



## REPORT 4 – COUNTRY COMPARATIVE REPORT

Supply of services in monitoring of South East Europe -  
telecommunications services sector and related aspects

November 30, 2007

**The opinions expressed in this study are those of the authors and do not necessarily  
reflect the views of the European Commission**

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## I. INTRODUCTION

The significance of the telecommunications sector is being increasingly recognised among economists. It is not only an important service industry in its own right, but it is also a critical support element for other service industries and the enabling infrastructure for the information society.

This explains why telecommunications policies have occupied a central position in the economic development of nations. There is broad international agreement that these policies should be based on a fair competitive environment and that this can best be achieved by having a balanced legal environment supervised by a regulatory function that is separated from telecommunications operations. There is also a strong trend toward privatisation because state ownership is no longer deemed necessary for the achievement of national communications objectives and because such ownership may interfere with fair competition. In addition, privatisation represents a welcome source of revenue for the state.

In the European Union, the regulatory environment for the telecommunications sector, or the electronic communications<sup>1</sup> sector as it is called now, has gone through a continuous development for about twenty years, starting with the publication of the famous “Green Paper” in 1987. This development is characterised by four major phases:

1. The first step was the initial liberalisation of telecommunications services and terminals in 1992. This was considered a significant step at the time even though in retrospect it appears rather modest. The most important service, voice telephony, was allowed to remain an exclusive service for the incumbent operator and the status of competitive infrastructures was not directly addressed. In these early days of liberalisation, it was clear that value added services had become competitive. Data communication, however, without addition of value was in the grey area. Competitive offerings to closed user groups, an important concept for business users, provided room for the most significant competitive activity.
2. The second step is normally called the “1998 acquis” because the legislation became effective at the national level in that year<sup>2</sup>. This step is also often described as “full liberalisation” because it eliminated all special and exclusive rights. The framework was characterised by:
  - its authorisation regime, which permitted the use of individual authorisations for public telephony services as well as all establishment of infrastructure, whether terrestrial or radio based;
  - asymmetric regulations with special conditions for operators with significant market power (SMP). These were based on a rather simplistic criterion of having 25% market share or more in a few broadly defined areas of activity, such as public fixed telephony networks and services. If deemed to have SMP, a number of pre-defined requirements would automatically apply.
3. The third step will be referred to in this report as the “2003 acquis” or the EU 2003 regulatory framework<sup>3</sup>. It consists of the Framework, Authorisation, Access, Universal Service, Privacy and Competition Directives, and the Spectrum Decision. The main changes from the “1998 acquis” are:
  - An extensive use of general authorisations so that telecommunications activities can be started without prior permission from the regulator. Only activities that need access to limited resources may need individual authorisations.

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<sup>1</sup> The sector is now referred to as the electronic communications sector because, due to technology convergence, the current framework also applies to broadcasting networks. In this report, the term electronic communications is used when describing aspects that relate specifically to the new regulatory framework. Otherwise, the term telecommunications is used to describe general aspects that do not relate to a specific regulatory framework

<sup>2</sup> Specifically, all enabling measures should have been adopted by December 31, 1997.

<sup>3</sup> This framework is also often referred to as the “2002 acquis”. The directives that define this regime were adopted in 2002 and became effective at the national level in 2003. Because the “1998 acquis” is a widely accepted term and it refers to the year when the regulations became effective at the national level, it is more logical to use the term “2003 acquis”.

- The designation of SMP can only be decided for fairly narrowly defined markets after rigorous analysis based on competition law principles. Where an operator is found to have SMP, the regulator has a choice of remedies in the form of special obligations to address specific exposures to fair competition in the market concerned.
  - In response to the convergence of technologies, the framework is no longer limited to telecommunications but covers all electronic communications networks and services. This includes fixed-line voice telephony, mobile and broadband communications and broadcasting transmission networks (e.g. cable and satellite). On the other hand, the content of services delivered over electronic communications networks, such as broadcasting content or financial services, is excluded, as is telecommunications terminal equipment.
4. The fourth step is represented by the “2006 review”. On June 29, 2006 the European Commission published a communication on the review of the EU regulatory framework for electronic communications networks and services and on November 13, 2007 it adopted a series of proposals. The most important are:
- Establishment of the European Electronic Communications Market Authority (EECMA). This organisation, which will be composed by the national NRAs, will have key tasks in the areas of market analysis, radio spectrum, numbering, and network security.
  - Changes to the market analysis procedures, including deadlines and a role for EECMA in case a country is late with its market analysis. The Commission's veto powers are proposed to be extended also to include the remedies with a view to ensure a higher degree of harmonisation across the EU of how SMP operators are regulated.
  - The inclusion of functional separation as a remedy “of last resort”. This would mean that a vertically integrated undertaking could be required to place activities related to the wholesale provision of its access network products in an independently operating business unit that would have to work under strict non-discriminatory obligations.
  - More flexible radio spectrum management with technology and service neutrality becoming the norm from December 31, 2009. Spectrum trading would be permitted in bands selected by the Commission under a regulatory procedure, and possibly in additional bands selected by individual Member States.
  - The proposals also included a number of amendments in the areas of network integrity, data security, privacy and consumer rights issues.

These proposals, which included amendments to the directives forming the EU regulatory framework, will now be considered by the European Council and the European Parliament. Adoption of amendments and transposition by EU Member States is expected to take around three years so that the new *acquis* may become effective around 2010.

The regulatory development, which has taken place over twenty years, has been compressed into a much shorter period for the ten new EU Member States that joined the EU on May 1, 2004, and also for Bulgaria and Romania that joined the EU on January 1, 2007. They all negotiated their membership based on the 1998 *acquis*. However, while these negotiations took place, the EU was already in the process of adopting the 2003 *acquis* and the new Member States had to transpose these directives before they entered the EU.

These regulatory developments are largely supported by in-depth monitoring of the developments in the national markets

Every year the European Commission publishes an in-depth monitoring report on the implementation of the EU electronic communications regulatory framework in the Member States. The latest 12<sup>th</sup> report was adopted by the Commission on March 29, 2007. The reports examine major developments in the market and give an assessment of the implementation of the key regulatory principles covered by the regulatory framework.

South East Europe is a region that includes countries that are potential candidates for membership in the European Union, some in the near term and other in a longer-term perspective. As part of the preparation for EU enlargement, monitoring of their telecommunication markets, as significant drivers of economic growth, is being performed. The resulting report,

similar to those for the EU Member States, has been prepared every 9 months in the period from 2005 to 2007. This is the fourth and last report of this series.

The project, called “Monitoring of South East Europe - telecommunications services sector and related aspects”, is funded by the EC Directorate General for Information Society and Media, and performed by Cullen International.

The reports cover the following countries:

- Albania;
- Bosnia & Herzegovina. This country includes two administrative divisions, the Federation of Bosnia & Herzegovina and Republika Srpska in addition to the district of Brčko. The country is included in the report as one entity because there is common legislation and the single national regulatory authority;
- Bulgaria;
- Croatia;
- Montenegro;
- Romania;
- Serbia, including Kosovo, which has a separate status defined by UNSCR 1244. Serbia and Kosovo have different legislation and separate regulatory authorities and are therefore dealt with separately in this report.
  - Serbia;
  - Kosovo;
- The former Yugoslav Republic of Macedonia;
- Turkey.

## II. OBJECTIVES AND METHODOLOGY

The overall aim of the project is to assist the European Commission and the participating countries in monitoring the progress made by each country towards compliance with the EU rules for electronic communications, often called the EU acquis.

The report presents factual information. It is not the intention to pass judgment on the relative merits of the policies pursued or to evaluate progress made toward policy objectives. Each reader may make his or her own assessment based on the many indicators provided in the report.

At the request of the Commission, the scope and methodology for this report closely follows the previous reports on “Monitoring of EU Candidate Countries – Telecommunication Services Sector”, performed by IBM Business Consulting Services. These reports have been used as models for this report with suitable changes and additions.

In the data collection process, we have relied on the support of the national regulatory authorities and/or representatives of the Ministries responsible for telecommunications policies. The main sources of information for this report are listed in the table below:

Country	Source of information in this report	Website
Albania	Telecommunications Regulations Entity (TRE)	<a href="http://www.ert.gov.al">http://www.ert.gov.al</a>
Bosnia & Herzegovina	Communications Regulatory Agency (RAK)	<a href="http://www.rak.ba/">http://www.rak.ba/</a>
Bulgaria	Communications Regulation Commission (CRC)	<a href="http://www.crc.bg/">http://www.crc.bg/</a>
Croatia	Croatian Telecommunications Agency (HAT)	<a href="http://www.telekom.hr/">http://www.telekom.hr/</a>
Montenegro	Agency for telecommunications and postal services of the Republic of Montenegro	<a href="http://www.agentel.cg.yu/">http://www.agentel.cg.yu/</a>
Romania	National Regulatory Authority for Communications and Information Technology (ANRCTI)	<a href="http://www.anrcti.ro/">http://www.anrcti.ro/</a>
Serbia (including Kosovo <sup>1</sup> )		
Serbia	Republic Telecommunications Agency (RATEL)	<a href="http://www.ratel.org.yu">http://www.ratel.org.yu</a>
Kosovo	Telecommunications Regulatory Authority (TRA)	<a href="http://www.art-ks.org">http://www.art-ks.org</a>
The former Yugoslav Republic of Macedonia	Agency for Electronic Communications (AEC)	<a href="http://www.aec.mk/">http://www.aec.mk/</a>
Turkey	Telecommunications Authority (TA)	<a href="http://www.tk.gov.tr/">http://www.tk.gov.tr/</a>

<sup>1</sup>) under UNSCR 1244

Table 1 – Main sources of information

The information collection process has consisted of four information packages, each with its own reference date:

1. Organisational information. This package included information of an institutional and organisational nature. The reference date was July 1, 2007.
2. Price information. This package included a range of wholesale and retail prices. The reference date was July 1, 2007.
3. Regulatory information. This package included indicators of a regulatory nature, such as competitive safeguards, numbers of licences issued, etc. The reference date was July 1, 2007.
4. Market information. This package included various forms of statistics from the telecommunications market. The reference date was July 1, 2007 for information that represents the situation on a certain date. Information that represents the results over a period of time, such as annual revenues, relate to 2006, which is the last year for which results were available when this report was written. In some cases, this report also includes information that is more current. The dates are then noted in the report.

The report makes many comparisons with the corresponding EU information taken from the European Commission 12<sup>th</sup> Implementation Report. This is the latest implementation report available at the time this report was developed. The regulatory information in the 12th Implementation Report is from December 31, 2006. Most market information is from October 1, 2006. One should therefore bear in mind that the EU market data represents information that is 9 months older than the information presented from South East Europe in this report.

This report covers ten geographic units with different status. Most of them are internationally recognised as countries, but in the case of Kosovo, it is a territory under international administration.

The choice of geographic units has been made according to their legislative and institutional framework for telecommunications regulations. For this reason, the country of Bosnia & Herzegovina is presented as a single geographic unit because its constituent parts have common legislation and a common regulator for the electronic communications sector. Nevertheless, Bosnia & Herzegovina has three incumbent operators.

Table 2 provides basic information on the geographic units, with some more information when necessary to explain their status. It also introduces the short two letter country codes based on the international ISO codes that will be used as identification in graphs elsewhere in the report. In addition, each incumbent operator in Bosnia & Herzegovina has been given its own code, which is used in certain graphs.

The countries and geographic units are presented in the alphabetical order by the name of the country. Special territories within a country are presented after the country name. Consequently, Kosovo is presented after Serbia within the country of Serbia. This sequence of countries and geographic units is maintained throughout this report, even if the full context of the alphabetical order is not always displayed and the alphabetic order of the two letter ISO codes is different.

Cullen International has contracts with independent telecommunications experts in each country and geographic unit. They have provided more advice and guidance on the national level. The majority of the information presented in this report has been provided by the national regulatory authorities and/or the ministries in the geographic units, but in some cases, the information has been supplemented and/or corrected with other, and sometimes more recent, sources.

Country	ISO country code / special code	Comments
Albania	AL	
Bosnia & Herzegovina	BA	<p>Bosnia &amp; Herzegovina includes two administrative divisions:</p> <ol style="list-style-type: none"> <li>1. The Federation of Bosnia &amp; Herzegovina</li> <li>2. Republika Srpska</li> </ol> <p>In addition, there is a district, Brčko, which is under international administration</p> <p>There are three incumbent operators in the different regions.</p> <ol style="list-style-type: none"> <li>1. BH Telecom d.d Sarajevo (BA-bh in the graphs). The operator is active in the Federation of Bosnia &amp; Herzegovina. It is the only operator in some cantons and shares the market with HT Mostar in other cantons.</li> <li>2. Telekom Srpske a.d. Banja Luka (BA-ts in the graphs) is the incumbent operator in Republika Srpska.</li> <li>3. Hrvatske Telekomunikacije d.o.o. Mostar (BA-ht in the graphs) is active in the Federation of Bosnia &amp; Herzegovina. It is the only operator in some cantons and shares the market with BH Telecom in other cantons.</li> </ol> <p>Fixed telephony services in the District of Brčko (not identical to the pre-war Brčko Municipality) are provided by Telekom Srpska. Mobile services are provided by all three mobile operators.</p>
Bulgaria	BG	
Croatia	HR	
Montenegro	ME	Montenegro is an independent country from June 3, 2006. It was separated from Serbia & Montenegro after a referendum on May 21, 2006.

Country	ISO country code / special code	Comments
Romania	RO	
Serbia (including Kosovo <sup>1</sup> )	CS	Serbia is the remaining part of Serbia & Montenegro after the separation of Montenegro. It includes the territory of Kosovo (see below).
Serbia	RS	
Kosovo	XK	Kosovo is a territory under interim international administration and has its own telecommunications ministry and regulations. Under UN resolution UNSCR 1244, the actual administration of Kosovo is carried out by the UN without the involvement of the government of Serbia. For that reason, it is reported separately from Serbia in this report.
The former Yugoslav Republic of Macedonia	MK	The constitutional name of the country is "Republic of Macedonia". However, the country is not recognised under this name by parts of the international community. The EU refers to the country by the provisional reference under which it was admitted to the UN: "the former Yugoslav Republic of Macedonia". The country code "MK" is used by ISO and some other organisations, but this does not prejudice the outcome of the negotiations on the name of the country that are taking place at the United Nations.
Turkey	TR	

1) under UNSCR 1244

Table 2 - List of participating countries and their country codes

Note:

Most of the two-letter country codes are the international two-letter ISO codes that are also used for Internet domain names as provided by IANA (Internet Assigned Numbers Authority). Kosovo does not have a separate two-letter code officially assigned by ISO. However, the structure allows so-called user-assigned code elements. The code indicated in the table above is used by Eurostat and other organisations in order to identify Kosovo individually with a two-letter code (see Europe in Figures, Eurostat Yearbook 2005). It should be noted that the ISO codes for Montenegro and Serbia were changed in 2006<sup>4</sup>.

All the countries and geographic units in this region aspire to membership of the European Union. All of them are in negotiations and procedures that may lead to this goal. The status of each unit's relationship with the European Union is indicated in the table below.

Country	Relationship with the EU
Albania	Stability and Association Agreement signed on June 12, 2006
Bosnia & Herzegovina	Negotiations on Stability and Association Agreement formally opened on January 1, 2006. In March 2007, the Commission warned that it would not conclude SAA talks unless the country made progress on reforming its police and co-operated with the UN War Crimes Tribunal.
Bulgaria	Member State from January 1, 2007
Croatia	EU Candidate country. Negotiations ongoing.
Montenegro	Stability and Association Agreement signed on October 15, 2007
Romania	Member State from January 1, 2007
Serbia (including Kosovo <sup>1</sup> )	
<i>Serbia</i>	Negotiations on Stability and Association Agreement opened in October 2005 were suspended on May 3, 2006, and resumed on June 13, 2007. On September 10, 2007 the Enlargement Commissioner, Olli Rehn announced that the technical stages of the SAA agreement had been completed. On November 6, Olli Rehn initialized the agreement.
<i>Kosovo</i>	The status of Kosovo will depend on the outcome of negotiations that started in December 2005. On February 2, 2007 UN Special Envoy Martti Ahtisaari presented a plan for the resolution of the final status of Kosovo, which was rejected by Serbia. An international contact group led by the EU-US-Russia Troika will present a new report on Kosovo status to the UN Secretary General by December 10, 2007.

<sup>4</sup> Ref ISO 3166-1 Newsletter V-12 2006-09-26.

Country	Relationship with the EU
The former Yugoslav Republic of Macedonia	Stability and Association Agreement in force since April 2004. EU Candidate country status granted in December 2005, but without determining a date for the start of negotiations.
Turkey	EU Candidate country. Negotiations ongoing.

1) under UNSCR 1244

Table 3 - Status of the relationships between SEE countries and the EU

The EU established<sup>5</sup> an “Instrument for Pre-accession Assistance”, which provides funding for pre-accession activities during 2007-2009. The budget is shown in the table below.

Pre-accession assistance for 2007-2009, million euro				
Country	2006	2007	2008	2009
Albania	45.5	61.0	70.7	81.2
Bosnia & Herzegovina	51	62.1	74.8	89.1
Croatia	140	138.5	146.0	151.2
Montenegro	59.5	31.4	32.6	33.3
Serbia (including Kosovo <sup>1</sup> )				
<i>Serbia</i>	19.5	186.7	190.9	194.8
<i>Kosovo</i>	167	63.3	64.7	66.1
Former Yugoslav Republic of Macedonia	43.6	59.5	70.2	81.8
Turkey	500	497.2	538.7	566.4

1) under UNSCR 1244

Table 4 – Pre-accession funding

<sup>5</sup> EU Enlargement Newsletter, November 8, 2006

### III. SUMMARY OF MARKET AND REGULATORY DEVELOPMENTS

This chapter provides a summary of the most important market and regulatory developments in the region with particular focus on the period from mid-2006 to mid-2007. More detailed information is found in the following chapter.

#### A. Market developments

##### 1. Electronic communications sector revenues

The electronic communications sector continues to be an important segment of the overall SEE economy, accounting for around 3.4% of the region's GDP in 2006. For comparison, in 2006 the respective figure in the EU 25 in 2006 was 2.5% of GDP. In 2006, the sector was worth roughly €19.5 billion of which €6,650 million was fixed telephony, €10,567 million mobile telephony, €1,255 million fixed data services, €463 million cable TV services, and €569 million in other services.

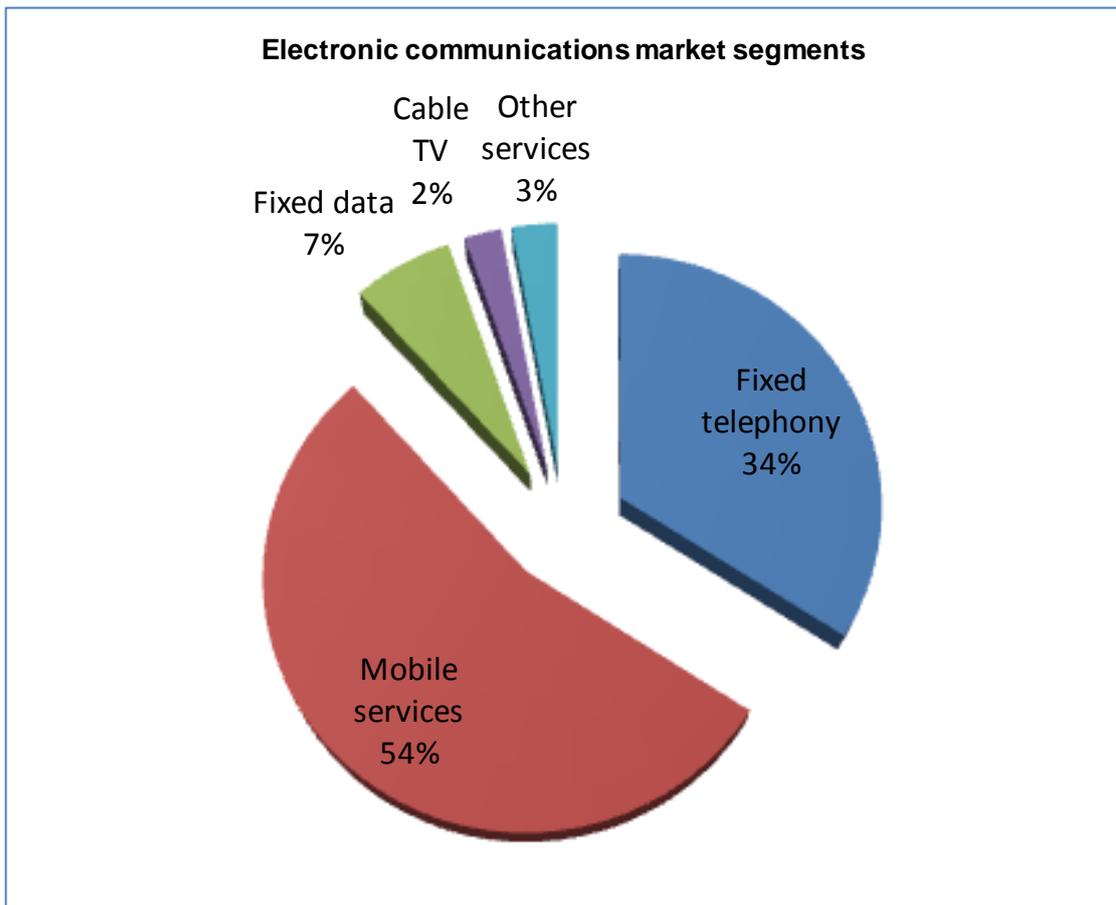


Figure 1 – Main electronic communications market segments

The sizes of the national markets vary significantly. Turkey and Romania are the largest markets, and these two countries share about 2/3 of the total market in South East Europe.

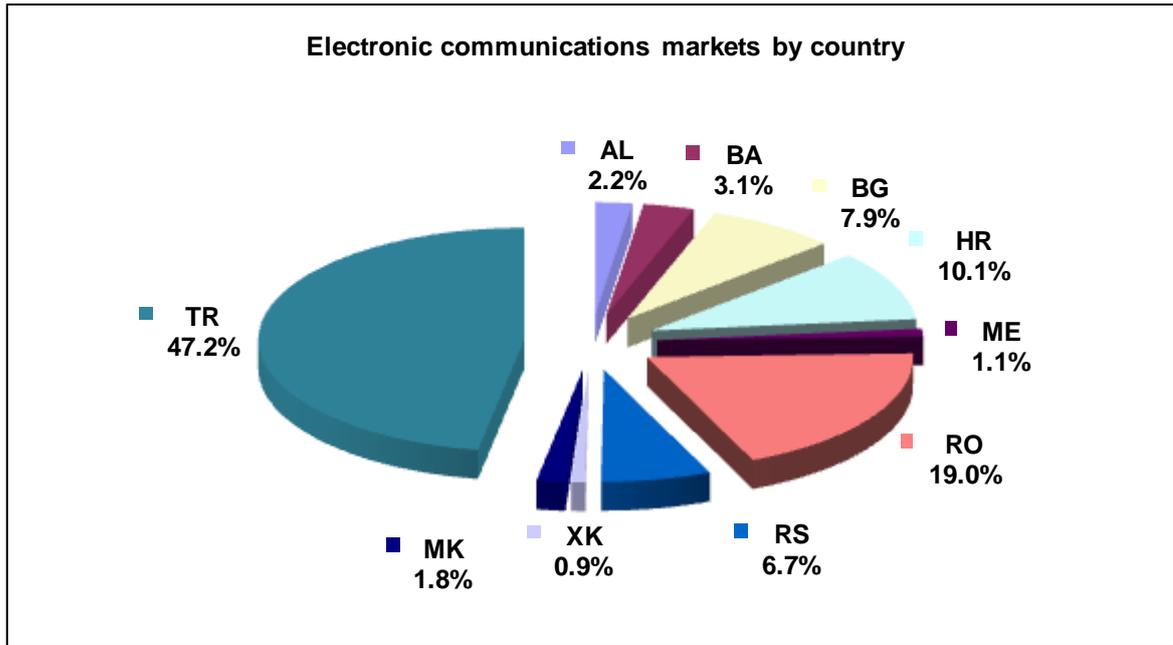


Figure 2 – Relative shares of the SEE market

Overall revenue growth in 2006 was about 1.6%. However, this relatively low growth is quite misleading, because it is heavily influenced by currency fluctuations in Turkey. This country, which accounts for over 47% of the total market value, had a growth measured in national currency of 6.4%. But after conversion to euro, it is presented as a decline of 11.9%. The average growth for the other countries was 17.7%.

By comparison, the overall revenue growth in the EU was 2.3%<sup>6</sup>.

Figure 3 below shows how the markets have developed in 2004, 2005 and 2006.

<sup>6</sup> From European Commission's 12<sup>th</sup> Implementation Report quoting figures from EITO, 2006 and IDATE, 2006.

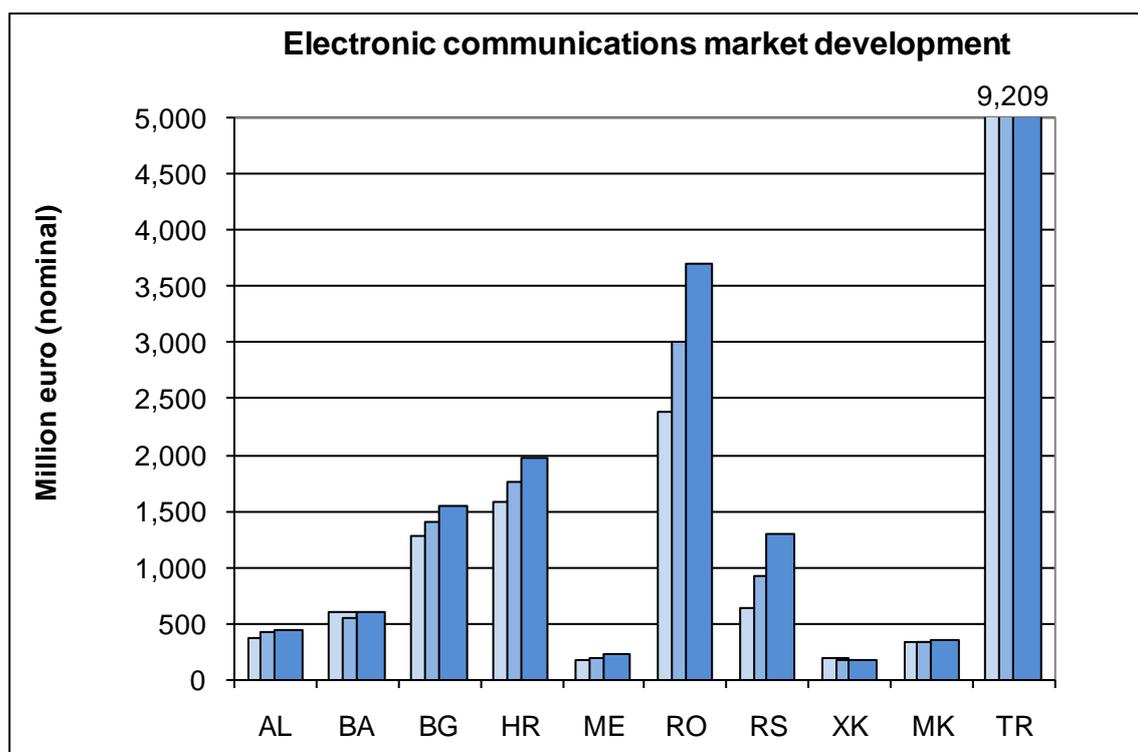


Figure 3 – National market developments

The growth pattern is rather different from country to country. Table 5 below shows the percentage growth during 2006 for each market segment for all the countries.

Country	Fixed telephony	Mobile	Fixed data	Cable TV	Other services	Total
Albania	-10.1	9.5	6.9			4.3
Bosnia & Herzegovina	8.0	5.1	88.0	72.1	77.5	10.4
Bulgaria	-8.3	18.9	25.8	6.1	25.0	10.4
Croatia	2.6	17.1	46.5	47.7	-19.4	11.8
Montenegro	20.5	17.9	0.6	46.6		18.6
Romania	2.2	38.7	70.0	45.0	-60.0	23.7
Serbia, including Kosovo 1)						
Serbia	18.4	51.7	2.9	56.4	116.2	40.2
Kosovo	0.0	0.0				0.0
The former Yugoslav Republic of Macedonia	-4.0	8.3	-47.1			1.5
Turkey	-20.8	-7.2	26.5	-32.6	-22.5	-11.9
1) under UNSCR 1244						

Table 5 – Relative growth in national markets by segments in percent in 2006

It is interesting to note that:

- Bosnia & Herzegovina, Croatia, Montenegro, Romania, and Serbia still have growth in fixed telephony revenues, while other countries have negative growth. Information from Kosovo is not available.
- Serbia is shown with a growth rate of 40%. This high rate may be partly due to inconsistencies in the reported revenue figures for different years, but it is clear that there has been significant growth in the country from mobile telephony and DSL rollout.
- Romania also has a very high growth rate at 23%. This growth comes from the mobile telephony, broadband oriented fixed data, and cable TV segments.

- Montenegro also has a significant growth with a rate of 19%. This comes mainly from fixed and mobile telephony. Cable TV is shown with a high percentage growth value, but it is from a low base and does not contribute much to total growth.

The market growth means that there is also growth in the per capita spending on electronic communications, which is an important indicator for investors. This indicator is presented in Figure 4 below.

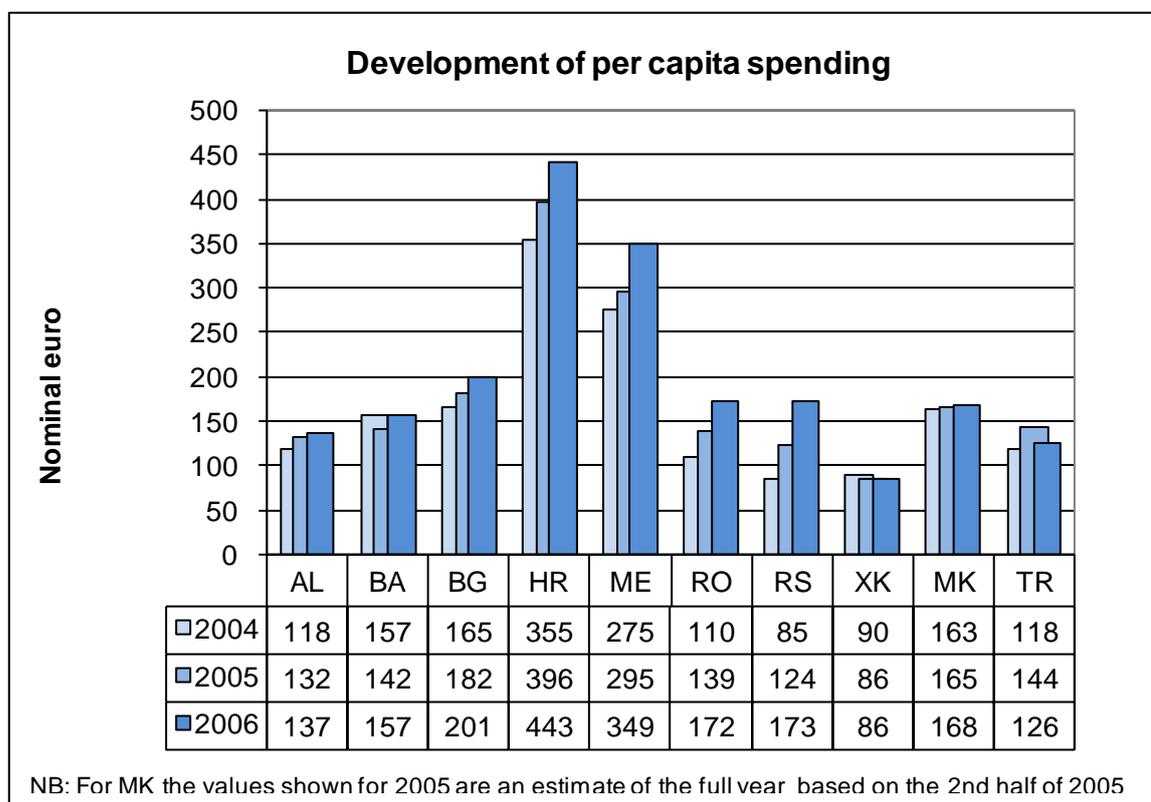


Figure 4 – Developments in national spending per capita

## 2. Fixed voice telephony

### a) Penetration

In most European countries, fixed voice telephony is now declining in terms of the number of subscribers and revenue, but it still remains the most important source of revenue for operators in the fixed market. Intensifying competition leading to falling prices and substitution by mobile services and VoIP are the primary factors. According to the EU's 12<sup>th</sup> implementation report, the decrease in revenues from fixed voice telephony in the EU 25 in 2006 was estimated at between 4.5% and 5.1%.

This is also the case for most of the countries and geographic units in South East Europe. In fact, in 2006 the decline in total fixed voice telephony revenues in the region was even more significant than in the EU, by 11% (from €7,485 million in 2005 to €6,650 million in 2006). The most significant decline in fixed voice telephony revenues by 21% is observed in Turkey, the region's largest economy, however, this is partly explained by the national currency fluctuation against the euro. Fixed voice telephony revenues fell by 10% in Albania and by 8% in Bulgaria. In other countries, fixed voice telephony revenues remained roughly at the same level, with the exception of an 8% growth in Bosnia & Herzegovina, 20% growth in Montenegro, and 18% growth in Serbia.

The strong decline in fixed telephony revenues in South East Europe in comparison with the EU Member States could perhaps be explained by lower average income, which makes it less affordable to maintain fixed telephony in addition to a mobile subscription. However, the decline

in the fixed telephony revenue is much stronger than could be explained by the reduction in subscriptions as measured by the penetration rate.

The weighted average fixed line penetration rate in the region is 25.4%, which represents a decrease of about 0.6% since 2005. In general, the penetration rates are lower than the EU 25 average of about 45%. However, they compare more favourably with the EU 10 Member States where the weighted average is 31%. Comparing developments for the period since the third report (reference date July 1, 2006) to this report (reference date July 1, 2007), Albania and Serbia have registered slight growth in terms of main subscriber lines per 100 population. Bulgaria, Montenegro, Romania, and the former Yugoslav Republic of Macedonia have experienced a slight decline, while in Bosnia & Herzegovina, Croatia, Kosovo and Turkey, this indicator has been more or less stable.

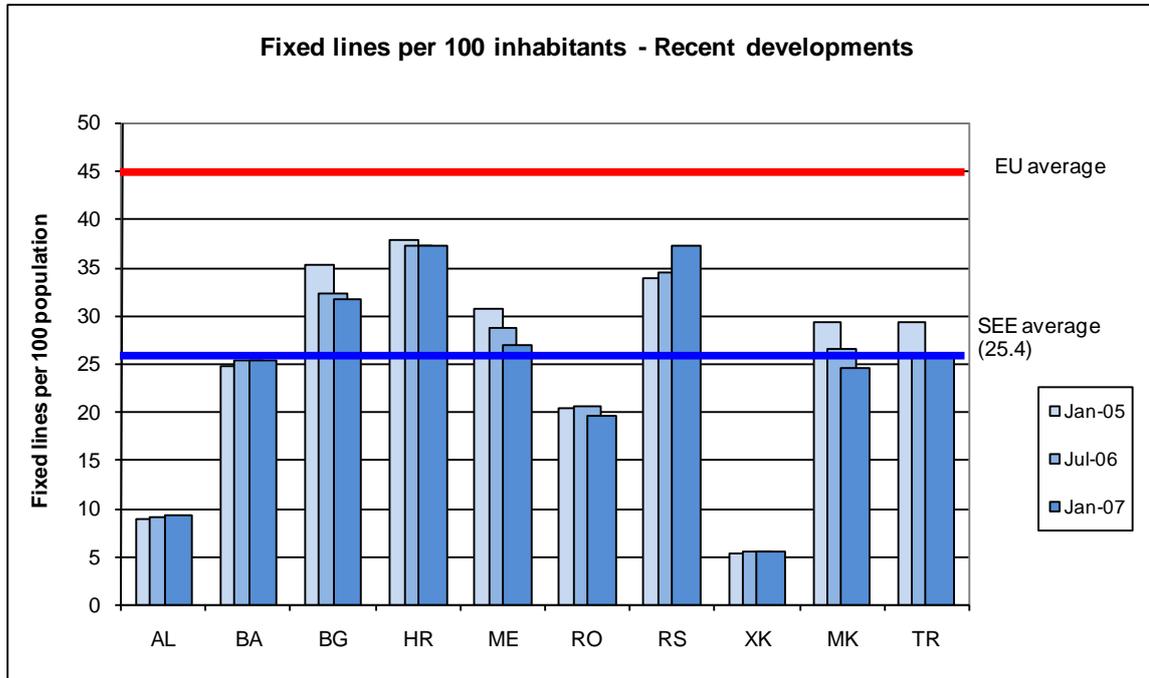


Figure 5 – Fixed line penetration

b) Digitalisation

Croatia, Montenegro and the former Yugoslav Republic of Macedonia have had full digitalisation since the start of the monitoring project in 2005. In the recent period from July 2006, Romania and Kosovo have also completed the digitalisation process.

All the other countries can show progress and Albania, Bosnia & Herzegovina, and Turkey are above the 95% level. Serbia is just under 90%, which represents significant progress in the last year.

Bulgaria has shown progress, but not entirely in line with expectations. The digitalisation rate in Bulgaria is still below 60%.

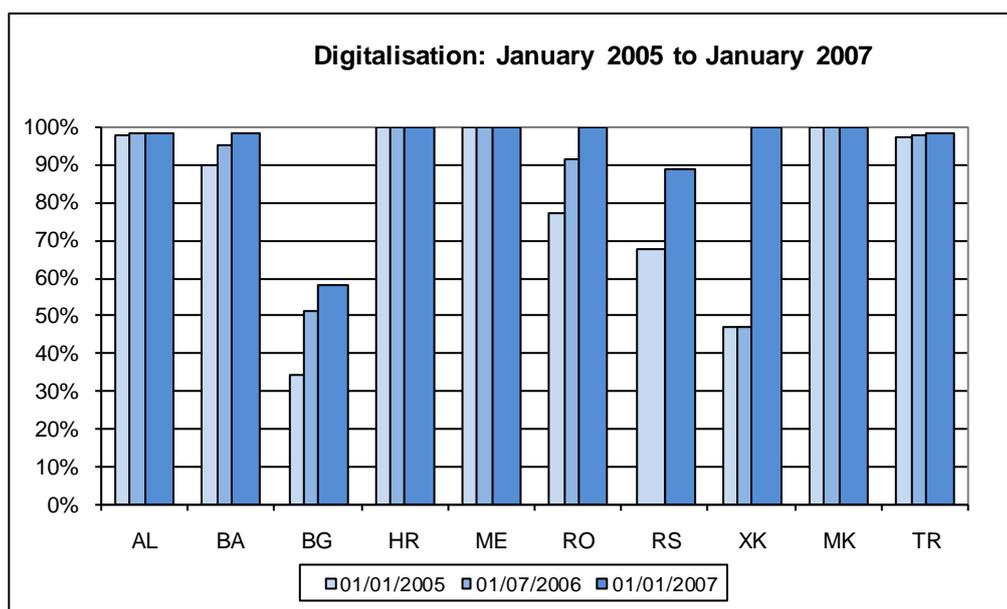


Figure 6 - Digitalisation

## c) Fixed network competition

The development of competition in fixed networks and services in each country has been determined by the liberalisation process. In some SEE entities, liberalisation was introduced gradually where local and national (long distance) services have been opened for competition at a different point time. Therefore, in order to understand the competitive situation, it is necessary to consider separately the local and the national operators, as shown in Figure 6 below.

Albania and Turkey are the specific examples of the countries, where competition at the local and the national level has not been introduced at the same time. In Albania, rural local networks and services have been liberalised before national. Moreover, up to now no alternative operator has been issued a licence to provide services nation-wide. Consequently, currently there are 55 local or regional operators, but only the incumbent can provide services nationally. In Turkey, on the contrary, national networks were liberalised before local. Therefore, there are 27 operators providing long distance services, but local services are only provided by the incumbent.

The competitive situation is also determined by the existing authorisation frameworks. Two countries, Romania and the Former Yugoslav Republic of Macedonia have been the first in the SEE region to introduce a general authorisation system and now have the largest number of competitors providing services at both, local and national levels. On the contrary, Montenegro and Serbia have complex licensing systems involving tender procedures, and the competition has not yet emerged in this countries. In Kosovo, the competition is just starting after the NRA has finalised the licensing framework.

Country	Providers of fixed voice telephony services	
	Local	National
Albania	55	1
Bosnia & Herzegovina	5	3
Bulgaria	7	7
Croatia	10	10
Montenegro	1	1
Romania	80	80
Serbia (including Kosovo <sup>1</sup> )		
Serbia	1	1
Kosovo	2	2

Country	Providers of fixed voice telephony services	
	Local	National
The former Yugoslav Republic of Macedonia	32	32
Turkey	1	27

1) under UNSCR 1244

Table 6 – Competitive alternatives

d) Tariff rebalancing

It is beyond the scope of this report to perform a sophisticated tariff analysis in order to assess where the countries and geographic units stand on tariff rebalancing. However, a simple comparison of local and international tariffs against the EU averages suggests that they fall into two distinct clusters.

- Bulgaria, Croatia, Romania, the former Yugoslav Republic of Macedonia, and Turkey have tariffs for local calls that are below the EU average in nominal currency. However, the corresponding comparison with PPP currency shows that the local tariffs are well above the EU average. The same group of countries have tariffs for international calls, for example to the UK, that are close to the EU average in nominal currency. This combination of tariffs suggests that a fair amount of tariff rebalancing has been accomplished. However, none of these countries claim that their tariff rebalancing has been completed. There have been significant price reductions in tariffs for international calls by the incumbent operator in Bulgaria (50% to a near country) and in Turkey (by 60% to the UK) since the previous report.
- Albania, Bosnia & Herzegovina, Montenegro, Serbia, and Kosovo have tariffs for local calls that are significantly lower than the EU average in nominal currency. Yet, their tariffs for an international call, for example to the UK, are at the EU average or significantly higher, in particular for Bosnia & Herzegovina. Montenegro has brought forward its target date for tariff rebalancing from 2010 to September 1, 2007. However, the major tariff changes that were implemented by Crnogorski Telekom in Montenegro took place after the reference date of July 1, 2007 and therefore are not reflected in this report.

In the period since the previous report, there have been significant tariff rebalancing changes to the incumbent operators' prices, in particular in the following cases:

- In Bosnia & Herzegovina, tariffs have been increased for monthly rental and local calls, while long distance and international tariffs have been reduced.
- In Bulgaria, monthly rentals have slightly increased, while international tariffs have been substantially reduced.
- In Romania, monthly rentals have increased, local and long distance national tariffs have been slightly decreased and there have been substantial decreases in international tariffs.
- In Kosovo, a single national tariff has been introduced that is substantially below the previous local and long distance tariffs. International tariffs have also been reduced.
- In Turkey, monthly rentals and local call tariffs have increased slightly, while international and long distance tariffs have been significantly reduced.
- In the former Yugoslav Republic of Macedonia, international tariffs have been reduced.
- Lastly, in Montenegro, a major rebalancing action was undertaken on September 1, 2007.

NB. All these tariff comparisons have been carried out based on prices in national currencies in order to eliminate price movements caused by currency exchange movements.

An overview over the tariff changes in the period is shown in the table below.

Country / unit	Fixed monthly	Local calls	Long distance	International near country	International distant country
Albania	-	-	-	-	-
Bosnia & Herzegovina	+10...+25%	+19%	-10...-15%	-20%	-20...-25%
Bulgaria	+10%	-	-22%	-40...-50%	-27%
Croatia	-	-	-	-	-
Montenegro (September 1, 2007)	+	+100%	+	-30%	-30%
Romania	+22%	-7%	-7%	-55%	-55%
Serbia (including Kosovo <sup>1</sup> )					
<i>Serbia</i>	+87%	-	-	-	-
<i>Kosovo</i>	-	-70%	-80%	-30%	-30%
The former Yugoslav Republic of Macedonia	-	-	-	-	-40%
Turkey	+7	+10%	-60%	-60%	-60%

1) under UNSCR 1244

Table 7 – Relative tariff changes in national currency for telephony services in 2006

This study has also reported on the price for incoming international calls.

In the past, the prices for calls to South East Europe from countries like the UK and the US have been significantly higher than for calls in the opposite direction. This situation has changed since July 2006 for calls from the US. The prices for these calls have been significantly reduced. In addition, the tariffs are now different from country to country rather than being assigned to a common tariff group. This may be an indication that the prices have been subject to interconnection agreements in each country.

However, the prices for calls from the UK have moved in the opposite direction. Not only have the prices in this period gone up rather than down, but also the tariffs are still identical for all countries except Romania.

### 3. Mobile networks

#### a) Revenue and penetration

Most SEE entities show strong growth in mobile networks. The total mobile revenue in the SEE region as a whole grew at 8% a year. At the same time, in two countries, the growth was exceptionally high: in Serbia the mobile market revenue in 2006 grew by 52% and in Romania by 39%. By comparison, the growth in the EU Member States<sup>7</sup> was 4.6%.

The take up and usage of mobile phones as measured by the penetration rate have also continued to increase. The average subscriber penetration rate increased from 66% on July 1, 2006 to 88% on January 1, 2007. By comparison, the average penetration rate in the EU Member States was reported<sup>8</sup> to be 103%.

Mobile penetration by far exceeds the fixed line penetration rate. The strong growth of the mobile sector has been accompanied with the licensing of new mobile operators in several countries: Montenegro, Romania, Serbia, Kosovo and the former Yugoslav Republic of Macedonia.

<sup>7</sup> 12<sup>th</sup> Implementation Report by the European Commission

<sup>8</sup> 12<sup>th</sup> Implementation Report by the European Commission

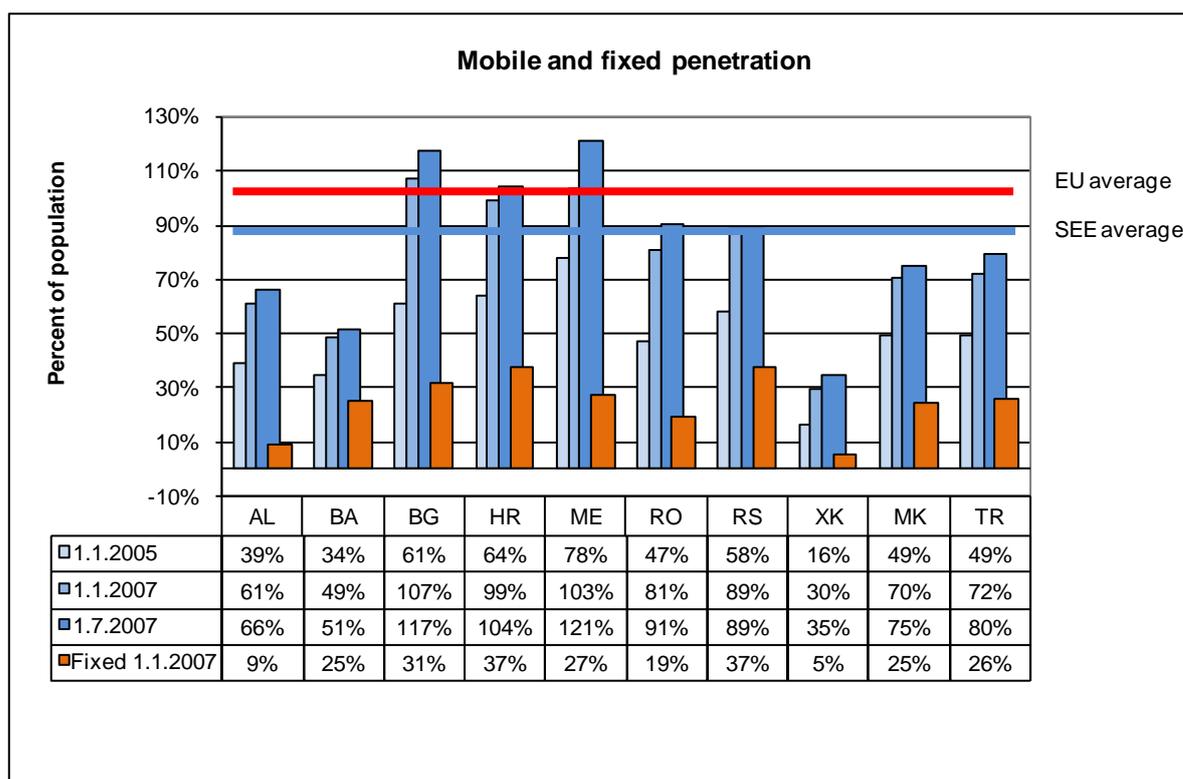


Figure 7 – Mobile and fixed penetration rates

b) Competition in mobile networks

Except for Kosovo, all countries now have three or more mobile operators. Bulgaria and Turkey have four, while Romania has five.

Most of the mobile operators offer GSM services in the 900 MHz or 1800 MHz bands. Furthermore, most of the operators in SEE countries have been licensed to operate in both the 900 MHz and the 1800 MHz bands. The exceptions are Romania, Kosovo, the former Yugoslav Republic of Macedonia and Turkey. In Romania, the smallest of the mobile operators has a GSM only licence in the 1800 MHz band. In Kosovo, the mobile subsidiary of the incumbent operator only operates in the 900 MHz band. In the former Yugoslav Republic of Macedonia the two operators only have licences for the 900 MHz spectrum. Finally, in Turkey there are two GSM 900 and one GSM 1800 operators. UMTS licences have been issued in Bulgaria, Croatia, Montenegro, Romania, and Serbia. One CDMA2000 network is operational in the 450 MHz band in Romania where the same operator has been awarded both UMTS and CDMA licences. Two NMT 450 operators, in Bulgaria and Turkey, are also in the process of upgrading their networks with CDMA2000 technology.

Country	Mobile network operators				
	UMTS only	GSM/UMTS	GSM only	Other	Total
Albania			3		3
Bosnia & Herzegovina			3		3
Bulgaria		3		1 (NMT 450)	4
Croatia		3			3
Montenegro		3			3
Romania	2	2	1	1 (CDMA 2000)	5
Serbia (including Kosovo <sup>1</sup> )					
Serbia		3			3
Kosovo			2		2

Country	Mobile network operators				
	UMTS only	GSM/UMTS	GSM only	Other	Total
The former Yugoslav Republic of Macedonia			3		3
Turkey			3	1 (NMT 450)	4

1) under UNSCR 1244

Table 8 – Competition in mobile networks

c) Tariffs

The mobile tariffs compare relatively favourably with those in the European Union. In most cases, the tariffs are positioned below the median values presented in the European Commission's 12<sup>th</sup> Implementation Report.

Albania has previously represented an exception with prices that would rank among the highest in the EU, in particular for the medium and high usage baskets. Recent price reductions in the range from 18% to 27% have changed this picture, but the prices remain the highest in the region for all baskets.

Kosovo and Turkey are above the EU median for the high usage basket.

In the period from July 1, 2006 to January 1, 2007 there have been significant reductions in Bulgaria, Romania and Kosovo, and in Montenegro – for the high usage basket. For Turkey, the picture is more mixed, with some prices being increased and others decreased.

A summary of tariff changes for those countries where comparative price information is available is shown in the table below. Information for Serbia is not available.

Country	OECD baskets		
	Low	Medium	High
Albania	-18%	-27%	-19%
Bosnia & Herzegovina	0%	0%	0%
Bulgaria	-29%	-43%	-47%
Croatia	+6%	-1%	-1%
Montenegro	0%	-7%	-12%
Romania	-17%	-18%	-17%
Serbia (including Kosovo <sup>1</sup> )			
<i>Serbia</i>			
<i>Kosovo</i>	-13%	-13%	-13%
The Former Yugoslav Republic of Macedonia	0%	-5%	0%
Turkey	-20%	-36%	+28%

1) under UNSCR 1244

Table 9 – Relative changes in OECD basket prices in national currency in 2006

For the first time, this report includes information on the retail roaming charges for making and receiving calls while travelling in the SEE region paid by subscribers of the three major mobile operators: Vodafone, T-Mobile and Orange. The EU Roaming Regulation 717/2007/EC that came into force on June 30, 2007 does not apply to countries outside the EU. Therefore, it is not surprising to find that T-Mobile and Orange charge their retail customers roaming tariffs that are significantly above the EU roaming price caps. Both operators apply almost similar prices to all SEE countries, and their retail charges for outgoing calls are on average 200-300% above the EU price caps, while charges for receiving calls are 500% above the EU price caps.

However, Vodafone applies uniform roaming charges across most of the European countries including the EU Member States and countries that are outside the EU.

4. Broadband

a) Penetration

Broadband has been the fastest growing segment in the SEE telecommunications market. In 2006, the revenue from fixed data services (which is mostly related to broadband services) was growing at 37%. The total number of broadband connections on January 1, 2007 had grown to 5.6 million compared to some 873,000 broadband connections in 2004. In 2006, the average broadband penetration in the region in 2006 reached the 4.43% mark (against 3.16% one year ago). However, there is a significant variation between individual countries, ranging from below 1% in Albania to 1.8% in the former Yugoslav Republic of Macedonia, 6.1% in Croatia and 8.2% in Romania.

NB. Broadband penetration in this context is measured by the number of subscriptions for access solutions that provide Internet access at speeds equal to or higher than 144 Kbit/s. It includes mobile technologies that support this speed.

Figure 8 below presents the broadband penetration for each country and geographic unit. Both fixed and mobile technologies can be used for broadband access. In this chart the fixed numbers include subscription for xDSL, cable modems, leased lines, fixed wireless access and satellite connections, while the mobile numbers include UMTS and CDMA subscriptions that support transfer at 144kbit/s or higher. Because the usage pattern may be different and because the rate of utilisation of broadband access by mobile subscribers represents some uncertainty, the two sets of penetration rates are shown separately in the chart.

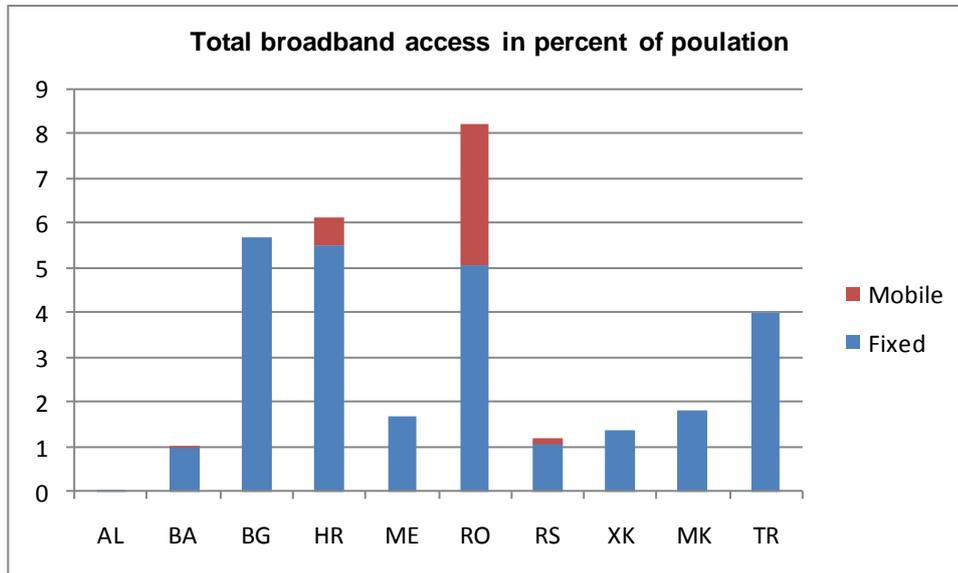


Figure 8 – Broadband penetration by country

Note:  
Albania's numbers are too low to show up on the graph.

b) Broadband technologies

DSL is the dominating technology in the region and is used for more than 60% of the broadband access lines. Cable TV is used for almost 20% of the access lines. Fixed wireless access (FWA) is starting to become a factor, but is still far less than 1% of the access lines. The rest is spread over several other technologies, such as fixed wireless access, leased lines, fibre, satellites, etc.

It should be noted that the "Others" category in the figure below also includes 3G mobile telephone subscriptions that support data rates of 144kbit/s or higher.

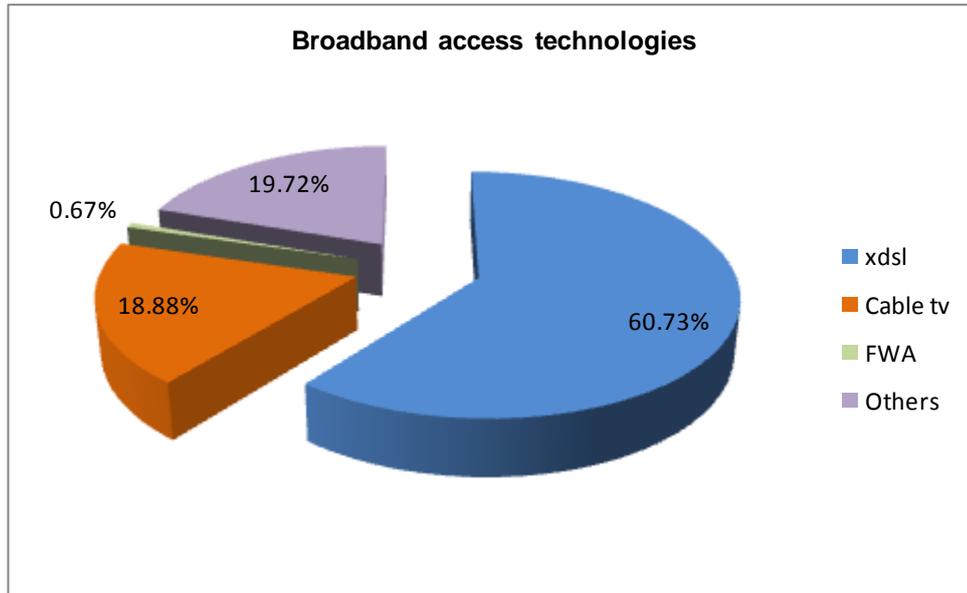


Figure 9 – Distribution of broadband access lines by technology

Nevertheless, there are significant differences between countries. Romania has a particularly low share of DSL lines and a significant use of other technologies, but a similar situation is found in Bulgaria, Serbia, Kosovo, and the former Yugoslav Republic of Macedonia.

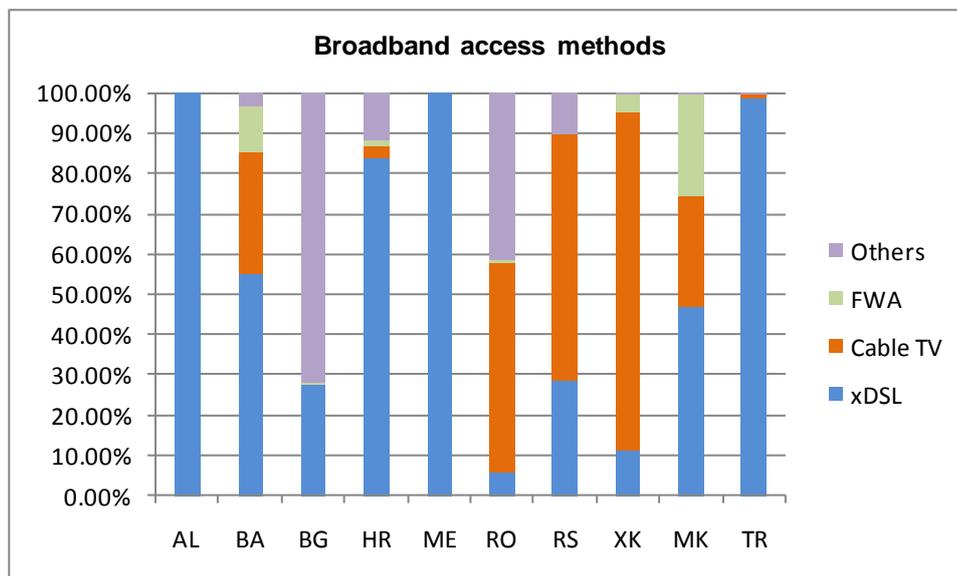


Figure 10 – Distribution of broadband access lines within each country or geographic unit

c) Competitive situation

In Albania and Montenegro, the incumbent has a 100% market share of the broadband access market. In Turkey, the incumbent operator has a 98% market share.

In Croatia, alternative operators have taken more than a 20% market share.

In all the other countries and geographical units, alternative operators have taken a large market share ranging from more than 40% to well above 90%. Where the alternative operators have such high market shares, the prevailing technologies are usually cable TV or wireless technologies.

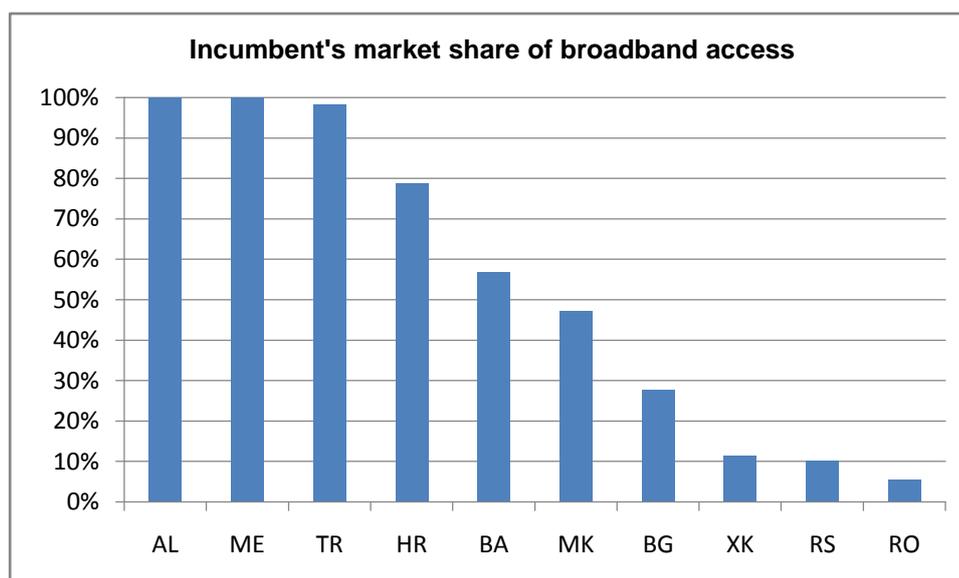


Figure 11 - Incumbent's share in retail broadband

## 5. Interconnection tariffs

### a) Fixed termination rates

Most of the SEE countries have regulated prices for call termination rates in fixed networks and with the exception of Montenegro and Kosovo, they are well in line with the EU average. Montenegro and Kosovo have termination rates that are significantly higher. In Serbia, there are no established fixed-to-fixed termination rates (as there are no alternative fixed operators) and mobile-to-fixed termination rates are confidential.

According to the EU regulatory framework, if the non-discrimination and cost orientation regulatory obligations have been applied correctly, the call termination rates of the regulated fixed operator with SMP should be the same regardless of whether the call originates in a fixed or a mobile national network, and even for calls originating from abroad.

Figure 12 below shows the fixed termination rates at the local level for calls originating in national fixed and mobile networks. International call termination has not been considered within the scope of this report, but it is understood that in all countries, except for Romania, it has not been regulated. Therefore, international fixed termination rates have been set subject to commercial agreements and are typically higher than the national rates approved by the regulator.

Currently, only Bosnia & Herzegovina, Romania, Kosovo and Turkey apply non-discriminatory fixed call termination charges to call originating in fixed and mobile networks. In all other countries, fixed termination rates are higher for calls originating in mobile networks. In particular, in Bulgaria and Croatia, the fixed termination rates are higher if the call originates in a mobile network. The non-discriminatory fixed termination charges have recently been approved in the former Yugoslav Republic of Macedonia, but have not been yet applied in practice.

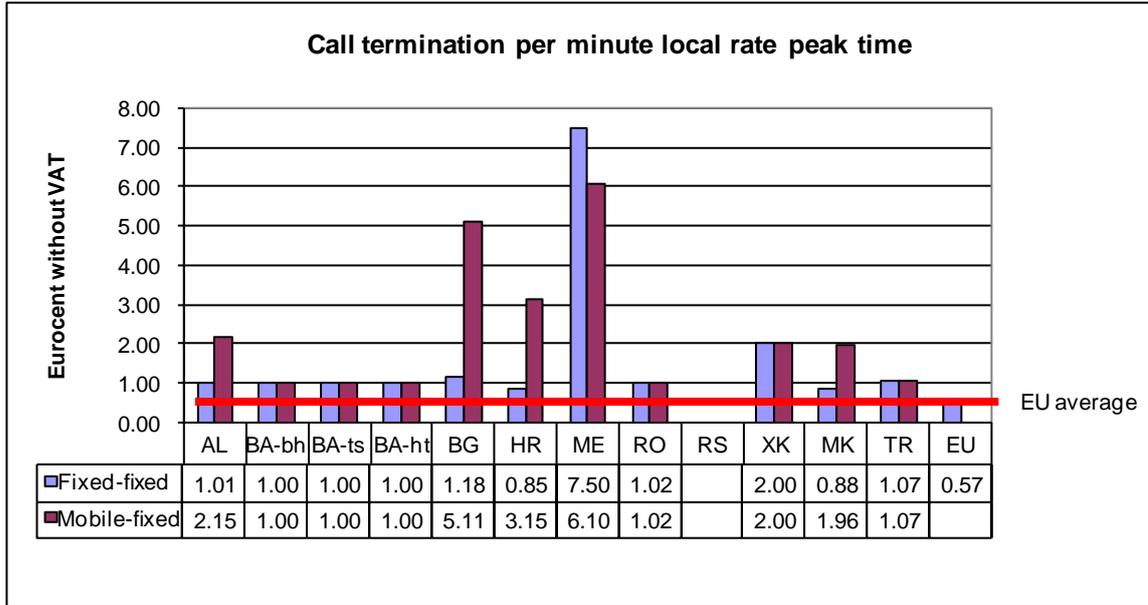


Figure 12 – Call termination in fixed network local rate

b) Mobile termination rates

Not all countries have regulated prices for mobile termination rates. The particular exception is Bulgaria, which has not regulated termination rates in mobile networks under its previous Telecommunications Law. In Bulgaria, the termination rates are about 70% higher than the EU average, while the other countries have mobile termination rates that are in line with the EU average. Information for Bosnia and Herzegovina and Kosovo is not available.

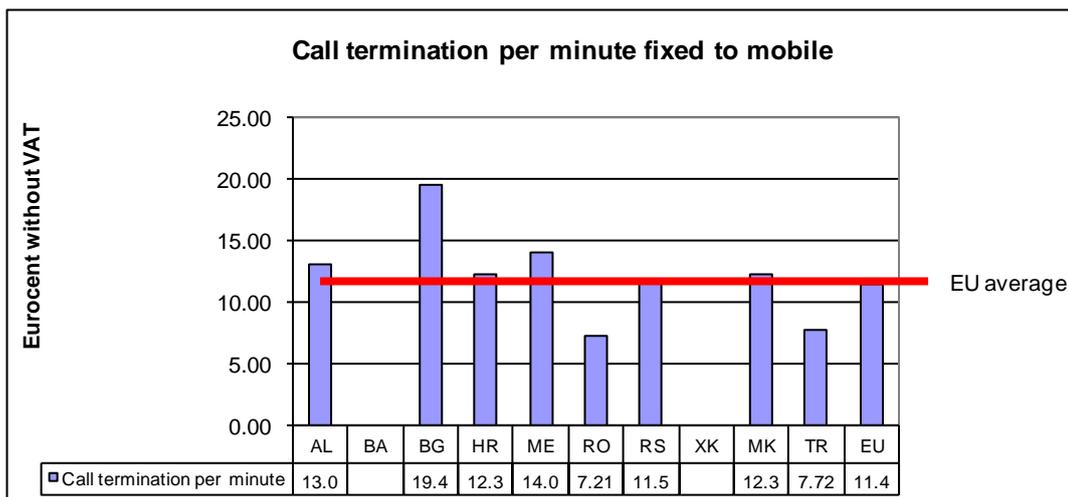


Figure 13 - Fixed-to-mobile interconnection charges for call termination on mobile network

6. Leased lines

a) National leased lines

When considering leased line prices in national currencies, there has been no change or only an insignificant change (less than one percent) in Albania, Bosnia & Herzegovina, Romania, Montenegro, and the former Yugoslav Republic of Macedonia.

In Bulgaria, there have been price increases of about 17% for 64 Kbps and 2 Mbps lines. The prices for 34 Mbps lines have been withdrawn as the prices for these high-speed lines are only available after commercial negotiations.

In Serbia, the prices for the tail-end lines of 2 km have been increased by about 15% while the prices for longer distances have been decreased in the range of 10-15%.

In Kosovo, the price of 2 km long 2 Mbps lines have decreased by about 6%. For the other alternatives, there is no change.

In Turkey, the leased lines prices have decreased by about 15%.

#### b) International leased lines

In comparison to national leased lines, there have been more price changes for international leased lines and the changes have often been more significant. There have been large price reductions in Albania (about 26%), Croatia (ranging from 28% to 36%), the former Yugoslav Republic of Macedonia (about 11%), Romania (ranging from 9% to 55%), and Turkey (about 58%).

In Bosnia & Herzegovina, one of the three incumbent operators, BH Telecom has reduced some of the prices by as much as 48%. The other two incumbent operators, Telekom Srpske and Hrvatske Telekomunikacije have left their international prices unchanged.

Montenegro and Kosovo have moved in the opposite direction and increased their prices. For Montenegro, the price increases are in a range from 166% to 445%. Nevertheless, the prices before these increases were very low and the prices for international leased lines after the price increase are still among the lowest in the region.

In Kosovo, there has been a price increase for the rate to UK in a range from 32% to 50%. As in Montenegro, the price levels, even after these price increases, are relatively moderate and below the EU average.

For Bulgaria, price information for international leased lines is not available.

## B. Legal and regulatory developments

### 1. Legal developments

All entities covered in this study are in the process of adopting and implementing the EU regulatory framework for electronic communications as a basis for their national legislation. However, their progress in terms of regulatory development varies greatly, from the two new EU Member States, Bulgaria and Romania, which had their compliance with the EU acquis vetted by the EU accession procedures, to countries that are still in the process of establishing the initial conditions for a competitive telecommunications sector.

On January 1, 2007 Bulgaria and Romania joined the European Union, which now has 27 Member States. In line with the EU accession commitments, Bulgaria and Romania had to complete the transposition of the EU 2003 acquis for electronic communications before the date of their accession. This formal requirement was only met by Romania, while in Bulgaria the legislative process was delayed.

Romania was one of the first countries in Europe to adopt already in 2002 on its own initiative, national legislation that is based on the EU 2003 acquis. Nevertheless, the country's regulatory framework for universal service is not entirely in compliance with the EU acquis, and on April 20, 2007 the European Commission opened the first infringement proceedings against Romania for the failure to notify the full transposition of the Universal Service Directive. In October 2007, Romania notified the Government Decision transposing article 24 and Annex VI of the Universal Service Directive regarding the interoperability of consumer digital television equipment. Consequently, on October 17, 2007 the Commission closed the case against Romania.

On the same date, the Commission also opened infringement proceedings against Bulgaria in connection with the failure to transpose the Framework, Access, Authorisation, Universal Service, and Privacy Directives. The new Electronic Communications Act was adopted by the Bulgarian

parliament on May 10, 2007 and entered into force on May 26, 2007. However, to complete its implementation, the adoption of around 30 secondary legislative acts is still required.

The former Yugoslav Republic of Macedonia is another country in the region where the regulatory framework for electronic communications is based on the EU 2003 acquis. The Macedonian Electronic Communications Law was adopted in March 2005, but some important aspects of its implementation have been delayed, in particular due to the existing concessions issued to the fixed incumbent operator, its mobile subsidiary T-Mobile, and another mobile operator Cosmofon. Under the Electronic Communications Law introducing a general authorisation regime, these concessions had to be harmonised with the new law within nine months from its entry into force in May 2005. However, this process has not yet been completed.

The regulatory frameworks in all other entities are essentially based on the principles of the EU 1998 acquis, sometimes with elements of the 2003 acquis. Albania, Croatia and Montenegro, have recently started drafting new laws on electronic communications that are intended to implement the EU 2003 acquis. Croatia and Montenegro are expect to complete the legislative process in early 2008.

## 2. National regulatory authority

Since the previous report, several institutional changes affecting the national regulatory authorities have taken place in Bulgaria, Romania, Serbia and the former Yugoslav Republic of Macedonia.

In Bulgaria, the Communications Regulation Commission (CRC) has been facing a difficulty in making decisions because the Council of Ministers has not reached any decision on the appointment of the CRC Chairman after the expiry of the previous mandate in January 2007. The extension of the expired mandate has not been defined in the newly adopted Electronic Communications Act either. Furthermore, the position of one of the four other CRC members has also been vacant and the new member was not appointed by Parliament until November 12, 2007.

In Romania, on December 22, 2006 the government adopted a regulation re-organising the National Regulatory Authority for Communications (ANRC) into the National Regulatory Authority for Communications and Information Technology (ANRCTI). Similar to its predecessor, ANRCTI is organised and operates under the co-ordination of the prime minister and is fully self-financed. The new institution took over the budget and staff of the former ANRC. Another institutional change took place in April 2007, when ANRCTI took over the responsibilities of the Inspectorate General for Communications and Information Technology (IGCTI) for spectrum management, audio-visual communications and terminal equipment. ANRCTI also absorbed the personnel, budget, financing resources, rights, and obligations of the former IGCTI.

Lastly, on October 9, 2007 the Romanian parliament adopted a set of amendments to ANRCTI organisation. One of the most significant changes concerns the rules for the designation of ANRCTI's management. According to the proposal, ANRCTI will be led by a 7-member council nominated by the parliament for a 5-year period, one of which will be elected as president. The proposed changes are intended to eliminate the subordination of ANRCTI to the government: ANRCTI is headed, by a president and a vice-president, appointed by the prime minister for a 5-year term.

The Romanian President has, however, rejected the draft law<sup>9</sup> and sent it back to the Parliament. In a letter to the Parliament, the President stressed that "in order to observe the constitutional principles of bicameralism and of the parliamentary control exerted by both Chambers of the Parliament, the control over the ANRCTI must be exercised by both the Chamber of Deputies and the Senate". As a consequence, the draft law shall be re-examined by the Parliament.

In Serbia, after the elections and establishment of the new government in May 2007, the new Ministry for Telecommunications and Information Society with responsibilities for telecommunications, postal services and information society was formed in May 2007.

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<sup>9</sup> Government Emergency Ordinance no. 134/2006

In the former Yugoslav Republic of Macedonia, several amendments to the Electronic Communications Law have been adopted during 2007. These amendments are aimed at strengthening the accountability of the Agency for Electronic Communications and the members of its Commission. They also introduce additional grounds for the removal of the president and members of the Commission and clarify the criteria for appointing the AEC’s director. Another set of amendments addressed the AEC’s ability to enforce its measures by introducing more stringent penal sanctions for failure to comply with the AEC’s requirements for the implementation of the RIO and RUO. Lastly, the government has also started working on another set of amendments to the Law on Electronic Communications and the Broadcasting Law proposing *inter alia* to create a single regulatory body for the electronic communications, broadcasting, and postal sector.

Also, a National Strategy for development of information society is adopted.

### 3. Privatisation

The only entities in the SEE region that have completely privatised the incumbent operators are Bulgaria, Montenegro, and the entity of the Republika Srpska in Bosnia & Herzegovina.

During 2007, the Albanian government finalised a two-year long privatisation negotiation after selling a 76% state share in Albtelecom to a Turkish consortium Calik Enerji Telecommunication. Privatisation was also completed in the Republika Srpska of Bosnia and Herzegovina through the sale of the state-owned Telekom Srpske to the Serbian incumbent operator, Telekom Srbija, which is 80% owned by the Serbian state. In Croatia, after an IPO procedure, the government has further reduced its stake in the incumbent operator, T-HT.

The Romanian government has decided to put on hold further steps in privatisation of the incumbent telecom operator and the state-owned broadcasting transmission company that had initially been scheduled to take place in the first half of 2007. The Ministry of Communications and Information Technology now intends to take a next step in the second or third quarter of 2008. However, the exact timing as well as the number of shares to be sold has not yet been determined.

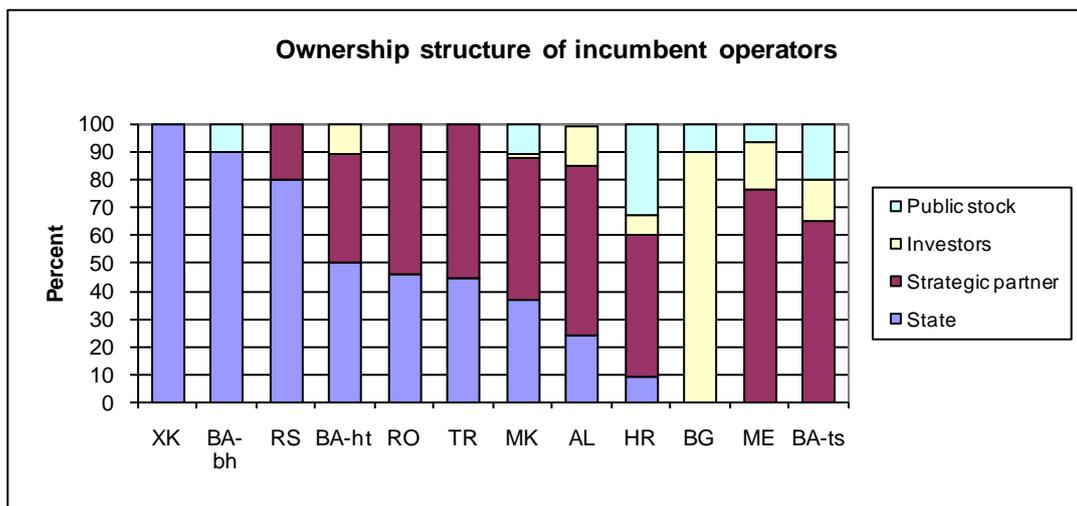


Figure 14 – Ownership structure of incumbent operators

### 4. Market access

In theory, all forms of telecommunications networks and services in all the SEE entities have been fully liberalised. In practice, however, access to certain market segments for new entrants in some of the entities remains somewhat problematic even if some recent developments have brought the liberalisation process of a step forward.

In Albania, although formally the market was fully liberalised from January 1, 2005, no licensing framework had been defined for telecommunications services in urban areas, and this segment remained closed to competition. However, an amendment to the Telecommunications Law

adopted in November 2006 introduced a new concept of regional licences covering rural and urban telephone networks. The new law has also clarified the status of VoIP services by introducing a technology neutral definition of publicly available telephony services. The provision of voice telephone services is now subject to the same licensing regime, regardless of the underlying technology.

In Bulgaria, after the adoption of the new law, the provision of public electronic communications networks or services no longer requires individual licences but is subject to a general authorisation except when limited spectrum and numbering resources are to be used.

In Montenegro, the annual licence fee for international services has been reduced from €120,000 to €1,000. Since the market was liberalised in 2004, this fee has been a major entry barrier for potential new entrants. A tender procedure has been launched by the regulator to award up to five individual licences for VoIP services.

In Serbia, the fixed telecommunications network and services licence has been issued to the incumbent operator, Telekom Srbija. Two applications for fixed telephone licences have been submitted by two potential new entrants. The new Ministry of Telecommunications and Information Society will now have to decide on further steps in the licensing process. Serbia has a significant tariff rebalancing problem that is not yet resolved. Therefore, the official policy document adopted by the government in October 2006 takes a cautious approach to the practical implementation of full liberalisation, including the licensing of new operators.

In Kosovo, the regulator has issued a second licence to an alternative operator for the provision of national public fixed telephone services and granted several licences for the provision of international services and international telecommunications facilities. However, the newly licensed providers of international services will have to rely on international interconnection from the incumbent PTK until its monopoly rights expire on December 31, 2007.

In Turkey, the authorisation conditions have been defined for local fixed telephone services, opening the way for competition in the provision of voice telephony, data, payphones and value added services at the local level. Although the Turkish telecommunications market had been fully liberalized since July 2005, the competition at the local level is not legally possible as the Council of Ministers has not yet approved the license fees. At the same time, the Turkish administrative court has cancelled the authorization framework for cable platform services that was adopted by the regulator in 2005 arguing that this type of licence was not in line with the overall authorization framework.

Several regulators have been active in licensing spectrum for mobile telephone services. Montenegro has awarded two 3G licences to the existing operators and one combined 2G/3G licence to a new entrant. New 2G licences have been issued in Kosovo and the former Yugoslav Republic of Macedonia, and a combined 2G/3G licence in Serbia. A decision is expected shortly on licensing 3G spectrum in Bosnia & Herzegovina and in the former Yugoslav Republic of Macedonia. The Turkish regulator has decided to cancel the announced auction procedure for four 3G licences because only one operator had expressed interest.

Several SEE countries have also issued licences for fixed wireless access applications in the 3.5 GHz band. In Croatia, 74 regional licences had been issued by April 2007, of which only one operator has so far launched commercial services. In Montenegro, three national licences in the 3.4-3.6 GHz band were awarded in May 2007 and two further national licences in the 3.6-3.8 GHz band should be awarded shortly. In the former Yugoslav Republic of Macedonia, two national and 18 regional licences in the 3.5 GHz band were issued in 2007. Further licensing activities in the 3.5 GHz band are expected in Albania, Bosnia and Herzegovina, Serbia, Kosovo, Romania and Turkey.

## 5. Market analysis and competitive safeguards

Under the EU acquis, after a market analysis procedure, NRAs may impose ex-ante regulatory obligations on operators that have been found as having SMP in a specific market. Such obligations, which apply only to SMP operators, typically set out rules for competitive safeguards that are intended to protect competition.

With the exception of Bulgaria, Romania, and the former Yugoslav Republic of Macedonia, regulatory frameworks for market analysis, SMP designation and remedies in most of the SEE

entities are based on the principles of the EU 1998 acquis. However, recent developments show that regulators in the SEE region are increasingly taking a more sophisticated approach to the definition of relevant markets, and often try to apply general competition law principles rather than simply analysing the four relevant markets defined under the ONP framework.

Following the EU accession, the Bulgarian and Romanian regulators are required to conduct market analyses during 2007–2008 and notify their draft measures to the Commission and other NRAs under article 7 of the Framework Directive. The Bulgarian NRA has been drafting secondary legislation on market analysis, but the process of market analysis itself has not started yet. Romania had already been following since 2002 the market analysis approach under the EU 2003 acquis, although there was no requirement to notify these market analyses to the Commission and other NRAs. The Romanian regulator has now been working on its second round of market analysis and is expected to notify its first draft proposals to the Commission shortly. In the former Yugoslav Republic of Macedonia, the regulator has also started an analysis of the relevant markets, and in July 2007 published for consultation its first draft decision on the wholesale voice call termination on individual mobile networks.

In Albania, the regulator, TRE, has renewed the designation of the two mobile operators as having SMP in the retail market for mobile services and the wholesale markets for voice call termination on individual mobile networks. TRE has also in November 2007 adopted measures on the retail markets for fixed access and call services and the wholesale markets covering fixed call origination, termination, and national and international transit services. The list of relevant markets defined by TRE is based on the national market conditions according to the existing Telecommunications Law and the Law on Protection of Competition. These market definitions appear to be somewhat different from those set out under the EU 1998 or 2003 acquis.

The Croatian regulator, HAT, has renewed the previous SMP designations in the four markets covering public fixed telephony networks and services, public mobile networks and services, national interconnection services and leased lines. In addition, HAT has defined a separate new market for transmission of voice, sound, data, documents, pictures and other media over fixed networks, where it had designated the fixed incumbent operator together with its ISP subsidiary as having a joint SMP.

In Montenegro, the newly licensed third mobile operator has been designated as having SMP in the public mobile networks and services market. In Serbia, a major Cable TV operator was designated as having SMP in the Cable TV transmission market. Turkey completed its analysis of 16 relevant markets defined according to the European Commission recommendation and has recently changed the regulation on access and interconnection obligations for SMP operators.

In terms of implementing specific competitive safeguards, the following developments have taken place:

- Carrier selection and pre-selection (CS/CPS) has been introduced in Bosnia & Herzegovina, the former Yugoslav Republic of Macedonia, and Turkey. A new regulation on CS/CPS has been adopted in Montenegro setting out the implementation deadline of December 2007. In Albania, the regulator has proposed imposing CS/CPS as a regulatory obligation in its draft analysis of the fixed retail calls market. No decision on CS/CPS has been taken in Serbia or in Kosovo yet.
- Number portability. Croatia remains the only country in the region that has successfully implemented number portability in the fixed and mobile networks. In Bulgaria, mobile number portability was scheduled to become operational on January 1, 2007, but is now due for January 2008, while fixed number portability is not foreseen before 2009. Implementation is ongoing in Romania and the Former Yugoslav Republic of Macedonia. Turkey has adopted the regulatory framework for number portability, and a draft regulation has been published for consultation in Bosnia & Herzegovina.
- Regulatory cost accounting. Bulgaria and Romania are the only two countries that have developed cost accounting methodologies. Romania has implemented LRAIC that is applied for calculating cost-oriented interconnection charges of SMP operators in fixed and mobile networks. Bulgaria has been applying FDC methodology for the fixed network operator. In the former Yugoslav Republic of Macedonia, AEC has prepared guidelines for LRIC

methodology for fixed SMP operator and is also working on LRIC guidelines for mobile SMP operator(s). In other countries, little progress has been achieved so far.

- Reference interconnection offer (RIO). RIOs from the fixed incumbent operators have been published in all SEE entities, except in Albania and Serbia. In Kosovo, the RIO was approved in January 2007 and interconnection negotiations on its basis are now in progress. In Albania, the regulator intends to impose the publication of RIO as an obligation on SMP operators within two months after completing the market analysis procedure and having adopted the SMP decision.
- Reference unbundling offer (RUO). The most significant development over the past 12 months has taken place in Croatia where the number of unbundled loops has exceeded 16,000 and growing rapidly. Romania has also implemented local loop unbundling and can now report some 1,588 unbundled loops<sup>10</sup>. In Bulgaria, there has been a dispute over the RUO, and its practical implementation has been delayed. The first unbundling agreements based on the RUO have been signed in the former Yugoslav Republic of Macedonia and in Turkey. In Turkey, the regulator has also approved the incumbent's wholesale bitstream access and resale offers. In Serbia, the incumbent has offered wholesale bitstream access on a commercial basis.

A quick overview of the status of competitive safeguards is provided in Table 10 below.

## 6. Significance of good regulation for ICT sector and overall economy

Experience in the EU has demonstrated that broadband growth is largely a function of a good regulatory environment. Those Member States that have been more successful with adapting their regulations, for example in the area of local loop unbundling and bitstream access, can show higher growth rates than countries with less suitable regulations. The following quote from the "Broadband market competition report" by the ERG<sup>11</sup> makes the case:

*The market data analysis and the country studies both lead to the conclusion that the following hypothesis can explain the market development both in terms of competition and penetration / growth of penetration:*



*Regulation leads to competition, which then incites investment, which in turn pushes penetration.*

A similar trend can be detected in South East Europe. It is probably not by coincidence that the two Member States and at least two of the three accession countries that have the longest experience with the EU regulatory framework, have the highest penetration figures in the region.

Table 10 below demonstrates how these two groups of countries compare for some of the most important regulatory indicators. In this table the emphasis is on whether the indicators were operational on July 1, 2007. Operational in this sense means that carrier selection and number portability are in use, and that the reference interconnection offer and reference unbundling offer have resulted in agreements between operators.

In the former Yugoslav Republic of Macedonia the new RIO prices had not yet entered into force. The corresponding indicator is therefore marked yellow in the table below.

<sup>10</sup> Report 3, published in the first quarter of 2007, indicated that around 45,000 loops had been unbundled. This information was wrong due to incorrect classification as the total number of ADSL lines was provided instead of the unbundled local loops.

<sup>11</sup> Broadband market competition report, ERG document (05/23), May 26, 2005

Country	General authorisation regime for fixed telephony	General authorisation regime for VoIP	Carrier selection in use	Number portability in use	Operational fixed-to-fixed RIO	Operational RUO
<b>Member States and Accession countries</b>						
Bulgaria	Yes	Yes	Yes	No	Yes	No
Croatia	No	Yes	Yes	Yes	Yes	Yes
Romania	Yes	Yes	Yes	No	Yes	Yes
The former Yugoslav Republic of Macedonia	Yes	Yes	Yes	No	Yes	No
Turkey	No	No	Yes	No	Yes	Yes
<b>Other countries and geographic units</b>						
Albania	No	No	No	No	No	No
Bosnia & Herzegovina	No	No	Yes	No	Yes	No
Montenegro	No	No	No	No	No	No
Serbia (including Kosovo <sup>1</sup> )						
<i>Serbia</i>	No	No	No	No	No	No
<i>Kosovo</i>	No	No	No	No	No	No

1) under UNSCR 1244

Table 10 – Regulatory indicators for Member States and accession countries compared with other countries and geographic units.

However, the significance of good regulations goes further than resulting in higher penetration rates for broadband. It also has a positive impact on growth in the overall economy as measured by GDP.

The relationship between the ICT sector developments and growth in the national economy has become better understood in recent years. The OECD has explained this in terms of multi-factor productivity growth. Growth in the ICT sector contributes more to the GDP growth than the economic growth of the sector itself. The additional contribution of ICT to GDP growth is explained by the increased efficiency that can be experienced at the industry level as well as the individual company level.

However, this effect is not a constant factor and it will vary from country to country depending on factors such as skill level and the ability of organisations to adapt to new opportunities.

In its 2003 report to the Meeting of the OECD Council at Ministerial level “Seizing the benefits of ICT in a digital economy”, OECD concluded:

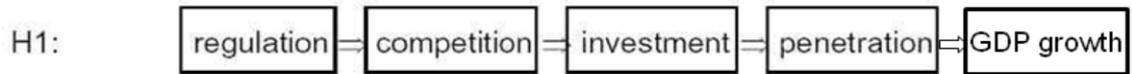
*ICT remains an important driver of growth, .... The use of ICT has already led to better productivity performance in countries where appropriate policies to seize the benefits of ICT have been put in place. Since these technologies are continuing to improve in functionality, speed, and capacity, it is important that countries improve their policy frameworks to benefit from ICT.*

And the first of five recommendations for policy action is:

**Strengthen competition**, by ensuring network infrastructure competition across and within different platforms, placing more emphasis on regulatory frameworks that are neutral with respect to alternative technologies and on the convergence of markets and technologies, maintaining a strong stance on competition in services, fostering competitive conditions in digital content and applications markets, and monitoring for anti-competitive behaviour. Governments should not succumb to calls to retreat from liberalisation or assist the ICT industry in a way that distorts competition, and should

*make regulatory frameworks more effective to ensure that incumbent firms provide adequate access to their network resources for new entrants.*

Therefore, the ERG hypothesis may well be expanded to include a direct effect of the regulatory environment on GDP.



## IV. GENERAL OVERVIEW

### A. Introduction and general background information

#### 1. Currencies, exchange rates and value added tax

The report contains many indicators reflecting the state of development of the national telecommunications markets, which are presented in this chapter.

The information collected suggests that there are great differences between the individual countries in terms of relative size, per capita income, fixed line, mobile and Internet penetration rates, wholesale and retail pricing structures, regulatory regime and data availability.

Country	Currency	ISO currency code	Average exchange rate for 2005	Average exchange rate for year 2006	Average exchange rate for year 2007
<b>Albania</b>	<b>Albanian lek</b>	<b>ALL</b>	<b>124.1800</b>	<b>123.2700</b>	<b>122.2000</b>
<b>Bosnia &amp; Herzegovina</b>	<b>Bosnian mark</b>	<b>BAM</b>	<b>1.9560</b>	<b>1.9560</b>	<b>1.9560</b>
<b>Bulgaria</b>	<b>Bulgarian lev</b>	<b>BGN</b>	<b>1.9558</b>	<b>1.9558</b>	<b>1.9558</b>
<b>Croatia</b>	<b>Croatian kuna</b>	<b>HRK</b>	<b>7.4000</b>	<b>7.2443</b>	<b>7.3030</b>
<b>Montenegro</b>	<b>euro</b>	<b>EUR</b>	<b>1.0000</b>	<b>1.0000</b>	<b>1.0000</b>
<b>Romania</b>	<b>New Romanian lei</b>	<b>RON</b>	<b>3.6234</b>	<b>3.5686</b>	<b>3.1340</b>
<b>Serbia, including Kosovo<sup>1</sup></b>					
<b>Serbia</b>	<b>Serbian dinar</b>	<b>RSD</b>	<b>82.9074</b>	<b>84.9995</b>	<b>78.6667</b>
<b>Kosovo</b>	<b>euro</b>	<b>EUR</b>	<b>1.0000</b>	<b>1.0000</b>	<b>1.0000</b>
<b>The former Yugoslav Republic of Macedonia</b>	<b>Macedonian denar</b>	<b>MKD</b>	<b>61.2958</b>	<b>61.1919</b>	<b>61.1692</b>
<b>Turkey</b>	<b>New Turkish lira</b>	<b>TRY</b>	<b>1.6700</b>	<b>2.0170</b>	<b>1.7623</b>
<b>1) under UNSCR 1244</b>					

Table 11 - Basic currency and exchange rate information

#### Notes:

The information has been provided by the NRAs, which have consulted their national banks, ministries of finance and or national statistical offices.

Montenegro and Kosovo use the euro as official currency.

In order to obtain a clearer understanding of the national price levels it is useful to adjust prices with purchasing power parity indices (PPP). Such indexes aim to establish the exchange rate that will permit a euro in a reference country to have an equivalent purchasing power in another country.

Because different countries have different currencies with different exchange rates, the PPPs cannot be directly compared. In order to have a common yardstick, price level indices (PLI) can be constructed by dividing the PPP by the nominal exchange rate. A price level index of 50 means that the average price level is 50% of the price level in the reference country. Conversely, in this case, a euro will have a purchasing power that is twice what it is in the reference country.

PPPs for many European countries are calculated in the European Comparison Programme, which is managed and co-ordinated by Eurostat. Data collection under this programme is continuous, but cyclical, with each cycle or round of surveys taking three years to complete. Annual comparisons are made by “rolling” data collected in one year over to subsequent years.

The European Comparison Programme was expanded with additional West Balkan Countries in 2006. It now covers all countries in South East Europe and thus all the countries covered by this report. The analysis of price information from Serbia under this programme does not include price information from Kosovo, and Kosovo is not included in the programme.

The first PPP reports to cover Albania, Bosnia & Herzegovina, Montenegro and Serbia will only be available in late 2007 or early 2008. This is too late to be included in this report, which can only report PPP information from Bulgaria, Croatia, Romania, the former Yugoslav Republic of

Macedonia and Turkey. Eurostat has made PPP forecasts for 2007 available for these five countries.

Figure 15 below presents the PPP information<sup>12</sup> in the form of price level indices.

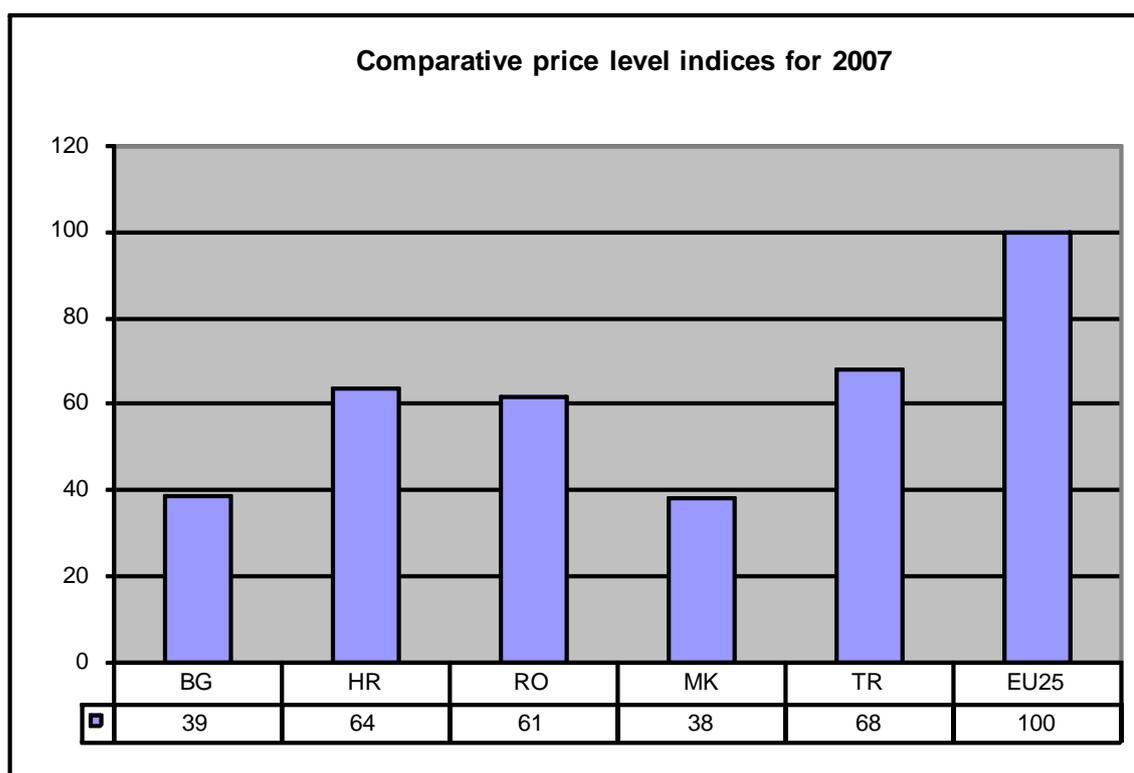


Figure 15 - Price level indices

## 2. Population and households

Table 12 below provides basic information on population and households. It is based on data received from the national authorities and should therefore be the most reliable information available in July 2007. However, a word of warning may be appropriate. For many countries, the information is based on a census that may be some years old. This is particularly true for the number of households. Sometimes the population figures may be based on an old census with growth projections to give an estimate for later periods. In other cases, the last known numbers have been used.

For some of the Balkan territories there is a significant problem with refugees that creates uncertainty about the population count.

<sup>12</sup> In Report 2, price comparisons were made for all countries and geographic units using partial PPP, because they were the only indicators available at the time. The partial PPPs had been calculated based on data from 2003 for the food, beverage and tobacco sector and for clothing and footwear sector. The full PPPs that are now available for the five countries are lower than the partial PPPs. Thus, when converting nominal euros to PPP euros, the prices will appear more expensive in Report 3 and this report than they were with partial PPP conversion in Report 2

Country	Inhabitants year end 2006	Percentage of EU population as of year end 2006	Households year end 2006
<b>Albania</b>	<b>3,162,506</b>	<b>0.69</b>	<b>752,978</b>
<b>Bosnia &amp; Herzegovina</b>	<b>3,871,000</b>	<b>0.84</b>	<b>1,034,538</b>
<b>Bulgaria</b>	<b>7,679,280</b>	<b>1.66</b>	<b>2,921,887</b>
<b>Croatia</b>	<b>4,440,000</b>	<b>0.96</b>	<b>1,477,377</b>
<b>Montenegro</b>	<b>627,000</b>	<b>0.14</b>	<b>191,047</b>
<b>Romania</b>	<b>21,584,365</b>	<b>4.68</b>	<b>7,320,202</b>
<b>Serbia, including Kosovo<sup>1</sup></b>			
<b>Serbia</b>	<b>7,498,001</b>	<b>1.62</b>	<b>2,521,190</b>
<b>Kosovo</b>	<b>1,965,000</b>	<b>0.43</b>	<b>311,100</b>
<b>The former Yugoslav Republic of Macedonia</b>	<b>2,037,000</b>	<b>0.44</b>	<b>564,296</b>
<b>Turkey</b>	<b>72,974,000</b>	<b>15.81</b>	<b>18,491,840</b>
<b>SEE</b>	<b>125,838,152</b>	<b>27.27</b>	<b>35,586,455</b>
<b>EU27</b>	<b>461,478,703</b>		
1) under UNSCR 1244			

Table 12 – Population

## Notes:

The national information has been provided by the NRAs based on the information from the national statistical organisations.

Albania: Data are estimations from INSTAT, based on the 2001 census. The number of households is derived by dividing the estimated population for 2006, with the average number of people per household in 2001.

Bosnia & Herzegovina: Inhabitants at the end of 2005 is used as the best estimate of inhabitants at the end of 2006. The number of households is based on the B&H Statistical system and LFS 2006 survey. This survey also estimated the population to be significantly lower (3,397,328) than the official estimate.

Bulgaria: The number of households is based on the most recent data available from 2001.

Croatia: Inhabitants at the end of 2005 is used as the best estimate of inhabitants at the end of 2006.

Montenegro: The most recent information is for 31.12.2003 – population is 620,145, households are 191,047. 2005 and 2006 data are projections.

Romania: The latest census of population and dwellings was made in March 2002. Since that date, estimates have been developed. The information on households is from the census. Inhabitants at the end of 2005 is used as the best estimate of inhabitants at the end of 2006.

Serbia: Inhabitants at the end of 2005 is used as the best estimate of inhabitants at the end of 2006.

Kosovo: Inhabitants at the end of 2005 is used as the best estimate of inhabitants at the end of 2006.

The former Yugoslav Republic of Macedonia: The number of inhabitants and households are the same as those given for 2004 and are taken from the official report of the State Statistic Authority of the Republic of Macedonia.

Turkey: The number of households is a projection based on the census of 2000.

The EU population has been taken from Eurostat's population projection database. This population now includes 27 Member States. In this table, the population in Bulgaria and Romania is included in the total SEE population and in the total EU 27 population.

### 3. National economy

The countries and geographic units in this report belong to the least developed regions in Europe. However, they are demonstrating strong economic growth with an average growth rate of over 23% from 2005 to 2006, measured in nominal euros at current prices. The corresponding growth rate for the 25 EU Member States was, by comparison around 4.4%, measured in euros at current prices (including inflation).

Table 13 below shows the gross domestic product (GDP) in nominal euro for 2005 and 2006 and the corresponding values per capita. Not all of the countries and territories are covered by Eurostat. Therefore, the calculation methodology may differ from country to country. In some cases, the original calculation may have been performed in US dollars and the euro value will then depend on the US dollar to euro exchange rate. Therefore, the information should be seen only as a rough indicator of the economic status of the countries and territories.

However, Eurostat data<sup>13</sup>, are available for Bulgaria, Croatia, Romania, the former Yugoslav Republic of Macedonia, and Turkey and these values have been used in this report rather than the values reported from national authorities. This represents a change from our previous reports and the numbers may therefore be different from those in Report 3 published in the first quarter of 2007.

In addition, the values for other countries and geographic units that are reported here may be different from the values reported in Report 3 because more precise estimates have become available. In most cases, the re-evaluation has led to increased estimates.

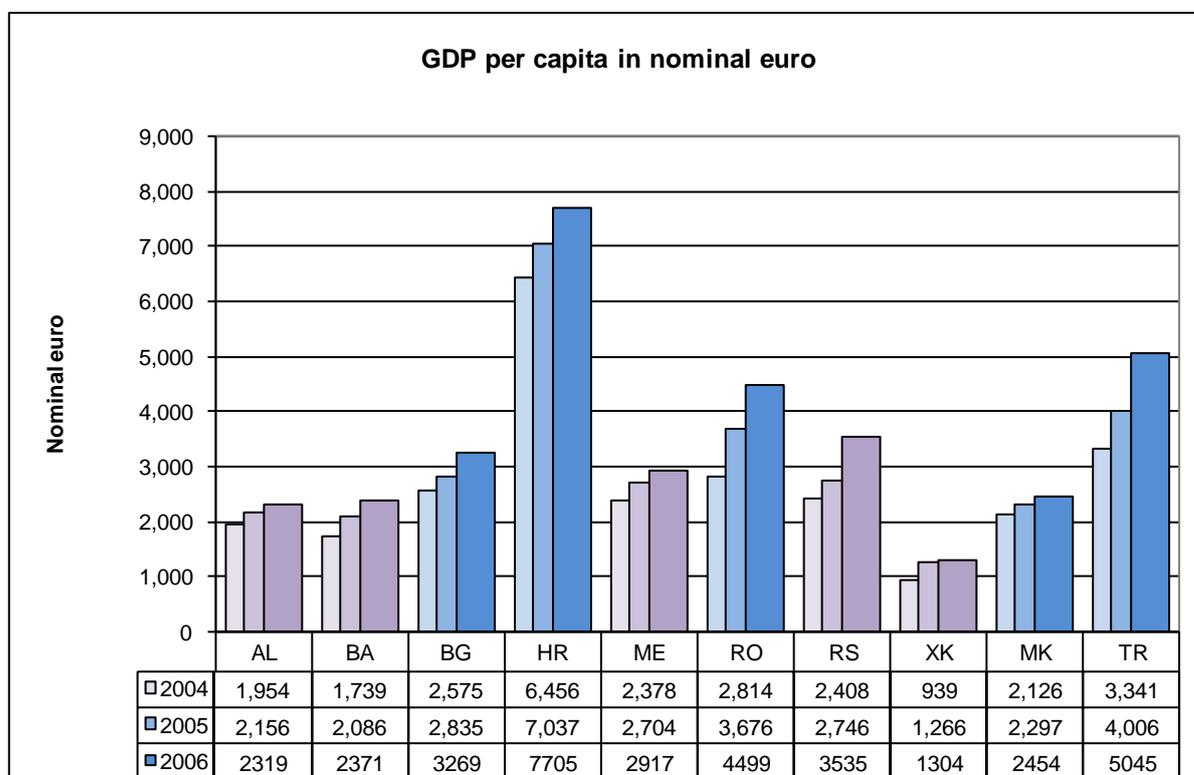


Figure 16 - GDP per capita in nominal euro for 2004, 2005 and 2006

Note:

Bulgaria, Croatia, Romania, the former Yugoslav Republic of Macedonia, and Turkey:: The source is Eurostat for 2004, 2005 and 2006. These countries are indicated shades of blue. The other countries and geographic units are indicated in shades of purple.

Albania: Estimate by the National Bank of Albania, the Ministry of Finance, INSTAT and IMF

Bosnia & Herzegovina: Source is Central Bank of Bosnia & Herzegovina

Montenegro: Central Bank of Montenegro. Chief Economist's report for 2006.

Serbia: Source is National Bank of Serbia

Kosovo: The information is provided by PTK. The GDP estimates for Kosovo may vary depending on the source

<sup>13</sup> Ref.

[http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1996,39140985&\\_dad=portal&\\_schema=PORTAL&screen=detailref&language=en&product=Yearlies\\_new\\_economy&root=Yearlies\\_new\\_economy/B/B1/B11/daa10000](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,39140985&_dad=portal&_schema=PORTAL&screen=detailref&language=en&product=Yearlies_new_economy&root=Yearlies_new_economy/B/B1/B11/daa10000)

Country	GDP Nominal euro (billion)		Per capita nominal euro	
	GDP 2005	GDP 2006	GDP 2005	GDP 2006
<b>Albania</b>	<b>6.788</b>	<b>7.335</b>	<b>2156</b>	<b>2319</b>
<b>Bosnia &amp; Herzegovina</b>	<b>8.073</b>	<b>9.177</b>	<b>2086</b>	<b>2371</b>
<b>Bulgaria</b>	<b>21.882</b>	<b>25.100</b>	<b>2835</b>	<b>3269</b>
<b>Croatia</b>	<b>31.260</b>	<b>34.212</b>	<b>7037</b>	<b>7705</b>
<b>Montenegro</b>	<b>1.690</b>	<b>1.829</b>	<b>2704</b>	<b>2917</b>
<b>Romania</b>	<b>79.483</b>	<b>97.118</b>	<b>3676</b>	<b>4499</b>
<b>Serbia, including Kosovo<sup>1</sup></b>				
<b>Serbia</b>	<b>20.588</b>	<b>26.504</b>	<b>2746</b>	<b>3535</b>
<b>Kosovo</b>	<b>2.488</b>	<b>2.563</b>	<b>1266</b>	<b>1304</b>
<b>The former Yugoslav Republic of Macedonia</b>	<b>4.675</b>	<b>4.998</b>	<b>2297</b>	<b>2454</b>
<b>Turkey</b>	<b>290.503</b>	<b>368.182</b>	<b>4006</b>	<b>5045</b>
<b>SEE</b>	<b>467.431</b>	<b>577.017</b>	<b>3712</b>	<b>4585</b>
<b>EU25</b>	<b>10889.321</b>	<b>11461.185</b>	<b>23676</b>	<b>24720</b>
<b>1) under UNSCR 1244</b>				

Table 13 - GDP in nominal euro for 2005 and estimate for 2006

## Notes:

Bulgaria, Croatia, Romania, the former Yugoslav Republic of Macedonia, and Turkey: The source for national GDP is Eurostat for 2005 and 2006.

Albania: Estimate by the National Bank of Albania, the Ministry of Finance, INSTAT and IMF

Bosnia & Herzegovina: Source is Central Bank of Bosnia & Herzegovina

Montenegro: Central Bank of Montenegro. Chief Economist's report for 2006.

Serbia: Source is National Bank of Serbia

Kosovo: The information is provided by PTK. The GDP estimates for Kosovo may vary depending on the source.

## B. Telecommunications market

The information presented in this section has July 1, 2007 as its reference date except for information that covers a complete year in which case the reference year is 2006.

### 1. Economic overview

The table below shows the estimated size of the telecommunications markets in 2006. Information on the Internet market and the market for data and leased lines is not available for all geographic units. The size of the market is therefore somewhat underestimated for these units. Not all of the geographic units have Cable TV operators and, in some cases, Cable TV operators exist but have not reported their revenues.

Turkey has by far the largest telecommunications market and represents almost half of the total market presented in this report. The Turkish market, which is valued at €9,209bn, represents more than 3% of the total EU market. Nevertheless, the value of Turkey's market is less than it was in 2006 because of currency fluctuations. When measured in local currency, the market grew by 6.4%.

At the other end of the scale is Kosovo, with a market of about €170m with little or no growth reported.

Country	Market estimate 2006 Million euro	GDP 2006 Billion euro	Percent of GDP
Albania	434	7.335	5.92
Bosnia & Herzegovina	607	9.177	6.61
Bulgaria	1,548	25.100	6.17
Croatia	1,966	34.212	5.75
Montenegro	219	1.829	11.96
Romania	3,710	97.118	3.82
Serbia, including Kosovo <sup>1</sup>			
Serbia	1,300	26.504	4.90
Kosovo	169	2.563	6.59
The former Yugoslav Republic of Macedonia	342	4.998	6.84
Turkey	9,209	368.182	2.50
SEE	19,504	577.017	3.38
EU25	289,000	11,461.185	2.52
1) under UNSCR 1244			

Table 14 - Market value overview

Notes:

Turkey: The value of GDP is an estimate by the State Planning Organization for the Annual Programme for 2006

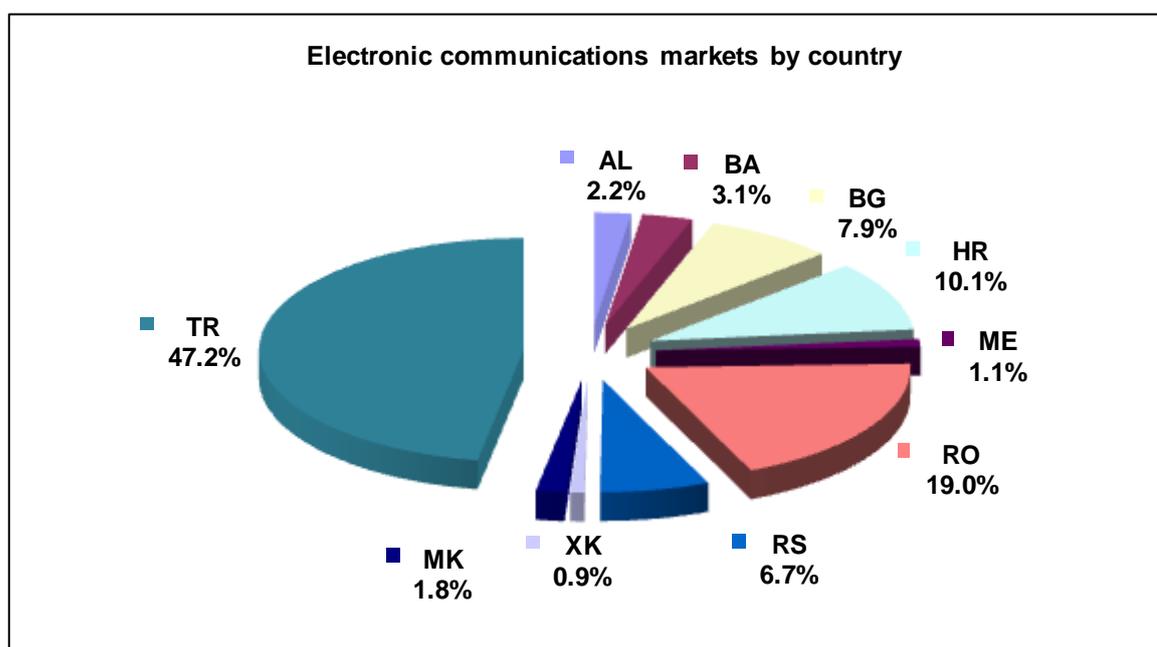


Figure 17 - Relative shares of the SEE telecommunications markets

In Figure 18 below, the total telecommunications market is broken down into five categories:

- fixed telephony services;
- mobile services;
- fixed data services (including Internet services);
- cable TV services;
- other services (for example satellite services).

The information is derived from the existing national procedures for collecting information from the operators. These procedures have not been co-ordinated among all the countries and

geographic units in order to produce comparable information according to a common specification. The information presented in this report should therefore be seen as indicative rather than providing the definitive picture.

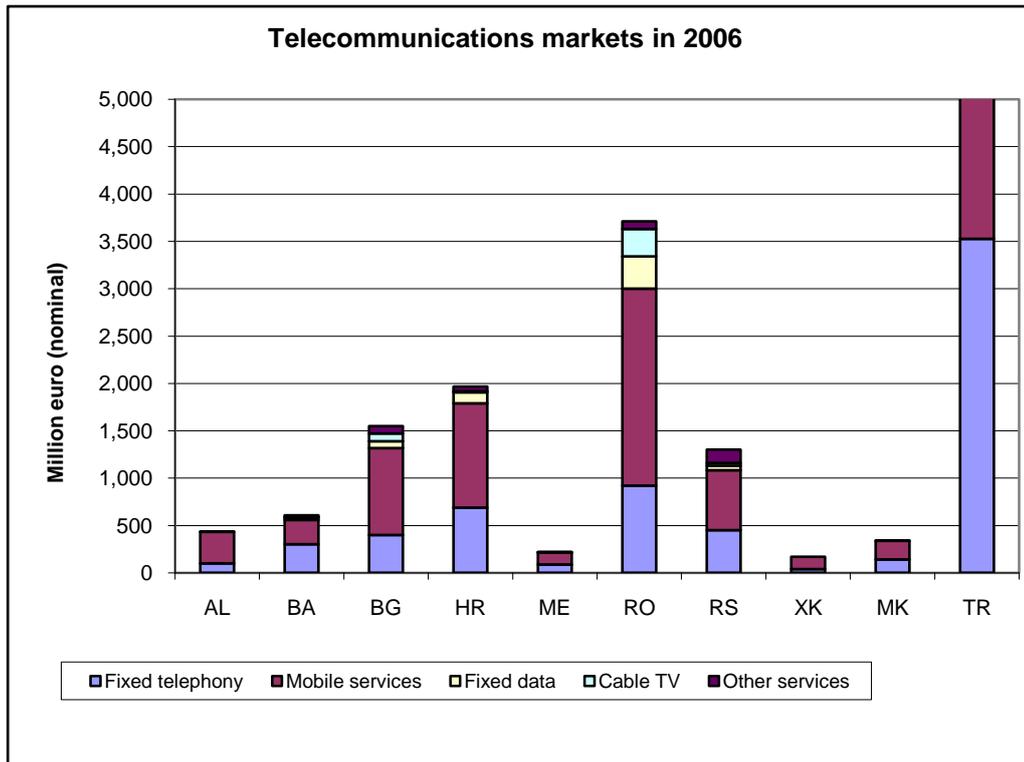


Figure 18 - Market value breakdown

Figure 19 below presents the growth in the total telecommunications markets. Montenegro and Romania can present extraordinary growth from 2005 to 2006, which is further analysed below. Bosnia & Herzegovina, Bulgaria and Croatia had robust growth of 10% or more in the period. Turkey, as mentioned above, had a growth of about 6% when measured in local currency, but this turns into a decline of almost 12% when translated into euro.

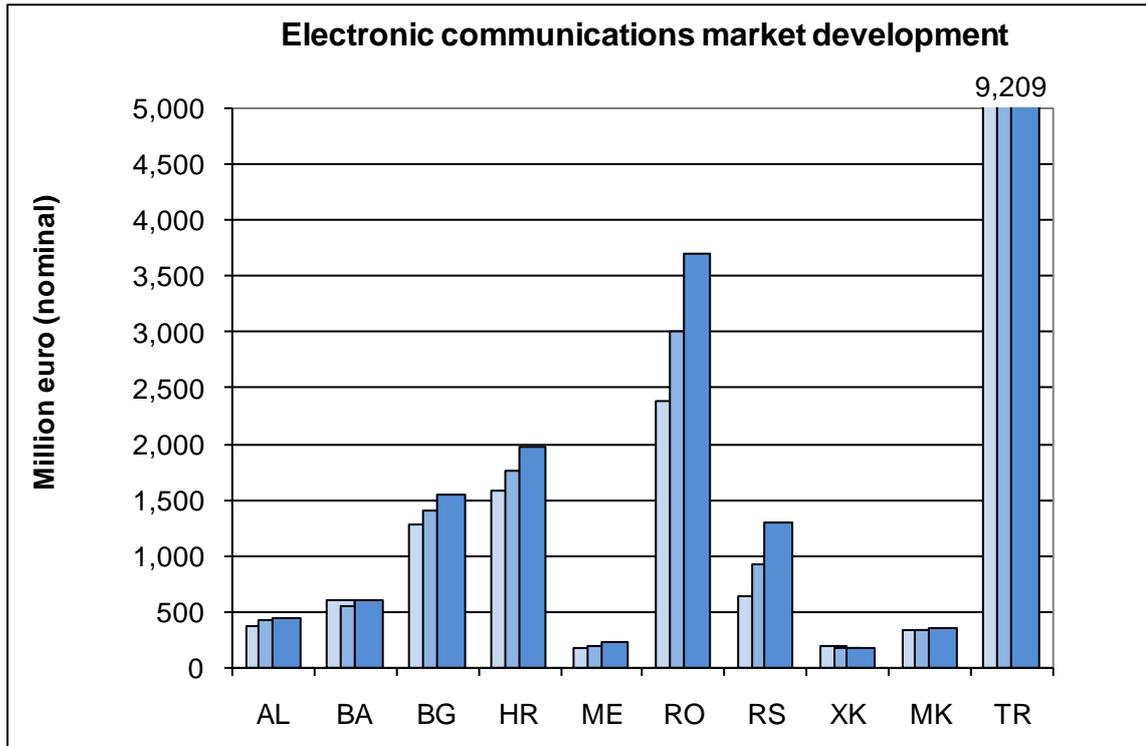


Figure 19 - Telecommunications market development

Note:

The former Yugoslav Republic of Macedonia: The market value for 2005 is an estimate based on data from a six month period.

It is also interesting to see the size of the telecommunications market compared to the population. Figure 20 below shows that Croatia and Montenegro have the highest spending on telecommunications with around €450 and €350 per capita per year, clearly driven by their mobile telephony markets. Per capita spending in the other countries and geographic units is between €100 and €200, except Kosovo, where the spending is below this range.

In all countries and geographic units, the market for mobile services is higher than the market for fixed telephony services.

By comparison, the electronic communications sector in the EU in 2006 was €289bn<sup>14</sup>, which represents a per capita spending of €626.

<sup>14</sup> 12<sup>th</sup> Implementation Report from the European Commission

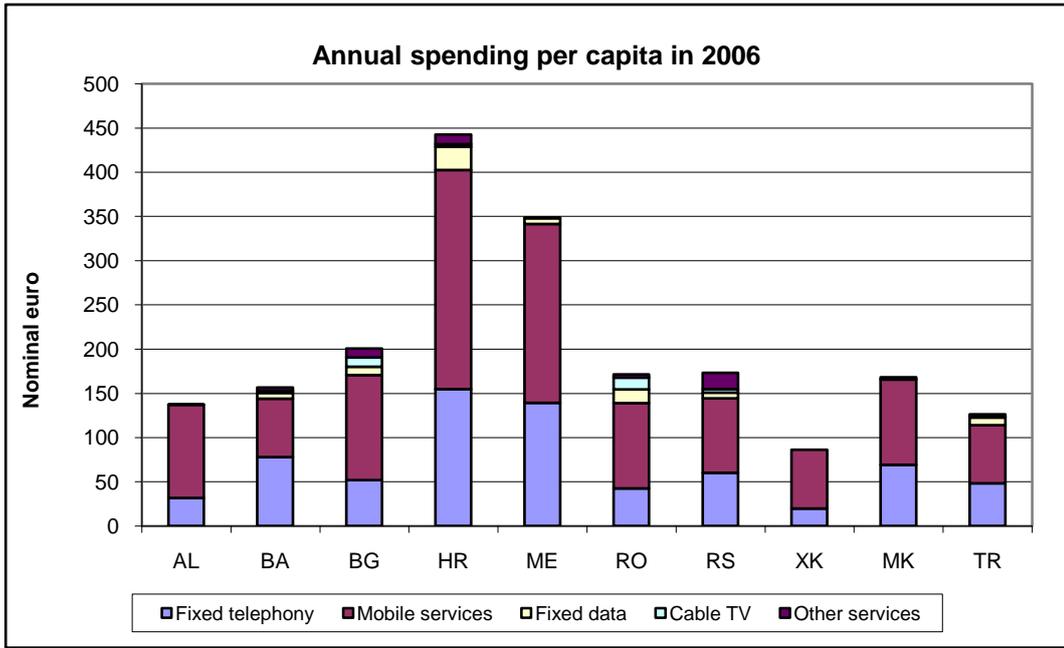


Figure 20 - Telecommunications markets per capita in nominal euro

Figure 21 below shows how the per capita spending has developed over the past three years. The overall growth in the telecommunications markets explained above is also reflected in per capita spending growth.

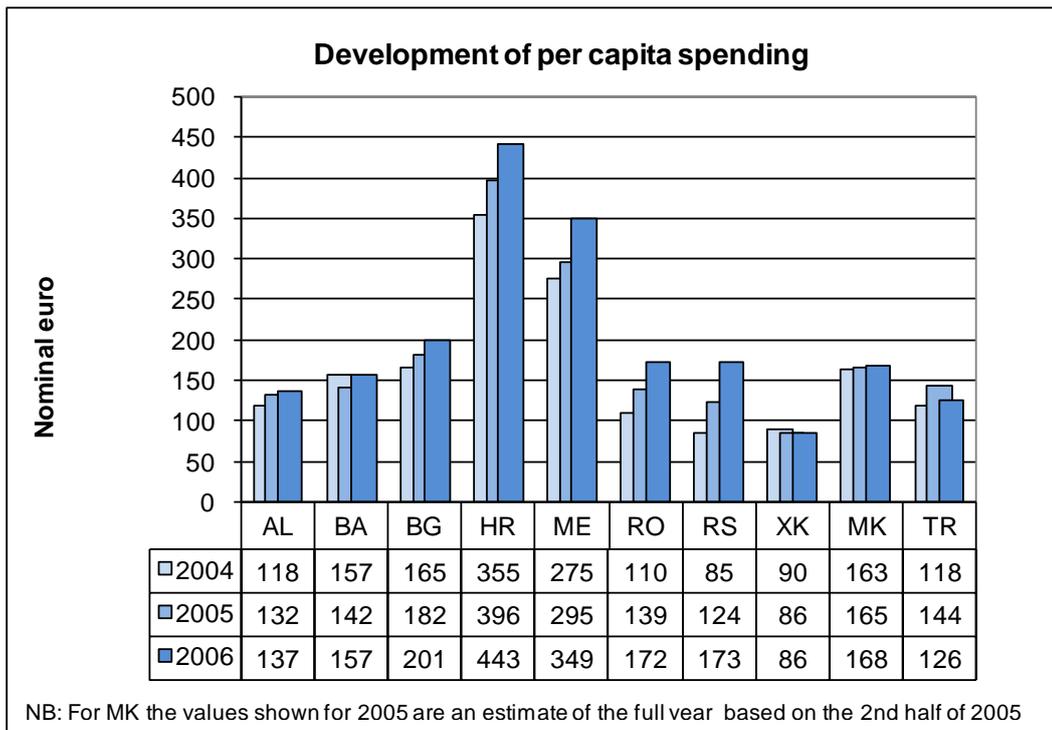


Figure 21 - Development of per capita spending

Furthermore, it is meaningful to examine the total telecommunications markets measured in comparison to the national GDP. This indicator is presented in the figure below.

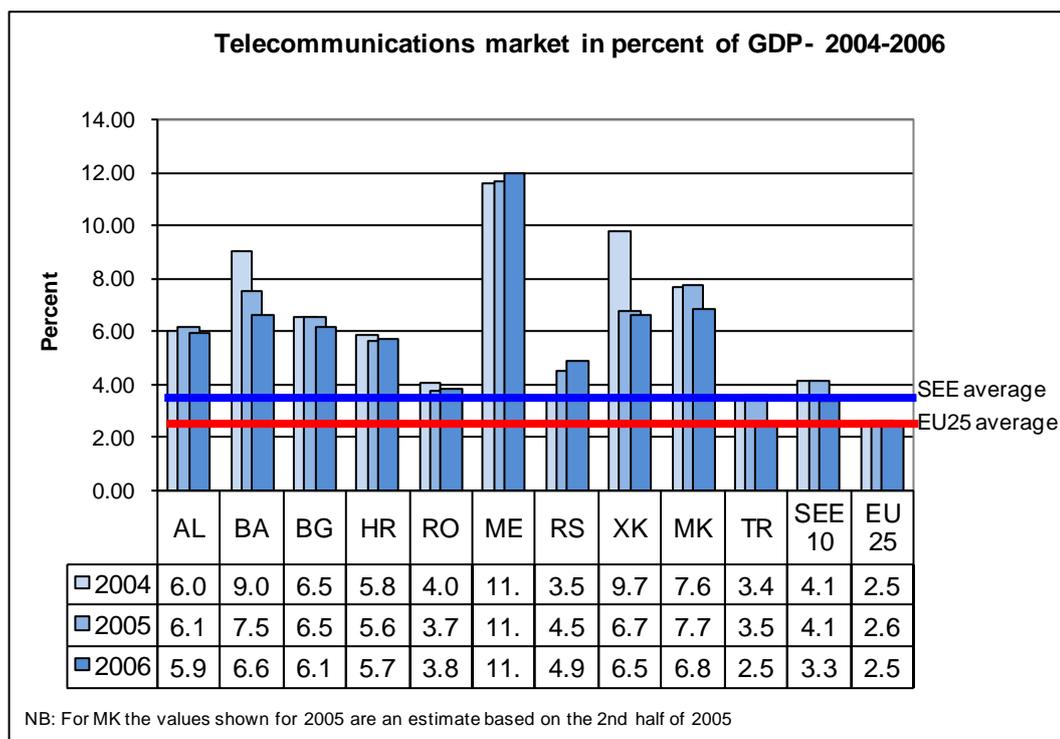


Figure 22 - Telecommunications market in percent of GDP in 2006

**Notes:**

The GDP value for the EU has been provided by Eurostat.

The market value for the EU25 in 2006 is from the 12<sup>th</sup> Implementation Report from the European Commission.

It will be seen that the average spending on telecommunications in the SEE countries is just below 4% of GDP. This is significantly higher than in the EU, where the average around 2.5%. This is a reflection of the fact that the SEE countries have a lower GDP per capita than the EU 25. However, it is also indicative of the important role and the significant growth in the telecommunications sector in these countries.

## 2. Fixed network penetration

The fixed line penetration rates per 100 population are given in the table below. The numbers represent active subscriber lines. Subscriber lines that are connected to analogue switches are classified as “analogue lines”, while those connected to digital switches are classified as “digital lines”. ISDN subscriber lines can be offered in two forms: Basic Rate Access (BRA) and Primary Rate Access (PRA). BRA lines enable two telephone numbers and two simultaneous calls and are often used by households and smaller organisations. PRA lines, which enable 32 simultaneous calls, are normally used for connecting larger organisations to the PSTN.

The number of simultaneous calls that can be transmitted over one or two pairs of copper wire is therefore highly technology dependent. With xDSL and modern voice coding technologies, the number of simultaneous calls over a copper pair represents an unreliable indicator. A better and more reliable indicator is the number of copper pairs in the subscriber networks.

In the tables and figures below, all ISDN subscriptions have been added into one category, but primary rate subscriptions count double because each subscription requires two subscriber lines (two copper pairs) for implementation.

The weighted average fixed line penetration rate is 25.4% (a decrease of about 0.6% since November 2005). In general, the penetration rates are still lower than the overall EU25 average of about 45%. However, they compare more favourably with the new EU Member States as the weighted EU10 average is 31%. Nevertheless, the fixed line penetration rates have fallen in six countries and have been more or less static in the other four.

A consequence of limited fixed line penetration rates will be a restriction on the number of households that could eventually subscribe to broadband services provided over fixed telephone lines.

Country	Analogue	Digital	ISDN	Total	Per 100 pop
Albania	2,003	268,640	131	270,774	8.56%
Bosnia & Herzegovina	50,251	792,630	8,245	851,126	21.99%
Bulgaria	946,736	1,105,373	1,013	2,053,122	26.60%
Croatia	0	1,361,215	40,302	1,401,517	31.55%
Montenegro	0	142,234	4,551	146,785	23.41%
Romania	180,000	3,460,000	1,020	3,641,020	16.84%
Serbia, including Kosovo <sup>1</sup>					
Serbia	236,693	2,180,856	62,191	2,479,739	33.07%
Kosovo	0	91,000	0	91,000	4.63%
The former Yugoslav Republic of Macedonia	0	433,673	2,766	436,439	21.45%
Turkey	0	14,208,266	1,563	14,209,829	19.47%
1) under UNSCR 1244					

Table 15 - Fixed lines per 100 inhabitants, January 2007 (residential users)

Notes:

Albania: The number of analogue lines has almost halved compared to 2005 and the number of digital lines has increased, which has resulted in a slight increase in the overall penetration rate.

Bosnia & Herzegovina: The number of analogue and digital lines in service continues to fall compared to the previous year.

Bulgaria: Continued digitalisation has led to a reduction in the number of analogue lines in service. In addition, in 2006, the number of fixed digital lines includes the lines supplied by alternative fixed operators, while in 2005 these were not included.

Montenegro: The remaining analogue lines have now been replaced with digital lines.

Romania: The number of analogue lines has been reduced by about 50% and the number of digital lines has also fallen which has led to a slight reduction in the penetration rate.

Serbia: The number of analogue lines has reduced by about 50% and the number of digital and ISDN lines has increased, which has led to a 3% increase in the fixed line penetration rate.

Kosovo: The remaining analogue lines have now been replaced with digital lines but there has been an overall drop in the penetration rate of about 1%.

Country	Analogue	Digital	ISDN	Total	Per 100 pop
Albania	151	17,606	568	18,325	0.58%
Bosnia & Herzegovina	1,995	109,310	18,276	129,581	3.35%
Bulgaria	55,814	291,501	24,294	371,609	4.81%
Croatia		162,589	87,477	250,066	5.63%
Montenegro	0	18,572	3,183	21,755	3.47%
Romania	10,000	530,000	20,000	560,000	2.59%
Serbia, including Kosovo <sup>1</sup>					
Serbia	29,553	272,300	7,765	309,619	4.13%
Kosovo	0	15,400	453	15,853	0.81%
The former Yugoslav Republic of Macedonia	0	50,588	13,591	64,179	3.15%
Turkey	0	4,623,350	19,180	4,642,530	6.36%
1) under UNSCR 1244					

Table 16 - Fixed lines per 100 inhabitants, January 2007 (business users)

Notes:

Bosnia & Herzegovina: The number of analogue lines has reduced by about 50% and there has been about a 25% increase in the number of digital lines. This has led to about a 20% increase in the number of lines.

Bulgaria: There has only been a slight decrease in the number of analogue lines and a corresponding small increase in the number of digital lines. In addition, in 2006, the number of fixed digital lines includes the lines supplied by alternative fixed operators, while in 2005 these were not included. The result is that the penetration rate in 2006 was relatively static compared to 2005.

Romania: The number of analogue lines has reduced by about 50%. The number of digital lines has increased by more than the reduction in the analogue lines so overall there has been an increase in the penetration rate.

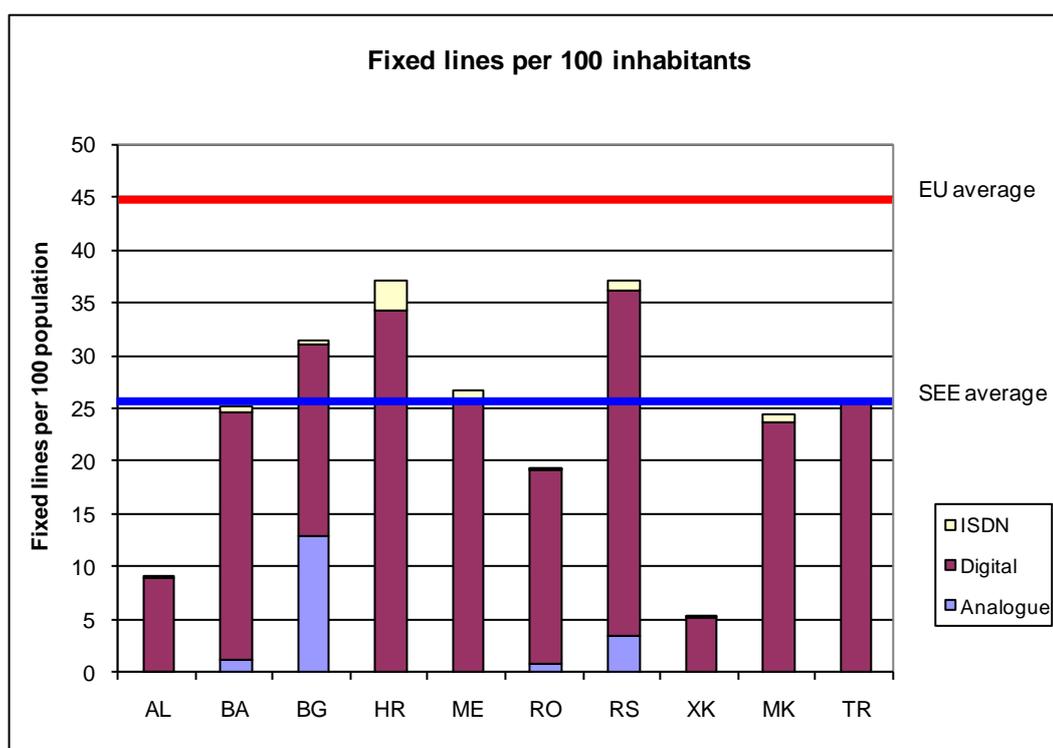


Figure 23 - Fixed lines per 100 inhabitants, January 2007

## Notes:

The EU 25 average is from the Commission Staff Working Document Review of the Scope of Universal Service in line with Article 15 of Directive 2002/22/EC. The SEE average is the weighted average for the countries and geographic units calculated on the basis of the information in Table 15 and Table 16 above.

Figure 23 above shows the percentage of fixed lines per 100 inhabitants broken down into ISDN, Digital and Analogue lines. Figure 24 below shows how the fixed line penetration rates have developed in the period January 2005 to January 2007.

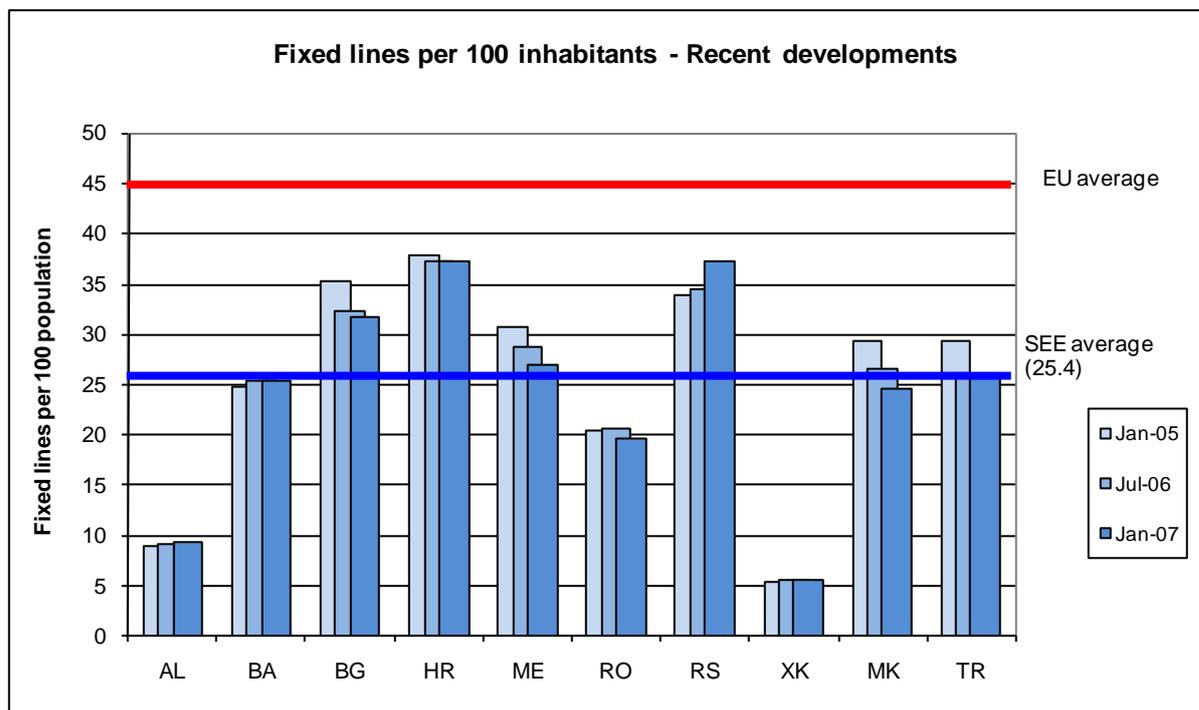


Figure 24 – Fixed lines per 100 population – January 2005 – January 2007

A consequence of low digitalisation rates is the inability to introduce xDSL services and value added services. The digitalisation of the fixed networks is crucial for the provision of value-added services and for increasing the quality of service for customers. The data presented in Table 17 below is calculated on the basis of the number of digital fixed lines as a percentage of the total number of fixed lines.

Croatia and the former Yugoslav Republic of Macedonia have been 100% digital since January 2003 and January 2004 respectively. Montenegro and Kosovo achieved 100% digitalisation in 2006 and Romania reached this target in on June 30, 2007. Albania, Bosnia & Herzegovina, and Turkey have achieved 98% digitalisation. In Albania, the rural operators (12.4% of the total network) are 100% digital.

Bulgaria is digitalising the major cities before rural areas and its digitalization rate continues to grow significantly. Figure 25 shows that the proportion of analogue to digital lines is now almost 40-60 (compared to the 66-34 ratio in January 2005). However, according to Bulgaria's pre-accession negotiation commitments and the terms of BTC's licence the digitalization rate should have reached 75–81% by the end of 2007. This should also be seen in the context of the strong fixed-to-mobile substitution in Bulgaria, where the number of fixed lines per 100 population continues to fall.

Serbia's digitalisation rate is increasing, but about 11% of the lines are still analogue.

Country	01/01/2004	01/01/2005	01/11/2005	01/07/2006	01/01/2007
Albania	97.50	97.60	97.70	98.10	98.00
Bosnia & Herzegovina	85.27	89.93	92.45	94.85	98.40
Bulgaria	26.00	34.00	36.84	51.00	58.00
Croatia	100.00	100.00	100.00	100.00	100.00
Montenegro	98.00	99.80	99.87	99.90	100.00
Romania	74.00	77.15	84.54	91.40	100.00
Serbia, including Kosovo <sup>1</sup>					
Serbia	64.87	67.35	83.69	n/a	88.63
Kosovo	45.00	47.00	47.00	47.00	100.00
The former Yugoslav Republic of Macedonia	100.00	100.00	100.00	100.00	100.00
Turkey	90.77	97.12	97.78	97.87	98.30

1) under UNSCR 1244

Table 17 - Digitalisation rate of fixed networks in percent

Notes:

Bulgaria: The status on November 1, 2005 is not available. The information shown is from June 30, 2005.

Kosovo: The value given for November 1, 2005 is as at January 1, 2005.

Figure 25 shows the extent of network digitalisation and the significant progress that has been made in Bulgaria but also underlines the progress that has yet to be made for Bulgaria to meet the pre-accession negotiation commitments by the end of 2007.

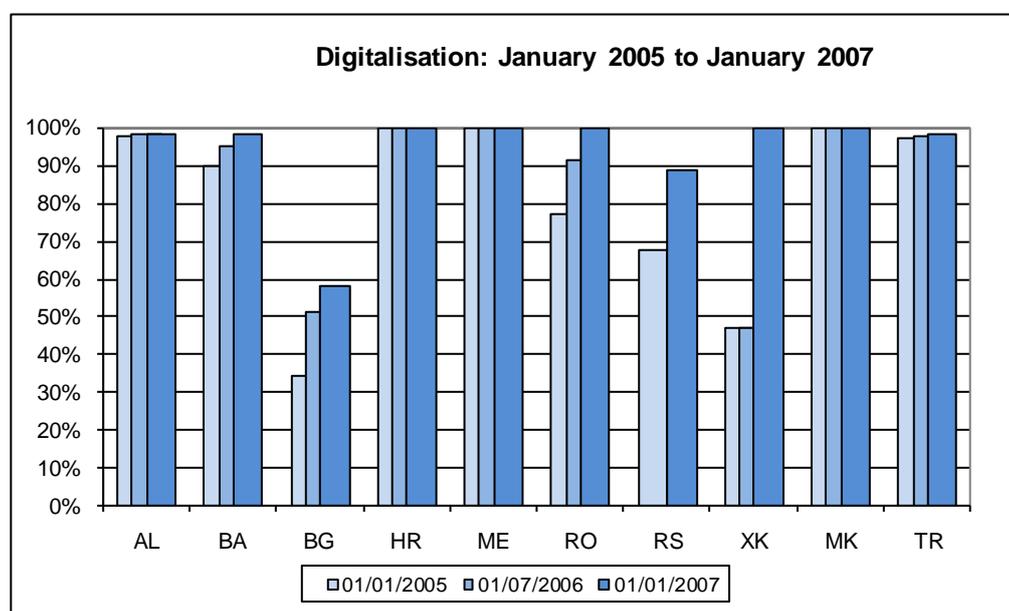


Figure 25 - Digitalisation rate of fixed networks in percent

Party and group lines are those lines that serve two or more customers. These lines are a potential barrier to local loop unbundling and, as far as customers are concerned, inhibit the use of value added services, especially xDSL and as such are an inhibitor to reliable internet access and usage.

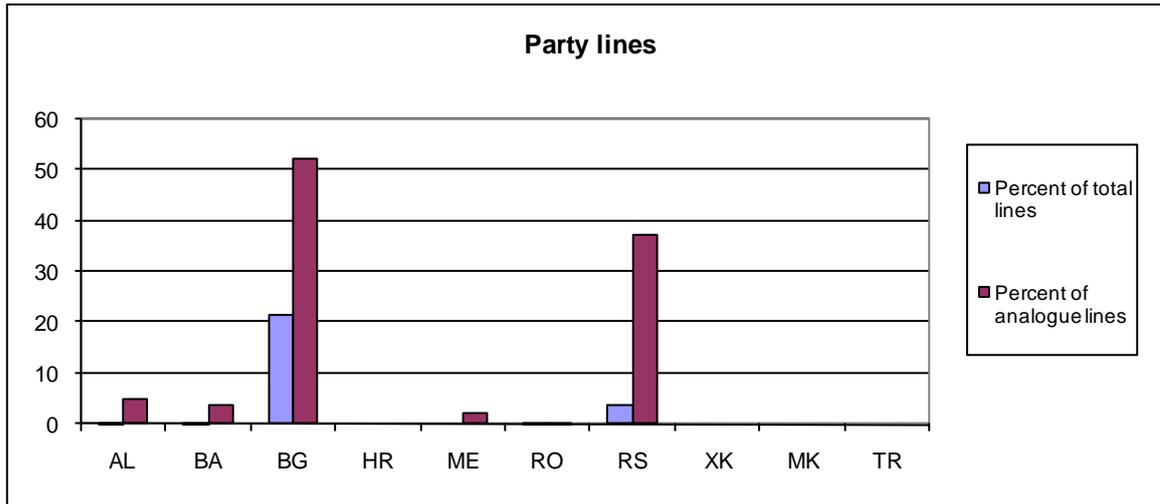


Figure 26 - Presence of party and group lines in fixed networks

Five countries have no party lines, Croatia, Romania, Kosovo, the former Yugoslav Republic of Macedonia, and Turkey. In Romania, the last remaining party lines were upgraded to single user lines in the first half of 2007.

The percentage of party lines in the other countries has been decreasing steadily since 2005 and are now an insignificant proportion of the total number of lines except in Bulgaria, which has the largest proportion of party lines (21.5% of all lines) although it has achieved a considerable reduction since 2005.

In Kosovo, a condition in PTK's licence stipulated that all party lines must be removed by December 31, 2006. This condition has apparently been satisfied.

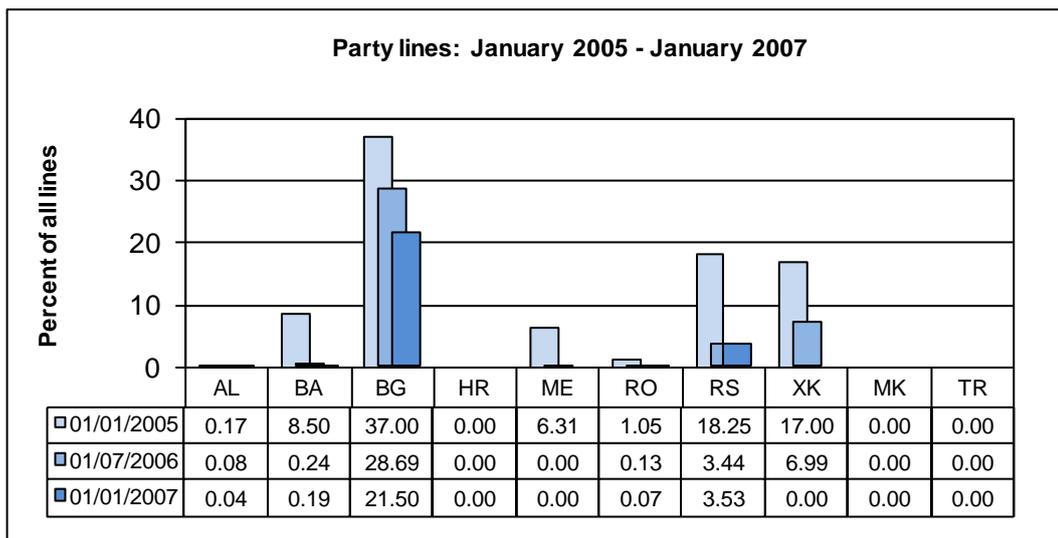


Figure 27 – Changes in party and group lines January 2005 to January 2007

In general, alternative operators have a very low percentage of the total number of fixed lines except in Albania where almost 11% of all lines are operated by alternative operators that have invested in their own fixed network infrastructure. However, they have until recently been considered to be 'Rural Operators' which could not supply services at a national level in competition with the incumbent or other operators.

In Bulgaria, sixteen alternative operators have started operating fixed networks using digital lines but the total number of lines in service is insignificant (slightly more than 1% of all lines).

However, it is interesting to note that the alternative operators in Bulgaria seemed to be addressing the business, rather than the residential, sector.

In Romania, alternative operators now account for almost 20% of the total lines in use. These operators have invested in their own fixed network infrastructure.

Country	Residential			Business			Total number of lines	Percentage of lines of alternative operators
	Analogue lines / analogue switches	Analogue lines / digital switches	ISDN lines	Analogue lines / analogue switches	Analogue lines / digital switches	ISDN lines		
Albania	-	31,625	-	-	-	-	31,625	10.94%
Bosnia & Herzegovina	-	-	-	-	-	-	0	0.00%
Bulgaria	261	5,913	-	2,166	14,537	3,479	26,355	1.09%
Croatia	-	1,175	-	-	1,192	-	2,367	0.14%
Montenegro	-	-	-	-	-	-	0	0.00%
Romania	100	720,000	-	300	90,000	1,000	815,000	19.40%
Serbia, including Kosovo <sup>1</sup>								
Serbia	-	-	-	-	-	-	0	0.00%
Kosovo	-	-	-	-	-	-	0	0.00%
The former Yugoslav Republic of Macedonia	-	-	-	-	-	-	0	0.00%
Turkey	-	-	-	-	-	-	0	0.00%
1) under UNSCR 1244								

Table 18 - Number of fixed lines of alternative operators and percentage of these lines compared to the total number of fixed lines

Notes:

The information is from January 1, 2007.

Romania: The numbers have been rounded off.

### 3. Mobile service penetration

On average, the penetration rates for mobile services are triple those of fixed lines. In Albania, the mobile penetration rate is almost six times that of the fixed penetration rate while in Bosnia & Herzegovina it is slightly less than double.

Country	1.1.2003	1.1.2004	1.1.2005	1.1.2006	1.1.2007	1.7.2007	Fixed lines per 100 pop on 1.7.2006	Fixed lines per 100 pop on 1.1.2007
Albania	26.00	34.00	38.61	48	61	66	8.93	9.14
Bosnia & Herzegovina	19.65	28.68	34.22	42.3	48.58	51.49	25.29	25.33
<i>BH Telecom d.d. Sarajevo</i>	9.87	14.57	16.88					
<i>Telekom Srpske a.d. Banja Luka</i>	7.39	10.56	13.07					
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	2.39	3.55	4.27					
Bulgaria	33.00	45.00	61.00	80	107	117	32.27	31.41
Croatia	52.71	57.45	63.99	82.08	98.95	103.83	37.11	37.18
Montenegro	67.40	62.70	77.9	87.6	103	121.25	28.64	26.88
Romania	24.00	32.47	47.12	52.50	80.70	90.53	20.44	19.29

Country	1.1.2003	1.1.2004	1.1.2005	1.1.2006	1.1.2007	1.7.2007	Fixed lines per 100 pop on 1.7.2006	Fixed lines per 100 pop on 1.1.2007
Serbia (including Kosovo <sup>1</sup> )								
<i>Serbia</i>	32.14	43.80	57.94	N/A	88.60	88.60	34.35	37.20
• Telekom Srbija	18.14	23.80	30.98		55.74	55.74		
• Telenor Srbija	14.00	20.00	26.96		32.87	32.87		
<i>Kosovo</i>	13.50	15.20	16.00	18.00	29.50	34.50	5.50	5.50
The former Yugoslav Republic of Macedonia	18.00	29.88	49.02	62.38	70.061	75.041	26.52	24.58
• T-Mobile	18.00	25.73	36.94	43.38	46.70	49.54		
• Cosmofon	0.00	4.15	12.05	19.00	23.361	25.501		
• VIP								
Turkey	33.50	39.40	48.90	61.07	72.18	79.52	25.89	25.83

<sup>1)</sup> under UNSCR 1244

Table 19 - Mobile penetration

Notes:

Bosnia & Herzegovina: There are 3 mobile operators in Bosnia & Herzegovina: "BH Telecom" with brand name of mobile network BH Line, "Telekom Srpske" with brand name of mobile network MOBI'S and "HT Mostar" with brand name of mobile network HT Mobilne komunikacije.

Croatia: Pre-paid card subscribers are dropped after six inactive months.

Kosovo: The mobile penetration rate includes those subscribers that can make and receive calls and those that can only receive calls in the previous month.

Romania: A pre-paid card has to be active at the end of the monitoring period in order to be considered active.

Turkey: Mobile penetration reached 84% in September 2007.

In Albania, pre-paid cards are counted if they have been active within the last six months. In Bosnia & Herzegovina, there are 3 mobile (GSM) incumbent operators: BH Telecom, Telekom Srpske, HT Mostar. In Bulgaria, both GSM operators have a 12-month period of activity for pre-paid cards after their last activation or recharge. In Croatia, pre-paid users are not counted after nine inactive months. In Montenegro and Serbia, pre-paid users are not counted after 12 inactive months. In the former Yugoslav Republic of Macedonia, pre-paid card users are counted as active if the card has been used in the last three months.

In Serbia, the figures for Telenor (ex Mobi63) in Table 19 are calculated for the territory of Serbia excluding the Kosovo and Metohia regions. Pre-paid users are dropped after 420 inactive days (13 months). The mobile penetration figures for Telekom Serbia in Table 19 include a relatively small number of subscribers in Kosovo and Metohia. Pre-paid users are dropped after 11 months. In the 12<sup>th</sup> month, only incoming calls are permitted and in the 13<sup>th</sup> month, a customer can reactivate a number by paying a renewal fee.

The penetration figure for Kosovo only applies to PTK/VALA900, which, until 2007, was the only licensed mobile operator in Kosovo. The second mobile operator Ipkonet was licensed in March 2007 and is still in process of rolling out its network. For the other 'illegal' mobile operators active in Kosovo there are no published subscriber figures.

A pre-paid user in Romania has to be active within the previous twelve months to be counted.

The next figure shows how mobile penetration rates had increased from January 2005 to July 2007. In the same period, fixed line penetration rates had declined in some countries.

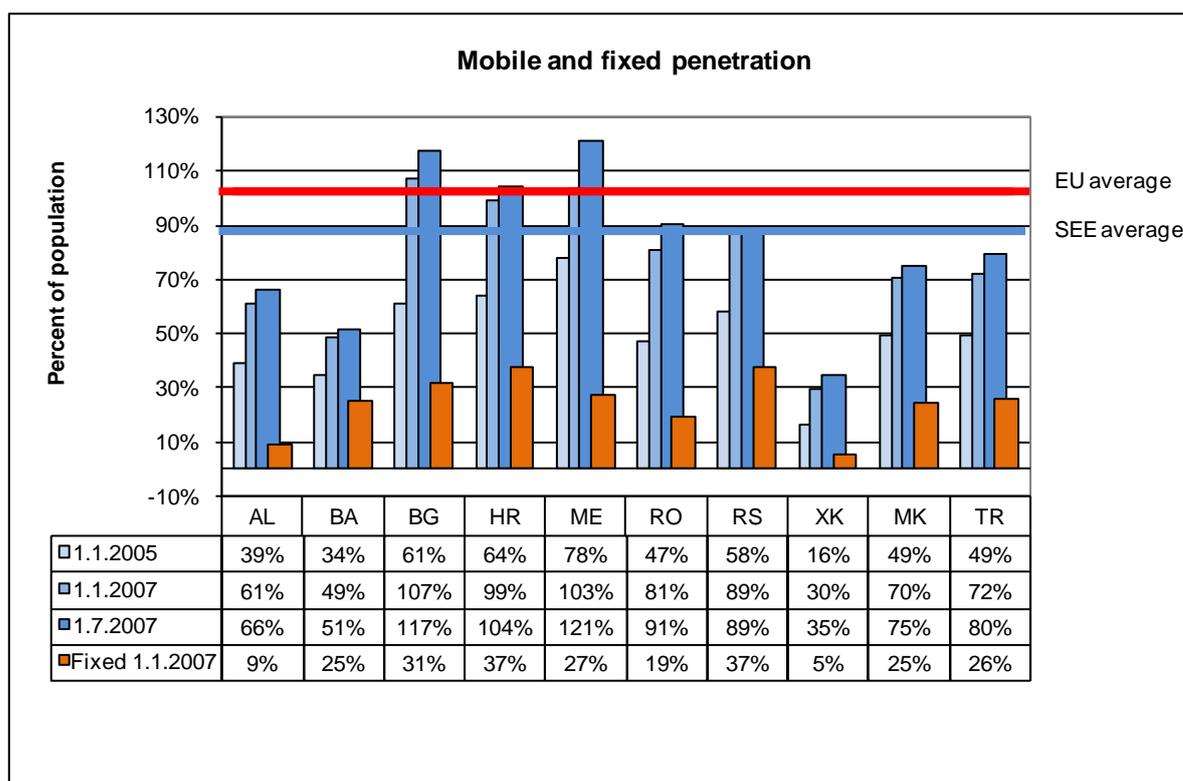


Figure 28 - Mobile and fixed penetration

#### 4. Internet user penetration

The statistics provided for Internet user penetration are based on estimates or on sample surveys. Because there are differences in the age ranges, the time since a user last accessed the Internet and different sampling techniques, i.e. some figures represent 'users' but other figures represent 'subscribers', direct comparisons of the figures in Table 20 are not possible. Therefore, the penetration rates should only be considered as indicative.

The European Commission's Statistical Office (Eurostat) publishes statistics about the Information Society in the European Union. These are broken down by country and they are also aggregated for the EU 15, EU 25 and EU 27. The share of individuals aged 16 to 74 that have accessed the Internet at least once a week on average in the three months preceding the data collection survey is 45% for the EU 27. The lowest percentages are in Greece (23%), Bulgaria (22%), and Romania (18%). The highest percentages are Sweden (80%), Denmark (78%), and the Netherlands (76%).

Internet usage in the SEE countries is generally at the lower end of the EU 27. Croatia is somewhat higher and is on a level equal to the Czech Republic, France, and Poland. Albania, at almost 4%, has the lowest penetration rate in the SEE countries.

However, it must be remembered that the methods used to estimate Internet usage in the SEE countries differ and therefore the figures are not directly comparable.

Country	Total number of Internet users	Internet users per 100 population	Internet users per 100 households
Albania	120,000	3.79%	15.94%
Bosnia & Herzegovina	950,000	24.54%	91.83%
Bulgaria	1,663,437	21.66%	56.93%
Croatia	1,684,600	37.94%	114.03%
Montenegro	150,000	23.92%	78.51%
Romania	4,000,000	18.53%	54.64%
Serbia, including Kosovo <sup>1</sup>			
Serbia	1,005,161	13.41%	39.87%
Kosovo	299,850	15.26%	96.38%
The former Yugoslav Republic of Macedonia	651,800	32.00%	115.51%
Turkey	15,300,000	20.97%	82.74%
1) under UNSCR 1244			

Table 20 - Internet user penetration

## Notes:

Albania: The figure is based on an estimate from a survey performed in 2005.

Bulgaria: The figures are based on a survey by Alpha Research that indicates that 27% of the population over the age of 18 uses the Internet. The number of users is calculated on population data from the National Statistical Institute at the end of 2006.

Croatia: The figure for Croatia is calculated on the assumption that there are one and a half users for every dial-up and broadband Internet subscription (971,480 subscriptions) + free of charge university users (80,000).

Montenegro: The figure given is an estimate based on the number of registered subscribers in January 2006. So the figure given reflects the number of subscribers. Therefore, the actual number of users may be somewhat higher.

Romania: The figure given is an estimate based on a residential survey conducted by Gallup Romania during October-November in 2006. The target group was the population aged over 16.

The former Yugoslav Republic of Macedonia: (source: State Statistical Office ([www.stat.gov.mk](http://www.stat.gov.mk)) and Strategic Marketing (SMMRI) ([www.mkconnects.org.mk](http://www.mkconnects.org.mk))). The figure is the number of Internet subscriptions,

Turkey: The figure is an estimate based on a study performed by the Turkish Statistical Institute in 2005.

Figure 29 below shows the growth in Internet user penetration over the period January 2005 to January 2007.

Figure 73 in the chapter on retail tariffs shows the change in costs of 40 hours dial-up Internet access during the same period. There has been little change in the cost of access during this latest reporting period so there is no visible correlation between lower costs and increased Internet penetration rates. In fact, although Croatia has one of the highest access costs (but cheaper than in the former Yugoslav Republic of Macedonia) it has the highest Internet penetration rate. Albania has access costs in-line with the other countries and territories, but has the lowest Internet penetration rate. Given that GDP per-capita income for Albania is on a par with other countries, the low Internet penetration rate may be a consequence of Albania's low fixed-line penetration rate.

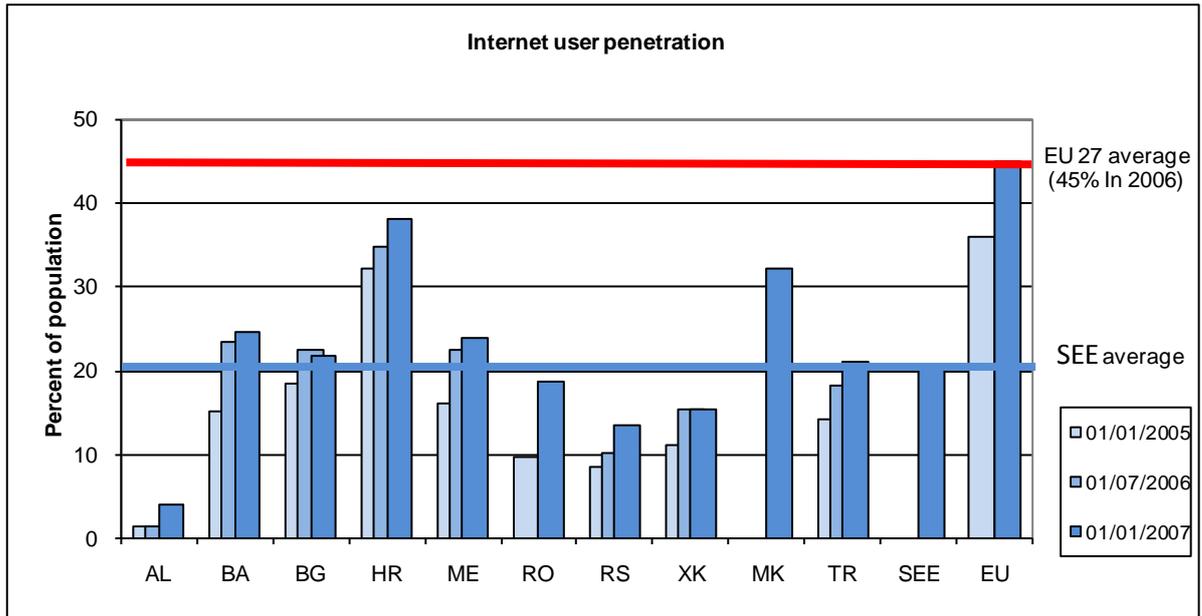


Figure 29 - Internet user penetration

Notes:

The EU average is taken from Eurostat's indicator on "Share of individuals regularly using the Internet for 2006. This indicator includes all individuals aged 16 to 74 who access the Internet, on average, at least once a week, in the three months before the survey. Use includes all locations and methods of access.

5. Broadband access

In January 2004, xDSL broadband access was only possible in half of the countries (see Table 21 below). By July 2006, xDSL services were available in all the countries, but had only recently been introduced in Albania, Montenegro, and Serbia. Provision of xDSL services by alternative operators has also become a commercial reality in five of the countries.

Apart from Croatia and Turkey, where xDSL lines respectively account for 14% and 15% of the fixed network subscriptions, the rollout of xDSL services to customers is still at an early stage. In most countries, the xDSL penetration rates are in the range of less than 1% (Albania, Kosovo, and Serbia) to 6% (Montenegro) of the total network.

The tables and figures below show the situation on January 1, 2007 rather than July 1, 2007, which otherwise is the reference date in this report for such information. The reason for choosing the earlier date is that this information can require more time to collect. For example, it may be difficult to get numbers for small cable TV operators that provide Internet access.

The situation is now that several countries are now experiencing strong growth in broadband access. We have included examples of such strong growth in the notes, where such information has been made available.

Country	All xDSL lines			All xDSL lines - January 1, 2007		
	01/01/2004	01/01/2005	01/07/2006	Total	Incumbent	Alternative
Albania			361	1,072	1,072	0
Bosnia & Herzegovina	93	910	13,945	21,664	21,664	0
Bulgaria		6,651	62,013	121,354	121,298	56
Croatia	2,556	23,423	166,041	229,764	215,473	14,291
Montenegro			3,253	10,430	10,430	0
Romania	3,933	2,182	44,239	98,362	95,834	2,528
Serbia, including Kosovo <sup>1)</sup>						
Serbia			9,830	25,349	775	24,574
Kosovo	135	135		3,000	3,000	0
The former Yugoslav Republic of Macedonia		2,447	12,058	17,297	17,297	0
Turkey	52,624	452,398	2,098,677	2,859,901	2,813,143	46,758
1) under UNSCR 1244						

Table 21 - Number of xDSL lines

Table 21 shows how the xDSL line penetration has begun to increase rapidly in all countries, especially during the last six months of 2006. In Bulgaria and Romania the number of xDSL lines has nearly doubled and almost tripled in Montenegro and Serbia. The growth in Serbia is almost entirely because of xDSL lines provided by new entrants using bitstream. The growth in Croatia, Montenegro, and Turkey during the last six months of 2006 is particularly noteworthy because it represents more than 4% of the total fixed network lines in each country.

The next table provides a breakdown the new entrant's xDSL lines by types of access. The breakdown gives the number of xDSL lines provided via full and shared ULL access, bitstream, and resale. In the case of Croatia and Romania there are xDSL also lines provided over the networks owned by the alternative operators.

Country	Incumbent's DSL Lines	New Entrant				
		Full ULL	Shared access	Bitstream	Resale	Own network
Albania	1,072	0	0	0	0	0
Bosnia & Herzegovina	21,664	0	0	0	0	0
Bulgaria	121,298	2	3	0	51	0
Croatia	215,473	617	0	0	13,572	102
Montenegro	10,430	0	0	0	0	0
Romania	95,834	0	889	0	0	1,639
Serbia, including Kosovo <sup>1)</sup>						
Serbia	775	0	0	24,574	0	0
Kosovo	3,000	0	0	0	0	0
The former Yugoslav Republic of Macedonia	17,297	0	0	0	0	0
Turkey	2,813,143	0	0	0	46,758	0
1) under UNSCR 1244						

Table 22 - Breakdown of xDSL lines

## Notes:

Romania: 153 of the 1,639 xDSL lines provided over the alternative operators own networks are classified as narrowband.

Turkey: By September 2007, the number of xDSL lines of the incumbent operator had reached 4,118,826.

The total number of lines provided by new entrants is insignificant in terms of the size of the fixed networks but it should be remembered that provision of xDSL by new entrants has only started recently. Most of the new entrants' xDSL offerings are based upon the resale of the incumbent's services and bitstream access.

It is important to note that a significant development in local loop unbundling had taken place in Croatia over the first nine months of 2007, where the number of unbundled local loops had grown from 617 on January 1, 2007 to 16,539 on July 1, 2007 and reached 30,000 in October 2007. This development is further discussed in section IV.E.5 below.

The next table gives a breakdown of the alternative broadband technologies and the extent to which they are now used.

Country		FWA	Cable modem	Leased line	3G	Fibre to home	Satellite	PLC	Other	Total
Albania	Incumbent	0	0	0	0	0	0	0	0	0
	Alternative	0	0	0	0	0	0	0	0	0
Bosnia & Herzegovina	Incumbent	0	0	710	0	0	0	0	0	710
	Alternative	4,330	11,863	531	0	0	0	0	147	16,871
Bulgaria	Incumbent	0	0	466	N/A	0	0	0	2	468
	Alternative	1,067	67,392	503	0	12,750	2	0	233,474	315,188
Croatia	Incumbent	0	0	360	0	0	0	0	0	360
	Alternative	4,680	7,080	554	28,561	944	69	0	0	41,888
Montenegro	Incumbent	0	0	0	0	0	0	0	0	0
	Alternative	0	0	0	0	0	0	0	0	0
Romania	Incumbent	0	0	0	0	131	0	0	821	952
	Alternative	16,735	919,296	0	53,111	52,705	131	0	628,097	1,670,075
Serbia, including Kosovo 1)										
Serbia	Incumbent	0	0	0	8,442	0	0	0	0	8,442
	Alternative	0	54,598	823	0	0	0	0	0	55,421
Kosovo	Incumbent	0	0	66	0	0	0	0	0	66
	Alternative	1,200	22,300	50	0	20	0	0	0	23,570
The former Yugoslav Republic of Macedonia	Incumbent	0	0	141	0	0	0	0	0	141
	Alternative	9,161	10,239	101	0	0	0	0	0	19,501
Turkey	Incumbent	0	27,804	7,799	0	0	0	0	0	35,603
	Alternative	0	0	0	0	0	0	0	0	0
1) under UNSCR 1244										

Table 23 - Breakdown of other means of broadband access

Notes:

Albania: Broadband internet access by other means than xDSL is possible but there is no data available to show the extent to which the other means are used.

Bosnia & Herzegovina: Normal speed ranges are 256/128 Kbps, 1024/256 Kbps, 1024/1024 Kbps, 1536/512 Kbps, and 2048/256 Kbps. The number of Cable TV subscriptions to the Internet should not be taken as 100% accurate because not all licensed network operators (there are 65 of them in Bosnia & Herzegovina) offer internet connectivity through their networks, while at the same time those that do offer internet connectivity often have special discounts that attract customers. Due to the lack of response from network operators to supply data on subscriptions, it is difficult to estimate the actual number of subscriptions. However, the actual number of subscriptions countrywide could be ten times that indicated above.

Bulgaria: Data for 3G services is inconsistent (some operators provided the number of users that had used the services while other operators provided the number of subscribers that could use the service) and so no value is given for 3G. The 'Other' category is broken down into LAN (226,185) and RLAN (7,289).

Montenegro: There is no alternative broadband operator in Montenegro.

Romania: By July 1, 2007 the situation had changed to: FWA – 31,441; Cable modem (incl. UTP/FTP cable) – 1,236,033; 3G – 73,974; Fibre – 66,958; Satellite – 231; Other (incl. EDGE, CDMA/EV-DO) – 744,070.

Kosovo: The number of cable modems includes 1,500 business subscriptions (the others are residential). The fibre to home is the number of business clients using the HFC network.

Turkey: The table does not include Internet access by satellite. By July 1, there were 6,250 such users. By September, cable modems had increased to 32,740 while leased lines had decreased slightly to 7,211.

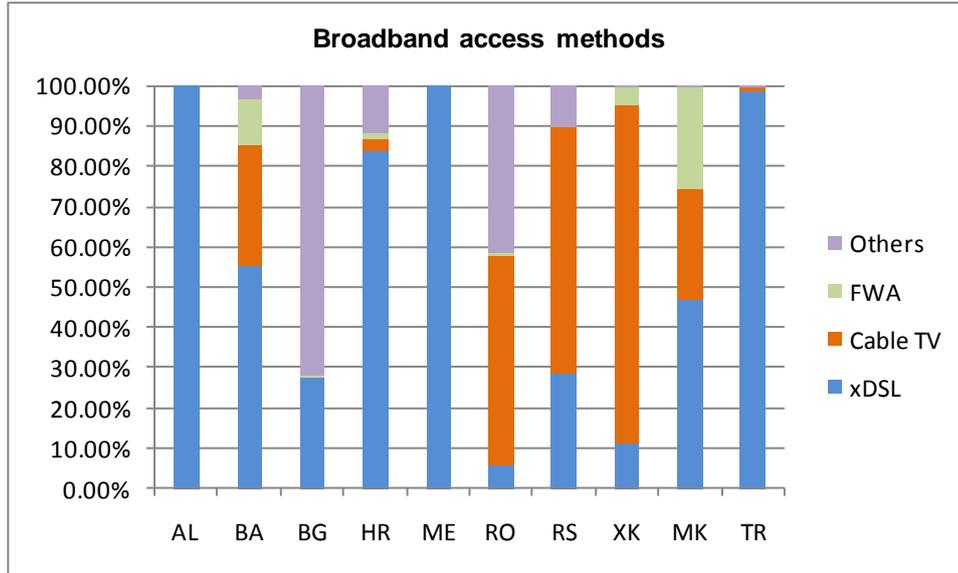


Figure 30 – Broadband technologies by country or geographic unit

Figure 30 clearly shows how xDSL over the fixed line network is predominant in some countries (Albania, Croatia, Montenegro and Turkey) while other access methods are used in the other countries. Nevertheless, some of the countries could be showing a slightly distorted figure. This is the case for Croatia (3G subscriptions rather than the number of users) and Romania (inclusion of EDGE and CDMA).

Figure 31 shows the number of xDSL lines per 100 population.

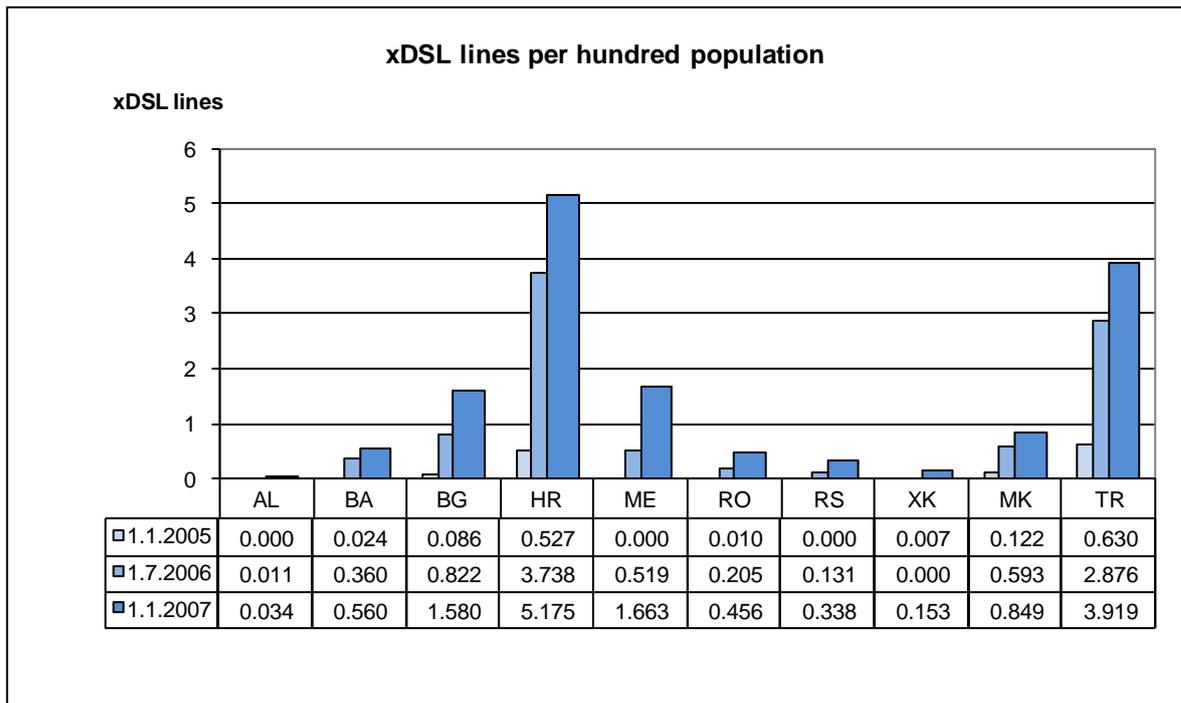


Figure 31 – xDSL lines per hundred population

The next figures present the number of broadband Internet connections per 100 population on January 1, 2007. The definition of broadband is that the connection supports transfer at 144kbit/s or higher. Modern mobile telephony technologies, such as GPRS, UMTS and CDMA, support

data transfer at this speed or higher. But not all mobile subscribers to these technologies use their handset for Internet access, and even if they do, the usage pattern may be different from that of PC connected to the Internet.

We have therefore chosen to present three figures in order to explain the situation. In Figure 32 below, we include all those technologies that are normally used to support PC Internet connections, i.e. fixed broadband access. The numbers therefore include xDSL, cable modems, leased lines, fixed wireless access and satellite connections.

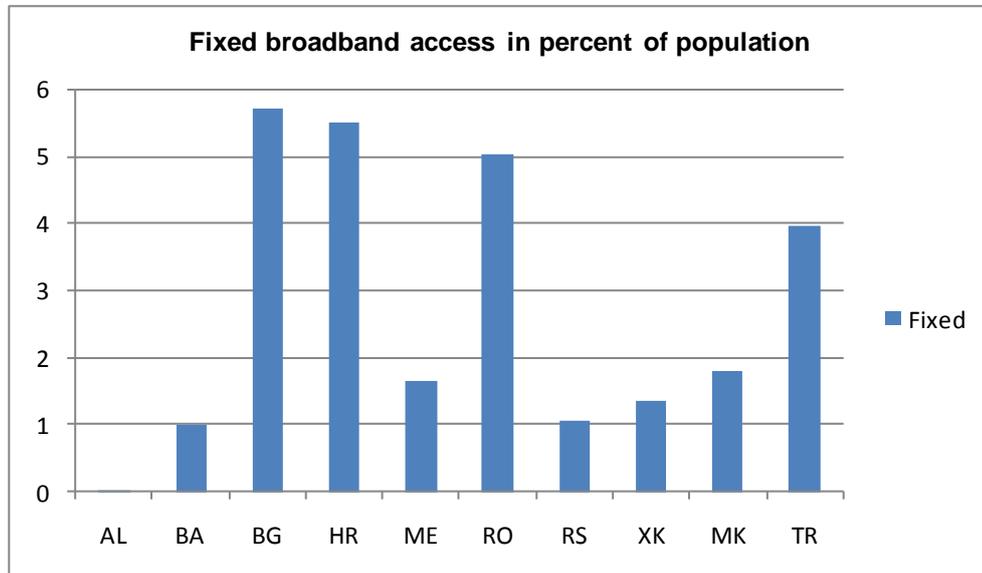


Figure 32 – Fixed broadband access

In the next figure, we present the number of subscribers for mobile telephony services that offer data transfer with broadband speed. The numbers only include those subscribers that have the data transfer option included in their subscription profile, but it is not precisely know how many use the subscription regularly for Internet access. The numbers include UMTS and CDMA subscriptions that support transfer at 144kbit/s or higher. The chart shows that Croatia and Romania have a particularly significant number of such users.

However, this type of information is not available from all countries. For example, Bulgaria has 3G subscribers, but there is no information on the number of such users that have access to high speed data transfer.

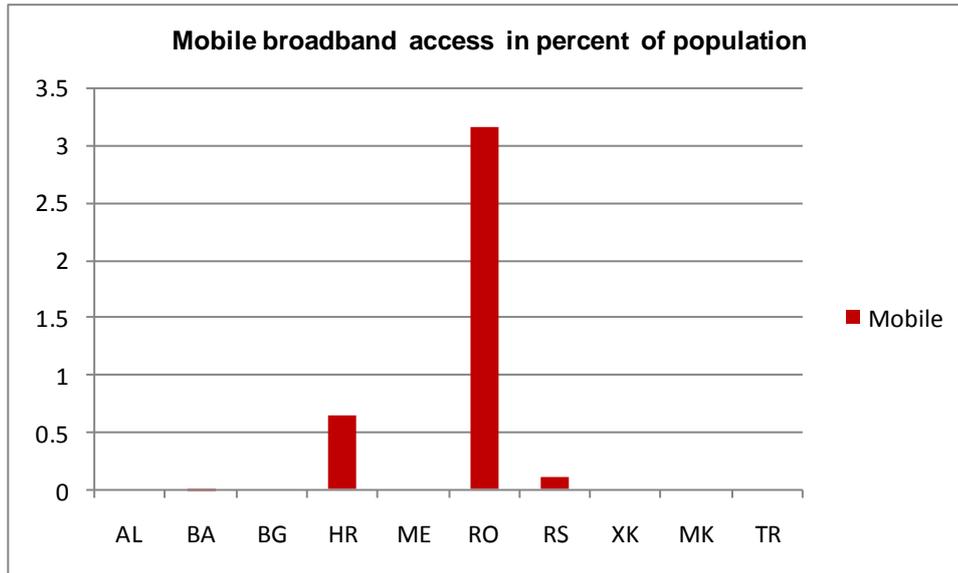


Figure 33 – Mobile broadband access

Finally, we show the combined penetration level when the two types of broadband access fixed and mobile are added together. The fixed and mobile penetration is shown in different colours in order to better understand the national variations.

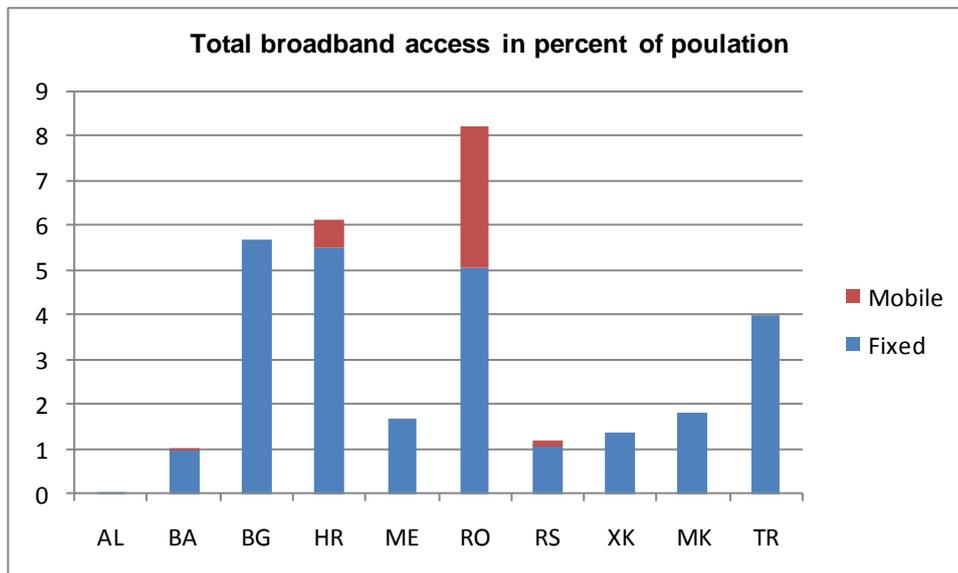


Figure 34 – Broadband access per 100 population

Notes:

Albania: The statistics are too small to be shown on the figure above.

Bulgaria: The figure above includes information about cable modem connections that was previously unavailable.

## 6. Competitive alternative ISPs

Out of the nine countries where information is available, the fixed incumbent's ISP only has a significant majority market share in five countries or geographic units (Albania – 88%, Croatia – 67%, Montenegro – 87%, the former Yugoslav Republic of Macedonia – 75%, and Turkey – 88%). In Turkey, the incumbent's market share increased from 52% to 88% between January 2005 and July 2007.

In general, it can be said that Internet subscribers have a choice of ISP and that competition is in place. This is especially true in some countries (Bulgaria, Romania, and Serbia) where the incumbent's ISP has a small market share.

Country	Number of ISPs		Estimate of market share of ISP of fixed incumbent operator
	National	Local	
Albania	17	10	88.00%
Bosnia & Herzegovina	1	51	55.00%
Bulgaria	108	319	25.30%
Croatia	41	0	66.54%
Montenegro	8	3	87.22%
Romania	1,100	0	5.50%
Serbia, including Kosovo <sup>1</sup>			
Serbia	117	0	1.30%
Kosovo	3	0	0.00%
The former Yugoslav Republic of Macedonia	8	24	75.00%
Turkey	72	0	88.00%
1) under UNSCR 1244			

Table 24 - Number of ISPs and estimate of market share of ISP of fixed incumbent operator

Notes:

Albania: Market share is estimated as being the ratio of the number of Internet dial-up users of the incumbent operator (using the ISP owned by incumbent) with total number of Internet dial-up users (using the incumbent ISP + other ISPs. Users refer to Internet dial up users of incumbent fixed network).

Bulgaria: The number of ISPs includes those ISPs that notified the CRC that they were providing Internet services at the end of 2006. The market share of the incumbent's ISP is based on the number of subscribers.

Montenegro: There are two national ISPs: Internet Montenegro and MontSky (with roughly 67,000 and 7,000 subscribers respectively). There are also 3 new FWA operators with local licences that were issued in 2005.

Romania: By July 2007, the number of broadband providers had increased to 1,164 and the incumbent's market share had increased to 7.8% of the dedicated broadband connections.

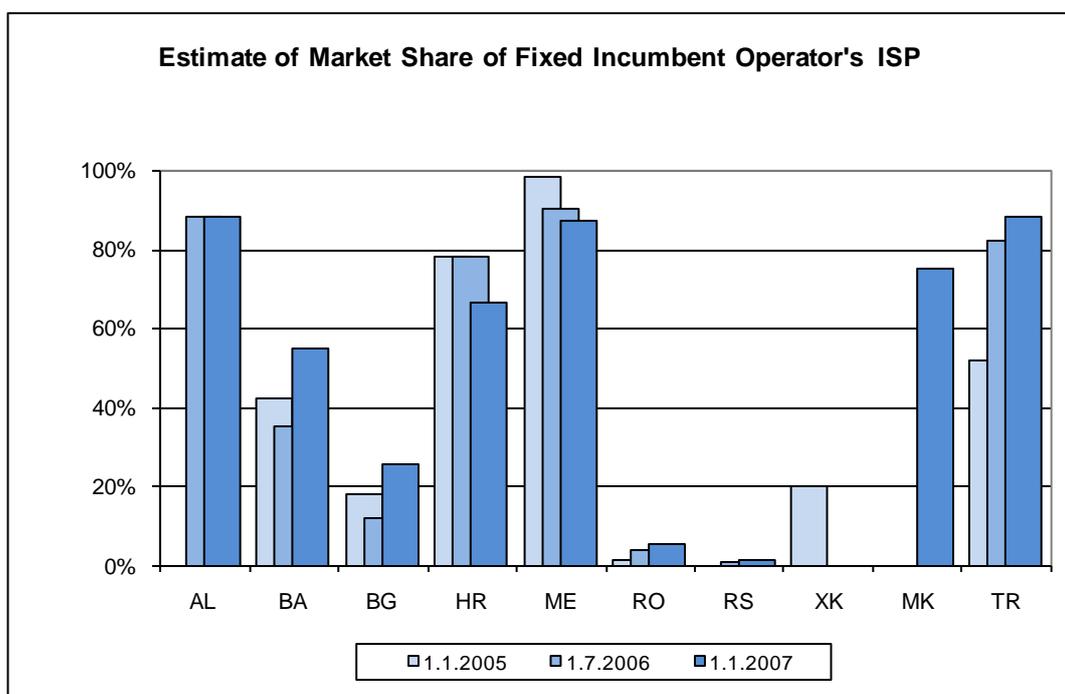


Figure 35 – Estimate of ISP market share of the fixed incumbent

Figure 35 shows how the market shares of the fixed incumbent operators' ISPs have developed during the period January 1, 2005 to January 1, 2007. There is no consistent pattern emerging from the information that is available.

The incumbent ISP's market share has fallen in Croatia, Montenegro, and Kosovo and has increased in Bosnia & Herzegovina, Bulgaria, Romania, and Turkey.

Although the incumbent ISP's market share increased slightly in Romania, its market share is still insignificant. In Turkey, the incumbent ISP's market share has increased significantly and now accounts for almost 90% of the market compared to slightly more than 50% in 2005.

## 7. Payphones

The number of payphones per 1,000 population is shown in the next table. There is a wide variation, from 0.26 in Kosovo to 2.87 in Croatia. This represents about one payphone per 336 inhabitants in Croatia and one payphone per 3,846 inhabitants in Kosovo.

Country	1.1.2004	1.1.2005	1.1.2006	1.1.2007
Albania	0.47	0.47	0.47	0.46
Bosnia & Herzegovina	0.79	0.77	0.83	0.87
Bulgaria	2.70	2.65	1.99	2.10
Croatia	2.74	2.76	2.68	2.87
Montenegro	1.54	1.29	0.90	1.02
Romania	2.41	2.38	2.09	2.08
Serbia including Kosovo 1)				
Serbia	1.43	1.73	1.78	1.85
Kosovo	0.43	0.45	0.30	0.26
The former Yugoslav Republic of Macedonia	1.04	1.03	1.25	1.01
Turkey	1.08	1.08	1.09	1.20

1) under UNSCR 1244

Table 25 - Number of payphones per 1,000 population

### Notes:

Montenegro: There are three payphone operators in Montenegro: Post of Montenegro, Montenegro card, and Bristol Ltd.

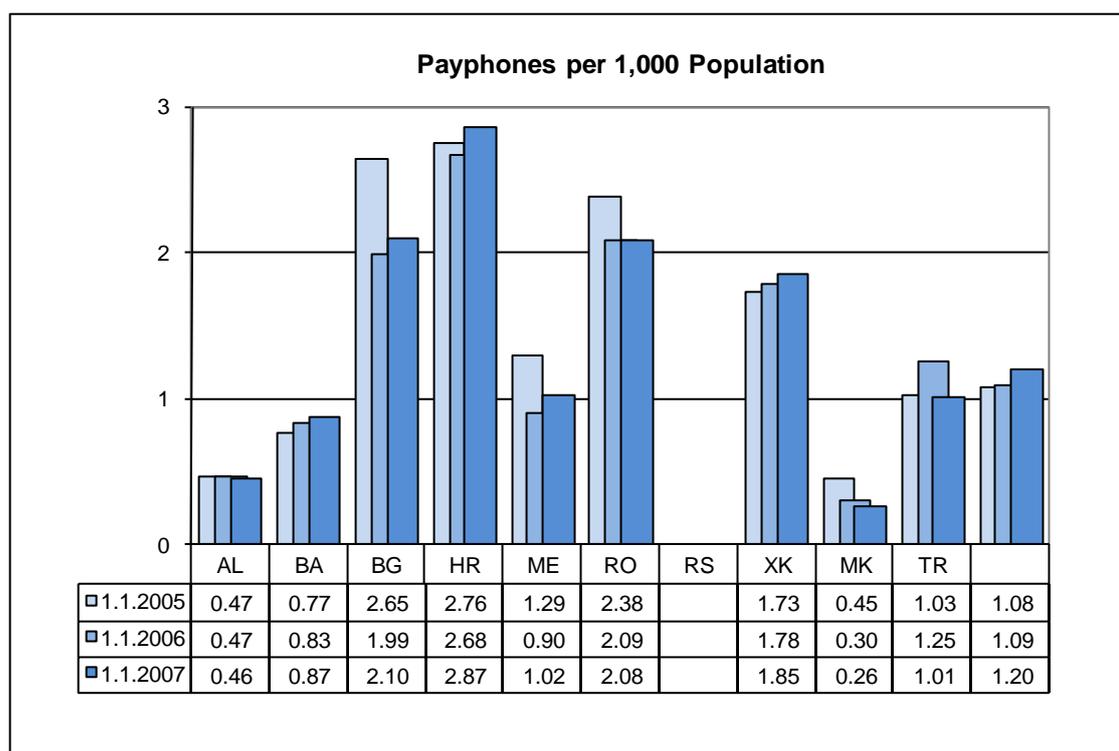


Figure 36 – Payphones per 1,000 population

In Albania, Bosnia & Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, and Turkey, the number of payphones has been effectively static since 2004. The number of payphones has reduced by about: 20% in Bulgaria; 36% in Montenegro; 16% in Romania; and 40% in Kosovo. During the same period, the number of payphones has increased by almost 30% in Serbia.

## 8. Financial ratios for incumbent operators

The most common financial ratios used when assessing 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 - the EBITDA divided by operating revenues; and
- Earnings Before Interest and Taxes (EBIT) margin – the EBIT divided by operating revenues.

### a) Inflation

The rate of inflation has remained relatively static in Albania, Bulgaria, Croatia, Montenegro, and Kosovo. In Bosnia & Herzegovina and the former Yugoslav Republic of Macedonia, the rate of inflation has increased dramatically, but even so, has remained below the inflation levels in Bulgaria, Romania, Serbia and Turkey. Significant decreases took place in Romania and Serbia and a slight decrease in Turkey. Nevertheless, the inflation rates in Bulgaria, Romania, Serbia and Turkey are higher than those in the other countries. In comparison, the annual EU inflation rate was 2.1% in December 2006<sup>15</sup>.

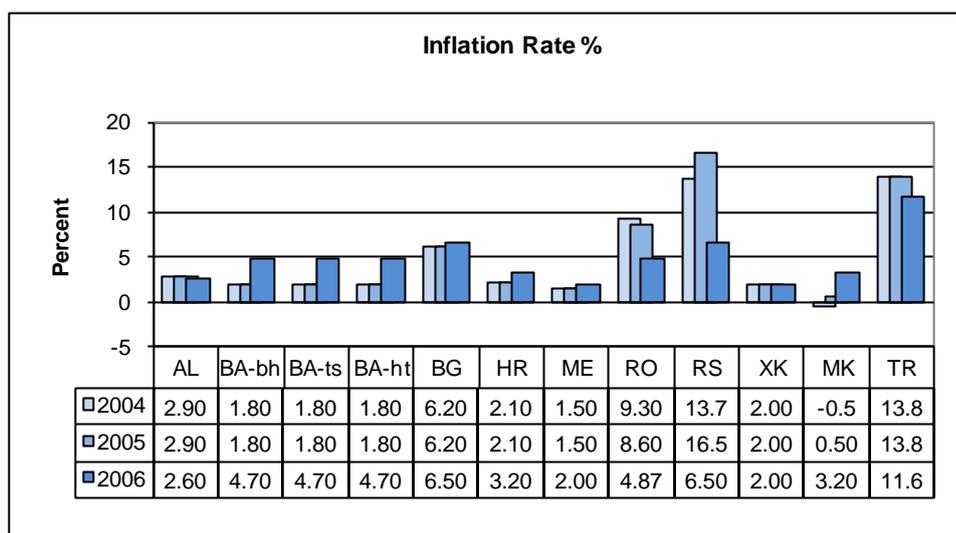


Figure 37 – Inflation rate (CPI)

### b) ROCE

Return on Capital Employed (ROCE) is used as a measure of the returns that a company is realizing from the capital it employs. The ratio can also be seen as representing the efficiency with which capital is being utilized to produce revenue. It is commonly used as a measure for comparing the performance between businesses and for assessing whether a business generates enough returns to pay for its cost of capital.

<sup>15</sup> Source: Eurostat euro indicators news release 7/2007

ROCE compares earnings with capital invested in the company and takes into account sources of financing. Net assets or capital employed are examined rather than total assets.

Capital Employed has many definitions. In general, it is the capital investment necessary for a business to function. It is commonly represented as total assets less current liabilities or fixed assets plus working capital.

The main drawback of ROCE is that it measures return against the book value of assets in the business. 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).

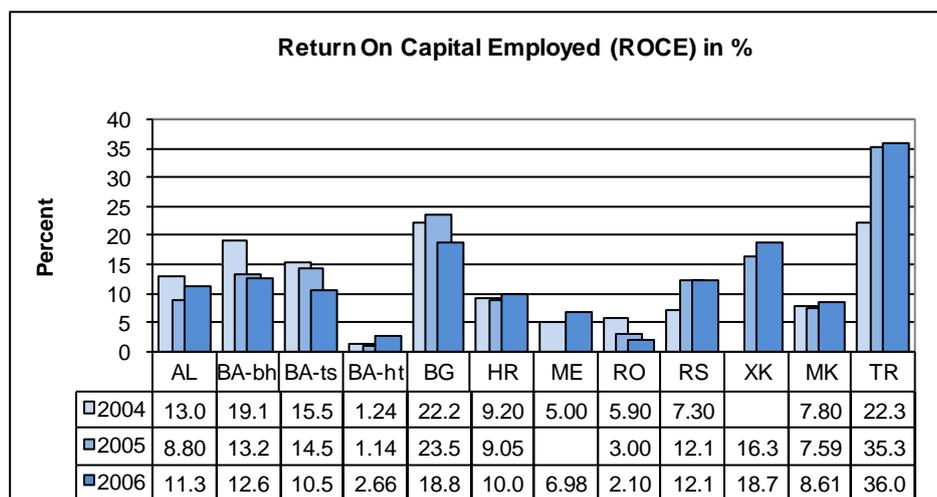


Figure 38 – Return On Capital Employed

Notes:

Montenegro: Telecom Montenegro's annual report for 2005 has not been approved as it failed the audit procedure so no data is available for 2005.

Kosovo: The ROCE in Kosovo is not available for 2004 because of uncertainties about the cost of fixed assets, depreciation related to these and the allocation of costs to facilities.

In all countries, except Bosnia & Herzegovina (HT Mostar) and Romania (RomTelecom), the ROCE in 2006 was higher than the inflation rate. In Serbia, the rate of inflation was higher than the ROCE in 2004-2005, however the situation improved in 2006.

It should also be noted that the ROCE figures for the operators are not directly comparable.

c) EBITDA

A company net income is affected by decisions that the company made in previous years. This is because of the differences between accrual accounting and cash basis 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, so investors can get a better idea of how profitable the company is. Because depreciation and amortization are non-cash charges, some view EBITDA as a better proxy than earnings of the actual 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 brackets. EBITDA can also assist lenders when estimating the cash flows that a company will have available to service its debt -- as it more or less measures the amount of cash that a company has available for interest payments. Finally, EBITDA can provide a truer cash flow picture in industries where substantial non-cash depreciation and amortization expenses might otherwise distort earnings figures.

The figure below shows the EBITDA margin of the fixed incumbent operators in the region which is calculated as EBITDA divided by total revenue. EBITDA margin measures the extent to which cash operating expenses use up revenue.

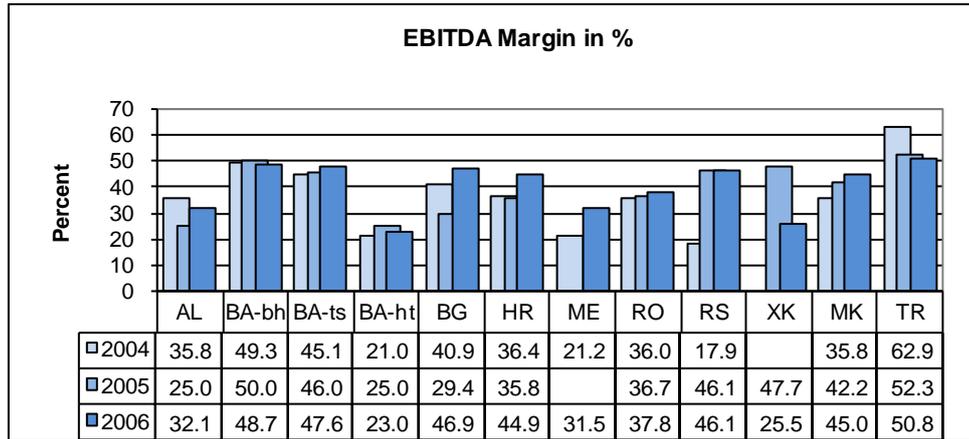


Figure 39 – Earnings Before Interest, Taxes, Depreciation and Amortization margin

Notes:

Montenegro: Telecom Montenegro's annual report for 2005 has not been approved as it failed the audit procedure so no data is available for 2005.

Kosovo: The EBITDA margin reported for Kosovo for 2004 (80%) is not shown because it is unlikely that it is an accurate figure given that the ROCE could not be calculated for 2004.

EBITDA margins of nearly all of the incumbent operators are in the 30-50% range, which can be considered normal for a telecommunications operator, except for HT Mostar in Bosnia & Herzegovina and PTK in Kosovo (almost halved in 2006 compared to 2005). The reduction in Bulgaria during 2005 was the result of higher costs incurred due to restructuring activities.

d) EBIT

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.

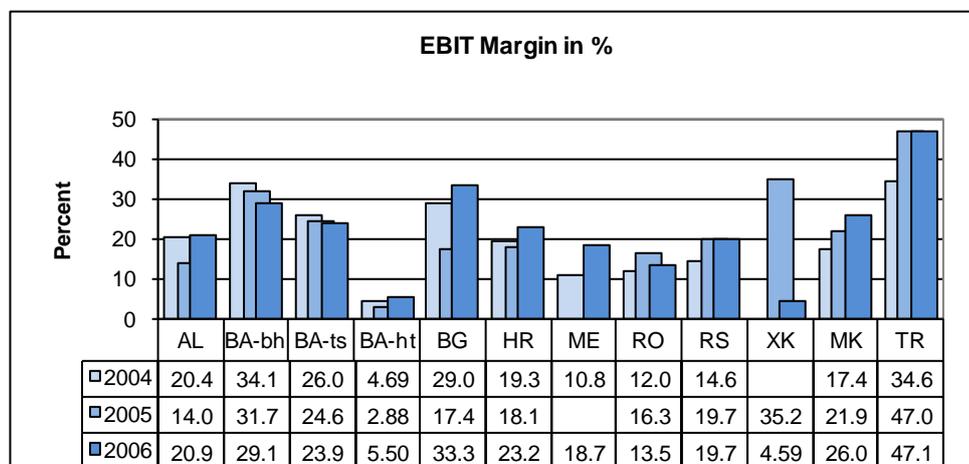


Figure 40 – Earnings Before Interest, and Taxes

Notes:

Montenegro: Telecom Montenegro's annual report for 2005 has not been adopted as it failed the audit procedure so no data is available for 2005.

Kosovo: The EBIT margin for Kosovo for 2004 (75.2%) is not shown because it is unlikely that it is an accurate figure given that the ROCE could not be calculated for 2004.

In keeping with the EBITDA reductions, Albtelecom (Albania) and BTC (Bulgaria) experienced significant reductions in their EBIT margins during 2005 but these have now increased to levels that are above the 2004 values. PTK (Kosovo) had a significant drop in its EBIT figure in 2006.

e) Employees

Country	Code	Operator	Avg No of Employees		
			2004	2005	2006
Albania	AL	Albtelecom	2,473	2,199	2,216
Bosnia & Herzegovina	BA-bh	BHT Sarajevo	3,056	3,055	3,087
Bosnia & Herzegovina	BA-ts	Telekom Srpske	2,721	2,719	2,753
Bosnia & Herzegovina	BA-ht	HT Mostar	1,221	1,193	1,208
Bulgaria	BG	BTC	17,251	12,564	9,268
Croatia	HR	Hrvatske Telekom	7,299	6,811	6,476
Montenegro	ME	T-com Montenegro	1,168	1,168	946
Romania	RO	RomTelecom	19,048	13,050	12,257
Serbia, including Kosovo <sup>1</sup>					
Serbia	RS	Telecom Serbia	12,340	11,227	10,851
Kosovo	XK	PTK	570	637	472
The former Yugoslav Republic of Macedonia	MK	Makedonski Telecom	3,005	2,325	1,792
Turkey	TR	Turk Telekom	58,084	54,243	43,547

<sup>1)</sup> under UNSCR 1244

Table 26 – Average number of employees in the incumbent operators

Notes:

Bulgaria: BTC was being restructured in 2005-2006 to reduce the number of staff through "socially responsible" HR programmes. This has led to a 46% cut in the workforce during the last three years. This reduction in the workforce has led to a 40% increase in the number of fixed lines per employee (see below) despite a 15% reduction in the number of fixed lines in service.

Romania: The number of employees for RomTelecom on January 1, 2005 was 18,382 while the average number of employees in 2004 was 19,048 and 15,316 in 2005. At the end of 2006, the number of employees for RomTelecom was 12,257. This represents a reduction of 36% and explains the increase in the number of fixed lines per employee shown for January 2007 in the next figure.

The former Yugoslav Republic of Macedonia: The number of employees has reduced by 40% since 2004, which has led to a 40% increase in the number of lines per employee.

Turkey: Although the number of employees was reduced by 25%, the number of lines per employee has reduced by 7%. This is probably linked to the 12% reduction in the number of fixed lines in service between 2004 and 2007.

f) Fixed Lines per Employee

The number of fixed lines per employee is an indication of the efficiency of a telecommunications operator (the more fixed lines per employee then the more efficient the operator can be considered to be).

The next figure shows the changes in the number of fixed lines per employee in the period January 2005 to January 2007. In most countries where a change in fixed line penetration has occurred during this period there has been a reduction in the number of lines (i.e. fixed line penetration rates are declining). However, there has been an increase in the number of lines per employee in nine countries. Between November 2005 and January 2007 the number of lines per employee increased in Albania, Bosnia & Herzegovina (Telekom Srpske), Bulgaria, Croatia, Montenegro, Romania, Serbia, Kosovo, and the former Yugoslav Republic of Macedonia.

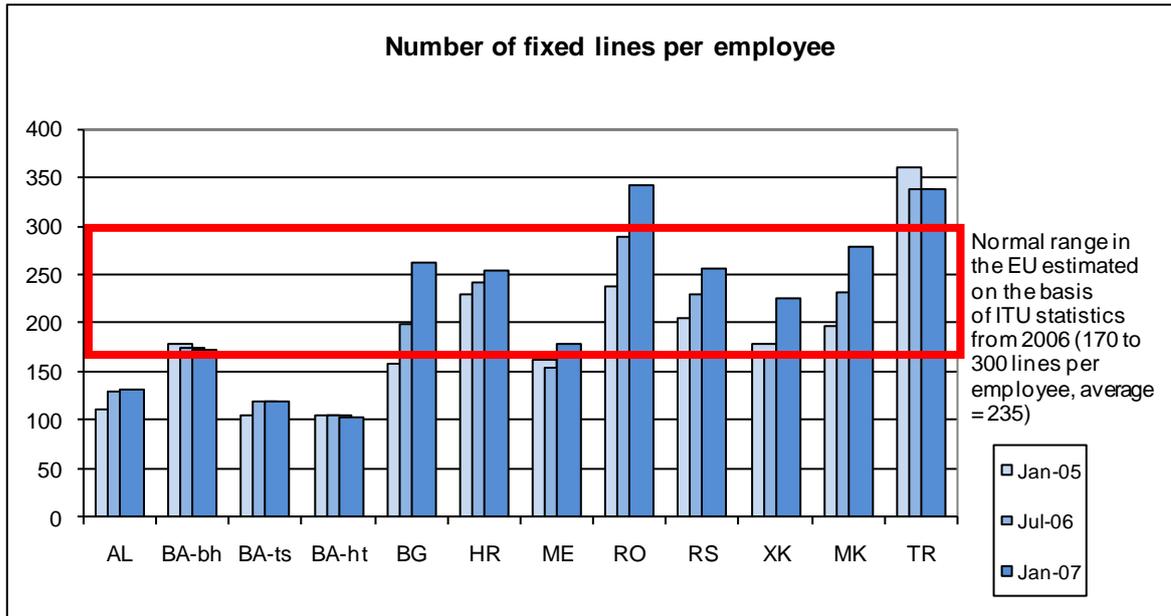


Figure 41 – Number of fixed lines per employee

Notes:

The Implementation Reports from the European Commission do not give an EU average for the number of fixed lines per employee. Information on this indicator may be inferred from ITU statistics but the information does not give a definitive value. Based on different assumptions, the ITU statistics from 2006 suggest that the average number of active lines per employee in the EU Member States is in a range from 170 to 300. The number of lines per employee in January 2007 is based upon the average number of employees for 2006.

The number of fixed lines per employee is the number of active lines, as opposed to the installed capacity. The increases since 2005 are the result of staff reductions during 2005 and 2006 rather than an increase in the number of active lines in service.

9. Fixed network ownership

The breakdown of the ownership structure for the fixed incumbent operators is given in Table 27 below. The only countries that have completely privatised the incumbent operators are Bulgaria (although the State has retained a 'golden share'), Montenegro, and the entity of Republika Srpska in Bosnia & Herzegovina.

The Bulgarian privatisation was completed in June 2004 when 65% was sold to Viva Ventures, a subsidiary of the US private equity fund Advent International. 34.78% of the shares were in public ownership via the Bulgarian stock exchange. In August 2007, AIG Investments bought Viva Ventures 65% shareholding in BTC and also acquired a significant number of the publicly quoted stock. AIG Investments now owns 90% of BTC's shares. Remarkably, the price offered by AIG for the 65% stake in BTC is almost 5 times higher than the €230m paid by Viva Ventures to the Bulgarian government in 2004. The acquisition appears to be the largest private M&A transaction in Bulgaria to date.

In March 2005, the government of Montenegro sold its total 76.53% shareholding to Magyar Telecom, a 59% subsidiary of Deutsche Telekom. Private investors now hold 17.4% and 6.07% is quoted on the stock exchange.

In Bosnia & Herzegovina, there are three incumbent operators, one in each of the three territories. The Federation government of Bosnia and Herzegovina still 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 of the Republika Srpska is now completely 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.

In Albania, on June 19, 2007, after a two-year period of negotiations about the details of the privatisation of Albtelecom, Calik Enerji and the Albanian Ministry of Economy, Trade and Energy, signed an agreement for the sale of a 76% stake of the state-owned incumbent operator. The deal also includes Eagle Mobile, the third mobile telephony licence that is not yet operational. To satisfy the Albanian government's conditions, Calik Enerji and Turk Telekom created a joint company (80% Calik and 20% Turk Telekom) which is the formal buyer. The agreement was ratified by the Albanian Parliament on July 19, 2007.

In Croatia, between September 17 and October 5, 2007 the government offered for sale through an IPO 32.5% out of total 42% state owned shares in the incumbent telecommunications operator, T-HT. Originally planning to divest no more than a 23% stake, the government has been encouraged by the popularity of the sale, to speed up the sell-off. As a result of the sale, the ownership structure of T-HT will be changed. Deutsche Telekom remains the majority owner of T-HT with 51% of shares. The government owns 9.5% of the shares, 7% of which will be distributed to the former and present T-HT Group employees. The Croatian War Veteran's Fund owns 7% of shares. The Zagreb and London stock exchanges trade in 32.5% of shares.

In Romania, on December 2, 2006 the Ministry of Communications and IT (MCTI) and the Greek incumbent telecom operator OTE, the major shareholders of the Romanian incumbent operator RomTelecom, agreed to postpone the full privatisation of RomTelecom through an IPO initially scheduled to take place in the first half of 2007, due to unfavourable market conditions. The Romanian government currently controls 46% of RomTelecom shares and OTE holds the remainder. The Ministry of Communications and Information Technology intends to sell part of the remaining shares in Romtelecom in the second or third quarter of 2008. However, the exact timing of the IPO as well as the number of shares remains to be determined.

The privatisation of the National Radiocommunications Society (Radiocom), a 100% state owned terrestrial broadcasting network operator and major provider of telecommunications services, was also postponed. The process is considered to be extremely complex and more time has been necessary to ensure correct implementation.

In the former Yugoslav Republic of Macedonia, the government retains 36.81% ownership in the incumbent MakTel, while the 51% majority stake is controlled by Magyar Telekom.

In Serbia, the government controls 80% of Telekom Srbija through the Public Enterprise of PTT and also retains a 'golden share' which gives it the power to veto all the important decisions of the company. The Greek company OTE owns the remaining 20% of the capital in Telekom Srbija.

In Kosovo, UNMIK is responsible for the 100% state ownership of the incumbent PTK through the Kosovo Trust Agency (KTA), a provisional body established by UNMIK regulation 2002/12. Privatisation of the company is unlikely to take place before the subject of the province's status is resolved.

In Turkey, the recently re-elected government announced plans to sell part of its 45% stake in Turk Telekom in an IPO in 2008. The other 55% was bought by Saudi Oger Ltd in 2005 for US\$ 6.6bn, itself partly owned by Vivendi. That transaction was the largest ever acquisition of a Turkish company. The Treasury performs the ownership function of the State's remaining 45% shareholding in Turk Telekom, while the Ministry of Transportation is responsible for Turk Telekom's operational activities ('golden share' function).

Country Name of operator	State ownership	Strategic partner Ownership share	Investors Ownership share	Public ownership (Stock Exchange)
Albania Albtelecom sh.a	Ministry of Economy, Trade and Energy 24%	Turk Telekom 61%	Calik 15%	0%

Country Name of operator	State ownership	Strategic partner Ownership share	Investors Ownership share	Public ownership (Stock Exchange)
Bosnia & Herzegovina: BH Telecom d.d. Sarajevo	Entity government in Federation of B&H 90%	None	None	10%
Telekom Srpske a.d. Banja Luka	No state ownership	Telekom Srbije 65%	Pension fund 10% Restitution fund 5%	20%
Hrvatske Telekomunikacije d.o.o. Mostar	Entity government in Federation of B&H: 50.10%	T-HT(Croatia): 39.10%	Hrvatska Pošta (Croatia): 5.23% Shareholders: 5.57%	-
Bulgaria BTC	State Agency for Information Technologies and Communications - golden share	-	AIG Investments (AIG Capital Partners) 90%	10%
Croatia T-HT (Croatian Telecom Inc.)	Government 9.5%	Deutsche Telekom 51%	Fund for homeland war veterans 7%	32.5%
Montenegro Telecom Montenegro (Crnogorski Telekom)	No state ownership	Magyar Telekom 76.53%	Investors 17.4%	6.07%
Romania S.C. RomTelecom S.A.	Ministry of Communications and Information Technology 45.99%	OTE Greece 54.01%	-	-
Radiocom	100%			
Serbia (including Kosovo <sup>1</sup> )				
<i>Serbia Telekom Srbije</i>	80% (through 100% state- owned Public enterprise PTT Srbija	Hellenic telecommunications organization (OTE) 20%	-	-
<i>Kosovo</i>	UNMIK through Kosovo Trust Agency (KTA) 100%	None	None	None
The former Yugoslav Republic of Macedonia A.D. Makedonski Telekomunikacii	Ministry of Finance 36.81% - golden share	Magyar Telekom 51%	International Finance Corporation 1.88%	A.D. Makedonski Telekomunikacii 10.00% Minority shareholders 0.31%
Turkey Turk Telekom (Türk Telekomünikasyon A.Ş.)	Treasury 45% Ministry of Transportation – golden share	Oger Telekom 55%	None	None

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Table 27 - Ownership structure of fixed incumbent operators

The ownership structure is presented graphically in the figure below.

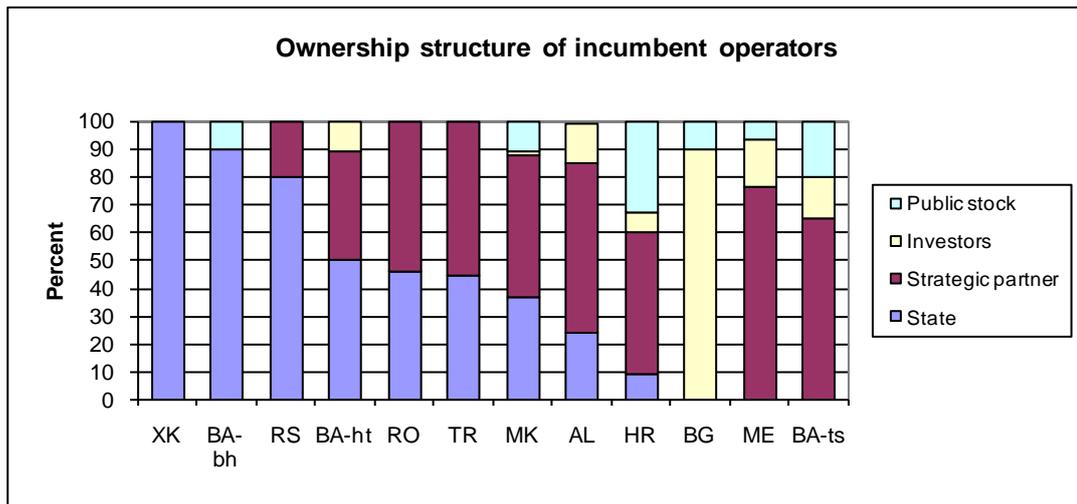


Figure 42 - Ownership structure of fixed incumbent operators

### C. National regulatory authority

The information in this chapter reflects the situation as it existed on July 1, 2007, unless specified otherwise.

The establishment of an independent regulatory authority is a cornerstone of the EU regulatory framework for electronic communications. Article 3 of the Framework Directive requires that the regulatory tasks in the sector 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 no longer owns any electronic communications undertakings, the subject of regulatory independence is typically a lesser concern.

This requirement of regulatory independence does not rule out the assignment of relevant regulatory tasks to more than one body, as long as the respective tasks of each authority are clearly defined and transparent. Although there is no explicit requirement to separate regulatory tasks from the activities of the ministry responsible for the electronic communications policy, the common practice across the EU is to create a regulatory authority that is separated from the ministry as well. This is done to achieve the following objectives:

- Separation of policy making from policy execution, where the ministry is responsible for overall policy and primary legislation, but the NRA – for secondary legislation and execution of the law. The ministry can provide guidance and set policy objectives, but normally is not involved in the daily execution of regulatory tasks.
- Isolation of the regulatory authority from political interference.
- Securing the stability of the regulatory functions against unforeseen changes as a result of new political appointments.
- Separation of the regulatory and ownership functions, because the ministry responsible for policy making is often involved with the control of the incumbent operator.

This section investigates the states' involvement in ownership of telecommunications operators and then presents an overview of the important factors that must be considered in the context of NRA independence.

## 1. State control of telecommunications undertakings

Table 28 presents information about the state's involvement in ownership and control of fixed and mobile telecommunications operators.

The table shows that almost all countries and geographic units have some state involvement in ownership. Montenegro has been the first country in the region, where the privatisation process of the incumbent operator was completed on April 1, 2005 by selling the 51.12% share owned by the state to Magyar Telecom. Bulgaria completed its privatisation process in 2005, but retained a golden share that permits the government to veto decisions taken by the board of the incumbent operator.

During 2007, the Albanian government finalised a two-year long privatisation process after selling the 76% state share in Altelecom. Privatisation was also completed in the Republika Srpska of Bosnia and Herzegovina through the sale of 100% entity government's stake in Telekom Srpske to the Serbian incumbent operator, Telekom Srbija (which is 80% owned by the Serbian state). In Croatia, after an IPO procedure, the government has further reduced its stake in the incumbent operator.

The Romanian government has decided to put on hold further steps in the privatisation of the incumbent telecom operator and the state-owned broadcasting transmission company that were initially scheduled to take place in the first half of 2007.

Country	Ownership by State		
	Name of operator	Percentage ownership by the State	Which government unit is responsible for ownership functions
Albania	<ul style="list-style-type: none"> <li>Altelecom sh.a (with Eagle Mobile)</li> <li>AMC sh.a.</li> </ul>	<ul style="list-style-type: none"> <li>24%</li> <li>12.6%</li> </ul>	Ministry of Economy, Trade and Energy
Bosnia & Herzegovina	<ul style="list-style-type: none"> <li>BH Telecom d.d. Sarajevo</li> <li>Hrvatske Telekomunikacije d.o.o. Mostar</li> <li>Telekom Srpske</li> </ul>	<ul style="list-style-type: none"> <li>90%</li> <li>50.1%</li> <li>0%</li> </ul>	Entity government in Federation of BiH
Bulgaria	Bulgarian Telecommunications Company	Golden share	State Agency for Information Technologies and Communications
Croatia	HT-Hrvatske Telekomunikacije d.d. (Croatian Telecom Inc.)	9.5%	Government unit responsible for ownership functions is not defined.
Montenegro	Telecom Montenegro Inc.	0%	
Romania	<ul style="list-style-type: none"> <li>S.C. RomTelecom S.A.</li> <li>National Radiocommunications Company (Radiocom)</li> </ul>	<ul style="list-style-type: none"> <li>45.99%</li> <li>100%</li> </ul>	Ministry of Communications and Information Technology (MCTI)
Serbia (including Kosovo <sup>1</sup> )			
<i>Serbia</i>	<ul style="list-style-type: none"> <li>Telekom Srbija</li> </ul>	<ul style="list-style-type: none"> <li>80% through 100% state-owned Public Enterprise of PTT Serbia</li> </ul>	Ministry of Telecommunications and Information Society
<i>Kosovo</i>	PTK (Post and Telecommunications Enterprise of Kosovo)	100%	UNMIK (through Kosovo Trust Agency)
The former Yugoslav Republic of Macedonia	A.D. Makedonski Telekomunikacii	36.81% plus one golden share	Ministry of Finance

Country	Ownership by State		
	Name of operator	Percentage ownership by the State	Which government unit is responsible for ownership functions
Turkey	<ul style="list-style-type: none"> <li>Türk Telekom</li> <li>Avea İletişim Hizmetleri A.Ş. (former TT&amp;TIM, a GSM operator)</li> <li>Türksat Uydu Haberleşme ve Kablo TV İşletme A.Ş.(cable TV and satellite operator)</li> </ul>	<ul style="list-style-type: none"> <li>45% plus one golden share</li> <li>36.45% through Turk Telekom</li> <li>100%</li> </ul>	The Treasury, but the Ministry of Transportation is responsible for operational activities

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Table 28 – State ownership

Notes:

Albania: On June 19, 2007 a Turkish consortium, Calik Enerji, and the Albanian Ministry of Economy, Trade and Energy, signed the agreement for the privatisation and sale of a 76% stake in Albtelecom. The agreement was ratified by the Albanian Parliament on July 19, 2007. On July 11, 2007 the Albanian government also decided to distribute the state-owned shares in AMC to AMC's employees.

Bosnia & Herzegovina: On June 18, 2007 Telekom Srbija completed the acquisition of 65% of the incumbent operator Telekom Srpske in the Republika Srpska of Bosnia and Herzegovina.

Croatia: Between September 17 and October 5, 2007 the Croatian government offered for sale through an IPO 32.5% out of total 42% state owned shares in the incumbent telecommunications operator, T-HT.

## 2. NRA independence

After a regulatory authority has been established as a separate legal entity, it is important to guarantee its independence by ensuring effective structural separation of regulatory functions from activities associated with ownership or control of undertakings providing electronic communications networks or services.

Table 29 below presents an assessment of the NRA independence applying some of the main criteria that are normally used as indicators of independence.

In addition to structural separation of the NRAs, several other factors are important when assessing its independence:

- Appointment of the NRA management. The appointments are typically made by Parliament or by the government, for a specific term of office with some safeguards against arbitrary dismissal.
- Dismissal of the NRA management. The appointed decision makers stay in office for a defined period of time, typically four or five years, and can only be dismissed during this period under a limited set of well defined circumstances. It is reasonable to expect that the dismissal must be performed by the same body that made the appointment. The rules for appointment and dismissal are found in Table 29.
- Staff resources. The regulator must be properly resourced and have the necessary competences to be able to carry out its tasks. This is addressed in Table 30.
- Financing. It is important that the NRA has sufficient budget and that its sources of financing do not depend on political favours. This is addressed in Table 31.
- Dispute resolution and enforcement. Independence may be illusory unless the NRA has the necessary powers to carry out its tasks. This is addressed in Table 32.
- Accountability. Independence needs to be reconciled with measures to ensure that the regulator is accountable for its actions. Such measures may include establishing certain 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. Lastly, it is important to establish an effective appeal mechanism against regulatory decisions, with

an appeal body independent of the parties involved. Appeal mechanisms are addressed in Table 33.

As shown in the table below, the national legislation in all entities requires the establishment of the NRA as an independent, functionally separate and self-financed legal entity. The appointment of the NRA management is typically made by Parliament or by the government, for a specific term of office with some safeguards against arbitrary dismissal.

A parliamentary appointment is seen to give a higher level of independence, because there is better protection against political replacements. Nevertheless, examples of change in the NRA management after elections have been common in the region.

The subject of NRA independence seems to be undergoing reassessment in Romania. In October 2007, the Romanian parliament adopted a set of amendments to the rules on the NRA organisation intended to create more separation of ANRCTI from the Prime Minister's office and to introduce a 7-member managing council appointed by the Chamber of Deputies of the bicameral Romanian Parliament.

The Romanian President has, however, rejected the draft law<sup>16</sup> and sent it back to the Parliament. In a letter to the Parliament, the President stressed that "in order to observe the constitutional principles of bicameralism and of the parliamentary control exerted by both Chambers of the Parliament, the control over the ANRCTI must be exercised by both the Chamber of Deputies and the Senate." Consequently, the draft law shall be re-examined by the Parliament.

In Bulgaria, the transitional legislation in the recently adopted Electronic Communications Law have not provided for mechanisms to ensure either a legitimate extension of the expired mandate of the CRC Chairman or a prompt procedure for a new appointment, which may potentially have a negative effect on the legitimacy of decisions adopted by the CRC in the meantime.

In Albania, the NRA budget, after a recent amendment to the law, will no longer be approved by the government but by Parliament, which potentially can be a more complex procedure. In Kosovo, the financial independence of the NRA has been put under question on several occasions when the regulator was required to secure approval from the Ministry of Economy and Finance to get access to its funds, despite the fact that the budget was formally approved by Parliament.

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	If yes, how is independence assured?
Albania	Yes. Telecommunications Regulations Entity (TRE)	<p>According to the Law on Telecommunications, No. 8618 of June 14, 2000 (as amended on July 17, 2006)</p> <ul style="list-style-type: none"> <li>• TRE has status of an independent legal entity</li> <li>• Board proposed by Government and approved by Parliament for 5-year term of office. Board members cannot be nominated for more than two consecutive terms</li> <li>• Board members can only be dismissed by Parliament for reasons as defined by law</li> <li>• Board members are not allowed to own shares or other interests in any market participant</li> <li>• Self-financed, annual budget approved by Parliament</li> <li>• Excess revenue goes to state budget</li> </ul>

<sup>16</sup> Government Emergency Ordinance No. 134/2006

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	If yes, how is independence assured?
Bosnia & Herzegovina	Yes. Communications Regulatory Agency (RAK)	According to the Law on Communications, chapter IX <ul style="list-style-type: none"> <li>• RAK is functionally independent and non-profit making institution with the status of a legal person</li> <li>• Self-financed, annual budget approved by the Council of Ministers</li> <li>• RAK Council is nominated by Council of Ministers and approved by Parliament for a 4-year period</li> <li>• Only Parliament can dismiss RAK Council</li> <li>• Director General nominated by RAK Council and approved by Council of Ministers for a 4-year period</li> <li>• Only Council of Ministers can dismiss Director General under defined conditions</li> </ul>
Bulgaria	Yes. Communications Regulation Commission (CRC)	According to the Electronic Communications Law, articles 21-28 <ul style="list-style-type: none"> <li>• CRC is a separate legal entity</li> <li>• CRC Chairman appointed and dismissed by Council of Ministers</li> <li>• CRC Deputy chairman and two CRC members appointed and dismissed by National Assembly</li> <li>• One CRC member appointed and dismissed by the President of Bulgaria</li> </ul>
Croatia	Yes. Croatian Telecommunications Agency (HAT)	According to the Law on Telecommunications, article 8 <ul style="list-style-type: none"> <li>• HAT is autonomous, non-profit, and independent legal entity</li> <li>• HAT Council is appointed by Parliament for a 5-year term and can only be dismissed by Parliament under certain pre-defined circumstances</li> <li>• HAT Director is appointed for a 4-year term by the Minister of Sea, Transport and Development</li> <li>• HAT Director can be dismissed by the Minister only under circumstances defined in the law, or upon a proposal by HAT Council</li> </ul>
Montenegro	Yes. Agency for Telecommunications and postal services	According to the Telecommunications Law, articles 7-11 <ul style="list-style-type: none"> <li>• Agency has status of an independent legal entity</li> <li>• Agency Director appointed by the government for a 4-year term and can be dismissed by the government only under circumstances defined by the Law</li> <li>• Conflict of interest forbidden by law</li> <li>• Agency is fully self-financed</li> <li>• Empowered to adopt regulations without government approval</li> </ul>
Romania	Yes. National Regulatory Authority for Communications and Information Technology (ANRCTI)	According to the Government Emergency Ordinances No. 134/2006 and No. 79/2002 <ul style="list-style-type: none"> <li>• ANRCTI is organised and operates under the coordination of the Prime Minister</li> <li>• ANRCTI President and two vice-presidents are appointed by the Prime Minister for a 5-year term</li> <li>• ANRCTI president and vice-presidents may be dismissed by the Prime Minister for violation of the provisions of the Government Emergency Ordinance No. 79/2002, for criminal conviction, or due to inability to carry out their attributions for more than 120 consecutive days</li> <li>• ANRCTI is fully self-financed</li> <li>• ANRCTI must exercise its powers in a transparent and impartial way</li> <li>• Conflict of interest forbidden by the Law</li> </ul>

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	If yes, how is independence assured?
Serbia (including Kosovo <sup>1</sup> )		
<i>Serbia</i>	Yes. Republic Telecommunications Agency (RATEL)	<p>According to the Telecommunications Law, articles 8-15</p> <ul style="list-style-type: none"> <li>• RATEL has status of independent legal entity</li> <li>• Managing Board members appointed for a 5-year term and dismissed by the Parliament upon recommendation of the government</li> <li>• Dismissal is only possible due to criminal conviction or other circumstances defined by the Law</li> <li>• RATEL is fully self-financed</li> <li>• Conflict of interest forbidden by the Law</li> </ul>
<i>Kosovo</i>	Yes. Telecommunications Regulatory Authority (TRA)	<p>Defined by the provisions of the Telecommunications Law (UNMIK/REG 2003/16), sections 4-5</p> <ul style="list-style-type: none"> <li>• Status of independent legal entity</li> <li>• Self-financing, annual budget approval by the Assembly</li> <li>• TRA Board Members appointed for a 5-year term by the Assembly upon recommendation by the Minister of the Transport and Telecommunications and proposal by the government</li> <li>• 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</li> <li>• Authorised to issue regulations and instruction for the implementation of the present Law</li> </ul>
The former Yugoslav Republic of Macedonia	Yes. Agency for Electronic Communications (AEC)	<p>Under the Electronic Communications Law,</p> <ul style="list-style-type: none"> <li>• AEC is an independent, self-financed, legal entity</li> <li>• AEC Commission approved by the Parliament for a 5-year term. It can only be dismissed by Parliament on the basis of conditions defined by law</li> <li>• Director of the Agency is selected by the Commission on the basis of a public tender for a 5-year term. The Director can be dismissed by the Commission on the basis of conditions defined by law</li> </ul>
Turkey	Yes. Telecommunications Authority (TA)	<ul style="list-style-type: none"> <li>• The TA is an independent legal entity</li> <li>• Board members are appointed by the Council of Ministers, with the approval of the President of the Republic, for a period of five years and may be re-elected</li> <li>• Board members can only be dismissed before the expiration of a term by the Council of Ministers for inability to work due to serious disease or illness, professional misconduct or conviction of criminal offences</li> <li>• Self-financed</li> </ul>

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Table 29 - NRA separation from ownership of telecommunications operators

Notes:

Albania: According to Law No. 9584 of July 17, 2006 on “salaries, honoraries and structures of independent constitutional institutions and other independent institutions created by law”, the budget of organisations such as TRE will be defined in the annual budget law adopted by Parliament. Previously such organisations were self-financed and their budgets and structures were simply approved by the government.

### 3. NRA staffing

Table 30 below presents the number of the NRA staff in 2006 and 2007. In addition to the total number of employees, it shows separately the number of employees involved with the regulatory and frequency monitoring tasks. This is done in order to illustrate to what extent the NRA organisation has sufficient internal competences to carry out its regulatory activities. The staff involved with the regulatory tasks are professional employees, typically lawyers and economists, dealing with licensing and authorisations, assignment of scarce resources, market analysis, regulatory obligations and competitive safeguards, dispute resolution in commercial disputes and consumer complaints.

It is difficult to make a judgment of what is a reasonable or adequate level of staffing. A comprehensive assessment would require considering specific national and institutional characteristics, where, for example, use of external consultants is one of such factors. Another important factor is the capacity of the NRA to retain their qualified staff, and this could be a potential problem in countries where salaries of the NRA employees are subject to certain restrictions (for example, such as specific levels defined for civil servants).

To a certain extent, a majority of the NRAs in the region are still relatively new organisations facing common problems related to organisation building, staff retention and capacity strengthening. At the same time, some of them have been more successful in building up a professional organisation than others. The example of the Romanian regulator is particularly encouraging. At the same time, the lack of professional staff resources appears to be rather critical in the former Yugoslav Republic of Macedonia, where there are only four staff members dealing with regulatory tasks.

Country	Employees of NRAs			Employees handling telecoms regulatory tasks	Employees handling radio frequency monitoring tasks
	1.1.2006	Status 1.7.2006	Status 1.7.2007	1.7.2007	1.7.2007
Albania	39	39	52	19	4
Bosnia & Herzegovina	86	89	97	11	20
Bulgaria	219	203	204	77	35
Croatia	80	78	113	45	17
Montenegro	37	37	42	12	13
Romania	200	219	691	143	42
Serbia (including Kosovo <sup>1</sup> )					
<i>Serbia</i>	15	54	77	37	10
<i>Kosovo</i>	30	31	30	11	4
The former Yugoslav Republic of Macedonia	95	95	95	4	12
Turkey	451	536	549	119	22
1) under UNSCR 1244					

Table 30 - Employees of NRAs and staff directly handling telecommunications regulatory tasks

Note:

Romania: On April 23, 2007 ANRCTI took over the responsibilities of the Inspectorate General for Communications and Information Technology (IGCTI) for radio-communications, audio-visual communications, radio and electronic communications terminal equipment. IGCTI was abolished and ANRCTI took over the budget, the personnel, as well as the rights and obligations of the former IGCTI.

Table 31 below presents information on the operational budgets of the NRAs for 2006 and 2007 in thousands of euro, 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.

The EU regulatory framework assumes that the NRAs are self-financing and that their fees only cover their administrative costs, except when allocating limited resources. Furthermore, under the EU 2003 acquis, the general authorisation regime applies to all activities in 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 at a modest level.

Because most of the entities in the region still have authorisation regimes based on individual licences, authorisation fees are a significant part of the NRA revenue. This could be an indication that authorisation fees are often set at a high level that, potentially, may constitute a barrier to market entry.

The entities that rely on one-off authorisations fees for a significant part of their revenue are Albania, Bosnia & Herzegovina, and Kosovo. A financing approach more in line with the EU regulatory framework is when an NRA is mainly financed on revenue related fees.

Country	Operational budget for 2006 in thousand euro	Source of financing of 2007 budget	Operational budget for 2007 in thousand euro
Albania	1,429	<ul style="list-style-type: none"> <li>• Authorisation fees (30.8%)</li> <li>• Frequency fees (68.8%)</li> <li>• Numbering fees: 0.2%</li> <li>• Others: 0.2%</li> </ul>	1,572
Bosnia & Herzegovina	2,556	<ul style="list-style-type: none"> <li>• One-off and annual authorisation fees (63%)</li> <li>• Numbering fees (29%)</li> <li>• Frequency fees (8%)</li> </ul>	2,500 (estimate)
Bulgaria	4,946	<ul style="list-style-type: none"> <li>• One-off authorisation fees (1.4%)</li> <li>• Revenue related monitoring fees (18.7%)</li> <li>• Frequency fees (61.8%)</li> <li>• Numbering fees (17.2%)</li> <li>• Others (0.9%)</li> </ul>	5,211
Croatia	8,656	<ul style="list-style-type: none"> <li>• Revenue related fees (37%)</li> <li>• Numbering fees (42%)</li> <li>• Frequency fees (16%)</li> <li>• Other (3%)</li> </ul>	9,418
Montenegro	1,800	<ul style="list-style-type: none"> <li>• Revenue related fees (98%)</li> <li>• Frequency fees (2%)</li> </ul>	2,000 (estimate)
Romania	6,163	<ul style="list-style-type: none"> <li>• Monitoring and frequency fees (99.97%)</li> <li>• Other revenues (0.03%)</li> </ul>	51,233
Serbia (including Kosovo <sup>1</sup> )			
<i>Serbia</i>	5,319	<ul style="list-style-type: none"> <li>• Annual authorisation fees (41%)</li> <li>• Frequency fees (46%)</li> <li>• Other types of fees (13%)</li> </ul>	8,241
<i>Kosovo</i>	794	<ul style="list-style-type: none"> <li>• Authorisation fees</li> <li>• Numbering fees</li> <li>• Frequency fees</li> </ul>	519

Country	Operational budget for 2006 in thousand euro	Source of financing of 2007 budget	Operational budget for 2007 in thousand euro
The former Yugoslav Republic of Macedonia	4,114	<ul style="list-style-type: none"> <li>• Frequency fees (52%)</li> <li>• Supervision fees (19%)</li> <li>• Numbering fees (18%)</li> <li>• Concession fees (11%)</li> </ul>	7,424
Turkey	46,242	<ul style="list-style-type: none"> <li>• Frequency fees (72%)</li> <li>• Radio device certificate fees (17%)</li> <li>• Administrative fees (7%)</li> <li>• Other (4%)</li> </ul>	55,763

1) under UNSCR 1244

Table 31 - Operational budget of NRAs for 2005 and sources of financing

Notes:

Romania: On April 23, 2007 ANRCTI took over the responsibilities of IGCTI for radio-communications, audio-visual communications, radio and electronic communications terminal equipment. IGCTI was abolished and ANRCTI took over the budget, the personnel, as well as the rights and obligations of the former IGCTI. The ANRCTI budget does not include the universal service fund.

Serbia: One-off authorisation fees from licensing activities are paid directly to the government budget.

Turkey: The 2006 budget shows the actual operational budget on December 31, 2006. The 2007 budget shows the actual operational budget on July 31, 2007.

#### 4. Dispute resolution

Article 20 of the Framework Directive defines 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, with an exception in some special circumstances.

Table 32 below shows whether the NRAs are authorised to resolve commercial disputes and describes the applicable procedures and the sanctions available at the NRA's disposal to ensure that its decisions are respected. At least formally, all entities have a legal basis that enables NRAs to adopt binding decisions in disputes and defines reasonably short timeframes for dispute resolution. However, the capacity of the NRA to enforce its decisions is an aspect that is more difficult to assess.

Country	Type of commercial disputes that can be resolved by NRAs	Dispute resolution procedures and deadlines	Sanctions
Albania	<p>Law No. 8618 on Telecommunications, article 43 and article 52(11):</p> <ul style="list-style-type: none"> <li>• failure to reach an interconnection agreement;</li> <li>• disputes on numbering.</li> </ul> <p>NRA may interfere 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.</p>	<p>Law No. 8618 on Telecommunications, article 43:</p> <ul style="list-style-type: none"> <li>• NRA involvement after 2 months of failed negotiations</li> <li>• NRA issues a binding order to resolve the dispute within one month after a failure to reach agreement has been filed at TRE</li> </ul>	<p>Law on Telecommunications, articles 94-96:</p> <ul style="list-style-type: none"> <li>• fines</li> </ul>

Country	Type of commercial disputes that can be resolved by NRAs	Dispute resolution procedures and deadlines	Sanctions
Bosnia & Herzegovina	Failure to reach an interconnection agreement	Law on Communications, article 16: <ul style="list-style-type: none"> <li>• NRA intervention after 6 weeks of failed negotiations at the request of the involved operators</li> <li>• NRA issues binding decision within 6 (in exceptional cases 10) days from receiving the request</li> </ul>	Law on Communications, article 46: <ul style="list-style-type: none"> <li>• Oral and written warnings</li> <li>• Fines up to €75,000 or €150,000 if repeated violation</li> <li>• Requirement to stop the activities for a period of up to 3 months</li> <li>• Revocation of a licence</li> </ul>
Bulgaria	Electronic Communications Law, articles 54 – 62: <ul style="list-style-type: none"> <li>• failure to reach an interconnection agreement, network access or leased lines agreement;</li> <li>• failure to reach an agreement on shared use of facilities</li> </ul>	Electronic Communications Law, articles 54 – 62: Interested parties may <ul style="list-style-type: none"> <li>• ask CRC for binding instructions;</li> <li>• ask for CRC mediation in reaching the agreement</li> </ul> The following procedures apply: <ul style="list-style-type: none"> <li>• NRA involvement after 2 months of failed negotiations on written request of the interested party</li> <li>• Special commission appointed by NRA acts as a mediator in the dispute</li> <li>• If agreement is not reached within further 30 days, on request of the parties involved in the dispute NRA can issue binding instructions, at latest within 4 months from receiving the request.</li> </ul>	<ul style="list-style-type: none"> <li>• Financial penalties</li> <li>• Requirement to stop the activities</li> </ul>
Croatia	<ul style="list-style-type: none"> <li>• Disputes between operators and between operators and providers of services</li> <li>• Disputes between providers and end-users, except those for payment of debts</li> </ul>	Telecommunications Law, article 56: <ul style="list-style-type: none"> <li>• NRA intervention after 45 days of unsuccessful negotiations on request of the involved operators</li> <li>• NRA issues binding decision within 45 (in exceptional cases 75) days from receiving the request</li> <li>• 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.</li> </ul>	Telecommunications Law, articles 116a, 117: <ul style="list-style-type: none"> <li>• Written warning</li> <li>• Administrative fines, from €690 to €69,000</li> <li>• Order to stop activities</li> </ul>

Country	Type of commercial disputes that can be resolved by NRAs	Dispute resolution procedures and deadlines	Sanctions
Montenegro	Telecommunication Law, article 12 <ul style="list-style-type: none"> <li>• Disputes between operators about the interconnection and provision of leased lines</li> <li>• Disputes between service providers and end users</li> </ul>	Telecommunication Law, articles 33, 37 and 60: <ul style="list-style-type: none"> <li>• NRA intervention after 90 days of unsuccessful negotiations on request of the involved operators</li> <li>• NRA issues decision within 60 days (in the case of leased lines dispute, 30 days) from receiving the request</li> <li>• If the dispute is not resolved by NRA, operators may submit it to the administrative court</li> </ul>	Telecommunication Law, articles 68-70: <ul style="list-style-type: none"> <li>• Fines</li> <li>• Order to stop activities</li> </ul>
Romania	<ul style="list-style-type: none"> <li>• Disputes between providers of electronic communications networks and services</li> <li>• Disputes between end users and service providers on the enforcement of the provisions of Law No. 304/2003 on the universal service and users' rights</li> </ul>	NRA may settle disputes applying two procedures: <ol style="list-style-type: none"> <li>1) Mediation procedure, shall be completed within 30 days</li> <li>2) Contentious procedure, can be used directly, or after failed mediation:               <ul style="list-style-type: none"> <li>• Appointment of a commission to deal with the case</li> <li>• Preliminary solution allowing 15 days for parties to comment</li> <li>• NRA decision within 4 months from the start of the settlement procedure</li> <li>• Decision can be appealed within 30 days to the Court of Appeal</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>• Administrative fines</li> </ul>
Serbia (including Kosovo <sup>1</sup> )			
<i>Serbia</i>	Telecommunications Law, article 9: <ul style="list-style-type: none"> <li>• Disputes between telecommunications operators about interconnection, special access and provision of leased lines</li> <li>• Disputes between operators and end users</li> </ul>	Telecommunications Law, article 47: <ul style="list-style-type: none"> <li>• NRA intervention after 3 months of unsuccessful negotiations on request of the involved operators</li> <li>• NRA issues binding decision within 60 days from receiving the request</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative fines from €4,133 (CSD 300,000) to €41,133 (CSD 3,000,000)</li> </ul>

Country	Type of commercial disputes that can be resolved by NRAs	Dispute resolution procedures and deadlines	Sanctions
Kosovo	Law on Telecommunication (UNMIK/REG 2003/16), section 11(2): <ul style="list-style-type: none"> <li>• Disputes involving service providers, end users, owners of land and facilities</li> </ul>	UNMIK/REG 2003/16, section 11: <ul style="list-style-type: none"> <li>• NRA may undertake dispute resolution procedure either on request of one of the parties or on its own motion</li> <li>• NRA issues binding decision within 6 weeks from receiving the request</li> <li>• Service provider must comply within 30 days</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative fines according to Administrative Instruction No. 2004/3 on telecommunications fees and fines by the Ministry of Transport and Telecommunication</li> </ul>
The former Yugoslav Republic of Macedonia	Disputes involving operators of communications networks and providers of communications services	Electronic Communications Act, article 122: <ul style="list-style-type: none"> <li>• NRA can resolve conflicts on the request of the parties, or take action on its own</li> <li>• Maximum time for NRA to reach a decision is 4 months</li> <li>• Disputes can be settled applying mediation or arbitration procedure</li> <li>• Mediator chosen by the parties or by NRA within 7 days</li> <li>• Arbitrators appointed by NRA Commission, the Minister and other interested parties for 5 years.</li> <li>• Result of arbitration is binding, final and enforceable</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative fines</li> <li>• Temporary or permanent ban on operations</li> </ul>
Turkey	Access and interconnection	<ul style="list-style-type: none"> <li>• Parties may call in the NRA after 3 months of failed negotiations</li> <li>• After calling in the NRA, the parties still have 6 weeks (extendable to 10) to reach an agreement</li> <li>• NRA decides within 4 months (extendable to 6)</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative fines up to 3% of turnover</li> </ul>
	Roaming Roaming Ordinance of March 8, 2002	<ul style="list-style-type: none"> <li>• NRA has 15 days to decide if a request is accepted or not</li> <li>• NRA expects parties to reach agreement in 4 weeks</li> <li>• If agreement is not reached, NRA will decide</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative fines minimum 1% maximum 3% of turnover</li> </ul>

1) under UNSCR 1244

Table 32 - NRA powers in dispute resolution

## 5. 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 appeal body that is independent of the parties involved. Therefore, this provision sets out a similar requirement of independence for the appeal body as exists for the NRA itself.

In addition, the article sets out several requirements for the appeal mechanisms:

- The appeal body may be a court, but it can also be a non-judicial body. In this case, there is a requirement for a second appeal instance by a court or a tribunal.
- The NRA's decision shall stand during the appeal process unless the appeal body decides otherwise.
- The appeal body must be able to take the merits of the case into consideration and not only rule on procedural grounds.

Table 33 provides an overview of the national appeal mechanisms against NRA decisions.

In most entities, appeals against the NRA's decisions can be submitted directly to the national court system, with the exception of Albania, Bosnia & Herzegovina, and the former Yugoslav Republic of Macedonia, where the first appeal instance is a non-judicial administrative body. In Albania, depending on the case, this could be the Ministry or the NRA Board, while in Bosnia & Herzegovina and the former Yugoslav Republic of Macedonia it is the NRA Council.

In Bosnia & Herzegovina, Bulgaria, Montenegro, and the former Yugoslav Republic of Macedonia there are also restrictions on the appeal body's capacity to rule on the merits of the case. However, in practice, even where the appeal body is authorised to rule on the merits of a case and not just on the correct application of the law, the actual execution of these powers would often depend on the expertise level of the appeal body.

In Albania, Bulgaria, Romania, and Kosovo, the appeal body may suspend the NRA's decision pending the outcome of the appeal. In Bulgaria, Serbia, Kosovo, and the former Yugoslav Republic there are also certain restrictions to the third party rights of appeal.

Country	Appeal body	NRA decision stands pending appeal decision?	Can appeal body rule on merits of a case?	Third party rights of appeal?
Albania	TRE decisions that nullify or amend the terms and conditions of licences: <b>First instance:</b> Minister of Public Works, Transport and Telecommunications <b>Second instance:</b> First instance Albanian Courts of First Instance Complaints on fines issued by inspectors: <b>First instance:</b> Board of TRE <b>Second instance:</b> First instance Albanian Courts 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
Bosnia & Herzegovina	<b>First instance:</b> Council of the Agency <b>Second instance:</b> State Court of Bosnia & Herzegovina	Yes	No, only on the correct application of the law	Yes, if it can prove that it has a legal interest in the case

Country	Appeal body	NRA decision stands pending appeal decision?	Can appeal body rule on merits of a case?	Third party rights of appeal?
Bulgaria	Supreme Administrative Court	<p>Yes.</p> <p>The following CRC decisions shall not be suspended by appeals, unless a court rules otherwise (article 35, §6 of the Electronic Communications Law):</p> <ul style="list-style-type: none"> <li>• requests for submission of information for market analysis;</li> <li>• decisions on market analysis, SMP designations and imposition of regulatory obligations;</li> <li>• resolutions related to implementation of specific obligations, imposed on SMP operators;</li> <li>• decisions on commercial disputes</li> </ul>	<p>No, the appeal body can only judge on the correct application of the law.</p> <p>However, the court decision may contain reasons and instructions upon the merits of the case, which CRC should follow.</p>	<p>Only directly involved parties can appeal.</p> <p>If a General Administrative Act is issued everyone who is affected can appeal.</p>
Croatia	Administrative Court	<p>Yes</p> <p>According to the Telecommunications Law (Article 13, §§3-6), and the Law on general administrative procedure.</p> <p>The Agency may also decide to suspend the decision during the appeal under specific conditions but only if a party has filed an appeal with the administrative court in due time and the other party's rights are not affected by the suspension.</p>	Yes	Yes, if it can prove that it has a legal interest in the case.
Montenegro	Supreme Administrative Court	Yes	No, the Supreme Administrative Court can only judge on the correct application of the law.	Yes, but only if it can prove that it has a legal interest in the case.

Country	Appeal body	NRA decision stands pending appeal decision?	Can appeal body rule on merits of a case?	Third party rights of appeal?
Romania	<b>First instance:</b> Bucharest Court of Appeal <b>Second instance:</b> High Court of Cassation and Justice	The Court may decide to suspend the NRA decision if certain conditions are met.	Yes	Yes
Serbia (including Kosovo <sup>1</sup> )				
<i>Serbia</i>	Supreme Court	Yes	Yes	No
<i>Kosovo</i>	Kosovo Courts Supreme Court of Kosova	The Court may decide to suspend the NRA decision	Yes, the appeal body can rule both on the merits of the case and on the correct application of the law.	No, third parties without legal interest in the case do not have the right of appeal
The former Yugoslav Republic of Macedonia	<b>First instance:</b> Commission of the Agency for electronic communications <b>Second instance:</b> Administrative Court (according to the Law on Administrative Disputes of May 19, 2006, procedures to be applied from May 28, 2007)	Yes	No, the appeal body can only judge on the correct application of the law.	No, only a directly involved party can appeal
Turkey	<b>First instance:</b> District administrative courts <b>Second instance:</b> Council of State	Yes	Yes. The appeal body can judge both on the procedure and the merits of the NRA decision.	Yes, any party affected by an NRA decision has the right of appeal

1) under UNSCR 1244

Table 33 - Appeal procedures against NRA decisions

Notes:

Kosovo: Kosovo has a special form of appeal procedure in addition to the one presented above. Within three months from the final decision, which may be the NRA's decision or the appeal body's decision, any party, including those not affected by the decision, can make a request to the Public Prosecutor. He may accept the request, and then start an appeal, or he may reject it. Whichever way, he must take a decision within one month of receiving the request. The Public Prosecutor may also start an appeal, without any party making a request. This procedure is known as the "Request for Defending the Legality" and presents a legal solution to a binding, but illegal decision made by the court. In such a case, the Public Prosecutor must take action within three months. This procedure was started in April 2005 for a dispute about the validity of the second GSM licence issued by the NRA.

## 6. Frequency management

Table 34 below provides information on which regulatory bodies are responsible for:

- frequency allocation – which includes the decision on the national frequency plan; and
- frequency assignments – which are the decisions on who is licensed to use frequencies in the national frequency plan. Frequencies for the military sector are normally decided outside this framework.

In Bosnia & Herzegovina and Turkey, the NRAs are responsible for frequency allocation and frequency assignment. In other entities, frequency allocation is carried out by the government or responsible ministry, while the NRA is responsible for frequency assignments. In Albania, Montenegro, and Turkey, frequency assignment tasks are further divided, with the NRA being responsible for spectrum assignments for telecommunications and the broadcasting authority is

responsible for frequency assignments for broadcasters. In Kosovo, UNMIK still plays an important role in the allocation and assignment of frequency resources.

Country	Frequency allocation	Frequency assignment	Legal basis
Albania	Council of Ministers	<ul style="list-style-type: none"> <li>Telecommunication Regulations Entity (TRE) – for telecommunications</li> <li>TRE also allocates the block of broadcasting frequencies to National Council of Radio and Television (NCRT)</li> <li>NCRT assigns broadcasting spectrum to individual broadcasters</li> </ul>	<p>Law on Telecommunications No. 8618 of June 4, 2000, article 70</p> <p>National plan of Radio frequency (PKRF) is approved by the Government of Albania, (Decision No. 379 of May 31, 2001) amended by the Council of Ministers, (Decision No. 123 of March 2, 2006)</p>
Bosnia & Herzegovina	Communications Regulatory Agency (RAK)	RAK	Law on Communications of 2002, Articles 30, 31, 32
Bulgaria	National Radio Frequency Spectrum Council (CNRFS) with the Council of Ministers	Communications Regulation Commission (CRC)	Electronic Communications Law, articles 9-14 and 32
Croatia	Ministry of the Sea, Tourism, Transport and Development	Croatian Telecommunications Agency (HAT)	Law on Telecommunications, articles 76 and 84
Montenegro	Government of Montenegro (on the proposal of the NRA to the Ministry of Maritime affairs, Transportation and Telecommunications of the Republic of Montenegro )	<ul style="list-style-type: none"> <li>Agency for telecommunications of the Republic of Montenegro – for telecommunications</li> <li>Broadcasting Agency – for broadcasting</li> </ul>	<p>Telecommunications Law, article 12 (9) (Official Gazette № 59/2000)</p> <p>Broadcasting Law (Official Gazette № 51/2002).</p>
Romania	The Ministry of Communications and Information Technology	ANRCTI	<p>Article 8 para. (1), article 14 par. (1) of the Government Emergency Ordinance No. 79/2002</p> <p>Article 5 para. (1) of the Government Emergency Ordinance no. 25/2007</p>
Serbia (including Kosovo <sup>1</sup> )			
<i>Serbia</i>	Ministry of Telecommunications and Information Society decides on frequency allocation plan and adopts frequency assignment plan (on the proposal of RATEL)	Republic Telecommunications Agency (RATEL)	Telecommunication Law (Official Gazette of Republic of Serbia, No 44/03) and Frequency Allocation Plan (Official Gazette of Republic of Serbia, No 112/04)
<i>Kosovo</i>	UNMIK (FMO - Frequency Management Office)	<ul style="list-style-type: none"> <li>TRA and FMO – for telecommunications</li> <li>TRA in coordination with Independent Media Commission (IMC) – for broadcasting</li> </ul>	Law on Telecommunications (UNMIK/REG 2003/16), Articles 22 and 36
The former Yugoslav Republic of Macedonia	Agency for electronic communications	Agency for electronic communications	Law on electronic communications of March 2005

Country	Frequency allocation	Frequency assignment	Legal basis
Turkey	Telecommunications Authority	<ul style="list-style-type: none"> <li>• Telecommunications Authority – for telecommunications</li> <li>• Radio and Television Supreme Council (RTSC) – for broadcasting</li> </ul>	Wireless Law No. 2813, Articles 9 and 11 Telegram and Telephone Law No. 406, articles 2-3

1) under UNSCR 1244

Table 34 - Frequency allocation and assignment

## 7. Regulatory framework for broadcasting networks

The EU 2003 acquis has 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 and a single regulator.

In this context, two considerations are particularly important when deciding on a suitable regulatory framework for spectrum assignments used by broadcasting and electronic communications networks.

- Over the next few years, the broadcasting industry will phase out analogue transmission in favour of digital technologies. This will release significant amounts of radio frequency spectrum, which can then be used for other purposes. The determination of the frequency allocation that best serves the public interest requires a clear and transparent spectrum policy that takes into account the interests of all spectrum users.
- Digital broadcasting transmission technologies increasingly allow the capacity available to broadcasting networks to be used for non-broadcasting applications. There is a possibility that frequency licence conditions that are currently granted for broadcasting networks may focus too narrowly on broadcasting objectives and therefore restrict these networks from participation in other markets. This may pose a potential threat to efficient radio frequency usage.

Most of the EU Member States, with few exceptions, have decided to have a single regulatory authority responsible for all types of spectrum assignments available for civil purposes. The relative priorities of broadcasting, electronic communications, and other uses of radio frequencies are normally determined at a relatively high political level through the adoption of the national frequency plan.

As shown in Table 34, spectrum allocation is a centralised function in all entities carried out by the same regulatory body, while the situation may differ for spectrum assignments. Table 35 shows whether the spectrum assignments for broadcasting networks are covered by the same regulatory framework as electronic communications and, in particular, it lists:

- 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.

All entities have established a separate broadcasting authority responsible for licensing broadcasters and content-related matters, except for Bosnia & Herzegovina where the Communications Regulatory Authority also acts as a broadcasting content regulator. A proposal to create a similar converged regulator is also being discussed in the former Yugoslav Republic of Macedonia. Spectrum assignments for broadcasting in most entities are carried out by the same authority as for telecommunications, with the exception of Albania, Montenegro, Kosovo,

and Turkey where assigning spectrum to broadcasters is also a separate responsibility of the broadcasting authorities.

Country	Broadcasting authority responsible for content issues	Legal basis	Frequency assignments carried out by the same authority for broadcasting as for telecommunications?
Albania	National Council of Radio and Television (KKRT)	Law No. 8410 of September 30, 1998 on Radio and Television (with amendments)	No, National Council of Radio and Television assigns spectrum to broadcasters
Bosnia & Herzegovina	Communications Regulatory Agency (RAK)	Law on Communications, Official Gazette of BiH, No. 33/02, November 12, 2002	Yes, by RAK
Bulgaria	Council for Electronic Media	Law on Radio and Television of November 1998 (with amendments)	Yes, by CRC
Croatia	Council for Electronic Media	Law on Electronic Media, Official Gazette No. 122, July 30, 2003	Yes, by HAT
Montenegro	Broadcasting Agency (ARD)	Broadcasting Law of April 2004	No, the Broadcasting Agency assigns spectrum to broadcasters.
Romania	National Audio-visual Council (CNA)	Law No. 504 of July 11, 2002 on Radio and Television Broadcasting	Yes, by ANRCTI
Serbia (including Kosovo <sup>1</sup> )			
<i>Serbia</i>	Republican Broadcasting Agency (RRA)	Broadcasting Law of July 2002 (with amendments)	Yes, by RATEL
<i>Kosovo</i>	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.
The former Yugoslav Republic of Macedonia	Broadcasting Council	Law on Broadcasting Activity	Yes, by AEC
Turkey	Radio and Television Supreme Council (RTSC)	Law No. 3984 on the foundation and broadcast of Radio and Television of April 13, 1994	No, RTSC assigns spectrum to broadcasters

1) under UNSCR 1244

Table 35 - Regulatory treatment of broadcasting networks

Notes:

Kosovo: According to the Law on Independent Media Commission and Broadcasting (UNMIK Reg. 2005/34): "IMC is the only authority in the territory of Kosovo responsible for managing, regulating, and assigning resources from the broadcast frequency spectrum, issuance of licences and collection of duties for usage of broadcasting frequencies. The authorities and competencies of the TRA shall not encompass Broadcasting or Broadcasters as defined in Article 1 of the Law. The office of the IMC Chief Executive shall coordinate the management of the Broadcast Frequency Spectrum with the TRA".

The former Yugoslav Republic of Macedonia: In spring 2007, The government started to work on a set of amendments to the Law on Electronic Communications proposing *inter alia* to create a single regulatory body for electronic communications, broadcasting, and the postal sector.

## 8. Cooperation between NRA and competition authority

The EU 2003 acquis for electronic communications is intended to apply during the intermediary phase on the transition from a regulated monopoly to normal competition, governed only by general competition law. During this phase, sector specific ex ante regulation and competition law serve as complementary instruments in achieving their respective policy objectives in the electronic communications sector and in dealing with a 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 are insufficient and should be rolled back when it is no longer needed.

Furthermore, the use of sector specific regulation, when it is found to be justified, relies extensively on the competition law principles in defining the relevant markets that are susceptible to ex ante regulation, in assessing market dominance and in formulating remedies to address anticipated competition law breaches.

Therefore, the EU 2003 regulatory framework for electronic communications represents an important convergence of competition law and sector specific ex ante regulation. In its practical application, NRAs are advised to consult with their national competition authority (NCA) 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 National Competition Authorities (NCAs). In a practical application, it is 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 36 examines the degree of cooperation established between NRAs and NCAs. In most of the SEE entities, such cooperation is envisaged in the primary law, with exceptions in Montenegro and Kosovo where no NCAs have been established yet, and Bosnia and Herzegovina and Serbia where NCAs are still relatively new institutions. At the same time, formal cooperation agreements between the NRA and the NCA have been established in Bulgaria, Croatia, Romania, and the former Yugoslav Republic of Macedonia.

Country	Competition authority	Formal agreement between NRA and Competition Authority
Albania	The Competition Authority was created in February 2004, under the Law No. 9121 of July 28, 2003 on Protection of Competition. The Authority is responsible for competition in general, including the monitoring of competition in the electronic communications sector. It is composed of a Commission - a collegiate body of 5 members appointed by Parliament - and a Secretariat as an administrative and investigative body. At the same time, the Tirana District Court is also authorised to apply the competition rules.	TRE and the Competition Authority cooperate on specific topics. TRE and the Competition have signed a Memorandum of Understanding.
Bosnia & Herzegovina	Competition Council at the state level was established in May 2004. In addition, the Offices of Competition and Consumers Protection set up in the Federation of Bosnia & Herzegovina and in the Republika Srpska.	No
Bulgaria	Competition Protection Commission (CPC) is the national competition authority that monitors all sectors including electronic communications, according to the conditions of the Competition Protection Act.	On May 16, 2005 the CRC and the Commission on Protection of Competition (CPC) concluded an agreement on co-operation for matters that affect competition in the communications sector. Joint working group of CRC and CPC experts elaborates draft Methodology for market analyses under the EU 2003 framework.

Country	Competition authority	Formal agreement between NRA and Competition Authority
Croatia	Croatian Competition Agency (CCA)	<p>Yes</p> <p>On July 14, 2006 CCA and the Croatian Telecommunications Agency (HAT) concluded the Agreement on co-operation in the area of competition in the telecommunications market. Under the 2003 Telecommunications Act, particular activities about competition have been exempted from the jurisdiction of CCA. According to these rules, establishing the existence of a dominant position and its abuse in the telecommunications markets falls under the exclusive jurisdiction of HAT as a sector regulator, but the CCA, as a market regulator with a general jurisdiction, remains responsible for restrictive agreements between undertakings and control of concentrations in the telecommunications markets. The Agreement specifies methods of communication and coordination between the two authorities.</p>
Montenegro	<p>No such authority exists.</p> <p>The Agency for telecommunications also has the responsibility for protecting competition in the electronic communication sector.</p>	No
Romania	Competition Council	<p>On July 14, 2004 the ANRC (now ANRCTI) signed a Collaboration Protocol with the Competition Council.</p> <p>The document establishes the terms under which the institutions coordinate their efforts to promote competition in the electronic communications and postal sectors, as well as to protect end-user rights and interests. The two institutions develop a common annual action plan for competition in the electronic communications and postal services markets.</p>
Serbia (including Kosovo <sup>1</sup> )		
<i>Serbia</i>	<p>The Law on Protection of Competition (Official Gazette of RS, No. 79/05), establishes the Competition Commission as an independent competition authority.</p>	<p>There is no formal agreement between the NRA and the Competition Commission.</p> <p>On February 16, 2007 RATEL designated SBB, a cable network operator offering radio, TV and broadband Internet services as having SMP in the market for distribution of radio and TV programmes over the cable distribution network.</p> <p>In parallel, the Competition Commission issued a decision on the abuse of a dominant position by SBB in the market for cable TV services.</p>
<i>Kosovo</i>	<p>No such authority exists.</p> <p>Law on Competition No. 2004/36 (UNMIK Reg. 2004/44), article 20 (1) requires the establishment of “an independent competition regulatory body to be known as the Kosovo Competition Commission (KCC). The KCC shall have the responsibility and authority to enforce the competition law and to promote competition among undertakings and consumer welfare in Kosovo.”</p>	No

Country	Competition authority	Formal agreement between NRA and Competition Authority
The former Yugoslav Republic of Macedonia	Under the Law on Protection of Competition of January 11, 2005 the Commission for Protection of Competition was established on February 15, 2005.	Article 21 of the Law on Electronic communications states: <ul style="list-style-type: none"> <li>AEC and the Commission for Protection of Competition shall exchange data and information they need in exercising their responsibilities, where the scope of exchange of information shall be limited to data and information that is relevant and proportionate to the purpose for which they are exchanged.</li> <li>In the implementation of relevant market analysis and determination of significant market power under this Law, the Agency shall cooperate with the Commission for Protection of Competition.</li> </ul> In January 2007, AEC and the Commission for Protection of Competition concluded an cooperation agreement in the area of competition in the electronic communications market.
Turkey	In the SMP Ordinance, it is stated that TA takes the opinion of the Competition Authority for market analysis	Relationship between the Competition Authority and the Telecommunications Authority is set up on the basis of the Wireless Law No. 2813, (Article 7/m).

1) under UNSCR 1244

Table 36 - Cooperation between NRA and competition authority

#### D. Regulations – market access

The information in this chapter reflects the situation, as it existed on July 1, 2007, except where a different date is mentioned.

This chapter provides information on the liberalisation status and authorisation frameworks for the provision of public fixed telecommunications networks, voice telephony services, data services, and on the status of competition in the fixed and mobile markets.

##### 1. Market access

Table 37 below summarises the liberalisation status of public fixed telecommunications networks and services on the local, domestic long distance and international level. This table only addresses the legal framework enabling liberalisation, while its practical implementation could be assessed based on the actual number of licensed operators and the proportion of numbering resources shown, respectively, in Table 44 and Table 45 below.

In Albania, the amendments to the Telecommunications Law adopted in November 2006 completes the liberalisation process for fixed networks. Liberalisation in Albania was introduced gradually: starting with rural local networks in 1998, moving to domestic long distance networks in July 2003 and international networks in January 2005. However, in practice, competition has only emerged at the level of rural local networks, and no alternative fixed network operators have been licensed to supply long distance and international services in competition with the incumbent Altelecom. Prior to the November amendment, no licensing framework had been established for urban local networks. The amendments introduced a new concept of regional licences for rural, urban, and domestic long distance networks and effectively opens urban local networks for competition. The relevant implementing legislation was adopted by the NRA in April 2007.

Bosnia & Herzegovina liberalised local and domestic long distance services, as well as data services in 2002. International networks were opened for competition from January 1, 2006.

Bulgaria, Croatia, and Romania were the first SEE countries to introduce full liberalisation of local, domestic long distance, and international networks and services on January 1, 2003, followed by Montenegro – on January 1, 2004. However, the high Montenegrin licensing fees, for

the provision of international services in particular, constituted a de facto barrier to entry and were only reduced recently, in April 2007.

In Serbia, the market liberalisation was formally introduced by the Telecommunications Law of April 2003, but its actual implementation is delayed pending adoption of the enabling secondary legislation. Serbia has a significant tariff rebalancing problem that is not yet resolved. Therefore, the official policy document adopted by the government in October 2006 takes a cautious approach to the practical implementation of full liberalisation.

In Kosovo, the liberalisation of fixed networks and services was formally introduced by the Law on Telecommunications of May 12, 2003. However, the NRA has only recently completed the secondary legislation on authorisations that would allow market entry for alternative providers. Furthermore, the incumbent maintains exclusive control over access to international gateway facilities until December 31, 2007.

In the former Yugoslav Republic of Macedonia, liberalisation of public fixed telecommunications networks and services was originally foreseen from January 1, 2005 but its implementation was delayed until the second half of 2005 when the secondary legislation required under the Law of Electronic Communications of March 5, 2005 was finally adopted.

In Turkey, domestic long-distance and international networks were liberalised on January 1, 2004, and the liberalisation of local services was formally introduced in July 2005. However, in practice, the licensing framework for local telephone and data services was only adopted in August 2007. The NRA will be able to issue the first licences for local services through a tender procedure after the minimum licence fees have been determined by the government.

Country	Liberalisation status for fixed public telecommunications networks and services			
	Local	Domestic long distance	International	Comments
Albania	Rural local services liberalised from February 1998 Urban local services liberalised from April 2007, through a new concept of regional licensing.	Liberalised from July 2003	Liberalised from January 1, 2005	Law No. 8287 of February 18, 1998 liberalised rural local networks (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 completed liberalisation of local networks introducing a new concept of regional licensing for rural and urban local services and domestic long distance services. TRE adopted the respective implementing legislation on April 2, 2007.
Bosnia & Herzegovina	Liberalised from July 1, 2002	Liberalised from July 1, 2002	Liberalised from January 1, 2006	-

Country	Liberalisation status for fixed public telecommunications networks and services			
	Local	Domestic long distance	International	Comments
Bulgaria	Liberalised from January 1, 2003	Liberalised from January 1, 2003	Liberalised from January 1, 2003	Liberalisation introduced by transitional rules in the Telecommunications Act of 1998.
Croatia	Liberalised from January 1, 2003	Liberalised from January 1, 2003	Liberalised from January 1, 2003	-
Montenegro	Liberalised from January 1, 2004	Liberalised from January 1, 2004	Liberalised from January 1, 2004	Article 27, Telecommunications Law of 2000 (Official Gazette No. 59/2000)
Romania	Liberalised from January 1, 2003	Liberalised from January 1, 2003	Liberalised from January 1, 2003	-
Serbia (including Kosovo <sup>1</sup> )				
Serbia	Formally liberalised in 2003	Formally liberalised in 2003	Formally liberalised in 2003	Article 32, Telecommunication Law of April 2003, introduces liberalisation, but its implementation started in September 2005 with the establishment of RATEL, the NRA.
Kosovo	Formally liberalised in 2003	Formally liberalised in 2003	Provision of services formally liberalised in 2003 PTK maintains exclusive control over access to the international gateway facilities until December 31, 2007.	Licensing framework adopted in 2006
The former Yugoslav Republic of Macedonia	Liberalised in 2005	Liberalised in 2005	Liberalised in 2005	Liberalisation introduced by the Electronic Communications Law of March 5, 2005
Turkey	Formally liberalised from July 1, 2005 Licensing framework adopted on August 14, 2007	Liberalised from January 1, 2004	Liberalised from January 1, 2004	Telecommunications Act (Law No. 4502, Official Gazette January 29, 2000), Ordinance on Authorisations for Telecommunications Services and Infrastructure of August 2004 (with amendments)

1) under UNSCR 1244

Table 37 - Liberalisation of public fixed telecommunications networks and services

Table 38 addresses the liberalisation status of data networks and services, which are now open to competition in all SEE entities, although some question marks still exist for international data traffic. Furthermore, the liberalisation of data networks in most countries took place a few years before the fixed networks were opened for the competitive provision of voice telephone services.

In Bulgaria, liberalisation started in 1993, when the first individual licence for the operation of a public data communications network and the provision of data services was issued to a joint venture of BTC and Sprint International. The infrastructure was partly liberalised in 1993, removing restrictions on building new networks, subject to a refusal by the incumbent to provide the required transport facilities. Later on, several individual licences to provide data services were granted under the Telecommunications Act of 1998.

In Romania, data networks and services have been liberalised since 1992.

In Turkey, the provision of data services was liberalised on June 10, 1994 and the first licences were issued to service providers in March 2002 after the establishment of the NRA on January 27, 2002 under the Law No. 4502. However, the provision of data networks remained under the incumbent's monopoly until January 1, 2004.

Country	Liberalisation status for data networks and services		
	National	International	Comments
Albania	Liberalised from 1998	Liberalised from 1998	Article 4, Law No. 8287 of February 18, 1998
Bosnia & Herzegovina	Liberalised from July 1, 2002	Liberalised from July 1, 2002	-
Bulgaria	Liberalised from 1993	Liberalised from 1993	-
Croatia	Liberalised from 1999	Liberalised from 1999	-
Montenegro	Liberalised from January 1, 2004	Liberalised from January 1, 2004	Article 27, Telecommunications Law of 2000 (Official Gazette No. 59/2000)
Romania	Liberalised from 1992	Liberalised from 1992	-
Serbia (including Kosovo <sup>1</sup> )			
Serbia	Liberalised from April 2003	Liberalised from April 2003. Requirement to use the incumbent's network for international traffic until June 2005	Liberalisation introduced by Telecommunications Law of April 2003 Authorisation framework for ISPs adopted in June 2006. Authorisations for international data traffic have not been issued after June 2005.
Kosovo	Liberalised from May 2003	Liberalised from May 2003	First ISP authorisations issued to Durante (PTK subsidiary), Aponte, and Kites on May 18, 2005.
The former Yugoslav Republic of Macedonia	Liberalised from February 1998	Liberalised from February 1998 Requirement to use the incumbent's network for international traffic until April 2000	-
Turkey	Data services liberalised from June 10, 1994 Data networks – from January 1, 2004	Data services liberalised from June 10, 1994 Data networks – from January 1, 2004	-

1) under UNSCR 1244

Table 38 - Liberalisation of data networks and services

## 2. Authorisation framework for terrestrial services

Under the EU 2003 acquis, article 3 of the Authorisation Directive (2002/20/EC) establishes a general authorisation regime for the provision of electronic communications networks and services. Undertakings may be required to notify the intention to start supplying electronic communication networks or services and to provide the necessary information to allow the NRA to maintain a register or list of providers. However, there is no requirement to receive an explicit decision by the NRA before the start of activities. Individual authorisations (or rights of use) are only required in cases where operators will use scarce resources, such as frequencies or numbers.

Only Bulgaria, Romania and the former Yugoslav Republic of Macedonia have authorisation frameworks in place that are in line with the rules in the Authorisation Directive. The new Electronic Communications Act transposing the EU 2003 acquis into Bulgarian legislation came into force on May 26, 2007, but the implementing legislation still has to be adopted.

In all other countries, an individual or a class licence is required, with some variations depending on whether business activities involve the use of scarce resources, such as frequencies and numbers.

In Turkey, the licensing regime is the area that diverges the most from the EU regime. Individual licences are issued under four types of authorisations depending on the scope of activities. Each licence is limited to narrowly defined services or activities and, as a general rule, every service needs to be authorised by a separate licence and a single licence could not authorise more than one service.

Table 39 summarises the authorisation framework for the provision of public fixed telephony networks and services.

Country	Authorisation requirements for fixed telephony	
	Fixed networks	Telephony services
Albania	Individual licence	Individual licence
	Individual licences are classified in two categories: <ul style="list-style-type: none"> <li>• Category I - national fixed or mobile public telephony. The number of licences is decided by the government.</li> <li>• Category II - public telephony in rural areas, urban and interurban areas (covered by the new concept of regional licensing introduced in November 2006), paging, PMR/PAMR services (and other services that use frequencies).</li> </ul> General licences are issued for Internet services, data transmission services, value added services, public payphones (coins or prepaid cards), telecommunication service providers and other services not classified in individual licences (Law No. 8618 of June 14, 2000). Effectively, a 'general licence' is an individual authorisation issued by the NRA.	
Bosnia & Herzegovina	Individual licence	Individual licence
Bulgaria	General authorisation with notification	General authorisation with notification
Croatia	Individual licence	Individual licence
Montenegro	Individual licence	Individual licence
Romania	General authorisation with notification	General authorisation with notification
Serbia (including Kosovo <sup>1</sup> )		
Serbia	Individual licence	Individual licence
Kosovo	Individual licence	Individual licence
The former Yugoslav Republic of Macedonia	General authorisation with notification	General authorisation with notification

Country	Authorisation requirements for fixed telephony	
	Fixed networks	Telephony services
Turkey	Individual licence	Individual licence
	<p>Depending on the scope of telecommunications activities, there are four different types of authorisations issued by TA:</p> <ul style="list-style-type: none"> <li>• authorisation agreement – issued only to state-controlled operators;</li> <li>• concession agreement – issued, after a tender procedure, to a limited number of companies providing telecommunications services or operating telecommunications networks on a national level;</li> <li>• Type 1 telecommunications licence – issued, after a tender procedure, to a limited number of companies providing telecommunications services or operating telecommunications networks on a regional or local level;</li> <li>• Type 2 telecommunications licence – issued to companies providing telecommunications services or operating telecommunications networks, where the number of providers is not limited. This category includes long distance telephony services, cable TV, satellite, public phones, intelligent networks and value added services.</li> </ul> <p>Individual licences issued under each of the four types are limited to narrowly defined services or activities as set out in 14 annexes to the Ordinance on Authorisations.</p>	

1) under UNSCR 1244

Table 39 - Licensing requirements for public fixed telecommunications networks and services

Notes:

Albania: Under the Category II licences, operators are authorised to build, own and operate fixed public telephone networks. Since April 2007, more than five regional operators have been licensed in three different regions.

Montenegro: The licensing regime is defined in Article 3 in the Rulebook on issuing and registering general and individual licences (Official Gazette of the Republic of Montenegro, No. 08/2002).

Table 40 summarises the authorisation requirements for Internet service providers (ISPs), and where ISPs have the right to interconnection whether the call origination or call termination model is used for settlements between the incumbent operator and ISPs.

The call termination model, where the incumbent pays interconnection charges to the ISP for terminating Internet traffic and then bills the retail customer, prevails in Croatia and Kosovo, and has been proposed in Albania. In Bulgaria and Serbia, both call origination and call termination models are used. In Romania and Turkey, despite the ISP's right to interconnection, no interconnection agreements exist in practice between the incumbent and ISP. As a result, an alternative arrangement is used, where ISPs bill the end user for Internet access, while the incumbent bills separately for the line usage (including fixed charge and calling charge).

Country	Authorisation requirements for ISP	Interconnection	
		Right to interconnection	Call origination or termination
Albania	General (class) licence Internet licences issued by TRE are classified as: PoP, local, regional, national or backbone.	Yes	Call termination model proposed in the draft Interconnection Agreement that is under discussion.
Bosnia & Herzegovina	General (class) licence	Yes	Call origination
Bulgaria	General authorisation with notification	Yes	Both models are applicable, subject to commercial agreement
Croatia	General authorisation with notification	Yes	Call termination
Montenegro	General (class) licence (Internet service providing only) Individual licence (VoIP or own network)	Yes	Call origination

Country	Authorisation requirements for ISP	Interconnection	
		Right to interconnection	Call origination or termination
Romania	General authorisation with notification	Yes Not applied in practice	Neither model is used, as there are no interconnection agreements between ISPs and the incumbent
Serbia (including Kosovo <sup>1</sup> )			
Serbia	General (class) licence (Internet service providing only) Individual licence (VoIP or own network)	Yes	Call origination and termination
Kosovo	Individual licence	Yes	Call termination
The former Yugoslav Republic of Macedonia	General authorisation with notification	Yes	Call origination
Turkey	General authorisation with notification	Yes Not applied in practice	Neither model is used, as there are no interconnection agreements between ISPs and the incumbent. ISP bills the customer for Internet access and the incumbent bills the customer for the line usage (fixed charge and calling charge). There is no revenue sharing between ISPs and the incumbent.

1) under UNSCR 1244

Table 40 - Licensing requirements for Internet Service Providers

Notes:

Montenegro: An ISP needs an individual license instead of a general authorisation in the case of providing the VoIP or in the case of building an own network, as defined in the Rulebook of providing the public internet service (Official Gazette of the Republic of Montenegro, № 65/2005).

Table 41 addresses the official position on, and authorisation requirements for, the provision of voice telephony services over Internet protocol (VoIP).

Under the EU 1998 acquis, the status of VoIP on the EU level was outlined in the “Commission Communication on the Status of voice on the Internet under Community Law, in particular under Directive 90/388/EC”, the purpose of which was not to regulate VoIP services in the same way as voice telephony if they were not substitutable. Currently, there is neither specific EU-level VoIP regulation, nor any specific voice telephony regulation, which is the consequence of technology neutrality emphasised in the new regulatory framework. Under the EU 2003 package, VoIP providers operate under the same general authorisation regime as any other communications providers.

Only Bulgaria, Romania, and the former Yugoslav Republic of Macedonia have authorisation frameworks in place that are in line with the rules of the Authorisation Directive.

In Bulgaria, VoIP telephony services were freely offered even before the liberalisation on January 1, 2003 as long as the service did not qualify with the specific quality of service (QoS) requirements set for the fixed voice telephone service. On the other hand, compliance with QoS requirements was a minimum requirement for an authorisation that gave the right to interconnect (under RIO conditions of the incumbent). With adoption of the new Electronic Communications Act in May 2007, the Bulgarian authorisation framework is based on the 2003 acquis, but the specific QoS requirements are still used to decide what form of notification is required.

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%.

In Albania, the new law adopted on November 2006 has clarified the status of VoIP services introducing a technology neutral definition of publicly available telephony services. Now provision of voice telephone services is subject to the same licensing regime, regardless of the underlying technology.

Similarly, in Bosnia & Herzegovina and Kosovo, the provision of VoIP is subject to an individual licence as for other fixed voice telephony services. 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 Montenegro, the provision of VoIP is a separate service category that requires an individual (special) licence. The Montenegrin regulator launched a public tender procedure to issue five VoIP licences, which is expected to be completed shortly.

In Serbia, the licensing rules (individual or general licence) 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	VoIP authorisation requirements		
	Official position on VoIP	Date of liberalisation	Licensing requirements
Albania	Subject to technology neutral definition of publicly available telephone services	April 2007 (revised licensing framework)	Individual licence – same as for voice telephony
Bosnia & Herzegovina	Subject to technology neutral definition of public fixed telephony services	January 1, 2006	Individual licence – same licence as for voice telephony
Bulgaria	To be reviewed, after adoption of the new Electronic Communications Act. Secondary legislation not yet adopted.	Not regulated	General authorisation with notification to CRC. The form of notification may vary depending on QoS requirements
Croatia	VoIP is classified as a separate service category that can be provided under general authorisation with notification, different from voice telephony which is subject to individual licence	June 30, 1999	General authorisation with notification to HAT
Montenegro	VoIP is classified as a separate service category. Rulebook on conditions and mode of providing the public service of voice transmission over IP-based networks (Official Gazette of the Republic of Montenegro No. 66/06) prescribes obligatory special licence for VoIP service providers that is issued by the Agency through a tender procedure in line with the Rulebook on the method of issue and register of general and special licences.	January 1, 2004	Special (individual) licence Tender procedure for five VoIP licences launched in July 2007 expected to be finalised shortly

Country	VoIP authorisation requirements		
	Official position on VoIP	Date of liberalisation	Licensing requirements
Romania	Based on the principle of technological neutrality, VoIP services with certain characteristics fall within the scope of the definition of the publicly available telephony services (PATs), defined by Article 2, par (1) (c) of Law No. 304/2003 <i>on the universal service and users' rights relating to electronic communications networks and services.</i>	January 1, 2003	General authorisation with notification to ANRCTI
Serbia (including Kosovo <sup>1</sup> )			
Serbia	Under discussion. Document 'Rules for provision of VoIP services without the use of numbering resources' is being drafted.	Liberalisation formally introduced by the Telecom Law of April 2003	Individual licence is required for real-time transmission of voice services between termination points in public telecommunications network and for services using numbering resources
Kosovo	Subject to technology neutral definition of public fixed telephony services	September 2005 (adoption of secondary legislation on authorisation regime)	Individual licence – same as for voice telephony
The former Yugoslav Republic of Macedonia	Subject to technology neutral definition of publicly available telephony service.	March 5, 2005 (entry into force of the new Electronic communications Law)	General authorisation with notification to AEC
Turkey	VoIP requires a Type 2 long distance telephony service licence issued on a technology neutral basis.	January 1, 2004	Individual licence – same as for voice telephony

1) under UNSCR 1244

Table 41 - Voice over IP licensing requirements

Note:

Albania: Amendments to the Telecommunications Act No.8618, made by law No.9637 of November 6, 2006 define public telephony services in a technology neutral manner. The regulatory package approved by TRE on April 2, 2007, for licensing of telephony public network operators and service providers is based on the same principle of technology neutrality.

The former Yugoslav Republic of Macedonia: A VoIP provider willing to operate at the local switch level, can conclude an access agreement with the access network operator. In this case, it can provide ONLY call origination through green numbers (08009abcd). If the traffic volume on each voice channel is higher than 0.12 Erl, then the VoIP provider is obliged to conclude an interconnection agreement and has rights for call origination and/or call termination.

Table 42 below summarises the authorisation requirements for Cable TV networks.

In Albania, Romania, Serbia an authorisation from two respective national authorities may be required: an authorisation from the national broadcasting authority for the provision of content over Cable TV networks, and an authorisation from the NRA responsible for the telecommunications sector for the construction of cable infrastructure.

In Montenegro, cable TV networks are outside the scope of the Telecommunications Law, and are subject to an individual licence issued by the broadcasting authority.

The authorisation framework for cable TV still has to be defined in Kosovo.

In Turkey, the Council of State has cancelled the authorisation of cable platform services set out in Annex 10 to the Ordinance on Authorisations approved by the TA in February 2005. The

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 has 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 TA appealed against the Council of State’s decision and a final decision is pending. On May 25, 2007 the TA issued a statement that according to the Council of State decision the existing authorisations for cable platform services only covered radio and TV broadcasting, and that the cable operators could apply for additional authorisations for more services.

Country	Cable TV licensing			
	Availability of Cable TV licences	Licensing requirement	Number of national licences	Number of local licences
Albania	Available	Individual licence from the National Council of Radio and Television-NCRT Preliminary authorisation for the construction and final certification of cable network from TRE (Law No. 8410 on Private and Public Radio and Television of September 30, 1998. Articles 123, 127)	-	38
Bosnia & Herzegovina	Available	Individual licence from RAK	-	52
Bulgaria	Available	General authorisation with notification to CRC	-	605
Croatia	Available	Individual licence from HAT	2	22
Montenegro	Available	Individual licence from the Broadcasting Agency	1	8
Romania	Available	General authorisation with notification to ANRCTI Individual licences or notification from the National Audio-Visual Council (CNA)/ a ‘technical notice’ from ANRCTI	-	777 licences for cable TV operators in 9,595 localities
Serbia (including Kosovo <sup>1</sup> )				
Serbia	Available	Individual licence from RRA General (class) licence from RATEL	63 cable TV operators	63 cable TV operators
Kosovo	Authorisation requirements for cable TV still to be defined	-	-	-

Country	Cable TV licensing			
	Availability of Cable TV licences	Licensing requirement	Number of national licences	Number of local licences
The former Yugoslav Republic of Macedonia	General authorisation with notification	Broadcasting programme permission from the Broadcasting Council, according to the Broadcasting Law (Official Gazette No. 100/2005) General authorization with notification to AEC	-	In the past, 65 concessions were awarded by the Broadcasting Council, covering local areas. Concessions were harmonised with the new legislation in June 2006.
Turkey	Cable TV licences are generally available to any organisation that wishes to operate nationally or locally.	Individual licence – Type 2 telecommunications licence from NRA	1	5
1) under UNSCR 1244				

Table 42 – Cable TV licensing requirements

## Notes:

Albania: Some cable TV operators offer Internet connectivity as well.

Montenegro: All topics covering Cable TV (conditions, licences) are regulated by the Broadcasting Agency.

Serbia: General licences for Cable TV operators do not distinguish between national and local operations. Operators can serve either on the national or local area.

### 3. Authorisation fees

The provision of electronic communications networks and services, either under a general authorisation or an individual licence, may be subject to authorisation fees. In many countries, such fees have been quite high in the period immediately after termination of monopoly rights. The high level of fees may be triggered by the fact that the telecommunications sector represents a potential source of revenues for the state budget as much as the objective of protecting the state-owned incumbent operator. Regardless of the purpose, high authorisation fees may form a barrier to market entry and send a signal that the market is not fully liberalised.

The EU's regulatory framework, both under the 1998 acquis and the 2003 acquis, requires authorisation fees to be limited to what is necessary to cover the administrative cost of the regulatory authority. Only those fees that are paid for access to limited resources may deviate from this criterion. In practice, this means that all fees levied by the NRA are affected by this requirement, with the exception of fees for:

- Radio frequency spectrum where demand exceeds supply.
- Numbering resources. Normally, the national numbering plan must be managed so there are enough numbers for all operators. Since the theoretical numbering space available is unlimited, the only limited resource in the longer term is special short numbers represented by a limited number of digits.
- Rights of way. In theory, rights of way 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 43 below provides an overview of the one-off and annual fees for the provision of public fixed telephony networks and services and Voice over IP services. These are two telecommunications services for which the number of operators cannot be limited because of resource constraints.

Montenegro has a special authorisation fee for international voice traffic. This fee was reduced in April 2007 from €100,000 to €1,000 by a decision by the Ministry of Maritime affairs, Transport and Telecommunications, which essentially opened this market segment to competition.

Country	Fixed telephony networks and services		Voice over IP services	
	One-off fee	Annual fee	One-off fee	Annual fee
Albania	Determined by public tender procedure for individual Class I licences TRE makes the proposal for tender conditions that must be approved by Council of Ministers (Article 49 of the Law no. 8618 of June 14, 2000)	€56,370 (national operators). €160 per commune (for rural network operators) €800 per municipality (for newly introduced regional operators, Government Decision No. 125 of March 14, 2007)	Same as for fixed telephony	Same as for fixed telephony
Bosnia & Herzegovina	€511	Public fixed telephony networks and services (three incumbent operators): €255,600 Public fixed telephony services (without own network): €35,800 Public fixed telephony networks: local - €2,500 regional - €5,000 national - €25,500	Same as for public fixed telephony services	Same as for public fixed telephony services
Bulgaria	Fees before entry into force of new Electronic Communications Act of May 2007, no new fees established yet		Not defined	Not defined
	Public fixed telephony networks and services: €31,700	0.4% of annual revenue plus fees for numbering resources		
	Public fixed telephony services via CS (carrier licence): €17,900 plus €3,800 (CS code)	0.4% of annual revenue plus €1,000 annual fee for the CS code		
Croatia	€2,700	0.2% of annual revenue	€670	0.1% of annual revenue
Montenegro	Determined by tender procedure (minimum set by the Ministry of Maritime Affairs, Transport and Telecommunications)	1% of annual revenue plus €1,000 for international traffic	Determined by public tender procedure (minimum set by the Ministry of Maritime Affairs, Transport and Telecommunications)	1% of annual revenue

Country	Fixed telephony networks and services		Voice over IP services	
	One-off fee	Annual fee	One-off fee	Annual fee
Romania	0	ANRCTI monitoring fee of maximum 0.4% of annual turnover (or the revenues from the provision of electronic communications networks and services)	0	ANRCTI monitoring fee of maximum 0.4% of annual turnover (or the revenues from the provision of electronic communications networks and services)
Serbia (including Kosovo <sup>1</sup> )				
Serbia	Determined by tender procedure (minimum set by the Ministry of telecommunications and information society) plus administrative fees for the issue of individual licence	0.1% of total revenue realised in the business year for which the fee is paid	Administrative fees for the issue of general licence ('approval') – if no numbers are used	0.1% of total revenue realised in the business year for which the fee is paid
Kosovo	National fixed telephone services licence: €87,500 International telecommunications facilities licence: €50,000 International telecommunications services licence: €35,000	1% of gross annual turnover attributable to licensed activity	Same as for fixed telephone services	Same as for fixed telephone services
The former Yugoslav Republic of Macedonia	0	Between 0.1% - 0.5% of the annual gross revenue, but may not exceed €250,000.	0	Between 0.1% - 0.5% of the annual gross revenue, but may not exceed €250,000.
Turkey	Local telephony services: No licences issued yet. The fee is to be determined by the TA and approved by Council of Ministers.  Long distance telephony services: A-type (CPS services) (533,065.91 TRY or about €310,000) B-type (CS services)– (236,918.18 TRY or about €140,000) C-type (services provided through a 10-digit number provided by the TA) (118,459.09 TRY or about €70,000)	Not determined yet  0.5% of net annual sales	VoIP services are covered by the long distance telephony services fees.	0.5% of net annual sales

1) under UNSCR 1244

Table 43 – Authorisation fees

## Notes:

Bulgaria: No changes so far. A new draft regulation on fees collected by CRC is under public consultation. According to the draft, the one-off fee for public telephone services is considerably lower than the old fees.

The former Yugoslav Republic of Macedonia: Based on the revenue level, providers are divided into 5 categories:

- Up to MKD 1m (€16,500) - 0.1%
- MKD 1m - 10m (€16,500 - €165,000) - 0.2%
- MKD 10m - 100m (€165,000 - €1.65m)- 0.3%
- MKD 100m - 500m (€1.65m - €8.2m) - 0.4%
- Above MKD 500m (€8.2m) - 0.5% (but may not exceed €250,000).

#### 4. Status of fixed network competition

Table 44 provides information about the number of local and national licensed operators in fixed telephony across the SEE countries. This is an essential indicator of the liberalisation of the fixed market and is provided for two types of licences:

- number of licences issued for the provision of public voice telephony (local/national);
- number of licences issued for the operation of public network infrastructure and the provision of network services (local/national).

In Albania, until the new concept of regional licences has been introduced and the licensing framework was amended accordingly in April 2007, alternative operators were only offering local services in rural areas. After the amendments, operators licensed under Category II will be able to compete in rural and urban areas, at local and regional levels. However, Albtelecom is still the only licensed national voice telephony operator.

Similarly, in Montenegro, where the market was formally liberalised on January 1, 2004 the incumbent Telecom Montenegro is still the only licensed fixed telephony operator. In Serbia, secondary legislation on the authorisation framework was adopted recently, but Telekom Serbia is the only operator of public voice telephony and network services.

In Bosnia & Herzegovina, the three regional incumbent operators are the only providers of fixed networks and long-distance national telephone services. Competition is only present at the level of local services provision.

In Kosovo, the second fixed telephony networks and services licence was issued to an alternative provider, Ipko Net in September 2007.

Country	Number of authorisations for provision of fixed telecommunications services							
	Public voice telephony				Network services			
	Local		National		Local		National	
	N° authorisations		N° authorisations		N° authorisations		N° authorisations	
	Registered	Active	Registered	Active	Registered	Active	Registered	Active
Albania	60	55	1	1	2	2	4	4
Bosnia & Herzegovina	12	5	3	3	61	61	11	11
Bulgaria							19*	16*
							12**	7**
Croatia	-	-	14	10	2	2	7	7
Montenegro	1	1	1	1	1	1	1	1
Romania	466	80*	466	80*	2489	2050**	2489	2050**
Serbia (including Kosovo <sup>1</sup> )								
<i>Serbia</i>	1	1	1	1	1	1	1	1
<i>Kosovo</i>	2	2	2	1	2	1	2	1

Country	Number of authorisations for provision of fixed telecommunications services							
	Public voice telephony				Network services			
	Local		National		Local		National	
	N° authorisations		N° authorisations		N° authorisations		N° authorisations	
	Registered	Active	Registered	Active	Registered	Active	Registered	Active
The former Yugoslav Republic of Macedonia	69	32	69	32	32	6	32	6
Turkey	1	1	34	27	1	1	1	1

1) under UNSCR 1244

Table 44 - Number of authorisations for provision of fixed telecommunications services

Notes:

Albania: With Law No.9637, Category II Operators will be Regional with the right to compete at local and regional levels. The network services license includes also data transmission services.

Bulgaria: Number of registered operators on July 1, 2007

\* Number of authorised and active operators carrying out telecommunications through public fixed telecommunications network and the provision of fixed voice telephone service (including the incumbent BTC).

\*\* Number of authorised and active operators carrying out telecommunications through public telecommunications network based on carrier selection/carrier pre-selection.

10 out of the total number of licensed alternative operators and 5 out of the number of active ones are authorised to provide both fixed voice telephone and carrier selection services.

Romania: \* on 01.01.2007; \*\* on 01.01.2007 and refers to fixed and mobile telephony, internet, data transmissions services, satellite, leased lines and audiovisual programme retransmission services

Table 45 below shows the proportion of fixed numbers allocated to alternative operators, which is also an important indicator of the actual state of competition in the fixed market.

Country	Percentage of fixed numbers allocated to fixed incumbent operator	Percentage of fixed numbers allocated to fixed alternative operators
Albania	84.56 %	15.44 %
Bosnia & Herzegovina	91.80 %	8.20 %
Bulgaria	94.90 %	5.10 %
Croatia	93.19 %	6.81 %
Montenegro	100.00 %	0.00 %
Romania	30.80 %	69.20 %
Serbia, including Kosovo <sup>1</sup>		
Serbia	100.00 %	0.00 %
Kosovo	100.00 %	0.00 %
The former Yugoslav Republic of Macedonia	97.92 %	2.08 %
Turkey	100.00 %	0.00 %
1) under UNSCR 1244		

Table 45 - Proportion of fixed numbers allocated to the fixed incumbent and to fixed alternative operators

Notes:

Bosnia & Herzegovina: 12,000 fixed numbers (0.3% of the total) have been allocated to alternative operators. RAK will allocate block numbers to the alternative operators if they request them.

Kosovo: In May 2007, TRA allocated 100,000 numbers to Ipko Net for the provision of national fixed telephone services in line with the recently adopted Regulation on the National Numbering Plan. Ipko Net has been allocated the block of geographic numbers: 387 xxxxx (NDC: 38, Series of numbers: 700000- 799999).

The proportions indicated in the previous reports and from the table above are shown graphically in the next figure.

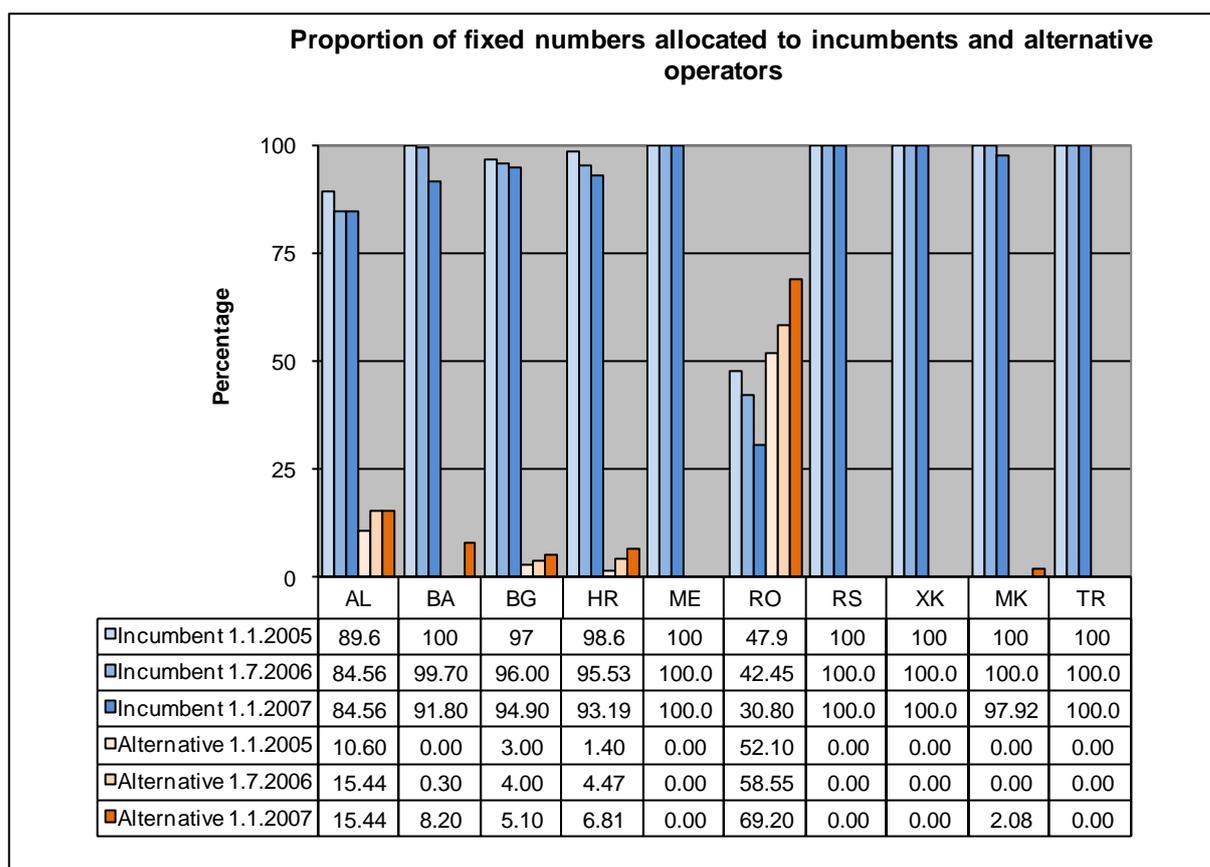


Figure 43 - Allocation of fixed numbers

The figure above shows that there have been slight increases in the proportion of fixed numbers allocated to alternate operators in Bulgaria, Croatia, and larger increases for Bosnia & Herzegovina and Romania. Also in Kosovo, the first numbering block of 100,000 numbers has been allocated to an alternative operator in 2007. Since it happened after January 1, 2007, it is not included in Figure 43.

Romania is the only country where alternative operators have a greater allocation of fixed numbers than the incumbent has. However, as shown in Table 18 above only 19.4% of the lines in service are operated by alternative operators. Nevertheless, this represents significant growth from the 14.74% that was reported on July 1, 2006.

Only minor changes have been reported from the other countries.

## 5. Radio networks and services

Table 46 provides information on mobile licences granted in the SEE countries.

Country	Operators licensed for provision of public mobile communications services : 1G, 2G, 3G ...			
	Operator	System	Licence (date of issue)	Expiry year
Albania	Albanian Mobile Communications	GSM 900/1800	August 19,1999	2014
	Vodafone Albania	GSM 900/1800	June 9, 2001	2016
	Eagle Mobile (not operational)	GSM 900/1800	March 1, 2004	2019

Country	Operators licensed for provision of public mobile communications services : 1G, 2G, 3G ...			
	Operator	System	Licence (date of issue)	Expiry year
Bosnia & Herzegovina	BH Telecom d.d. Sarajevo	GSM 900/1800	October 12, 2004	2019
	Telekom Srpske a.d. Banja Luka	GSM 900/1800	October 12, 2004	2019
	Hrvatske Telekomunikacije d.o.o. Mostar	GSM 900/1800	October 12, 2004	2019
Bulgaria	Radio Telecommunications Company (Mobikom)	NMT 450	March 16, 1993	2013
	MobiTel	GSM 900/1800	June 8, 1994	2014
		UMTS	April 25, 2005	2025
	COSMO Bulgaria Mobile (GloBul)	GSM 900/1800	January 11, 2001*	2021
		UMTS	April 25, 2005	2025
	BTC Mobile (Vivatel)	GSM 900/1800	June 7, 2004**	2024
UMTS		April 25, 2005**	2025	
Croatia	T - Mobile	GSM 900	September 16, 1999 (commercially available from 1995)	2009
		UMTS	October 2004	2024
	VIPNet	GSM 900	October 30, 1998	2008
		UMTS	October 2004	2024
	Tele2	GSM 900/1800	December 2004	2024
		UMTS		
Montenegro	Promonte	GSM 900/1800	January 1, 2002	2017
		UMTS	April 13, 2007	2022
	Monet	GSM 900/1800	January 1, 2002	2017
		UMTS	April 11, 2007	2022
	M-Tel	GSM 900/1800	April 21, 2007	2022
		UMTS	April 21, 2007	2022
Romania	Zapp (Telemobil)	CDMA 450	NMT 450 in 1994 (extended in 2001 to CDMA)	2011
		UMTS	January 19, 2007	2022 with possible 10-year extension
	Connex Vodafone (Mobifon)	GSM 900/1800	December 1996	2011
		UMTS	November 12, 2004	2019 with possible 10-year extension
	Orange (previously MobiRom)	GSM 900/1800	December 1996	2011
		UMTS	November 12, 2004	2019 with possible 10-year extension
	Cosmote (previously Cosmorom)	DCS 1800	1999	2009
	RCS&RDS	UMTS	January 8, 2007	2022 with possible 10-year extension

Country	Operators licensed for provision of public mobile communications services : 1G, 2G, 3G ...			
	Operator	System	Licence (date of issue)	Expiry year
	<p><b>3G spectrum licences</b></p> <p>On July 17, 2006 the General Inspectorate for Communications and Information Technology (IGCTI) <a href="#">opened</a> a tender procedure to award the two 3G/UMTS spectrum licences that remained available after the two 3G licences were awarded to Vodafone and Orange Romania in November 2004.</p> <p>On September 4, 2006 four operators: RCS&amp;RDS, Telemobil, Radiocom and Cosmote submitted their bids. According to the results announced by IGCTI on October 13, 2006, RCS&amp;RDS and Telemobil have scored the best results. On October 26, 2006 IGCTI <a href="#">rejected</a> the complaints from Radiocom and Cosmote about the tender procedure, and confirmed the results as final. The two new 3G licences were awarded by IGCTI in January 2007 to RCS&amp;RDS and Telemobil.</p>			
Serbia (including Kosovo <sup>1</sup> )				
Serbia	Telekom Srbija	GSM 900/1800	August 2006	2016 (2026)
		NMT 900		
	Telenor Srbija	GSM 900/1800	September 2006	2016 (2026)
	Vip mobile	GSM 900/1800	December 2006	2016 (2026)
Kosovo	Vala	GSM 900	July 30, 2004	15 years
	IpkoNet	GSM 900/1800	March 6, 2007	15 years
The former Yugoslav Republic of Macedonia	T-Mobile (former Mobimak)	GSM 900	Concession contract of June 5, 2001*	2018
	Cosmofon	GSM 900	Concession contract of November 22, 2001*	2023
	Nov operator (company of Mobilkom Austria)	GSM 900/1800	March 26, 2007**	2017 (can be extended until 2027 upon request)
	<p><b>Additional 2G spectrum</b></p> <p>On April 2, 2007 AEC <a href="#">invited</a> interested parties to express their interest until May 10, 2007 in the available GSM 1800 radio frequencies for the provision of public mobile services. 6 (six) companies expressed their interest for providing public mobile services.</p>			
Turkey	Turkcell	GSM 900	1998	2023
	Telsim-Vodafone	GSM 900	1998	2023
	Avea (former Aria and Aycell, which merged and formed TT&TIM that was changed to Avea İletişim Hizmetleri)	DCS 1800	2000	2025
	Turk Telekom	NMT 450	1986	31.12.2007

1) under UNSCR 1244

Table 46 - Number of 2G operators and licences for the provision of digital mobile services

Notes:

Bulgaria: \* First license issued to OTE C.A. (later transferred to its subsidiary Cosmo Bulgaria Mobile).

\*\* First licenses issued to BTC (later transferred to its subsidiary BTC Mobile).

Serbia: The licences are issued for the period of 10 years that can be extended with additional 10 years on request  
The former Yugoslav Republic of Macedonia \* concession contracts are the subject of negotiation between the government (through the Ministry of transport and communications) and mobile operators, to make the concession contracts compliant with the Electronic Communications Law.

\*\* Nov operator has an authorisation for radio frequencies utilization for providing mobile services. The duration of an authorisation for radio frequencies utilization is 10 years. After getting an authorisation for radio frequencies utilization, the Nov operator shall notify the AEC for all public communications activities that it will provide.

Table 47 provides more detailed information on 3G mobile licences based on the UMTS standard that have been granted in SEE countries.

Licences for 3G mobile networks based on the UMTS standard have been granted in five countries: Bulgaria, Croatia, Montenegro, Romania, and Serbia. In Croatia and Romania, the licences were awarded after a beauty contest procedure, and by an auction in Bulgaria and Serbia. In Montenegro, the tender procedure included a combined financial bid and a defined set of non-financial selection criteria. The former Yugoslav Republic of Macedonia has also started procedures for issuing 3G licences based on the UMTS standard.

In Turkey, the tender procedure for four 3G licences that was launched in June 2007 was cancelled due to a lack of interest – only one operator, Turkcell, submitted a bid.

In Romania, Telemobil SA was also issued a licence to operate a 3G standard CDMA 2000 network in the 450 MHz spectrum band in addition to its UMTS license.

In other countries, the timing for issuing 3G licences has not been decided yet.

Country	Licensees	One-off fees	Annual spectrum fees	Deadline for service launch	Coverage and roll-out obligations
Albania	Under consideration				
Bosnia & Herzegovina	Council of Ministers needs to make a decision at the end of 2007 about condition for issuing UMTS licences.				
Bulgaria	April 25, 2005 <ul style="list-style-type: none"> <li>Mobilitel</li> <li>GloBul</li> <li>BTC Mobile</li> </ul>	Mobilitel: BGN 78m (€50m) for Class A licence (with 2x10 MHz and 1x5 MHz capacity)  GloBul and BTC Mobile: BGN 42m (€21.5m) for the two Class B licences (with 2x5 MHz and 1x5 MHz capacity, each)	Annual spectrum fees: Class A licence - BGN 2.5m (€1.3m); Class B licences - BGN 1.5m (€775,000), each	May 2007 (MTel and Globul launched from 2006; BTC Mobile from April 2007)	Class A licence: <ul style="list-style-type: none"> <li>20% population by May 2007</li> <li>55% population by May 2010</li> </ul> Class B licences: <ul style="list-style-type: none"> <li>15% population by May 2007</li> <li>50% population by May 2010</li> </ul>
Croatia	October 2004 <ul style="list-style-type: none"> <li>T-HT Mobile;</li> <li>VIPnet</li> </ul> December 2004 <ul style="list-style-type: none"> <li>Tele2</li> </ul>	T-HT Mobile and VIPnet: Kuna 132m (€17.6m) Tele2: Kuna 172m (€22.9m) for a combined 2G/3G concession All licensees: annual fee of 1% revenue from UMTS service	Annual fee of Kuna 5m (€670,000) for 5 MHz frequency block	T-HT Mobile and VIPnet: June 2005 Tele2: August 2005	T-HT and VIPnet: <ul style="list-style-type: none"> <li>25% of population within two years</li> <li>50% of population within five years</li> </ul> Obligations on Tele2: <ul style="list-style-type: none"> <li>14% of population and 1% of territory within one year</li> <li>33% of population and 7% of territory within two years</li> <li>50% of population and 19% of territory within three years</li> <li>65% of population and 36% of territory within four years</li> <li>71% of population and 51% of territory within five years</li> </ul>

Country	Licensees	One-off fees	Annual spectrum fees	Deadline for service launch	Coverage and roll-out obligations	
Montenegro	Promonte T-Mobile Montenegro M-Tel	Promonte: €4.01m T-Mobile Montenegro: €2.4m M-Tel: €16m for combined GSM 900/1800 and UMTS licence	1% of annual revenue	Promonte: July 1,2007 T-Mobile Montenegro: November 1, 2007 M-Tel: July 1,2007	See below	
	Coverage conditions that apply to each licensee (as a % of population):					
		Year 1	Year 2	Year 3	Year 4	Year 5
Promonte		40	60	75	87	97
T-Mobile Montenegro		11	20	28	37	53
M-Tel (2G)		95.9	98.8	99.2	99.4	99.5
M-Tel (3G)		75.2	80.5	83.9	86.3	89.1
Romania	November 12, 2004 <ul style="list-style-type: none"> <li>Vodafone</li> <li>Orange</li> </ul>	\$35m payable in six instalments as follows: \$10.5m within 120 days after the notification announcing the winner of the auction; and the next five annual instalments, of \$4.9m each, starting from 2006	Each 3G licensee pays to ANRCTI an annual tariff for the use of the spectrum: €1.2m/paired block of 2x5 MHz/year; €300,000/unpaired block of 5 MHz/year.	Individual commitments: January 1, 2005 for Vodafone (launched on April 22, 2005) 1 <sup>st</sup> quarter 2006 for Orange (launched on June 6, 2006)	The minimum coverage by December 31, 2011 shall include Bucharest and 10 major towns, chosen by the applicant. The coverage, distribution and deployment rate will be evaluated based on the candidates' commitment for three different deadlines: <ul style="list-style-type: none"> <li>December 31, 2005</li> <li>December 31, 2008</li> <li>December 31, 2011</li> </ul>	
	<ul style="list-style-type: none"> <li>Telemobil</li> <li>RDS&amp;RCS</li> </ul>	\$35m payable in six instalments as follows: \$10.5m within 120 days after the notification announcing the winner of the auction; and the next five annual instalments, of \$4.9m each, starting from 2008	Each 3G licensee pays to ANRCTI an annual tariff for the use of the spectrum: €1.2m/paired block of 2x5 MHz/year; €300,000/unpaired block of 5 MHz/year.	<ul style="list-style-type: none"> <li>February, 2007 for RDS &amp; RCS (technical launch)</li> <li>End 2007 for Telemobil</li> </ul>	The minimum coverage by Dec 31, 2012 shall include Bucharest and 10 major towns, chosen by the applicant. The coverage, distribution and deployment rate will be evaluated based on the candidates' commitment for three different deadlines: <ul style="list-style-type: none"> <li>June 30, 2008</li> <li>December 31, 2009</li> <li>December 31, 2011</li> </ul>	

Country	Licensees	One-off fees	Annual spectrum fees	Deadline for service launch	Coverage and roll-out obligations
Serbia	August 2006 Telekom Srbija	Free of charge	See below		See below
	September 2006 Telenor Srbija	€320m for GSM/UMTS licence	See below	Within 6 months from the licence issue	See below
	December 2006 Mobilkom Austria	€320m for GSM/UMTS licence	See below	Within 6 months from the licence issue	See below
	Annual spectrum fees for each combined GSM/UMTS license: <ul style="list-style-type: none"> <li>• €940,000 (CSD 70m) in the year of granting licence with pro rata reduction if less than a full year.</li> <li>• 0.9% of total revenue for each subsequent year of operation</li> </ul> Coverage conditions that apply to each combined GSM/UMTS license: <ul style="list-style-type: none"> <li>• 20% of the population and three major highways within 1 year</li> <li>• 50% of the population and all highways within 2 years</li> <li>• 80% of the population and 90% of the territory within 4 years from the licence issue</li> </ul>				
The former Yugoslav Republic of Macedonia	On July 31, 2007 AEC published an <a href="#">announcement</a> inviting all interested parties to express before September 1, 2007 their interest in radio frequencies for the provision of public mobile services based on the IMT-2000/UMTS standard.				
Turkey	On June 16, 2007 the TA <a href="#">launched</a> the tender to award four licences for provision of IMT-2000/UMTS services and infrastructures through an auction scheduled for September 7, 2007. On September 19, 2007 the TA Board announced a <a href="#">decision</a> to cancel the tender procedure for four IMT-2000/UMTS licences, due to lack of competition: only one bid was submitted by Turkcell.				

Table 47 - Information about assigned UMTS licences

Table 48 provides information on the issued licences for wireless local loop (WLL) that is often also referred to as fixed wireless access (FWA). FWA applications could be reliable and cost effective complements or alternatives for providing voice and data services, especially in the SEE countries where the penetration of fixed networks is still relatively low and unbundled access to the incumbent's copper local loops is not always available.

Interest in fixed wireless access applications increased with the introduction of the WiMax standard. The 3.5 GHz licensed spectrum band has been the most common band for fixed wireless access applications. Several countries in the SEE region have also recently issued licences for fixed wireless access applications in the 3.5 GHz band.

In Bulgaria, four national licences were issued after an auction procedure in October 2005 with over €11m in auction proceeds. In Croatia, between September 2005 and April 2007, 74 concessions for FWA spectrum in the 3.5 GHz band in 18 out of 20 Croatian counties and the District of Zagreb. In Montenegro, three national licences in the 3.4-3.6 GHz band were awarded in May 2007 and two further national licences in the 3.6-3.8 GHz band are expected to be awarded shortly. In Romania, several local and national licences in the 3.4-3.6 GHz band were issued during 2003-2004, and further licences in the 3.6-3.8 GHz band are expected to be issued in 2008. In the former Yugoslav Republic of Macedonia, two national and 18 regional licences in the 3.4-3.6 GHz band were issued in 2007. Regulations for awarding spectrum in the 3.4-3.6 GHz band have been drafted in Albania, Bosnia and Herzegovina, Kosovo, and Turkey.

Country	Licensing requirements	Legal basis	Auction vs. beauty contest	Frequency bands	Status and number of awarded licences
Albania	Individual licence	Law No. 8618 of June 14, 2000 Council of Ministers Decision No. 692 of December 27, 2002	Public tender (international bid)	3.4-3.6 GHz 10.5 GHz 26 GHz	2 local licences in the 3.4-3.6 GHz (valid until January 2006)
Bosnia & Herzegovina	Individual licence which includes a frequency licence	Regulations on the use of the particular spectrum band	Beauty contest	3.4–3.6 GHz	Expected before end 2007
Bulgaria	3.4–3.6 GHz (for public networks)		Auction	3.4–3.6 GHz	5 national licences
	3.6–3.8 GHz (for private networks only)		First come – first served	3.6–3.8 GHz	1 licence
	26 GHz		First come – first served		5 national licences (expected*)
Croatia	Licence for provision of public services, individual licence for base stations, licence exemption for user terminals	Law on telecommunications, By-law on concessions and licences for provision of telecommunications services	Beauty contest	3.4–3.6 GHz 24.5–26.5	74 regional licences (concessions) in the 3.4–3.6 GHz
Montenegro	Special licence	Rulebook of issuing and register general and special licences (Official Gazette No. 08/2002) Plan of Frequency Allocation of Montenegro (Official Gazette No. 11/2005)	Public tender	3.4–3.6 GHz 10.15–10.30 GHz 24.5–26.5 GHz 27.5–29.5 GHz	3 national licences in the 3.4–3.6 GHz awarded 2 more national licences in the 3.6–3.8 GHz expected
Romania	General authorisation plus frequency licence from ANRCTI	Article 4 par. (2) and Article 14 par. (1) from Government Emergency Ordinance No. 79/2002 on the general regulatory framework for communications, with the subsequent amendments and completions	Beauty contest	3.4–3.6 GHz 24.5–26.5 GHz	175 local licences in the 3.5 GHz band to 5 operators 9 national licences in the 3.5 GHz band to 6 operators 46 local licences in 26 GHz band to 3 operators 3 national licences in 26 GHz band to 3 operators
Serbia (including Kosovo <sup>1</sup> )					
Serbia	Individual licence	Article 33 of the Telecommunications Law of 2003	Not decided	3.4–3.6 GHz 10.15–10.30 GHz 24.50–26.50 GHz	None

Country	Licensing requirements	Legal basis	Auction vs. beauty contest	Frequency bands	Status and number of awarded licences
Kosovo	Individual licence	Article 22 (2) of the Telecommunications Law	Not decided	3.41-3.6 GHz for FWA	None
The former Yugoslav Republic of Macedonia	General authorization with notification to AEC and authorisation for radio frequencies.	Law on Electronic communications of 2005	Public tender	3.4-3.6 GHz 24.5-26.5 GHz 27.5-29.5 GHz	2 national and 18 regional licences in the 3.4-3.6 GHz band
Turkey	Individual licence	The Annex Ordinance on FWA of Authorisation Ordinance	Auction (planned)	24.5-26.5 GHz	None

1) under UNSCR 1244

Table 48 - Licensing of wireless local loop

Notes:

Albania: TRE is drafting the regulatory framework to start licensing wireless operators on 3.5GHz

Bulgaria: The five licenses is being planned, but have not yet been awarded.

Montenegro: There are 3 national licences in the 3.4–3.6 GHz band awarded (M-Tel, Broadband Montenegro, T-Com Montenegro). Public tender procedure for two more licences in the 3.6–3.8 GHz band is ongoing

Kosovo: TRA has prepared National Strategy for implementing FWA in the 3.4-3.6 GHz frequency band.

The former Yugoslav Republic of Macedonia: After a tender procedure for spectrum in the 3.4-3.6 GHz band, on June 29, 2007 AEC issued two national FWA licences and on August 29, 2007 18 regional licences.

Turkey: TA prepared a draft Annex to the Authorisation Ordinance for licensing of broadband wireless access (BWA) services. The new regulation shall be technology neutral and more comprehensive than FWA. BWA shall include all broadband services with all technologies like WiMax, MMDS, LMDS etc.

Radio Local Area Networks (R-LAN) also known as Wireless Local Area Network (WLAN) or WiFi (IEEE 802.11) operating in unlicensed spectrum bands also represent a useful component to wireless broadband capacity. Three frequency bands have been reserved for R-LAN systems by the European Radiocommunications Committee (ERC) Decisions:

Frequency band	ERC Decisions
2.400 – 2.483 GHz (max. 100 mW)	ERC Decision 01/07
5.150 – 5.350 GHz (indoor only max. 200 mW) 5.470 – 5.725 GHz (indoor and outdoor max. 1 W)	ECC Decision 04/08 (replaces ERC Decision 99/23)

Table 49 – ERC Decisions on frequency bands for R-LAN

Table 50 below addresses the availability of spectrum for wireless R-LAN (FWA) systems. In particular, it shows whether:

- the full frequencies in the 2.400 – 2.483 GHz, 5.150 – 5.350 GHz and 5.470 – 5.725 GHz bands are available for R-LAN systems;
- the operation of a public R-LAN network for the provision of public access to a licensed telecommunications network is subject to an individual licence or a general authorisation (with or without registration);
- the incumbent operates a commercial service.

Country	Public Radio Local Area Networks (R-LAN)			
	Full frequency bands available		Licensing requirements for provision of access to public network	Availability of commercial services
	2.4 GHz	5 GHz		
Albania	Yes	Yes	General licence	Yes
Bosnia & Herzegovina	Yes	Yes	General (class) licence	No
Bulgaria	Yes	Yes	General authorisation with notification to CRC	Yes
Croatia	Yes	Yes	General authorisation with notification to HAT	Incumbent – No Others – Yes
Montenegro	Yes	No	Individual licence only for public services	No
Romania	Yes	No (5.8 GHz only)	General authorisation with notification to ANRCTI	No
Serbia (including Kosovo <sup>1</sup> )				
<i>Serbia</i>	Yes	Yes	General authorisation is foreseen	Yes
<i>Kosovo</i>	Yes	No	General authorisation is foreseen	No
The former Yugoslav Republic of Macedonia	Yes	Yes	General authorisation with notification to AEC	Yes
Turkey	Yes	Yes	There are no authorisation requirements for indoor applications, but outdoor applications for 2.4 GHz band require a General Authorisation for Internet service provision.	Internet Service Providers may provide outdoor applications in the 2.4 GHz for Internet services but incumbent operator is not entitled to this provision.

1) under UNSCR 1244

Table 50 - Public Radio Local Area Networks (R-LAN)

Notes:

Albania: R-LAN technology is used by ISPs to provide access to the Internet.

Bulgaria: Notification before the launch of the services is required (article 64 of the Electronic Communications Law).

Montenegro: Defined in Rulebook on using the frequency bands for implementation of wireless access systems, including local radio networks (WAS/R-LAN) (Official Gazette of the Republic of Montenegro, № 40/2005).

Serbia: There are commercial data services provided by ISPs.

Kosovo: KFOR uses several frequency ranges, including a part of the 5GHz spectrum.

The former Yugoslav Republic of Macedonia: Some notified alternative operators provide public electronic communications services (voice telephony and/or data) over these non-protected radio frequency bands.

Turkey: The incumbent Turk Telekom is not authorised for Internet Service Provision after May 15, 2006.

However, Internet services are provided by TNet, which is a subsidiary of Turk Telekom.

## E. Regulations – Competitive safeguards

The information in this chapter reflects the situation as it existed on July 1, 2007, except where a different date is mentioned.

### 1. Carrier selection and pre-selection

Carrier selection and pre-selection are among the basic mechanisms enabling competition while a national market is being liberalised. Carrier selection 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 carrier pre-selection is available, the subscriber can make a permanent (or semi-permanent) selection of an alternative operator for all calls or certain types of calls.

Under article 19 of the Universal Service Directive, the obligation to provide CS/CPS is triggered automatically by SMP designation in the provision of connection to and use of the public telephone network at a fixed location.

The next two tables present the status for carrier selection and pre-selection in the SEE region.

Bulgaria, Croatia, Romania, the former Yugoslav Republic of Macedonia, and Turkey now have carrier selection and pre-selection in place, although for some categories of calls, as explained in the table below, may not be implemented. Bosnia & Herzegovina has implemented carrier selection, and carrier pre-selection is expected to become available in the second half of 2007.

Montenegro adopted regulations on CS/CPS and the services are expected to become available before the end of 2007.

In Albania, the regulator has proposed that a CS/CPS obligation be imposed as a remedy on the SMP operator in the new draft analysis of the fixed retail markets recently published for consultation.

Serbia and Kosovo are still undecided about the practical implementation of these safeguards.

Country	Carrier selection				
	Local calls	Long distance calls	International calls	Calls to mobile	Calls to non-geographical numbers
Albania	Not decided				
Bosnia & Herzegovina	1.10.2006	1.10.2006	1.10.2006	1.10.2006	1.10.2006
Bulgaria	Not available	29.06.2004	29.06.2004	11.07.2006	Not available
Croatia	1.1.2003 Available 1.7.2006	1.1.2003 Available 1.7.2006	1.1.2003 Available 1.7.2006	1.1.2003 Available 1.7.2006	1.1.2003 Not available
Montenegro	December 21, 2007				
Romania	February 2003				
Serbia (including Kosovo <sup>1</sup> )					
Serbia	Not decided				
Kosovo	Not decided				
The former Yugoslav Republic of Macedonia	January 2007	January 2007	January 2007	January 2007	January 2007

Country	Carrier selection				
	Local calls	Long distance calls	International calls	Calls to mobile	Calls to non-geographical numbers
Turkey	CS not implemented for local calls.	April 2006	April 2006	April 2006	Technical requirements are fulfilled in March 2006 by incumbent operator. However, the interconnection agreements on CS do not include calls to non-geographical numbers.

1) under UNSCR 1244

Table 51 - Availability of carrier selection

Notes:

Bosnia & Herzegovina: The Council of Ministers of Bosnia & Herzegovina adopted the Decision on the introduction of carrier selection and set the deadline of October 1, 2006. (Official Gazette No. 76, September 25, 2006).

Montenegro: Decision on carrier selection in Rulebook on carrier selection and pre-selection. (Official Gazette of the Republic of Montenegro No. 32/2007)

The former Yugoslav Republic of Macedonia: Three operators with allocated access codes, two of them started offering CS services.

Country	Carrier pre-selection				
	Local calls	Long distance calls	International calls	Calls to mobile	Calls to non-geographical numbers
Albania	Not decided yet	Not decided yet	Not decided yet	Not decided yet	Not decided yet
Bosnia & Herzegovina	1.7.2007	1.7.2007	1.7.2007	1.7.2007	1.7.2007
Bulgaria	Not available	1.1.2005	1.1.2005	11.07.2006	Not available
Croatia	1.1.2005	1.1.2005	1.1.2005	1.1.2005	Not available
Montenegro	December 21, 2007	December 21, 2007	December 21, 2007	December 21, 2007	December 21, 2007
Romania	June 30, 2006	June 30, 2006	June 30, 2006	June 30, 2006	June 30, 2006
Serbia (including Kosovo <sup>1)</sup> )					
Serbia	Not decided	Not decided	Not decided	Not decided	Not decided
Kosovo	Not decided	Not decided	Not decided	Not decided	Not decided
The former Yugoslav Republic of Macedonia	1.1.2007	1.1.2007	1.1.2007	1.1.2007	1.1.2007

Country	Carrier pre-selection				
	Local calls	Long distance calls	International calls	Calls to mobile	Calls to non-geographical numbers
Turkey	CPS is not implemented for local calls	July 2006	July 2006	July 2006	Interconnection agreements on CPS signed between the incumbent and carriers in July 2006. However, the agreements do not include calls to non-geographical numbers.

1) under UNSCR 1244

Table 52 - Availability of carrier pre-selection

Notes:

Bosnia & Herzegovina: The deadline for implementation was by Council of Ministers Decision. (Official Gazette No. 76, September 25, 2006). A later *Decision on amendments to a telecommunication sector policy in B&H*, adopted by the Council of Ministers redefined the date for availability of CPS to “six months after tariff rebalancing”. However, it has been subsequently clarified that the decision in the Official Gazette No. 76, September 25, 2006 is still valid.

Montenegro: Carrier selection is defined by Rulebook on carrier selection and carrier pre-selection (Official Gazette of the Republic of Montenegro, № 32/2007).

The former Yugoslav Republic of Macedonia: Three operators with allocated access codes, one of them started offering CPS services.

The number of operators with an allocated access code is a good indicator of the level of competition in the national telephony markets. Given the early phase of liberalisation in this region, it is not surprising that most of the geographic units are still without any such alternative operators.

Table 53 below shows how many operators have been allocated an access code. Not all of them have necessarily launched the service, as they may be in a testing phase or still in the process of negotiating the interconnection agreement. The last two columns show how many operators that are using CS or CPS for the provision of services.

Country	Operators with allocated access code	Operators using CS for the provision of services	Operators using CPS for the provision of services
Albania	0	0	0
Bosnia & Herzegovina	9	2	0
Bulgaria	12	7*	1*
Croatia	14	2	4
Montenegro	0	0	0
Romania	92	32*	1**
Serbia (including Kosovo <sup>1</sup> )			
Serbia	2	0	0
Kosovo	0	0	0
The former Yugoslav Republic of Macedonia	3	2	1
Turkey	34	13	12

1) under UNSCR 1244

Table 53 - Operators with allocated access codes and use of CS and CPS for provision of voice telephony

Notes:

Bosnia & Herzegovina: T3 and AirAba.

Bulgaria: One of the operators uses CS and CPS for the provision of services.

Montenegro: There are still no requests from operators for access codes.

Romania: \* on 01.01.2007 \*\* provisional data

The former Yugoslav Republic of Macedonia: AEC granted three CS codes to alternative fixed operators. \* Two operators had concluded interconnection agreements with the fixed incumbent operator based on its RIO and one of them has started to offer CPS service. The third operator is finalising its negotiations for interconnection with the incumbent.

## 2. Number portability

Another important competitive safeguard is number portability, which enables a subscriber to maintain his or her telephone number when changing 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.

Croatia remains the only 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 had originally been planned for October 2005, but technical problems delayed its implementation by one year. Within nine months of its availability from October 1, 2006 until July 1, 2007 over 21,000 numbers had been ported (and over 29,000 numbers by October 21, 2007). The technical solution is based on a central database operated by the NRA. At the same time, over 109,000 fixed numbers were ported in the period between July 2005 and July 2007 (and over 137,000 by October 21, 2007).

Mobile number portability was due to become operational in Bulgaria from January 1, 2007 according to the deadline set out in the old Telecommunications Act, but this did not happen in practice. Mobile operators have not agreed on the technical implementation procedure yet, and the functional specifications approved by the regulator have been appealed by one of the operators. However, the NRA insists that updated specifications should be available by December 2007. The implementation of fixed number portability in Bulgaria is postponed until January 1, 2009, as agreed in the Accession Treaty.

In Romania, fixed and mobile number portability is expected to become available in early 2008, and the implementation project for the centralised database solution was launched by the regulator in August 2007.

In Bosnia and Herzegovina, a draft regulation on fixed and mobile number portability was published for consultation in September 2007. The deadline for its implementation will be decided by the Council of Ministers.

In the former Yugoslav Republic of Macedonia, fixed and mobile number portability was scheduled to become operational on July 1, 2007, but its implementation is not yet complete due to delays in the public procurement procedure for the centralised database solution.

Turkey adopted a Number Portability ordinance in February 2007 setting out a centralised database solution. Mobile number portability will be available 6 months after the establishment of the central reference database, and fixed number portability within 12 months.

Some implementation delays have also occurred in Romania, which now has a target date of 2008. However, the procurement procedure for the central database is ongoing.

Albania, Bosnia & Herzegovina, Montenegro, Serbia and Kosovo have not decided on the introduction of number portability. In Kosovo, number portability represents a complex problem as the entity does not have its own national code in the ITU's international numbering plan yet and has to rely on several temporary solutions for routing international traffic. The incumbent operator, PTK, for the fixed network uses the code for Serbia +381, while its mobile subsidiary Vala900, has an arrangement with Telecom Monaco for the use of non-geographic numbers from Monaco's numbering plan with the +377 code. The newly licensed operator, Ipko Net (majority owned by Telecom Slovenije), will use numbering blocks from the Slovenian numbering plan with the +386 code for its mobile services and +381 for its fixed services.

Country	Geographic fixed numbers	Non-geographic fixed numbers	Mobile numbers
Albania	Not decided	Not decided	Not decided
Bosnia & Herzegovina	Not decided	Not decided	Not decided
Bulgaria	January 1, 2009	January 1, 2009	January 1, 2007 (not implemented)
Croatia	January 1, 2005 (implemented July 2005)	January 1, 2005 (implemented July 2005)	October 30, 2005 (implemented October 2006)
Montenegro	Not decided	Not decided	Not decided
Romania	2008	2008	2008
Serbia (including Kosovo <sup>1</sup> )			
Serbia	Not decided	Not decided	Not decided
Kosovo	Not decided	Not decided	Not decided
The former Yugoslav Republic of Macedonia	July 1, 2007 (not implemented)	July 1, 2007 (not implemented)	July 1, 2007 (not implemented)
Turkey	Within 12 months after database implementation	Within 12 months after database implementation	Within 6 months after database implementation

1) under UNSCR 1244

Table 54 - Availability of number portability

Notes:

Bulgaria: The date of January 1, 2007 is the legal requirement. Number portability is not yet operational and there are disputes over operational procedures.

The former Yugoslav Republic of Macedonia: AEC adopted a Number Portability regulation in December 2006 setting the July 1, 2007 deadline for fixed and mobile number portability based on a central reference database operated by AEC. In April 2007, AEC started a public tender procedure for procurement of the database, but the procedure was cancelled by the government in October 2007, because of irregularities in the process.

Turkey: Number Portability Ordinance published in the Official Gazette No. 26421 of February 1, 2007. Studies on the creation of a central database are performed. Mobile number portability will be available within 6 months after the establishment of the central reference database, and fixed number portability within 12 months.

### 3. SMP regulations

The concept of significant market power (SMP) is one of the central elements of the EU regulatory regime for electronic communications. Once an operator has been deemed as having SMP in a specific telecommunications market, it may subsequently be subject to asymmetric ex-ante regulatory obligations ('remedies'). Such obligations, which apply only to SMP operators, typically set out requirements for competitive safeguards that are intended to protect competition. Examples of such regulatory obligations are the requirements to meet all reasonable requests for network access, non-discrimination, cost orientation, and transparency. The transparency requirement is often further defined as a requirement to publish a reference offer for specific wholesale products, such as interconnection or unbundled access to local loops.

Under the 1998 acquis, which prevails in the majority of SEE countries, with the exception of Bulgaria, Romania and the former Yugoslav Republic of Macedonia, SMP is generally presumed to be present when a fixed or mobile operator has 25 percent or more of a defined telecommunications market. The following four markets were defined under the ONP Interconnection Directive (97/33/EC):

- market for the public fixed telecommunications services and networks;
- market for the public mobile telecommunications services and networks;
- market for the leased line services; and
- national interconnection market.

Furthermore, the ONP Interconnection Directive also defined specific regulatory obligations for each market that should apply automatically to all operators designated as having SMP in that market.

In the 2003 acquis, the definition of SMP is changed to bring it more into line with the concept of 'dominance' in EU competition law. Typically, an operator is presumed to be dominant in a relevant market only when its market share exceeds 40 percent, rather than 25 percent. However, any final determination of SMP must take other factors into consideration, such as the control of 'essential facilities' and the absence of potential competition. Furthermore, regulatory obligations on operators with SMP are not pre-defined in the legislation, but imposed by NRAs after a sophisticated market analysis procedure for a set of specific national markets.

The EU 2003 acquis has so far only been implemented in Romania. Since it was not an EU Member State before 2007, it was not required to notify the results of its market analyses to the European Commission and had some flexibility in defining its own markets relevant for ex ante regulation. Romania will now start the second round of market analyses as an EU Member State.

In the former Yugoslav Republic of Macedonia, the legal transposition of the 2003 acquis is complete, but practical implementation in terms of market analysis is still at an early stage. The law also established the starting conditions for SMP, which reflected the 1998 acquis. These SMP designations, which are shown in the table below, will stay in place until replaced by the market analysis procedure. The market analysis process started in 2007, and in June 2007 the NRA published for consultation its first draft analysis of the market for voice call termination on individual mobile networks (market 16).

Although the EU 2003 acquis has not been formally adopted in Turkey, the TA decided in its 2005 work plan to adopt the definition of the relevant markets according to the Commission recommendation and conduct market analyses as foreseen under the EU 2003 acquis. Market definitions and SMP concept in accordance with the EU 2003 acquis are set out in the document on relevant markets and SMP published by the TA in March 2005. The TA completed its analyses of the relevant markets during 2005-2006:

- In December 2005, the 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 15 and 16 in the Commission recommendation on the respective relevant markets. All three MNOs, Turkcell, Telsim and TT-TIM were designated as having SMP in the mobile call termination market, and Turkcell as also having SMP in the mobile access and call origination market (Decision of the Telecommunications Authority 2006/DK-10/142, Official Gazette of March 17, 2006).
- In March 2006, the TA completed its analysis of the relevant fixed markets, wholesale and retail, corresponding to markets 1-14 of the Commission recommendation on the relevant markets, and designated Turk Telekom as having SMP in these markets (Decision of the Telecommunications Authority 2006/DK-10/142, Official Gazette of March 17, 2006).

The major divergence of the Turkish regime from the EU 2003 acquis is that the regulations on the regulatory obligations for operators with SMP are, to a certain extent, predefined in the ordinance on Access and Interconnection (rather than being imposed at the NRA's discretion).

Bulgaria is also a new Member State and will have to carry out formal market analyses according to the 2003 acquis. The draft methodology for market analyses has been published for consultation.

The Croatian regulatory framework combines elements from both the 1998 acquis and the 2003 acquis. A bylaw adopted in 2005 sets out the procedures for market analysis according to the 2003 acquis. However, in practice the regulator has no discretionary powers for imposing regulatory obligations on the relevant markets defined in accordance with the new EU regulatory framework, as the primary law still defines a fixed set of regulatory obligations for SMP operators, in line with the rules of the ONP Interconnection Directive. Therefore, the new market analysis procedures for market analyses will not be applied before the adoption of the new law based on the EU 2003 acquis, which is expected in early 2008. On September 14, 2006 the Croatian NRA, HAT, designated T-Com and its 100%-owned subsidiary, Iskon Internet as having jointly SMP in the national market for fixed public telephony networks and services and in the national market for transmission of voice, sound, data, documents, pictures and other media over fixed networks. This market has been defined by the regulator in addition to the four markets set out in the ONP Interconnection Directive. In four other ONP markets, HAT renewed the SMP designations in March 2007, in line with its previous decisions on these markets.

In Albania, TRE designated Albtelecom as having SMP in fixed telephone networks and services in May 2004, however this designation was only valid until May 2005. Since its expiry no new SMP decision has been adopted by TRE. TRE has now published for a consultation until September 28, 2007 draft conclusions of its new analysis of fixed networks and services markets. TRE proposed to designate the fixed incumbent operator, Albtelecom, as having SMP in the relevant retail fixed markets for access and call services, and in the wholesale fixed markets for call termination, origination, national and international transit. TRE's final decision was taken on November 13. On September 18, 2007 TRE adopted its final measures on the new market analysis of mobile networks and services conducted in 2007. Similar to its previous market analysis completed in April 2006, TRE has designated two mobile operators, AMC and Vodafone Albania as having SMP in the retail market for the provision of public mobile services to end users and the wholesale market for call termination on each operator's mobile network.

Table 55 below summarises the legal basis for the designation of operators with SMP in the SEE countries, and the operators designated as having SMP and regulatory obligations imposed on each operator.

Country	Legal basis for defining SMP and designating the organisations with SMP	SMP designation in practice: relevant markets and undertakings with SMP	SMP obligations imposed in each market
Albania	<p>Law No. 8618 of June 14, 2000 Definition of organisation with SMP (Article 2, Para. 11*) Designation as organisation with SMP by TRE (Article 17*) Interconnection obligations of organisation with SMP (Article 42*) The Law establishes a 25% market share threshold for SMP designation. TRE Regulation No. 257, dated 16/09/2005 on "Definition of SMP Organisations in the Telecommunications Market." Law No. 9121 of July 28, 2003 "On Protection of Competition" contains rules on the 'relevant market' definition.</p>	<p>TRE decision of September 18, 2007 designated Albanian Mobile Communications and Vodafone Albania as having SMP on the following relevant markets:</p> <ul style="list-style-type: none"> <li>• Wholesale call termination in individual mobile network;</li> <li>• Retail public mobile services.</li> </ul> <p>TRE decision of November 13<sup>th</sup>, 2007 designated Albtelecom as SMP on the following relevant markets:</p> <p>Retail Markets:</p> <ul style="list-style-type: none"> <li>• access to the public telephone network from fixed location;</li> <li>• publicly available telephone calls from fixed location;</li> </ul> <p>Wholesale markets:</p> <ul style="list-style-type: none"> <li>• call termination to geographic numbers in the Albtelecom fixed network;</li> <li>• call origination on the public telephone network provided at a fixed location;</li> <li>• national transit services in the public telephone network provided at fixed locations;</li> <li>• international transit services in the public telephone network provided at fixed locations.</li> </ul>	<ul style="list-style-type: none"> <li>• Non-discrimination</li> <li>• Cost orientation</li> <li>• Transparency</li> <li>• Meet all reasonable requests for access and interconnection</li> <li>• Respect confidentiality</li> <li>• Price control</li> <li>• RIO</li> </ul>

Country	Legal basis for defining SMP and designating the organisations with SMP	SMP designation in practice: relevant markets and undertakings with SMP	SMP obligations imposed in each market
Bosnia & Herzegovina	<p>Law on Communications 2003, Article 14 contains general rules for the designation of operators with SMP in the relevant markets based on competition law principles.</p> <p>Article 17 contains rules on the designation of operators with SMP in the leased lines market.</p> <p>The Law foresees that RAK shall review SMP designations annually.</p>	<p>Three incumbent operators: BH Telecom; Telekom Srpske; HT-Mostar designated as having SMP in the following markets:</p> <ul style="list-style-type: none"> <li>• Voice telephony service via a fixed network</li> <li>• Voice telephony services via mobile networks</li> <li>• Leased lines</li> </ul> <p>SMP obligations were imposed when the licences were issued on June 1, 2002 for public fixed telephony services and on October 12, 2004 for mobile services.</p>	<p>All SMP-operators are subject to obligations of:</p> <ul style="list-style-type: none"> <li>• Non-discrimination</li> <li>• Cost orientation (applies to fixed network operations only)</li> <li>• Transparency</li> <li>• Meet all reasonable requests for access</li> <li>• Respect confidentiality</li> </ul>
Bulgaria	<p>Analyses according to the new Electronic Communications Law not started yet.</p> <p>Obligations imposed on SMP operators under the previous Telecommunications Law will stay in force until the end of the market analysis under the new Electronic Communications Law (§ 7 of the Final and Transitional Provisions of the Electronic Communications Law).</p> <p>Article 45(2) of the <i>Telecommunications Act of October 7, 2003</i>: A 25% market share threshold is set for SMP designation.</p> <p>The methodology for the terms and order for designation of an operator with SMP is approved by Decree No 155 of July 5, 2004 State Gazette No 61 of July 13, 2004.</p>	<ul style="list-style-type: none"> <li>• Fixed telephone networks and services: BTC</li> <li>• Leased lines: BTC</li> <li>• Mobile telephone networks and services: Mobitel and Cosmo Bulgaria Mobile</li> </ul> <p>National combined market for interconnection was not defined in the previous law.</p>	<p>BTC (fixed telephony network and services; leased lines) is imposed the full set of remedies defined in the TA:</p> <ul style="list-style-type: none"> <li>• Non-discrimination</li> <li>• Meet all reasonable requests for access</li> <li>• RIO and RUO</li> <li>• Transparency and access to information</li> <li>• Cost orientation</li> <li>• Accounting separation</li> <li>• Respect confidentiality</li> <li>• Co-location for interconnection</li> <li>• Provision of leased lines, special access, LLU and co-location</li> </ul> <p>Mobitel and Cosmo Bulgaria Mobile are only subject to obligations of:</p> <ul style="list-style-type: none"> <li>• Non-discrimination</li> <li>• Transparency</li> <li>• Confidentiality</li> </ul>
Croatia	<p>Telecommunication Law, article 51 establishes a 25% market share threshold for SMP designation on a relevant market.</p> <p>The <a href="#">Ordinance on conditions and procedures of relevant markets definition (Official Gazette 127/05)</a> was adopted in October 2005 based on the EU 2003 acquis, not applied in practice</p>	<p>HAT SMP decisions of March 30, 2007:</p> <ul style="list-style-type: none"> <li>• Leased lines: T-Com</li> <li>• Public voice services in mobile network: T-Mobile, VIPnet</li> <li>• Interconnection on national level: T-Com, T-Mobile, VIPnet</li> </ul> <p>HAT SMP decision of September 14, 2006:</p> <ul style="list-style-type: none"> <li>• Public fixed telephone networks and services: T-Com</li> <li>• Transmission of voice, sound, data, documents, pictures etc. in fixed network on national level: T-Com jointly with Iskon Internet.</li> </ul>	<p>All SMP operators are subject to obligations of:</p> <ul style="list-style-type: none"> <li>• Non-discrimination</li> <li>• Cost orientation</li> <li>• Transparency, including RIO</li> <li>• Meet all reasonable requests for access</li> <li>• Respect confidentiality</li> <li>• Accounting separation</li> <li>• Price control</li> </ul>

Country	Legal basis for defining SMP and designating the organisations with SMP	SMP designation in practice: relevant markets and undertakings with SMP	SMP obligations imposed in each market
Montenegro	Telecommunications Law (Official Gazette of the Republic of Montenegro, No. 59/2000) establishes a 25% market share threshold for SMP designation on a relevant market (Articles 3, 12, 28, 29, 37).	<ul style="list-style-type: none"> <li>• Fixed telephone networks and services: Telecom Montenegro</li> <li>• Internet services: Internet Montenegro</li> <li>• Mobile telephone networks and services: Promonte, Monet</li> </ul>	<ul style="list-style-type: none"> <li>• Non-discrimination</li> <li>• Cost orientation</li> <li>• Transparency</li> <li>• Meet all reasonable requests for access</li> <li>• Respect confidentiality</li> </ul>
Romania	<p>Article 32 par. (1)-(3) of Government Emergency Ordinance No. 79/2002 sets out the legal basis for identification of relevant markets and for designating providers with SMP.</p> <p>Decision of president of ANRC No. 136/2002, with subsequent completions, identifies the following relevant wholesale markets:</p> <ul style="list-style-type: none"> <li>• Access to the fixed public telephone networks for call origination, termination and transit</li> <li>• Full or shared unbundled access to the twisted metallic pair local loop, to provide broadband electronic communications services and publicly available telephone services at fixed locations</li> <li>• Bitstream access to the twisted metallic pair, optical fibre, or coaxial cable local loop and to the radio local loop, to provide broadband electronic communication services</li> <li>• Terminating segments of leased lines</li> <li>• Trunk segments of leased lines</li> <li>• Access to the public mobile telephone networks operated by each mobile operator for call termination</li> </ul> <p>and the following relevant retail markets:</p> <ul style="list-style-type: none"> <li>• Access at a fixed location to a public telephone network for residential customers / for non-residential customers</li> <li>• Local calls at a fixed location for residential / non-residential customers</li> <li>• National calls at a fixed location for residential / non-residential customers</li> <li>• Calls at a fixed location to public mobile telephone networks for residential / non-residential customers</li> <li>• International calls at a</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed retail and wholesale relevant markets: RomTelecom</li> <li>• Mobile call termination: Vodafone Romania, Orange România, Telemobil (Zapp), Cosmote</li> </ul>	<p>Wholesale markets:</p> <p>Access to the public fixed telephony networks for call origination, termination and transit RomTelecom</p> <ul style="list-style-type: none"> <li>• Transparency (RIO)</li> <li>• Non-discrimination</li> <li>• Accounting separation</li> <li>• Access to and use of specific network facilities</li> <li>• Cost orientation</li> </ul> <p>Terminating segments of leased lines RomTelecom</p> <ul style="list-style-type: none"> <li>• Transparency (RIO)</li> <li>• Non-discrimination</li> <li>• Accounting separation</li> <li>• Access to and use of specific network facilities</li> <li>• Cost orientation</li> </ul> <p>Full or shared access to the twisted metallic pair local loop to provide broadband electronic communication services and publicly available telephony services at fixed locations RomTelecom</p> <ul style="list-style-type: none"> <li>• Transparency (RUO)</li> <li>• Non-discrimination</li> <li>• Accounting separation</li> <li>• Access to and use of specific network facilities</li> <li>• Cost orientation</li> </ul> <p>Access to the mobile telephony network, for call termination Vodafone Romania &amp; Orange România:</p> <ul style="list-style-type: none"> <li>• Transparency</li> <li>• Non-discrimination</li> <li>• Accounting separation</li> </ul>

Country	Legal basis for defining SMP and designating the organisations with SMP	SMP designation in practice: relevant markets and undertakings with SMP	SMP obligations imposed in each market
	fixed location for residential / non-residential customers		<ul style="list-style-type: none"> <li>• Access to and use of specific network facilities</li> <li>• Cost orientation</li> </ul> Cosmote & Telemobil: <ul style="list-style-type: none"> <li>• Transparency</li> <li>• Providing certain services and give access to certain facilities</li> </ul> Retail markets: RomTelecom <ul style="list-style-type: none"> <li>• Prohibition of excessive prices</li> <li>• Prohibition of predatory prices</li> <li>• Services unbundling</li> <li>• CS/CPS (fixed access markets only)</li> <li>• Accounting separation</li> <li>• Price cap</li> </ul>
Serbia (including Kosovo <sup>1</sup> )			
Serbia	<p>Telecommunications Law, Article 4 (49) establishes a 20% market share threshold for SMP designation on a relevant market, which RATEL may modify to 25%.</p> <p>RATEL decision of March 24, 2006 designating Telekom Srbija as having SMP in public fixed telephone networks and services market.</p> <p>RATEL decision of February 16, 2007 designating SBB as having SMP in cable TV services market.</p> <p>SMP obligations are set out in Telecommunications Law, Articles 9, 10, 39, 40, 43, 48, 52 and 111).</p>	<ul style="list-style-type: none"> <li>• Fixed telephone networks and services: Telekom Srbija</li> <li>• Cable TV services: SBB</li> </ul>	<p>Telekom Srbija:</p> <ul style="list-style-type: none"> <li>• Network access</li> <li>• Special tariff regime</li> <li>• Provision of leased lines</li> <li>• Non-discrimination</li> <li>• Cost orientation</li> <li>• Transparency</li> <li>• Prohibition of cross-subsidisation</li> </ul> <p>SBB:</p> <ul style="list-style-type: none"> <li>• Retail price control</li> <li>• Accounting separation</li> </ul>
Kosovo	Telecommunications Act (UNMIK Regulation 2003/16), Section 44 establishes a 25% market share threshold for SMP designation on a relevant service market.	<ul style="list-style-type: none"> <li>• Fixed telephone networks and services: PTK</li> <li>• Mobile networks and services: Vala 900 (PTK mobile subsidiary)</li> </ul>	<ul style="list-style-type: none"> <li>• Non-discrimination</li> <li>• Cost orientation</li> <li>• Transparency</li> <li>• Network access</li> <li>• Respect confidentiality</li> </ul>

Country	Legal basis for defining SMP and designating the organisations with SMP	SMP designation in practice: relevant markets and undertakings with SMP	SMP obligations imposed in each market
The former Yugoslav Republic of Macedonia	Law on electronic communications, Article 146 designates the incumbent operator Makedonski Telekomunikacii as having SMP until otherwise decided by the NRA.	Makedonski Telekomunikacii: <ul style="list-style-type: none"> <li>fixed voice telephone networks and services;</li> <li>access to networks for data transmission and leased lines.</li> </ul>	<ul style="list-style-type: none"> <li>Non-discrimination</li> <li>Cost orientation</li> <li>Transparency</li> <li>Network access</li> <li>Respect confidentiality</li> <li>Interconnection obligation</li> <li>Accounting separation</li> <li>Minimum set of leased lines</li> <li>Retail tariff regulation</li> <li>CS/CPS</li> </ul>
Turkey	<ul style="list-style-type: none"> <li>'Ordinance On Principles and Procedures on the Determination of Operators Having Significant Market Power' of January 7, 2007</li> <li>TA Decision no. 2005/880, Official Gazette of December 28, 2005 (SMP designations for GSM mobile markets: M15, M16)</li> <li>TA Decision no. 2006/DK-10/142, official gazette dated 17/03/2006 (SMP designation for fixed markets: M1-14)</li> </ul>	<ul style="list-style-type: none"> <li>Fixed retail and wholesale markets (M1-14): Türk Telekom</li> <li>Mobile call termination (M16): Turkcell, Vodafone, Avea</li> <li>Mobile access and call origination (M15): Turkcell</li> </ul>	All SMP-operators: <ul style="list-style-type: none"> <li>Non-discrimination</li> <li>Cost orientation</li> <li>Transparency</li> <li>Network access</li> <li>Respect confidentiality</li> <li>Obligation to follow national and international QoS standards</li> <li>Reference Interconnection / Access Offer</li> <li>Accounting separation</li> <li>Co-location</li> </ul>

1) under UNSCR 1244

Table 55 - SMP regulations

Notes:

Bulgaria: A new legal basis came into force on May 26, 2007. Chapter 9 of the Electronic Communications Law (article 150-157) stipulates that:

- The NRA is responsible for market definition, analyses, and imposition of remedies on operators with SMP.
- The terms and conditions for market definition, analysis and assessment are stipulated by the methodology adopted by the Council of Ministers.
- Markets shall be defined and analysed every two years.

A draft market analysis methodology has been published for consultation.

Under the EU 2003 acquis, the European Commission has defined 18 relevant markets to be analysed in order to determine one or more operators having SMP. Seven of these are retail markets. The other eleven are wholesale markets, three of which are for fixed network interconnection (fixed call origination, termination and transit) and two for mobile network interconnection (mobile call origination and call termination on individual mobile networks). The designation of operators having SMP is done in each of these markets. The Access Directive (2002/19/EC) gives NRAs the flexibility to choose which ex-ante access and interconnection obligations to impose on operators found to have significant market power (SMP) on a relevant wholesale market from an exhaustive list of obligations.

The previous 1998 acquis defined four broader markets relevant for ex ante regulation. These were defined in such a way that they included both retail and wholesale services. The markets covered: public fixed telephony networks and services, leased lines, public mobile telephony networks and public mobile telephony services. In addition, the overall market for interconnection was defined in order to impose more specific regulatory obligations for mobile operators

designated as having SMP in this market if the mobile operator passes the additional test of having more than 25% market share in the fixed and mobile interconnection market. A public fixed telephone network operator designated as having SMP is always considered to have SMP on the interconnection market). A pre-defined set of specific regulatory obligations was imposed on SMP operators in each of the four markets according to the former ONP Interconnection Directive (97/33/EC). In particular, a cost orientation obligation was applied to interconnection charges of public fixed network operators with SMP and public mobile operators with SMP on interconnection market.

Table 56 shows whether national operators have been designated as having SMP in a market that implies specific interconnection obligations, and whether there is a requirement for their interconnection tariffs to be cost oriented subject to a specific cost orientation principle.

The developments over the last 12 months have not created many changes to the SMP designations and the cost orientation imposition in the region as reflected in the table below. The only change has occurred in Montenegro, where the new third mobile operator has also been designated as having SMP.

In Bulgaria, the interconnection market was not defined as a relevant market in the previous Telecommunications Act and for this reason no specific cost orientation obligations could be imposed on public mobile operators with SMP. This was essentially a misinterpretation of the 1998 acquis, where the SMP regime is associated with the broader activities such as the fixed public telephone network and the public mobile telephone network. Now that Bulgaria has adopted the 2003 acquis, the regulator will have to carry out the analysis of the wholesale mobile call origination and mobile call termination markets (markets 15 and 16) as foreseen in the Commission recommendation on relevant markets.

Most of the geographic units have established a cost orientation requirement for fixed network interconnection charges of SMP operators. Albania, Croatia, Montenegro, Kosovo, Romania, and Turkey also have cost orientation regulations in place for mobile operators with SMP. However, only a few countries have implemented a specific cost accounting system as a basis for cost orientation. With the exception of Bulgaria (FDC - for fixed networks), Romania (LRAIC - for fixed and mobile networks), and the former Yugoslav Republic of Macedonia, most of the regulators continue to rely on benchmarking as a preferred methodology for controlling the level of wholesale charges.

In the former Yugoslav Republic of Macedonia, the regulator (AEC) has prepared guidelines for LRIC methodology for the fixed SMP operator. One year after being designated as SMP on mobile markets, the mobile SMP operator(s) should also implement LRIC cost methodology, and AEC is currently working on these guidelines.

Country	SMP operators		Cost orientation imposition on SMP operators			
	Fixed	Mobile	Fixed	Mobile	Cost base	Cost standard
Albania	None		-			
		Albanian Mobile Communications and Vodafone Albania are designated as having SMP		Yes	Not defined	Not defined
	At the moment, there is no methodology for the regulation of mobile tariffs, either retail or wholesale. The interconnection charges recommended by TRE in May 2004 and in April 2006 were based on an EU benchmark.					
Bosnia & Herzegovina	BH Telecom d.d. Sarajevo	BH Telecom d.d. Sarajevo	Yes	-	Benchmarking	Benchmarking
	Telekom Srpske a.d. Banja Luka	Telekom Srpske a.d. Banja Luka	Yes	-	Benchmarking	Benchmarking
	Hrvatske Telekomunikacije d.o.o. Mostar	Hrvatske Telekomunikacije d.o.o. Mostar	Yes	-	Benchmarking	Benchmarking

Country	SMP operators		Cost orientation imposition on SMP operators			
	Fixed	Mobile	Fixed	Mobile	Cost base	Cost standard
	RAK has recommended the forward looking LRIC method in "A guide to setting up an interconnection regime in Bosnia & Herzegovina" and in the Rule on Interconnection No. 16/02. None of the incumbents have implemented LRIC or any other cost-oriented methodology and RAK has applied the benchmarking based on the EU and SEE countries.					
Bulgaria	BTC	-	Yes	-	Current cost	Fully Distributed Cost
		MTel	-	No	-	-
		Cosmo Bulgaria Mobile	-	No	-	-
Croatia	HT- Hrvatske Telekomunikacije d.d.		Yes		Benchmarking	Benchmarking
	Iskon d.d.		Yes		Benchmarking	Benchmarking
		T-Mobile Hrvatska d.o.o.	-	Yes	Benchmarking	Benchmarking
		VIPnet d.o.o	-	Yes	Benchmarking	Benchmarking
Montenegro	T-COM Montenegro		Yes		Historic	Fully Distributed Cost
		Promonte		Yes	Historic	Fully Distributed Cost
		T-Mobile Montenegro		Yes	Historic	Fully Distributed Cost
		M-Tel		Yes	Historic	Fully Distributed Cost
	No specific cost orientation obligation has been defined by the NRA. Consultation on a draft rulebook on regulatory cost orientation obligation is ongoing. The cost methodologies indicated above are the ones used in practice by operators.					
Romania	RomTelecom	-	Yes	-	Current cost	LRAIC
		Mobifon	-	Yes	Current cost	LRAIC
		Orange Romania	-	Yes	Current cost	LRAIC
		Telemobil	-	No	-	
		Cosmote România	-	No	-	
Serbia (including Kosovo <sup>1</sup> )						
Serbia	Telekom Srbija		Not decided			
	SBB (cable operator)		Not decided			
Kosovo	PTK		Yes		Benchmarking	Benchmarking
		PTK (Vala 900)		Yes	Benchmarking	Benchmarking
The former Yugoslav Republic of Macedonia	Makedonski Telekomunikacii A.D.	None	Yes	1 year after being designated as SMP operator on relevant market	Current cost	Fully Distributed Cost
	The cost orientation methodology is proposed in the secondary regulation adopted by the NRA. Implementation of LRIC cost accounting methodology is foreseen starting from July 2007. In June 2007, AEC prepared Guidelines for LRIC methodology for SMP operator in fixed voice telephony networks and services. Guidelines for LRIC applied to SMP operator in mobile services are being prepared.					

Country	SMP operators		Cost orientation imposition on SMP operators			
	Fixed	Mobile	Fixed	Mobile	Cost base	Cost standard
Turkey	Turk Telekom		Yes		Costs+ Benchmarking	LRIC (together with international benchmarking)
		Turkcell		Yes	Costs+ Benchmarking	LRIC (together with international benchmarking)
		Vodafone		Yes	Costs+ Benchmarking	LRIC (together with international benchmarking)
		Avea		Yes	Costs+ Benchmarking	LRIC (together with international benchmarking)

1) under UNSCR 1244

Table 56 - Operators declared as having SMP on interconnection and imposition of cost orientation

Notes:

Albania: The SMP designation of the fixed operator expired in May 2005 and a consultation on the new designation was completed in September 2007. The TRE's final decision is expected shortly.

#### 4. 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 operator with significant market power to all alternative operators in a non-discriminatory manner. With the exception of Albania and Serbia, RIOs have been established and published by the fixed incumbent operators in all entities. In Kosovo, the first RIO was approved by the regulator on January 12, 2007.

An even better indicator of a competitive market is the number of interconnection agreements that have been concluded. While mobile-to-fixed interconnection agreements may be limited by the number of operators in the national market, the number of fixed-to-fixed agreements represents a more interesting indicator for the degree of competition in a market. Romania can demonstrate a competitive environment with 120 agreements concluded for fixed-to-fixed network interconnection. In the last 12-month period, there were increases in the number of such agreements in Bosnia & Herzegovina, Bulgaria, Croatia, Romania, the former Yugoslav Republic of Macedonia and Turkey.

There was also an increase in Albania which now has 53 interconnection agreements between fixed networks in place even though no RIO is published. This is due to its very special situation with one incumbent operator and a large number of small operators, which only operate in rural areas.

In Bulgaria, 21 traditional agreements for switched interconnection have been concluded between fixed telephony operators. In addition, 12 operators have signed interconnection agreements based on IP technologies.

In addition to the national interconnection agreements reflected in the table below, there are cross-territory interconnection agreements in place between Telenor Serbia and mobile operators in Montenegro. Both Telenor Serbia and Promonte in Montenegro are subsidiaries of the Norwegian operator Telenor.

In Turkey, 32 agreements have been concluded for fixed-to-fixed network interconnection. These are mainly between Turk Telekom and long-distance carriers and between the long-distance carriers themselves.

There are no fixed-to-fixed agreements in Montenegro, Serbia and Kosovo. In Kosovo, the alternative operator, IpkoNet, has requested the regulator to mediate in its interconnection negotiations with the incumbent operator and the negotiations are still in progress.

Country	Status of RIO	Number of interconnection agreements		
		Fixed – Fixed	Fixed – Mobile	Mobile - Mobile
Albania	No RIO To be published within 2 months after TRE has completed analysis of wholesale fixed interconnection markets.	53	2	1
Bosnia & Herzegovina	Published November 1, 2005	6	0	0
Bulgaria	<a href="#">BTC RIO 2006</a> was approved by CRC on March 30, 2006	21*+10**	36	3
Croatia	<a href="#">T-HT RIO</a> valid from April 1, 2006 until October 31, 2007	9	14	3
Montenegro	Published December 2004	0	3	3
Romania	<a href="#">RomTelecom RIO 2007</a> updated on August 23, 2007	120	107	6
Serbia (including Kosovo <sup>1)</sup> )				
Serbia	No RIO	0	Telekom Srbija – Telenor Telekom Srbija – VIP	Telenor – Telekom Srbija Telekom Srbija – VIP
Kosovo	Approved by TRA on January 12, 2007	0	0	0
The former Yugoslav Republic of Macedonia	<a href="#">MakTel's RIO</a> approved by AEC on February 2006	5	4	1
Turkey	<a href="#">Turk Telekom RIO 2007</a> . <a href="#">Tariff list</a> valid from March 1, 2007	32	3	3

1) under UNSCR 1244

Table 57 - Reference interconnection offer of fixed incumbent operator and number of interconnection agreements

Albania: TRE has published for a consultation until September 28, 2007 draft conclusions of its new analysis of fixed networks and services markets. TRE has proposed designating the fixed incumbent operator, Albtelecom, as having SMP in a number of relevant retail and wholesale fixed markets. Publication of RIO is proposed as one of the remedies in the fixed wholesale markets. To be published within 2 months after the SMP designation.

Bulgaria: [BTC RIO 2006](#) was approved by CRC by its [Resolution N 572](#) on March 30, 2006. Annex 8 of BTC RIO 2006 with interconnection charges was contested by BTC to the Supreme Administrative Court (SAC) and is not yet valid. On December 18, 2006 BTC and SEC (Association of alternative operators) submitted to CRC an agreement for voluntarily application of the interconnection charges in compliance with the CRC approval of interconnection charges of March 2006. In relation with Annex 8 of BTC RIO 2006 the SAC with Resolution of August 9, 2007 rejected BTC's appeal and approved CRC [Resolution N 572](#) of March 30, 2006. This Resolution should have been contested in 14 days. There is no evidence of another appeal by BTC.

\* SS7 agreements (normal interconnection standard) \*\* H.323 agreements (used for IP and Internet telephony). Croatia: The [new T-HT RIO](#) was approved by CTA on September 7, 2007 together with the [Annex for collocation services](#). To be valid from November 1, 2007 until December 31, 2008.

Montenegro: RIO of T-Com Montenegro was published in December 2004. It has not been updated since then. Interconnection agreements of M-Tel with other operators (Promonte, T-Com Montenegro and T-Mobile Montenegro) have to be approved by NRA.

Romania: [RomTelecom RIO 2007](#) updated on August 23, 2007 after the changes introduced by [ANRCTI Decision No. 2800/2007](#) of July 19, 2007.

Serbia: Interconnection agreements concluded between Telecom Srbija (fixed and mobile) and new mobile operators: Telenor and VIP.

The former Yugoslav Republic of Macedonia: [Makedonski telekomunikacii RIO \(MATERIO\)](#) approved by AEC in February 2006, new [price list](#) came into force on March 2, 2007. MakTel published changes to the RIO on May 10, 2007. Updated on June 1, 2007.

Turkey: The RIO is valid until the new one is approved by TA. Fixed-to-fixed interconnection agreements concluded between the incumbent and long distance telephony operators.

## 5. Reference unbundling offer

Access to local loops of the telephony network connecting individual subscribers with the nearest switch 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 loop facilities are still difficult to duplicate. For this reason, the obligation to give unbundled access to local loops 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<sup>17</sup> 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 local loop.
- Shared access to unbundled loops, whereby the alternative operator typically gets access to the xDSL channel, while the incumbent operator keeps the normal telephony channel.

In addition, there is another option for access to the local loop 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. Lastly, there is also wholesale line rental, which is a resale arrangement, whereby an alternative operator only performs the marketing and billing functions, while the actual operation is carried out by the incumbent operator.

Each of these main alternatives can be implemented in different ways and there can be different solutions as to how and where the traffic is handed over from the incumbent to the alternative operator.

The most significant development over the past 12 months has taken place in Croatia. The requirement for LLU was legally established in October 2005, but as late as July 1, 2006 no unbundling had taken place. Despite this, one year later, Croatia could count 16,539 unbundled loops as of July 1, 2007. The country is now into a period of exponential growth and the number of unbundled local loops had reached almost 30,000 in October 2007. The main reason for this development was a regulatory intervention in December 2006. The new RUO approved by the regulator on December 15, 2006 introduced shared access to the incumbent's local loops, reduced some of the prices and streamlined access procedures.

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<sup>17</sup> A regulation can be adopted quite quickly if there is agreement between the European Commission, the Council, and the Parliament. When adopted, it is directly applicable at the national level. This is in contrast with directives, which typically takes a year or two to be adopted, followed by a period of transposition at the national level.

Romania has also implemented local loop unbundling and can now report some 1,588 unbundled loops<sup>18</sup>.

In Bulgaria, there has been a dispute over the RUO, and its practical implementation has been delayed even if the regulatory decision on RUO must be observed during the appeal process.

In the former Yugoslav Republic of Macedonia the RUO was approved in April 2006, however only one agreement has been reached so far and its practical implementation has been slow. In February 2007, the RUO was amended.

In Serbia, several alternative ISPs are offering services to end users based on the commercial offer from the incumbent operator. However, no decision has been taken yet on mandating LLU access.

In Turkey, the RUO of the incumbent operator was approved in November 2006, but no loops have been unbundled yet, although two agreements were signed in May 2007 between Turk Telekom and alternative operators. The obligation to provide wholesale bitstream access at the IP level was imposed on Turk Telekom by the TA in October 6, 2004 and the wholesale tariffs for bitstream access were approved in July 2005. However, the first reference offers for wholesale bitstream access and ADSL resale was only approved in August 2007. Only one alternative operator, NetOne, succeeded in signing an agreement on wholesale bitstream access with Turk Telekom on February 14, 2007, after the TA's intervention in a dispute on NetOne's request.

In Albania, the regulator has proposed the implementation of RUO in a draft regulation on access and interconnection that was published for consultation until September 28, 2007. The draft is intended to transpose the requirements from the Regulation on unbundled access to the local loop<sup>19</sup>.

Country	RUO legally compulsory	When is RUO expected to become compulsory	Status of RUO (Number of unbundled loops)	Does RUO include bitstream access via xDSL?	Number of loops with bitstream access by alternative operators
Albania	No	Under discussion	-	-	-
Bosnia & Herzegovina	Yes	2008	-	-	-
Bulgaria	Yes	January 1, 2005 BTC RUO 2006 approved by CRC on July 11, 2006	2	No	-
Croatia	Yes	October 20, 2005 T-Com RUO 2007 approved with changes on December 15, 2006.	16,539	No	-
Montenegro	No	Not decided	-	-	-
Romania	Yes	July 2004 RomTelecom RUO 2006 amended on June 6, 2006	1,588	No	-

<sup>18</sup> Report 3, published in the first quarter of 2007, indicated that around 45,000 loops had been unbundled. This information was wrong due to an incorrect classification as the total number of ADSL lines was provided instead of the unbundled local loops.

<sup>19</sup> 2887/2000/EC

Country	RUO legally compulsory	When is RUO expected to become compulsory	Status of RUO (Number of unbundled loops)	Does RUO include bitstream access via xDSL?	Number of loops with bitstream access by alternative operators
Serbia (including Kosovo <sup>1)</sup> )					
Serbia	No	Not decided	-	Access via ADSL is offered commercially	Several alternative providers offer bitstream access to end users
Kosovo	No	-	-	-	-
The former Yugoslav Republic of Macedonia	Yes	In May 2006 AEC approved the first <a href="#">MakTel's RUO</a> . In February 2007 AEC amended the prices for full and shard access	1 general agreement based on RUO signed	No	-
Turkey	Yes	<a href="#">Türk Telekom RUO</a> approved by TA on November 23, 2006. Prices reduced on July 24, 2007	2 LLU agreements signed in May 2007	Turk Telekom wholesale BSA and resale offers approved by on August 1, 2007	1 BSA agreement signed

1) under UNSCR 1244

Table 58 - Reference unbundling offer (RUO) of fixed incumbent operator

Notes:

Albania: The main principles on drafting the Reference Interconnection Offer (RIO), and Reference Unbundling Offer (RUO) have been sent out for [public consultation](#) to all stakeholders.

Bosnia & Herzegovina: RUOs from the three incumbent operators should be approved by December 2007 and that the Rule on LLU and RUO will be implemented during 2008.

The former Yugoslav Republic of Macedonia: \* According to the by-law document for RUO, bit-stream access via xDSL is not included as an unbundling technology.

## 6. National roaming and MVNO access

When a country decides to increase its number of mobile operators, it is normal that some regulatory help is given to the new entrant by requiring the already established operators to allow national roaming on their networks. Otherwise, it would be difficult for the new operator to get customers before achieving a degree of coverage comparable to the other operators.

National roaming requirements are not intended to be a permanent solution and normally have some conditions attached, such as:

- achievement of a minimum level of network coverage before national roaming is permitted;
- a maximum period during which the roaming is allowed;
- charges to be paid for the roaming services.

Table 59 below shows that Bulgaria, Croatia, Kosovo, and Turkey have such national roaming requirements in place.

Bosnia & Herzegovina also has national roaming requirements, but for a different reason. Their mobile operators were originally regional organisations that relied on national roaming for full national coverage. They were awarded national licences in 2004 and these licenses included national coverage obligations. According to their licenses, they were supposed to cover 80% of the population and 80% of the main roads by October 2006. During the transitional period, the operators were entitled to national roaming with roaming fees regulated by RAK so that national roaming was free of charge for the subscribers. By the end of 2006, the operators had met their

coverage obligations, but not the quality of service requirements. Therefore, RAK extended the national roaming arrangements, but changed the tariff regulation to allow national roaming fees both for outgoing and incoming calls.

Country	National roaming requirements	Practical implementation
Albania	Not regulated	None
Bosnia & Herzegovina	Mobile 2G operators in B&H have national roaming with each other to ensure national coverage.	Yes, between mobile 2G operators in B&H
Bulgaria	Licensed UMTS operators, having 2G networks with national coverage, are obliged to provide national roaming for a new operator, having no GSM network and having reached network coverage by population of 20% and having granted data transfer speed 144 Kbit/s.	None
Croatia	2G operators are obliged to provide national roaming for new 2G operators for at least three years after the new operator has reached coverage of at least 20% of the population.	National roaming 2G – 2G: Tele 2 – VIPnet (from June 2005 until June 2008) Tele 2 – T-Mobile (from June 2008 until June 2011)
Montenegro	Not regulated	None
Romania	Not regulated	None
Serbia (including Kosovo <sup>1)</sup> )		
Serbia	Not regulated	VIP – Telekom Srbija
Kosovo	Not regulated	None
The former Yugoslav Republic of Macedonia	Not regulated	None
Turkey	2G operators are required to satisfy reasonable, economically proportionate, and technically feasible roaming requests of other operators working in the same field for permitting the use of the customer equipment of the requesting operator on their telecommunication system.	None

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Table 59 - National roaming requirements for 2G operators

Note:

Croatia: National roaming between VIPNet and Tele2 does not take place in the Zagreb area.

The former Yugoslav Republic of Macedonia: Subject to commercial negotiations between mobile operators.

Table 60 shows whether there is a specific obligation for the licensed mobile operators to provide access to mobile virtual network operators (MVNO) and service providers (other than a general obligation to negotiate interconnection).

In Croatia, under Article 53(3) of the Telecommunications Law, mobile operators with SMP are required to accept all reasonable requests for “special access”, which covers any category of service providers and virtual operators. The costs of wholesale access shall be subject to a commercial agreement between the network operators and the service provider submitting the request, about which the operator must inform the NRA.

Country	Legal obligation for mobile operators to deal with			Commercial reality
	Service providers	Enhanced service providers	Mobile virtual network operators	
Albania	No	No	No	No
Bosnia & Herzegovina	No	No	No	No
Bulgaria	No	No	No	No
Croatia	Yes	Yes	Yes	No

Country	Legal obligation for mobile operators to deal with			Commercial reality
	Service providers	Enhanced service providers	Mobile virtual network operators	
Montenegro	No	No	No	No
Romania	No	No	No	No
Serbia (including Kosovo <sup>1</sup> )				
<i>Serbia</i>	No	No	No	No
<i>Kosovo</i>	No	No	No	No
The former Yugoslav Republic of Macedonia	No	No	No	Yes**
Turkey	No	No	No	Yes, only one airtime reseller is operating over Turkcell's mobile network in the Turkish mobile market.

1) under UNSCR 1244

Table 60 - Service providers and mobile virtual network operators

Notes:

Montenegro: There are no defined conditions for service providers or virtual mobile network operators yet.

The former Yugoslav Republic of Macedonia \*\* 1 Enhanced service provider (Roamfree) notified the AEC for providing re-branded SIM cards (with Estonian subscriber numbers) for Macedonian subscribers when travelling abroad.

## 7. Rights of way

Rights of way are necessary to establish electronic communications infrastructure, in particular, for new fixed networks infrastructures access to cables and ducts, across public and private land is an important subject. Building permits for mobile network infrastructures 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 and non-discriminatory way, without delay. In addition, the Framework Directive requires that the authorities issuing building permits must be structurally separated from the network operators that apply for them. In addition, countries should make sure that expropriation procedures are available and justified as a safeguard mechanism for access to private as well as public land.

There are also steps that can be taken to streamline application procedures, defining maximum time periods for dealing with applications and making rules for the free use of or easy access to public domains.

All SEE entities have frameworks in place, which establish non-discriminatory rights of way for operators of public telecommunications networks. However, few of the frameworks provide convincing and operator-friendly solutions for network builders. When compared with the procedures applied in the EU Member States, it appears that the solutions often suffer from:

- decentralised procedures subject to many local and regional approvals;
- lack of clearly stated time limits for approval procedures;
- lack of efficient expropriation procedures applicable to public networks.

In addition, some of the countries suffer from a lack of clearly established property rights to the network elements that were installed in earlier years, in particular during the communist period when real estate registration was not so well maintained.

Turkey established a new legal framework for rights of way in 2006. In particular, a new ordinance clarifies the procedures to be followed for access to private land.

Romania prepared new draft legislation on November 1, 2005, with a view to facilitate access to rights of way for network operators, but until now the new law has not been adopted.

Country	Does legal framework provide for		
	Non-discriminatory rights of way?	Procedures for access to public land Responsible authorities?	Procedures for access to private land
Albania	Yes Defined in the Law No. 8618 of June 14, 2000, article 12: "The right to use public and private property"	Public land is used by public operators upon application to regional authorities. Disputes between a public licensed operator and relevant authorities are resolved at legal courts.	A public telecommunications operator, may, in conformity with the legislation in force, enter into agreements with private people to use their land and facilities for the installation and maintenance of the nodes, lines transmitter stations and any other telecommunication equipment.
Bosnia & Herzegovina	Yes Subject to the requirement to apply for construction permission from the municipal authority and if telecommunication infrastructures, such as ducts, are envisaged in the municipality development plan.	If construction permission is obtained, the operator may use public land. Ref. Articles: 9, 14, 22, 34, 36 and 49 of the Law on Country Planning and Use of Land in Federation of Bosnia and Herzegovina ("Official gazettes FBiH", No. 52/02). Law on Country Planning in Republika Srpska ("Official gazettes RS", No. 84/02). Law on City Construction Land ("Official Gazettes FBiH", No. 67/05), Law on City Construction Land ("Official Gazettes RS", No. 86/03). Municipal authorities are responsible authorities where applicant will be advised on procedure.	The procedure defined in the Law must be applied to access private land. If public interest is established, expropriation may be applied; otherwise the operator must have permission from the landowner.
Bulgaria	Yes According to the Electronic Communications Law public operators have the rights of way through public and private properties and access to private property and also right of use over state private property of networks – transport, water, duct, power supply, etc. This provides a sound legal framework but there is still a need to ensure adequate practical compliance with the Urban Development Act (UDA) and relevant secondary legislation.	Rights of way are established directly by the Electronic Communications Law, on the basis of the following pre-conditions: <ul style="list-style-type: none"> <li>Local regional development plan is available;</li> <li>Compensation is paid to the landowner. The amount of compensation shall be agreed between the interested parties or by licensed valuator.</li> </ul> Further details for the technical specifications shall be arranged in local rules and regulations adopted by the Regional	The Electronic Communications Law contains no rules for access to private land. The rights of way must be agreed between the operator and the land owner.

Country	Does legal framework provide for		
	Non-discriminatory rights of way?	Procedures for access to public land Responsible authorities?	Procedures for access to private land
		Development Authorities and the State Agency for Information Technologies and Communications.	
Croatia	Yes Telecommunications Act, article 21, guarantees that all broadcasters and telecommunication operators have a right to access public lands, following appropriate procedures, as described in the article 21.	Telecommunications Act, article 21(1) allows the use of public land after obtaining an approval from the state administration body responsible for that particular resource. Article 21(2) ensures that, in cases where this approval could not be obtained, and in which a public interest is established, there is a possibility of expropriation of the public or private land or real estate, under the general expropriation law.	The operator must have permission from the landowner. Request for approval can be according to article 21(1) of the Telecommunications Act, or expropriation procedure under general expropriation law, according to article 21(2). In line with the rules of the Act on the Expropriation, operators can acquire ownership or usufruct of the real estate, when the usage is of interest to the state.
Montenegro	Yes All public network operators have non-discriminatory rights of way established by law (Chapter VI of Telecommunications Law of 2000).	Public land may be used by public operators upon application to an appropriate state or municipality administration.	No No expropriation procedure is defined by the Law.
Romania	Yes, for access to public property Article 26 par. (2) of Government Emergency Ordinance No. 79/2002 includes a non-discrimination clause. A new bill on rights of way has been drafted. It will establish a detailed procedure for access to public property, including the conditions for the shared use of the facilities.	Yes Article 23 par.(1) of Government Emergency Ordinance No. 79/2002 establishes that public property can be used when certain public interest conditions are met: <ul style="list-style-type: none"> <li>• it is in the public interest;</li> <li>• it does not go against city planning or the protection of the environment;</li> <li>• it is based on agreement by the parties or a court decision.</li> </ul> Article 27 of Government Emergency Ordinance No. 79/2002 sets a time limit of four months for negotiations after which the courts will decide. Negotiations involve local governments (mayor or local council) or central government pending of ownership of specific land. Also, the owner or the holder of the administration right shall be responsible for the	Yes Article 23 par.(2) of Government Emergency Ordinance No. 79/2002 establishes that private land can be used if: <ul style="list-style-type: none"> <li>• there is insignificant impact on the private property;</li> <li>• there are already installations and an additional installation will have insignificant impact;</li> <li>• the work does not contravene town or county planning;</li> <li>• there is an agreement by the parties or through court decision.</li> </ul> Article 27 of Government Emergency Ordinance No. 79/2002 sets a time limit of four months from application to the proprietor after which the courts will decide.

Country	Does legal framework provide for		
	Non-discriminatory rights of way?	Procedures for access to public land Responsible authorities?	Procedures for access to private land
		publication of the court decision. A copy of the court decision shall be delivered to ANRCTI, which is must make it available to any interested party.	
Serbia (including Kosovo <sup>1)</sup> )			
Serbia	Yes All public network operators have non-discriminatory rights of way	There are no procedures defined in the Telecommunications Act. Other laws, such as the Law on National Parks and the Law on protection of forests, define procedures. The responsible authorities are the authorities responsible for the public land in question.	Article 87 of the Telecommunications Act entitles public telecommunications operators to request the rights of way or the right to use the land (easement) if necessary for establishment of public telecommunications networks. If no agreement can be reached between the property owner and the operator, the NRA will regulate the right of access or the rights of use.
Kosovo	Yes All public network operators have non-discriminatory rights of way established by law	Yes Public land may be used by public 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.	Expropriation procedures may be used.
The former Yugoslav Republic of Macedonia	Yes All public network operators have non-discriminatory rights of way established by law.	State land may be used by public operators upon application to a responsible department with the Ministry of Finance to establish the right of use or defining the expropriation procedures.	Expropriation procedures may be used.

Country	Does legal framework provide for		
	Non-discriminatory rights of way?	Procedures for access to public land Responsible authorities?	Procedures for access to private land
Turkey	Yes Regulation on the Rights Of Way in Execution Of Telecommunication Services, article 6 establishes the following principles: “f) Evaluation of applications containing rights of way to be done without admitting any delay and acting transparent without differentiation between the operators at similar conditions by public institutions and establishments providing the Rights of way”.	Yes Public land may be used by public operators upon application to the relevant authorities. Responsible authorities include municipalities, General Directorate of Highways, Turkish State Railways.	Generally, the usage of rights of way depends primarily on the mutual agreement of the parties.

1) under UNSCR 1244

Table 61 - Rights of way

Note:

Montenegro: Chapter VI (Articles 43-57) of Telecommunications Law (Official Gazette of the Republic of Montenegro, № 59/2000) defines the conditions for building, maintenance, safety and use of telecommunications networks, facilities and equipment.

## F. Regulations – Universal service

The information in this section has July 1, 2007 as its reference date, except where a different date is mentioned.

### 1. Scope of universal service

All countries and geographic units have now defined a scope of universal service in their legislation that broadly corresponds to the requirements of the EU acquis. However, Albania has only set out general requirements that do not include specific details for access to networks and telephony services. There is an intention to define the scope of universal service more specifically at a later stage. A similar situation is in Serbia, where a detailed framework for the universal service still needs to be defined by the Ministry for Telecommunications and Information Society.

Country	Network access	Voice telephony service access	Emergency services	Payphones	Common subscriber directories	Directory enquiry service	Legal base for disabled users
Albania	Not yet decided	Not yet decided	Yes	Yes	Yes	No	Yes
Bosnia & Herzegovina	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bulgaria	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Croatia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Montenegro	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Romania	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Serbia (including Kosovo <sup>1)</sup> )							
Serbia	See note	Yes*	Yes*	Yes*	Yes*		Yes**
Kosovo	Yes	Yes	Yes	Yes	Yes	Yes	See note

Country	Network access	Voice telephony service access	Emergency services	Payphones	Common subscriber directories	Directory enquiry service	Legal base for disabled users
The former Yugoslav Republic of Macedonia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Turkey	No	Yes	Yes	Yes	Yes	No	Yes

1) under UNSCR 1244

Table 62 - Scope of USO

Notes to column on legal base for disabled users:

The final column of this table identifies whether the national telecommunications act includes rules, terms that are intended to assist disabled users. The following regimes are in place:

Albania: The entries reflect the situation as set out by Albanian legislation. Some of the requirements are not yet applicable.

Bosnia & Herzegovina: the arrangement includes special economic and technical conditions for disabled users. The monthly subscription fee includes 130 pulses free of charge. There are also pay phones especially adapted for disabled users. Special conditions for disabled users have been included in a document on universal service, which is not yet approved.

Bulgaria: According to Article 93 of the Telecommunications Act, the "provision of access to fixed voice telephone services under special conditions and/or provision of terminals, where appropriate, for the disabled or underprivileged people" is one of the elements of the universal telecommunications service.

Croatia: The legal requirement<sup>20</sup> is that "the telecommunications infrastructure and telecommunications equipment shall be designed, produced, installed and constructed in such a way as to also enable access and availability of public telecommunications services to disabled people". Two ordinances have been adopted on Universal Service: Ordinance on Unified Number for Emergency Services (September 2005), and an Ordinance on Universal Telecommunications Services (October 2005). The Agency has designated HT as the Universal Service Provider for 5 years starting from November 28, 2005.

Kosovo: According to the Law on Telecommunications, Section 21, TRA may establish additional conditions for authorizations, based upon class or category of services, which may include special arrangements for disabled people. Under Section 49, TRA is also authorized to adopt secondary legislation on the scope of USO, which may include specific measures for people with disabilities.

Other notes:

Albania: Under the definition of article 38 of the telecom law the Council of Ministers classifies and defines the obligations for the USO

Montenegro: Secondary legislation is still being prepared. Agency for telecommunication and postal services of Republic of Montenegro will compile the Draft Rulebook for Universal service by the end of 2007 (public consultation process is still in progress) and submit it to the Ministry of Maritime affairs, Transportation and Telecommunications of the Republic of Montenegro.

Serbia: Minimum set of US is defined by Telecommunications Law Article 49. However, the universal service framework should be approved through a separate decision by the Ministry on recommendation from RATEL.

\*\* Special tariff discounts defined by Telekom Srbija.

Turkey: The scope of universal service covers fixed telephone services, public phone services, printed or electronic directory services, emergency call services, basic internet services and passenger transport services to places that can be reached only through sea transport and maritime emergency and security communications services (two islands in the Aegean). Two additions were made to this list by Council of Ministers decisions:

1) services oriented to spread information technologies, including computer literacy so as to help the development of information society (February 2006), and 2) services for the provision of the digital broadcasting performed by the utilization of various broadcast media and technology via digital terrestrial transmitters to cover the entire settlements countrywide (April 2006)

## 2. Designation of universal service providers

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 undertakings to provide different elements of universal service and/or to cover different parts of the national territory.

The table below shows the designation of the universal service providers in SEE countries:

- which operator(s) has been designated to provide the US obligations;

<sup>20</sup> Article 11 of the Telecommunications Act of 2003 as amended in 2005.

- the designation mechanism for the US providers and the legal basis;
- if there are some restrictions for a mobile operator to bid for the provision of a connection to the public telephone network at a fixed location.

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 potentially reduce the cost of universal service provision.

Only Croatia, Montenegro, Romania, and the former Yugoslav Republic of Macedonia have implemented the universal service rules in a technology neutral way that would allow the participation in the provision of universal service by mobile operators.

Country	US providers	Designation mechanism for the US provider(s)	Eligibility of mobile operators for US designation
Albania	All public telecommunications operators are obliged to provide Emergency Services to their subscribers free of charge.	No designation mechanism	Yes
	Albtelecom (fixed incumbent) has an obligation to offer lower tariffs for services provided to disabled people.	Subsidised from State budget	No
	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 license	Part of Albtelecom License (Annex 5)	No
Bosnia & Herzegovina	None Licence conditions of the three fixed incumbent operators contain obligations corresponding to the universal service scope.	Not decided	No
Bulgaria	Bulgarian Telecommunications Company (BTC)	Under the previous Telecommunications Law, BTC, as the operators having SMP on the market for fixed telephone networks and services was designated by CRC as US providers.  Article 191 of the new Electronic Communications Law establishes a public tender procedure for the designation of the US providers.	No

Country	US providers	Designation mechanism for the US provider(s)	Eligibility of mobile operators for US designation
Croatia	HT-Hrvatske Telekomunikacije d.d.	<p>HAT Council can decide one or more providers of public voice services to provide USO, or it can choose the most favourable bidder for providing universal services on the basis of a public tender</p> <p>If as public voice service provider has a market share above 80%, HAT Council oblige that provider to provide USO, without public tender.</p> <p>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.</p> <p>On November 28, 2005 the Agency <a href="#">designated</a> T-HT as a USO provider for 5 years term, without public tender.</p>	Yes
Montenegro	None	Not decided	Yes (Draft version of rulebook)
Romania	Orange Romania, Vodafone (mobile operators); Rartel, Radiocom are designated as USO providers by means of telecentres.	Public tender procedure (ANRC president's Decision no. 1074/2004)	Yes
Serbia (including Kosovo <sup>1</sup> )			
Serbia	None	Not decided	Yes, RATEL can designate any public telecommunications operator (Telecommunications Law, Article 50).
Kosovo	PTK as operator with SMP on the fixed networks and services market and also based on its licence conditions	Not decided	Yes
The former Yugoslav Republic of Macedonia	None Tender procedure to designate US provider is ongoing	Under article 35 of the Electronic Communications Act, AEC may designate one or several universal service providers, after a public tender procedure.	Yes

Country	US providers	Designation mechanism for the US provider(s)	Eligibility of mobile operators for US designation
Turkey	Turk Telekom (in line with the concession agreement) The new universal service legislation has not been applied yet and there have been no tender procedure to designate universal service providers.	New framework under the Universal Service Law No. 5369 of June 16, 2005 envisages a tender procedure for designation of universal service providers. In January 2006 the Ministry of Transport issued a draft ordinance on principles and procedures about the provision of universal services. The ordinance envisages that the Ministry can impose universal service obligations on other operators than Turk Telekom and use a tender procedure for that purpose. The Ministry also has the authority to impose temporary universal service obligations on operators that have more than 70% market share in a given geographic market.	Yes

1) under UNSCR 1244

Table 63 - Designation of US providers

Notes:

Albania: One of obligations in the contract for the sale of Altelecom is the requirement for the buyer to clarify the issue of universal services (Law 9785 dated 19 July 2007).

Bosnia and Herzegovina: Article 12 of the Communications Law defines the scope of the universal service obligations and the designation mechanism for the universal service providers to be defined in a secondary legislation approved by the Council of Ministers. RAK has prepared a document on universal services which is not yet approved by Council of Ministers.

Kosovo: Based on article 3 of PTK National Fixed Licence, the licensee shall define its obligation to provide Universal Access and Universal Services in consultation with the regulator. Article 4 stipulates that the licensee shall provide a public emergency call services, Article 6 covers Directory Inquiry Services. The same obligations are included in PTK's Mobile Licence.

Montenegro: Secondary legislation is still being prepared. The regulator will compile the Draft Rulebook for Universal service by the end of 2007 (public consultation process is still in progress) and submit it to the Ministry of Maritime affairs, Transportation and Telecommunications of the Republic of Montenegro.

Romania: The Romanian USO legislation provides for the possibility to ensure the universal access to telephone, facsimile and Internet services in rural areas by means of telecentres, serving the needs of a certain community. A telecentre is a public site endowed with at least 2 telephone sets, 2 computers and one fax machine, within which the end-users can make and receive local, national and international calls. A telecentre may also provide facsimile and data communications services at a transfer rate allowing functional access to the Internet. Between December 2004 and September 2007 ANRC organised tenders for the installation of telecentres in 331 localities. The telecentres in 253 of these localities are already functioning. The telecentres are operated by four different operators, two of which are mobile operators.

The former Yugoslav Republic of Macedonia: In June 2007, AEC invited all interested parties to express their interest to be nominated for Universal Service provider. Only one company expressed its interest.

Turkey: Only Turk Telekom is designated as US provider at this time. It has been assigned as USO provider to about 1250 villages on a temporary basis according to Article 8.c of the Universal service Ordinance.

### 3. USO financing

Few of the geographic units have implemented compensation schemes for universal service net cost in practice.

Romania has established a universal service fund. The universal service cost compensation scheme in Romania has some innovative characteristics that merit additional comment.

- Providers of electronic communications networks and services contribute to the USO fund if their turnover of the previous year amounts to or exceeds €3m. For 2004: 0.8% of the turnover minus the revenue from wholesale interconnection and mobile roaming services. For 2005 – 2010: 0.5% of the turnover minus the revenue from wholesale interconnection and mobile roaming services, but not exceeding the amount of €2m for 2005 and €3m for 2006.
- ANRC Decision 1298/2005 allows two options for calculating USO contributions: one based on total revenues, and one based on electronic communications and postal services related revenues only.
- The funds collected are used in particular to subsidise the establishment of telecentres in rural communities where no telecommunications exist. Each telecentre shall include at least two computers with operational access to the Internet, one facsimile machine, one uninterruptible power supply (UPS) device and two telephones. The assignment of operators for the establishment of telecentres is based on competitive bidding. Funds are also used for public telephones in rural areas.
- Mobile operators are eligible to receive compensation for the provision of universal service undertakings. Moreover, two mobile operators Orange Romania and Vodafone were designated as universal service providers for the provision of access to the public telephone network, at a fixed location, by means of telecentres.

So far, ANRCTI has organised tenders for the installation of telecentres in 331 localities and 253 telecentres are already functional<sup>21</sup>.

In Bulgaria, the universal service compensation fund was established in May 2005, but the incumbent operator has not submitted any claim for compensation yet.

Turkey introduced a legal requirement for universal service funding under the authority of the Ministry of Transport and Communications in a new law of June 16, 2005. Turk Telekom has been designated as temporary universal service provider in about 1,250 villages. However, the detailed scope of this obligation still has to be defined and there have been no payments yet. In the meantime, universal service funds are being collected.

Croatia, Montenegro, Kosovo, and the former Yugoslav Republic of Macedonia have adopted legislation that will permit them to introduce compensation schemes in the future. Albania and Bosnia & Herzegovina do not have legislation that enables cost compensation for universal service providers.

Table 64 below shows whether NRAs have established the net universal service obligation (USO) cost, the method of funding is net cost sharing between operators; and it has been implemented in practice.

Country	Legal basis for calculation and reimbursement of USO costs	Method of funding	Implementation
Albania	No	No	No
Bosnia & Herzegovina	No	No	No
Bulgaria	Rules to calculate the net cost of operators providing	Funded by operators providing voice telephony services (Art.	BTC has provided USO without compensation until now. Recovery scheme may

<sup>21</sup> ANRCTI Newsletter September 26, 2007

Country	Legal basis for calculation and reimbursement of USO costs	Method of funding	Implementation
	<p>USO approved by CRC on June 24, 2005.</p> <p>The Electronic Communications Law (ECA) of May 22, 2007 states that the CRC prepares and approves new rules for calculation of the US provision net costs (Art. 201) in 6 months of the law's entry into force (i.e. end of 2007).</p>	<p>206 of the ECA).</p> <p>The contributions to the USO fund for the relevant year may not exceed 0.8% of the operator's gross revenue (excl. VAT) from the provision of voice telephony services, minus transfer payments to other undertakings for interconnection and special access as well as transit, roaming and VAS.</p>	<p>be implemented if BTC applies for its proven US net costs since 2005. The first application for recovery of the US net costs for 2005 has had to be submitted by June 30, 2007 (Article 111 of TA , Article 207 of ECA); no submission so far.</p>
Croatia	<p><a href="#">Ordinance on universal telecommunications services (Official Gazette 123/2005)</a></p>	<p>The USO funding mechanism is not activated as long as the USO provider has a market share above 80%.</p> <p>In case 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.</p> <p>The total annual funding requirement will be determined by the Agency to cover unfair financial burdens from USO obligations.</p>	No
Montenegro	Draft rulebook is under discussion	No	No
Romania	<p>Art. 13 of the Law on universal service 304/2003 provides for a USO fund. USO providers shall have the right to receive compensation for the net cost of the service provision within the USO scope.</p> <p><a href="#">ANRC Decision 1074/2004</a> of August 18, 2004 on implementation of universal service in electronic communications sector, with amendments by:</p> <ul style="list-style-type: none"> <li>• <a href="#">ANRC Decision 1188/2004</a> of Sep. 15, 2004</li> <li>• <a href="#">ANRC Decision 1298/2005</a> of Sep. 12, 2005</li> <li>• <a href="#">ANRC Decision 113/2006</a> of April 11, 2006</li> </ul>	<p>Providers of electronic communications networks and services contribute to the USO fund if their turnover of the previous year amounts to or exceeds €3m:</p> <ul style="list-style-type: none"> <li>• For 2004: 0.8% of the turnover minus the revenue from wholesale interconnection and mobile roaming services.</li> <li>• For 2005 – 2006: 0.5% of the turnover minus the revenue from wholesale interconnection and mobile roaming services, but not exceeding the amount of €2m for 2005 and €3m for 2006.</li> </ul> <p><a href="#">ANRC Decision 1298/2005</a> allows two options for calculating USO contributions: one based on total revenues, and one based on electronic communications and postal services related revenues only.</p>	<p><a href="#">USO fund value</a> in 2004-2005:</p> <ul style="list-style-type: none"> <li>• 2004 – roughly €14.3m</li> <li>• 2005 – €19.5m, including the unspent funds for 2004 (see <a href="#">Details on the USO Fund</a>)</li> </ul> <p>The funds have been allotted to the installation of telecentres and subsidies for low-income families.</p>

Country	Legal basis for calculation and reimbursement of USO costs	Method of funding	Implementation
Serbia (including Kosovo <sup>1)</sup> )			
Serbia	USO cost compensation is foreseen by the Telecommunications Law (Article 50).	Not decided	NRA should adopt it by the secondary legislation.
Kosovo	Yes	No	Not implemented
The former Yugoslav Republic of Macedonia	<p>By-law on methodology of establishing prices for universal service</p> <p>By-law on the method of calculating real costs and intangible benefits for the provision of universal service</p> <p>By-law on determination of the level of compensation for the real costs for the provision of the universal service</p>	<p>Costs sharing</p> <p>The reimbursement of real costs for US provision shall be financed by the operators/providers with minimum annual gross revenue of €100,000.</p> <p>The amount of contributions may not exceed 1% of the operator's gross revenue from the provision of public electronic communications networks and services.</p>	Not implemented
Turkey	<p>Law 5369 on 'The Provision of Universal Services and Making Changes on Some Laws' (Official Gazette No. 25856 dated June 25, 2005)</p> <p>Ordinance on Principles and Procedures for the Collection of Universal Service Revenues and Execution of Expenditures (Official Gazette, No. 26213, June 29, 2006)</p>	<p>According to article 6 of the Universal Service Law of June 2005, contributions to the universal service fund consist of the following:</p> <ul style="list-style-type: none"> <li>• 2% of the authorization fees collected by the Telecommunications Authority</li> <li>• 1% of net sales revenues of all operators except for GSM operators</li> <li>• 10% of payments by GSM operators to the Treasury</li> <li>• 20% of administrative fines collected by the Telecommunications Authority</li> <li>• 20% of what remains in the budget of the Telecommunications Authority budget after all expenditures are deducted</li> </ul> <p>These percentages can be increased by up to 20% by the Council of Ministers.</p> <p>These revenues are collected in the public budget and allocated to the budget of the Ministry of Transport.</p>	Funds are being collected, but there is no decision yet on payments.

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Table 64 - USO cost recovery scheme and application of the mechanism in practice

Notes:

Albania: Under the definition of article 38 of the telecom law the Council of Ministers classifies and defines the obligations of licensed operators for the USO.

Montenegro: Secondary legislation is still being prepared. Agency for telecommunication and postal services of

Republic of Montenegro will compile the Draft Rulebook for Universal service by the end of 2007 (public consultation process is still in progress) and submit it to the Ministry of Maritime affairs, Transportation and Telecommunications of the Republic of Montenegro. Source: Business plan of Agency for telecommunications and postal services of the Republic of Montenegro for 2007.

The former Yugoslav Republic of Macedonia: NRA has adopted a by-law on the determination of the real costs for universal service. All operators of public communication networks and services with a minimum annual gross revenue of €100,000 shall be obliged to contribute to universal service up to a maximum of 1% of total revenues from these activities.

#### 4. Quality of service

Article 11 of the Universal Service Directive defines a requirement for NRAs to ensure that operators with SMP publish their quality of service (QoS) achievements according to standardised<sup>22</sup> QoS parameters, definitions, and measurement methods. The following Table 65 explains the various obligations on QoS that exist. It looks specifically at the existence of QoS obligations, the standards to be followed as well as the information on the publication of the measurements.

The information indicates that QoS obligations exist in most countries and geographic units and that the ETSI EG 201 standard is followed for the method of measurements. However, only one or two of the countries and geographic units make measurements available to consumers, 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.

Country	NRA sets out QoS to SMP and other operators	SMP operators measure QoS according to	Measurements for most recent year published by NRA/SMP operator	Last publication of QoS results in the national Official Journal (or other)
Albania	Yes	ETR 138/1994 ITU-T E426 WTDR-1994*	Yes, based on licence conditions	No publication
Bosnia & Herzegovina	Yes	ETSI EG 201 769-1	No	No publication
Bulgaria	Yes	ETSI EG 201 769-1	Part of the QoS parameters are published in the CRC Annual Report 2005 (the report is adopted by CRC by Decision 1441 / 11.07.2006)	Data for the end of 2005 were published in the CRC annual report for 2005.
Croatia	SMP and other operators	ETSI EG 201 769-1	Yes	No publication
Montenegro	Yes (Draft version of rulebook)	ETSI EG 201 769-1 (Draft version of rulebook)	Yes (Draft version of rulebook)	No publication

<sup>22</sup> The standards are set out in Annex III to the Universal Service Directive. This annex specifies ETSI EG 201 769-1 version 1.1.1 (April 2000)

Country	NRA sets out QoS to SMP and other operators	SMP operators measure QoS according to	Measurements for most recent year published by NRA/SMP operator	Last publication of QoS results in the national Official Journal (or other)
Romania	Yes	Some minimal quality requirements are set out in ANRC President's Decision no. 138/2002.	No obligation to publish	No publication
Serbia (including Kosovo <sup>1)</sup> )				
Serbia	NRA has not yet addressed the topic.	Community of YPTT technical requirements	No obligation to publish	"General Plan of Telephone Network", CYPTT, 1999 and 2005
Kosovo	Yes	ETSI EG 201 769-1	No obligation to publish	No publication
The former Yugoslav Republic of Macedonia	Yes*	ETSI EG 201 769-1	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.	No**
Turkey	Yes, TA sets out QoS parameters for fixed operators having SMP and for all mobile operators.	ETSI EG 201 769-1 parameters for fixed line operators  Concession Agreement and some of the ETSI EG 201 769-1 parameters for all mobile operators	Not yet, but obligation to publish sufficient and up to date information by operators is set out with the new QoS Ordinance.	No publication

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Table 65 - Application of Quality of service

Notes:

Albania: TRE is drafting a new Regulation

Bulgaria: The CRC Annual report 2006 is not published yet.

Montenegro: Agency for telecommunication and postal services of Republic of Montenegro will issue a Rulebook for Quality of service by the end of 2007 (public consultation process is still in progress). Source: Business plan of Agency for telecommunications and postal services of the Republic of Montenegro for 2007

The former Yugoslav Republic of Macedonia: \* In June 2006, AEC prepared and adopted a by-law document on QoS parameters for public voice telephony services. \*\* After the check and validation of the reported data for QoS parameters, AEC will publish them on its website

Turkey: Ordinance on QoS came into force on March 3, 2005. It requires operators to publish the related information every three months. Therefore, fixed line operators and mobile operators have sent QoS parameters to TA for examination.

The other table on QoS provides the actual results of key measurements. These indicators give useful information on the technical status of the network.

Some independent observers have questioned whether all the QoS information has been provided according to the ETSI standards. For example, some of the supply times may be a theoretical figure. It is not clear how the calculation has been carried out for subscribers that are on a waiting list or not easily connectable.

It would have been interesting to report on the time required to change from one operator to another. This indicator is not yet explicitly defined as a QoS requirement in the majority of countries and geographic units. This is perhaps understandable in view of the early stage of competition. Croatia reports that the change of operator should take five days when number portability is implemented.

However, with these reservations, the information provides a wide range of performance characteristics.

The major changes in the last 12-month period are as follows:

- Bulgaria has reported an improvement in the time for initial connection from 19 days to 3 days. It also reports improvements in call-setup time and possibly in fault repair time. On the other hand, there is a fairly significant increase in the fault rate per access line.
- Croatia also reports improvements in supply time and fault repair times as well as a slight increase in fault rate per access line.
- Romania reports improvements in supply time, but a slight deterioration in most of the other parameters.
- The former Yugoslav Republic of Macedonia reports improvements in supply time, fault repair time and unsuccessful call ratio for long distance national calls, but slight deterioration in faults per access line per year, unsuccessful call ratio for international calls and call set-up time for international traffic
- Turkey reports improvements in most of the parameters.

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)
Albania	Not reported	0.044	0:50	0.15% for local calls 1.73% for national calls 1.73% for international calls	Not reported
Bosnia & Herzegovina	5 – 16 days It depends on technical possibilities	0.21 – 0.23	26 hours	0.29 – 0.4% for local calls 0.83 – 1.09% for long distance calls 3.8 – 5.31 for international calls	0.58 seconds
Bulgaria	3 days	2.12	5.4 hours** 12 hours***	0.41%	1.73
Croatia	49 calendar days	0.15	25 hours	1.03% total 1.186% calls to national fixed network 0.0199% calls to national mobile network 2.19% international calls	1.746 total 0.902 calls to national fixed network 4.891 calls to national mobile network 4.788 international calls

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)
Montenegro	Normally 1-2 days Max 7 days, if technical conditions are fulfilled	N/A	4 hours	0.1% for local N/A for long distance	0.2 sec local calls
Romania	2 days for 95% of requests 3 days for 99% of requests	0.171	10:01 for 80% of access line cases	3.79% for local calls 2.86% for national calls 6.99% for international calls	1.71 local calls (average) 2.54 national calls (average) 9.24 international calls (average)
Serbia (including Kosovo <sup>1)</sup> )					
Serbia	15 days (if technically possible)	0.300	61 50 (latest)	1.01% for local calls 5.7% for long distance calls	1.50
Kosovo	6.4 days	0.003	24	0.2%	0.50
The former Yugoslav Republic of Macedonia	5 days for answering the subscriber request 99.13%  7 days for instalment after signing the contract 99.71%	0.0920	96.13% of submitted faults are repaired within 1 working day	2.62% for long distance calls 0.02% for international calls	923 msec national traffic 3690 msec international traffic
Turkey	3 days	Urban area: 0.049% Rural area: 0.110%	Urban area 9.40 hours Rural area 17.22 hours	5.5% for international traffic 1.2% for national traffic	2-3 sec for national and international calls

1) under UNSCR 1244

Table 66 - ETSI standardised QoS indicators (1-5) of fixed incumbent operator

Notes:

Bosnia & Herzegovina: The indicators are given as a range when they vary between the three incumbent operators.

Bulgaria: Data from December 31, 2006.

\*\* Time by which the fastest 80% of valid faults on access lines are repaired

\*\*\* Time by which the fastest 95% of valid faults on access lines are repaired

Romania: Reference dates:

Supply time for initial connection – whole year 2006

Fault rate per access line per year – trimester IV 2006

Fault repair time (hours: minutes) – trimester IV 2006

Unsuccessful call ratio – trimester IV 2006

Call set-up time (seconds) – trimester IV 2006

## G. Retail tariffs

The reference date for the information in this section is July 1, 2007.

One of the main objectives of a telecommunications policy based on competition is to provide all kinds of users, consumers, as well as business organisations, improved telecommunications offerings in terms of price, quality, and choice.

Telephony retail prices represent one of the most important indicators whereby the results can be judged. In a traditional monopolistic environment, fixed monthly charges and local call tariffs were typically priced significantly below cost in an effort to make telephony affordable to the majority of consumers. Because they had monopoly rights, the operators could compensate for the revenue loss by charging sometimes exorbitant prices for long distance and international calls. Such calls were primarily used by business, so the pricing method constituted a transfer from business to consumers.

This tariff principle becomes untenable in a competitive environment, where new entrants will concentrate on the high profit areas and stay out of the unprofitable ones. The pressure on long distance and international calls has been further augmented by advances in technology that has greatly reduced the impact of distance as a cost element.

The need for tariff rebalancing is therefore evident. However, even where it is necessary, it can be a painful experience for many consumers and it is a process that typically requires several years. In order to soften the rebalancing consequences for consumers, it is fairly normal to differentiate tariffs for business and consumer users. Differentiation takes place most often for monthly rentals, but can also be implemented for call units.

At the end of the process, businesses and most consumers will normally pay less for their total communications bill and or consume more communications services.

However, some consumers, typically low-income families, may find that their total communications costs increase because of tariff rebalancing. It is therefore common to protect such users with special low-income tariff packages. These tariff options typically have monthly rental prices that are much cheaper than normal tariffs. The package also typically includes a limited number of free or cheap call units. Once this quota has been exhausted, the user will have to pay tariffs that are significantly more expensive than the normal tariff. The low-income tariff package is therefore unattractive for normal consumers, but may meet the basic communications needs of a low-income family.

This section on retail telephony tariffs presents indicators that relate to these topics in order to allow a reader to form an assessment of the tariff situation in each of the countries and geographic units.

### 1. Basic information about tariffs

Table 67 below provides some basic information about tariffs. It presents the status of rebalancing, primarily as it is assessed by the NRAs. Furthermore, it presents what type of tariff regulation exists for telephony services.

The table indicates that Kosovo considers that tariff rebalancing has been completed.

Montenegro has established a target date of September 1, 2007, bringing forward the original target date of 2010. Crnogorski Telekom, the fixed incumbent operator, with the approval of the regulator started to apply new retail tariffs from September 1, 2007. The tariffs have been modified according to the third and fourth phases of the tariff rebalancing plan adopted in 2004. According to the new price list,

- residential and business prices have been equalized (before, business customers used to pay prices that were two times higher per impulse compared to residential users);
- monthly subscription fees increased;
- prices for local and long distance calls increased (with the prices for local calls nearly doubled);
- prices for calls to mobile networks reduced by 20%; and

- prices for international calls reduced on average by 30%.

Furthermore, Telekom abolished impulse-based call charging system and introduced a time-based system, where after the first indivisible minute of the call, the price of the call will be calculated per second.

Bosnia & Herzegovina started its tariff rebalancing plan with a first step on November 1, 2005. The rule on tariff rebalancing adopted by the regulator in October 2005 allows a phased implementation of the rebalancing of retail tariffs of the three fixed incumbent operators during 2005 – 2008. The second phase of tariff rebalancing through January – December 2007 sets the following objectives:

- increasing access fees and national call charges;
- equalising monthly subscription and call charges for residential and business customers;
- reducing the number of international zones; and
- introducing time-based charging system with a one second billing interval.

In Bulgaria, further steps towards tariff rebalancing were undertaken with the regulator's approval of BTC's new retail tariffs in December 2006. The new retail tariffs came into force on February 1, 2007 and involve increased monthly subscription fees for residential and business subscribers and reduced prices for international calls. CRC had rejected two previous BTC retail tariff proposals in May and July 2006, as they did not comply with the Rules for retail price affordability for regulated fixed voice telephone services.

In Romania, in May 2007 the regulator introduced a price cap regime for fixed retail markets where RomTelecom is designated as having SMP, valid from June 1, 2007 until December 31, 2009. A price cap CPI+2.09% without sub-caps applies to access and call charges (national, local, international, and fixed to mobile calls) for residential and non-residential customers.

Serbia is a special case where the tariffs are particularly out of balance and there has been little rebalancing activity. A first step toward rebalancing was taken in the second half of 2006, but there is still a long way to go. In the meanwhile, the tariff imbalances form a barrier toward full liberalisation.

In Turkey, the new tariffs put into effect by Turk Telekom on March 1, 2007 as part of its tariff rebalancing plan, increased monthly subscription fees by about 23% and tariffs for local calls by 18%, while reducing tariffs for domestic long distance and international calls and calls to GSM operators by 50-60%. The regulator had approved the new tariffs, but the Turkish Competitive Telco Operators Association filed an appeal with the Council of State opposing the TA decision. The Council of State granted interim relief, suspending the TA decision. The TA took the case to the appeal chamber of the Council of State, which revoked the suspension. On July 21, 2007 Turk Telekom announced some changes to the tariffs introduced in March 2007. The most significant change was a slight reduction of the tariffs for local calls.

Country	Status of tariff rebalancing (target date if established)	Retail services covered by regulation	Type of tariff regulation	Advance notification requirements to the NRA (if any) and notice period	Public notice before tariff change
Albania	Ongoing	Regulation under preparation	Price cap/benchmarking	60 days	15 days
Bosnia & Herzegovina	Ongoing	Fixed and mobile voice telephony services Leased lines	Price cap/benchmarking NRA approval	1 month	1 month

Country	Status of tariff rebalancing (target date if established)	Retail services covered by regulation	Type of tariff regulation	Advance notification requirements to the NRA (if any) and notice period	Public notice before tariff change
Bulgaria	Ongoing	Voice telephony services Leased lines  New legislation: Prices of undertakings with SMP on a relevant retail market (article 221 of the ECL)	<ul style="list-style-type: none"> <li>• price cap</li> <li>• retail tariffs control</li> <li>• cost orientated tariffs on retail markets</li> <li>• benchmarking towards EU Member States tariffs</li> </ul>	1 month	No specified period for public notice; 3-day period prior entering into force to inform the NRA
Croatia	Ongoing	Voice telephony services	NRA approval + benchmarking	15 days	30 days
Montenegro	Target date: 31.08.2007	Voice telephony services	NRA approval	Not specified	8 days
Romania	Ongoing No target date	Fixed access and call charges for residential and business customers	Price cap regulation CPI+2,09% (the basket include all regulated services)	No	30 days
Serbia (including Kosovo <sup>1)</sup> )					
<i>Serbia</i>	Ongoing	Fixed service (Telekom Srbija is designated as SMP) Cable TV (SBB is designated as SMP)	NRA approval Cost based method (in progress)	Not specified	30 days
<i>Kosovo</i>	Yes	Yes	NRA approval Cost based model	Not specified	Yes
The former Yugoslav Republic of Macedonia	Ongoing. No target date established.		Price cap		No
Turkey	Ongoing. No target date determined.	PSTN Leased lines	Price cap	Not specified	Yes

1) under UNSCR 1244

Table 67 - Basic information about tariffs

Notes:

Bulgaria: The new Electronic Communications Law was adopted in May 2007 (promulgated SG No41 of 22.05.2007). According to article 218 of the old Telecommunications Act, BTC as the operator designated as having SMP in the market for fixed telephone networks and services, must notify its retail tariffs for fixed voice telephone services to CRC for approval one month before their publication. The entry on "Retail services covered by regulation" reflects the regulations that were put in place according to the 1998 acquis.

Croatia: Legal basis: Law on telecommunications article 63, paragraph 3, and interconnection bylaw article 32 paragraph 1

Montenegro: Process of tariff rebalancing started in 2004, originally with a target date of 2010. Period of 8 days before any tariff change is defined by Article 19 of Rulebook on the protection of customers of public telecommunication services (Official Gazette of the Republic of Montenegro, № 63/2003).

Turkey: Price cap regime for PSTN: All services are included in a single basket. The whole basket is subject to a global price cap and there are also individual price caps for certain services: local calls, monthly rentals, connection fees.

Table 68 presents the different charging mechanisms used by the incumbent operators. Traditionally, telephone calls have been measured by pulses. Each pulse would carry a certain price, and the time between each pulse would vary between different types of call. Pulse counting was a relatively simple way of collecting traffic data using electromechanical counters. Most of the advanced telephone operators, using modern digital switches, have replaced pulse based traffic measurements by a time-based method, often measuring time down to each second. This method of measuring traffic provides more flexibility in the construction of tariffs.

Because, on average, subscribers will pay for a half period more than they consume, the shorter time intervals is in the subscribers' interest.

Albania, Serbia, and Kosovo still have pulse based charging mechanisms with pulse periods for local calls with a typical pulse period length of between one and three minutes for local calls.

Bulgaria and Turkey have a combination of time and pulse charging depending on the technical capabilities of the switches.

The other countries and geographic units have time based charging. Bosnia & Herzegovina and Croatia have time intervals of one second. In the case of Croatia, there is also a tariff option with a charging interval of 60 seconds. The other countries and geographic units have longer charging intervals.

Country	Charging system	Length of call unit	Setup-cost																
Albania	Pulse based	Depends on the type of call (local, national, mobile, or international) and time of the day (peak, off peak). Only local calls are charged in call units: 120 seconds in peak time and 180 seconds in off-peak time.	3 Leke (2.45 eurocent) for calls towards the mobile operators There are no set-up charges for all other calls.																
Bosnia & Herzegovina	Time based	1 second	No charge																
Bulgaria	Time based (digital switches and analogue switches with technical possibility for reporting calls per time). Pulse based (analogue switches)	1 second (for time based). Minimum charge for 30 seconds for international calls and calls to mobile networks. Pulse length (for pulse based) – may vary depending on the type of the call: - local calls: always one pulse only per call - long-distance calls: 60 sec (peak), 90 sec (off peak) - international calls <table border="1"> <thead> <tr> <th>International group</th> <th>No. of seconds in 1 pulse</th> </tr> </thead> <tbody> <tr> <td>I group</td> <td>44.0</td> </tr> <tr> <td>II group</td> <td>30.0</td> </tr> <tr> <td>III group</td> <td>22.0</td> </tr> <tr> <td>IV group</td> <td>13.2</td> </tr> <tr> <td>V group</td> <td>11.0</td> </tr> <tr> <td>VI group</td> <td>7.3</td> </tr> <tr> <td>VII group</td> <td>3.3</td> </tr> </tbody> </table>	International group	No. of seconds in 1 pulse	I group	44.0	II group	30.0	III group	22.0	IV group	13.2	V group	11.0	VI group	7.3	VII group	3.3	Lev 0.11 (5.62 eurocent) for local and national long distance calls (Minutes included in the low level tariff plans are calculated with minimum duration of one minute. No call set up charge applied.)
International group	No. of seconds in 1 pulse																		
I group	44.0																		
II group	30.0																		
III group	22.0																		
IV group	13.2																		
V group	11.0																		
VI group	7.3																		
VII group	3.3																		
Croatia	Time based	National calls: 60 seconds Fixed to mobile and international calls: 15 seconds Per second billing was introduced in April 1, 2005 as an option	Normally no charge. (Setup costs are included in some tariff options.)																
Montenegro	Time based	After the first indivisible minute of the call, the price of call will be calculated per second.	No charge																
Romania	Time based	60 seconds	No charge																

Country	Charging system	Length of call unit	Setup-cost
Serbia (including Kosovo <sup>1)</sup> )			
Serbia	Pulse based	Depends on the type of call (local, long distance, international, non-geographic code) Pulse length: <ul style="list-style-type: none"> <li>• 2 min local off peak (1 min in peak)</li> <li>• 24 sec long distance off peak (12 sec in peak)</li> <li>• 4 sec national mobile off peak (2 sec in peak)</li> <li>• 2 sec fixed Montenegro</li> <li>• 1 sec mobile Montenegro</li> </ul>	No charge
Kosovo	Pulse based	Each call unit costs 4 eurocents. Local calls: <ul style="list-style-type: none"> <li>• 4.62 min off peak (2200-0800)</li> <li>• 2.31 min peak (0800-2200)</li> </ul> National Calls: <ul style="list-style-type: none"> <li>• 94 sec min off peak (2200-0800)</li> <li>• 47 sec min peak (0800-2200)</li> </ul> New scheme (optional, can be selected by subscriber): Call unit: 0.04 Euro National calls: 4 min, same for peak & off-peak, local & national calls. (15 Euro min monthly fee which includes 1000 minutes. For calls over the included minutes, the above rate applies.)	No charge
The former Yugoslav Republic of Macedonia	Time based	60 seconds (local, long-distance, fixed to mobile) 20 seconds (Premium rate services)	No charge
Turkey	Pulse or unit based (depending on the technology of the exchange)	Depends on type of call (international, national, local etc.) Unit length for all calls except GSM: 60 seconds Unit length for GSM calls: 20 seconds	No charge

1) under UNSCR 1244

Table 68 - Call charging system and initial charge application

Notes:

Albania: The tariff data are for the incumbent fixed telephony operator. The length of each pulse is different for the first 2 minutes (3 minutes in off-peak time), being respectively 40 seconds (90 seconds). These data are for household subscribers, for business subscribers the impulse is 1.5 times shorter (1 ALL/pulse for households and 1.5 ALL/pulse for others)

Bulgaria: Set-up charge was first introduced by the incumbent operator on April 1, .2005 and applies to local and long-distance calls (not to international calls). All calls are charged per second, for international calls and calls to mobile networks there is a minimum charge of 30 seconds.

Pulses are charged as full units and are not pro-rated. One pulse is generated at the beginning of each successful call.

Local calls for customers on pulse based charging, no matter of the call duration, are charged for 1 pulse only.

Long distance calls for customers on pulse based charging are charged one pulse at the beginning of the call, and after that according to the minutes in one pulse depending on call destination.

## 2. Monthly subscription fees

Table 69 below provides information on the monthly rental price for normal PSTN lines in the fixed network for residential subscribers in nominal euro with value added tax included.

The prices in many of the tariff schemes include some free calls or call units. In order to compare prices between countries, these price differences have to be taken into account.

The corresponding graph is constructed in such a way that it shows both the net monthly cost (after deduction of the value of the free call units) as well as the value of the free call units. Therefore, the total height of the column corresponds to the nominal monthly charge.

Country	Standard monthly rental including VAT	Nominal value of call units included in standard monthly rental	Low level package monthly rental	Nominal value of call units included in low level monthly rental
Albania	€1.96	There are no "free" call units included in monthly rental	There is no low level package of monthly rental applied.	There are no call units included.
Bosnia & Herzegovina	• BH Telecom d.d. Sarajevo	130 minutes of local calls in peak time - represents a value of €2.41	€2.18	Equivalent of 100 minutes of local calls in peak time - represents a value of €1.85
	• Telekom Srpske a.d. Banja Luka	130 minutes of local calls, peak time €1.56	€1.79	Equivalent of 150 minutes of local calls in peak time - represents a value of €1.79
	• Hrvatske Telekomunikacije d.o.o. Mostar	130 minutes of local calls, peak time €2.10	€2.8	130 minutes of local calls, peak time represents a value of €2.10
Bulgaria	€7.06 single telephone line		Package "Minimum plan" 3.32	30 minutes of local calls (15 pulses) represents a value of €0.28
	€6.75 residential party line		Package "Low User Plan": 1.59 EUR	20 minutes of local calls (10 pulses) represents a value of €0.18
			Package "Disabled people's plan": 0.77 EUR	160 minutes of local calls (80 pulses) represents a value of €1.47
Croatia	€10.02	€1.67	€7.52	60 minutes of national traffic anytime and this represents a value of €2.31
Montenegro	€3.00	No "free" call units included	€2.25 For party lines	No "free" call units included
September 1, 2007	€5.10	100 minutes of local calls or Internet dial-up calls (off-peak time, 19.00-07.00) €0.0095/min	Package for disabled people €0	Calls for €2.3 value included

Country	Standard monthly rental including VAT	Nominal value of call units included in standard monthly rental	Low level package monthly rental	Nominal value of call units included in low level monthly rental
Romania	€9.28	50 minutes of local and national on-net calls €0.018 /min	€8.21	No minutes included
Serbia (including Kosovo <sup>1)</sup> )				
Serbia	€1.12	See notes	€0.99	See notes
Kosovo	1) €6.33 2) €8.00	1) €1.84 2) €11.50	NA	NA
The former Yugoslav Republic of Macedonia	€7.70	€1.93	€4.24 Traffic up to 80.00 MKD is charged according standard tariffs and traffic above 80.00 MKD is charged double the amount of the standard tariff	None
Turkey	€7.12	-	€4.48	€6.03

1) under UNSCR 1244

Table 69 - Standard and low-level monthly line rental charge of fixed incumbent operator for residential users in nominal euro including VAT

Bulgaria: All low level packages are approved by CRC. The amount used above the units included in the plan is usually charged at tariffs that are much higher than the tariffs in the standard calling plan.

Romania: \* there is another low level package "Confort Standard with Social Discount" of 3.90 euro, available only for residential clients, pensioners with low incomes.

Kosovo: There are two tariff schemes in use for residential subscribers. In addition, there is also a tariff scheme primarily for business users that also may be selected by residential subscribers. None of them are typical low level packages. The two residential packages are therefore listed under "Standard monthly rental". The first option is the old tariff scheme, which is still in use. The second package is the new "Basic package". The Propackage has a rental charge of €21.74 and is intended primarily for business users.

Serbia: The value of the call units included in the standard and low level monthly rental cannot be accurately reflected in a table. There are 150 call units included in the monthly subscriptions. However, if the subscriber exceeds this number of free units, the advantage of the free call units is lost. In fact, call unit number 151 will then trigger payment not only for the 151<sup>st</sup> call unit, but for the previous 150 call units as well.

Turkey: 15% Special Communication Tax (SCT) is included.

The next figure provides a graphical representation of the standard monthly rental in Table 69 above. It also displays the value of the free call units. It is constructed in such a way that the total height of the column represents the nominal value of the monthly rental. The top burgundy coloured segment represents the value of the free call units calculated on the basis of what a call unit costs after the free units have been exhausted.

It is clear from the graph that the monthly charges in nominal euro are significantly lower than the EU average. However, when considering the charges in PPP euro - for the five countries where this information is available - the charges compare reasonably well with the EU average. Nevertheless, the monthly charges in Albania, Bosnia & Herzegovina, Montenegro and Serbia would be significantly below the EU average even if a PPP euro comparison could be made, providing a strong indication of tariff imbalances.

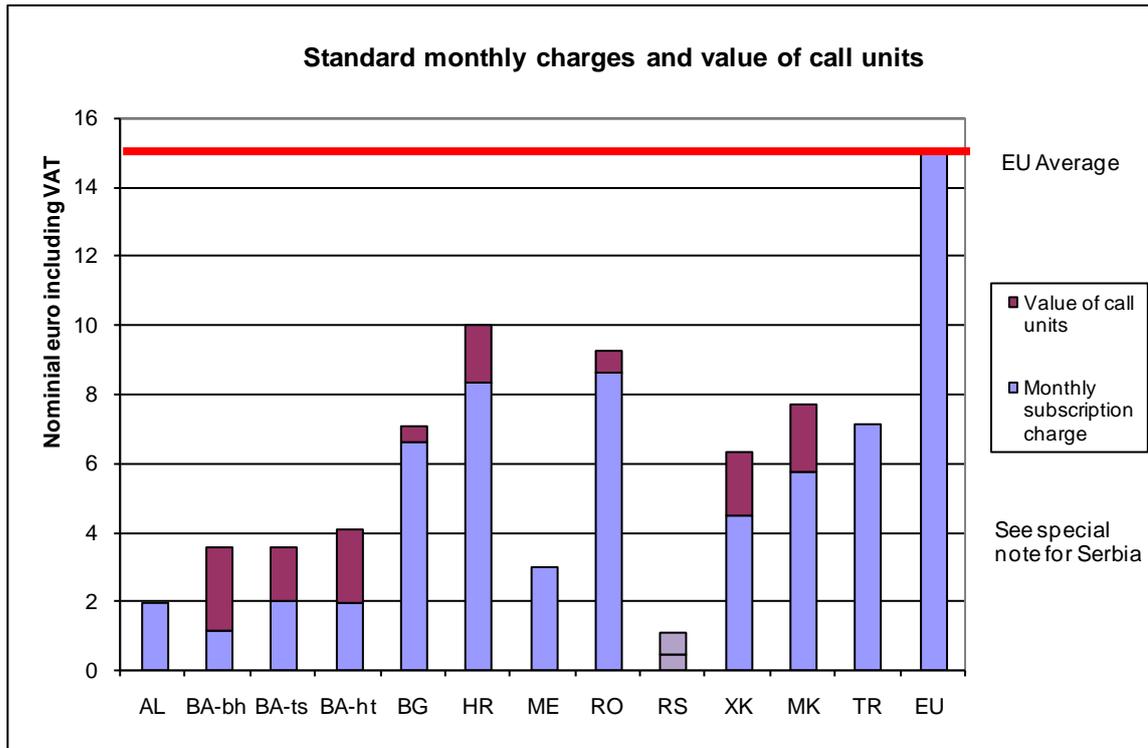


Figure 44 - Standard monthly rental and value of call units for residential users – nominal euro

Notes:

Serbia: The value of the call units included in the standard and low level monthly rental cannot be accurately reflected in a chart. There are 150 call units included in the monthly subscriptions. However, if the subscriber exceeds this number of free units, the advantage of the free call units is lost. In fact, call unit number 151 will then trigger payment for not only for the 151<sup>st</sup> call unit, but for the previous 150 call units as well.

Turkey: The monthly charge for Turkey includes a special 15% communications tax

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

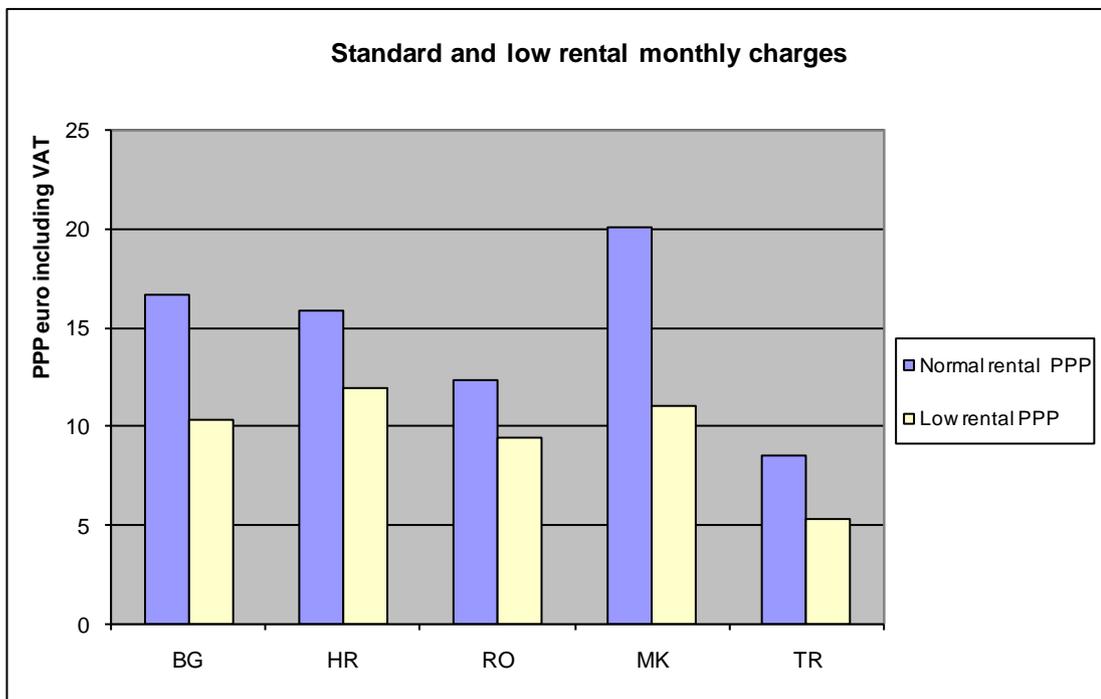


Figure 45 - Standard monthly rental (including value of call units) for residential users – PPP euro

Note:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission.

Figure 46 below shows how a low rental option compares with the normal monthly subscription charges. Not all countries have a low rental option. Bosnia & Herzegovina is indicated on the chart as not having a low rental option because their special tariff scheme for war victims is not generally available for low-income families.

The value shown in the figure is the nominal price paid by the subscriber. In several of the tariff schemes, the monthly rental includes a number of free call units. The value of the free call units (presented in Table 69) is not presented in the graph.

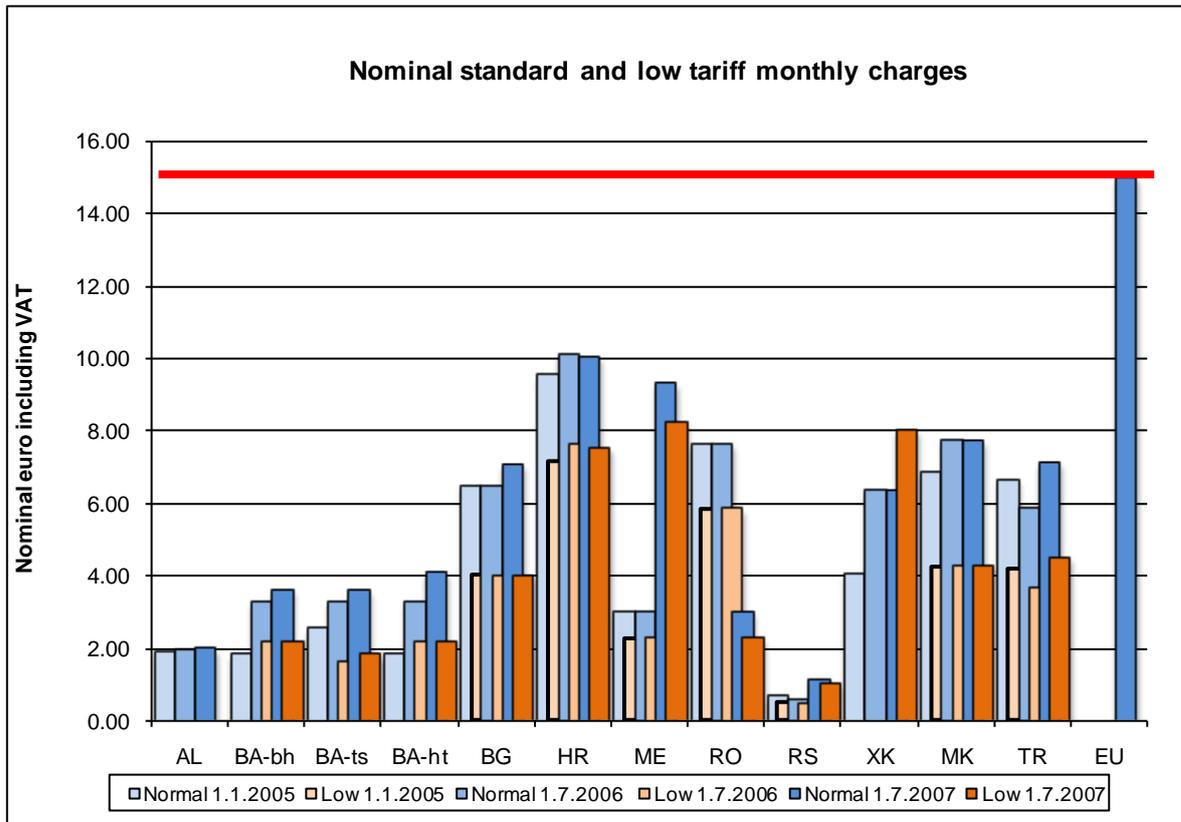


Figure 46- Standard and low-level monthly line rental charge of fixed incumbent operator for residential users in nominal euro

In general, the monthly line rental charges have remained relatively stable since January 2005. There was a significant increase in Serbia in the monthly subscription fee in the period after July 1, 2006, but the monthly subscription fee remains at a level that is significantly lower than all the other countries in the region. As a step in the tariff rebalancing process in Bosnia & Herzegovina, the monthly subscription fees were increased in the range of 10-15% for each of the three incumbent operators. At the same time, the number of call minutes included in the monthly fee has been increased from 100 to 130 minutes. This has partly offset the price increases.

Figure 47 below shows how standard and low level monthly charges compare in PPP euro for those countries where PPP information is available.

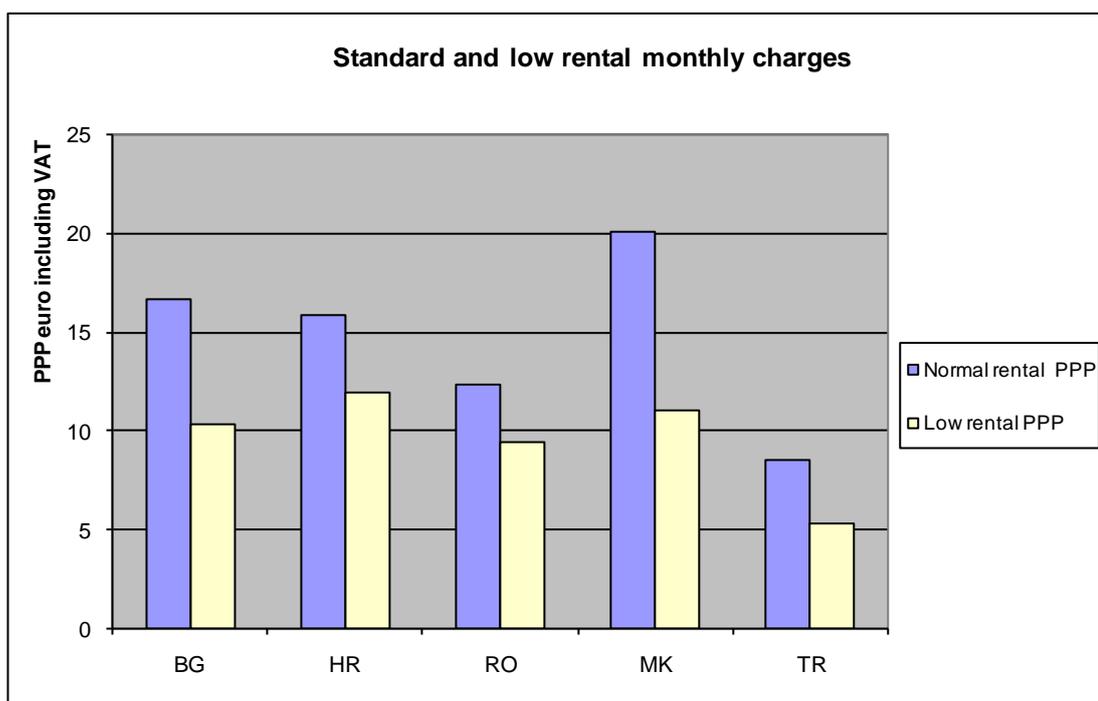


Figure 47 - Standard and low-level monthly line rental charge of fixed incumbent operator for residential users in PPP euro

Table 70 provides similar information for business subscribers as Table 69 shows for residential subscribers. The difference is that the prices for business subscribers are without value added tax and, except for Montenegro, which has a low tariff option choice for party lines, there are no low tariff schemes.

Country	Monthly rental	Value of call units
Albania	6.55	0.00
Bosnia & Herzegovina		
<i>BH Telecom d.d. Sarajevo</i>	8.36	2.06
<i>Telekom Srpske a.d. Banja Luka</i>	8.36	1.33
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	8.36	1.79
Bulgaria	9.20	0.00
Croatia	9.59	0.00
Montenegro	4.09	0.00
Romania	10.00	0.00
Serbia, including Kosovo <sup>1</sup>		
Serbia	0.95	0.00
Kosovo	21.74	100.00
The former Yugoslav Republic of Macedonia	11.44	0.00
Turkey	17.07	0.00
1) under UNSCR 1244		

Table 70 - Standard line rental charge of fixed incumbent operator for business users in nominal euro

Notes:

Bulgaria has higher monthly rentals for lines that are connected to a PABX.

Montenegro: Lower tariff for two-party lines.

Serbia: The value of the call units included in the standard and low level monthly rental cannot be accurately reflected in a table. There are 150 call units included in the monthly subscriptions. However, if the subscriber exceeds this number of free units, the advantage of the free call units is lost. In fact, call unit number 151 will then trigger payment not only for the 151<sup>st</sup> call unit, but for the previous 150 call units as well. It is assumed in the

information for business users that the advantage of call units is lost. It is therefore valued at zero in this table and the following chart.

Two of the geographic units have had fairly significant changes in their tariff plans.

- The tariff option for Kosovo includes free call units to the value of €100. In fact, the option includes 2,500 call units at the price of four eurocent each, which are included in the monthly subscription fee of €21.74. This tariff plan, which goes some way towards providing unlimited calls at a fixed price, is also available to residential subscribers. Likewise, business subscribers may also choose the tariff option normally used by residential subscribers. This tariff structure does not lend itself to be presented correctly in the corresponding graph in Figure 48 below as the value of the free call units greatly exceeds the nominal monthly charge.
- The monthly charges for business users in Turkey have more than tripled in the last 12 months.

The corresponding graph in Figure 48 should be interpreted in the same way as the graph for residential subscription costs. For each country, there can be two cost elements, one for the net monthly cost (after deduction of the value of free call units), and the free call units. The total height of the column then represents the nominal monthly charge.

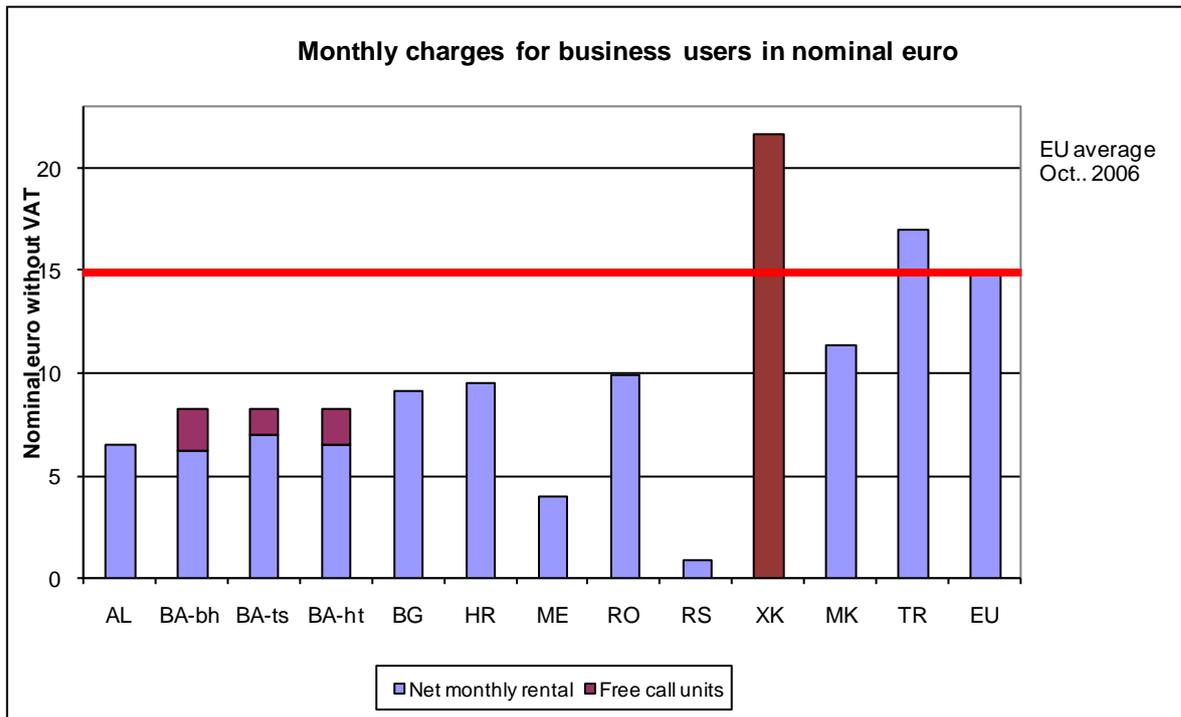


Figure 48 - Standard line rental charge of fixed incumbent operator for business users in nominal euro

Note:

The monthly charge for Turkey includes a special 15% communications tax

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission.

### 3. One time installation costs

Figure 49 below shows the one-time costs for installation and connection of residential as well as 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 countries also have special reconnection tariffs that apply when a subscriber is disconnected for failure to pay the subscription fee. These types of reconnection tariffs are not reflected here.

The geographic units fall into three cost categories:

1. Albania, Serbia, and two of the incumbent operators in Bosnia & Herzegovina have installation prices above €100. In the case of Serbia, this high rate is only paid by business users.
2. Bosnia & Herzegovina (one incumbent operator), Bulgaria, Croatia, Montenegro and residential subscribers in Serbia have installation costs between €35 and €100.
3. Romania, Kosovo, the former Yugoslav Republic of Macedonia, and Turkey have installation costs below €25. Turkey's installation cost is particularly low at only €3.21 without VAT.

In the case of Kosovo, there has been a significant change in the installation costs in the last 12 months. While the installation costs were previously the highest in the region, they are now in the lowest cost category.

In Figure 49 below, both residential rates and business rates are provided without value added tax in order to allow a fair comparison. In most countries and geographic units, the one-time installation costs are nominally the same for residential and business subscribers.

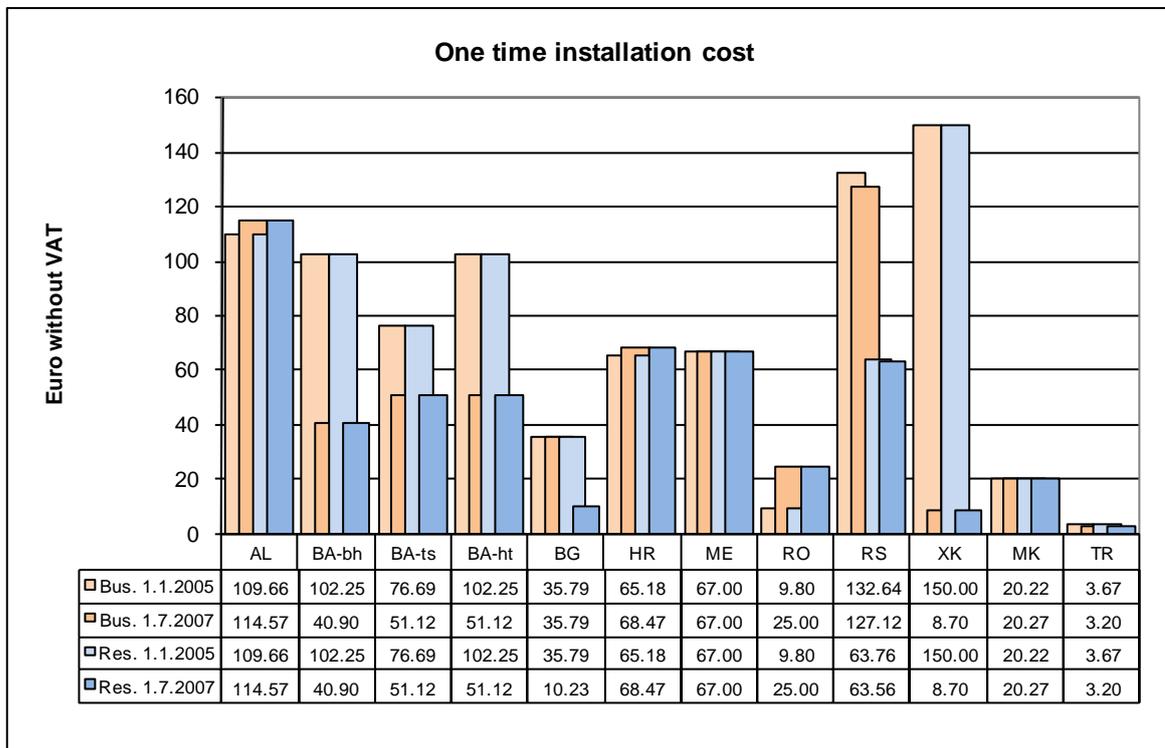


Figure 49- One time installation cost for residential and business users without VAT

Notes:

The former Yugoslav Republic of Macedonia: Normal installation fees assume that the new installation is within 250 metres of the network. For greater distances, the new subscriber is obliged to pay the additional cost.

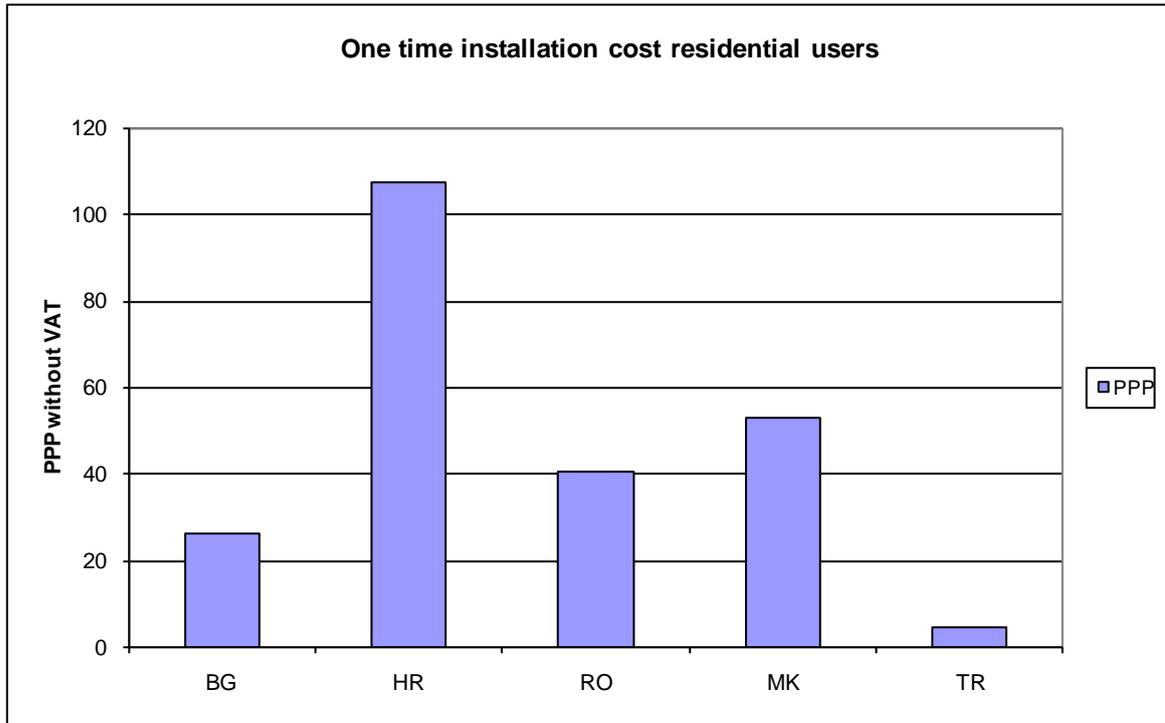


Figure 50 - One time installation cost for residential users without VAT in PPP euro

#### 4. Access cost

Figure 51 below requires some special explanation. It is intended to show the status of tariff rebalancing and to give an indication of the degree to which the tariff scheme creates a tariff deficit.

The cost of connecting to the local network of an operator is normally paid for by a combination of the one-time installation costs and the fixed monthly charges. In order to combine these two revenue elements into a single indicator, the monthly charges (without VAT) have been discounted and added to the one time installation charge.

This discounted sum of installation cost and monthly charges can also be represented by a single monthly charge that, when discounted, produces the same amount. This “fictitious” monthly access charge would then include the one-time installation elements.

Such a calculation has to make certain assumptions. For the calculations in this report, it has been assumed that:

- the discount factor is 8% per year;
- the revenue stream for monthly subscription fees covers 18 years;
- the one-time installation cost is collected in year zero;
- the subscriber line is reconnected so that a reconnection fee is collected in year seven and year fourteen.

In the figure below, the “fictitious” monthly access charge representing one-time installation costs has been added to the normal monthly subscription cost.

These indicators are compared with the European average for monthly access charges for residential users. The corresponding indicator for the one-time cost is not available from the 11th Implementation Report from the European Commission.

The result shows that all of the geographic units are below the EU average for residential users and also most of them for business users. In particular, Serbia has extremely low values for both residential and business tariffs. However, the new tariff structures for business users in Kosovo

and Turkey have increased the corresponding access charges so that they are now above the EU average.

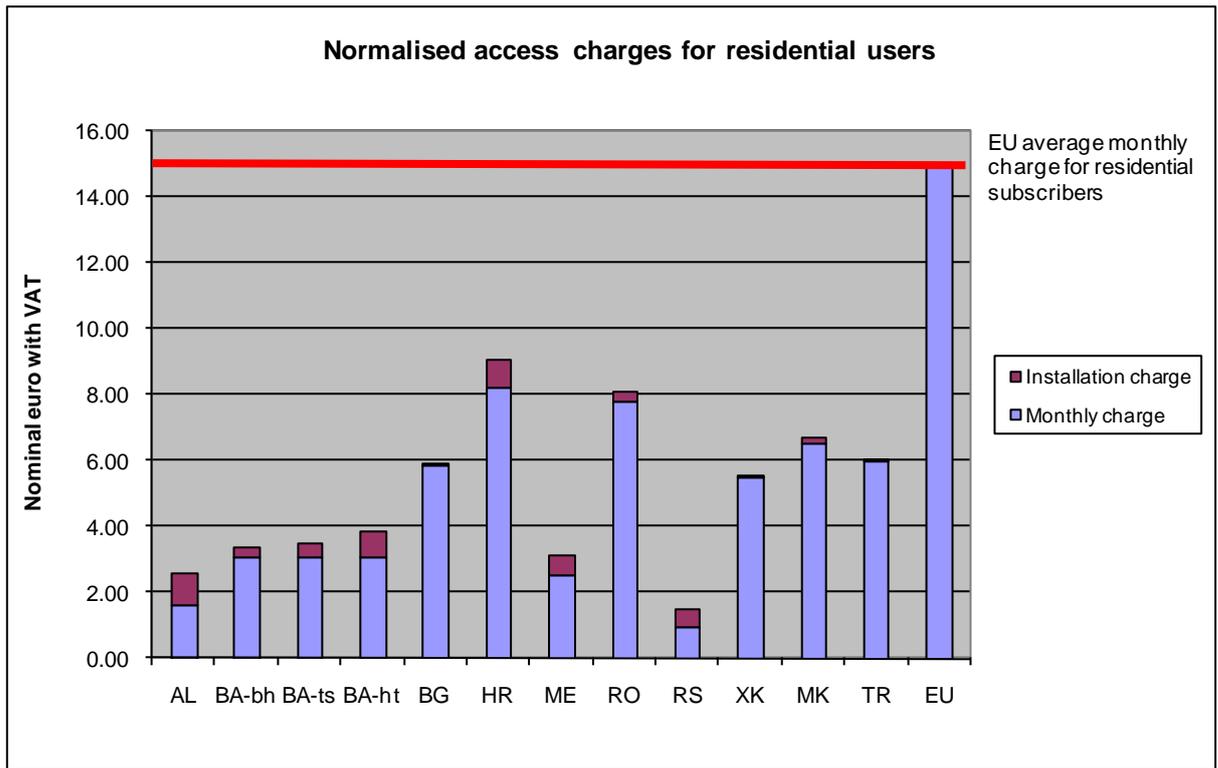


Figure 51 - Normalised access charges for residential users – nominal euro

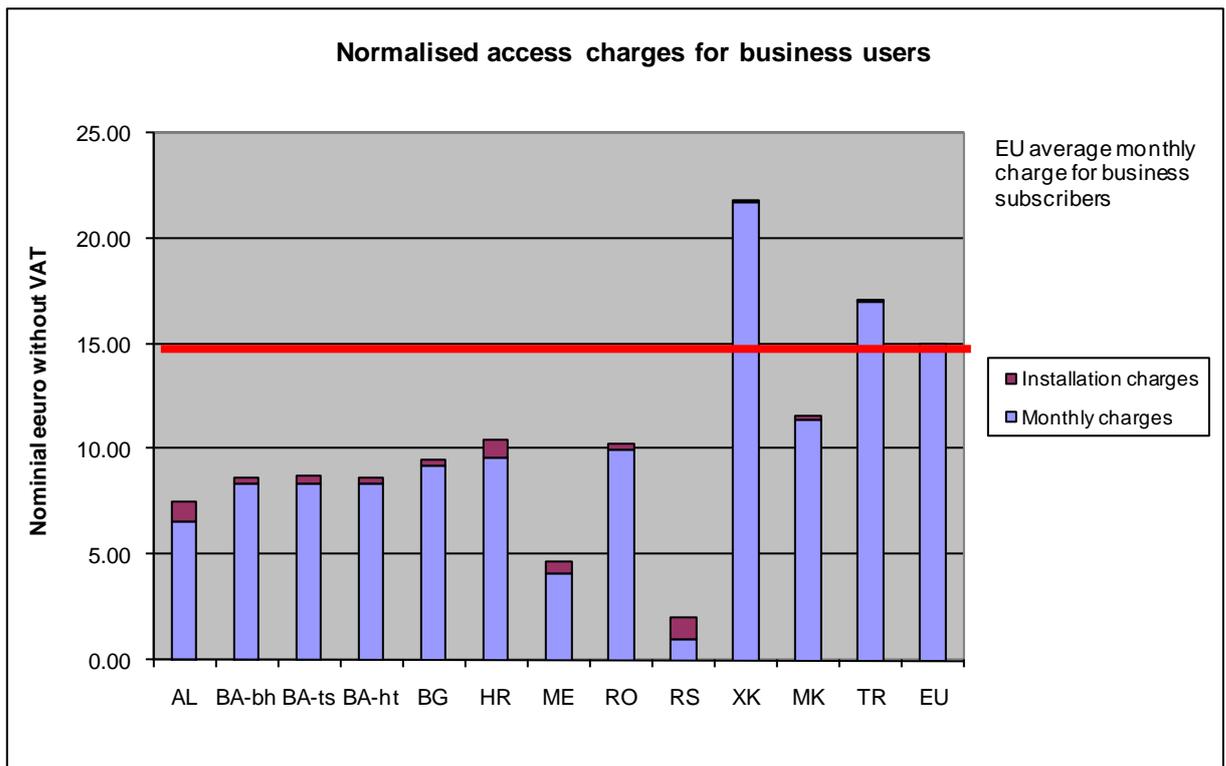


Figure 52 - Normalised access charges for business users – nominal euro

## 5. Local fixed telephony tariffs

The next figure provides price information for local calls including value added tax for the incumbent operator, and where competition exists, from a typical alternative operator, in peak time periods.

Some assumptions have to be made in order to produce price information that allows international comparisons:

- Where the tariff scheme includes an initial price for the establishment of the call (call-setup charge), this value is included in the price of the call.
- Where the length of a call unit is such that a three-minute call cannot be accurately priced, the time based price element is calculated on a theoretical three-minute price. For example, where a call unit has a duration of four minutes, the price for three minutes is calculated as  $\frac{3}{4}$  of the price for four minutes.

The price calculation does not take into account the additional cost element represented by the fact that on average each call includes the cost of an additional half call unit.

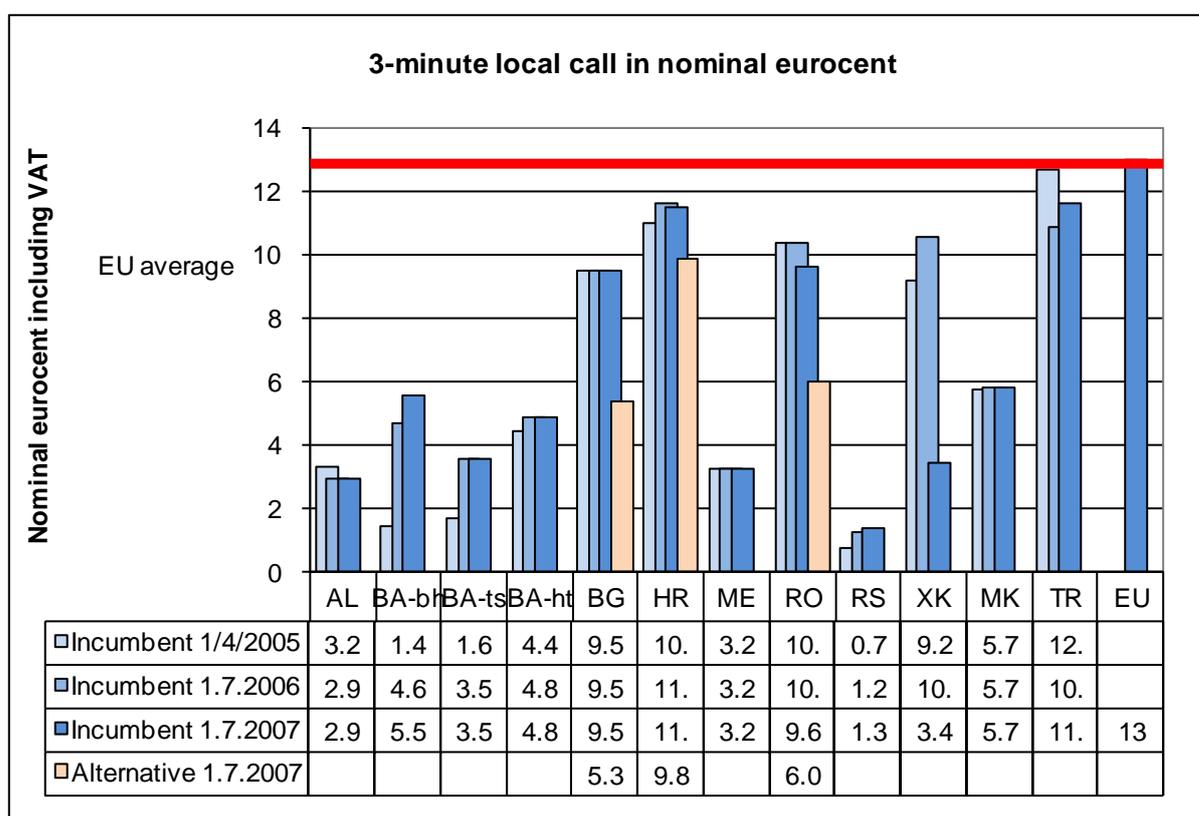


Figure 53 - Price of fixed incumbent and alternative fixed operator for a 3-minute local call in nominal eurocents

### Notes:

Albania: The actual cost is 3 Lek for the first two minutes and then 1 Lek for the next two minutes, giving a cost of 4 Lek for a 4-minute call. The tariff is represented here as 3 Lek for a three minute call. The tariffs for previous periods have been recalculated according to this method. This tariff is for residential subscribers. The corresponding tariffs for business subscribers are 50% higher.

Bulgaria: The prices shown for the incumbent are for calls made on digital exchanges. Local calls made on analogue exchanges are priced differently (6.75 eurocents per call). The alternative operator, Orbitel, does not charge for on-net local calls.

Croatia: The alternative operator is Optima Telekom.'s OptiMax peak-time rates at full tariff. This tariff scheme includes a fixed monthly fee of HRK 200 (€27.60) which can be used for calls. The first 100 minutes per month is charged at about 1/3 of the cost of additional minutes.

Romania: The tariffs for alternative operators, which in previous reports were incorrectly reflecting on-net tariffs, have been corrected to off-net tariffs.

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

All the incumbent operators have local call tariffs in nominal euro that are less than the EU average. The price developments since April 2005 are rather modest for most countries. From a tariff rebalancing viewpoint, it should be expected that local tariffs would increase while in particular international tariffs would decrease. Except for Bosnia & Herzegovina, such price increases are either absent or are very small. In Kosovo, the local call tariffs have recently been significantly reduced.

When considering the levels of local tariffs in purchase power values for the countries where this indicator is available, the local tariffs exceed the EU average in all countries as shown below in Figure 54.

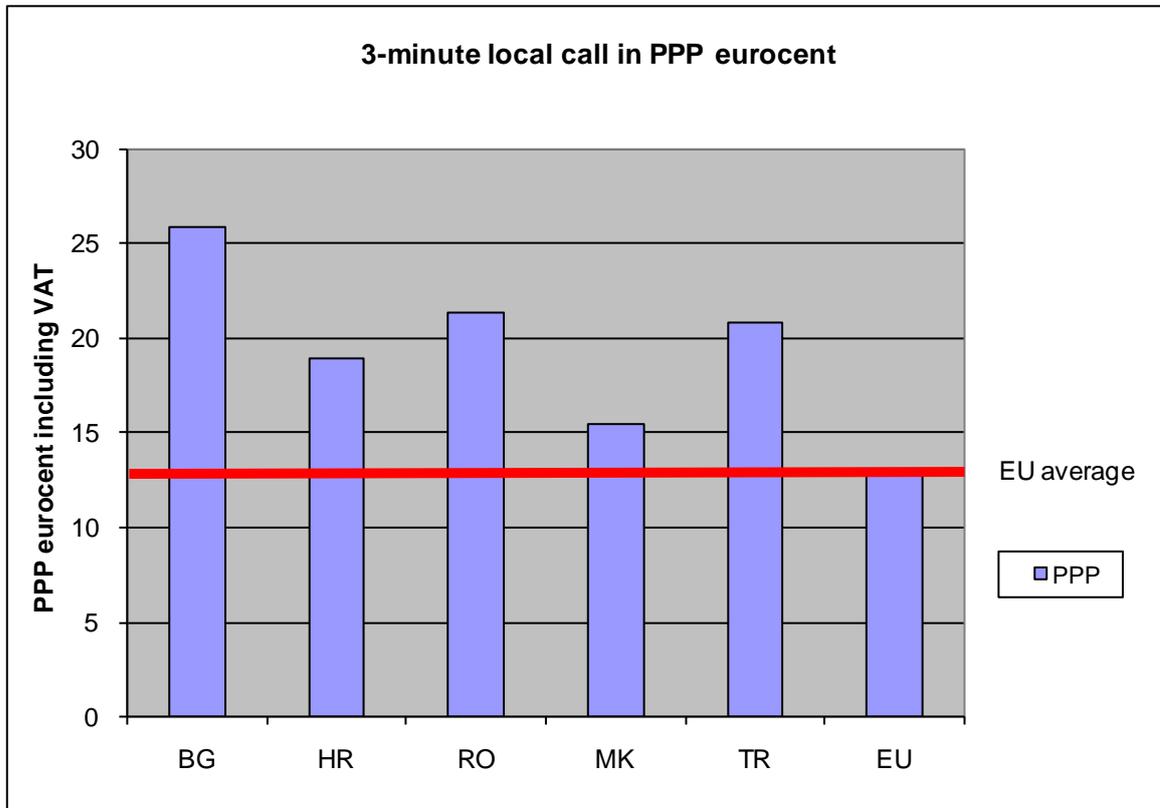


Figure 54 - Price of fixed incumbent operator for a 3-minute local call in PPP eurocents

Note:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

The next figure shows the prices for a 10-minute local call in the fixed network. This information will be different from that of a three-minute local call only when there are call set-up charges that become less significant in a longer call. Since only the incumbent operator in Bulgaria has tariff schemes with call set-up charges, this country is presented with relatively lower prices for calls with a 10-minute duration. Kosovo has terminated its arrangement with set-up costs.

For Bulgaria the call set-up cost remains rather high relative to the cost per minute and corresponds to the per minute cost for over seven minutes.

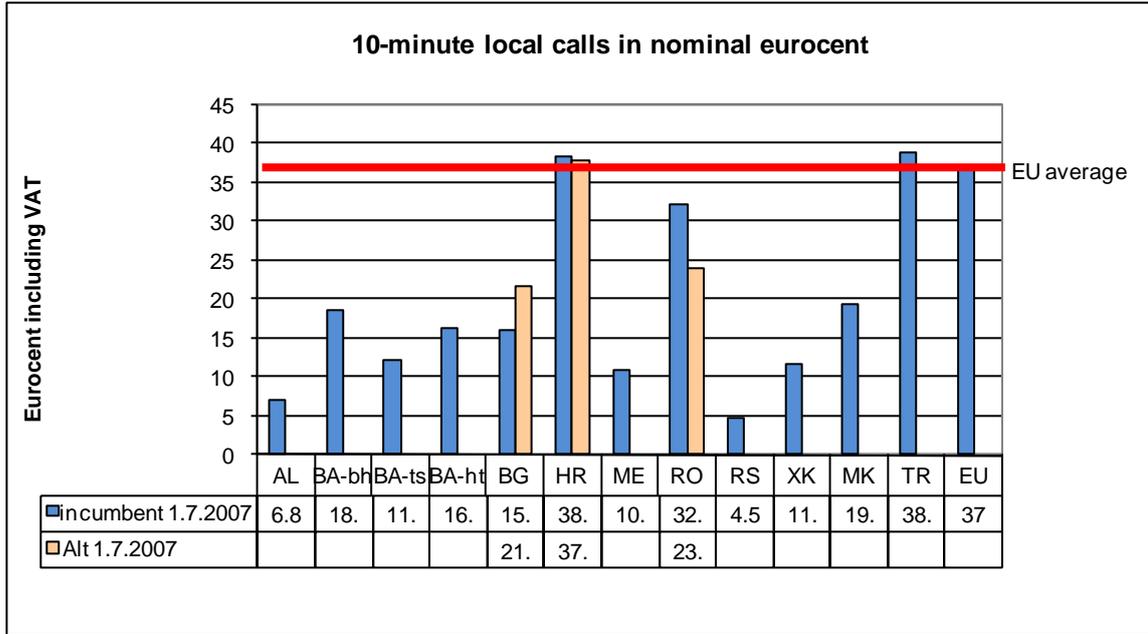


Figure 55 - Price of fixed incumbent and alternative fixed operator for a 10-minute local call in nominal Eurocents

Notes:

Bulgaria: The prices shown for the incumbent are for calls made on digital exchanges. Local calls made on analogue exchanges are priced differently (6.75 eurocents per call). The alternative operator, Orbitel, does not charge for on-net local calls.

Croatia: The alternative operator is Optima Telekom's OptiMax peak-time rates at full tariff. This tariff scheme includes a fixed monthly fee of 200 HRK (€27.60) which can be used for calls. The first 100 minutes per month is charged at about 1/3 of the cost of additional minutes.

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

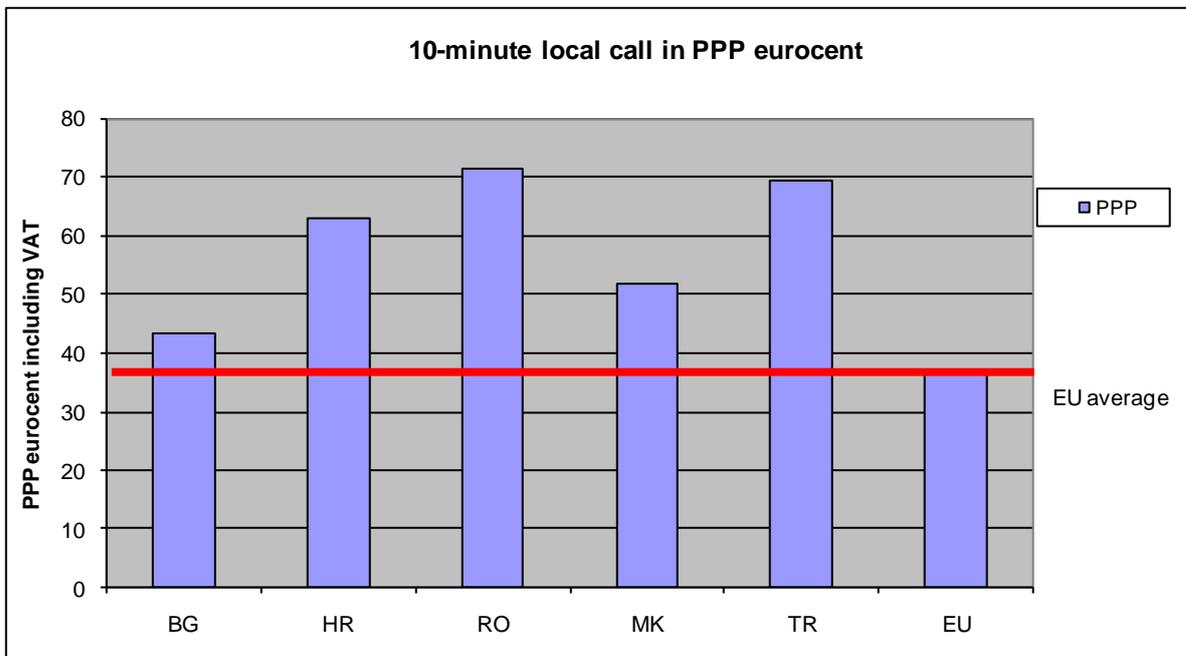


Figure 56 - Price of fixed incumbent fixed operator for a 10-minute local call in PPP Eurocents

6. Long distance fixed telephony tariffs

The Croatian incumbent operator has a tariff scheme whereby all national calls are charged at the same rate. In other words, all national calls are charged at the same rate as a local call. This means that while a three-minute local call in Croatia has a relatively high price, the price for a 3-minute long distance call is relatively low compared with the other geographic units and less than half of the European average.

A similar tariff scheme has also been introduced recently in Kosovo and its long distance tariffs are now the lowest in the region.

Serbia also has tariffs for national long distance calls that are lower than those in Croatia. However, this only applies to the Serbian tariffs for residential users, which are lower than for business users.

A three-minute long distance call with the incumbent operators in Albania and Turkey costs more than the EU average. In the other countries, the tariffs are lower than the EU average.

The charts also presents the tariffs of the alternative operators on July 1, 2007. The alternative operators often differentiate their tariffs between on-net (calls between subscribers in their own network) and off-net (calls that terminate on another network). The charts use the on-net rate for the incumbent operator and the off-net rate for alternative operators, because this is the most realistic comparison.

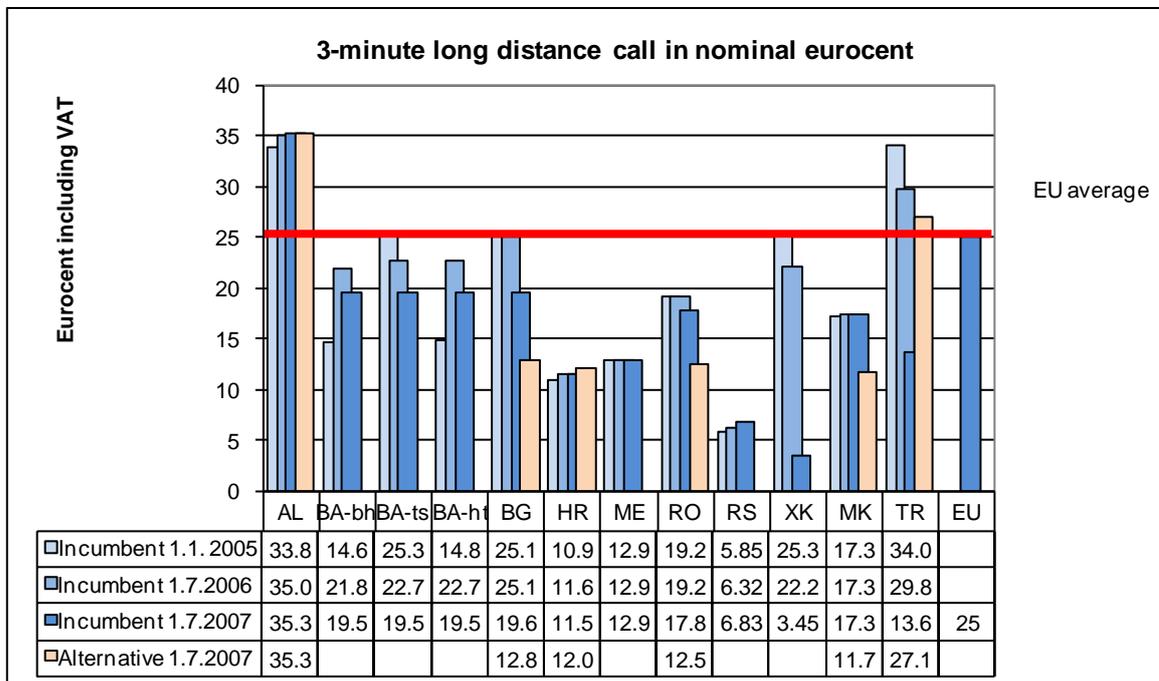


Figure 57 - Price of fixed incumbent and alternative fixed operator for a 3-minute long distance call in nominal Eurocents

Notes:

Albania: The incumbent operator, Albtelecom, has one tariff for all long distance calls. The alternative operator in this and the following tariff comparisons is NisaTel, which is one of the rural operators. NisaTel, has three different call zones with different prices. NisaTel's price for the longest possible call is the same as the Albtelecom tariff. For shorter calls, the NisaTel tariffs are lower.

Bulgaria: The alternative operator is Orbitel

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

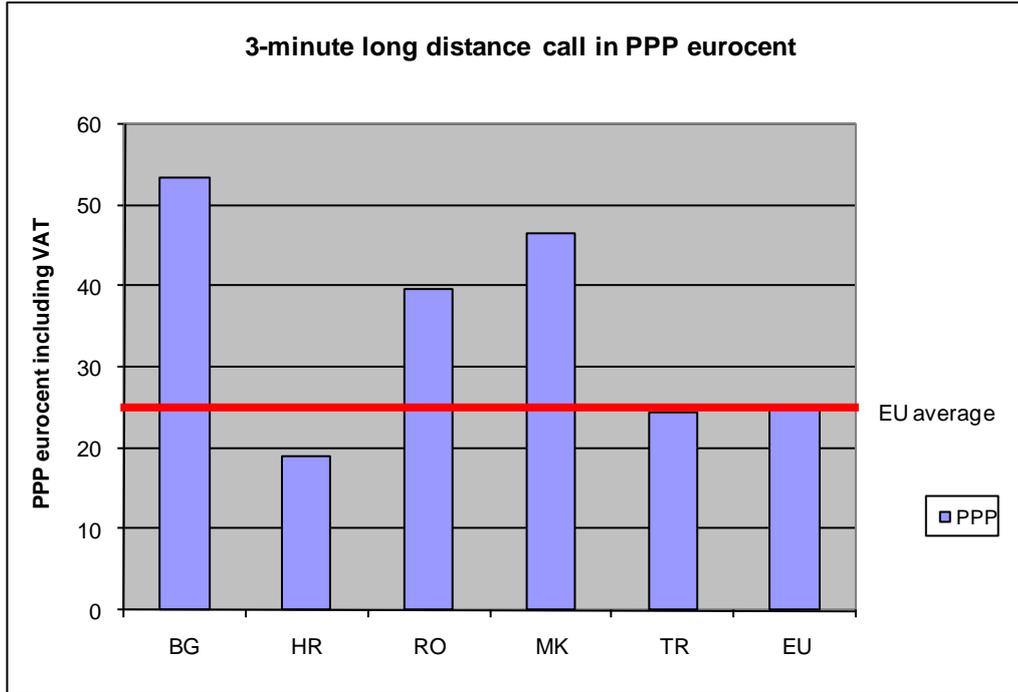


Figure 58 - Price of fixed incumbent operator for a 3-minute long distance call in PPP Eurocents

Notes:  
The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

The next figure shows the prices for 10-minute long distance calls. It presents a picture that is similar to the previous figure for a three-minute call with some variations due to the reduced impact of call set-up charges for Bulgaria Croatia, and Kosovo.

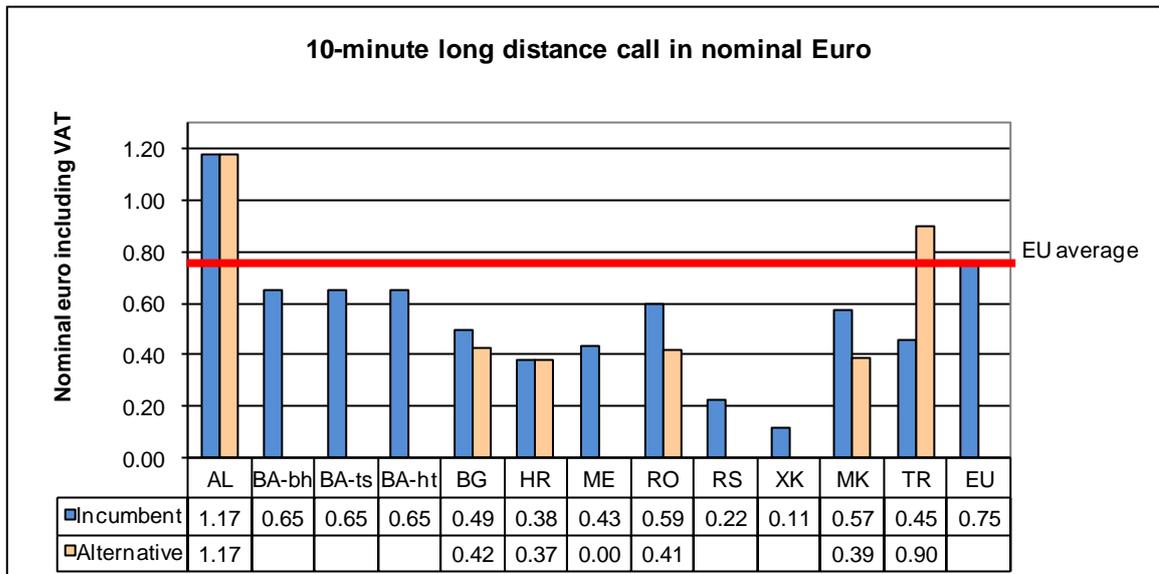


Figure 59 - Price of fixed incumbent and alternative fixed operator for a 10-minute long distance call in nominal Eurocents

Notes:  
The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.  
Bulgaria: The alternative operator is Orbitel

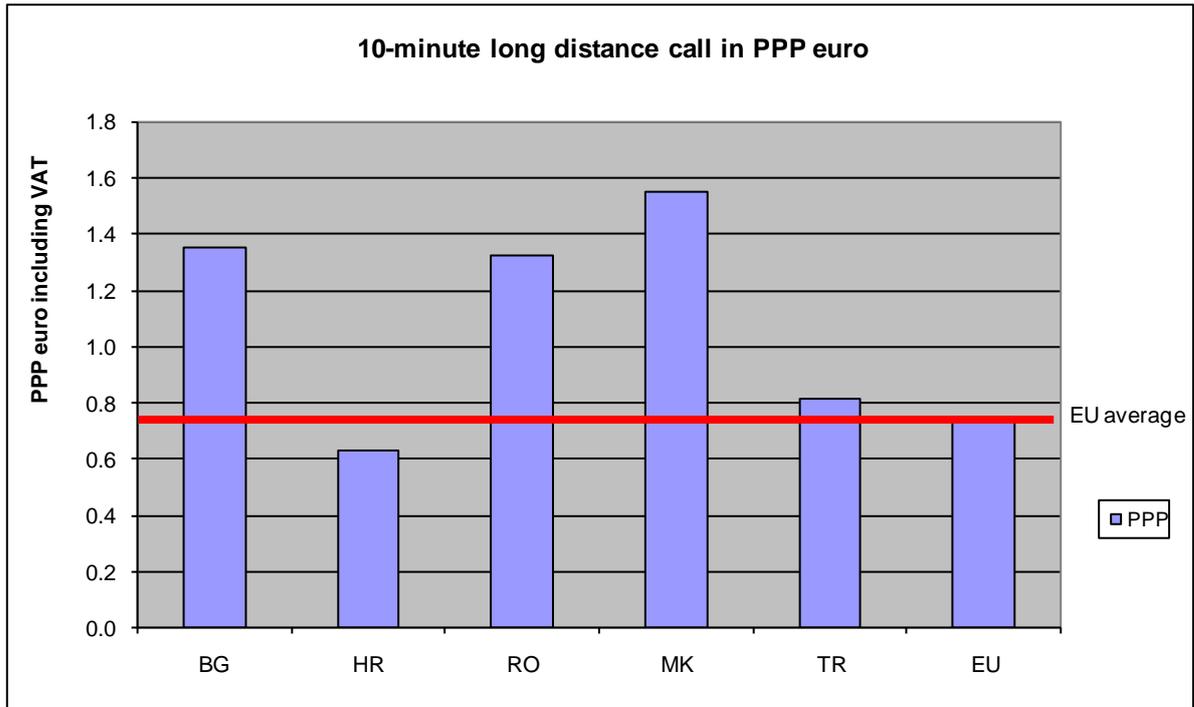


Figure 60 - Price of fixed incumbent operator for a 10-minute long distance call in PPP Eurocents

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

7. Fixed to mobile calls

In almost all the countries and geographic units in this report there are more mobile than fixed subscriptions. It is therefore interesting to look at the rates for mobile telephony. This section deals with the cost of calls from fixed telephony subscribers to mobile subscribers.

Since rates for fixed to mobile calls provide connection to mobile users wherever they are in the country or geographic unit, the rates could be compared with fixed national long distance calls rather than local calls.

Figure 61 below indicates particularly low tariffs for all three incumbent operators in Bosnia & Herzegovina. Serbia and Romania also have rather low tariffs, although they are twice the level of Bosnia & Herzegovina.

Albania has the highest rates although there has been some significant reductions since July 1, 2006. The other countries and geographic units have mid-range tariffs.

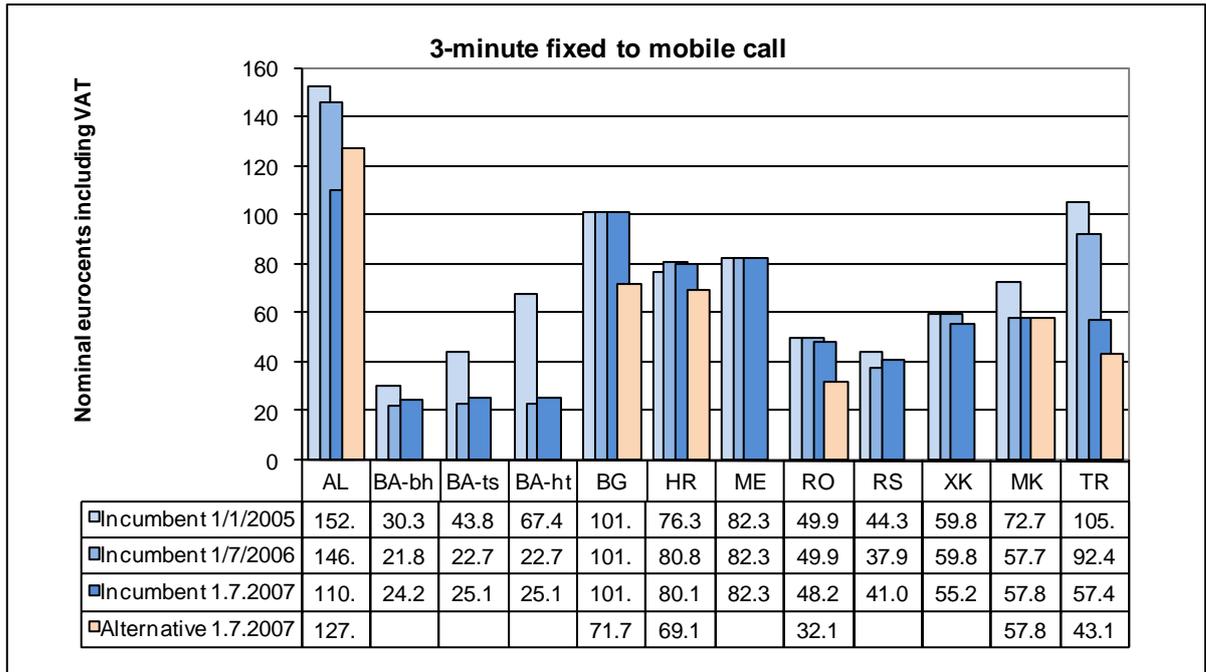


Figure 61 - Price of fixed incumbent and alternative fixed operator for a 3-minute long fixed to mobile call in nominal Eurocents

Notes:  
 Albania: The alternative operator is NisaTel.  
 Bulgaria: The alternative operator is Orbitel.

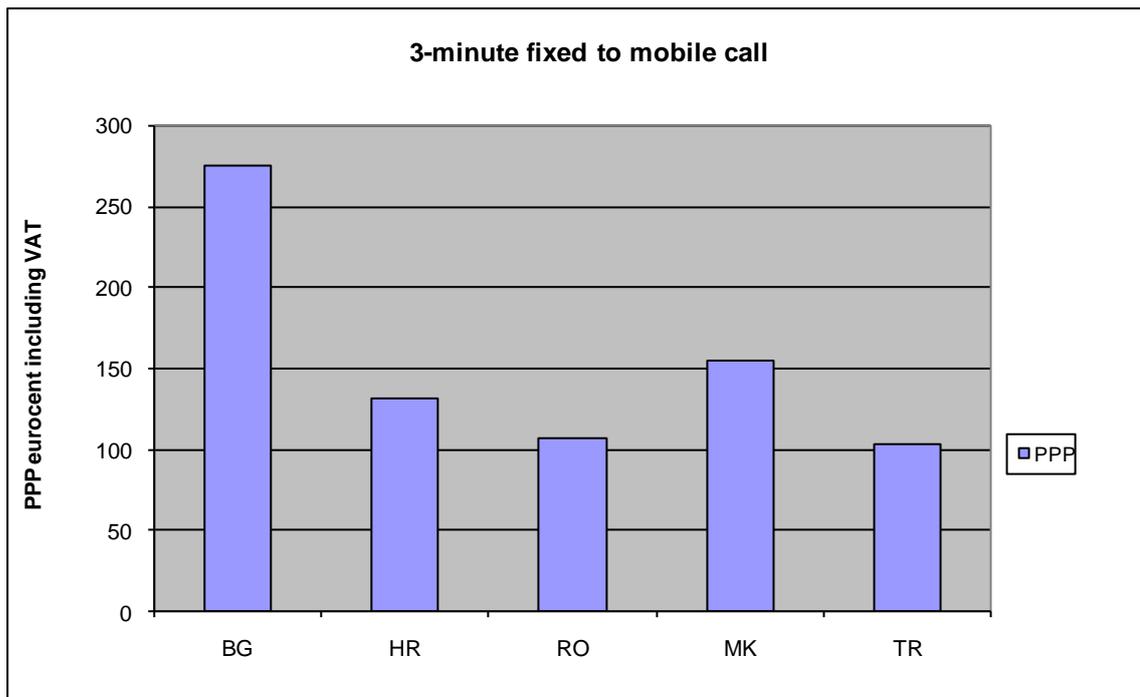


Figure 62 - Price of fixed incumbent operator for a 3-minute long fixed to mobile call in PPP Eurocents

## 8. National mobile tariffs

Mobile operators normally provide a range of tariff options that can be quite complex and difficult to compare without taking into account a long list of parameters, such as subscription activation charges, monthly subscription charges, peak- and off-peak tariffs, free call units included in the package, volume dependent tariffs, normal call tariffs, SMS tariffs, tariffs for calls within the same network (on-net calls), tariffs for calls to other mobile networks or to fixed networks (off-net calls), etc.

Nevertheless, in order to be able to make valid comparisons between different offerings, in 2000 the OECD constructed a set of mobile tariff baskets that allow all these parameters to be taken into account for each of three usage profiles representing low usage, medium usage and high usage. A definition of these tariff baskets is found at the end of this report.

The OECD baskets were revised in 2006 in order to reflect more accurately the current call patterns. In this report, we use the old baskets in order to allow comparisons and to show price movements from the previous report.

NB. Experts have raised doubts whether the OECD basket definitions are representative for the usage patterns in South East Europe. Since many of these countries have significantly lower per capita income than the average EU Member State, it may well be that the typical usage pattern is different. It is possible that a special South East European basket would have given a more favourable comparison with EU rates.

The figures below present the lowest cost alternative within each country and geographic unit for each usage basket taking into account the post-paid and pre-paid offerings. These values are compared against the corresponding yardstick values for the 25 EU Member States.

NB. The 2006 values from the 25 EU Member States are found in the 12<sup>th</sup> Implementation Report from the European Commission, which was published in March 2007.

The yardstick values used for comparisons in this report are the highest and lowest cost found in the EU, as well as the median value. The median value represents the point where half of the EU values are higher and the other half lower.

The figures suggest that the prices for the low usage basket compare favourably with those of the EU. Tariffs for all countries and geographic units except Albania are below the EU median.

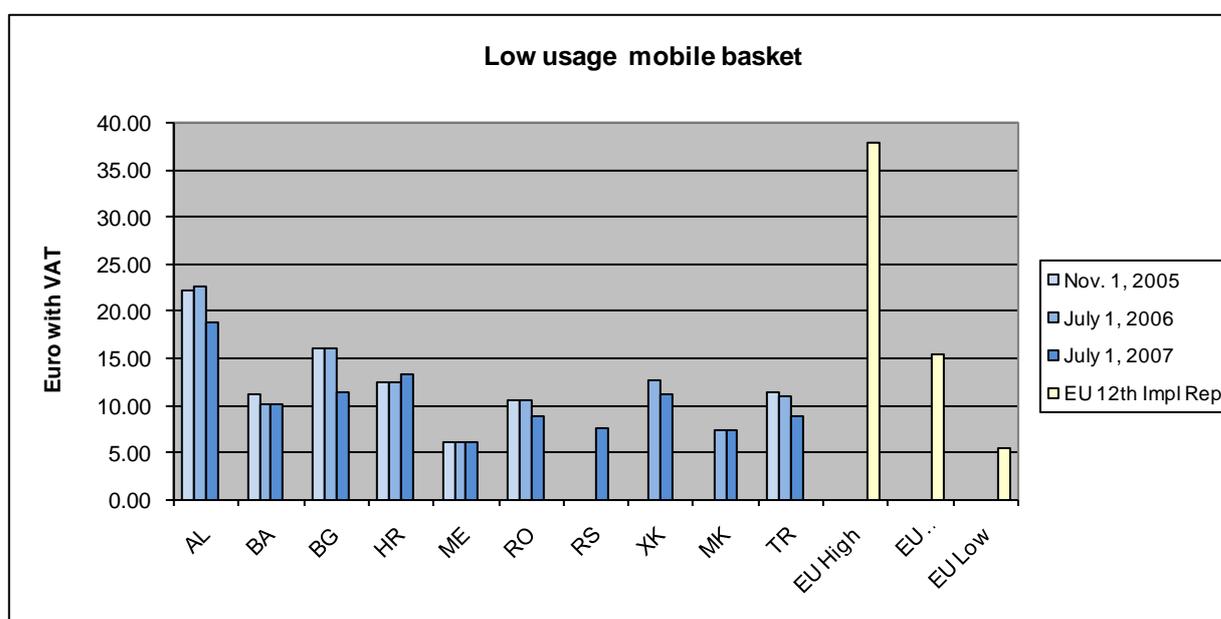


Figure 63 - Low usage mobile basket

**Notes:**

Montenegro: Prices are from 2006.

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

For the medium and high usage baskets, the tariffs in South East Europe appear to be relatively higher when compared to the EU, but most of the prices still fall below the EU median.

However, Albania and Kosovo have tariffs that are above the EU median.

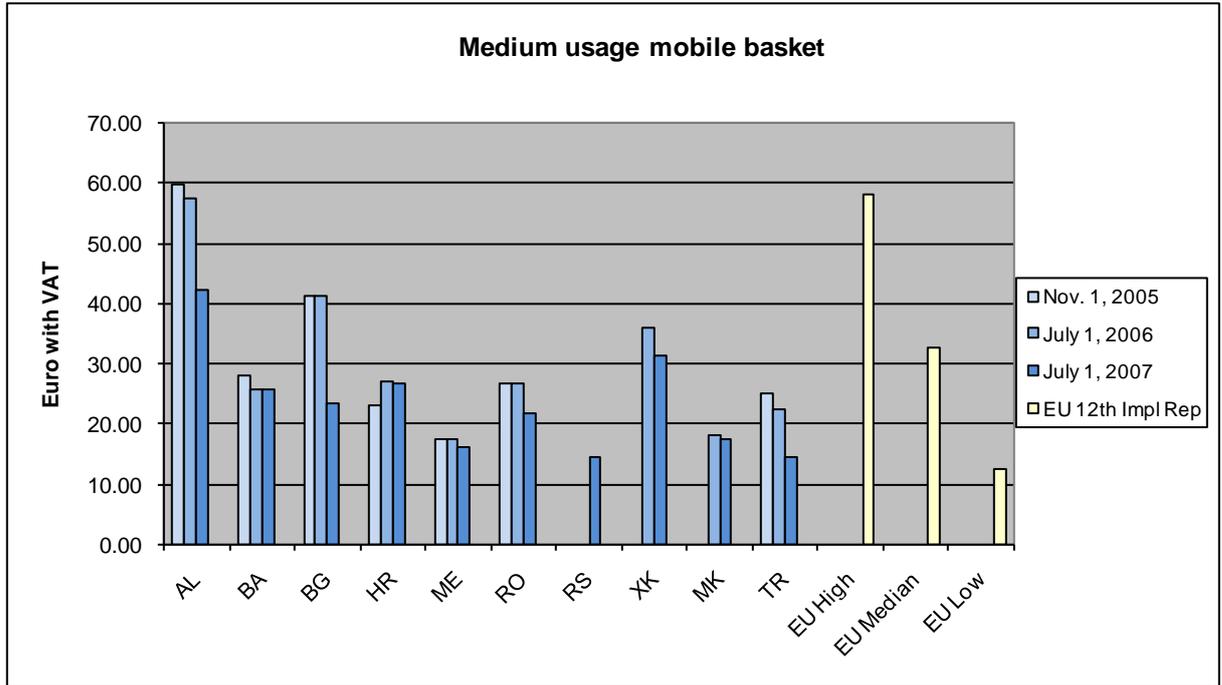


Figure 64 - Medium usage mobile basket

Notes:

Montenegro: Prices are from 2006.

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

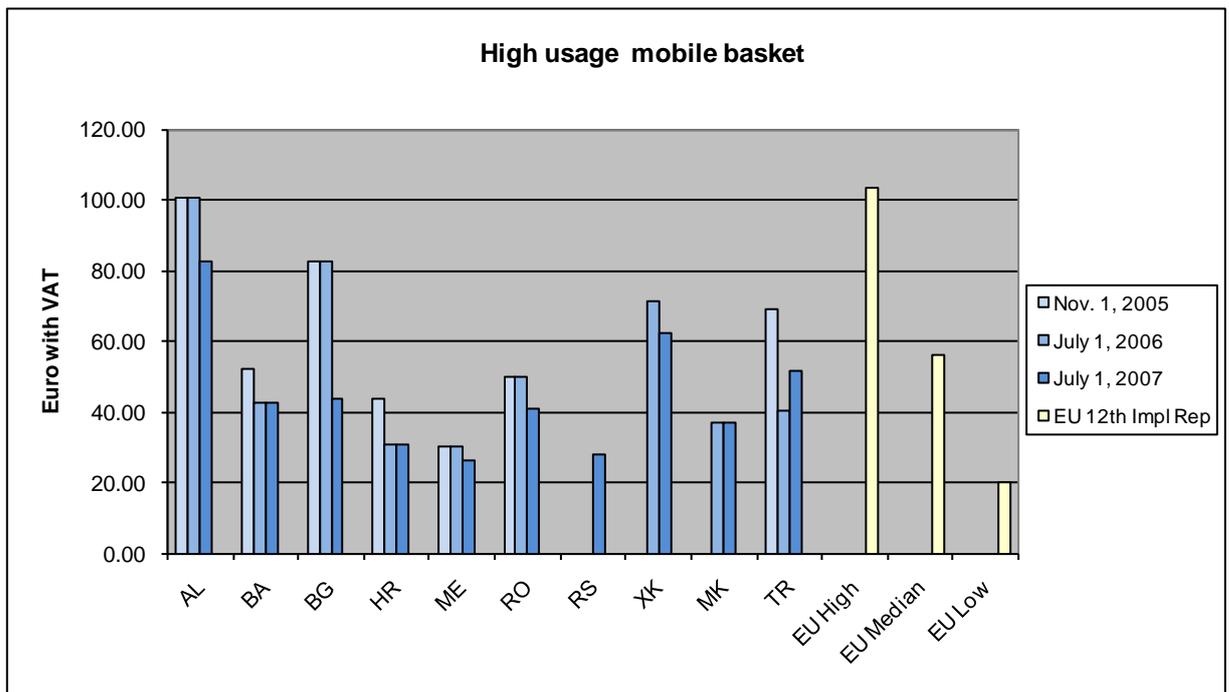


Figure 65 - High usage mobile basket

## Notes:

Montenegro: Prices are from 2006.

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

## 9. International roaming

On June 30, 2007 the EU regulation on international roaming came into force. 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 ('Eurotariff') for outgoing and received calls, as shown in the table below. This Eurotariff must not include any associated subscription or other fixed or recurring charges, and it may be combined with any retail tariff.

Max. retail charge per minute (eurocents per minute, excluding VAT)		
Year	Outgoing	Receiving
July 30, 2007	49	24
August 30, 2008	46	22
August 30, 2009	43	19

Table 71 – Maximum retail charges for international roaming in the EU

With the exception of Bulgaria and Romania that joined the EU on January 1, 2007, the EU roaming regulation does not apply to the SEE countries covered by this study. The table below illustrates how the retail prices charged by three major UK mobile operators on September 30, 2007 to their customers travelling in the region compared to the retail roaming price caps of €0.49 per minute, for outgoing calls and €0.24 per minute for incoming calls within the EU. According to the retail roaming price lists of Vodafone, T-Mobile UK and O2 UK, all three operators applied uniform roaming charges for all countries in the region.

Operator	Retail charge per minute (eurocents per minute, excluding VAT)			
	Outgoing	Difference	Receiving	Difference
Vodafone	£0.31 (€0.45)	-	£0.16 (€0.23)	-
T-Mobile UK	£1.16 (€1.65)	+236%	£1.07 (€1.52)	+533%
O2 UK	£1.49 (€2.14)	+336%	£0.99 (€1.41)	+487%

Table 72 – SEE roaming charges of the UK operators

## 10. Special cross-border tariff arrangements

The political, economical and social events in the last fifteen years in Southern and Eastern Europe, in particular in the territory of former Yugoslavia, created specific entities and territories some of which still have a provisional status.

This has created many special tariff arrangements across territories and country boundaries. For example, there have been preferential rates between the Serb population in Bosnia & Herzegovina and Serbia. Similarly, there have been preferential rates between the Croatian population in Bosnia & Herzegovina and Croatia. Such arrangements still exist, but are gradually being phased out and replaced by normal neighbourhood country tariffs.

The current status is explained below.

## a) Bosnia &amp; Herzegovina

The cross-territory tariffs within Bosnia & Herzegovina such as calls between the Federation of Bosnia & Herzegovina and Republika Srpska are charged as normal national long distance calls as presented in Figure 57 and Figure 59 above.

The other cross-border tariffs are discussed below.

**Federation of Bosnia & Herzegovina**

One of the incumbent operators in the Federation of Bosnia & Herzegovina, BH Telecom, now has the same tariffs to all its nearest countries, which are defined as Croatia, Montenegro and Serbia. This price is about 45% of the price for calls to other European countries.

The other operator, Hrvatska Telecom, still maintains preferential rates to Croatia but the price differential has been significantly reduced. Such calls now cost about 69% of calls to a near country, which is defined as Serbia and Montenegro.

A much smaller price advantage applies for calls to mobile users, who now pay 97% of the price for a call to another near country.

Calls to Montenegro and Serbia also benefit from preferential rates when compared to other European countries.

### **Republika Srpska**

Users in Republika Srpska still have lower tariffs for calls to Montenegro and Serbia than for calls to other neighbouring countries such as Croatia, Slovenia, and the former Yugoslav Republic of Macedonia. The prices of such calls are about 46% of the price of a call to a neighbouring country such as Croatia.

A similar price advantage applies for calls to mobile users. Here the cost per minute is 62% of the cost of a call to another near country such as Croatia.

#### **b) Montenegro**

For a fixed telephone user, calls to Serbia and Kosovo have the status of being a special category of calls. The tariff is about 2.7 times that of a national long distance call in Montenegro, but only 1/4 of the cost of an international call to a Western European country.

Calls to the whole territory of Bosnia & Herzegovina are charged as a neighbouring country (Zone 1 for international traffic).

For mobile users, calls to Serbia and Kosovo have the same price as a call within Montenegro.

#### **c) Serbia**

For a fixed telephone user, calls to Montenegro follow the same pattern as calls in the opposite direction, i.e. it is a special category of calls that fall in between a national long distance call and a call to a near country. For Serbia, it is now priced about 6 times higher than normal domestic long distance calls. Nevertheless, the price is 35% less than the price to another near country (Zone 1 for international traffic). These prices are for residential users. Business users pay more per minute, but the same principle applies.

Republika Srpska in Bosnia & Herzegovina enjoys a special status. For Serbian users, the cost is the same as for calls to Montenegro. The rest of Bosnia & Herzegovina is defined as Zone 1 for international traffic.

Recently, Telekom Srbija purchased Mobis in Republika Srpska. In addition, it has become the third operator in Montenegro. Telenor is also present in Serbia and Montenegro. Both operators have special low tariffs for calls to subscribers in their own network in the other countries.

#### **d) Kosovo**

Since July 1, 2006 the tariffs for international calls have been altered so that the price for calls to Montenegro and Serbia are no longer cheaper than for calls to other neighbouring countries. The Zone 1 for international calls now include Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Greece, Hungary, Montenegro, Romania, Serbia and the former Yugoslav Republic of Macedonia.

This applies to fixed and mobile calls.

#### **e) Romania**

Moldova no longer enjoys particularly low international tariffs for calls from Romania. This is not a result of tariff increases for calls to Moldova. This tariff is the same as before. It is rather that the tariffs to a series of other countries, including Bulgaria, Hungary, and the UK, have been reduced to a level so that they are now about 10% lower than to Moldova.

### 11. International tariffs

As explained above, there are some special near country relationships between Bosnia & Herzegovina, Croatia, Serbia, and Montenegro. These special arrangements are not reflected in the figure below, which deals with “normal” near country long distance rates.

The international call tariffs have traditionally been expensive, but with competition and new technologies, the price has been dramatically reduced in countries with a liberal telecommunications environment.

Figure 66 below shows that Bosnia & Herzegovina has tariffs that are significantly higher than the EU average. Only Bulgaria, Romania, and Turkey have tariffs below the EU average. These countries have had significant tariff reductions since July 2006.

The other countries and geographic units have tariffs that are moderately higher than the EU average.

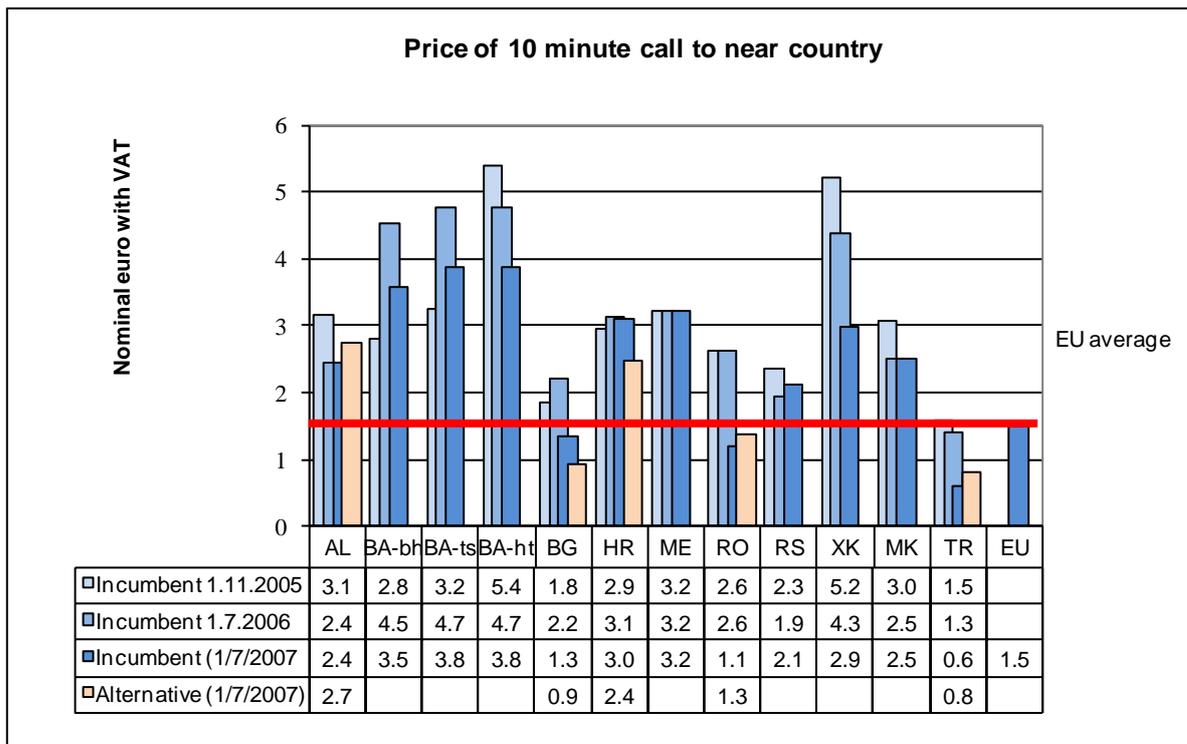


Figure 66 - Price of 10-minute call to near country in nominal euro

**Notes:**

Albania: In Albania, UK and the US are charged in the same group as other neighbouring countries. The alternative operator is NisaTel

Bosnia & Herzegovina: BH Telecom d.d. for calls to Croatia, Serbia and Montenegro. Telekom Sprske a.d. for calls to Croatia, Slovenia and the former Yugoslav Republic of Macedonia, Hrvatske Telekomunikacije d.o.o. for calls to Serbia and Montenegro.

Bulgaria: For calls to Greece. There are lower tariff for calls to Athens. The incumbent also offers lower tariffs by voice over IP (VoIP). The tariffs for the alternative operator, Orbitel, are based on carrier selection offerings that are available to business and residential subscribers. Lower tariffs are available for tariff schemes restricted to business users.

Montenegro: For calls to international Zone 1 countries. Price reductions are expected from August 31, 2007.

Romania: For calls to Bulgaria and Hungary

Kosovo: For calls to Group 1 countries (Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Greece, Hungary, Prices on June 1, 2007

Montenegro, Romania, Serbia, the former Yugoslav Republic of Macedonia,

Turkey: For calls to Greece

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

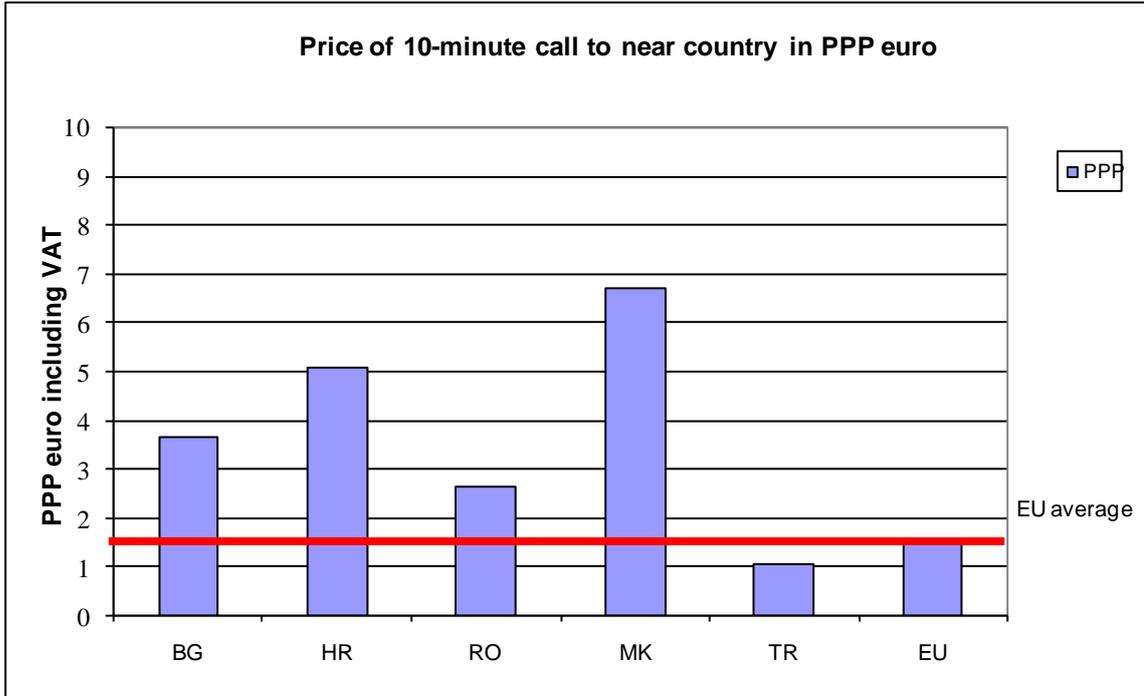


Figure 67 - Price of 10-minute call with incumbent operator to near country in PPP euro

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

Figure 68 presents the corresponding information for calls to a distant European country represented, in this case, by the UK. Again, the results indicate that the tariffs for Bosnia & Herzegovina, as well as Kosovo, are significantly above the EU average. Croatia and Montenegro are moderately above the EU average, without much movement in the last two years.

The former Yugoslav Republic of Macedonia has also had significantly higher tariffs in the past, but their tariffs have had a strong downward trend and are now well below the EU average. Bulgaria, Romania, and Turkey also had significant reductions in the tariffs that are now well below the EU average.

Albania and Bulgaria have tariffs that are at or below the EU average, while Croatia and Montenegro have tariffs above the EU average.

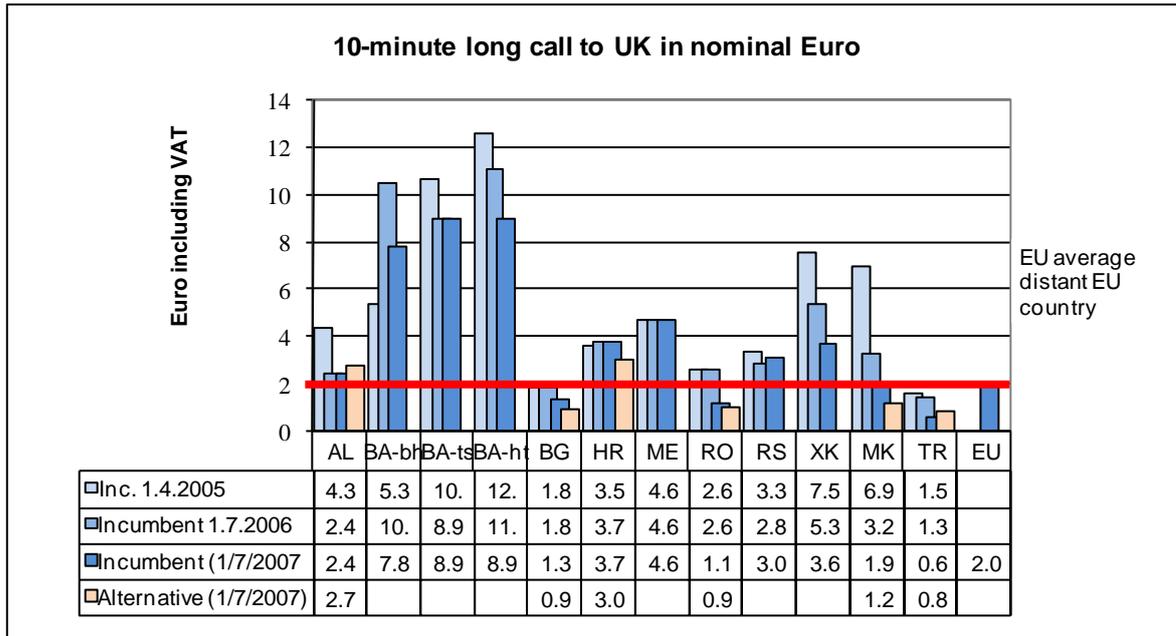


Figure 68 - Price of fixed incumbent and alternative fixed operator for a 10-minute long call to UK in nominal euro

Notes:

Albania: UK is in the same tariff group as neighbouring countries. The alternative operator is NisaTel  
 Bulgaria: The incumbent also offers lower tariffs by voice over IP (VoIP). The tariffs for the alternative operator, Orbitel, are based on carrier selection offerings that are available to business and residential subscribers. Lower tariffs are available for tariffs schemes restricted to business users.  
 Kosovo: Prices on June 1, 2007  
 The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

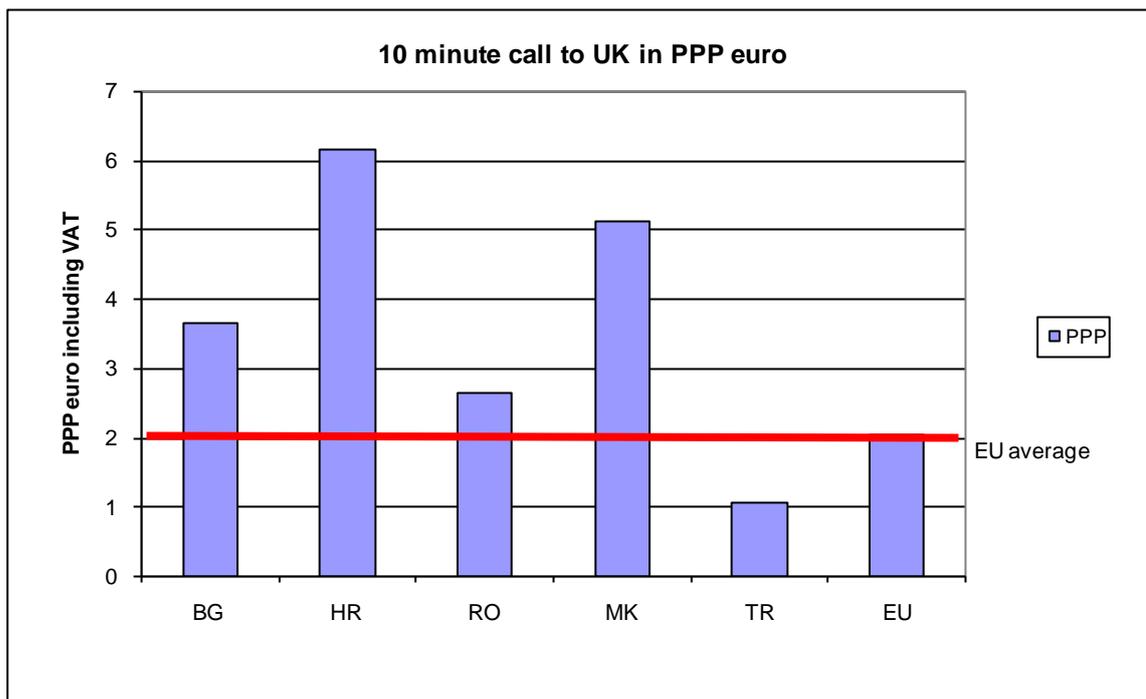


Figure 69 - Price of fixed incumbent operator for a 10-minute long call to UK in PPP euro

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

Figure 70 presents the corresponding tariffs for calls to the United States. This is a particularly interesting indicator because such calls used to be very expensive, but the combination of a high level of competition and new technologies has brought down the prices in most EU Member States so that such calls are no longer more expensive than calls within Europe.

Bosnia & Herzegovina, Montenegro and Kosovo have tariffs that are significantly higher than the EU average. Croatia and Serbia also have prices that are quite high at a level which is twice the EU average.

On the other hand, Bulgaria and Turkey have tariffs that are below the EU average. Significant price reductions in the former Yugoslav Republic of Macedonia have brought the tariffs down to a level that is close to the EU average.

The inbound tariffs for all countries and geographic units are almost, without exception, significantly higher than the tariffs for outgoing calls. In most cases, the price is higher by a factor of five.

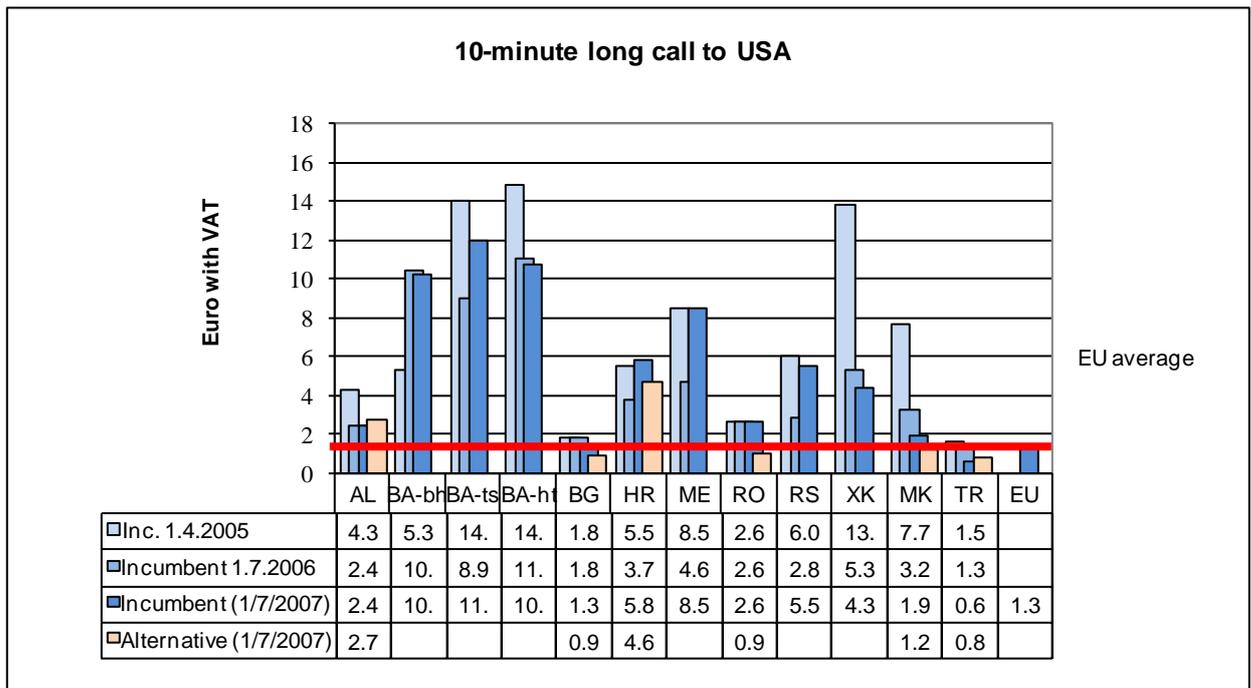


Figure 70 - Price of fixed incumbent and alternative fixed operator for a 10-minute long call to USA in nominal Euro

Notes:

Albania: The US is in the same tariff group as neighbouring countries. The alternative operator is NisaTel

Bulgaria: The incumbent also offers lower tariffs by voice over IP (VoIP). The tariffs for the alternative operator, Orbitel, are based on carrier selection offerings that are available to business and residential subscribers. Lower tariffs are available for tariff schemes restricted to business users.

Kosovo: Prices on June 1, 2007

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

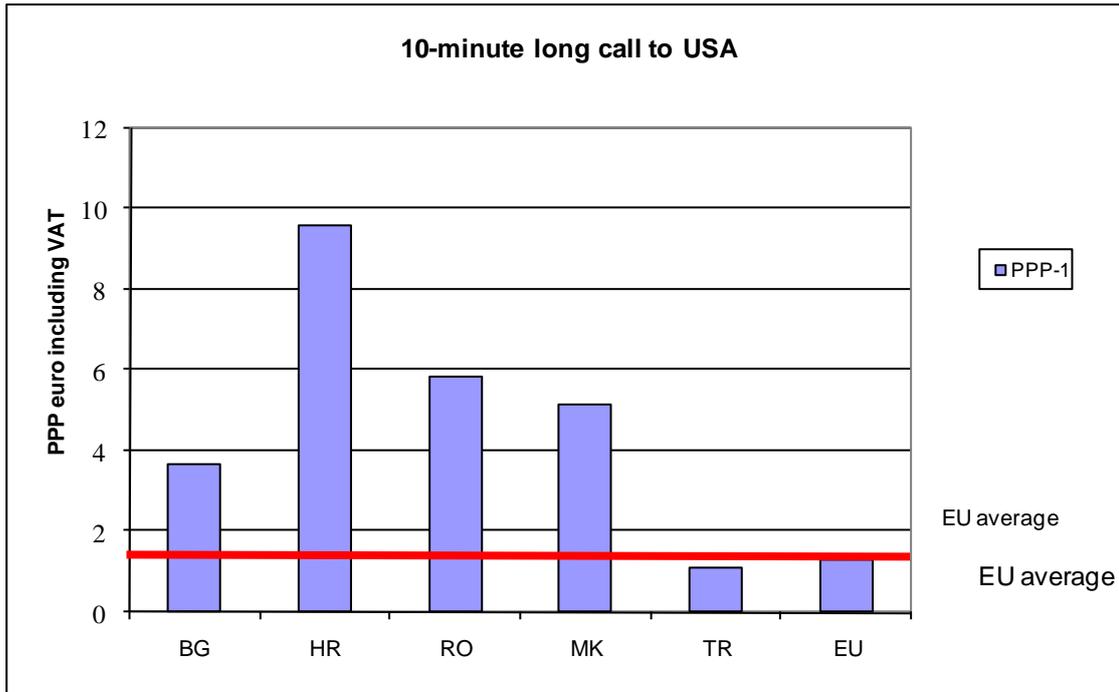


Figure 71 - Price of fixed incumbent operator for a 10-minute long call to USA in PPP Euro

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

It is clear from the international tariffs to the UK and the US that there has been price competition for outgoing calls in many of the national markets covered by this report. However, it is interesting to look at the prices for incoming calls as well.

Incoming calls have traditionally been dependent on international accounting rates where many countries have maintained high international accounting rates as a means of generating “export revenues”. Between countries with liberalised markets, these accounting rates have either been significantly reduced or replaced by alternative interconnection arrangements. Thus, for example, the international tariffs to and from the competitive fixed telephony markets in Western Europe are now reasonably symmetrical.

In the past, the prices for calls to South East Europe from countries like the UK and the US have been significantly higher than for calls in the opposite direction. This situation has changed since July 2006 for calls from the US. The prices for these calls have been significantly reduced. In addition, the tariffs are now different from country to country rather than being assigned to a common tariff group. This may be an indication that the prices have been subject to interconnection agreements in each country.

However, the prices for calls from the UK have moved in the opposite direction. Not only have the prices in this period gone up rather than down, but the tariffs are still identical for all countries except Romania.

The price development for incoming calls from the United Kingdom and the United States is shown in Figure 72 below.

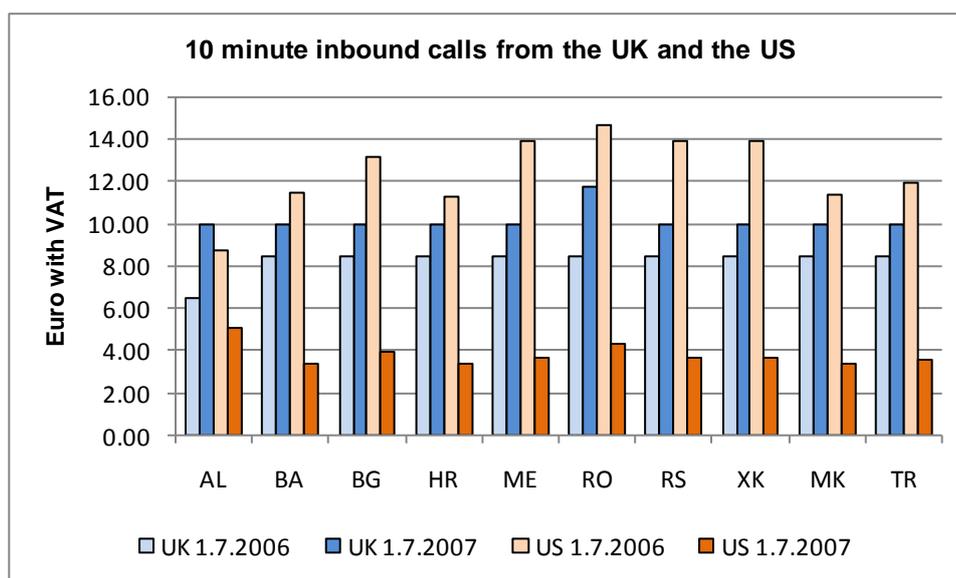


Figure 72 – Price developments for incoming calls from the UK and the US

## Notes:

UK 1.7.2006: BT peak time prices

UK 1.7.2007: BT peak time prices for non-BT Together customers (who enjoy special rates for selected countries).

US 1.7.2006: Verizon with international flat rate discount without taxes and universal service fees. This discount scheme had a cost of \$0.95 per month.

US 1.7.2007 AT&amp;T Rate AT&amp;T International Rate Table: IDDD01-DD-M for peak time. (Verizon has similar cut for most, but not all countries).

Exchange rates to euro on July 1, 2007: £1 = €1.4844. \$1 = €0.7837

## 12. Internet Dial-up access cost

Access to the Internet for household users in the SEE countries is primarily via dial-up fixed lines (see the section on 'Broadband Access') so the dial-up Internet access costs have a direct influence on the number of users and usage duration. Even though the PPP adjusted figures cannot be calculated for all countries because of a lack of data on PPPs it can be seen for a few countries that dial-up access is relatively expensive. For example, in June 2003, the cost of 40 hours peak time access in France was €5.90, it is now €74 in the former Yugoslav Republic of Macedonia and €40 in Croatia.

Country	Nominal euro with VAT		PPP euro with VAT	
	ISP	PSTN usage	ISP	PSTN usage
<b>Albania</b>	<b>11.91</b>	<b>23.57</b>	<b>0.00</b>	<b>0.00</b>
<b>Bosnia &amp; Herzegovina</b>				
<i>BH Telecom d.d. Sarajevo</i>	7.36	14.36	0.00	0.00
<i>Telekom Srpske a.d. Banja Luka</i>	11.96	21.53	0.00	0.00
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	5.98	31.58	0.00	0.00
<b>Bulgaria</b>	0.00	22.16	0.00	38.21
<b>Croatia</b>	40.09	20.05	0.00	0.00
<b>Montenegro</b>	9.80	12.92	0.00	0.00
<b>Romania</b>	4.22	34.27	0.00	62.31
<b>Serbia, including Kosovo<sup>1</sup></b>				
Serbia	13.20	5.40	0.00	0.00
Kosovo	27.60	17.91	29.26	18.98
<b>The former Yugoslav Republic of Macedonia</b>	74.08	0.00	0.00	0.00
<b>Turkey</b>	4.78	21.40	11.23	28.53
1) under UNSCR 1244				

Table 73 - Dial-up Internet access cost – 40 hours at peak time

Notes:

Bulgaria: The price shown is that for Orbitel's dial-up service. Orbitel is one of the largest national ISP's. The cost is that of the call set-up charge plus the charge for making an off-net call to Orbitel's network.

Montenegro: The peak time periods are: 07:00 to 15:00 and 17:00 to 21:00.

Kosovo: The price given above is for a new package that includes a certain number of free minutes for local and national calls that can also be used for dial-up access.

Turkey: The price shown is for the ISP with the largest market share. The price includes a special 15% communication tax.

In Albania, the dial-up service offered by Albtelecom is simple connectivity; the user dials a defined number and uses a public user-name and password. With this service, Albtelecom does not offer email accounts or web hosting. Other "traditional" ISPs offer packages with email accounts and web hosting capacities (sometimes, the ISPs apply limited downloading, with extra tariffs for data downloaded over this limit). Albtelecom also offers web hosting as a separate service. The ISP's charge shown is that of the largest ISP in the country, ABCom.

Mathematically, the cost for 40 hours of Internet connectivity for Albtelecom is 2,400 Lek, while for ISPs it is given in Euro - in many cases ISPs apply tariffs in euros or USD instead of Lek to avoid complications with bank exchange procedures. The cost of access via an ISP does not include the cost of local PSTN lines, which is the same as applied by Albtelecom for its dial-up Internet access. ABCom's public prices include:

- Several programmes for limited/unlimited personal and business differentiated for 4, 6, or 12-month contracts. Personal limited tariffs are for 30 hours a month for 15, 17, or 20 USD a month (depending on the length of the contract). For unlimited access, it is 35, 40, or 50 USD a month. For businesses, the tariffs vary from 27 to 105 USD a month. For access limited to 40 hours a month for businesses, the tariffs vary from 18 to 20 to 25 USD a month. Except limited personal contracts, for others 5 Mb disk space is given for web hosting.
- There are packages for unlimited email service only that cost 3.6, 5.8, or 7.29 USD a month, depending on the contract length (4, 6, or 12 months).

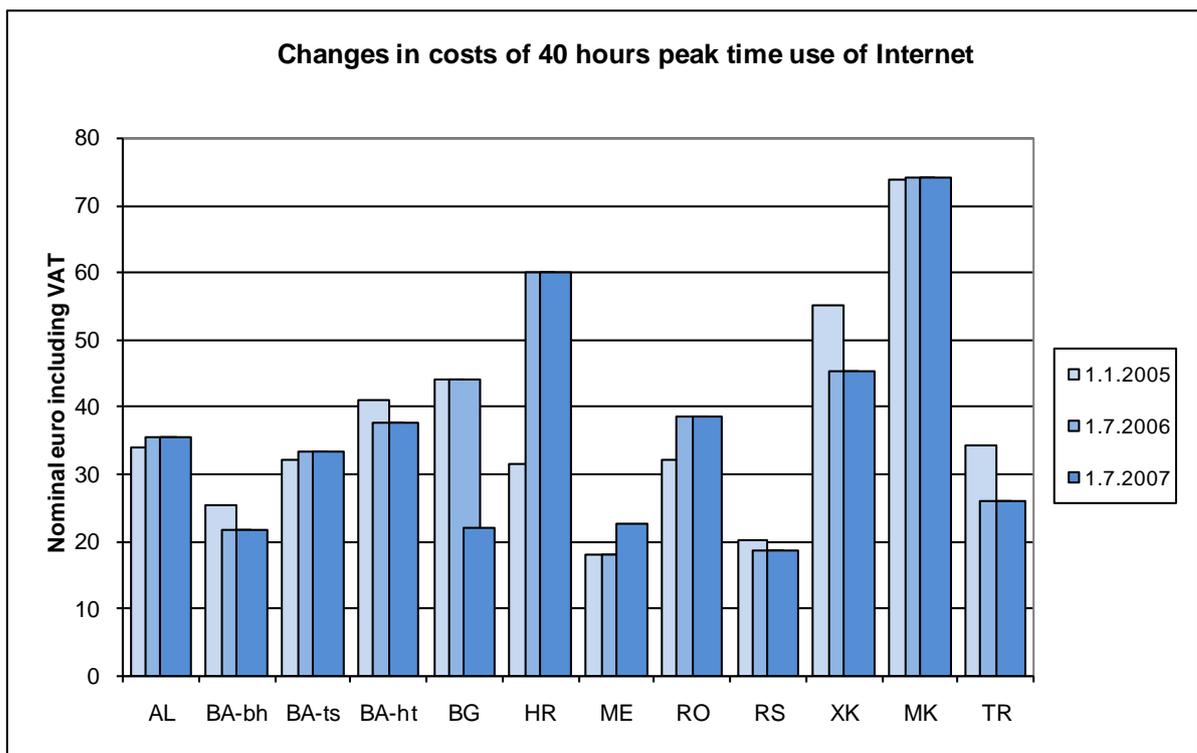


Figure 73 – Changes in costs of dial-up Internet access

The figure above shows that there has been little change in the costs of 40 hours peak time dial-up Internet access between January 2005 and July 2007. Some of the minor fluctuations are the

result of exchange rate differences rather than changes in the costs of the packages offered. The next figure shows how the costs are split between the telephone company and the Internet Service Provider.

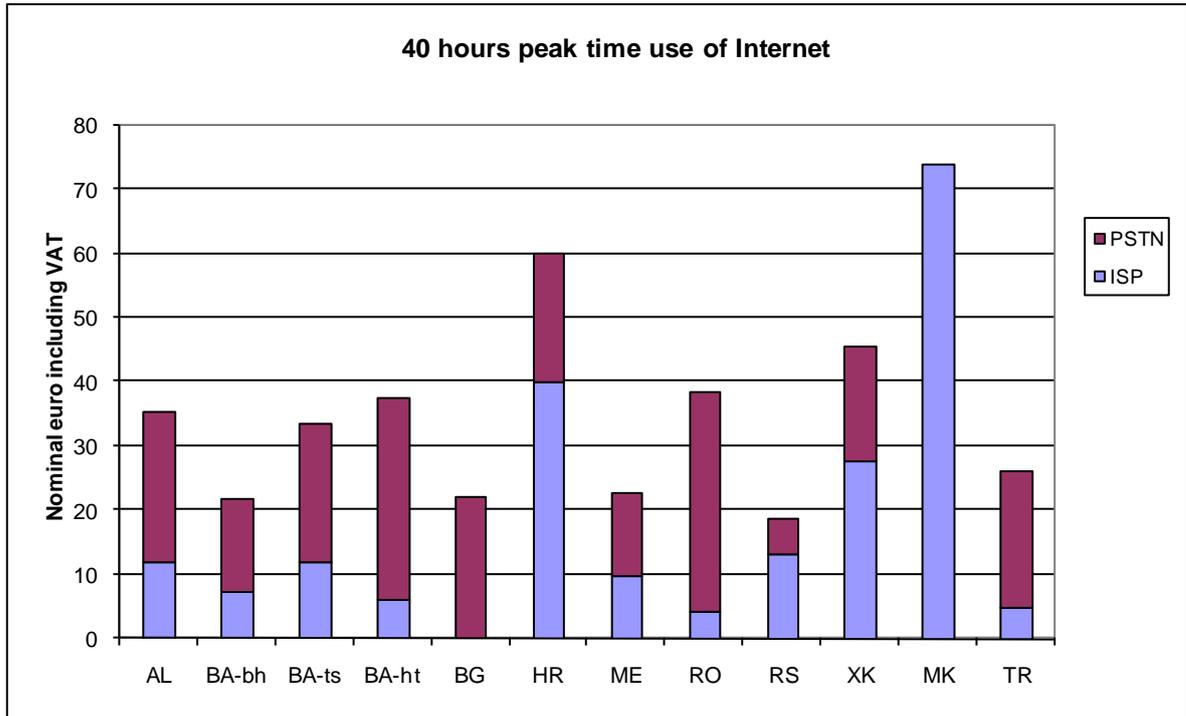


Figure 74 - Dial-up Internet access cost – 40 hours at peak time in nominal Euro

Notes:

Albania: For the payment to the PSTN, standard tariffs are not applied. Special tariffs are applied, as shown above.

Croatia: The PSTN part of the full price is 0.05 HRK/min. The rest goes to the ISP.

The ISP charge in Albania is the price per month for ABCom, an ISP operator, which is one of the biggest in the country. There is a one-off payment set up fee of 20 euro for installation and support. If there is a subscription for three months, the monthly payment to the ISP is 9.5 euro, if the subscription is for six months the monthly payment is 7.5 euro, and if the subscription is for a year then the monthly payment is reduced to 5.5 euro.

The table above shows the case when the user uses an ISP operator other than Altelecom. Altelecom also operates in the market as an ISP. Altelecom’s tariffs (PSTN usage) are the same as shown above, if Altelecom is used as an ISP. The difference between Altelecom and other ISPs is that the user does not have to pay for the set up fee (installation) and the monthly payment. Altelecom also applies peak and off-peak tariffs for dial-up internet access for users that use Altelecom as an ISP. Peak tariffs are the same as shown above, while off-peak tariffs are 0.80 Lek (0.6 eurocent per minute for residential users) and 1.20 Lek (0.9 eurocent per minute for business users). For the payment to the PSTN, the standard tariffs are not applied but special tariffs, as indicated, are applied.

In Bulgaria, Orbitel offers connection through local points in 33 cities and towns. The pricing for Orbitel’s dial-up access is shown above. Orbitel is one of the largest national ISPs.

In Montenegro, the price is for residential users, in peak-time and the ISP price is dependent only on the user’s category (residential or business). The prices are those charged by Internet Crne Gore (Internet Montenegro), a subsidiary of Telecom Montenegro, which is the largest ISP in the country. Residential and business users have several tariff packages at their disposal (10, 20, 40 or 100 hours, and unlimited monthly access), with different prices.

The figures for PSTN usage in Romania are those for Internet Special Access offered by RomTelecom (the fixed incumbent). RomTelecom provides a dial-up internet service available to

all its subscribers with the same tariffs all over the country, including the phone line usage and Internet access tariff.

The figure for Turkey is that of the monthly payment to the ISP.

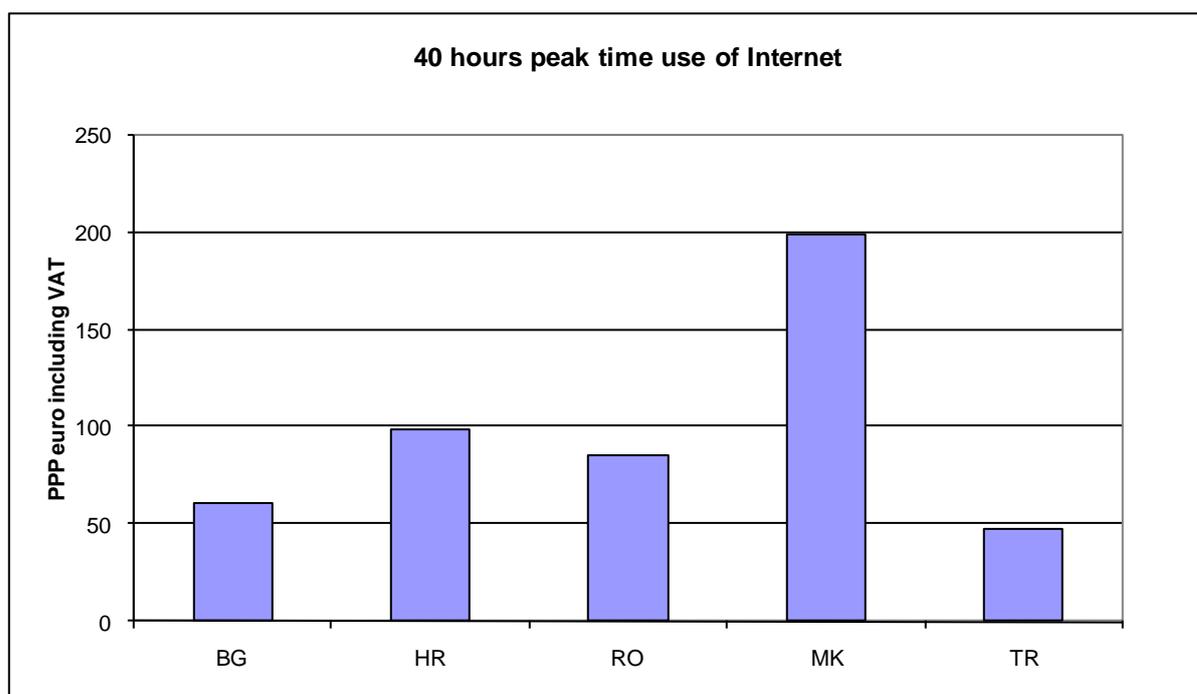


Figure 75 – Total dial-up Internet access cost – 40 hours at peak time in PPP

Dial-up Internet access costs during off-peak periods are those that residential users are most likely to incur. Although, as with the information about peak time costs, PPP information is missing for most countries it would seem that the off-peak costs could also be considered expensive and, because the costs could represent a significant proportion of net monthly income this could be a reason why Internet penetration rates are lower than in Europe.

An exception is Bulgaria, where the alternative operator Orbitel has an off-peak offering for its on-net customers at practically zero cost.

Country	Nom inal euro		ppp euro	
	ISP	PSTN usage	ISP	PSTN usage
Albania	11.91	9.43	0.00	0.00
Bosnia & Herzegovina				
<i>BH Telecom d.d. Sarajevo</i>	7.36	3.59	0.00	0.00
<i>Telekom Srpske a.d. Banja Luka</i>	2.99	7.18	0.00	0.00
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	5.98	9.33	0.00	0.00
Bulgaria	0.00	0.07	0.00	0.13
Croatia	10.02	5.01	0.00	0.00
Montenegro	4.90	3.23	0.00	0.00
Romania	2.81	10.71	5.11	19.47
Serbia, including Kosovo <sup>1</sup>				
Serbia	3.30	1.37	0.00	0.00
Kosovo	13.80	4.47	14.63	4.74
The former Yugoslav Republic of Macedonia	12.73		0.00	
Turkey	4.78	5.35	6.37	7.13
1) under UNSCR 1244				

Table 74 - Dial-up Internet access cost – 20 hours at off-peak time

Notes:

Bulgaria: The price shown is that for Orbitel's dial-up service. Orbitel is one of the largest national ISP's. The cost is that of the call set-up charge plus the charge for making an off-net call to Orbitel's network. The off-peak usage is practically zero, except for the set-up charge. (Off-peak: weekends, holidays, weekdays 21.00-7.00)

Montenegro: The off-peak periods are: 15:00 to 17:00 and 21:00 to 07:00.

Kosovo: The price given above is for a new package that includes a certain number of free minutes for local and national calls that can also be used for dial-up access.

The former Yugoslav Republic of Macedonia: Off peak hours are split into two bands: Off peak 1 – Monday to Friday 18:00 to 24:00 and weekends and national holidays from 06:00 to 24:00; Off peak 2 – every day from 00:00 to 06:00. The price shown above is for the Off peak 1 band.

Turkey: The price shown is for the ISP with the largest market share. The price includes a special 15% communication tax.

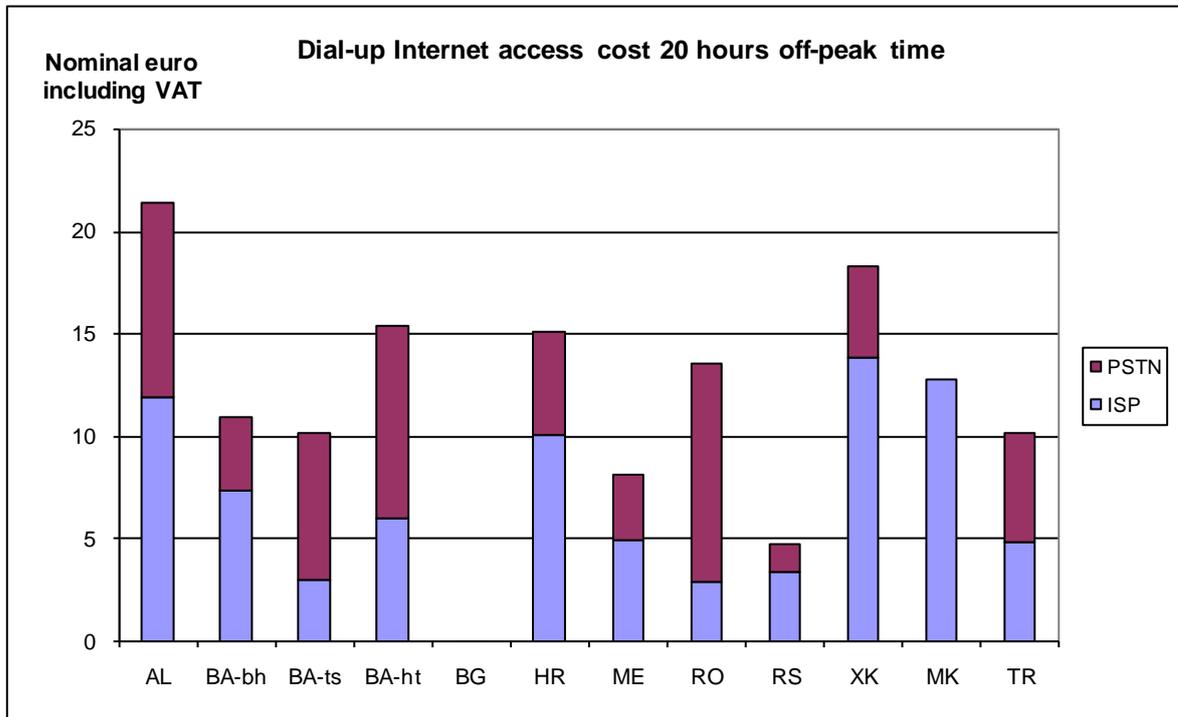


Figure 76 - Dial-up Internet access cost – 20 hours at off-peak time nominal euro

Notes:

Albania: The subscription fee is for 40 hours internet access, which means that there is no specific package for 20 hours dial-up internet access. There is a set up fee of 20 euro for the installation and the support. The tariffs that the user has to pay to the PSTN for off-peak hours are the same as for peak hours. The table above shows the case when the user uses another ISP operator other than Albtelcom, which in this case is called PSTN.

Albtelcom has introduced itself in the market as an ISP operator. Albtelcom's tariffs (PSTN usage) are the same as shown above, if subscribers use Albtelcom as an ISP. The difference between Albtelcom and other ISPs is that the user does not have to pay for the set up fee (installation) and the monthly payment. Albtelcom also applies peak and off-peak tariffs for dial-up internet access for users that use Albtelcom as an ISP. Peak tariffs are the same as shown above, while off-peak tariffs are 0.80 ALL/min for Residential users (0.6 eurocent per minute for residential users) and 1.20 ALL/min for business users (0.9 eurocent per minute for Business users).

Bulgaria:

Croatia: The PSTN part of the full price is 0.025 HRK/min. The rest goes to the ISP.

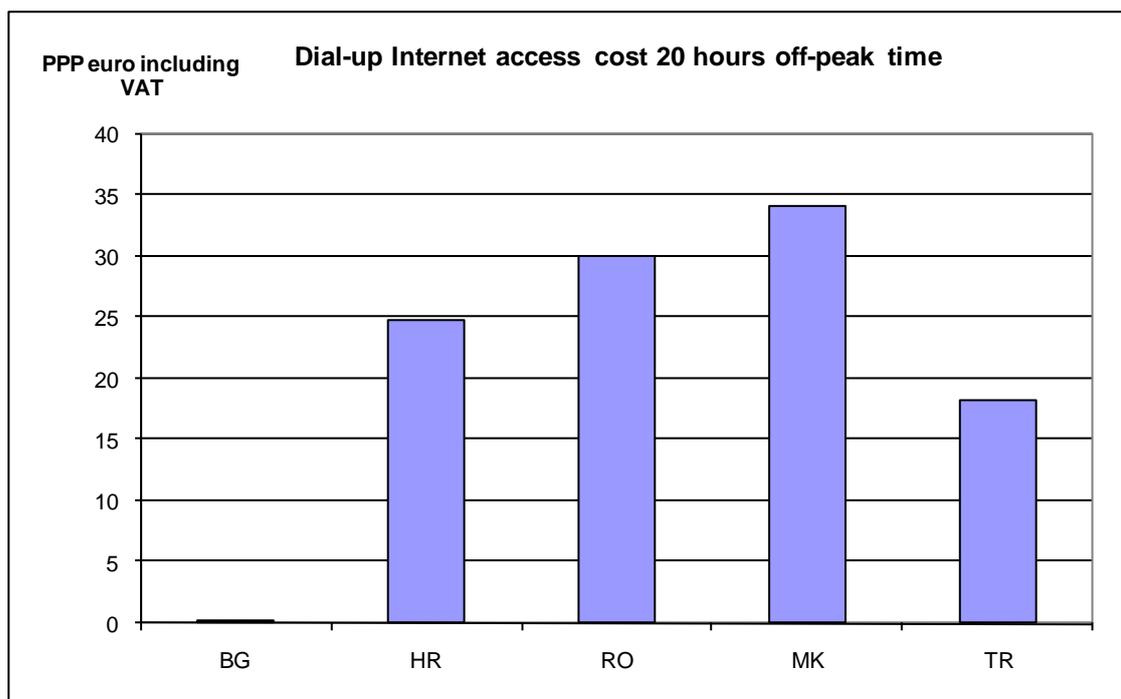


Figure 77 – Total dial-up Internet access cost – 20 hours at off-peak time PPP euro

### 13. Leased lines

Leased lines are the building blocks for alternative networks that compete, directly or indirectly, with the networks of incumbent operators. The prices are typically quite high before the start of network competition. When competition is introduced, there will often be competitive alternatives from other networks, such as networks belonging to energy companies, which create price pressure. In the past, such competition has probably had more effect on prices than cost orientation requirements.

In a series of figures below, the tariffs for national leased lines are presented for:

- 2 km 64 Kbit/s
- 200 km 64 Kbit/s
- 2 km 2 Mbit/s
- 200 km 2 Mbit/s
- 2 km 34 Mbit/s
- 200 km 34 Mbit/s.

Not all operators have tariffs that correspond exactly to these categories. In that case, the closest alternative has been chosen.

All the prices are monthly retail prices without value added tax without one-time charges.

In Turkey, the leased line offerings are not based on kilometre lengths. Instead there are four levels: 1) same exchange, 2) different exchange, 3) inner city, and 4) intercity. In the charts below, the rate for 2km has been mapped against the "different exchange" rate, and the 200 km category has been mapped against the intercity rate.

The countries and geographic units do not present a consistent relationship using the EU average as an indicator. For the short 64 Kbit/s lines, all countries and geographic units have prices below the EU average, while for the longer distance they are only slightly above or below. In the case of Montenegro and Serbia, they are significantly lower.

For the higher speeds of 2 Mbit/s lines, the picture is more mixed. In particular, for the longer lines, there are great variations. However, Albania, Croatia, Montenegro, Kosovo, and Turkey have tariffs that are consistently lower than the EU average.

The 34 Mbit/s lines are not offered in all the countries and geographic units. In the former Yugoslav Republic of Macedonia such lines are only available by radio links.

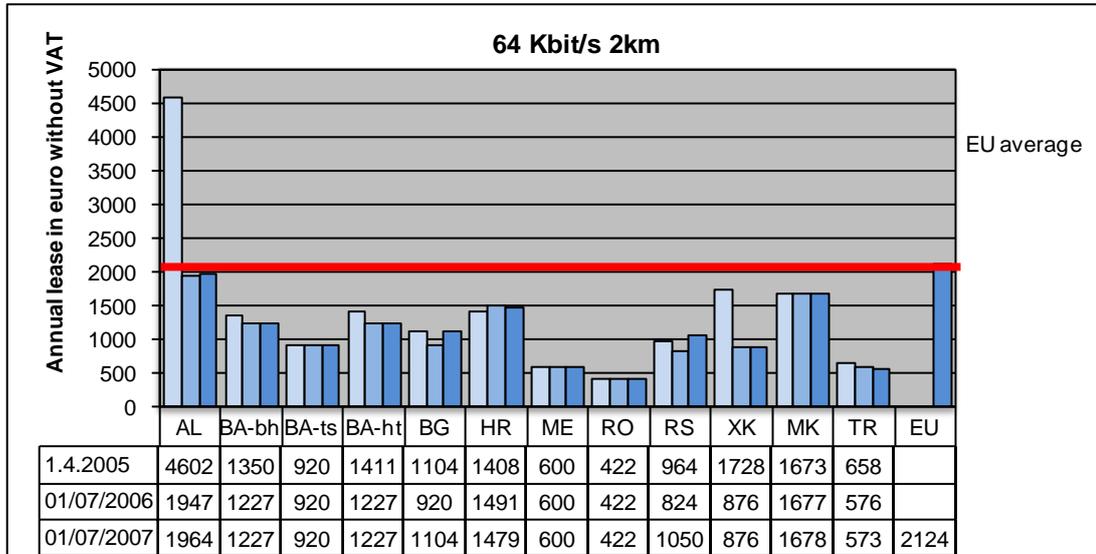


Figure 78 - Prices for national 64 Kbit/s 2 km leased lines in nominal euro without VAT

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

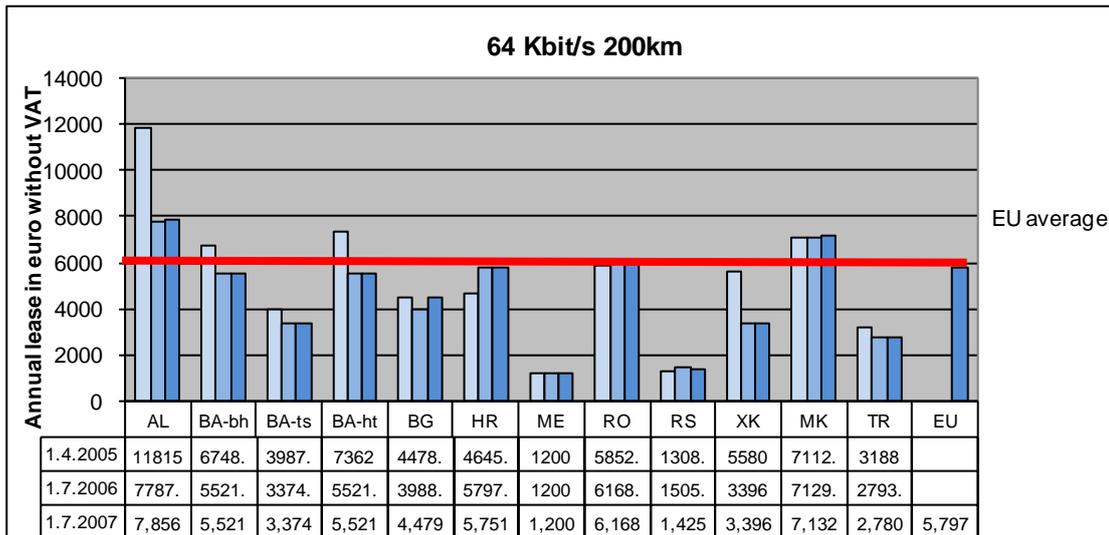


Figure 79 - Prices for national 64 Kbit/s 200 km leased lines in nominal euro without VAT

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

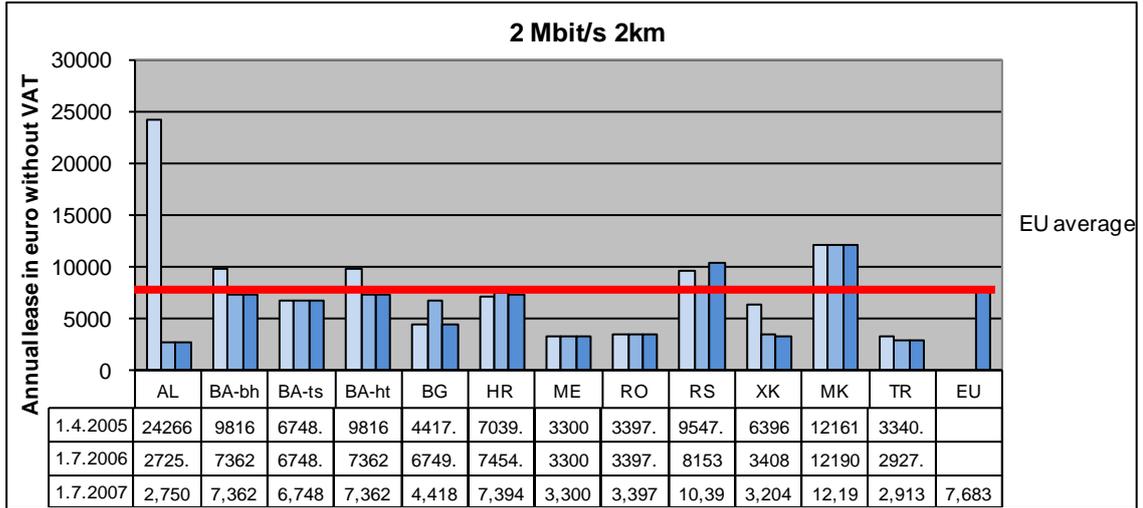


Figure 80 - Prices for national 2 Mbit/s 2 km leased lines in nominal euro without VAT

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

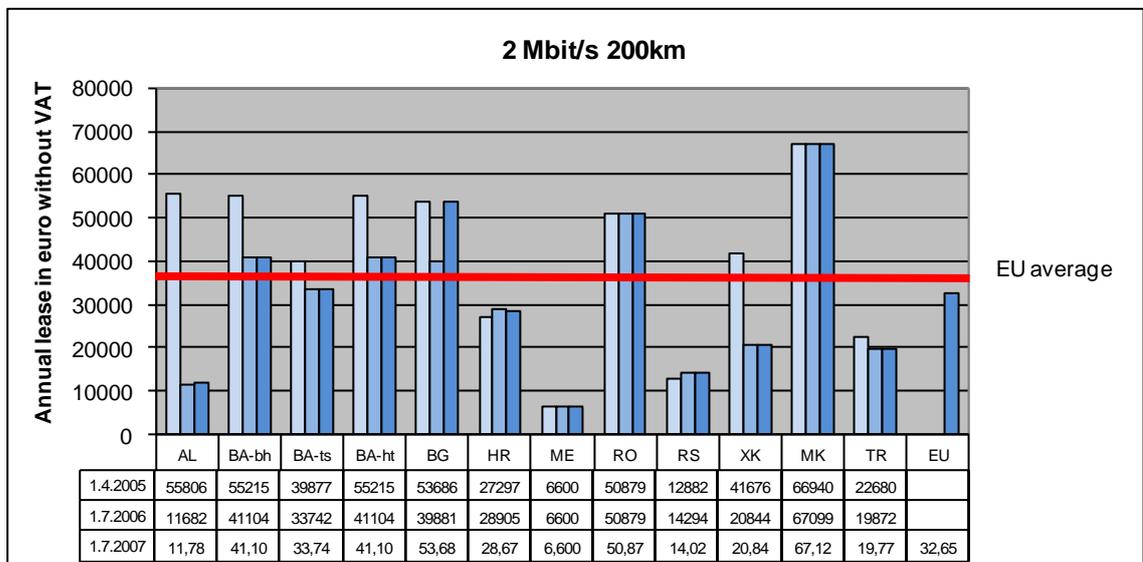


Figure 81 - Prices for national 2 Mbit/s 200 km leased lines in nominal euro without VAT

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

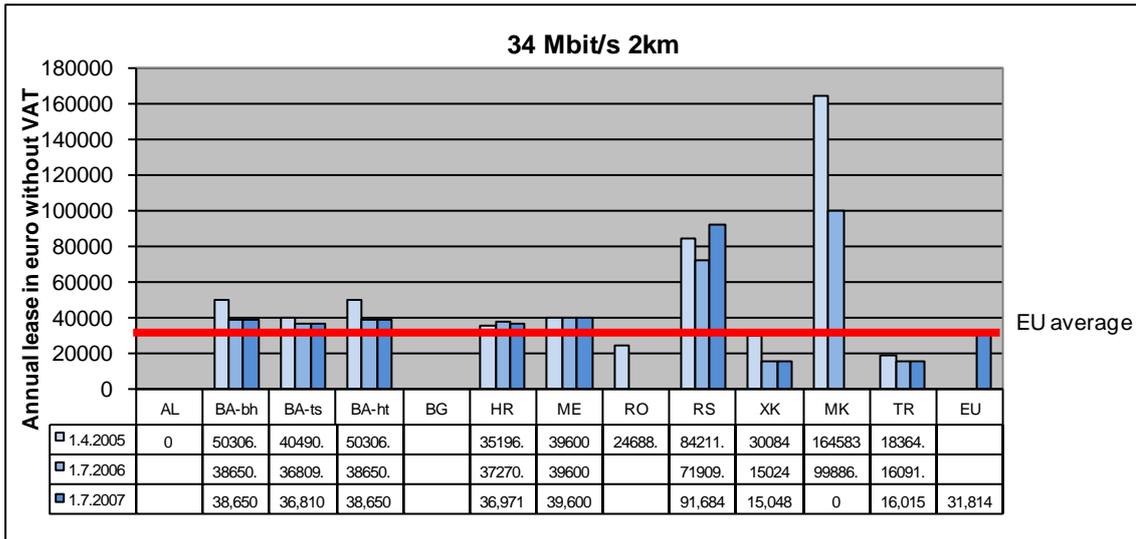


Figure 82 - Prices for national 34 Mbit/s 2 km leased lines in nominal euro without VAT

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

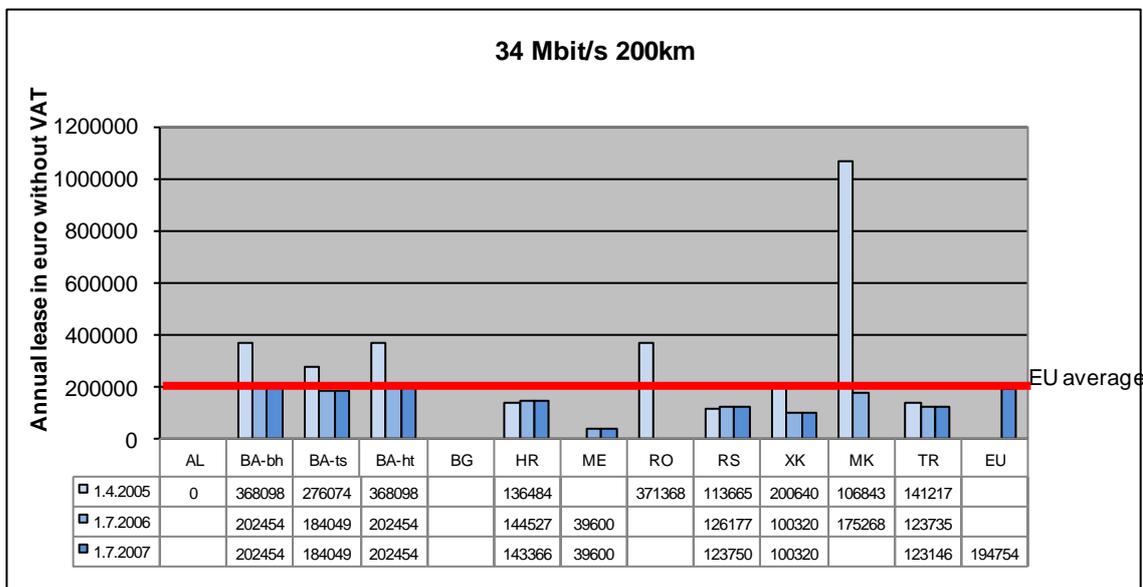


Figure 83 - Prices for national 34 Mbit/s 200 km leased lines in nominal euro without VAT

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

#### 14. International leased lines

International leased lines are provided in the form of half-circuits, which are connected to another half-circuit or a transit circuit near the border. For a complete leased line, it is necessary to have at least two half-circuits, one from each of two neighbouring countries.

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 cost more than single routing lines.

Single routing lines are only available in Bulgaria, Romania, and Turkey. The information provided in this section is the tariffs for double routing half-circuits for all the other countries and geographic units.

Below are four figures presenting information on monthly tariffs for international half-circuits:

- 64 Kbit/s to near country
- 64 Kbit/s to the UK
- 2 Mbit/s to near country
- 2 Mbit/s to the UK.

The tariffs for Montenegro are consistently extremely low when compared to the other countries and geographic units and to the EU average.

At the other end of the scale, one of the incumbent operators in Bosnia & Herzegovina and the former Yugoslav Republic of Macedonia have consistently high tariffs compared with the EU average.

NB. The incumbent operator in Bulgaria no longer publishes prices for international leased lines. These are now subject to negotiations, even though the operator has been designated as having significant market power for leased lines and is subject to a transparency requirements. (See Table 56 above).

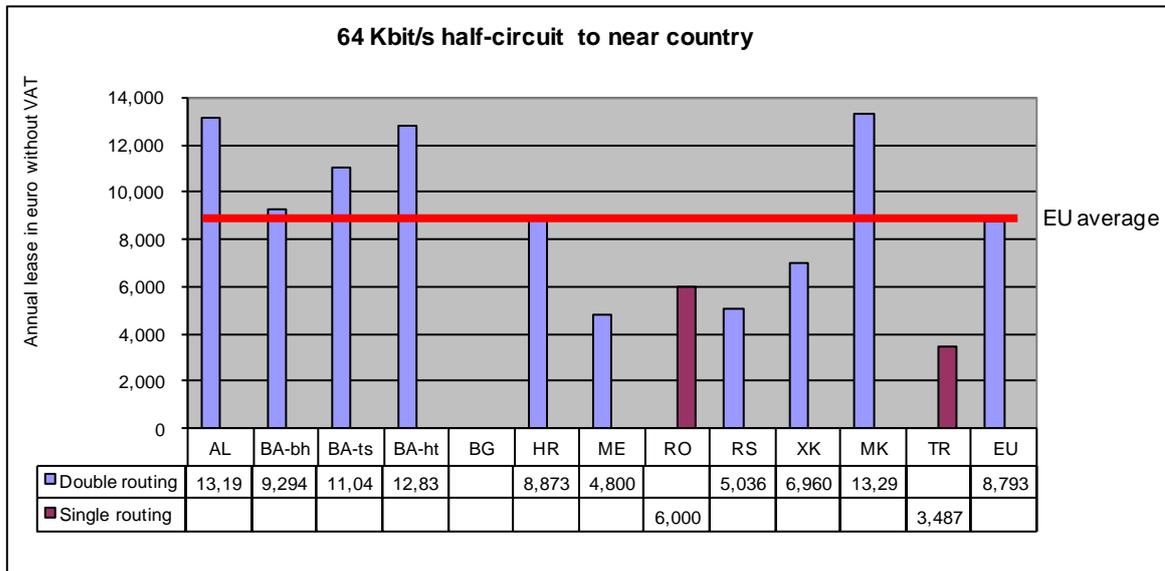


Figure 84 - Prices for international 64 Kbit/s leased lines to near country in nominal euro without VAT

Notes:

Albania: The prices for half circuits are given in US dollars translated to euro exchange rate on July 1, 2007: 1.35363.

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

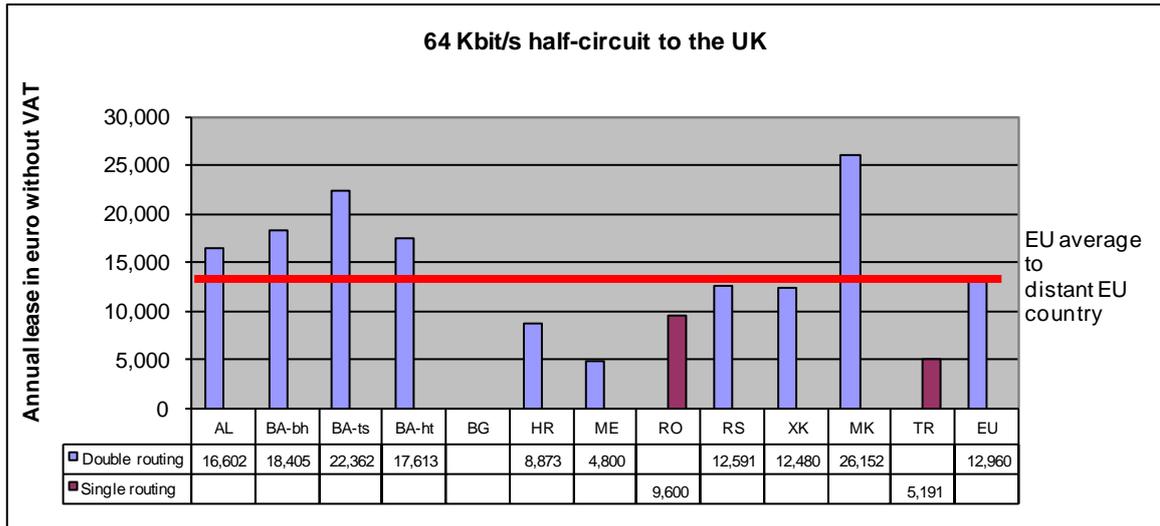


Figure 85 - Prices for international 64 Kbit/s leased lines to the UK in nominal euro without VAT

Notes:

The EU average represents the average cost to a distant EU country and is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

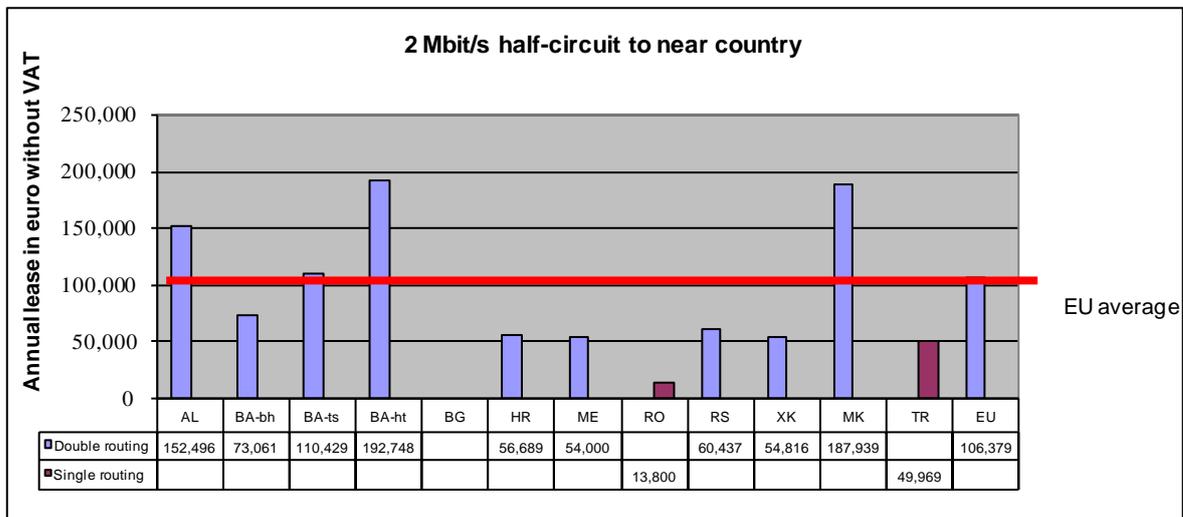


Figure 86 - Prices for international 2 Mbit/s leased lines to near country in nominal euro without VAT

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

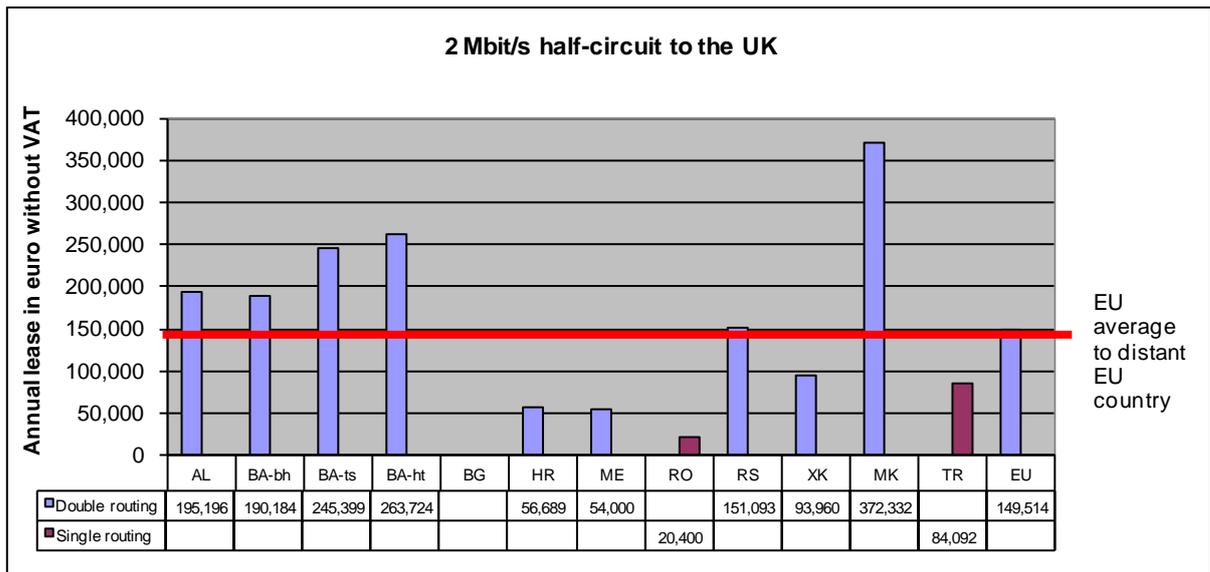


Figure 87 - Prices for international 2 Mbit/s leased lines to the UK in nominal euro without VAT

Notes:

The EU average represents the average cost to a distant EU country and is taken from the 12<sup>th</sup> Implementation Report from the European Commission, March 2007.

**H. Wholesale tariffs**

The information in this section has July 1, 2007 as its reference date.

In the EU regulatory framework the incumbent operators are normally defined as having significant market power and as a consequence they are normally obliged to offer cost oriented interconnection tariffs to other operators through a reference interconnection offer (RIO). The regulatory situation in each country and geographic unit is presented in IV.D on Regulations – Competitive safeguards.

In particular, the interconnection tariffs determine how the retail price for a call is shared between an incumbent operator and a new entrant. In a situation where the tariffs are rebalanced, there is typically a strong regulatory pressure for the incumbent operator to reduce the interconnection rates in order to provide both better conditions for competitive alternatives as well as to enable lower retail prices for the users.

In the EU Member States, benchmarking “best practices” rates played an important role in creating a downward pressure on prices. Today, interconnection rates in most EU Member States are fairly consistent with relatively small variations around the EU average.

The EU average therefore presents a quite meaningful comparative indicator.

**1. Call termination on fixed networks**

The local level interconnection tariffs for termination in the incumbent’s network are reasonably aligned with the EU average for most countries and geographic units where the rates have been established, although they are all higher than the EU average. The exception is Montenegro, where the termination rate is about 13 times the EU average.

With single transit and double transit, the difference with the EU average increases and for double transit, the rates are typically 50% higher.

However, Serbia does not yet have fixed network competition and so there are no fixed-to-fixed termination rates. Serbia has only established rates for termination from mobile networks to the fixed networks and these rates are an order of magnitude higher than the EU average.

According to the EU regulatory framework, if the non-discrimination and cost orientation regulatory obligations have been applied correctly, the call termination rates of the regulated fixed operator with SMP should be the same regardless of whether the call originates in a fixed or a mobile national network,

Currently only the incumbent operators in Bosnia & Herzegovina, Romania, and Turkey apply the same fixed call termination rates for calls originating in fixed and mobile networks.

Where the termination rates in the fixed network depend on whether the call has originated in a fixed or a mobile network, the explanation is often that call termination in the mobile network is set at the national level and the fixed network operator has negotiated that mobile-to-fixed termination rate should be set at the double transit level.

This is the case for Albania. In the former Yugoslav Republic of Macedonia the difference is marginal. Furthermore, the recently approved RIO of the Macedonian incumbent operator provides for the same mobile-to-fixed and fixed-to-fixed termination rates. These rates, however, have not been yet applied in practice. In Bulgaria and Croatia, significantly higher termination rates always apply if the call originates in a mobile network.

For Montenegro, which as explained above has exceptionally high termination rates, the rate is somewhat lower if the call has originated in a mobile network as compared with termination from the fixed network. However, this is based on a somewhat theoretical RIO rate, which is available for information purposes only, since currently there are no alternative fixed network operators in Montenegro.

The rest of this section includes tables on termination rates for local, single transit and double transit termination. For each case, there is one table covering termination for calls that originate in another fixed network and another table for calls that originate in a mobile network. There are also charts for each termination alternative with comparisons between rates originating in fixed and mobile networks.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.03	1.01	0.03	1.01
Bosnia & Herzegovina				
<i>BH Telecom d.d. Sarajevo</i>	0.00	1.00	0.00	0.50
<i>Telekom Srpske a.d. Banja Luka</i>	0.00	1.00	0.00	0.75
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	0.00	1.00	0.00	0.75
Bulgaria	0.00	1.18	0.00	1.06
Croatia	0.21	0.85	0.10	0.42
Montenegro	0.00	7.50	0.00	7.50
Romania	0.00	1.02	0.00	0.56
Serbia, including Kosovo <sup>1</sup>				
Serbia	na	na	na	na
Kosovo	0.00	2.00	0.00	2.00
The former Yugoslav Republic of Macedonia	0.00	0.88	0.00	0.59
Turkey	0.00	1.07	0.00	1.07
1) under UNSCR 1244				

Table 75 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – local level

Notes:

Bulgaria: Instead of termination at the local level, the rate for the “metro segment” is presented. The metro segment is used for calls through one regional point of interconnection to a subscriber, served by a local exchange connected to the same regional point of interconnection in the same city. The rates have been voluntarily agreed between BTC and the Association of Alternative Operators. They correspond to the rates that were recommended by CRC. Nevertheless, they are contested by BTC and the case is pending before the Supreme Administrative Court.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.06	2.15	0.06	2.15
Bosnia & Herzegovina				
<i>BH Telecom d.d. Sarajevo</i>	0.00	1.00	0.00	0.50
<i>Telekom Srpske a.d. Banja Luka</i>	0.00	1.00	0.00	0.75
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	0.00	1.00	0.00	0.75
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.15	0.00	1.64
Montenegro	0.00	6.10	0.00	6.10
Romania	0.00	1.02	0.00	0.56
Serbia, including Kosovo <sup>1</sup>				
Serbia	na	na	na	na
Kosovo	0.00	2.00	0.00	2.00
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	1.07	0.00	1.07
1) under UNSCR 1244				

Table 76 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – local level

Notes:

Albania: Mobile to fixed termination rates are the same for local, single transit and double transit termination

Bulgaria: The RIO of the Bulgarian incumbent does not provide for termination to the fixed network from mobile operators other than at the double transit level. For comparison purposes, the double transit rate is used for local and single transit in tables and charts.

Montenegro: New interconnection agreements have been signed in 2<sup>nd</sup> half 2007, after entering of third mobile operator in telecommunications market in Montenegro. These agreements are not yet in force pending approval of the Agency. The proposed prices in these agreements are 3 eurocents for mobile-to-fixed and 10 eurocents for mobile-to-mobile and fixed-to-mobile.

Serbia: The termination rate is confidential according to article 47 of the Telecommunications Law.

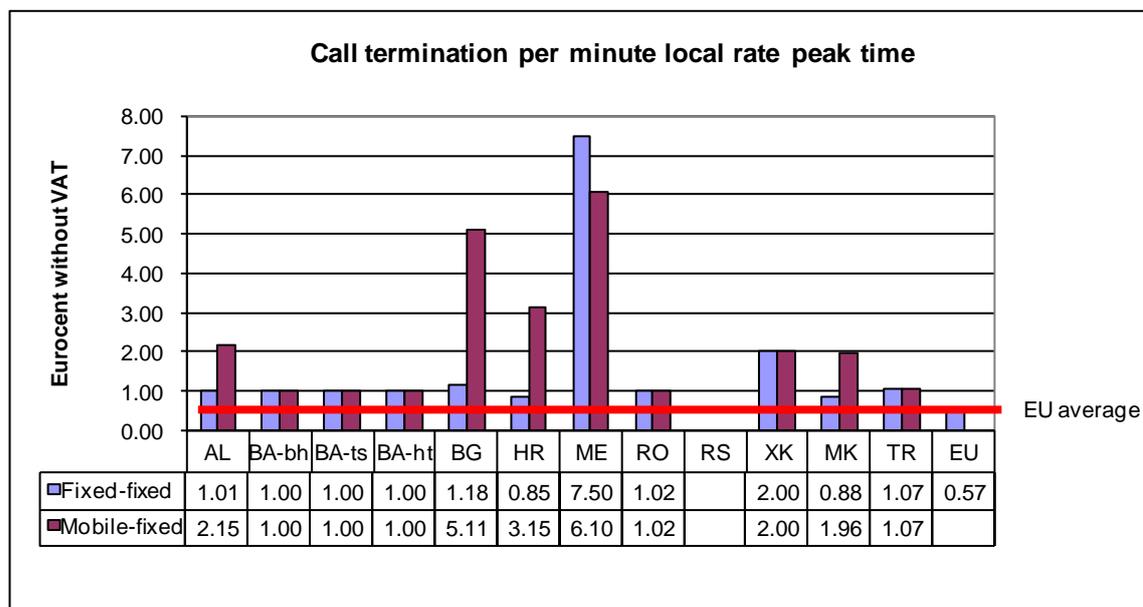


Figure 88 - Interconnection charges for call termination on fixed network of incumbent operator – local level

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report, March 2007.

The former Yugoslav Republic of Macedonia: Mobile-to-fixed tariffs are higher than fixed-to-fixed because of the interconnection agreements between Maktel (fixed operator) and older mobile operators T-Mobile and Cosmofon,

which were signed before the approval of the RIO by the AEC. This issue is currently subject to several disputes. It is AEC's opinion is that the fixed-to-fixed and mobile-to-fixed terminations should be equal.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.05	1.78	0.05	1.78
Bosnia & Herzegovina				
<i>BH Telecom d.d. Sarajevo</i>	0.00	1.50	0.00	0.75
<i>Telekom Srpske a.d. Banja Luka</i>	0.00	1.50	0.00	0.75
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	0.00	1.50	0.00	1.12
Bulgaria	0.00	1.38	0.00	1.23
Croatia	0.21	1.30	0.10	0.65
Montenegro	0.00	7.50	0.00	7.50
Romania	0.00	1.18	0.00	0.65
Serbia, including Kosovo <sup>1</sup>				
Serbia	na	na	na	na
Kosovo	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.23	0.00	0.83
Turkey	0.00	1.07	0.00	1.07
1) under UNSCR 1244				

Table 77 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – single transit

Notes:

Bulgaria: The rates have been voluntarily agreed between BTC and the Association of Alternative Operators. They correspond to the rates that have been instructed by CRC. Nevertheless, they are contested by BTC and the case is pending before the Supreme Administrative Court.

Montenegro: New interconnection agreements have been signed in 2<sup>nd</sup> half 2007, after entering of third mobile operator in telecommunications market in Montenegro. These agreements are not yet in force pending approval of the Agency. The proposed prices in these agreements are 3 eurocents for mobile-to-fixed and 10 eurocents for mobile-to-mobile and fixed-to-mobile.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.06	2.15	0.06	2.15
Bosnia & Herzegovina				
<i>BH Telecom d.d. Sarajevo</i>	0.00	1.50	0.00	0.75
<i>Telekom Srpske a.d. Banja Luka</i>	0.00	1.50	0.00	0.75
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	0.00	1.50	0.00	1.12
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.15	0.00	1.64
Montenegro	0.00	6.10	0.00	6.10
Romania	0.00	1.18	0.00	0.65
Serbia, including Kosovo <sup>1</sup>				
Serbia	na	na	na	na
Kosovo	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	1.07	0.00	1.07
1) under UNSCR 1244				

Table 78 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – single transit

Notes:

Albania: Mobile to fixed termination rates are the same for local, single transit and double transit termination

Bulgaria: The RIO of the Bulgarian incumbent does not provide for termination to the fixed network from mobile operators other than at the double transit level. For comparison purposes, the double transit rate is used for local

and single transit in tables and charts.

Serbia: The termination rate is confidential according to article 47 of the Telecommunications Law.

Kosovo: There is call termination rate for local termination, but not single transit or double transit.

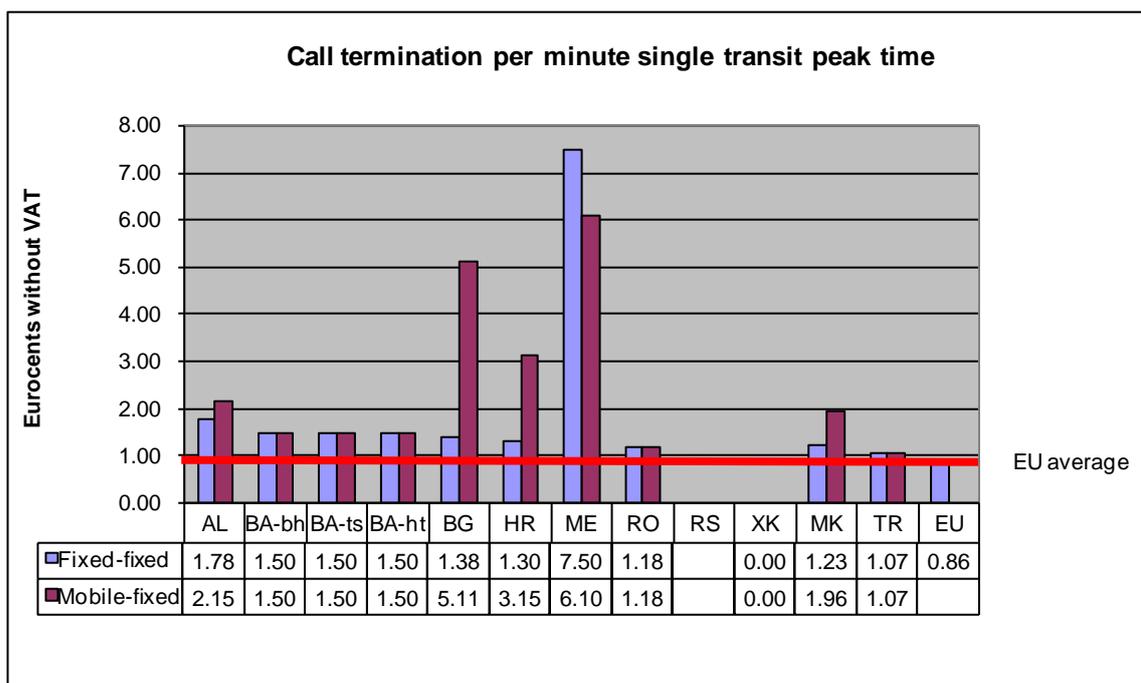


Figure 89 - Interconnection charges for call termination on fixed network of incumbent operator – single transit

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report, March 2007.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
<b>Albania</b>	0.06	2.15	0.06	2.15
<b>Bosnia &amp; Herzegovina</b>				
<i>BH Telecom d.d. Sarajevo</i>	0.00	2.04	0.00	1.02
<i>Telekom Srpske a.d. Banja Luka</i>	0.00	2.04	0.00	2.04
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	0.00	2.04	0.00	1.53
<b>Bulgaria</b>	0.00	3.07	0.00	2.71
<b>Croatia</b>	0.21	1.70	0.10	0.85
<b>Montenegro</b>	0.00	7.50	0.00	7.50
<b>Romania</b>	0.00	1.29	0.00	0.71
<b>Serbia, including Kosovo<sup>1</sup></b>				
Serbia	na	na	na	na
Kosovo	na	na	na	na
<b>The former Yugoslav Republic of Macedonia</b>	0.00	1.81	0.00	1.23
<b>Turkey</b>	0.00	1.70	0.00	1.70
1) under UNSCR 1244				

Table 79 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

Notes:

Bulgaria: The rates have been voluntarily agreed between BTC and the Association of Alternative Operators. They correspond to the rates that have been instructed by CRC. Nevertheless, they are contested by BTC and the case is pending before the Supreme Administrative Court.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.06	2.15	0.06	2.15
Bosnia & Herzegovina				
<i>BH Telecom d.d. Sarajevo</i>	0.00	2.04	0.00	1.02
<i>Telekom Srpske a.d. Banja Luka</i>	0.00	2.04	0.00	2.04
<i>Hrvatske Telekomunikacije d.o.o. Mostar</i>	0.00	2.04	0.00	1.53
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.15	0.00	1.64
Montenegro	0.00	6.10	0.00	6.10
Romania	0.00	1.29	0.00	0.71
Serbia, including Kosovo <sup>1</sup>				
Serbia	na	na	na	na
Kosovo	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	1.70	0.00	1.70
1) under UNSCR 1244				

Table 80 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

Notes:

Albania: Mobile to fixed termination rates are the same for local, single transit and double transit termination

Bulgaria: The RIO of the Bulgarian incumbent does not provide for termination to the fixed network from mobile operators other than at the double transit level. For comparison purposes, the double transit rate is used for local and single transit in tables and charts.

Montenegro: new interconnection agreements have been signed in 2<sup>nd</sup> half 2007, after entering of third mobile operator in telecommunications market in Montenegro. These agreements are not yet in force pending approval of the Agency. The proposed prices in these agreements are 3 eurocents for mobile-to-fixed and 10 eurocents for mobile-to-mobile and fixed-to-mobile.

Serbia: The rate is an average of several packages offered by Telekom Srbija to users.

Kosovo: There is call termination rate for local termination, but not single transit or double transit.

The figure below illustrates the charge per minute for double transit fixed-to-fixed termination in peak time, and the corresponding mobile-to-fixed termination rates.

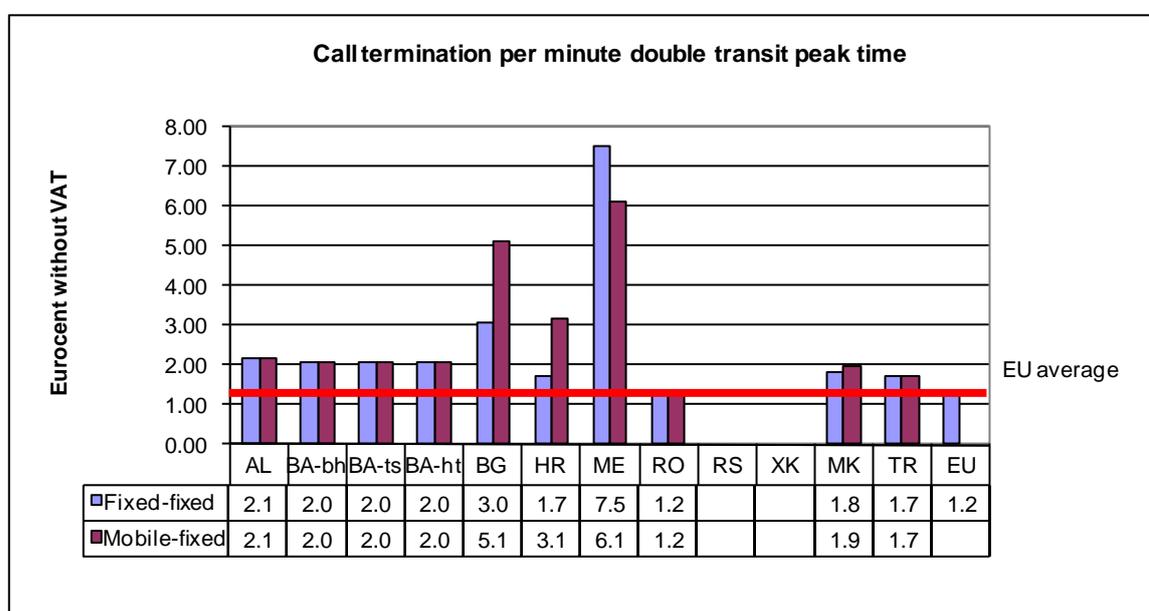


Figure 90 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

## Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report, March 2007.

## 2. Call termination on mobile networks

Table 81 below presents the interconnection rates applied to fixed-to-mobile termination. These rates apply to national termination and there is no distinction between local, single and double transit as for fixed network termination.

Most of the countries and geographic units have termination rates that are in the range of the EU average, with the exception of Romania and Turkey, which have rates that are about half the EU average.

The highest rates are found in Bulgaria. In this country, where mobile termination rates have been unregulated under the previous Telecommunications Act, the termination rate is about 70% higher than the EU average.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.04	13.09	0.04	13.09
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	19.48	0.00	18.71
Croatia	0.00	12.32	0.00	7.89
Montenegro	0.00	14.00	0.00	14.00
Romania	0.00	7.21	0.00	7.21
Serbia, including Kosovo <sup>1</sup>				
Serbia	0.00	11.58	0.00	11.58
Kosovo	0.00	12.50	0.00	6.25
The former Yugoslav Republic of Macedonia	0.00	12.33	0.00	4.92
Turkey	0.00	7.72	0.00	7.72
1) under UNSCR 1244				

Table 81 - Fixed-to-mobile interconnection charges for call termination on mobile

## Notes:

Albania: The mobile termination rates applies to both mobile networks

Montenegro: New interconnection agreements have been signed in 2nd half 2007, after entering of third mobile operator in telecommunications market in Montenegro. These agreements are not yet in force pending approval of the Agency. The proposed prices in these agreements are 3 eurocents for mobile-to-fixed and 10 eurocents for mobile-to-mobile and fixed-to-mobile.

Romania: The rate is the maximum tariff applicable on September 1, 2006. Starting January 1, 2008 the rate will be 6.4 eurocent for fixed to mobile termination, i.e. a reduction of 11%.

Serbia: The rates presented are for residential users. The termination rates for business users are lower than for residential users in peak hours, but higher than residential users in off-peak hours.

Figure 91 below presents the per minute rates for fixed to mobile termination.

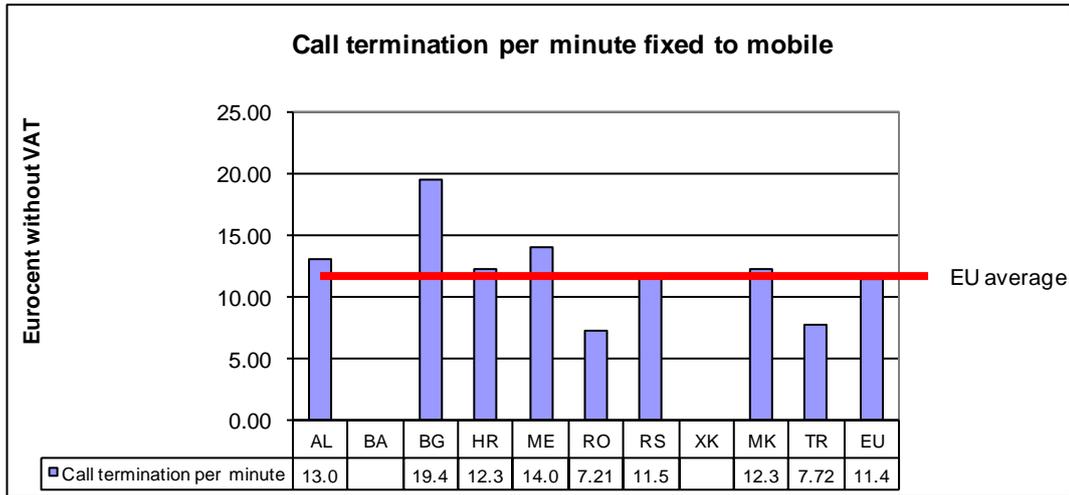


Figure 91 - Fixed-to-mobile interconnection charges for call termination on mobile network

Notes:

The EU average is taken from the 12<sup>th</sup> Implementation Report, March 2007.

### 3. Flat Rate Internet Access Call Origination

Flat Rate Internet Access Call Origination (FRIACO) is a concept for unmetered wholesale access for Internet calls. It allows an Internet service provider to offer an “always connected” solution for their customers at a reasonable fixed monthly fee using normal telephone lines. In many Western European countries, FRIACO was enforced by regulations in order to encourage increased use of the Internet before the availability of broadband at reasonable prices.

It is therefore of interest to investigate whether FRIACO has been enabled in South East Europe as a low cost “always connected” alternative. However, FRIACO is not available in any of the countries. This means that none of the alternative ISPs can offer a flat rate internet subscription to their customers unless they operate their own network.