countries

Country	Tariff rebalancing (target date if any)	Retail services covered	Advance notification requirements	Notice period	Formal or tacit approval	Assessment method (for formal approvals)
Croatia	Ongoing	Retail fixed voice telephony	Yes To NRA	15 days	Formal	Price squeeze Test 1
FYROM	Ongoing	• PSTN connection: initial connection, installation or taking over, use and ordinary maintenance • provision of Fixed Voice Telephony: international, long-distance, local and to mobile subscribers • Leased Lines: connection or taking over, use and ordinary maintenance • Telegraphy and Telex Services: connection or taking over of a connection, use and ordinary maintenance • telephone connection services to or from public pay phones.	Yes To NRA	Not specified	Formal notification	Price cap
Turkey	Ongoing	Fixed voice telephony, some retail services of the incumbent	Yes To NRA	30 days	Formal	Price Cap
Albania	Ongoing	Monthly rental, installation, calls, leased lines.	Yes To NRA	30 days	Formal	Price cap
Bosnia & Herzegovina	Rebalancing rule adopted and implementation started November 1, 2005. Phased implementation to be carried out during 2005-2008	Fixed voice telephony services • access fee, monthly subscription, one minute of voice service in domestic traffic, one minute of voice service in international traffic	Yes To NRA	1 month	Formal	Price cap
Montenegro	Completed August 31, 2007	Fixed voice telephony	Yes To NRA	8 days	Formal	Price cap
Serbia	No target date decided	Fixed voice telephony (Telekom Srbija is designated as SMP) Cable TV (SBB is designated as SMP)	Yes To NRA	Not specified	Formal	Cost based model
Kosovo	Ongoing	Fixed voice telephony	Yes To NRA	Not specified	Formal	Cost based model

Table G.1 - Tariff rebalancing and regulation of retail tariffs

Notes:
Albania: The methodology for tariff rebalancing of Albtelecom was under public consultation until May 21, 2008. Thereafter, the NRA will make a formal proposal to the Ministry which will be considered for approval by the Council of Ministers.

2. Retail price caps

Under Article 17 of the Universal Service Directive (2002/22/EC), NRAs are empowered to impose regulatory obligations to control individual tariffs (*inter alia*, by price caps) on undertakings with SMP in a given retail market if they have concluded, following a market analysis, that:

- the given market is not competitive; and
- obligations imposed on the wholesale market under the Access Directive (2002/19/EC) and the obligation to offer carrier selection and/or carrier pre-selection under Article 19 of the Universal Service Directive have failed to address competition concerns.

Table G.2 shows where retail price caps have been imposed on operators and the period of their validity.

Country	Validity of current price cap	Price cap (or sub caps)
Croatia	Retail price caps have not been imposed	-
FYROM	The period is defined in the concession agreement of Makedonski Telekom, as being from January 1, 2001 to December 31, 2018. Following an amendment to the Law on Electronic Communications adopted in July 2008, the concession agreement was cancelled in September 2008 and the price cap is no longer valid. AEC may impose a new price cap regulation, once it has carried out its analysis of the retail fixed telephony markets.	RPI+6% applies to MakTel's retail tariffs for the following basket of residential fixed telephony services: • one-off connection fee • one-off installation fee • monthly subscription fee • international calls • national calls • local calls • fixed-to-mobile calls • one-off initial fee for leased lines • monthly rental fee for leased lines • one-off initial fee for telex subscribers • monthly subscription fee for telex subscribers • fees for telex services; • public payphone services. In addition, two sub-caps apply as follows: • CPI+35% for local and long-distance calls • CPI+25% for monthly subscription fees for residential customers

Country	Validity of current price cap	Price cap (or sub caps)	
Turkey	From January 1, 2007 to December 31, 2008 (with a possible extension for one year)	CPI + 3.3% applies to the incumbent's retail tariffs for the following residential fixed telephony services: • one-off installation fee • monthly subscription fee • international calls • national calls • local calls • fixed-to-mobile calls	
Albania	Albtelecom From September 1, 2008 to August 31, 2010	RPI-RPI (effectively zero) for the basket (residential and business): • one-off installation fee • monthly subscription fee • local calls • national calls • retention rate for calls to mobile • retention rate for international calls	Sub caps: • RPI+20% for monthly rental residential • RPI+10.50% for local calls (residential peak RPI-X ≤ 8%) • RPI-15% national calls (within Albtelecom network) • RPI-15% for international calls
	AMC and Vodafone From September 1, 2008 to August 31, 2010	RPI-23% for one prepaid tariff option for both MNOs (Albacarta for AMC and Vodafone Card for Vodafone)	Sub caps: • RPI-28% for retention rate for calls to other MNOs (national) • RPI-28% for retention rate for calls to fixed network (national)
Bosnia & Herzegovina	From October 1, 2005 to December 31,2008		
Montenegro	Retail price caps have not been imposed	-	
Serbia	Retail price caps have not been imposed	-	
Kosovo	Retail price caps have not been imposed		

Table G.2 - Retail price caps

Notes:
Montenegro: A consultation on a draft rulebook for tariffs in public telecommunication service is under way. A price cap method has been defined but not yet applied.

3. Call charging system

The charges for public fixed voice telephony services can comprise two components: an initial or set-up charge applied at the beginning of a call and a charge for the remainder of the call, that may not depend on the type of initial charge used.

Initial charges can be of four different types:

- Call set-up charge set at the start of the call (when the call is answered). This charge does not include any call time. Per second or per unit charges apply from the beginning of the call.
- Initial charge that is used in the same way as call set-up, but additionally includes a certain number of seconds of call time before normal time-based charging starts.
- Unit charge in effect works the same way as the initial charge: A full unit is charged at the beginning of the call, providing a certain number of seconds call time until the next unit is charged. Depending on the principle used by the operator (synchronous or asynchronous) the number of seconds call-time in the first unit may be less than the specified unit duration.
- Minimum charging is normally used with per second billing, to ensure the operator obtains a minimum revenue per call. If the call duration is short, the actual call charge may be less than the minimum charge. In such cases the minimum charge will be applied.

Charging system during the call can by of three different types:

- Real time charging or "per second billing" in which the cost of the call to be calculated based on the exact duration of the call (normally to the nearest second). A call set-up charge, initial charge or minimum charge may be applied, in addition to the duration charge.
- Unit based charging using fixed price unit. The duration of this unit will vary with the destination of the call and time of day. The call duration will always be raised to a multiple of whole units, so the user will nearly always pay for more time than is used. Rarely, a call set-up charge may be applied to this method.
- Fixed period charging uses a variable price, but fixed duration unit. The call is normally charged on a per minute basis, or per 6 seconds. The price for the period will vary with destination and time of day. The charged duration of the call will be raised to a multiple of whole periods. A call set-up charge or initial charge is often implemented in the form of a higher charge for the first minute or period. This initial charge may vary with destination and time of day.

Table G.3 presents information on the call charging systems used by the fixed incumbent operators and the minimum cost of a call for local, long distance, international calls and call to a mobile phone.

Country	Type of call	Initial charges		Charging during the call	
		Types of charges	Nominal value (€ incl. VAT)	Minimum charging unit	Nominal value (€ incl. VAT)
Croatia	Local			60 seconds; 1 second*	
	Long distance			60 seconds; 1 second*	
	Fixed-to-mobile			15 seconds 1 second*	
	International			15 seconds 1 second*	
FYROM	Local	No initial charge		60 seconds	
	Long distance	No initial charge		60 seconds	
	Fixed-to-mobile	No initial charge		60 seconds	
	International	No initial charge		60 seconds	0 – 10 tariff zones**

Country	Type of call	Initial charges		Charging during the call	
		Types of charges	Nominal value (€ incl. VAT)	Minimum charging unit	Nominal value (€ incl. VAT)
Turkey	Local	N/A		60 seconds	0.0367
	Long distance	N/A		60 seconds	0.0430
	Fixed-to-mobile	N/A		20 seconds	0.0597
	International	N/A		60 seconds	0.0573
Albania	Local	Unit charge: 2 minutes		Unit charge of 2 minutes	
	Long distance	0		Per second billing	Per second billing
	Fixed-to-mobile	3		Per second billing	Per second billing
	International	0		Per second billing	Per second billing
Bosnia & Herzegovina	Local			1 second	
	Long distance			1 second	
	Fixed-to-mobile			1 second	
	International			1 second	
Montenegro	Local	No initial charge		1 minute	
	Long distance	No initial charge		1 minute	
	Fixed-to-mobile	No initial charge		1 minute	
	International	No initial charge		1 minute	
Serbia	Local	No initial charge		1 pulse	
	Long distance	No initial charge		1 pulse	
	Fixed-to-mobile	No initial charge		1 pulse	
	International	No initial charge		1 pulse	
Kosovo	Local	Pulse based		4 minutes	
	Long distance	Pulse based		4 minutes	
	Fixed-to-mobile	Pulse based		15 seconds	
	International	Pulse based		9.2 seconds	

Table G.3 – Call charging systems of fixed incumbent operators

Notes:

Croatia: There are two call charging systems. In one of them (used by tariff plans Start and Mini), the minimum charging unit is one minute or 60 seconds for the calls on the national network, but for calls to mobile networks and the international calls the minimum charging unit is 15 seconds. The tariff plan called Super has two alternatives. One has a minimum charging unit is one second and a call setup element of HRK 0.08. The other has a minimum charge of one minute and thereafter per second charging for all calls on the national network

Turkey: Charges include VAT and the Special Communication Tax of 15% for fixed network services.

Albania:	There have been no changes to the charging system since the previous report. The reported values are for residential users. Business users' prices are 50% higher than residential users' prices. The proposed methodology for tariff rebalancing that has been under public consultation, proposes the obligation on Albtelecom to change the charging system for local calls from units of 2 and 3 minutes to per-second billing, starting from the second 6-month period under the regulation.
Bosnia & Herzegovina:	Time-based charging system with pre-second billing.
Montenegro:	All prices are for the fixed incumbent operator (T-Com Montenegro, formerly Telecom Montenegro), VAT is excluded. The charging system is time-based. There are no initial charges for any type of calls. The tariff interval is 1 second, but with minimum charge equivalent to 1 minute. Off-peak tariffs (19:00-07:00) are 50% less than at peak times. After rebalancing the tariffs, the prices for residential and business users will be the same. The prices of international calls (foreign mobile in brackets) are: zone 1 €0.11 (0.27), zone 2 €0.15 (0.34), zone 3 €0.20 (0.40), zone 4 €0.40 (0.60), zone 5 €0.50 (0.70), zone 6 €0.60 (0.80) and zone 7 €0.70 (0.90). Source: Pricelist of T-Com Montenegro, dated from 13.03.2008. (www.t-com-cg.com)
Serbia:	The pulse duration varies, depending to the type of call: for local call – one pulse is 1 minute long in peak time and 2 minutes in off-peak; for long distance call - one pulse is 12 seconds in peak time and 24 seconds in off-peak; for calls to mobile networks – one pulse is 2 seconds in peak time and 4 seconds long in off-peak; for calls to a fixed network in Montenegro 2 seconds and to a mobile network in Montenegro 1 second.
Kosovo:	International call refers to first tariff group. Fixed to mobile calls from PTK to Ipko are the same for peak and off peak at € 0.16 per minute.

4. Minimum cost of a local call

In the calculation of the minimum charge for calls using per second billing it is assumed that the call is terminated as soon as it starts, making the minimum charge for the call equal to any call set-up or defined minimum call charge. If no such additional charges exist, the minimum charge will be zero.

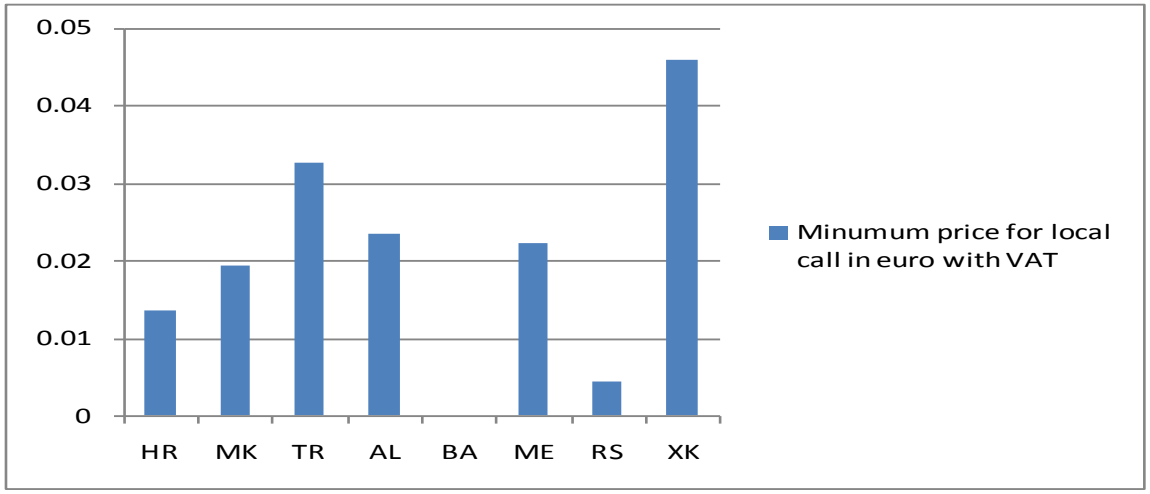


Figure 32 – Minimum cost of a local call

Notes:

Croatia:	The tariff alternative presented for Croatia is the Super plan with the option of per second charging from the first moment with the addition of a setup charge element.
Turkey:	The tariff includes a 15% Special Communications Tax

5. Monthly subscription fees for residential and business users

Table G.4 shows the monthly rental prices for PSTN lines in the fixed network for residential subscribers in nominal euro with value added tax included. It shows the prices for the standard tariff plans and, where available, the prices for the low usage tariff plan. For the low usage tariff plan, it shows the basis for its offering (e.g., legal requirement such as a universal service obligation or commercial offer) and any restrictions that might apply (e.g., no possibility to use CS/CPS).

Country	Standard monthly rental, € with VAT	Value of call units included		Availability of a low usage package Basis for the offer	Restrictions applicable to low usage package	Low usage monthly rental, € with VAT	Call units included in low usage monthly rental	
		Number of units	Nominal value of each unit, €				Number of units	Nominal value of each unit, €
Croatia	10.09	43	0.03	Yes Commercial offer	No	5.04	0	0.00
FYROM	7.69	100 minutes (local and national)	0.07	Yes Commercial offer called “Minimum package”	No	4.21	See note	0.00
Turkey	6.75	-	-	Yes Commercial offer	CS/CPS not permitted. Only one connection at any home.	4.25	100	0.05
Albania	1.98	-	-	None	-	-	-	-
Bosnia & Herzegovina • BH Telecom • Telekom Srpske • HT Mostar	 4.45 4.46 5.08	160 minutes of local calls (peak time)	 0.00 0.00 0.00	Yes Special package: war widows, disabled veterans, the blind and disabled	No	 2.16 2.16 2.16	160 minutes of local calls in peak time	 0.02 0.01 0.01
Montenegro	5.97	100 minutes of local off-peak calls	0.01	Yes Commercial offer	For residential users only	3.04	0.00	0.00
Serbia	1.08	-	-	None	-	-	-	-
Kosovo	7.99	250	0.04	Yes Commercial offer	-	3.99	0	0.00

Table G.4 - Residential monthly line rental charges of fixed incumbent

Notes:
FYROM: Traffic up to MKD 80 (€1.31) is charged at the standard tariff, thereafter the traffic is charged at twice that rate.
Turkey: Charges include the Special Communication Tax.
Montenegro: For party lines monthly rentals are €3.82 for the standard offer and €1.95 for the MINI package. (Source: T-Com Pricelist March 13, 2008 www.t-com-cg.com).

Serbia: For certain social groups with low incomes, if they use less than 150 pulses in a month they will be charged only the standard monthly rental and not for the calls.

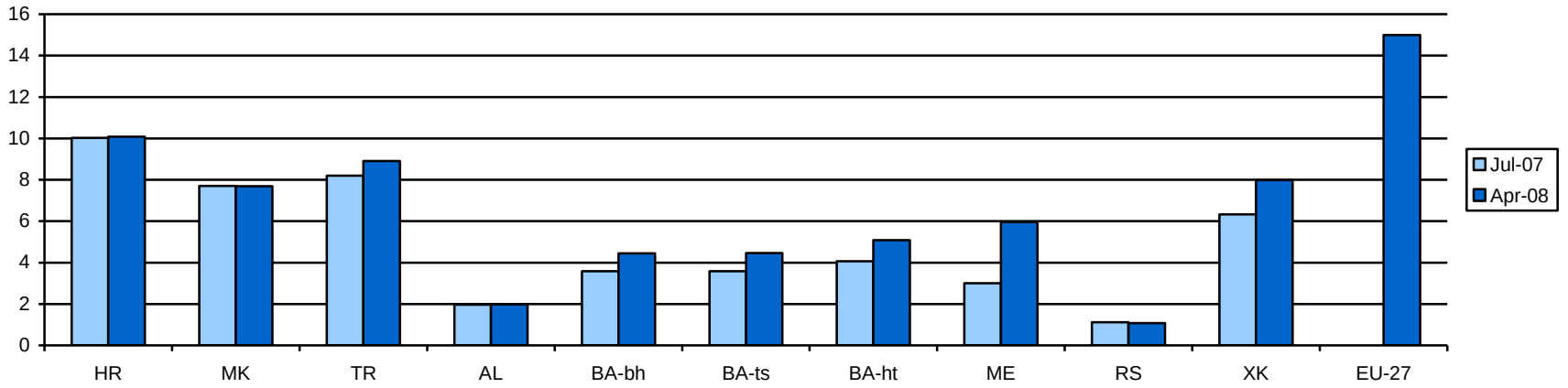


Figure 33 - Standard residential monthly rental (incl. VAT)

Notes:
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.
Turkey: The charges include the Special Communications Tax

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 indexes, which can be expressed as relative price levels. (See Section on General economic background).

Taking these price levels into account means that the prices for consumers in this region appear higher than what is expressed through the nominal exchange rate. Figure 34 below shows the differences in monthly rental when presented in nominal euro and in PPP values.

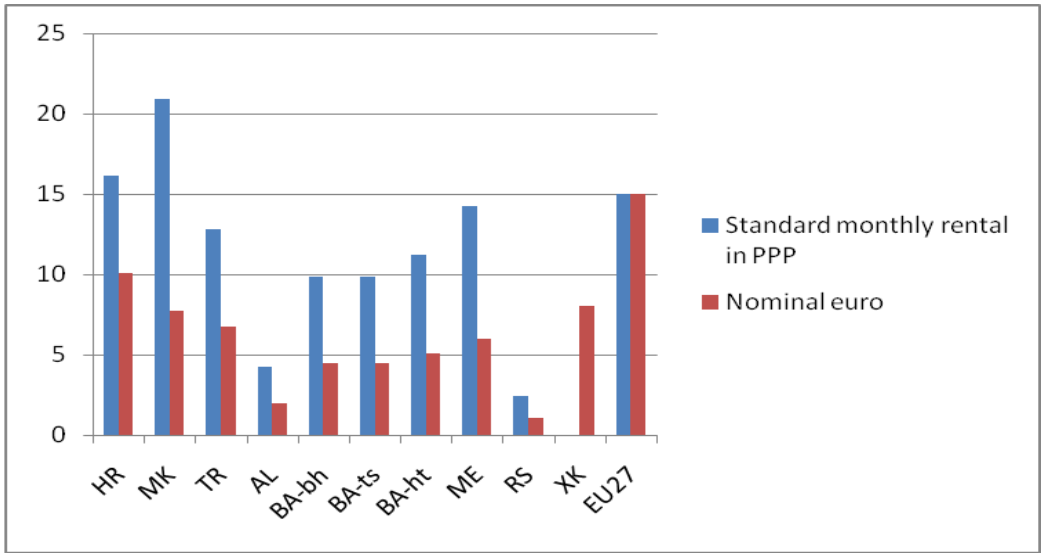


Figure 34 - Standard residential monthly rental (incl. VAT) expressed in PPP and nominal euro

Figure 35 below presents the value of free call units in the standard monthly rental for residential subscribers as well as the base rental. For Turkey and Bosnia & Herzegovina, a significant proportion of the fixed monthly rental may be used for call units.

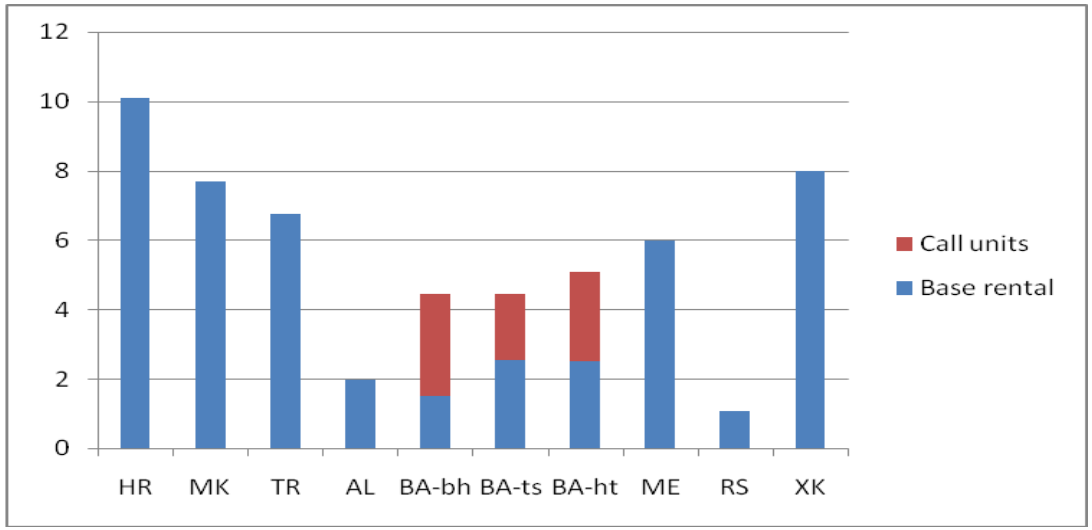
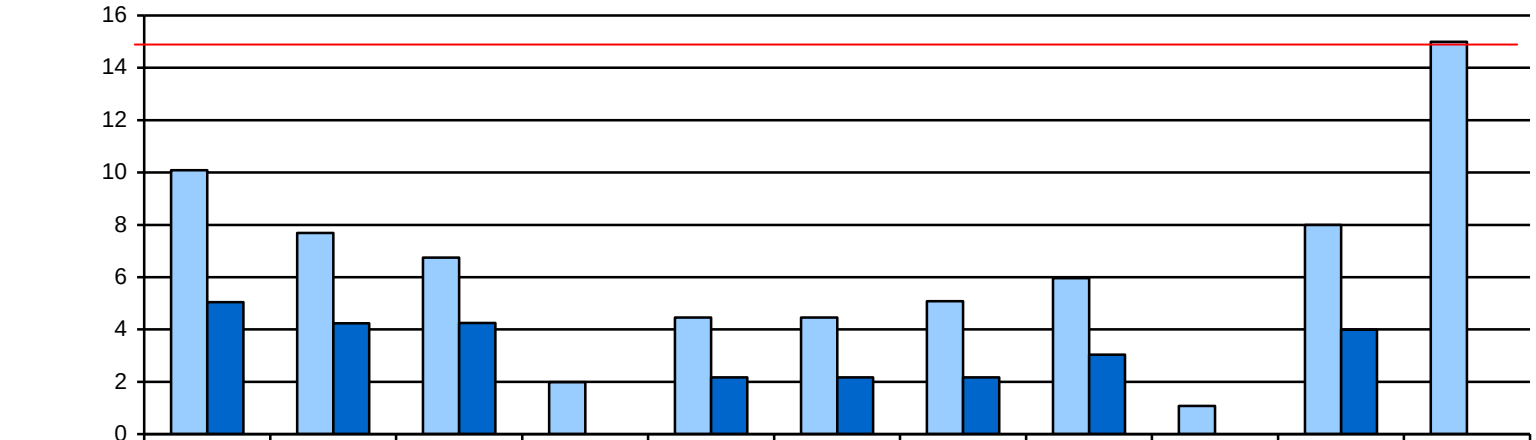


Figure 35 - Value of free call units included in standard residential monthly rental

Notes:
Turkey: The charges include the Special Communications Tax

Figure 36 below presents the low usage options in comparison with the standard monthly rental. Albania and Serbia do not have special low usage options, but their standard monthly rates are anyway lower than the low usage alternatives of the other countries.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Standard	10.09	7.69	6.75	1.98	4.45	4.46	5.08	5.97	1.08	7.99	15.00
Low usage	5.04	4.24	4.25	0.00	2.16	2.16	2.16	3.04	0.00	3.99	

Figure 36 - Standard and low usage residential monthly rental

Notes:
Turkey: The charges include the Special Communications Tax
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.

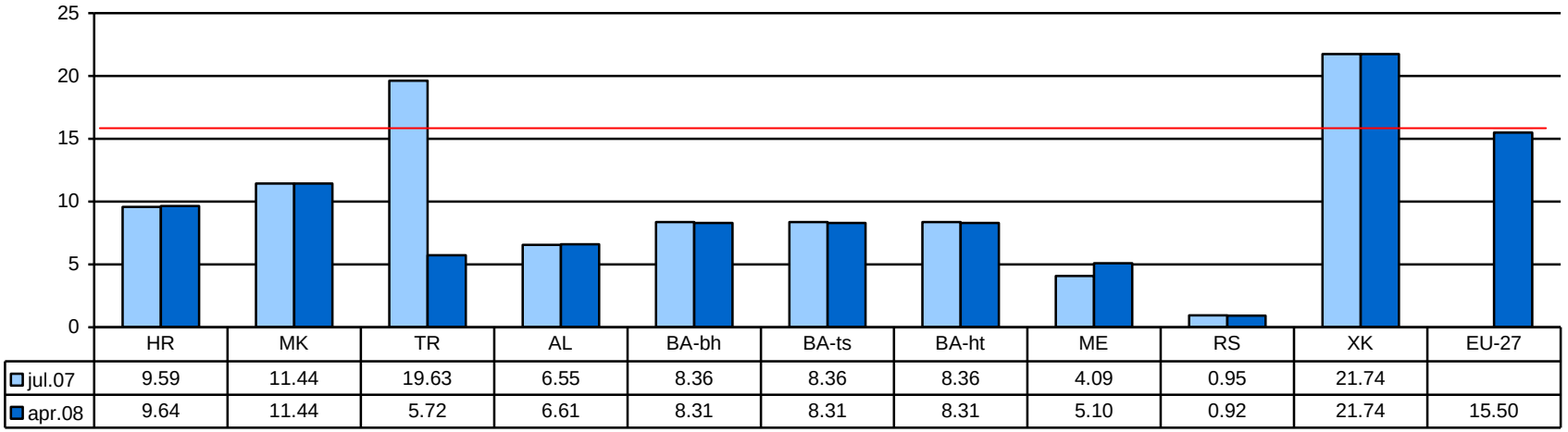
Table G.5 shows the monthly rental prices for PSTN lines in the fixed network for business subscribers in domestic currency and in nominal Euro without value added tax.

Country	Standard monthly rental €	Value of call units included	
		Number of units	Nominal value of each unit €
Croatia	9.64	0	-
FYROM	11.44	0	-
Turkey	5.72	-	-
Albania	6.61	0	-
Bosnia & Herzegovina:		160 minutes of local calls in peak time	
• BH Telecom	8.31		0.02
• Telekom Srpske	8.31		0.01
• HT Mostar	8.31		0.01
Montenegro	5.10	100 minutes of local off-peak calls	0.01
Serbia	0.92	150 pulses	0.92
Kosovo	21.74	2,500	0.04

Table G.5 - Business monthly line rental charges of the fixed incumbent

Notes:
Turkey: Includes Special Communications tax

Figure 37 below shows the monthly line rental charges for business subscribers and presents the corresponding information from July 2007 for comparison. Turkey has had significant price reductions. There are no major changes in the other countries.

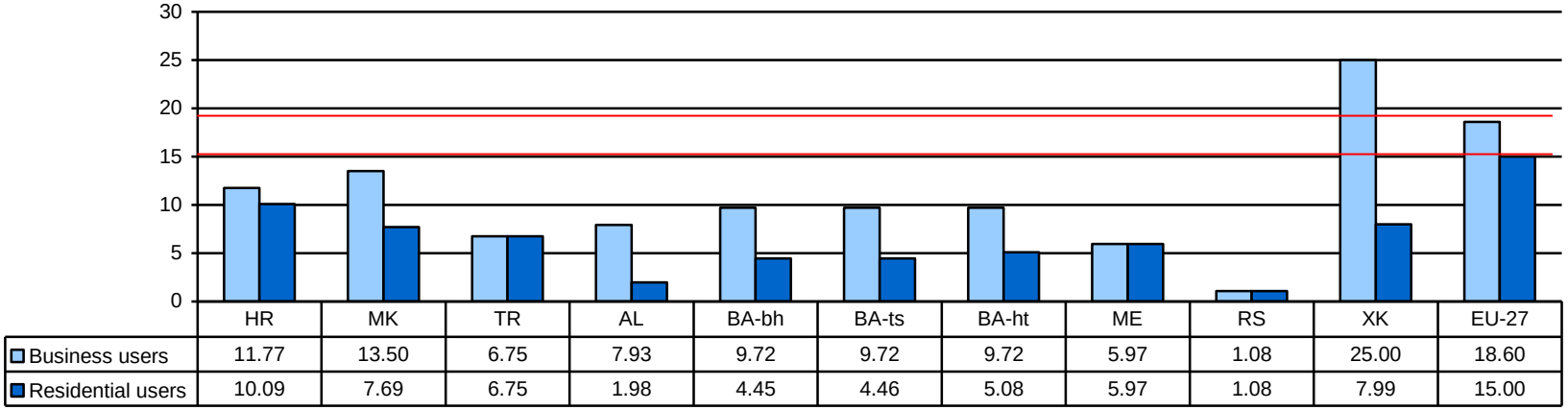


	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
jul.07	9.59	11.44	19.63	6.55	8.36	8.36	8.36	4.09	0.95	21.74	
apr.08	9.64	11.44	5.72	6.61	8.31	8.31	8.31	5.10	0.92	21.74	15.50

Figure 37 - Monthly rental business users

Notes:
Turkey: Includes Special Communications Tax
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.

Figure 38 presents a comparison between the monthly line rental charges for residential and business users. In order to make a valid comparison, VAT has been added to the rental charges for business users. The chart shows that residential subscribers pay less than business subscribers in many of the countries, particularly in Albania, Bosnia & Herzegovina and Kosovo. Turkey, Montenegro and Serbia have the same charges for both subscriber categories.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Business users	11.77	13.50	6.75	7.93	9.72	9.72	9.72	5.97	1.08	25.00	18.60
Residential users	10.09	7.69	6.75	1.98	4.45	4.46	5.08	5.97	1.08	7.99	15.00

Figure 38 - Monthly rental business and residential users (including VAT)

Notes:
Turkey: Includes Special Communications Tax
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.

6. One-off connection charges

Table G.6 shows the initial costs for the installation and connection of residential and business subscriptions. The installation costs represent the cost of a new installation in a location that has not been connected before. The connection cost is the cost 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.

Some operators have special reconnection tariffs that apply after a subscriber has been disconnected for failure to pay accounts. These are not included in the table.

Country	Residential (including VAT)		Business (excluding VAT)	
	New line connection charge	Reconnection charge	New line connection charge	Reconnection charge
Croatia	68.89	8.27	68.89	8.27
FYROM	20.26	0.00	20.26	0.00
Turkey	3.58	3.58	3.03	3.03
Albania	115.59	115.59	115.59	115.59

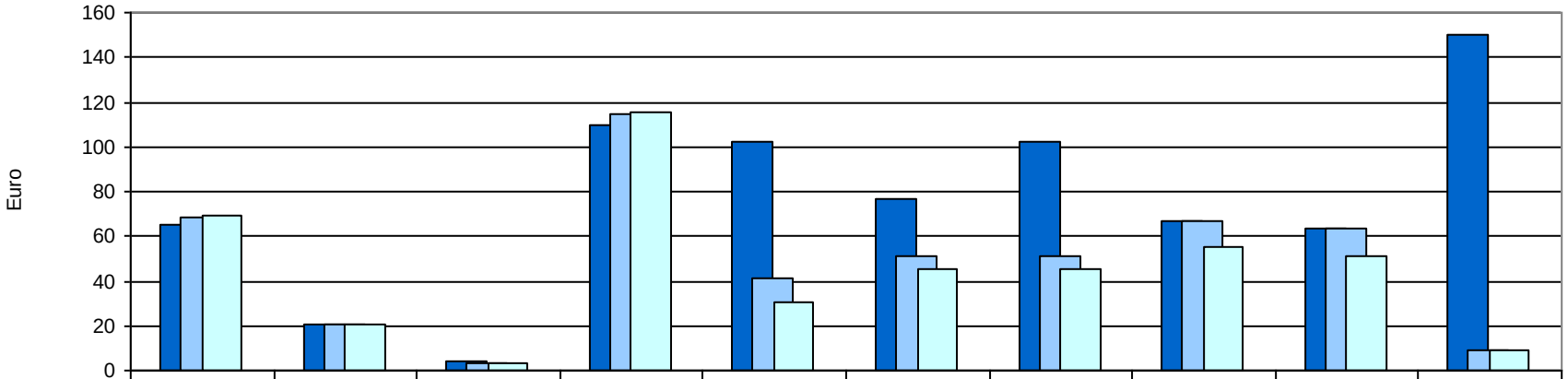
Country	Residential (including VAT)		Business (excluding VAT)	
	New line connection charge	Reconnection charge	New line connection charge	Reconnection charge
Bosnia & Herzegovina:				
BH Telecom	30.47	0.00	30.47	0.00
Telekom Srpske	45.71	0.00	45.71	0.00
HT Mostar	45.71	0.00	45.71	0.00
Montenegro	55.55	10.68	55.55	10.68
Serbia	61.23	4.56	122.46	4.56
Kosovo	8.70	1.74	8.70	1.74

Table G.6 - One-off connection charges of the fixed incumbent

Notes:

Montenegro:	Prices exclude VAT. There is a connection tax for a new line or for the reconnection of an old line of €10.68, included in the price of €55.55. After rebalancing the tariffs, prices for residential and business users are the same. (Source: T-Com Montenegro, March 13, 2008 www.t-com-cg.com).
Serbia:	There is an additional payment for the installation of TT cable, if this is required. The costs depend on the length of the cable (up to 150 metres it is RSD 3,500; >150 metres it is RSD 3,500 plus 63.27 per metre for aerial cable or 129.17 per metre for underground cable).
Turkey:	Includes Special Communications Tax

Figure 39 shows the trends in connection charges for residential customers since 2005. Some of these have dropped quite dramatically, notably Kosovo and Bosnia & Herzegovina. The level in Albania is both high and unchanged, Croatia is not as expensive, but still unchanged.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
Jan-05	65.18	20.22	4.22	109.66	102.25	76.69	102.25	67.00	63.76	150.00
Jul-07	68.47	20.27	3.68	114.57	40.90	51.12	51.12	67.00	63.56	8.70
Jan-08	68.89	20.26	3.58	115.59	30.47	45.71	45.71	55.55	51.23	8.70

Figure 39 - Incumbent operator connection charges for residential customers (2005-2008)

Notes:
Turkey: Includes Special Communications Tax

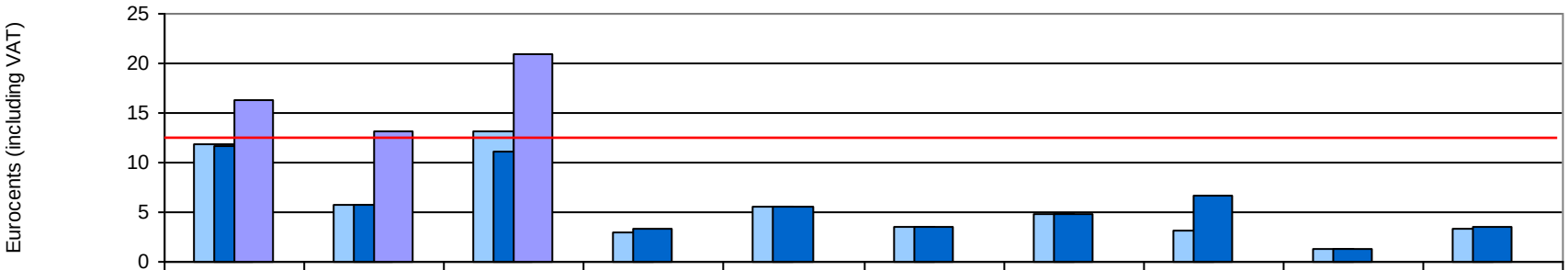
7. Local fixed telephony tariffs of the incumbent and an alternative operator

Country	Largest alternative operator	Technologies used
Croatia	OT - Optima Telekom d.o.o.	VoIP
FYROM	On.Net d.o.o. Skopje	LLU and Wi-Fi
Turkey	N/A	N/A
Albania	H-Communication	PSTN
Bosnia & Herzegovina	T3 d.o.o. Sarajevo	PSTN
Montenegro	M:Tel	Wi-Max
Serbia	No alternative operator	-
Kosovo	Ipko	VoIP

Table G.7 - Alternative operators chosen for comparison of retail tariffs

Notes:
Turkey: Local calls are currently provided only by the incumbent.
Albania: H-Communication is the largest alternative fixed operator, in the rural areas of Tirana and Durres.
Montenegro: The third mobile operator in Montenegro (M:Tel) with GSM and UMTS licence also has a licence for WiMAX.

Figure 40 shows the cost of a three-minute local call in Eurocents on the network of the incumbent operator, including VAT for residential consumers. There is considerable variation in the prices, with Croatia and Turkey more expensive, while Serbia is the cheapest. The EU average is indicated by the red line.

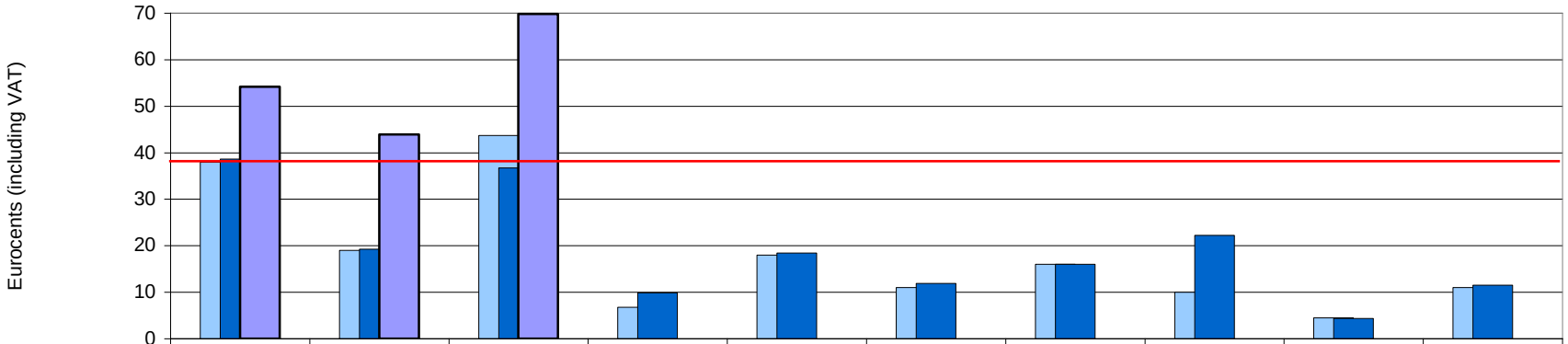


	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
jul.07	11.8	5.7	13.1	2.9	5.5	3.5	4.8	3.2	1.3	3.4
apr.08	11.6	5.8	11.0	3.3	5.5	3.6	4.8	6.7	1.3	3.5
PPP apr.08	16.24	13.17	20.93							

Figure 40 - Cost of a three minute local call (2007-2008) in nominal value and in PPP

Note:
Albania tariffs cannot represent correctly the cost of a three minute local call because the pulse intervals are two minutes. The price has been calculated on the basis of ¾ of the price of a 4-minute call.
Turkey: Includes Special Communications Tax

Figure 41 shows the equivalent data for a ten-minute call with very similar patterns.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
Jul-07	38.0	19.0	43.7	6.8	18.0	11.0	16.0	10.0	4.5	11.0
Apr-08	38.66	19.28	36.75	9.91	18.42	11.88	16.04	22.23	4.39	11.5
PPP Apr-08	54.15	43.92	69.79							

Figure 41 - Cost of a ten minute local call (2007-2008)

Notes:
Turkey: Includes Special Communications Tax

The differences between residential and business tariffs arise almost exclusively from VAT.

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

Table G.8 below presents the long distance tariffs by the incumbent operator and an alternative operator for 3 minute calls and 10 minute calls. All tariffs are in euro with VAT included.

It should be noted that the alternative operators in Albania are regional operators that are not competing directly with the incumbent operator. In the other countries where price information is missing, there is no competitive fixed network alternative.

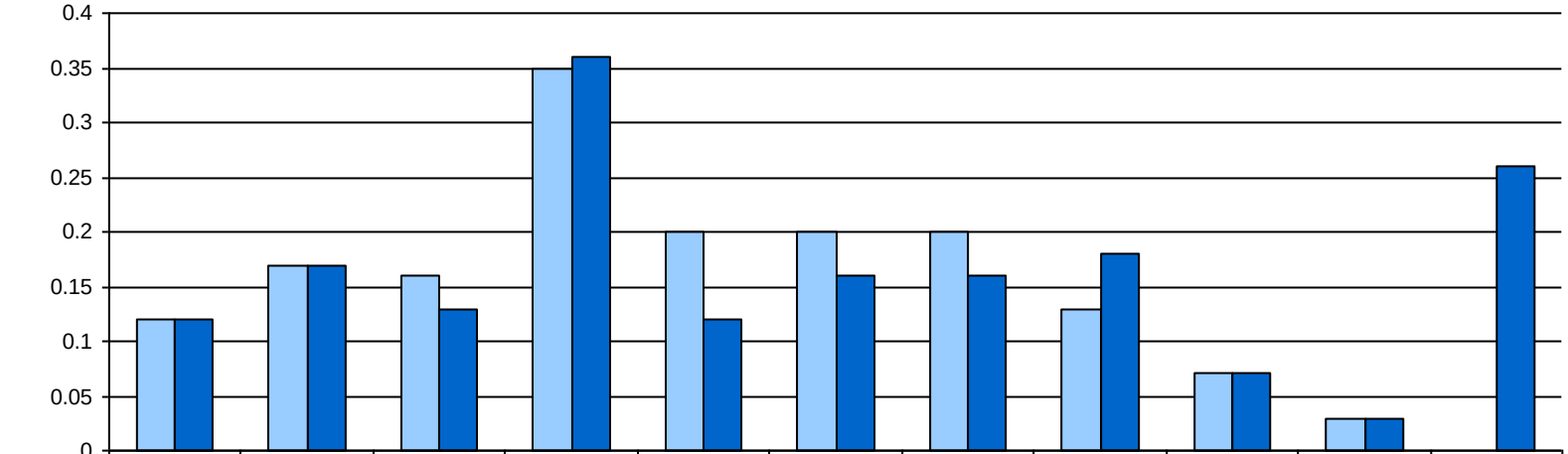
Country	Incumbent		Alternative operator	
	3 minutes, €	10 minutes, €	3 minutes, €	10 minutes, €
Croatia	0.12	0.39	0.12	0.38
FYROM	0.17	0.58	0.12	0.39
Turkey	0.13	0.44	0.12	0.39

Country		Incumbent		Alternative operator	
		3 minutes, €	10 minutes, €	3 minutes, €	10 minutes, €
Albania		0.36	1.19		
Bosnia & Herzegovina	BH Telecom	0.12	0.42		
	Telekom Srpske	0.16	0.54		
	HT Mostar	0.16	0.54		
Montenegro		0.18	0.59	0.12	0.40
Serbia		0.07	0.22		
Kosovo		0.03	0.12		

Table G.8 - Long-distance calls for residential customers (including VAT)

Notes:
Turkey: Includes Special Communications Tax

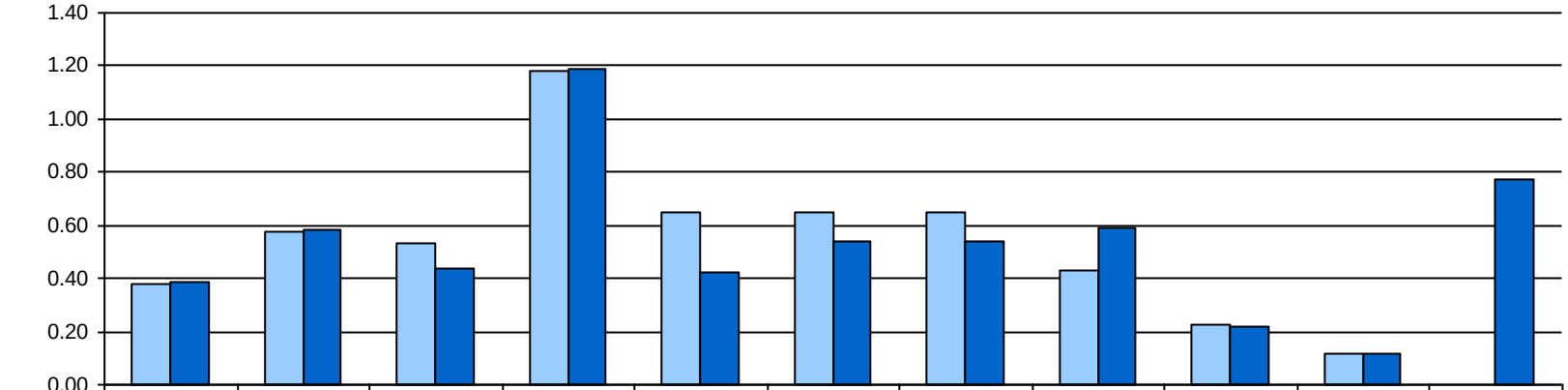
Figure 42 below presents the price developments for a 3 minute residential long distance call from July 2007. Figure 43 presents the corresponding information for a 10 minute call.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.12	0.17	0.16	0.35	0.2	0.2	0.2	0.13	0.07	0.03	
Apr-08	0.12	0.17	0.13	0.36	0.12	0.16	0.16	0.18	0.07	0.03	0.26

Figure 42 - Residential long distance charges for 3 minute calls

Notes:
Turkey: Includes Special Communications Tax
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.38	0.58	0.53	1.18	0.65	0.65	0.65	0.43	0.23	0.12	
Apr-08	0.39	0.58	0.44	1.19	0.42	0.54	0.54	0.59	0.22	0.12	0.77

Figure 43 - Residential long distance charges for 10 minute call

Notes:
Turkey: Includes Special Communications Tax
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.

Table G.9 below presents the corresponding information on long distance calls for business subscribers. These prices are without VAT.

Country		Incumbent		Alternative operator	
		3 minutes, €	10 minutes, €	3 minutes, €	10 minutes, €
Croatia		0.10	0.32	0.10	0.31
FYROM		0.15	0.49	0.10	0.33
Turkey		0.11	0.37	0.10	0.33
Albania		0.45	1.49		
Bosnia & Herzegovina	BH Telecom	0.11	0.36		
	Telekom Srpske	0.14	0.46		
	HT Mostar	0.14	0.46		
Montenegro		0.15	0.50	0.10	0.34

Country	Incumbent		Alternative operator	
	3 minutes, €	10 minutes, €	3 minutes, €	10 minutes, €
Serbia	0.09	0.31		
Kosovo	0.03	0.10		

Table G.9 - Long-distance calls for business customers (excluding VAT)

Notes:
Turkey: Includes Special Communications Tax

9. Fixed-to-mobile tariffs of the incumbent and an alternative operator

Table G.10 below presents the prices from the fixed network of the incumbent operator and for an alternative operator to a mobile network.

Country		Incumbent		Alternative operator	
		3 minutes, €	10 minutes, €	3 minutes, €	10 minutes, €
Croatia		0.81	2.69	0.70	2.30
FYROM		0.58	1.93	0.58	1.93
Turkey		0.54	1.81	0.49	1.63
Albania		1.14	3.75	1.77	5.90
Bosnia & Herzegovina	BH Telecom	0.26	0.86		
	Telekom Srpske	0.28	0.92		
	HT Mostar	0.28	0.92		
Montenegro		0.67	2.22	0.57	1.89
Serbia		0.40	1.32		0.00
Kosovo		0.55	1.84		

Table G.10 - Fixed-to-mobile calls for residential customers (including VAT)

Notes:
Turkey: Includes Special Communications Tax

Figure 44 below presents the price developments for fixed to mobile calls for the incumbent operator since July 2007.

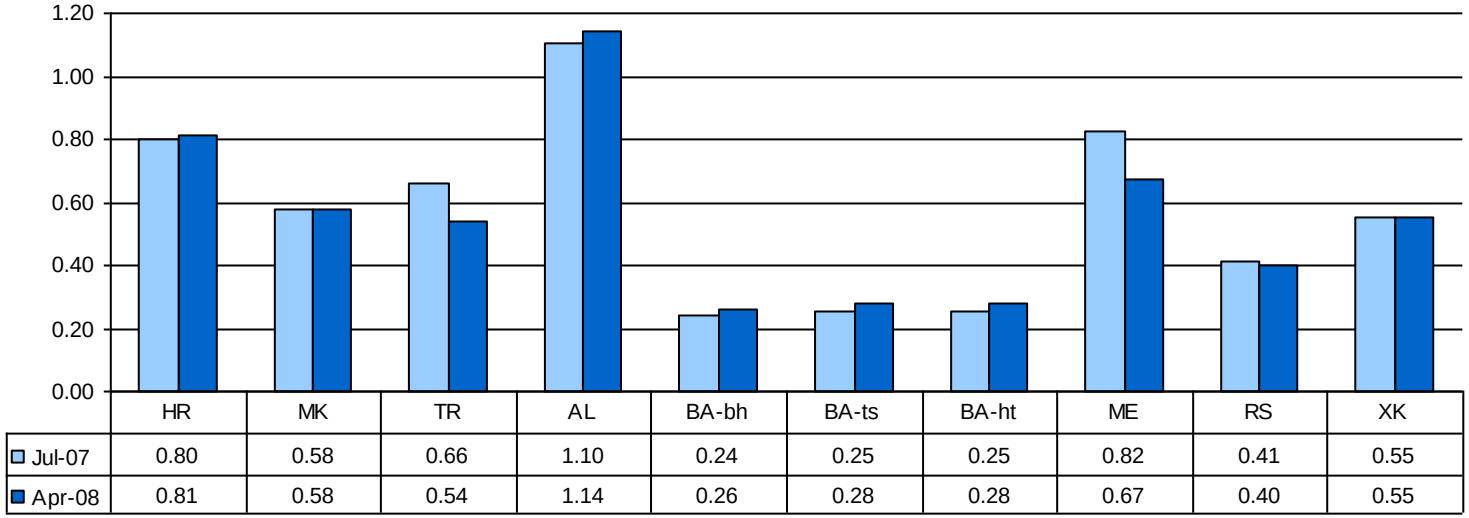


Figure 44 - Residential charges for 3 minute fixed to mobile calls

Notes:
Turkey: Includes Special Communications Tax.

Table G.11 presents the tariffs for fixed to mobile calls for business customers. The table includes tariffs from an alternative operator when available.

Country		Incumbent		Alternative operator	
		3 minutes, €	10 minutes, €	3 minutes, €	10 minutes, €
Croatia		0.66	2.20	0.57	1.88
FYROM		0.49	1.63	0.49	1.63
Turkey		0.45	1.53	0.42	1.38
Albania		1.42	4.67	1.47	4.91
Bosnia & Herzegovina	BH Telecom	0.22	0.73		
	Telekom Srpske	0.24	0.79		
	HT Mostar	0.24	0.79		
Montenegro		0.57	1.90	0.48	1.62

Country	Incumbent		Alternative operator	
	3 minutes, €	10 minutes, €	3 minutes, €	10 minutes, €
Serbia	0.55	1.84		
Kosovo	0.48	1.60		

Table G.11 - Fixed-to-mobile calls for business customers (excluding VAT)

Notes:
Turkey: Includes Special Communications Tax

10. International tariffs of the incumbent and an alternative operator

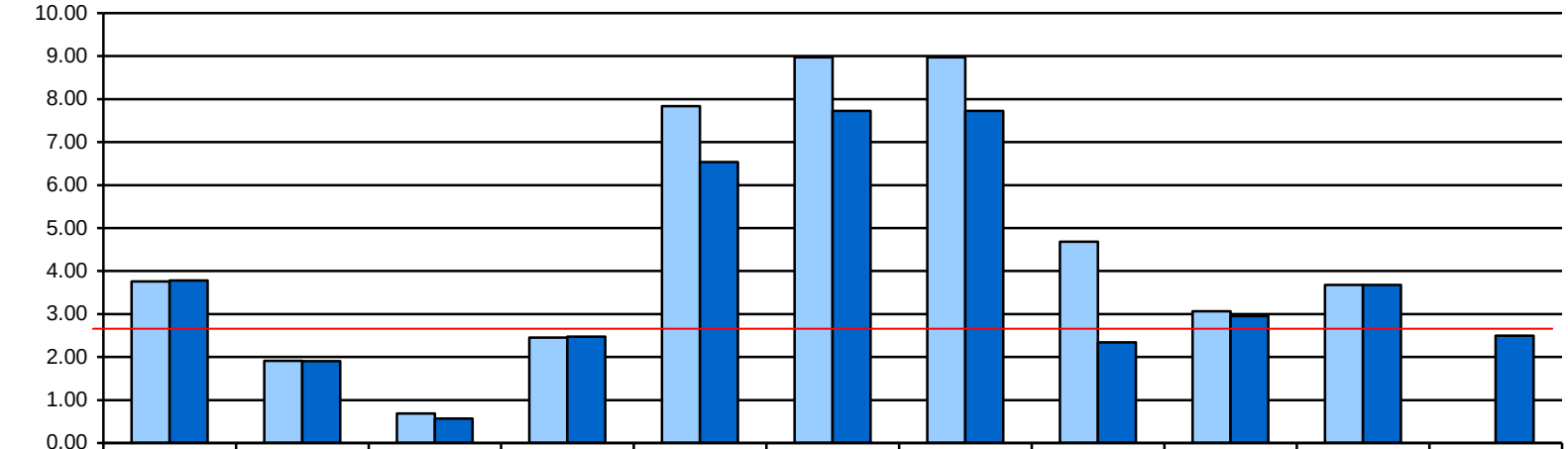
Table G.12 presents the long distance call tariffs to the UK for a ten-minute call from residential as well as business subscribers. The main difference between these tariffs is due to the fact that the residential tariffs include VAT. Tariffs are shown both for the incumbent operator and an alternative operator. It should be noted that in the case of Albania, the alternative operator is represented by regional operators with a traditionally captive regional subscriber base rather than a competitive alternative to the incumbent operator.

Country		Residential		Business	
		Incumbent, €	Alternative operator, €	Incumbent, €	Alternative operator, €
Croatia		3.78	3.04	3.10	2.49
FYROM		7.52	5.40	6.37	4.57
Turkey		0.57	0.52	0.49	0.44
Albania		2.48	6.25	3.10	5.21
Bosnia & Herzegovina	BH Telecom	6.54		5.59	
	Telekom Srpske	7.73		6.60	
	HT Mostar	7.73		6.60	
Montenegro		2.34	1.50	2.00	1.28
Serbia		2.95		4.13	
Kosovo		3.68		3.20	

Table G.12 - Ten-minute call to the UK

Notes:
Turkey: Includes Special Communications Tax

Figure 45 below shows the price developments since July 2007 for the international tariffs of the incumbent operator for residential users.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU27
Jul-07	3.76	1.91	0.69	2.45	7.84	8.97	8.97	4.68	3.06	3.68	
Apr-08	3.78	1.91	0.57	2.48	6.54	7.73	7.73	2.34	2.95	3.68	2.50

Figure 45 - 10 minute call to UK by incumbent operator for residential users

Notes:
Turkey: Includes Special Communications Tax
The EU-27 average is the tariff to a distant EU country taken from the 13th Implementation Report of the European Commission, March 2008.

Table G.13 and

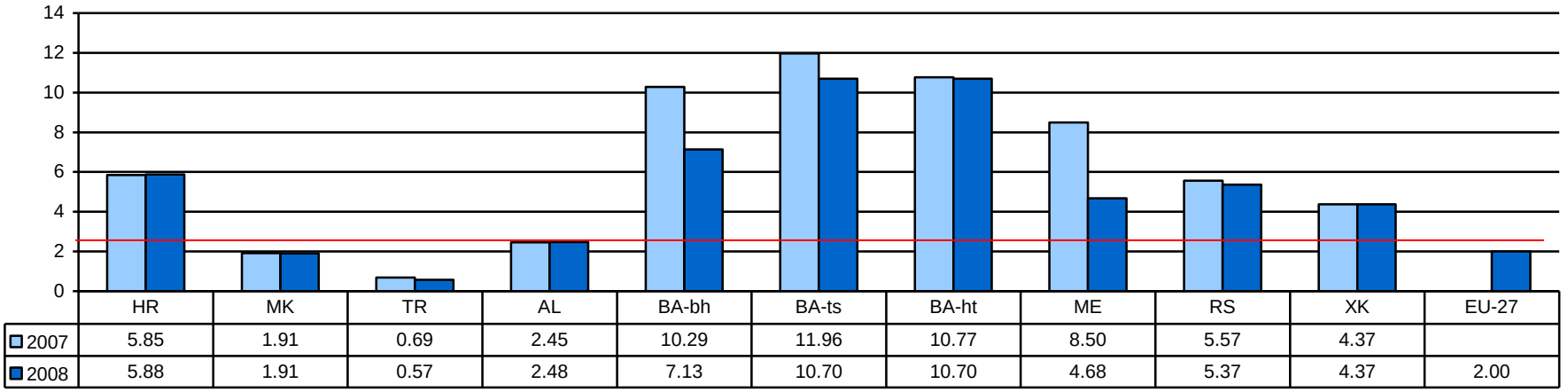
Figure 46 provide the corresponding tariff information for long distance calls to the United States.

Country	Residential		Business	
	Incumbent, €	Alternative operator, €	Incumbent, €	Alternative operator, €
Croatia	5.88	4.72	4.82	3.87
FYROM	1.91	1.21	1.62	1.03
Turkey	0.57	0.52	0.49	0.44
Albania	2.48	6.25	3.10	5.21

Country		Residential		Business	
		Incumbent, €	Alternative operator, €	Incumbent, €	Alternative operator, €
Bosnia & Herzegovina	BH Telecom	7.13		6.09	
	Telekom Srpske	10.70		9.14	
	HT Mostar	10.70		9.14	
Montenegro		4.68	4.00	4.00	3.42
Serbia		5.37		7.51	
Kosovo		4.37		3.80	

Table G.13 - Ten-minute call to the USA

Notes:
Turkey: Includes Special Communications Tax



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
2007	5.85	1.91	0.69	2.45	10.29	11.96	10.77	8.50	5.57	4.37	
2008	5.88	1.91	0.57	2.48	7.13	10.70	10.70	4.68	5.37	4.37	2.00

Figure 46 - 10 minute call to USA by incumbent operator for residential users

Notes:
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.

H. Mobile retail tariffs

Mobile network operators provide a range of tariff options that are quite 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 states the OECD constructed a set of mobile tariff "baskets" building on its work in fixed telephony baskets.[22] The OECD baskets were revised in 2001, but the document was not published until the following year, hence references to the OECD 2002 baskets.[23] Table H.1 shows the structure of the mobile baskets.[24] While the basket is the annual cost, the numbers of SMS and calls are for each month.

	SMS	Calls	Fixed calls		Mobile calls		Time of day		
			Local	National	On-net	Off-net	Peak	Off-peak	Weekend
Low user	30	25	28%	14%	40%	18%	38%	35%	27%
Medium user	35	75	24%	12%	43%	21%	47%	30%	23%
High user	42	150	26%	14%	42%	18%	63%	22%	15%

Table H.1 - Composition of OECD 2002 mobile baskets

They were again revised in 2006 in order to reflect more accurately calling patterns.[25] The statistical results are published in the OECD biennial Communications Outlook.[26] The European Commission adopted the OECD 2006 baskets in its 13th Implementation Report, reporting a wider range of data for operators and different tariff packages. It should be noted that the EC uses monthly and not annual results.

While some critics have argued for the creation of a "Balkan basket" or set of baskets that might better reflect local usage patterns, this would make any comparisons with the EU or with OECD impossible. Indeed, it would be likely to make historical comparisons very difficult, unless the old results could be recalculated.

Table H.2 shows the lowest cost alternative for each usage basket, including both post-paid and pre-paid offers.

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[22] http://www.oecd.org/dataoecd/52/33/1914445.pdf

[23] http://www.oecd.org/dataoecd/56/26/41049548.pdf

[24] A senior OECD official gave a briefing on the use of the baskets at the "kick off" meeting for the Monitoring Project.

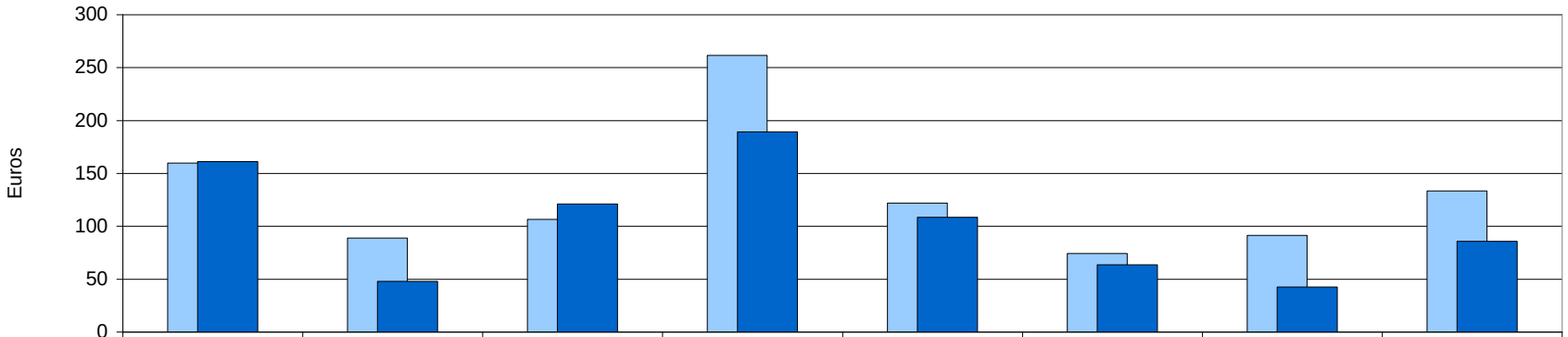
[25] http://www.teligen.com/publications/oecd.pdf

[26] The data for the mobile baskets for 2006 are available at
http://dx.doi.org/10.1787/002346358066
http://dx.doi.org/10.1787/002400356513
http://dx.doi.org/10.1787/002414286734

Country	Low-user	Medium-user	High-user
	€	€	€
Croatia	161.31	324.26	428.31
FYROM	47.97	175.25	364.03
Turkey	121.06	372.45	736.65
Albania	189.28	425.67	834.53
Bosnia & Herzegovina	108.64	286.91	572.15
Montenegro	63.60	160.56	230.76
Serbia	42.72	84.72	141.48
Kosovo	85.76	295.70	463.83

Table H.2 - OECD 2002 mobile tariff baskets for 2008

The three following figures show the trends in the baskets over the previous and current monitoring periods.

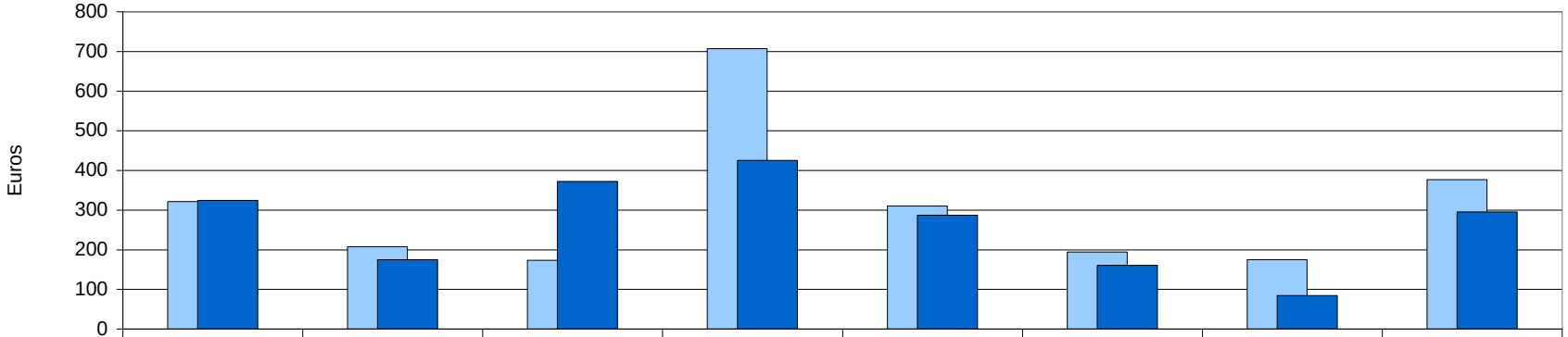


	HR	MK	TR	AL	BA	ME	RS	XK
jul.07	159.92	88.92	106.68	261.48	121.92	74.16	91.32	133.44
apr.08	161.31	47.97	121.06	189.28	108.64	63.60	42.72	85.76

Figure 47 - Low usage mobile basket (2007-2008)

Notes:

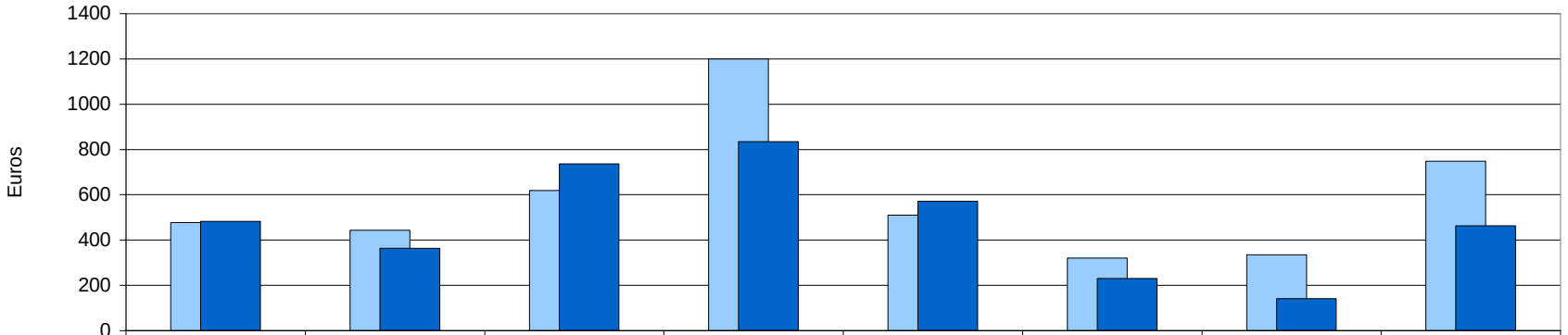
Croatia: The basket for Croatia for July 2007 has been recalculated after the publication of the previous monitoring report. The price difference between July 2007 and April 2008 are due to currency exchange rate changes rather than price changes in local currency.



	HR	MK	TR	AL	BA	ME	RS	XK
jul.07	321.47	208.20	173.76	706.92	309.96	194.28	174.60	376.68
apr.08	324.26	175.25	372.45	425.67	286.91	160.56	84.72	295.70

Figure 48 - Medium usage mobile basket (2007-2008)

Notes:
Croatia: The basket for Croatia for July 2007 has been recalculated after the publication of the previous monitoring report.
The price difference between July 2007 and April 2008 are due to currency exchange rate changes rather than price changes in local currency.



	HR	MK	TR	AL	BA	ME	RS	XK
Jul-07	478.15	444.12	619.08	1200.36	510.60	320.16	334.80	748.92
Apr-08	482.31	364.03	736.65	834.53	572.15	230.76	141.48	463.83

Figure 49 - High usage mobile basket (2007-2008)

Notes:
Croatia: The basket for Croatia for July 2007 has been recalculated after the publication of the previous monitoring report. The price difference between July 2007 and April 2008 are due to currency exchange rate changes rather than price changes in local currency.

I. Special cross-border arrangements for retail fixed and mobile tariffs

The political, economical and social events in the last fifteen years in South-Eastern Europe, in particular in the territory of the former Yugoslavia, created specific entities and territories some of which still have a provisional status. This has resulted in many special tariff arrangements that cross territorial boundaries. For example, there have been preferential rates between the Serb population in Bosnia & Herzegovina and Serbia. Similarly, there have been preferential rates for the Croatian population in Bosnia & Herzegovina and Croatia. Such arrangements are gradually being phased out and replaced by more conventional country tariffs.

On June 30, 2007 the EU regulation on international mobile roaming came into force.[27] It set price caps for wholesale and retail charges and requires a pro-active provision of roaming prices to customers via SMS. The Regulation sets the maximum retail charges for 2007-2009 for outgoing and received

[27] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:171:0032:0040:EN:PDF

calls and also for wholesale charges. However, operators in South-East Europe may not have access to the regulated wholesale tariffs within the EU and are not obliged to offer similar rates to other European operators.

Table I.1 sets out the current arrangements for cross-border tariffs for fixed and mobile tariffs. It also identifies an special international mobile roaming arrangements. However, if addressed only retail roaming offers as It is beyond the scope of this project to assess confidential agreements on wholesale Inter Operator Tariffs (IOTs).

Country	Fixed network	Mobile network	Special retail international roaming offers
Croatia	-	-	-
FYROM	-	-	-
Turkey	-	-	-
Albania		There are cross-border arrangements for international mobile to mobile calls on networks that are part of the same international group. AMC reduces the charges by 34% for calls to other Cosmote Group networks (four SEE countries including Greece). Vodafone Albania charges for calls to Vodafone Greece are 34% lower than calls to neighbouring countries. Calls to Vodafone Group mobile operators are charged at lower tariffs than calls to other mobiles of the same country. Eagle Mobile (a new entrant) does not currently have any such arrangements.	Vodafone Albania applies reduced tariffs if customers roam on Vodafone Greece (34% lower) and on other Vodafone networks. Vodafone also offers it Passport package of roaming tariffs.
Bosnia & Herzegovina	-	-	Telekom Srpske subscribers have free incoming calls when roaming in Serbia and Montenegro on the Telekom Serbia network.
Montenegro	To fixed networks in Serbia and Kosovo: €0.110 per minute (peak) €0.055 per minute (off peak)	To fixed networks in Serbia and Kosovo: €0.190 per minute (peak) €0.095 per minute (off peak)	All three mobile operators have special roaming offers for Serbia and Kosovo, with no charge for incoming calls when roaming.
Serbia	Calls to fixed numbers in Montenegro are €0.11(RSD 9.11) per minute for residential, €0.18 (RSD 15.06) per minute for business users. The same prices for fixed calls to Republika Srpska (a part of Bosnia & Herzegovina). For the other parts of Bosnia & Herzegovina the international rate for zone 1 is applied (€0.17 (RSD 14.05) per minute for residential, €0.37 (RSD 30.11) for business	Telekom Srbija (mts): incoming calls when roaming are free for: Montenegro (m:tel, Promonte and T-Mobile) and also when roaming on m:tel in the Republika Srpska (a part of Bosnia & Herzegovina) In all the countries bordering Serbia incoming roaming calls are €0.33 (RSD 27) per minute. Telenor: incoming roaming calls are free for on Promonte in Montenegro.	Vip mobile The same price, €0.35 (RSD 29) per minute for incoming calls, is charged when roaming on all operators owned by Mobilkom Austria: • Mobilkom Austria (A1) - Austria • Mobiltel (M-TEL) - Bulgaria • Vipnet (HR VIP) - Croatia • mobilkom liechtenstein (FL1) – Liechtenstein • Si.mobil (SI.MOBIL) - Slovenia

Country	Fixed network	Mobile network	Special retail international roaming offers
	users). Calls to mobile numbers in Montenegro €0.22 (RSD 18.22) per minute for residential, €0.37 (RSD 30.11) for business users.	Promonte: In all countries bordering Serbia incoming calls are charged at €0.33 (RSD 27) per minute.	• Vip operator (Vip MK) – Macedonia
Kosovo			

Table I.1 - Special cross-border arrangements for retail fixed and mobile tariffs

Notes:

Albania: While the prices for Albtelecom are unchanged from the last report, the international tariffs for mobile operators are new.

Montenegro: These are the prices of the incumbent operator, excluding VAT, applicable to both residential and business users. There is a discount of 50% for off-peak between 19:00 and 07:00. Standard prices for Zone 1 of T-Com Montenegro are €0.11 per minute for fixed networks, € 0.27 per minute for mobile networks, both peak and off-peak calls. (Source: T-Com pricelist March 13, 2008 www.t-com-cg.com).

Serbia: Calls from Serbia to Kosovo are billed as national calls.

J. Leased lines retail tariffs

1. National leased lines

Leased lines are the building blocks for alternative networks that compete, directly or indirectly, with the networks of the incumbent operators. Before competition begins in a market the prices are generally quite high. Price pressures are introduced as alternatives become available, for example, by operators associated with energy and railway companies. Such competition has probably had more effect on prices than obligations requiring cost orientation, at least on more popular route.

There is a long history of legislation, litigation, reporting on and a sector inquiry into the provision of leased lines. A pro-competitive framework was set out in a Council Directive in 1992.[28] A minimum set of leased lines was carried through into the 1998 and 2003 regulatory packages, though it is now proposed to handle these in a technology neutral manner, using market analyses for the provision of local access.

In a series of figures below, the tariffs for national leased lines are shown for:

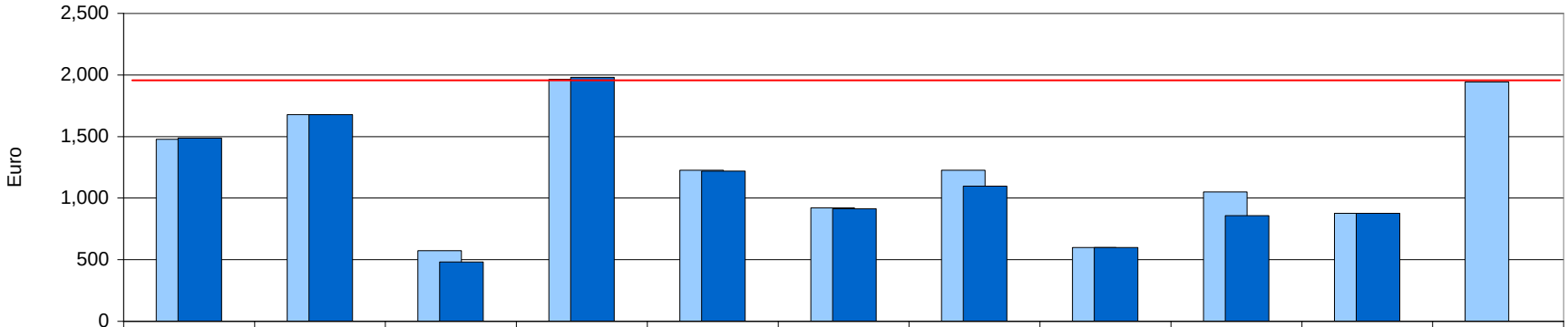
- 64 kbits/s: 2 km and 200 km
- 2 Mbits/s: 2km and 200 km
- 34 Mbits/s: 2 km and 200 km

[28] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0044:EN:HTML

All prices are annual and retail, excluding VAT and without any one-time or connection charges. Not all operators have tariffs that correspond directly to these categories, in which case the closest alternative has been selected. In Turkey, the leased line offerings are based not on distance but on four levels: 1) same exchange, 2) different exchange, 3) inner city, and 4) intercity. The 2 km distance has been considered to be the "different exchange" rate and the 200 km distance to be the intercity rate. The EU averages are taken from the 12th and 13th Implementation Reports, with prices from the autumns of 2006 and 2007 respectively.

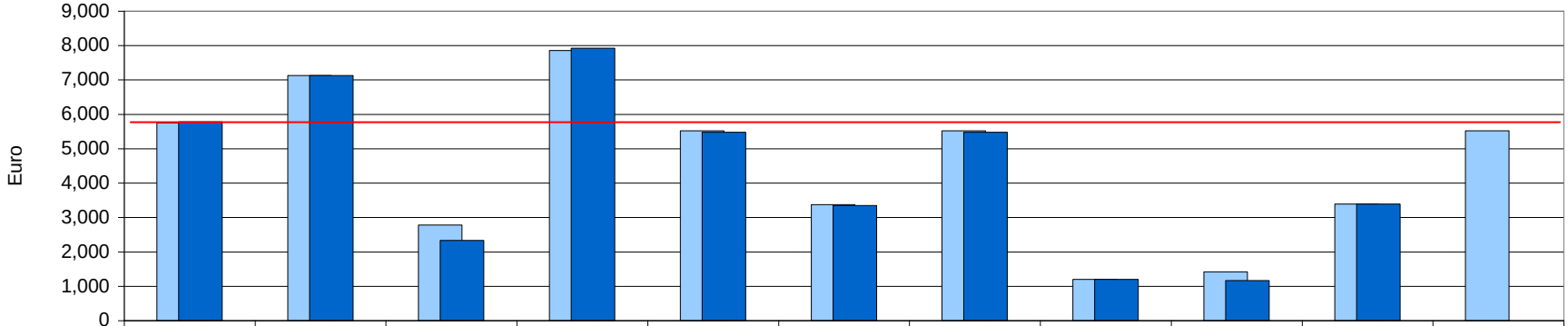
Leased lines at 64kbits/s are now often replaced by more advanced technologies such as ISDN, ADSL and SDSL where these are available with Service Level Agreements (SLA). Figure 50 shows the prices for a short circuit of 2 kilometres. While Montenegro and Turkey are relatively cheap, Albania, Croatia and FYROM are expensive in terms of South-East Europe, but reasonable in terms of the EU.

Figure 51 shows the prices for a much longer, 200 kilometre circuits. The variations in the prices are broadly similar, except that Serbia appears cheaper at the longer distance.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	1,479	1,678	573	1,964	1,227	920	1,227	600	1,050	876	1,944
Apr-08	1,488	1,677	482	1,982	1,219	914	1,097	600	857	876	

Figure 50 - Annual prices for a 2 km 64 kbits/s leased line

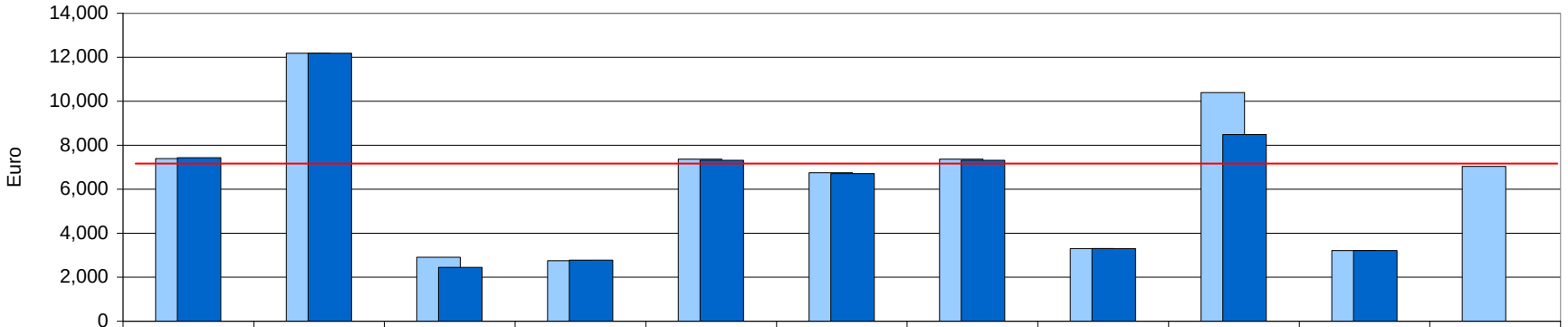


	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	5,751	7,132	2,780	7,856	5,521	3,374	5,521	1,200	1,425	3,396	5,521
Apr-08	5,787	7,128	2,338	7,926	5,485	3,352	5,485	1,200	1,163	3,396	

Figure 51 - Annual prices for a 200km 64 kbits/s leased line

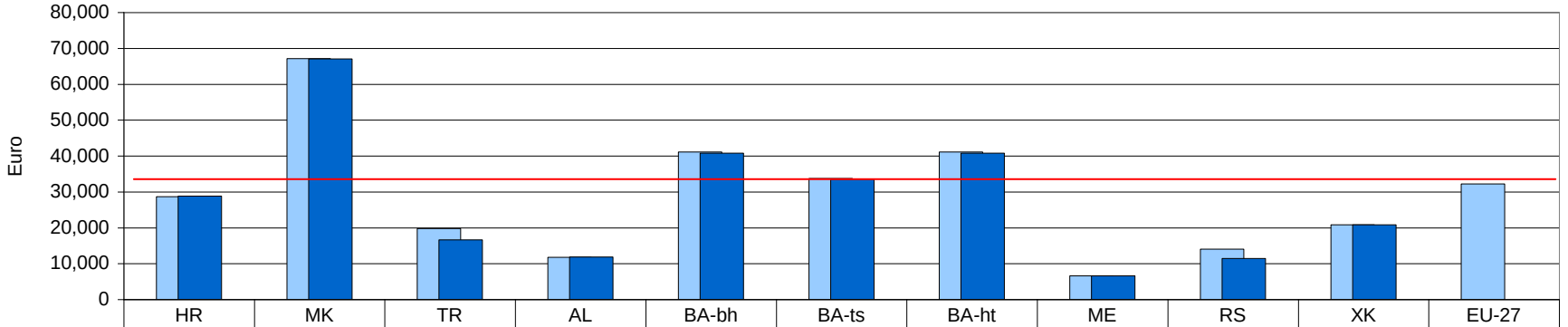
Figure 52 shows the prices for short circuits at the higher speed of 2Mbit/s, though these too have often been replaced by other technologies where appropriate SLAs are available. The prices are generally at or below EU level, with the exception of FYROM and, to a lesser extent. Albania. Kosovo, Montenegro and Turkey are all comparatively cheap, at half the EU price level.

Figure 53 shows the prices for the longer circuit at the same speed. Again FYROM stands out as being significantly above the EU level, while others are at the EU level or below.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	7,394	12,190	2,914	2,750	7,362	6,748	7,362	3,300	10,395	3,204	7,037
Apr-08	7,440	12,187	2,450	2,774	7,314	6,704	7,314	3,300	8,487	3,204	

Figure 52 - Annual prices for a 2km 2Mbits/s leased line



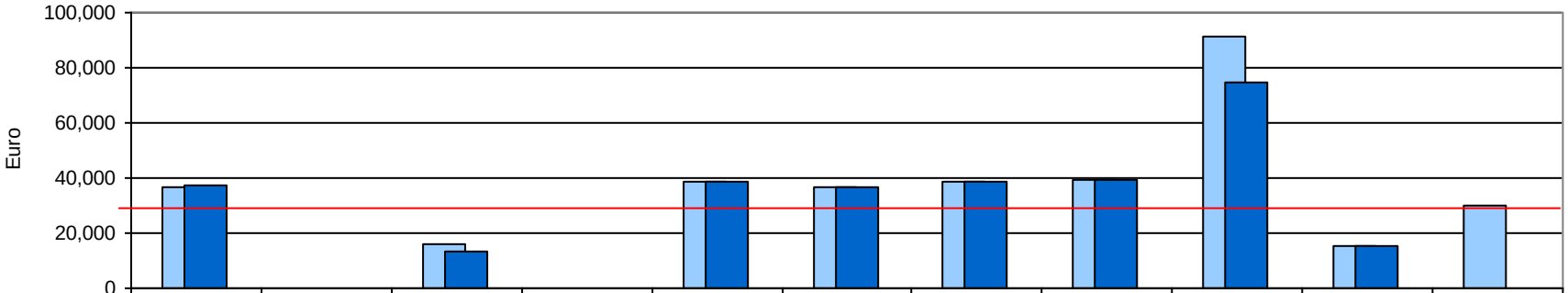
	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	28,675	67,120	19,775	11,785	41,104	33,742	41,104	6,600	14,025	20,844	32,219
Apr-08	28,851	67,084	16,632	11,890	40,835	33,522	40,835	6,600	11,450	20,844	

Figure 53 - Annual prices for a 200km 2Mbits/s leased line

The next two figures show the prices for faster leased lines at 34Mbits/s.

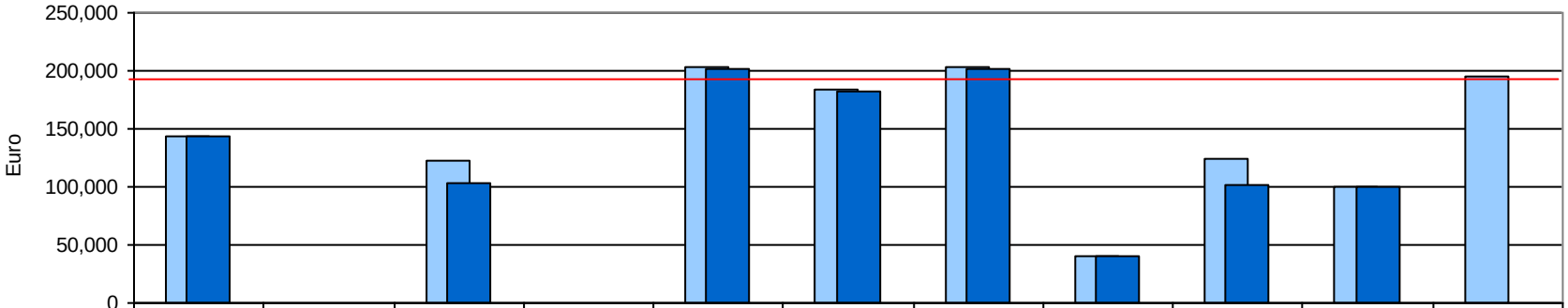
Figure 54 shows the shorter 2km circuits which are not available in Albania and in FYROM. The prices in Kosovo and Turkey are relatively low, while Serbia is expensive. The 200 kilometre circuits are shown in

Figure 55, again not available in Albania and FYROM. The price in Montenegro is the same as for 2km, making it very cheap. Serbian prices are above the EU average.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	36,971		16,015		38,650	36,810	38,650	39,600	91,664	15,048	29,768
Apr-08	37,201		13,468		38,397	36,569	38,397	39,600	74,854	15,048	

Figure 54 - Annual prices for a 2km 34Mbits/sec leased line



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	143,366		123,146		202,454	184,049	202,454	39,600	123,750	100,320	194,712
Apr-08	144,256		103,563		201,130	182,845	201,130	39,600	101,034	100,320	

Figure 55 - Annual prices for a 200km 34Mbits/sec leased line

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. International circuits can be provided in the form of double routing or single routing. Double routing includes an additional element of redundancy and such lines have a higher charge. Only single routing lines are only available in Turkey, otherwise the tariffs are for double routing half-circuits.

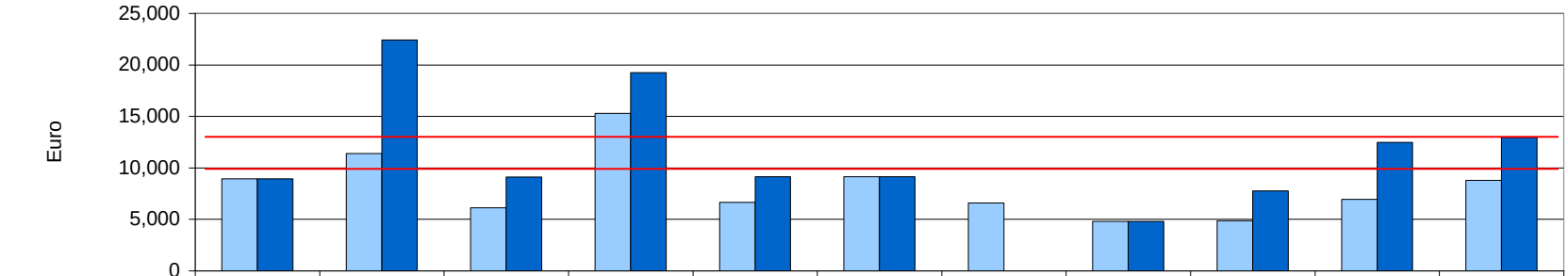
The annual prices (excluding VAT) for international half-circuits are given for:

- 64 kbit/s to a near country and to the UK
- 2 Mbit/s to a near country and to the UK

For comparison, EU averages have been taken from the 13th Implementation report, showing prices in the autumn of 2006. These are to a near and to a distant country which, for this report, has been uniformly taken to be the United Kingdom.

Figure 56 shows the annual charges for 64 kbit/s half-circuits, mostly below the EU average. Albania and FYROM are the obvious exception on the longer routes to the UK.

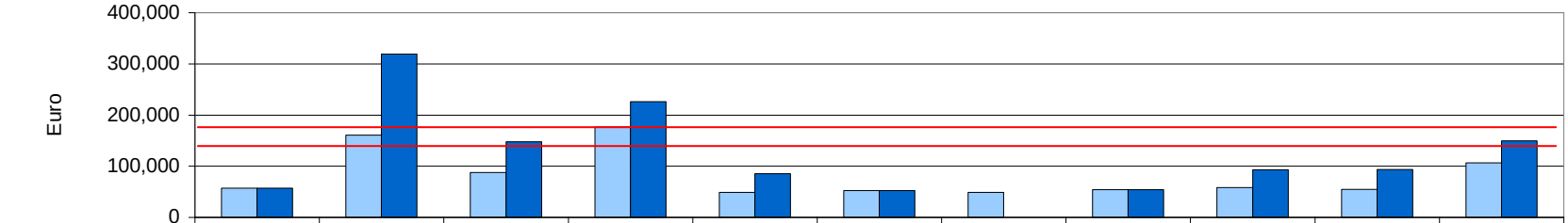
Figure 57 shows the 2 Mbits/s prices, where again Albania and Macedonia are expensive on the longer routes.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
To a near country	8,928	11,393	6,119	15,305	6,643	9,142	6,582	4,800	4,852	6,960	8,793
To the UK	8,928	22,407	9,117	19,255	9,142	9,142		4,800	7,763	12,480	12,960

Figure 56 - Annual prices for a 64kbit/sec international half-circuit

Notes:
For BA-ts the rate quoted is to Croatia. For lines to Montenegro and Serbia there is a price of €4,876 per annum.
The EU average is to a distant country taken from the 13th Implementation Report of the European Commission, March 2008.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
To a near country	57,041	161,028	87,701	176,864	48,759	52,416	49,002	54,000	58,225	54,816	106,379
To the UK	57,041	319,017	147,592	226,388	85,328	52,416		54,000	93,160	93,960	149,514

Figure 57 - Annual prices for a 2Mbit/sec international half-circuit

Notes:
For BA-ts the rate quoted is to Croatia. For lines to Montenegro and Serbia there is a price of €48,758 per annum.

The EU average is to a distant country taken from the 13th Implementation Report of the European Commission, March 2008.

K. Internet and broadband retail prices

1. Dial-up Internet access cost

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

Table K.1 shows the cost of forty hours of dial-up access to the Internet. The prices in Euros range considerably between countries and even within Bosnia. The most expensive are is FYROM followed by Croatia. The cheapest are Turkey and Serbia.

Country	ISP charge		PSTN usage		Total	
	€	PPP	€	PPP	€	PPP
Croatia	40.34	64.65	20.17	32.32	60.51	96.97
FYROM	74.03	200.97	0.00	0.00	74.03	200.97
Turkey	4.02	7.64	18.32	34.80	22.34	42.44
Albania	12.02	25.95	23.78	51.35	35.80	77.30
Bosnia & Herzegovina / BH Telecom	7.31	16.17	14.26	31.55	21.57	47.72
Bosnia & Herzegovina / Telekom Srpske	11.88	26.29	21.39	47.33	33.28	73.62
Bosnia & Herzegovina / HT Mostar	5.94	13.15	31.38	69.41	37.32	82.56
Montenegro	9.80	23.34	28.08	66.86	37.88	90.20
Serbia	13.01	28.79	10.54	23.34	23.55	52.12
Kosovo	0.00	-	27.60	-	27.60	-

Table K.1 - Dial-up Internet access cost - 40 hours at peak time including VAT

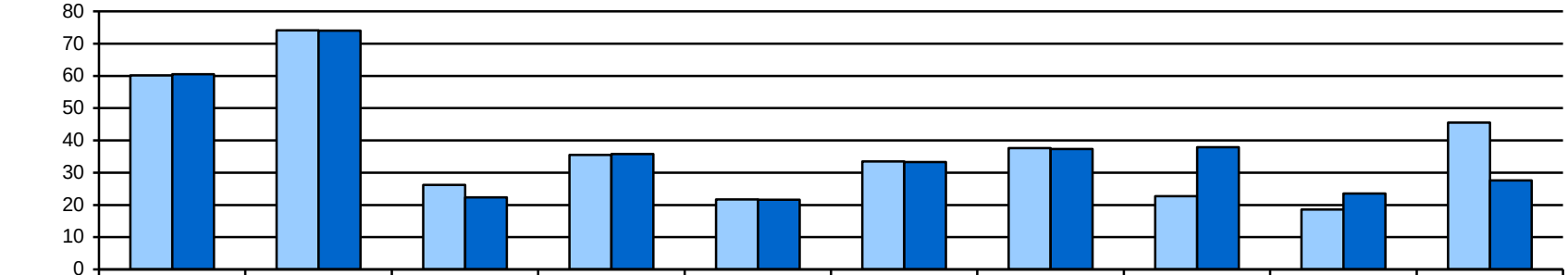
Notes:

FYROM: The price for 40 hours is based on standard prices - weighted average price per minute is lower.

Turkey: The ISP charge includes the monthly subscription fee (for the standard voice package with no additional ISP charge) but excludes VAT and the Special Communication Tax.

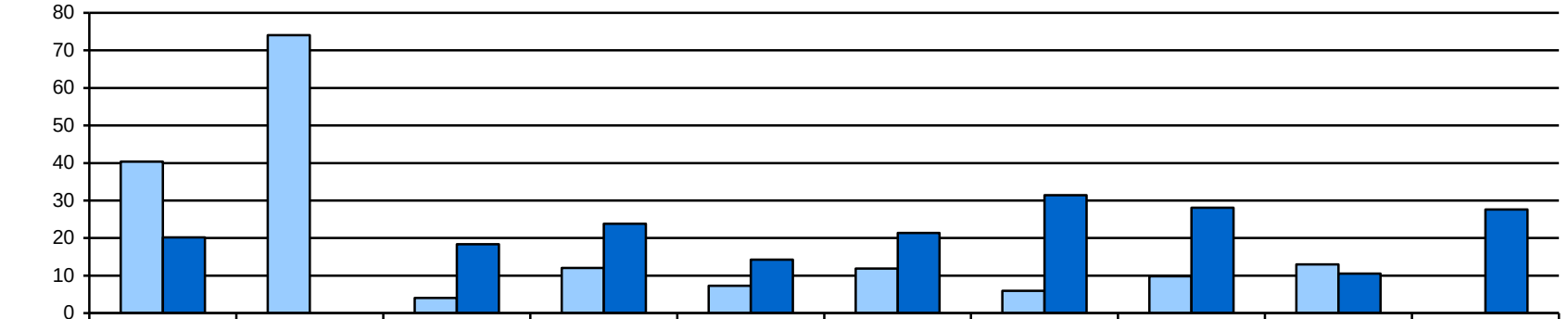
Albania: The costs comprise: ALL 2,400 for an Albtelecom customer using the Albtelecom ISP or ALL 2400 plus 1212.8 for PSTN usage and an alternative ISP.

Montenegro: The prices are for residential users. The ISP price depends only on the category of user: for residences 40 hours = €9.80 (including VAT) or for businesses 40 hours = €15.80 (including VAT). These are from T-Com, the largest ISP. Both residential and business users have several tariff packages available to them: 10, 20, 50 or 100 hours and unlimited monthly access. The PSTN price is for residential users at peak-time (07:00-19:00) €24.00 (40 x 60 x 0.01) at off-peak time (19:00-07:00) it would be: €12.00 (40 x 60 x 0.005) (Source: T-Com price list March 13, 2008. www.t-com-cg.com).



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
Jul-07	60.14	74.08	26.18	35.48	21.71	33.50	37.56	22.72	18.60	45.51
Apr-08	60.51	74.03	22.34	35.80	21.57	33.28	37.32	37.88	23.55	27.60

Figure 58 - 40 hours peak time use of Internet (2007-2008), in Euro



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
ISP	40.34	74.03	4.02	12.02	7.31	11.88	5.94	9.80	13.01	
PSTN	20.17	0.00	18.32	23.78	14.26	21.39	31.38	28.08	10.54	27.60

Figure 59 - 40 hours peak time use of Internet: PSTN/ISP charges, in Euro

For twenty hours a similar range of prices can be seen in Table K.2. The cheapest is Serbia, while the most expensive are Bosnia & Herzegovina and Croatia.

Country	ISP charge		PSTN usage		Total	
	Euro	PPP	Euro	PPP	Euro	PPP
Croatia	10.09	16.16	5.04	8.08	15.13	24.24
FYROM	12.72	34.54		0.00	12.72	34.54
Turkey	8.10	15.38	4.58	8.71	12.68	24.09
Albania	4.09	8.83	9.51	20.54	13.60	29.37
Bosnia & Herzegovina / BH Telecom	11.72	25.92	3.57	7.89	15.28	33.81
Bosnia & Herzegovina / Telekom Srpska	7.31	16.17	7.13	15.78	14.44	31.94
Bosnia & Herzegovina / HT Mostar	2.97	6.57	9.27	20.51	12.24	27.08
Montenegro	5.94	14.15	7.02	16.71	12.96	30.86
Serbia	4.94	10.94	2.64	5.83	7.58	16.78
Kosovo	0.00	0.00	13.80	0.00	13.80	0.00

Table K.2 – Dial-up Internet access cost – 20 hours at off-peak time, in Euro

Notes:

FYROM: Off-peak is Monday to Friday 18:00 to 06:00 and on all day on weekends and national holidays. Prices are for the "Surfer 20" package excluding VAT.

Turkey: The ISP charge includes the monthly subscription fee (for the standard voice package, no additional ISP charge) and excludes VAT and the Special Communication Tax.

Montenegro: The prices are for residential users, in off-peak-time. The ISP price from T-Com is dependant only on user's category: residential users 20 hours = €4.90 (including VAT) or business users 20 hours = €7.90 (including VAT). Both residential and business users have a choice from several tariff packages: 10, 20, 50 or 100 hours and unlimited monthly access. Price is dependant only on traffic period: peak time (07:00-19:00) €12.00 (20 x 60 x 0.01) off-peak time (19:00-07:00) 6.00 EUR (20 x 60 x 0.005). Source: Pricelist of T-Com Montenegro, dated from 13.03.2008. (www.t-com-cg.com)

2. Broadband Internet access cost

Table K.3 shows the prices for the initial connection for broadband Internet access for both xDSL from the incumbent operator and for an alternative operator. This excludes any refundable deposits, modems, routers and other charges. Clearly any initial charges can be seen by consumers as a barrier to adoption or to switching from dial-up, therefore some service providers try to keep these costs low. In FYROM and for Hrvatska Telekom the fees are zero and effectively zero, while in Albania the charges are extremely high.

Country	Incumbent DSL €	Alternative operator €	Alternative operator and technology
Croatia	22.59	0.11	OT-Optima telekom d.o.o.
FYROM	0.00	0.00	On Net DOO Skopje, ADSL over LLU
Turkey	10.40	10.76	Turksat A.S., Cable
Albania	57.80	85.00	ABCOM
Bosnia & Herzegovina / BH Telecom	5.08	5.08	Logosoft d.o.o. Sarajevo, DSL
Bosnia & Herzegovina / Telekom Srpske	15.24	0.00	
Bosnia & Herzegovina / HT Mostar	0.51	0.00	
Montenegro	25.64	0.00	M:Tel, Wi-Max
Serbia	0.01	0.00	PTT net, Verat net, Eunet, SBB; ADSL and cable Internet
Kosovo	8.70	0.00	Ipko, Cable

Table K.3 - One-off broadband connection charge (including VAT)

Having paid the initial charge, customer must then pay a flat-rate monthly fee as shown in Table K.4.

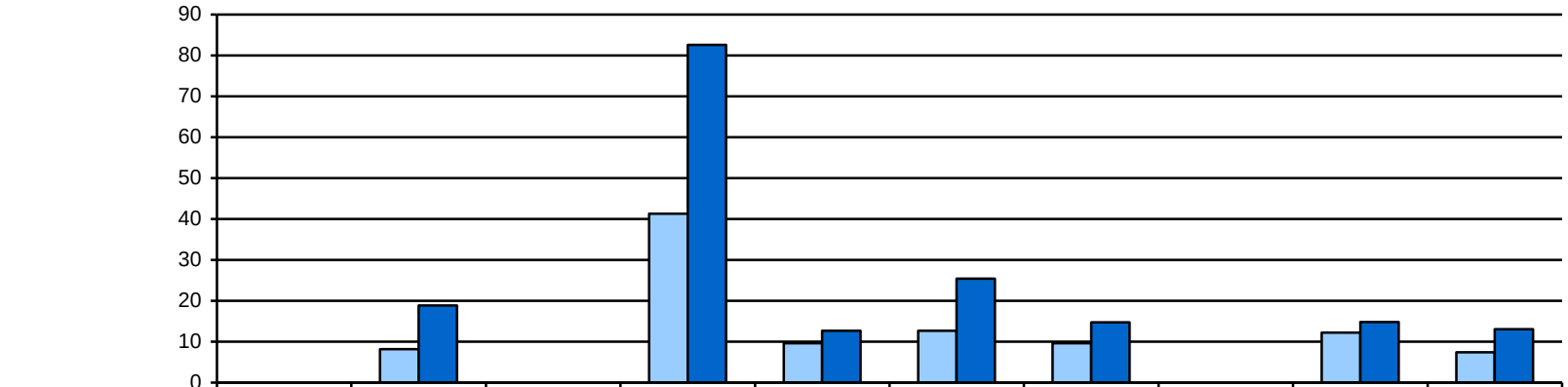
Country	Speed	Incumbent DSL €	Alternative operator €	Alternative operator and technology
Croatia	256 kbit/s		-	
	512 kbit/s		-	
	2 Mbit/s	8.92	7.68	OT-Optima telekom d.o.o.
FYROM	256 kbit/s	8.15	8.15	On Net, ADSL over LLU
		16.32		
		22.86		
	512 kbit/s	18.89		
		46.66		
		77.44		
	2 Mbit/s	-	17.81	On Net, ADSL over LLU
			24.34	
			24.34	

Country	Speed	Incumbent DSL €	Alternative operator €	Alternative operator and technology
			51.47	
			97.21	
Turkey	256 kbit/s	N/A	3.59	Turksat A.S., Cable
	512 kbit/s	N/A	5.02	
	2 Mbit/s	17.58	7.18	
Albania	256 kbit/s	41.28	24.39	Abcom, ADSL - USB modem (own infrastructure to customer premises).Family package.
	512 kbit/s	82.57	32.56	Abcom, ADSL - modem router (own infrestructure to customer premises). Family package 384/128 kbps supporting up to three PCs.
	2 Mbit/s	123.85		
Bosnia & Herzegovina: BH Telecom	256 kbit/s	9.65	7.62	Logosoft d.o.o. Sarajevo, DSL
	512 kbit/s	12.70	12.70	Logosoft d.o.o. Sarajevo, DSL
	2 Mbit/s	22.86	22.86	Logosoft d.o.o. Sarajevo, DSL
Bosnia & Herzegovina: Telekom Srpske	256 kbit/s	12.70		
	512 kbit/s	25.40		
	2 Mbit/s	50.79		
Bosnia & Herzegovina: HT Mostar	256 kbit/s	9.65		
	512 kbit/s	14.73		
	2 Mbit/s	24.89		
Montenegro	256 kbit/s	-	-	
	512 kbit/s	-	12.82	M:Tel, Wi-Max
	2 Mbit/s	-	32.48	M:Tel, Wi-Max
Serbia	256 kbit/s	12.23	-	
	512 kbit/s	14.79	16.53	PTT net, Verat net, Eunet, SBB; ADSL and cable Internet
	2 Mbit/s	29.58	36.74	PTT net, Verat net, Eunet, SBB; ADSL and cable Internet
Kosovo	256 kbit/s	7.39	-	Ipko
	512 kbit/s	13.04	13.00	
	2 Mbit/s	39.13	21.69	

Table K.4 - Broadband Internet monthly subscription (including VAT)

Notes:
FYROM: Prices are for the "Surfer 20" package, excluding VAT. Off-peak is 18:00 to 06:00 weekdays and all day weekends and national holidays.

Turkey: The ISP charge includes monthly subscription fee (for the standard voice package, no additional ISP charge) and excludes VAT and the Special Communication Tax. 256bit/s and 512kbit/s services are not provided by TTNet (subsidiary of Türk Telekom) at the retail level. The min. speed offered by the incumbent is 1 Mbit/s.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK
Incumbent 256kb/s		8.15		41.28	9.65	12.70	9.65		12.23	7.39
Incumbent 512kb/s		18.89		82.57	12.70	25.40	14.73		14.79	13.04

Figure 60 – ADSL monthly subscription charges, in Euro

Note:
Croatia: The incumbent operator does not offer 256kbit/s or 512 kbit/s. The price for 2Mbit/s is €8.92 per month, which compares quite favourably with the price of the lower speed offerings in other countries.

L. Wholesale tariffs

The information in this section has a reference date of April 1, 2008, unless stated otherwise.

1. Call termination on incumbent and alternative operators' fixed networks

The local level interconnection tariffs for termination on the incumbents' networks are reasonably aligned with, although slightly higher than, the EU average.

Country		Local, €				Single transit, €				Double transit, €			
		Peak		Off-peak		Peak		Off-peak		Peak		Off-peak	
		setup	Per min.	setup	Per min.	setup	Per min.	setup	Per min.	setup	Per min.	setup	Per min.
Croatia		0.0021	0.0077	0.0010		0.0021	0.0131	0.0010	0.0065	0.0021	0.0171	0.0010	0.0085
FYROM		0.0000	0.0070	0.0000		0.0000	0.0103	0.0000	0.0069	0.0000	0.0144	0.0000	0.0095
Turkey		N/A	N/A	N/A	N/A	0.0000	0.0082	0.0000	0.0082	0.0000	0.0129	0.0000	0.0129
Albania		0.0003	0.0102	0.0003	0.0102	0.0005	0.0179	0.0005	0.0179	0.0007	0.0217	0.0007	0.0217
Bosnia & Herzegovina	BH Telecom	0.0000	0.0099	0.0000	0.0050	0.0000	0.0149	0.0000	0.0074	0.0000	0.0203	0.0000	0.0102
	Telekom Srpske	0.0000	0.0099	0.0000	0.0083	0.0000	0.0149	0.0000	0.0083	0.0000	0.0203	0.0000	0.0203
	HT Mostar	0.0000	0.0099	0.0000	0.0074	0.0000	0.0149	0.0000	0.1117	0.0000	0.0203	0.0000	0.0152
Montenegro		0.0000	0.0225	0.0000	0.0225	0.0000	0.0270	0.0000	0.0270	N/A	N/A	N/A	N/A
Serbia		0.0036	0.0140	0.0018	0.0070	0.0036	0.0224	0.0018	0.0112	0.0036	0.0350	0.0018	0.0175
Kosovo		0.0000	0.0200	0.0000	0.0200	0.0000	N/A	0.0000	N/A	0.0000	N/A		N/A

Table L.1 - Call termination on the incumbent operator's fixed network (fixed to fixed)

Notes:

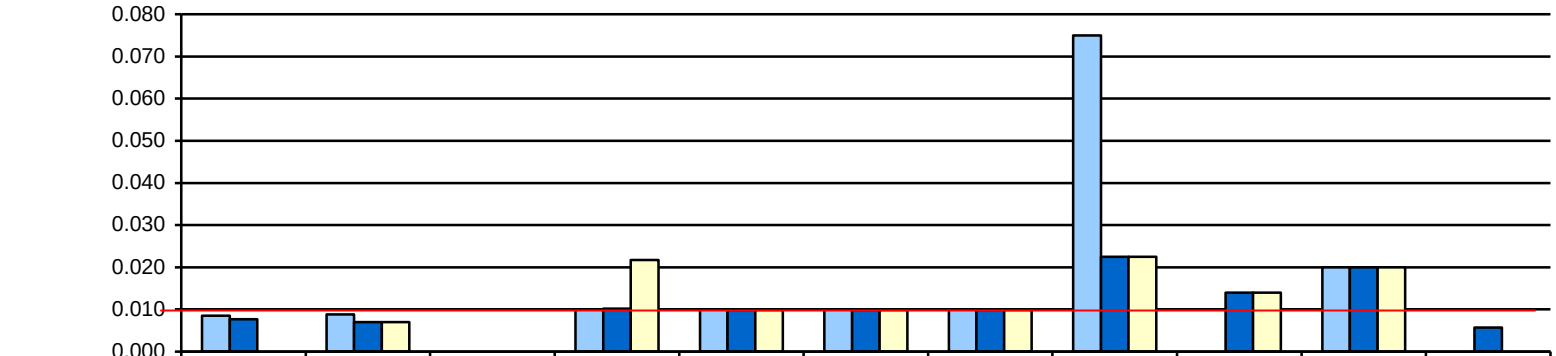
Turkey: The figures are from the "Standard Reference Interconnection Charges" determined by the NRA. They are to be inserted into the RIO of the incumbent operator and will be used in the resolution of any disputes.

Montenegro: Prices exclude VAT. There are no peak and off-peak times. The price per minute is paid by other operators to the fixed incumbent operator (T-Com). There are no setup charges for any type of call termination, only the price per minute. Double transit is not available, because of the hierarchical structure of the incumbent operator's network. (Source: T-Com Montenegro RIO April, 2008 www.t-com-cg.com).

Serbia: The interconnection agreements between mobile and fixed operators are commercial in confidence.

Figure 61, Figure 62 and

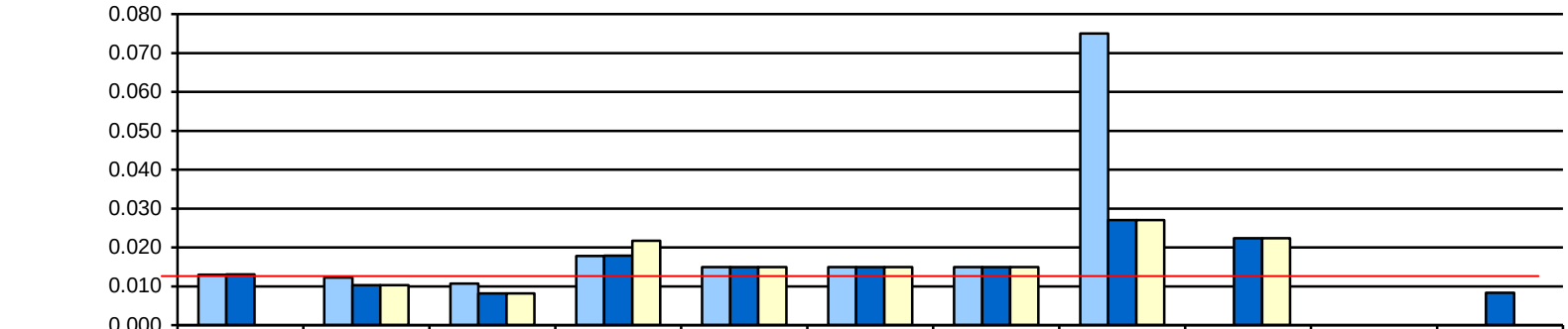
Figure 63 present the termination prices in the fixed network of the incumbent operator. These charts include the additional information on the termination charges for traffic from the mobile operators for those countries where this information is available. According to the EU framework, the termination charges should be the same regardless of the originating network. The graph shows that this is the case for FYROM, Montenegro, Serbia and Kosovo. For Albania, the tariffs are different for local and single transit termination as the mobile operators always pay the double transit charge.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.008	0.009		0.010	0.010	0.010	0.010	0.075		0.020	
Apr-08	0.008	0.007		0.010	0.010	0.010	0.010	0.023	0.014	0.020	0.006
Mobile to fixed		0.007		0.022	0.010	0.010	0.010	0.023	0.014	0.020	

Figure 61 - Fixed incumbent local termination in peak hours, in Euro

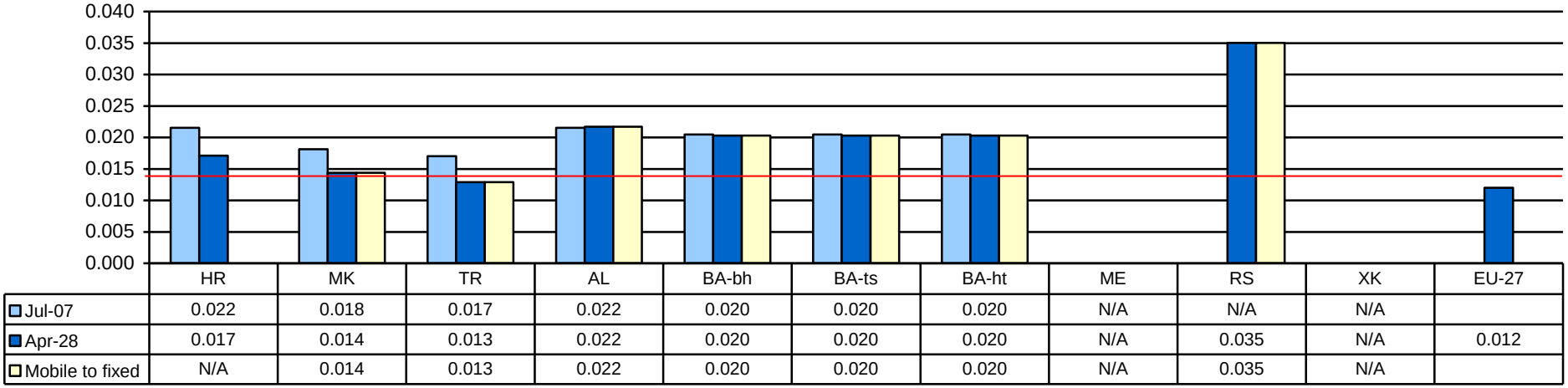
Notes:
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.013	0.012	0.011	0.018	0.015	0.015	0.015	0.075	N/A	N/A	
Apr-08	0.013	0.010	0.008	0.018	0.015	0.015	0.015	0.027	0.022	N/A	0.008
Mobile to fixed	N/A	0.010	0.008	0.022	0.015	0.015	0.015	0.027	0.022	N/A	

Figure 62 - Fixed incumbent single transit termination in peak hours, in Euro

Notes:
The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.022	0.018	0.017	0.022	0.020	0.020	0.020	N/A	N/A	N/A	
Apr-28	0.017	0.014	0.013	0.022	0.020	0.020	0.020	N/A	0.035	N/A	0.012
Mobile to fixed	N/A	0.014	0.013	0.022	0.020	0.020	0.020	N/A	0.035	N/A	

Figure 63 - Fixed to fixed incumbent double transit termination in peak hours, in Euro

Notes: The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.

Table L.2 presents the information on call termination charges in the largest alternative fixed network. This information is not available from all countries, either because it is seen as confidential information or simply because there is no alternative fixed network.

Country	Local, €				Single transit, €				Double transit, €			
	Peak		Off-peak		Peak		Off-peak		Peak		Off-peak	
	Setup	Per min.	Setup	Per min.	Setup	Per min.	Setup	Per min.	Setup	Per min.	Setup	Per min.
Croatia	0.0000	0.0110	0.0000	0.0055	0.0000	0.0110	0.0000	0.0055	0.0000	0.0110	0.0000	0.0055
FYROM	-	-	-	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-	-	-	-
Albania	0.0007	0.0248	0.0007	0.0248	0.0007	0.0248	0.0007	0.0248	0.0007	0.0248	0.0007	0.0248
Bosnia & Herzegovina	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	0.0000	0.0300	0.0000	0.0300	0.0000	0.0300	0.0000	0.0300	N/A	N/A	N/A	N/A
Serbia	-	-	-	-	-	-	-	-	-	-	-	-
Kosovo	-	-	-	-	-	-	-	-	-	-	-	-

Table L.2 - Call termination on the largest alternative network (fixed-to-fixed)

Notes:

FYROM:	The operator has submitted completed interconnection agreements to the NRA on a confidential basis.
Turkey:	There are no alternative networks.
Albania:	For mobile-to-fixed termination, Albtelecom and the alternative local and regional operators have only a single point of interconnection, consequently the charge is not dependant on the segment (local, single or double). Albtelecom applies a single price to mobile and to fixed operators. The only exception is one alternative operator active in urban areas that has agreed with Albtelecom on a local termination charge for those urban areas at ALL 1.50.
Montenegro:	Prices exclude VAT, with differences between peak and off-peak times. There are no setup charges for any type of call termination, only a price per minute to be paid to alternative fixed operator (M:Tel). Double transit is not available, because of the hierarchical structure of the network. (Source: Interconnection agreement between T-Com and M:Tel.)

Figure 64 below makes a comparison between the termination cost of the fixed network of the incumbent operator and the fixed network of the largest alternative operator for those countries where this information is available. For Albania and Montenegro, the termination cost of the incumbent operator is always higher than the corresponding rate of the incumbent and the rates do not distinguish between local, single and double transit. The rate is always the same. This is also the case for Croatia, but here the termination rate of the alternative operator is lower than that of the incumbent for single and double transit.

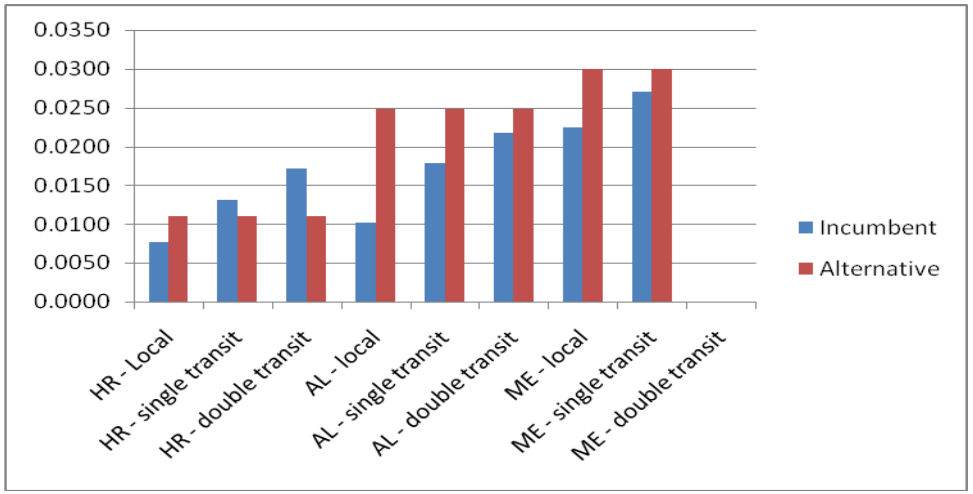


Figure 64 – Termination in the incumbent's and the alternative operator's fixed network, in Euro

Table L.3 below presents the corresponding termination rates if the call originates in a mobile network. The termination rates are the same as for termination from a fixed network in Albania and Montenegro. In the case of Croatia, the termination rates are somewhat higher if the traffic originates in a mobile network and there are also different rates for different mobile networks.

Country		Local, €				Single transit, €				Double transit, €			
		Peak		Off-peak		Peak		Off-peak		Peak		Off-peak	
		Setup	Per min.	Setup	Per min.	Setup	Per min.	Setup	Per min.	Setup	Per min.	Setup	Per min.
Croatia	T-Mobile	0.0021	0.0131	0.0010	0.0065	0.0021	0.0131	0.0010	0.0065	0.0021	0.0131	0.0010	0.0065
Croatia	VIP and Tele2	0.0000	0.0193	0.0000	0.0096	0.0000	0.0193	0.0000	0.0096	0.0000	0.0193	0.0000	0.0096
FYROM		-	-	-	-	-	-	-	-	-	-	-	-
Turkey		-	-	-	-	-	-	-	-	-	-	-	-
Albania		0.0007	0.0248	0.0007	0.0248	0.0007	0.0248	0.0007	0.0248	0.0007	0.0248	0.0007	0.0248
Bosnia & Herzegovina		-	-	-	-	-	-	-	-	-	-	-	-
Montenegro		0.0000	0.0300	0.0000	0.0300	0.0000	0.0300	0.0000	0.0300	N/A	N/A	N/A	N/A
Serbia		-	-	-	-	-	-	-	-	-	-	-	-
Kosovo		-	-	-	-	-	-	-	-	-	-	-	-

Table L.3 - Call termination on the largest alternative fixed operator (mobile to fixed)

Notes:

FYROM: The operator submitted completed interconnection agreements to the NRA on a confidential basis.

Turkey: There are no alternative networks.

Albania: For termination mobile-to-fixed operators (Albtelecom and Alternative -local and regional) the charge is not dependant on the segment (local, single or double). Operators have only one POI between them. The charge applied for Albtelecom (alternative)-fixed termination is also not dependent on the segment of termination, and is just one tariff applied the same as mobile to fixed.

Montenegro: Prices are without VAT (17%) and there are differences between peak and off-peak times. The price per minute is paid by the other operator to the alternative fixed operator (M:Tel). There are no setup charges for any type of call termination, only price per minute charges to be paid to alternative fixed operator. Double transit is not available, because of the hierarchical structure of the alternative fixed operator's network. (Source: Interconnection agreement between T-Com Montenegro and M:Tel.)

Serbia: There are no alternative networks.

2. Call termination on mobile networks – all mobile operators

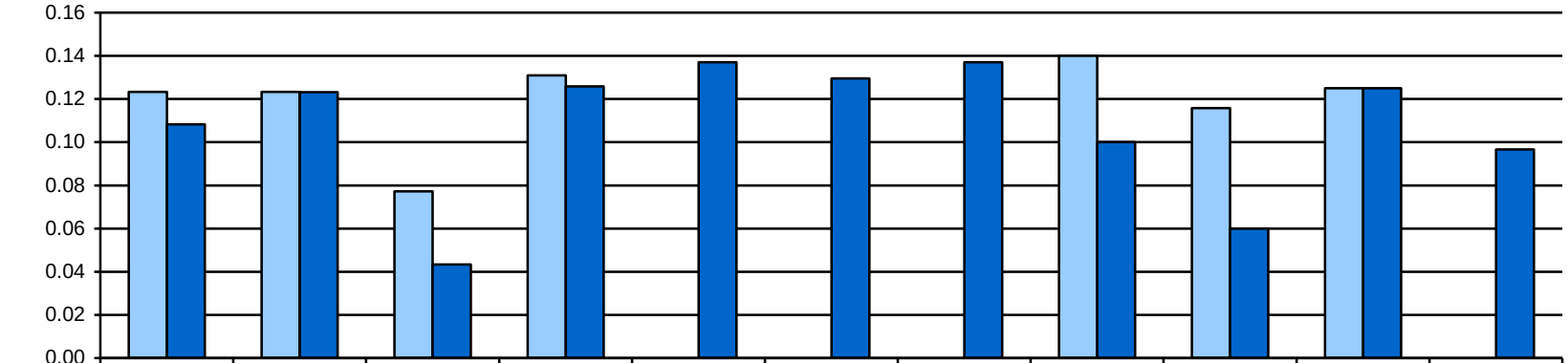
Table L.4 below presents the termination rates of the mobile operators for all countries where this information is available.

Country	Operator	Peak, €		Off-peak, €	
		setup	per min.	setup	per min.
Croatia	T-Mobile Hrvatska	0.0000	0.1083	0.0000	0.1083
	VIPnet	0.0000	0.1083	0.0000	0.1083
	Tele2	0.0000	0.1240	0.0000	0.0620
FYROM	T-Mobile	0.0000	0.123	0.0000	0.049
	Cosmofon	0.0000	0.123	0.0000	0.049
	VIP Operator	0.0000	0.123	0.0000	0.049
Turkey	Turkcell	0.0000	0.0434	0.0000	0.0434
	Vodafone	0.0000	0.0453	0.0000	0.0453
	Avea	0.0000	0.0534	0.0000	0.0534
Albania	AMC	0.0037	0.1259	0.0037	0.1259
	Vodafone Albania	0.0037	0.1259	0.0037	0.1259
	Eagle Mobile	0.0042	0.1404	0.0042	0.1404
Bosnia & Herzegovina	BH Telecom	0.0000	0.1371	N/A	N/A
	Telekom Srpska	0.0000	0.1295	N/A	N/A
	Hrvatska Telekom	0.0000	0.1371	N/A	N/A
Montenegro	ProMonte	0.0000	0.1000	0.0000	0.1000
	T-Mobile	0.0000	0.1000	0.0000	0.1000
	M:Tel	0.0000	0.1000	0.0000	0.1000
Serbia	mts	0.0000	0.0600	0.0000	0.0600
	Telenor	0.0000	0.0600	0.0000	0.0600
	Vip Operator	0.0000	0.0600	0.0000	0.0600
Kosovo	Vala	0.0000	0.1250	0.0000	0.0625
	Ipko	0.0000	0.1280	0.0000	0.1130

Table L.4 – Call termination on all mobile networks from a fixed network

Notes:
Bosnia & Herzegovina: The termination rates are those that apply when the traffic has been originated in the fixed network that belongs to the owner of the mobile network. This fixed operator represents the incumbent operator in the corresponding region.

Figure 65 below presents the development in the termination costs in mobile networks from July 2007. Where mobile operators in a country have different termination rates, the lowest rate is presented in the chart. Significant reductions have taken place in Turkey, Montenegro and Serbia.



	HR	MK	TR	AL	BA-bh	BA-ts	BA-ht	ME	RS	XK	EU-27
Jul-07	0.123	0.123	0.077	0.131				0.140	0.116	0.125	
Apr-08	0.108	0.123	0.043	0.126	0.137	0.130	0.137	0.100	0.060	0.125	0.097

Figure 65 - Fixed to mobile termination, in Euro

Notes:

FYROM: In April 2008 the NRA approved RIOs for T-Mobile and Cosmofon, being operators with SMP on Market 16. The operators appealed against the decision of the Director, which will be heard before the NRA Commission. As yet, there is no final of the Commission, with the proposed prices for call termination having been kept confidential.

Turkey: The figures are the Standard Reference Interconnection Charges determined by the NRA. They are to be inserted to the RIOs of the mobile operators and will be used in the resolution of any disputes.

The EU-27 average is taken from the 13th Implementation Report of the European Commission, March 2008.

Table L.5 below presents the termination rates that are applied by mobile operators when calls have been originated in another mobile network.

Country	Operator	Peak, €		Off-peak, €	
		setup	per min.	setup	per min.
Croatia	T-Mobile Hrvatska	0.0000	0.1083	0.0000	0.1083
	VIPnet	0.0000	0.1083	0.0000	0.1083
	Tele2	0.0000	0.1240	0.0000	0.0620
FYROM	T-Mobile	0.0000	0.0618	0.0000	0.0618
	Cosmofon	0.0000	0.0618	0.0000	0.0618
	VIP Operator	0.0000	0.1268	0.0000	0.0471
Turkey	Turkcell	0.0000	0.0434	0.0000	0.0434
	Vodafone	0.0000	0.0453	0.0000	0.0453
	Avea	0.0000	0.0534	0.0000	0.0534
Albania	AMC	0.0037	0.1259	0.0037	0.1259
	Vodafone Albania	0.0037	0.1259	0.0037	0.1259
	Eagle Mobile	0.0042	0.1404	0.0042	0.1404
Bosnia & Herzegovina	BH Telecom	0.0000	0.1554	N/A	N/A
	Telekom Srpska	0.0000	0.1468	N/A	N/A
	Hrvatska Telekom	0.0000	0.1554	N/A	N/A
Montenegro	ProMonte	0.0000	0.1000	0.0000	0.1000
	T-Mobile	0.0000	0.1000	0.0000	0.1000
	M:Tel	0.0000	0.1000	0.0000	0.1000
Serbia	mts	0.0000	0.0000	0.0000	0.0000
	Telenor	0.0000	0.0000	0.0000	0.0000
	Vip Operator	0.0000	0.0000	0.0000	0.0000
Kosovo	Vala	0.0000	0.0680	0.0000	0.0600
	Ipko	0.0000	0.1280	0.0000	0.1130

Table L.5 – Call termination on all mobile operators – from another mobile network

Notes:

FYROM: In April 2008 the NRA approved RIOs for T-Mobile and Cosmofon, being operators with SMP operators on Market 16. The operators submitted an appeal against the decision of the Director to be heard before the NRA Commission. Since, as yet, there is no final of the Commission, the new prices for call termination in mobile networks in T-Mobile and Cosmofon have not been made public.

Turkey: The figures reflect the Standard Reference Interconnection Charges determined by the NRA. They are to be inserted to the RIOs of the mobile operators and to be used in any procedures to resolve disputes

M. Information society statistics

1. Computer and Internet usage by individuals

The percentage of individuals regularly using the Internet is policy indicator A.2 of the *e*Europe 2005 benchmarking framework

- population is defined as being from 16 to 74 years
- regularly is defined as at least weekly
- usage includes all locations and methods of access
- *e*Europe analyses used background variables of age, gender, employment status and education level
- i2010 benchmarking framework added bandwidth as a variable

Table M.1 provides data on computer and Internet usage by individuals.

Country	Individuals regularly using computers (%)			Individuals regularly using the Internet (%)			Comments (different data definition, date of survey)
	Total	Female	Male	Total	Female	Male	
Croatia	N/A	N/A	N/A	N/A	N/A	N/A	The Central Bureau of Statistics plans to collect these data by the end of the 2008.
FYROM	37.07	29.16	44.90	25.78	19.46	32.05	Survey of April 2007, asking for persons aged 15-74 that used computers/Internet at least weekly within the last three months.
Turkey	29.46	20.92	37.88	26.67	18.47	34.76	Survey of July 2007, usage within the last three months.
Albania	N/A	N/A	N/A	[14.98]	N/A	N/A	The figure is not based on a survey asking for regular usage, but on the estimated number of Internet users in 2007 (471,200) in relation to the whole population.
Bosnia & Herzegovina	[36,47]	N/A	N/A	[27.25]	N/A	N/A	Estimation based on various sources (statistical institutes in BiH, studies of WB, UNDP and EC and some NGOs, i.e. BAIT, BHIST)
Montenegro	[44.5]	[46.6]	[42.4]	N/A	N/A	N/A	Source: ISSP ICT Survey December 2007 The table shows the answers on the question “Are you a PC user”, without reference to a certain period The survey also asked “Do you use the Internet”: 33.4% yes, 16.1% no, 50.6% no answer

Country	Individuals regularly using computers (%)			Individuals regularly using the Internet (%)			Comments (different data definition, date of survey)
	Total	Female	Male	Total	Female	Male	
Serbia	33.6 Eurostat: 41	29.4 Eurostat: 37	39.2 Eurostat: 46	23.9 Eurostat: 26	-	-	Survey of December 2006, usage within last three months. Source: Statistical Office. Eurostat data of 2007
Kosovo	30	22	38	23	17	29	Estimation based on subscriber numbers of the main ISPs and surveys of the Riinvest Institute.

Table M.1 – Computer and Internet usage by individuals

2. Computer and Internet usage by enterprises

Table M.2 provides data on computer and Internet usage by enterprises, as collected by national statistics institutes and, where available, grouped by the size of the enterprises. Indicator B.1 of the *e*Europe 2005 benchmarking framework asks for the percentage of persons employed using computers connected to the Internet, in their normal work routine. However, these data are generally not collected in South-East Europe, Instead, the table includes:

- percentage of enterprises using computers;
- percentage of enterprises having access to the Internet (*e*Europe indicator B.2); and
- comments, in particular on the date of the survey and eventually different data definitions.

Country	Percentage of enterprises using computers (by number of employees)				Percentage of enterprises having access to the Internet (by number of employees)				Comments (different data definition, date of survey)
	Total (10+)	10-49	50-249	250+	Total (10+)	10-49	50-249	250+	
Croatia	97.0	96.0	100.0	100.0	93.0	92.0	98.0	100.0	Survey 2007. Source: Eurostat
FYROM	90.7	88.6	97.4	100.0	73.3	70.1	81.9	97.4	Survey 2007.
Turkey	87.8	86.1	96.3	99.8	80.4	78.0	92.3	99.2	Survey 2005. See comment below.
Albania	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A survey conducted in December 2007 by IDRA showed that 84% of big business companies have access to the Internet.

Country	Percentage of enterprises using computers (by number of employees)				Percentage of enterprises having access to the Internet (by number of employees)				Comments (different data definition, date of survey)
	Total (10+)	10-49	50-249	250+	Total (10+)	10-49	50-249	250+	
Bosnia & Herzegovina	[85]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Estimation based on several sources.
Montenegro	92.9	N/A	N/A	N/A	90.5	N/A	N/A	N/A	Data are based on ISSP ICT Survey, December 2007.
Serbia	97.3 Eurostat: 92	96.7 Eurostat: 90	98.7 Eurostat: 98	100 Eurostat: 100	90.2 Eurostat: 87	89.7 Eurostat: 86	90.9 Eurostat: 86	94.1 Eurostat: 94	Survey of December 2006, usage within last three months (source Statistical Office – Usage of ICT in Republic of Serbia)Eurostat data of 2007
Kosovo	87.4	86.0	95.6	99.0	78.1	77	92.3	98.3	Survey made by Riinvest, Ministry of Transport and Telecommunications

Table M.2 – Computer and Internet usage by enterprises

Notes:
Turkey: The data collection of 2007 community survey on ICT usage and e-commerce in enterprise was finished at the end of December 2007. The quality controls, which were made by telephone interviews, detected measurement errors for some questions. TURKSTAT is not planning to publish and disseminate the results for the year 2007 for the present. TURKSTAT will decide on dissemination after comparing the 2007 results with the results of the year 2008 survey period.

3. Body responsible for Information society statistics

Table M.3 shows body, whether the national statistics institute or another organisation, that collects and publishes data on information society indicators. The indicators were defined in the Council Resolution of February 18, 2003 on the implementation of the *e*Europe 2005 Action Plan and further developed under the i2010 Benchmarking Framework, in particular on:

- supply and demand of e-government, e-learning and e-health services;
- buying and selling online; and
- ICT skills and Internet users' experience regarding ICT security.

Country	Responsible body for information society statistics	Short description of available statistical data, URL
Croatia	Central Bureau of Statistics https://www.dzs.hr/	No information society statistics available, besides Eurostat data on the use of information technologies in enterprises

Country	Responsible body for information society statistics	Short description of available statistical data, URL
FYROM	Statistical Office of the Republic of Macedonia http://www.stat.gov.mk/	Use of information technologies in households Use of information technologies in enterprises
Turkey	Turkish Statistical Institute (TURKSTAT) http://www.turkstat.gov.tr/	Use of information technologies in households (computer and Internet usage by gender and age group, by education level and by labour force status, also separately for rural and urban areas) Use of information technologies in enterprises (computer usage and Internet access grouped by economic activity and size of the company, data on the type of Internet connection, on the purpose of Internet usage and the proportion of enterprises which have a website) http://www.turkstat.gov.tr/VeriBilgi.do?tb_id=60&ust_id=2
Albania	Institute of Statistics (INSTAT) http://www.instat.gov.al/	No information society statistics available
Bosnia & Herzegovina	Agency for Development of the Information Society of BiH (ARID), to be established	No information society statistics available
Montenegro	Secretariat for Development http://ww.rsr.cg.yu/ Institute for Strategic Study and projects (ISSP) http://www.isspm.org/	See comment below Annual ICT surveys on usage of computers, telephony and Internet access, e-education, e-commerce, e-government and other information society topics
Serbia	Statistical Office of the Republic of Serbia http://webrzs.statserb.sr.gov.yu/	Use of information technologies in households Use of information technologies in enterprises
Kosovo	Telecommunication Regulatory Authority (TRA) http://www.art-ks.org/ Statistical Office of Kosova http://www.ks-gov.net/esk/	No information society statistics available

Table M.3 – Body responsible for Information society statistics

Notes:

Albania: AKEP (former TRE) and MPPTT have some market data of the electronic communications markets.

Bosnia & Herzegovina: According to strategic documents for the development of the information society of BiH (Policy for Development of the Information Society of BiH, Strategy for Development of the Information Society of BiH and Action Plan for Development of the Information Society of BiH), the responsible body for information society statistics shall be the Agency for Development of the Information Society of BiH (ARID). ARID has not been established yet, but a Law for the Agency for Development of the Information Society of BiH has been drafted. The statistical institutes will be in charge for data collection, ARID will be focal point to distribute and follow up the final reports.

Montenegro: MONSTAT is the governmental statistics office, but does not collect data on information society statistics. The Secretariat for Development is the key institution of the Information society issues, including the collecting of data regarding the reports requested.

N. 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 and addresses specific questions such as spam and cookies (Directive on Privacy and Electronic Communications);
- the fight against cybercrime, through the adoption of a framework decision (which echoes the Council of Europe Convention on Cybercrime) and initiatives specifically aimed at protecting minors; and
- specific network and information security measures.

This last line of action is 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

Table N.1 shows the:

- legal provisions obliging providers to safeguard the security of their services (see Article 4, Privacy Directive);
- the classes of providers obliged by these provisions (publicly available electronic communications services – PECS, publicly available telephone services – PATS or other definition); and
- the national body or bodies responsible for supervision (for example the NRA, the data protection authority, a body responsible for disaster prevention, a body responsible for network security or several of such bodies).

Country	Legal provisions on security of electronic communications services	Scope of obliged providers	Body/bodies responsible for supervision
Croatia	Article 105, Telecommunications Act (until June 30, 2008)	Providers of public telecommunications services	NRA
	Article 99, Electronic Communications Act (since July 1, 2008)	Providers of public communications services	NRA
FYROM	Article 110, Law for Electronic Communications Law for personal data protection, adopted in January 2005	Operators of public communications networks and service providers of communications services	NRA is responsible for technical measures. Data privacy protection for end consumers is a responsibility of a newly established Directorate for personal data protection.

Country	Legal provisions on security of electronic communications services	Scope of obliged providers	Body/bodies responsible for supervision
Turkey	Articles 6 and 7, By-law on Personal Information Processing and Protection of Privacy in the Telecommunications Sector	Providers of telecommunications services for profit	NRA
	By-law on Security of Electronic Communications (since July 20, 2008), see note	Equity companies which provide electronic communications networks and/or services	NRA
Albania	Article 22, Law on Telecommunications (until June 25, 2008)	Public telecommunications operators	NRA
	Article 122, Law on Electronic Communications (since June 26, 2008)	Providers of public electronic communications networks and services	NRA
Bosnia & Herzegovina	Article 5, Law on Communications	Providers of public telecommunications services and networks	NRA
Montenegro	Article 66, Law on Telecommunications	Providers of public telecommunications networks and services	NRA
	Art. 112 of Law on Electronic communication (adopted by Parliament on July 29, 2008)	Providers of public communications networks and services	NRA
Serbia	Article 54, Telecommunications Law	Public telecommunications operators	NRA
Kosovo	Article 43, Telecommunications Law	Providers of public telecommunications services	NRA

Table N.1 - Network security obligations

2. Cybercrime

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

- Council Framework Decision of February 24, 2005 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') seriously to interrupt or hinder its functioning;
  - interfering with computer data (e.g., alteration, deletion or damaging of data) on an information system (even in the absence of damage to a person).

  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 including through computer systems (Framework Decision 2004/68), and to fight fraud and counterfeiting of non-cash means of payment (Framework Decision 2001/413).
- policy initiatives, for example, to address new forms of cybercrime (e.g., identity theft) and improve cross-border enforcement cooperation.

Table N.2 shows:

- whether the country has ratified and transposed into national legislation the Council of Europe Convention on Cybercrime;
- whether national legislation considers attacks against information systems as criminal offences;
- whether national legislation considers other computer related acts as criminal offences; and
- the policy framework on the fight against cybercrime, and the main lines of that policy.

Country	Ratification of Council of Europe Convention on Cybercrime	Are attacks against information systems considered as criminal offences?	Are other computer-related acts considered criminal offences?	Policy framework on the fight against cybercrime
Croatia	Yes, on July 8, 2002 (Official Gazette 9/2002)	Yes, in the Criminal Code: • illegal access and interception (art. 223 para. 1) • systems interference (art. 223 para. 2) • data interference (art. 223 para. 3)	Yes, in the Criminal Code: • child pornography (art. 196) • computer forgery (art. 223a) • computer fraud (art. 224a) • the provisions on copyright do not explicitly refer to computer related acts but include all forms of communicating works to the public (art. 229ff).	No explicit policy framework
FYROM	Yes, on June 16, 2004 Ratification of the Protocol to the Convention on cyber crime concerning the criminalization of acts of racist and xenophobic nature committed through computer systems on July 5, 2005	Yes The Criminal Code considers as criminal offences: • illegal access to computer resources, • unauthorized use of computer data, • illegal use and multiplication of computer data, • illegal manipulation with computer data, • changing, damaging of data or programs, • introduction of viruses, • abuse of passwords.	• Computer fraud (Article 251b) • Issuance of a bad cheque and abuse of credit cards (Article 274) • Violation of copyright and similar rights (Article 157) • Violation of the right of the distributor of a satellite signal with special protection (Article 157a) • Piracy of audio and visual work (Article 157b) • Piracy of a phonogram (Article 157c) • Production and distribution of child's pornography through a computer system (Article 193a).	No explicit policy framework

Country	Ratification of Council of Europe Convention on Cybercrime	Are attacks against information systems considered as criminal offences?	Are other computer-related acts considered criminal offences?	Policy framework on the fight against cybercrime

Turkey	No	Yes
		• illegal access (art. 243 para. 1 Penal Code)
		• illegal interception (Art. 243 para. 1 and Art. 132 Penal Code)
		• attacks against conditional access systems (Art. 243 para. 2 Penal Code)
		• system interference (Art. 244 para. 1 Penal Code)
		• data interference (Art. 244 para. 2 Penal Code)
			Yes
			• Under Penal Code:
			  • Art. 158 and 245 (fight fraud and counterfeiting of non-cash means of payment),
			  • Art. 163 (fights benefit from using telephone lines, frequencies and coded or uncoded broadcasts without consent of the owner or possessor);
			  • Art. 226/3 (fights sexual exploitation of children through audio-visual and written means) is considered criminal offences.
			• Infringement of copyright and related rights (Art. 71, 72 and 73 of Law No. 5846 on intellectual and artistic works)
			• Turkey has adopted the Law numbered 5651 on May 23, 2007, which aims to fight with nine catalogue criminal offences committed through internet publications. These offences are provocation for committing suicide, sexual harassment of children, to incite the usage of drugs, to supply drugs which are dangerous for health, obscenity, prostitution, to provide place and opportunity for gambling and crimes determined in the Law on crimes against Atatürk.
				Within the Acquis Alignment Programme of Turkey which was declared by the chief negotiator in 2007, the Ministry of Justice has been assigned to draft a specific Law on the fight against cybercrime.
				Additionally, the Information Society Strategy (2006-2010) and Action Plan includes a line on “internet security” with the following direction:
				• Enactment of necessary regulations for a safe internet environment in order to increase the motivation of individuals towards ICT usage. With these regulations as well as training and awareness raising activities mental and physical healthcare of children, personal rights, family values and public order will be sustained.

Country	Ratification of Council of Europe Convention on Cybercrime	Are attacks against information systems considered as criminal offences?	Are other computer-related acts considered criminal offences?	Policy framework on the fight against cybercrime
Albania	Yes, on June 20, 2002	Yes Interference in computer transmissions and programs (art. 192/b Penal Code)	No Amendments to the Penal Code are being drafted by the Ministry of Justice	On January 9, 2008 the Government approved a sector strategy of public order, with the following main items on cybercrime: • to establish a special organisational unit to deal with cybercrime; • to recruit officers with special knowledge on the field; and • to improve the legislation in the field of cyber crime.
Bosnia & Herzegovina	Yes, in 2006	No provisions in the Penal Code	No provisions in the Penal Code	No explicit policy framework
Montenegro	Not ratified	Yes, in the Criminal Code • data interference (art. 349) • computer sabotage (art. 350) • distribution of viruses (art. 351) • unauthorised use (art. 353) • disturbing electronic processing (art. 354) • illegal access (art. 355) • preventing access to networks (art. 356)	Yes, in the Criminal Code: • criminal offences against copyright (art. 234) • computer fraud (art. 352) • electronic distribution of child pornography covered by art. 211	No explicit policy framework
Serbia	Not ratified	Yes Criminal Code: • damaging computer data and programs (art. 298) • computer sabotage (art. 299) • creating and introducing computer viruses (art. 300) • unauthorised access (art. 302) • preventing or restricting access to a public computer network (art. 303) • unauthorised use of a computer (art. 304) Law on Organisation and	Yes Criminal Code: • computer fraud (art. 301) • child pornography (art. 185) • criminal offences against intellectual property (art. 198 to 202) Law on Organization and Competences of public Authorities for Fighting High Technology Crime (Official Gazette No. 61/05)	No explicit policy framework

Country	Ratification of Council of Europe Convention on Cybercrime	Are attacks against information systems considered as criminal offences?	Are other computer-related acts considered criminal offences?	Policy framework on the fight against cybercrime
		Competences of public Authorities for Fighting High Technology Crime (Official Gazette No. 61/05)		
Kosovo	No, ratification is currently in first reading in Parliament	Yes • Intrusion into computer systems, data interference (Article 264, Penal Code) • Illegal access to information systems (Article 98, Law on information society services) • Illegal interference with information systems (Article 99, Law on information society services)	Child pornography will be addressed by a new law (Article 16, Draft law on prevention and fight of the cyber crime, June 2008)	No explicit policy framework

Table N.2 - National measures to fight against cybercrime

3. Bodies in charge for security policy

Table N.3 shows:

- the body (or bodies) responsible for network and information security policy, in particular for 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;
- a short description of the body's responsibilities; and
- references to relevant policy documents, websites promoting security awareness or alert networks.

Country	Body/bodies responsible for network and information security policy	Description of responsibilities	Policy documents, websites, alert networks
Croatia	Office of the Council on National Security (UVNS)	• Central state body responsible for information security • Coordinate activities in implementation of measures and standards of information security • Coordinate activities in classified and unclassified data exchange between Republic of Croatia and other countries and organizations	

Country	Body/bodies responsible for network and information security policy	Description of responsibilities	Policy documents, websites, alert networks
	Institute for Information Systems Security	• Central state body for technical aspects of information security in information systems of government bodies and legal entities • in charge of information systems security accreditations procedures	
	National CERT in Croatian Academic and Research Network - CARNet	• National body for prevention and protection from computer threats to public information systems	http://www.cert.hr/
FYROM	Not yet established		
Turkey	TR-CERT	• Public information security awareness activities via national information security portal • Technical training on information security (for public officials) • Consultancy to state institutions to establish Information Security Management System (ISMS) • Penetration tests for information technology systems of state institutions • Preparation of the policy document of “minimum security requirements for government information and information systems” (in progress) • Preparation of the policy document “security categorization for government information and information systems” (in progress) • International cooperation • Prepare guidance documents on information security (see www.bilgiguvenligi.gov.tr) • Design and implement the “Threat Monitoring System” (TMS) for national information systems (in progress) • Design and implement information security projects of state bodies (Government, Military) • Operate Turkish National CERT/CC (Coordination Center) (Entered into "accreditation candidate" status of “Trusted Introducer for CSIRTs in Europe” on March 2008)	http://www.bilgiguvenligi.gov.tr/ (National Information Security Portal) http://www.tr-cert.gov.tr/ (National CERT Coordination Center)

Country	Body/bodies responsible for network and information security policy	Description of responsibilities	Policy documents, websites, alert networks
Albania	Directorate for the Security of Classified Information (accountable to the Council of Ministers)	• preparing policy documents, programs and procedures for securing information classified as “state secret” • supervising the implementation of rules on classified information security; • collecting data on classified information security • proposing secondary legislation on security of classified information issues; • collaboration with state institutions on information security issues	Law no. 8457 On Information Classified as State Secret, dated February 11, 1999 Council of Ministers Decision no. 922, dated December, 19 2007, “On security of information classified “state secret”, that is produced, stored, processed and transmitted by communication systems (Infosec)”
	Directorate of Encryption, which consists of two authorities under the auspices of the State Information Service: • National authority of communications security • National authority of detachment	• Safety and security of information classified as “state secret” in information networks, devices and transmission equipment	
Bosnia & Herzegovina	No dedicated body responsible		
Montenegro	Secretariat for Development http://www.rsr.cg.yu/ Directorate of protection of secret data	• Governmental institutions network	
Serbia	The National Information Technology and Internet Agency to improve and monitor electronic government development, standardize the fields of ICT, ICT security and Internet use.	• Improve and monitor electronic government development, standardize the fields of ICT, ICT security and Internet use.	Strategy on Information Society Development in Serbia
Kosovo	Ministry of Public Services for Government Networks The NRA and the Ministry of Transport & Post-Telecommunication for public & telecom network	• Prepare policy documents for the government • Collect data on information security • Public awareness activities • Coordinate information security projects of state institutions	

Table N.3 – Bodies responsible for network and information security policy

O. Electronic contracts and electronic signatures

1. Legal recognition

Table O.1 shows whether the legislation in South-East Europe has been adapted to recognise the conclusion of electronic contracts and whether electronic signatures are legally recognised. These questions are important pre-conditions to ensure the take-up of electronic commerce.

The Electronic Commerce Directive (2000/31/EC) requires Member States to remove any legal obstacles for the use of electronic contracts. This means that a contract cannot be deprived of legal validity on the ground that it has been made by electronic means. The Directive lists categories of contracts which would not automatically be legally valid and whose electronic conclusion could be restricted. These categories relate to contracts creating or transferring rights in real estate, requiring the involvement of courts or public authorities; of suretyship 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' (referred to in the table as 'qualified electronic signatures'). The technical requirements of qualified electronic signatures are specified in the three annexes of the directive. They are based on public key cryptography, involving the intervention of 'certification service providers'.

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

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

Country	Are there any regulatory obstacles to the conclusion of electronic contracts (if yes, specify type of problem)?	Are ordinary electronic signatures denied legal effect or refused as evidence in courts?	Are qualified electronic signatures recognised as equivalent to hand-written signatures?
Croatia	No The Croatian E-Commerce Act transposes the E-Commerce Directive.	No The Law on Electronic Signature (Official Gazette 10/2002) specifies some exclusions of the rule that electronic signature cannot be denied its legal effect. It also specifies that if any other law specifically prescribes that only hand-written signature can be accepted as legally effective an electronic signature has no legal power.	Yes
FYROM	No From a legal perspective there are no obstacles to concluding online contracts as the Law on Electronic Commerce (chapter 3) is based on the EU E-Commerce Directive.	No Art. 12 of Law on data in electronic form and electronic signature	Yes Art. 13 of Law on data in electronic form and electronic signature

Country	Are there any regulatory obstacles to the conclusion of electronic contracts (if yes, specify type of problem)?	Are ordinary electronic signatures denied legal effect or refused as evidence in courts?	Are qualified electronic signatures recognised as equivalent to hand-written signatures?
Turkey	No However, according to Article 5 of Electronic Signature Law No. 5070 secure electronic signature shall not be applicable to legal proceedings subject to a special procedure or an official form pursuant to laws and warranty contracts. *	No Ordinary electronic signatures do not have the same effect as qualified electronic signature which are positive evidence. They are deemed under the scope of the judicial discretionary power. **	Yes According to Article 5 of Electronic Signature Law No. 5070 “A secure electronic signature shall have the same legal effect as that of a handwritten signature.”
Albania	No Article 5, Law no. 9880 on Electronic Signature recognises the electronic contract with a qualified electronic signature. Article 7 of the same Law excludes some contract types such as contracts regarding family and inheritance law which are under the control of other specific legislation; other legal acts which require a public legalisation, authorisation by a court or a notary act; legal acts related to guarantee about probation and when law prohibits the use of electronic form.	No	Yes Article 4, Law no. 9880 on Electronic Signature.
Bosnia & Herzegovina	No	No	Yes Article 5, Law of Electronic Signature
Montenegro	No	No	Yes
Serbia	No	No	Yes Article 10, Law on Electronic Signature ('Official Gazette No. 135/04)*
Kosovo	No	No	Yes Article 1 of Law on the information society services (1.1. This Law shall make electronic documentation legally equivalent to its tradicional counterpart in paper format...) Art. 86 of Law on the information society services (86. Equal Treatment of Signature Technologies)

Table O.1 – Legal recognition of electronic contracts and signatures

Notes:
FYROM: Law on data in electronic form and electronic signature: http://www.finance.gov.mk/gb/laws/law_on_data_in_electronic_form_and_electronic_signature.pdf
Link to Law on electronic commerce: http://www.sio.gov.mk/files/pdf/na_angliski/Law_on_%20e-Commerce_2007_REV_final.pdf

Turkey: *This Article creates an exception for special legal proceedings like contracts to be concluded under the custody of notaries or other public bodies. **With Article 23 of Electronic Signature Law No. 5070, the following 295/A article has been added to Article 295 of the Turkish Code of Civil Procedure numbered 1086: "Article 295/A – Electronic data that are generated with secure electronic signatures in accordance with procedures are equivalent to bill. These data are accepted positive evidence until the contrary is proved."

Kosovo: Link to the Law on the Information Society Services: http://www.assembly-kosova.org/common/docs/ligjet/2005_02-L23_en.pdf The law was approved by Kosovo Parlaiment on July 22, and is applicable according to UNMIK Regulation nr. 2006/32 of May 8,2006. This law includes the Law on electronic commerce, the Law on electronic signature, and the Data protection and privacy law.

2. 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.

Table O.2 shows whether prior authorisation, a voluntary accreditation scheme and/or supervision have been established and which institutions are responsible.

Country	Is prior authorisation required?	Voluntary accreditation scheme established?	Supervision established?
Croatia	No	No	Yes Ministry of the Economy, Labour and Entrepreneurship
FYROM	Yes Article 16, Law on Data in Electronic Form and Electronic Signature, according which certification-service providers are required to notify their activities to the Ministry of Finance and register themselves at the Register of CAs, at least 30 days before starting provision of certification services	No	Yes Ministry of Finance http://www.finance.gov.mk
Turkey	No Electronic Certificate Service Providers shall notify Telecommunications Authority before commencing its operations according to Article 8, Electronic Signature Law No 5070.	No	Yes According to Article 15 of Electronic Signature Law No. 5070 "The supervision of Electronic Certificate Service Providers' operations and transactions regarding the implementation of this Law shall be fulfilled by the Telecommunications Authority"

Country	Is prior authorisation required?	Voluntary accreditation scheme established?	Supervision established?
Albania	No Article 11, Law on Electronic Signature provides the registration and unregistration of the certification service provider by the national authority for electronic certification.	No	According to the Law on Electronic Signature, the national authority of electronic signature is depending on the Ministry of the Interior. This authority is under construction.
Bosnia & Herzegovina	Yes Article 7, Law on electronic signature requires certification-service providers to register their activities at the Supervision Body.	No	No According to article 20 of the Law on electronic signature, the office for accreditations and supervision (supervision body) shall be established in the Ministry authorised for information society (Ministry of Communications and Transport of BiH). It is expected that the office will be established up to the end of this year.
Montenegro	No	No	Yes Secretariat for Development
Serbia	Yes, for qualified electronic signatures Article 15, Electronic Signatures Act requires certification-service providers to register their activities at the Ministry of Telecommunication and Information Society.	No	Yes Ministry of Telecommunication and Information Society http://www.mtid.sr.gov.yu/
Kosovo	No Article 17, Law on The Information Society Services	No	No

Table O.2 – Market access for providers of certification services

3. Electronic signature market data

Table O.3 shows:

- certification service providers, which issue qualified certificates in the respective country;

  NB. The table shows certification service providers, which are established in the respective country, as well as certification service providers, which are established in another country, but are active on the respective national market, for example by establishing a network of registration services, or by gaining a voluntary accreditation.

- available market data on usage of electronic signatures, in particular: number of valid qualified certificates and % of enterprises using electronic signatures.

Country	Certification service provider(s) issuing qualified certificates Name(s) and URL(s)	Data on usage of electronic signatures
Croatia	Financial agency (Fina) http://www.fina.hr/	N/A

Country	Certification service provider(s) issuing qualified certificates Name(s) and URL(s)	Data on usage of electronic signatures
The former Yugoslav Republic of Macedonia	KIBS AD Skopje http://ca.kibs.com.mk/ Makedonski Telekom http://ca.mt.net.mk	N/A
Turkey	E – Güven Corp. http://www.e-guven.com/ TUBITAK UEKAE (NRIEC) http://www.kamusm.gov.tr/ TurkTrust Corp. http://www.turktrust.com.tr/ E – Tuğra Corp. http://www.e-tugra.com.tr/	14,000 traditional qualified electronic certificates 22,500 mobile qualified electronic certificates
Albania	No such providers	N/A
Bosnia & Herzegovina	No such providers	N/A
Montenegro	No such providers	e-Mon (http://www.emon24.net) issues non-qualified certificates that are used like qualified certificates, but only in closed systems of e-banking
Serbia	see note	N/A
Kosovo	No such providers	N/A

Table O.3 – Market data on electronic signatures

Notes:
Serbia: The regulation on technical-technological procedures and criteria for the creation of a qualified electronic signature was published in the Official Gazette on March 17, 2008. The registration procedure for certification service providers that issue qualified certificates signatures is ongoing.

P. Data protection and data retention

1. Protection of confidentiality of communications

According to Article 5 of the Privacy Directive, 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.

Table P.1 shows:

- legal provisions for the protection of confidentiality of communications;
- the scope of the protected communications: content of the communications and/or related traffic and location data;

- whether the provisions only refer to interception by an operator and its staff or also to interception by third parties;
- which penalties are prescribed by the provision; and is interception considered a criminal offence, a misdemeanour or can intercepted persons only enforce the provision by a lawsuit under civil law.

Country	Legal provisions on confidentiality	Scope of protected communications: content and/or traffic data	Interception by operator/by third parties	Penalties
Croatia	Art. 106 Telecommunications Act (until June 30, 2008)	All data in telecommunication traffic	Interception by operator and interception by third parties	Misdemeanour (article 116a)
	Art. 100 Electronic Communications Act (since July 1, 2008)	All data in telecommunication traffic	Interception by operator and interception by third parties	Misdemeanour (article 119) The head of the legal entity will be fined with an amount from 20,000 to 100,000 HRK (€2,755 to €13,774). The person who broke the law will be fined with an amount from 10,000 to 50,000 HRK (€1,377€ to €6,887). It is possible to penalise the legal entity with the protective measure of prohibiting practice for 3 months to one year and for the person or responsible person in the legal entity the same measure for one to six months.
	Art. 131 of the Penal statute (O.G. 110/1997)	All data in telecommunication traffic	Interception by anyone	Criminal offence. The penalty can vary between a monetary fine and one year in prison. If the offence is done during performing official duties, the offender can be penalised with a sentence between one year and three years in prison.
FYROM	Articles 111 of the Law on electronic communications	• Content of communications • Traffic data and location data relating to communications • Unsuccessful attempts to establish a connection.	Interception by operator	Misdemeanour fines (Electronic Communications Law): A fine in the amount of 2 to 4%, 4 to 7% or 7 to 10% of the total annual revenue acquired during the commercial year prior the year when the misdemeanour was performed or of the total revenue acquired for a shorter period of the year preceding the misdemeanour.
	Art. 151 of the Criminal Code	This provision does not explicitly refer to communications data, it applies to everyone who taps or records *on audio* a conversation or statement that	Interception by anyone	Criminal offence Imprisonment up to one year or a pecuniary fine Imprisonment up to three years, if the

Country	Legal provisions on confidentiality	Scope of protected communications: content and/or traffic data	Interception by operator/by third parties	Penalties
		was not intended for him.		crime was committed by an official while performing his duty
Turkey	Art. 132, 135, 136 Penal Code Art. 6, Law Number 5651 (traffic data) Art. 8 and 9, By-law on processing of personal data and protection of privacy in the telecommunications sector	Content data and traffic data	Interception by operator and interception by third parties	Criminal offence in Penal Code • Imprisonment from 6 months to 2 years (Art. 132) • Imprisonment from 6 months to 3 years (Art. 135) • Imprisonment from 1 year to 4 years (Art. 136) Misdemeanour – 10,000 to 50,000 TRY (€4,762 to €23,810), Art. 6 Law Number 5651 No penalty provided in the by-law.
Albania	Art. 22 of Law on telecommunications (until June 25, 2008)	Content data	Interception by operator and interception by third parties	Misdemeanour with a fine from 1,000,000 to 10,000,000 ALL (€8,257 to €82,570)
	Art. 123 of Law on electronic communications (since June 26, 2008)	Content data and traffic data	Interception by operator and interception by third parties	Misdemeanour with a fine from 4% to 7% of annual revenue
Bosnia & Herzegovina	No explicit legislation, but operators and service providers ensure confidentiality (content data and traffic data) according to their licences.			
Montenegro	Art. 64 of Law on telecommunications	Content data and traffic data	Interception by operator and interception by third parties	No penalty
	Art. 119 of Law on electronic communications (adopted by Parliament on July 29, 2008)	Content data and traffic data	Interception by operator and interception by third parties	Misdemeanour, but the provision only covers infringements by the operator, not infringements by third parties Art. 131, premise 1, point 38 Law on electronic communications
Serbia	Chapter V, Art. 54 and 55 of the Telecom Act Art. 142, 143.144, 146 of the Criminal Code	Content data and traffic data	Interception by operator and interception by third parties	Infringements by an operator are a misdemeanour according to Art. 97 of the Telecom Act, with a fine of at least 60,000 RSD (€735).

Country	Legal provisions on confidentiality	Scope of protected communications: content and/or traffic data	Interception by operator/by third parties	Penalties
Kosovo	Art. 74 of the Telecommunications Law Art. 74 and 98 of the Law on the information society services	Content data and traffic data	Interception by operator and interception by third parties	Infringements of art. 98 of the Law on the information society services are criminal offences and punishable with imprisonment of a maximum of no less than one year in serious cases. Serious cases are defined as excluding cases where the conduct resulted in no damage or economic benefit (art. 101 of this law).

Table P.1 - Protection of confidentiality of communications

Notes:
Turkey: The By-law on processing of personal data and protection of privacy in the telecommunications sector, as published in the official gazette on February 6, 2004 is currently in force. Works are underway to publish an amended version of the by-law in order to transpose the Data Retention Directive (2006/24/EC).

2. Traffic and location data

According to Article 6 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. Some countries transpose this provision by defining a certain period of time (which is typically the same for all operators and subscribers), some refer 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).

NB. See the separate table on data retention below. Data retention means that operators are obliged to retain traffic data for the purpose of lawful interception, for a longer period than needed by the operator for its own purposes, in particular billing. This table does not cover lawful interception or data retention. It only refers to legal provisions that specify the period for which the operator can store and use the date for its own purposes.

Article 6 para. 3 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.

Article 9 Privacy Directive contains provisions to protect location data, in particular that the usage of location data typically 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.

The table below shows:

- how the member state defines the maximum period for storage and processing of traffic data for purposes of the operator, e.g. billing (regardless of eventually longer periods defined in data retention legislation);
- whether informed consent is required before traffic data can be used for marketing purposes or for provision of value-added services;

- whether informed consent is required before location data can be used; and
- whether the user/subscriber can, even after giving consent, temporarily refuse the processing of location data.

Country	Traffic data		Location data		
	Maximum storage period	**Informed consent required for marketing?**	**Informed consent required?**	**Possibility to temporarily refuse?**	
Croatia	As long as needed for billing (period of statute of limitation – 1 year) Art. 107 Telecommunications Act (until June 30, 2008)	Yes	Yes Art. 109 Telecommunications Act (until June 30, 2008)	Yes	
	As long as needed for billing (period of statute of limitation – 1 year) Art. 102 Electronic Communications Act (since July 1, 2008)	Yes	Yes Art. 104 Electronic Communications Act (since July 1, 2008)	Yes	
The former Yugoslav Republic of Macedonia	As long as needed for billing. Article 112 of the Law on electronic communications	Yes	Yes Article 114 of the Law on electronic communications	Yes	
Turkey	• 6 months – 2 years for Art. 6, Law No: 5651 (This storage period is obligatory for access providers) • 1 year – Draft By-law on processing of personal data and protection of privacy in the telecommunications sector	Yes By-law on processing of personal data and protection of privacy in the telecommunications sector	Yes By-law on processing of personal data and protection of privacy in the telecommunications sector	Yes By-law on processing of personal data and protection of privacy in the telecommunications sector	
Albania	As long as needed for providing the service Art. 22 of Law on telecommunications (until June 25, 2008)	No	No	No	
	As long as needed for billing Art. 124 of Law on electronic communications (since June 26, 2008)	Yes Art. 124 of Law on electronic communications	Yes Art. 126 of Law on electronic communications	Yes Art. 126 of Law on electronic communications	

Country	Traffic data		Location data		
	Maximum storage period	Informed consent required for marketing?	Informed consent required?	Possibility to temporarily refuse?	
Bosnia & Herzegovina	Not regulated	Not regulated	Not regulated	Not regulated	
Montenegro	As long as needed for billing. Art. 65 Law on telecommunications	No	Not regulated by the Law on telecommunications	Not regulated by the Law on telecommunications	
	As long as needed for billing. Art. 121 Law on electronic communications (adopted by Parliament on July 29, 2008)	Yes	Yes Art. 123 Law on electronic communications (adopted by Parliament on July 29, 2008)	Yes	
Serbia	As long as needed for billing. Art. 54 Telecommunications Act	Not regulated	Yes	Yes	
Kosovo	As long as needed for billing. Art. 75 and 76 of the Telecommunications Law Art. 75 of the Law on the information society services	Yes	Yes Art. 78 of the Law on the information society services	Yes	

Table P.2 – Processing of traffic and location data

Notes:
Turkey: Access provider is the natural or legal person that provides access to the Internet to his users (Art. 2, Law No. 5651). The By-law on processing of personal data and protection of privacy in the telecommunications sector, as published in the official gazette on February 6, 2004 is currently in force. Works are underway to publish an amended version of the by-law in order to transpose the Data Retention Directive (2006/24/EC).

3. Data retention

According to the Privacy Directive, providers typically have to erase traffic data as soon as they do not need them any more for their legitimate purposes (in particular for billing, see the table above). However, Art. 15 (1) 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 (i.e. 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 specifies the principles, the types of data to be retained and the retention periods.

The table below shows:

- the legal basis for an obligation to systematically retain traffic data
- the types of data covered, in particular telephony data and/or Internet data (Internet access, Internet mail and/or Internet telephony);
- the retention periods (minimum and/or maximum); and
- who bears the costs of retaining data (in particular investments to set up a data retention system) and whether the operator has a right to being compensated

Country	Legal basis for data retention obligations	Types of data covered (telephony data and/or Internet data)	Retention period (Min. or max.)	Who bears the costs? Right to compensation?
Croatia	No provision in the Telecommunications Act (which was in force until June 30, 2008)			
	Art. 109 and 110 Electronic Communications Act (these two articles will come into force on July 1, 2009)	Telephony data and Internet data	12 months	Operators bear the costs. No right to compensation.
FYROM	No legal provisions on data retention			
Turkey	No provisions on data retention in legislation in force			
	Draft by-law on processing of personal data and protection of privacy in the telecommunications sector	Telephony data	Maximum 1 year	Operators bear the costs. No right to compensation.
Albania	Amendments to the Law on telecommunications, passed by Parliament on October 16, 2006	Telephony data	Two years	Operators bear the costs. No right to compensation.
	Art. 101 of Law on electronic communications (since June 26, 2008)	Telephony data Although art. 101 of the new law obliges all providers of public electronic communications networks and services, the list of retained data refers to telephony data; there is no specific requirement for Internet data.	Maximum 2 years	Operators bear the costs. No right to compensation.
Bosnia & Herzegovina	Law of legal interception of communications	Telephony data and Internet data	Maximum 12 months	Operators bear the costs. No right to compensation.
Montenegro	No provisions on data retention in legislation in force			
	Art. 126 to 128 Law on electronic communications (adopted by Parliament on July 29, 2008)	Telephony data and Internet data	Minimum 6 months Maximum 2 years	Operators bear the costs. No right to compensation.
Serbia	No legal provisions on data retention			
Kosovo	No legal provisions on data retention			

Table P.3 - Data retention obligations

4. Spam

Art. 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, Member States are free to require an opt-in or an opt-out.

NB. In addition to other requirements, Art. 7 of the Electronic Commerce Directive states that when 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.

The table below shows whether spam is authorised or prohibited in the countries and whether there is a dedicated public authority to fight the phenomenon.

Country	Is spam prohibited or allowed?			Authority to fight spam
	To companies	To individuals	Legal basis	
Croatia	Prohibited	Prohibited	Art. 111 Telecommunications Act (until June 30, 2008)	No dedicated public authority
	Prohibited	Prohibited	Art. 107 Electronic Communications Act (since July 1, 2008)	
FYROM	Prohibited	Prohibited	Article 117 of the Law on Electronic communications Article 17 of the Law on Personal Data Protection	No dedicated public authority Directorate for personal data protection is responsible for individuals (www.dzlp.mk) Agency for electronic communications for network operators and service providers (www.aec.mk)
Turkey	Prohibited	Prohibited	Art. 20 of By-law on processing of personal data and protection of privacy in the telecommunications sector	No dedicated public authority. TÜBİTAK-UEKAE (NRIEC) designs and implements awareness raising activities against security threats including spam. http://www.uekae.tubitak.gov.tr/
Albania	No explicit legislation	No explicit legislation	No provision in the Law on telecommunications (until June 25, 2008)	No dedicated public authority
	Prohibited	Prohibited	Art. 128 of Law on electronic communications (since June 26, 2008)	No dedicated public authority NRA inspectors can prosecute infringements by misdemeanour proceedings
Bosnia & Herzegovina	No explicit legislation	No explicit legislation	No explicit legislation on spam	No dedicated public authority

Country	Is spam prohibited or allowed?			Authority to fight spam
	To companies	To individuals	Legal basis	
Montenegro	No explicit legislation	No explicit legislation	No provision on spam in legislation currently in force	No dedicated public authority
	Prohibited	Prohibited	Art. 124 of Law on electronic communications (adopted by Parliament on July 29, 2008)	
Serbia	No explicit legislation	No explicit legislation	No explicit legislation on spam	No dedicated public authority
Kosovo	Allowed, under conditions	Allowed, under conditions	Art. 19 and 20 of the Law on the Information Society Services: 20.1. Unsolicited commercial communications by electronic mail are permitted provided however that such communications by a service provider need to be clearly identifiable and unambiguously as such According to article 20.2 service providers must respect opt-out registers	No dedicated public authority.

Table P.4 - Legal provisions on spam

5. Itemised billing

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

Art. 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.

The table below shows:

- whether subscribers have the right to receive itemised bills;
- whether subscribers have the right to receive non-itemised bills;
- the applied methods for protection of privacy in itemised bills, e.g. anonymisation of last digits;
- a reference to the relevant legislation.

Country	Right to receive itemised bills	Right to receive non-itemised bills	Methods for protection of privacy	Reference to the relevant legislation
Croatia	Yes	Yes	Calls to toll free numbers, including emergency numbers, may not be included in the itemised bill	Art. 44 Telecommunications Act (until June 30, 2008)
	Yes	Yes	Calls to toll free numbers, including emergency numbers, may not be included in the itemised bill	Art. 44 Electronic Communications Act (since July 1, 2008)
FYROM	Yes The law allows that the standard form of itemised bills shows the number of accounting units accumulated for local calls, national calls, international calls, calls to mobile networks, data transfer and other additional services, but in practice subscribers receive a fully itemised bill in case of complaints.	No	Calls to toll free numbers, including emergency numbers, may not be included in the itemised bill	Article 101 of the Law on electronic communications
Turkey	Yes	Yes	No	Art. 5 of the By-law on the consumer rights in the telecommunications sector
Albania	Yes	No	No	Art. 30 of Law on telecommunications (until June 25, 2008)
	Yes	No	Calls to toll free numbers, including emergency numbers, may not be included in the itemised bill	Art. 106 of Law on electronic communications (since June 26, 2008)
Bosnia & Herzegovina	Yes	Yes	No	Licenses for public telecommunications operators and providers of telecommunications services
Montenegro	Yes The law does not oblige operators to show details for every call; it only requires operators to show the number of accounting units accumulated for local calls, intercity calls, international calls, calls to mobile networks, calls to value added services and data transfer and other additional services.	Yes	No	Art. 113 Law on electronic communication (adopted by Parliament on July 29, 2008)
Serbia	Yes	Yes	No	Art. 92 Telecom Act
Kosovo	Yes	Yes	-	Art. 71 – Telecommunications Law Art. 76 – Law on The Information Society Services

Table P.5 – Itemised billing

Q. Subscriber directories

Directory information and a directory enquiry service constitute an essential access tool for publicly available telephone services. Two types of activities can be distinguished:

- collecting directory information from different providers of publicly available telephone services, aggregating this information into a single database and maintaining this database;
- providing access to such aggregated directory information, in particular by printing directories and providing directory enquiry services which are accessible via phone or online.

The European legislation addresses directories in the Universal Service Directive and the Privacy Directive:

- The Universal Service Directive addresses directory access for end-users. According to Art. 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. These directories shall comprise all subscribers of publicly available telephone services. Art. 25 (1) Universal Service Directive gives all subscribers the right to have a directory entry.
- The Privacy Directive addresses subscribers' privacy interests. According to Art. 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.

1. Legislation on directories

The table below shows the legislation on subscribers' rights to be included or not included in directories:

- Are operators obliged to ask new subscribers whether they want to be included in the directory?
- Do subscribers have the right to be included in the directory, free of charge?
- Do subscribers have the right to be not included in the directory, free of charge?
- Does the legislation establish an opt-in or opt-out principle?

  Such a principle would refer to those subscribers who have not stated an explicit opinion whether they want to be included. Opt-in means that only subscribers are included who explicitly wanted it. Opt-out means that all subscribers are automatically included unless they explicitly do not want it. Legislation often does not establish such a principle, but only requests that subscribers are given the opportunity to determine whether they want to be included.
- Does the scope of these provisions include all subscribers of publicly available telephone services (in particular: including mobile subscribers, pre-paid subscribers)?

Country	Obligation to ask new subscribers?	Right to be included? Free of charge?	Right to be not included? Free of charge?	Opt-in or opt-out?	Scope mobile subscribers? pre-paid subscribers?
Croatia	Yes Art. 48 Telecommunications Act (until June 30, 2008) Art. 47 Electronic Communications Act (since July 1, 2008)	Yes	Yes	Opt-out	All subscribers of publicly available telephone services
FYROM	Subscribers must be informed free of charge of the purposes of directories and of the use of such data before being included in printed or electronic directories available to the public. The costs of informing subscribers shall be borne by the publisher of the directory. Art. 119 of the Law on electronic communications.	Yes, all subscribers have the right to be included (free of charge).	Yes, but not free of charge. Refusal to be included in a public directory, and verifying, altering or erasing personal data shall be charged on the basis of real costs.	No explicit provision The law states that subscribers must be informed before being included and must have the opportunity to determine which, if any, of their personal data will be included. However, the law does not set up a rule whether subscribers who do not express their opinion will be included.	All subscribers (including mobile subscribers and pre-paid subscribers)
Turkey	Yes, operators are obliged to ask new subscribers whether they want to be included or not Art. 8 of the By-law on consumer rights in the telecommunications sector	Yes, all subscribers have the right to be included (free of charge).	Yes, subscribers may request not to be included (free of charge).	Opt-in in practice	All subscribers
Albania	No explicit obligation to ask new subscribers whether or not they want to be included	Yes, all subscribers had the right to be included.	Yes, all subscribers had the right not to be included.	No explicit provision	All subscribers (including pre-paid subscribers) Art. 34 Law on Telecommunications (until June 25, 2008)
	Subscribers must be informed free of charge of the purposes of directories and of the use of such data before data is made available to the public. The costs of informing subscribers shall be borne by the undertaking.	Yes, all subscribers have the right to be included.	Yes, but not free of charge. All subscribers have the right not to be included, based on real costs.	No explicit provision The law states that subscribers must be informed before being included and must have the opportunity to determine which, if any, of their personal data will be included. The law does not set up a rule	All telephony subscribers Art. 104 and 130 Law on electronic communications (since June 26, 2008)

Country	Obligation to ask new subscribers?	Right to be included? Free of charge?	Right to be not included? Free of charge?	Opt-in or opt-out?	Scope mobile subscribers? pre-paid subscribers?
				whether subscribers who do not express their opinion will be included.	
Bosnia & Herzegovina	No explicit obligation to ask new subscribers whether or not they want to be included.	Yes, all subscribers have the right to be included (free of charge).	Yes, subscribers may request not to be included (free of charge).	Opt-out, all subscribers are included unless they explicitly do not want it.	All subscribers (including mobile subscribers and pre-paid subscribers)
Montenegro	Yes Art. 111 Law on Electronic Communications (adopted by Parliament on July 29, 2008)	Yes, all subscribers have the right to be included (free of charge)	Yes, all subscribers may request not to be included (free of charge)	Opt-out, all subscribers are included unless they explicitly do not want it.	All subscribers
Serbia	No explicit obligation in legislation. However operator asks this question when first time registering subscriber.	Yes, all subscribers have the right to be included (free of charge).	Yes, subscribers may request not to be included (free of charge).	Opt-out in practice, all subscribers are included unless they explicitly do not want it.	Fixed subscribers only
Kosovo	Art. 76 para. 3 of the Law on Telecommunications states that subscriber data may only be included in directories if the subscriber consents in writing. Art. 81 of the Law on the Information Society Services states that service providers must give subscribers the opportunity to decide whether they want to be included.	Yes, all subscribers have the right to be included (free of charge).	Yes, subscribers may request not to be included (free of charge).	According to the Law on Telecommunications: Opt-in, subscribers are only included after they consent in writing. According to the Law on the Information Society Services: No explicit provision	All subscribers (including mobile subscribers and pre-paid subscribers) Art. 76 of the Telecommunications Law and Art. 81 of the Law on the Information Society Services

Table Q.1 – Subscriber inclusion in directories

R. Internet backbone infrastructure

This table provides data on the Internet backbone infrastructure in the monitored countries.

- 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). The table shows the IXPs in the monitored countries.
- The second column shows the total capacity of international Internet bandwidth in Mbps. If the capacity is asymmetric (more incoming than outgoing), the incoming capacity is provided.

Country	Internet exchange points (name, URL)	International Internet bandwidth (Gbps)
Croatia	CIX (Croatian Internet eXchange) http://www.cix.hr/	N/A
FYROM	No	N/A
Turkey	No	102 Gbps
Albania	No	N/A
Bosnia & Herzegovina	No	N/A
Montenegro	No	0.9 Gbps
Serbia	No	N/A
Kosovo	No	3 Gbps

Table S.1 – Internet backbone infrastructure

S. Management of Internet domains

1. National domain name registry

The table below shows:

- the name and website of the national registry in charge of the country codes Top Level Domains (ccTLD). The registry is the body which manages the central database and the domain name servers.
- the legal basis of to the registry in the national legislation, for example a body could be given the responsibility to act as the national registry by law, by an ordinance, by a contract with the government, or it could not have a formal legal basis.
- the legal basis of the national domain name policy, in particular the rules on who can register a domain name, rules on accrediting registrars and dispute settlement provisions. For example, such rules could be defined by an ordinance of a minister or the registry could have the legal power to adopt such rules.

Country	Name and website of the national registry	Legal basis of the national registry	Legal basis of the national domain name policy
Croatia	CARNet DNS služba http://www.dns.hr/	Contract with Internet Assigned Number Authority (IANA), Since July 1, 2008: art. 79 of the Electronic Communications Act	Currently: Regulations of CARNet In future: ordinance of the minister responsible for the information society, based on art. 79 of the Electronic Communications Act

Country	Name and website of the national registry	Legal basis of the national registry	Legal basis of the national domain name policy
FYROM	http://dns.marnet.net.mk/	Operates within the Macedonian Academic Research Network (MARNet). MARNet was established in 1994 as department of the "Ss Cyril and Methodious" University (biggest national university) by endorsement of the Ministry of Sciences and decision of the University Board. At the same time MARNet was ordered to manage domain name service.	MARNet, in cooperation with the legal department of the University and the major national ISPs and other affected parties from the internet community have elaborated General Terms and Conditions (a Statute) as an instrument for regulating for national domain name policy. This Statute is adopted by the MARNet Board, University Board and published in National official gazette. It has no formal recognition as a national law.
Turkey	Nic.tr - ".tr" Domain Names Administration https://www.nic.tr	Nic.tr is an organizational unit of Middle East Technical University (METU), operating since 1991 when first worldwide Internet connection of the country has been established by METU. No explicit legislation on domain name management except ICANN contract.	General Terms and Conditions, as adopted by the DNS Working Group of Internet Council that has been formed under the auspices of Ministry of Transportation.
Albania	Telecommunication Regulatory Entity (since June 26, 2008: Authority of Electronic and Postal Communications) http://www.akep.gov.al/	Under article 8 point k) of the new Law 9918/2008 on electronic communications (in force since June 26, 2008), AKEP is the responsible authority for the administration of ccTLD .al and other subdomains.	TRE has adopted the Regulation "On the Registration and Administration of the Domain Names under .AL and Subdomains .gov.al, .mil.al, .edu.al, .com.al, .org.al and .net.al" approved by the TRE Board, decision No. 437 date 21.02.2008.
Bosnia & Herzegovina	University Teleinformatic Centre (UTIC) http://www.utic.ba/	From 1996 UTIC has been authorised by IANA. Also, 1996 Government of B&H gave the authorization to UTIC. No explicit legislation on domain name management.	Regulations regarding the registration and use of the domain name under the Bosnia & Herzegovina country Internet .BA domain" adopted by UTIC.
Montenegro	.ME Register (doMEn) http://www.domen.me/	On the basis of article 7(1) of the Law on the property of the Republic of Montenegro the government adopted a decision establishing the Council for ".me" domain. This council announced a public invitation for selection of the Agent for domain registration. GoDaddy.com won this public tender.	Decision of the Council for „.me" domain of July 14, 2007.
Serbia	Register of National Internet Domain of Serbia (RNIDS) http://www.rnids.rs/	RNIDS is an non profit association of Internet Service Providers and university institutions, established under Serbian law in July 2006. No explicit legislation on domain name management	General Terms and Conditions, as adopted by the General Assembly of RNIDS on October 26, 2007
Kosovo	N/A	N/A	N/A

Table S.1 - National domain name registry

Notes:
Albania: According to the Regulation, entities entitled to possess one or more domain names in ".al" zone and in subdomains ".com.al, .org.al, and .net.al" under the administration of TRE, are public and private juridical entities as well as physical commercial persons.

2. Registrars of domain names

The management of Internet domain names consists of two different functions, which can be performed by different bodies:

- administrating the registry, in particular a central database and domain name servers (registry function); and
- registering individual domain names, customer contact and billing (registrar function).

For some top-level domains, the registry is the only registrar. In many countries, the registrar function is performed by many different registrars in a competitive environment. Usually, such registrars are accredited (and to some extent supervised) by the registry and have access to the registry's central database by means of an electronic interface.

The table below shows:

- whether the registry itself is the only registrar or competition between registrars has been established;
- whether foreign registrars become accredited and, if yes, if accreditation of foreign registrars is restricted to certain countries;
- whether registrars are accredited by the registry or by a different body;
- whether an electronic interface between registrars and registry exists; and
- the number of active registrars.

Country	Competition between registrars exists?	Can foreign registrars become accredited?	Who accredits registrars?	Electronic interface exists?	Number of active registrars
Croatia	No	No	-	-	1
FYROM	No	No	-	-	1
Turkey	Yes	No (for the time being)	The registry	Yes	7 (expected to be 20 before the end of 2008)
Albania	No	No	-	-	1
Bosnia & Herzegovina	Yes	No	The registry	Yes	20
Montenegro	Yes	Yes	The registry	Yes	87
Serbia	Yes	No	The registry	Yes	35 by July 1, 2008

Country	Competition between registrars exists?	Can foreign registrars become accredited?	Who accredits registrars?	Electronic interface exists?	Number of active registrars
Kosovo	N/A	N/A	N/A	N/A	N/A

Table T.2 – Registrars of domain names

3. Cybersquatting and dispute resolution

Cybersquatting is registering, trafficking in, or using a domain name with intent to profit from the goodwill of a trademark belonging to someone else. The cybersquatter then offers to sell the domain to the person or company who owns a trademark contained within the name at an inflated price.

The table below describes the national policies against cyber squatting, including the availability of alternative dispute resolution mechanisms.

Country	Policies against cybersquatting	Dispute resolution mechanism
Croatia	Regulations regarding organisation of the top-level 'hr' Internet domain and the principles of managing the top-level 'hr' domain and Arbitrage rules made by national DNS service (www.dns.hr)	Arbitrage provided by national DNS service
FYROM	There are certain general statements in the aforementioned Statute that the registrants shall not use the domain names for impersonating third party identity and use the domain name in bad faith but there are no instruments for enforcing such policy apart from the dispute resolution policy.	A dispute resolution policy has been stipulated that has three mechanisms: • mutual negotiation and resolution between the affected parties (an obvious one) • by means of an independent Arbitrage Committee • by means of an of authoritative court resolution
Turkey	As it is stated in the '".tr" Domain Names Policies, Rules and Procedures' document, domain names under ".tr" are not to be sold, rented or transferred. In the case of violation, all domain names registered to the owner of the relevant domain name will be subject to deletion. Domain names may only be transferred, on the condition that certified rights are also transferred (trademark and patent rights etc.).	Domain name disputes can be ultimately resolved by court proceedings or by DNS Working Group. The Ministry of Transportation established the "DNS Working Group" in 2000 which functions under the authority of the Internet Council and consists of eleven corporate members of sector representatives, as a means to apply the division of legislative, executive and judicial powers for ".tr" Domain Names. In this context, DNS Working Group operates as the pre-legislative authority and is in charge of determining policies, rules and procedures.
Albania	No explicit legislation on cybersquatting or domain name disputes. TRE, during the registration procedure acts on faith based on the principle of "transparency", taking for granted the genuineness, accuracy, authenticity and legitimacy of the data provided by the applicant in the respected application forms. The applicant is legally responsible based on the legislation in force, for the genuineness, accuracy and authenticity of all the information in compliance with the requirements foreseen in the Regulation. For this reason, the applicant signs a written statement of good faith about his/her legal	Domain name disputes can be resolved in court proceedings or by arbitration.

Country	Policies against cybersquatting	Dispute resolution mechanism
	responsibilities regarding the above mentioned and also that he/she has acted according to all the rules especially that he does not harm the other parties rights foreseen in the law for Competition, the law for Copyrights", intellectual, cultural property, etc.	
Bosnia & Herzegovina	WIPO´s ccTLD best practices for the prevention and resolution of Intellectual Property disputes No explicit legislation on cybersquatting or domain name disputes	ICANN´s Uniform Domain Dispute Resolution Policy
Montenegro	Art 28. of the Regulations regarding Registration and use of the Domain Name: Responsibility for the Domain Name	ICANN´s Uniform Domain Dispute Resolution Policy
Serbia	No explicit legislation on cybersquatting or domain name disputes	Rules on Arbitration Proceedings for Settling Disputes Arising out of Registration of .rs Domains, as adopted by the General Assembly of RNIDS on October 26, 2007. Each registrant must in advance give his consent to participate in arbitration proceedings and to comply by the final decision (Art. 18 of the General Terms and Conditions). Domain name disputes can be resolved in court proceedings or by arbitration in accordance with Criminal code (Official Gazette of the Republic of Serbia", No. 85/05), Art. 298-304
Kosovo	-	TRA has approved a regulation on "Dispute Resolution Procedures" based on Art. 4 and 11 of the Telecommunications Law, This also applies to domain name disputes. In case that TRA cannot resolve domain name disputes, they can be resolved in court proceedings or by arbitration.

Table T.3 – Policies against cybersquatting and dispute resolution mechanism

4. Domain market data

The table below shows:

- the number of registered sub domains of the relevant ccTLD;
- the price charged by the registry per sub domain and year (excluding VAT);
- whether this price covers solely the registry functions (for countries with separated functions of registry and registrars) or if it also includes registrar functions (for countries where the registry is the only registrar).

	Number of domains	Price per domain and year (excl. VAT)	Services covered by this price
Croatia	53,432 (end of 2007)	180 HKR (€24.79)	Including registrar functions
FYROM	Approx. 12,000 (May 2008)	• 525 MKD (€8.58) for the first year, half that price yearly subscription afterwards for local registrants. • The price is double for foreign registrants.	Registration and 3 free of charge updates within the subscription period. Further changes are charged 160 MKD (€2.61) per change. Including registrar functions
Turkey	150,000 registered .tr domain names (April 2008)	1-year registration fee (excl. VAT) ranges from 4 to 21 TRY (€1.90 to €10) Some domain names (gov.tr, edu.tr, pol.tr, mil.tr) are free of charge. Discounts applicable for 2 to 5 year registrations.	Annual registration and some other operations such as contact changes, DNS server changes, domain name information update etc. Registrar functions not included.
Albania	850 (end of April 2008)	The price is $75 per 2 years; $37.5 (€24.20) per year	The fee includes registrar functions.
Bosnia & Herzegovina	.ba about 7,000 (end of 2007)	68.38 BAM (€34.73)	.ba domain name registration by the registry (includes yearly maintenance for the first year, registrar functions not included)
Montenegro	.me: more than 30,000 domain names as of July 1, 2008 (sunrise and quiet phase of land rush, before open registration 50,000 new domain names after the first two days of open registration, which started on July 17, 2008 .cg.yu (valid till the end of 2009) 1,348 domains	Sunrise - €110 (min. registration 5 years) – closed Land Rush – €29.99 (min. registration – 2 years) – closed Open registration – €11.99 (minimum of registration – 2 years)	Annual registration for .me domain by the registry. Lower prices for sub-domains. All prices are the prices for registrars, not for users.
Serbia	.rs sunrise started in March 2008 A total of 23,668 domains have been registered by June 20, 2008 .yu: 34,000 (end of 2007)	1,500 RSD for .rs (€18.37)	Annual registration for .rs domain by the registry (registrar functions not included) Lower prices for sub-domains .in.rs, .co.rs., edu.rs., org.rs.
Kosovo	N/A	N/A	N/A

Table T.4 – Domain market data

Notes:

Montenegro: Sunrise period (trademark registration) from May 1 to May 20, 2008, Land Rush period (applications for domains) from June 2 to June 26, 2008 and Open registration (first come, first served) since July 17, 2008.

Serbia: RNIDS price list for different domain services is available on its website. Accredited registrars have different (higher) prices per domain (examples: EUNET charges 2,500 RSD (€30.62) for registration of .rs per year, Sezampro for registration of domains .rs + .co.rs charges 2,950 RSD (€36.13) per year).