Report 2 – Country Comparative Report

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

June 26, 2006

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Revision June 26, 2006:

This revision corrects two figures where the line representing the EU average was in a wrong position due to a technical problem:

- Page 176 - Figure 49 – Prices for national 64 Kbit/s 2 km leased lines in nominal euro without VAT
- Page 177 - Figure 50 - Prices for national 64 Kbit/s 200 km leased lines in nominal euro without VAT

The revision also includes small corrections on page 123 with regard to the total numbers for main subscriber lines. In addition, it includes the GDP for Turkey for 2005 on pages 26 and 27 . This information was not available when the report was developed.

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 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[1] sector as it is called now, has gone through a continuous development for more than fifteen years, starting with the publication of the famous "Green Paper" in 1987. This development is characterised by three major phases:

1. The first step was enabled by the Services Directive[2] from 1990, which opened the sector to limited competition in the early nineties. Essentially, this first framework opened data communications, value added services and closed user group services to competitive provision, while public telephony services were permitted to remain under special or exclusive rights. This framework was silent on the subject of infrastructure, but did not specifically provide for competitive networks.

2. The second step is normally referred to as the "1998 acquis" because the provisions became effective at the national level in that year[3]. This step is also often referred to as "full liberalisation" because it totally eliminated any special or exclusive right. 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.

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1 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.

2 European Commission Directive (90/388/EEC) of June 28, 1990 on competition in the markets for telecommunications services

3 Specifically, all enabling measures should have been adopted by December 31, 1997.

3. The third step will be referred to in this report as the "2003 acquis"[4]. The main changes from the "1998 acquis" are:

   - extensive use of general authorisations whereby telecommunications activities can be started without prior permission from the regulator. Only activities that require access to limited resources may be subject to individual authorisations;
   - 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;
   - the inclusion of broadcasting networks in the same framework in recognition of technological convergence between all forms of electronic communications.

This development, which has taken place over fifteen years, has been compressed into a much shorter period for the ten new EU Member States. They 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 on May 1, 2004.

The EU is now taking the fourth step with preparations for the next regulatory review in 2006. If appropriate, this review may lead to further adjustments in the regulatory framework and possibly a new acquis around 2010.

These regulatory developments are largely supported by in-depth monitoring of the developments in the national markets, which are subject to continuous scrutiny in the form of annual implementation reports. The latest (11^{th}) report was released in February 2006.

The reports examine major developments in the market, analyse the implementation of the key regulatory principles covered by the regulatory framework and draw conclusions intended to contribute to ensuring compliance with the European regulatory framework as well as providing a knowledge base for further regulatory developments.

South East Europe is a region that includes countries that are potential candidates for membership in the European Union, some in the shorter term and other countries 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, will be prepared every 9 months in the period from 2005 to 2007. The project, called "Monitoring of South East Europe - telecommunications services sector and related aspects", is funded by the EC Directorate-General Information Society and Media, and performed by Cullen International.

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[4] 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 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 a common regulatory authority;
- Bulgaria;
- Croatia;
- Romania;
- Serbia & Montenegro. This country is a federation of two republics: Montenegro and Serbia. In addition, Serbia & Montenegro includes the territory of Kosovo, which has a separate status. All three of these entities have different legislation and separate regulatory authorities and are therefore dealt with separately in this report.
    - Montenegro
    - Serbia
        - *Kosovo*
- The former Yugoslav Republic of Macedonia;
- Turkey.

All these countries and geographic units are in the process of adopting and/or implementing the EU regulatory framework for electronic communications. Their position on the regulatory development ladder varies from a very advanced status of Romania, which has adopted the 2003 acquis and is well into its implementation, to countries that are still grappling with the tasks of establishing the initial conditions for a competitive telecommunications sector.

This is the second of a series of four reports that are monitoring their progress in regulatory developments as well as the effects to be observed in the markets.

II. OBJECTIVES AND METHODOLOGY

The overall objective of the project is to assist the EC and the representatives of the countries in monitoring the progress made by each country towards compliance with the EU rules for electronic communications.

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 European 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 appropriate changes.

In the data collection process, we have relied heavily on the support of the local national regulatory authorities and or Ministry representatives. The principal sources of information are listed in the table below:

Country	Source of information in this report	Website
Albania	Telecommunications Regulations Entity (TRE)	http://www.ert.gov.al/ert_eng/Index.html
Bosnia & Herzegovina	Communications Regulatory Agency (RAK)	http://www.rak.ba/
Bulgaria	Communications Regulation Commission (CRC)	http://www.crc.bg/
Croatia	Croatian Telecommunications Agency	http://www.telekom.hr/
Romania	National Authority for Communications Regulation (ANRC)	http://www.anrc.ro/
Serbia & Montenegro		
Montenegro	Agency for Telecommunications of the Republic of Montenegro	http://www.agentel.cg.yu/
Serbia	Ministry of Capital Investment	http://www.mugrs.sr.gov.yu/
• Kosovo	Telecommunications Regulatory Authority (TRA)	website under construction
The former Yugoslav Republic of Macedonia	Agency for Electronic Communications	http://www.aec.mk/
Turkey	Telecommunications Authority (TA)	http://www.tk.gov.tr/

Table 1 – Principal 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 November 1, 2005.

2. Price information. This package included a range of wholesale and retail prices. The reference date was November 1, 2005.

3. Regulatory information. This package included indicators of a regulatory nature, such as competitive safeguards, numbers of licences issued, etc. The reference date was November 1, 2005.

4. Market information. This package included various forms of statistics from the telecommunications market. The reference date was January 1, 2005. In some cases, the reports includes also includes more current information. The dates are then noted in the report.

This report covers ten geographic units with different status. Most of them are internationally recognised as countries, but some of them are federal states within a country, and, in the case of Kosovo, a territory under international administration.

The choice of geographic units has been made according to their situation for telecommunications regulations. For example, the country of Serbia & Montenegro is represented by three geographic units, Montenegro, Serbia, and Kosovo, because each unit has a different ministry, regulator, and legislation for electronic communications. On the other hand, the country of Bosnia & Herzegovina is presented as a single geographic unit because its constituent parts have common legislation and a common regulator. Nevertheless, Bosnia & Herzegovina has three incumbent operators.

Table 2 provides basic information on the geographic units, with some additional information when necessary to explain their status. It also introduces the short two or three letter country codes that will be used as identification in graphs elsewhere in the report. The two letter codes are the international ISO codes where they exist. However, there are no ISO codes for regional units within a country. Instead, special three letter codes have been created for this purpose. In addition, each incumbent operator in Bosnia & Herzegovina has been allocated 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. Member States within a country, such as Serbia & Montenegro, are presented in alphabetical order under the name of the country. Therefore, Montenegro is located before Serbia. Special territories within a country are presented after the Member States. Consequently, Kosovo is presented after Serbia within the country of Serbia & Montenegro.

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.

Cullen International has contracts with independent telecommunications experts in each country and geographic unit. They have provided additional 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	Bosnia & Herzegovina includes two administrative divisions: 1. The Federation of Bosnia & Herzegovina 2. Republika Srpska In addition, there is a district, Brčko, which is under international administration There are three incumbent operators in the different regions. 1. BH Telecom d.d Sarajevo (referred to as BA-bh in graphs). The operator is active in the Federation of Bosnia & Herzegovina. It is the only operator in some cantons and shares the market with HT Mostar in other cantons. 2. Telekom Srpske a.d. Banja Luka (referred to as BA-ts in graphs) is the incumbent operator in Republika Srpska. 3. Hrvatske Telekomunikacije d.o.o. Mostar (referred to as BA-ht in graphs) is active in the Federation of Bosnia & Herzegovina. It is the only operator in some cantons and shares the market with BH Telecom in other cantons. 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.
Bulgaria	BG	
Croatia	HR	
Romania	RO	
Serbia & Montenegro	CS	Serbia & Montenegro is a federation of two republics: Serbia and Montenegro.
Montenegro	Mon	Montenegro is a Member State within the federation of Serbia & Montenegro.
Serbia	Ser	Serbia is a Member State within the federation of Serbia & Montenegro.
• Kosovo	Kos	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 prejudge the outcome of the negotiations on the name of the country that are taking place at the United Nations.
Turkey	TR	

Table 2 - List of participating countries and their country codes

Note:
The two-letter country codes are the international two-letter ISO codes. They are also used for Internet domain

names as provided by IANA (Internet Assigned Numbers Authority). These codes provide a well-defined and widely understood two-letter code for the different countries. The Member States and territories within Serbia & Montenegro do not have separate two-letter codes within this structure. For the purposes of this study, we have assigned three-letter codes with one capital letter and two small letters. This should provide an easy means of identification and at the same time avoid confusion with the widely used two-letter codes.

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

Country	Relationship to the EU
Albania	Has negotiated Stability and Association Agreement since early 2003. Negotiations may be concluded mid 2006.
Bosnia & Herzegovina	Has started talks on Stability and Association Agreement.
Bulgaria	Accession country. Has signed accession treaty.
Croatia	Candidate country. Negotiations underway.
Romania	Accession country. Has signed accession treaty.
Serbia and Montenegro	Opened talks on Stability and Association Agreement in October 2005. If Montenegro and Serbia splits after the referendum to be held in May 2006, there will be two agreements. The status of Kosovo will depend on the outcome of negotiations that started in December 2005.
The former Yugoslav Republic of Macedonia	Stability and Association Agreement into force in April 2004. EU Council decision to grant candidate status in December 2005, but without determining a date for when negotiations can start.
Turkey	Candidate country. Negotiations underway.

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

III. SUMMARY OF STATUS AND RECENT DEVELOPMENTS

The status of the telecommunications sector in any given country can be broadly characterised in terms of its three main networks:

- public switched telephone network (PSTN);
- mobile network(s);
- broadband network(s).

This chapter presents the status of these three networks and the major regulatory conditions that set the stage for further development, in particular for broadband networks. It draws on information presented later in this report and information contained in the first report in this series[5].

A. PSTN

In most European countries, the PSTN, which has been developed over more than 100 years, is now declining in terms of the number of subscribers and revenue. This is also the case for most of the countries and geographic units in South East Europe. Considering developments since the first report, Albania, Bulgaria, Montenegro, the former Yugoslav Republic of Macedonia and Turkey are following this trend, while there is practically no growth in Romania. Only Croatia and Serbia[6] can still demonstrate some growth in terms of subscribers. In both cases, the growth over the ten-month period came to less than half a percentage point.

For the region as a whole, the penetration of PSTN subscribers in terms of main lines per 100 population declined from 27.6 to 25.8. The decline of the PSTN can normally be explained by the availability of alternative communication opportunities over mobile and broadband facilities. However, a rapid decline may also be a symptom of strong tariff rebalancing without sufficient customer protection in terms of a low usage tariff option. This can create a situation where low-income users are forced to terminate their subscription because it is no longer affordable to them.

However, as discussed below, only Bosnia & Herzegovina has had a significant increase in tariffs for local calls in this period. Unfortunately, the fixed network penetration information is not available from this country for November 1, 2005. However, since the price change took place on November 1, it has had no influence on the average penetration reported in the region.

All countries and geographic units[7] except Albania and Kosovo have low usage options available.

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5 Report 1 – Country comparative report, August 29, 2005. This report is available from the European Commission's website at: http://europa.eu.int/information_society/activities/internationalrel/dialogue_coop/enlargement/index_en.htm and from Cullen International's website at: http://www.cullen-international.com under "studies".

6 The corresponding information is missing for Bosnia & Herzegovina, and Kosovo.

7 Information on mobile penetration on November 1, 2005 was not available for Kosovo.

It is beyond the scope of this report to perform a sophisticated tariff analysis in order to determine where the countries and geographic units stand on tariff rebalancing. A simple graph is provided in Figure 1 below. Its X-axis represents local call tariffs (measured on the basis of the per minute charge) relative to the EU average, while the Y-axis represents the corresponding international call tariffs relative to the EU average.

Placing the countries and geographic units into this graph based upon their residential tariffs in partial purchasing power parity euros, they fall into two fairly separate clusters. The first cluster has low local tariffs and high international call tariffs that are typical for unbalanced tariffs. This cluster includes Albania, Bosnia & Herzegovina, Montenegro, Serbia, Kosovo, and the former Yugoslav Republic of Macedonia.

The other cluster has local call tariffs that are moderately above the EU average and international call tariffs that are around the EU average. This cluster, which suggests that tariff rebalancing has been carried out, includes Bulgaria, Croatia, Romania, and Turkey.

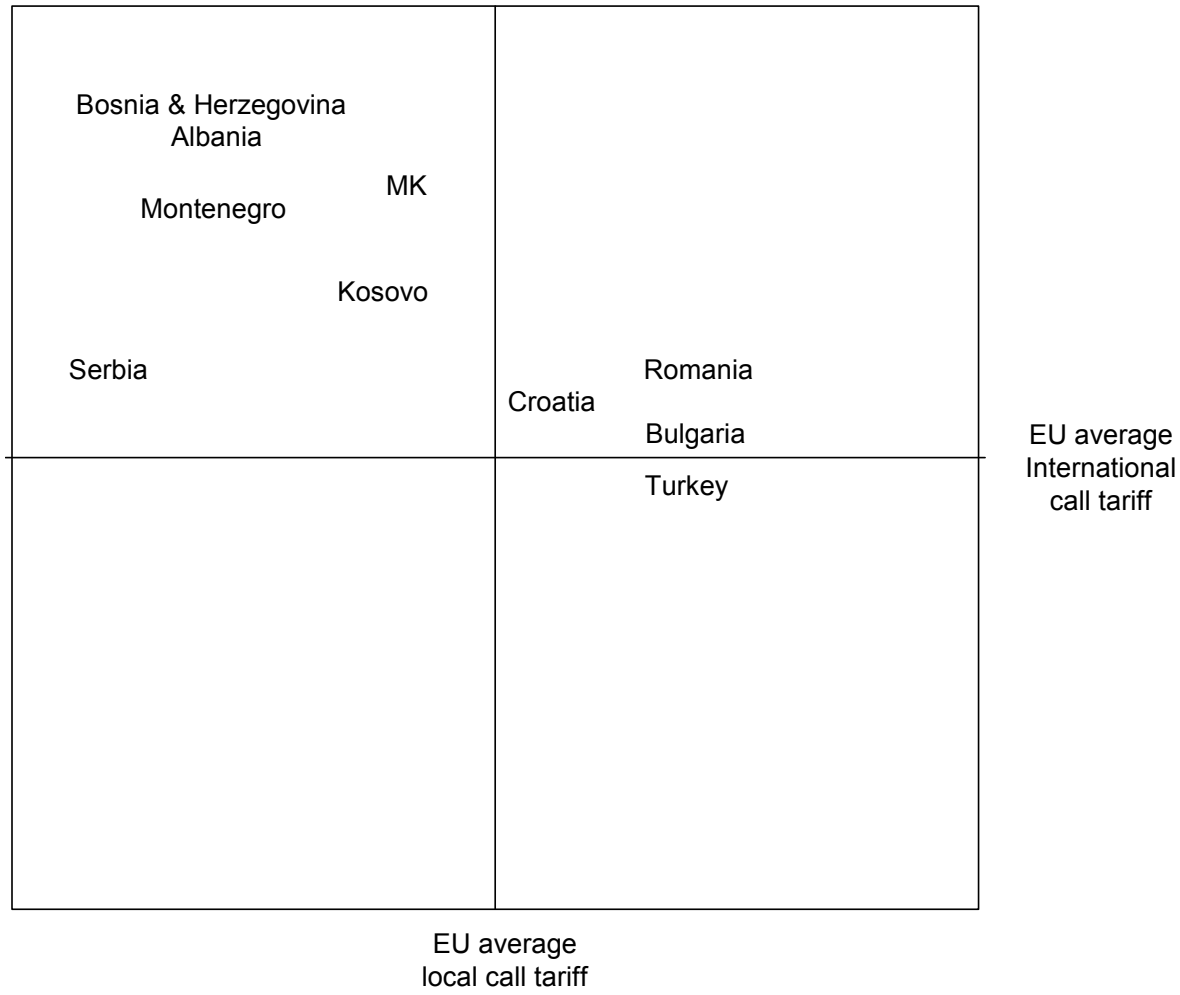

Figure 1 – Positioning of countries according to their residential tariffs for local and international calls measured by partial purchase parity euros relative to EU average tariffs

However, even if there is a cluster of countries with the characteristics of unbalanced tariffs, there have been tariff-rebalancing actions, at least in some countries, in the period between April 1 and November 1, 2005:

- In Albania, local call tariffs have increased by 17.5%.
- In Bosnia & Herzegovina, two of the three incumbent operators have increased local tariffs by 211% and 100% respectively. After this price adjustment, all three operators' local tariffs are fairly similar.

There appears to have been minor upwards adjustment of 3% and 5% in Croatia and Turkey, but these are the result of currency fluctuations rather than price changes in the local call tariffs.

For national long distance calls, the only price changes are in Bosnia & Herzegovina. Two of the three incumbent operators in Bosnia & Herzegovina have increased their long distance tariffs by 50% and 44% respectively, while the third operator has reduced its tariffs by 14%. After the price changes, all three incumbent operators have the same tariffs for long distance calls. The new tariffs are close to the EU average.

Serbia appears to have reduced its tariffs, but this is due to currency exchange differences. The price in local currency has remained the same.

Only Albania and Turkey have national long distance tariffs moderately above the EU average. The other countries and geographic units have tariffs that are quite close to the EU average.

For international calls represented by a 10-minute call to the UK, the price movements are as follows in the period:

- In Bosnia & Herzegovina, two of three incumbent operators have reduced their tariffs by 21% and 17% respectively. The third operator has increased its tariffs by 94%. After the tariff changes, the tariffs of the three operators are much closer to each other. Two of the operators having the same tariff and the third operator's tariffs are some 20% lower. However, all three operators' tariffs are still three to four times above the EU average.
- In the former Yugoslav Republic of Macedonia, the tariff has been reduced by about 30%. The tariff is now about twice the EU average.

Bulgaria, Croatia, Romania, Serbia and Turkey have tariffs that are close to the EU average.

This study has also reported on the price for incoming international calls. It turns out that all countries and geographic units that are included in this report have inbound tariffs that are significantly higher than the outgoing tariffs, except in Kosovo and Bosnia & Herzegovina. The price differential can be as much as 1 to 3, such as in Bulgaria. In fact, the tariffs from the UK to these countries and geographic units were identical for all countries and geographic units, with two exceptions:

- the tariff for calls to Romania is slightly higher than the others by about 18%, and
- the tariff for calls to Turkey is 45% lower.

The price differentials between outgoing and incoming calls are significantly more pronounced in the relationship between South East Europe and the United States than with the case of the UK. This is the case for all countries and geographic units except Bosnia & Herzegovina. In Bulgaria and Turkey, it costs eight times more to call into the country from the United States than a call in the other direction.

The difference in tariffs between outgoing calls and incoming calls appears to be a reflection of the old ITU accounting range system, which previously defined tariffs for international calls. This seems to indicate that there has not yet been sufficient competitive pressure on the rates for termination of international calls and or that the national termination rates defined by the RIOs of the SMP operators are not yet available for termination of international calls.

B. Mobile networks

All countries and geographic units demonstrate strong growth in mobile networks. The average subscriber penetration rate increased from 49% on January 1, 2005 to 59% on November 1, 2005. The growth rates ranged from 5 percentage points in Albania, which grew from 41% to 46% to 26 percentage points in Montenegro, which grew from 78% to 104%, which is well above the EU average.

In all countries and geographic units, the number of mobile subscriptions surpasses by far the number of fixed telephony subscriptions.

The strong growth in mobile penetration is based on a competitive situation with two or three operators in each market. 3G networks have been licensed in Bulgaria, Romania, and Croatia. Only Mobifon in Romania had started operations for six months by November 1, 2005.

The mobile tariffs compare favourably with those in the European Union. In most cases the tariffs would be positioned below the median values presented in the 11th Implementation Report of the European Commission. Albania represents the exception with prices that would rank among the highest in the EU.

C. Broadband access

Broadband access is an important indicator because it provides much of the basis for the service based information society economy. Without a broad base of broadband users, the national economy will not benefit from participation in these markets and the gap in the standard of living when compared to other modern economies may widen rather than being narrowed.

Broadband penetration is measured by the number of subscriptions for access solutions that provide Internet access at speeds equal to or higher than 144 Kbit/s.

The use of broadband access is extremely low when compared to the situation in the EU. The figures for broadband access are lower than the EU average by an order of magnitude. In October 2005 the EU average[8] was 11.45%. Behind this average was a significant variation between countries, ranging from 1% in Greece to 23.8% in the Netherlands.

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[8] 11th Implementation Report from the European Commission, February 2006

However, the average in South East Europe is only 1.6%. As in the EU, there is a significant variation between countries and geographic units. The average ranges from almost no broadband access reported in Albania to 3.47% in Romania.

Four countries have broadband access penetration rates that are significantly higher than the other countries in the region:

1. The leading country is Romania with 3.47%. However, half of this number is made up from subscribers to a mobile network using CDMA/EV-DO[9] technologies. A significant number of these subscribers use their mobile phone for connection to the Internet, but only half of them make regular use of this capability in addition to normal voice services.

   The second most important broadband technology in Romania is cable modem (Cable TV technology) which accounts for more than 1/3 of the total number.

   xDSL, which in the EU represents the largest technology and is seen as the main driver for broadband growth, plays a very minor role in Romania about 1% of all the lines. WiFi is ahead of xDSL with slightly more than 1% of all lines.

   The broadband sector in Romania is now developing very rapidly. Growth in cable modems in the twelve month period from January 1, 2005 to December 31, 2005 went from 84,197 to 248,924 subscribers (an 196% increase), while the number of xDSL subscribers went from 2,182 to 7,308 (235% increase).

   It is interesting to note that the incumbent operator only accounts for 1% of all the broadband access subscriptions. Alternative operators are providing the rest. Even for xDSL, alternative operators are providing almost 25% of all subscriptions based on fully unbundled local loops.

2. Croatia is the second country in the region with 2.02%. Over 95% of all the broadband connections were xDSL lines. The rest were based on Cable TV and WiFi, and, to some extent, leased lines. The non-xDSL technologies are mainly provided by alternative operators, who provide 11.6% of all connections, However, more than half of their connections are xDSL solutions based on resale of the incumbent operator's offerings.

   In the period from January 1, 2005 to November 1, 2005 the number of connections, mainly xDSL, has grown from 26,876 to 89,870 (an increase of 234%).

3. The third country is Turkey with 1.59%. As in Croatia, over 95% of the connections are based on xDSL. Nevertheless, only around 1.5% of all connections are provided by alternative operators, who provide broadband solutions through Cable TV, leased lines and satellite in addition to the resale of xDSL. The resale solutions make up about 1% of all the xDSL lines.

   From January 1, 2005 to November 1, 2005, the number of broadband connections in Turkey grew from 489,802 to 1,150,616 (an increase of 134%).

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[9] EV/DO stands for Evolution-Data Optimized. It provides download access with typical speeds around 300-500 kbit/s.

4. The fourth country in the region for broadband penetration is Bosnia & Herzegovina with 0.87% penetration. Almost 87% of the broadband connections are by xDSL where the incumbent operators have about ¾ of the market.

   The majority of the subscriptions are by BH Telecom d.d. Sarajevo, which has reported over 95% of the xDSL subscriptions in Bosnia & Herzegovina. A little over 25% of these xDSL subscriptions have been provided by alternative operators through bitstream solutions.

There is a considerable difference in the penetration levels in this group of four leading countries and the country in fifth place. The former Yugoslav Republic of Macedonia had a penetration of 0.61% and Bulgaria[10] had a penetration of 0.26% by mid-year 2005. Both these countries can demonstrate a relatively high growth rate from a relatively low base. In the former Yugoslav Republic of Macedonia, all xDSL activity is with the incumbent operator, while alternative operators have achieved a market share of more than 30% using alternative technologies, in particular WIFI and cable modems[11]. All the reported broadband connections in Bulgaria are xDSL lines provided by the incumbent operator.

The rest of the countries and geographic units have penetration levels that are equal to or lower than the former Yugoslav Republic of Macedonia and Bulgaria. In some cases, the lack of measurements prevents the presentation of growth figures. There is rather modest growth in Serbia from a penetration of 0.027% on January 1, 2005 to 0.029% on November 1, 2005.

Experience in the EU has demonstrated that broadband growth is largely a function of a good regulatory environment. 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 appropriate regulations. The following quote from the "Broadband market competition report" by the ERG[12] 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:*

[10] The broadband penetration statistics from Bulgaria are probably under-estimated. Since the provision of Internet access services is essentially unregulated, there is a lack of reliable statistics for cable modems and LAN connections. According to a study by Vitosha Research, 10.6% of the population have access to the Internet without dial-up.

[11] The broadband penetration in the former Yugoslav Republic of Macedonia is expected to grow significantly over next few months. In a project called Macedonia Connects, the US Agency for International Development invested $2.5 million to provide 461 schools throughout the country with Internet access, based on wireless mesh technology. The Macedonian partner in the project, On.net, an alternative ISP was chosen through a public competitive bid process. The project foresees the coverage of 95% country's territory with wireless broadband Internet access.

[12] Broadband market competition report, ERG document (05/23), May 26, 2005

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

A similar trend can be detected in South East Europe. Because the regulatory situation in this region is much less harmonised between countries and geographic units than is the case in the EU, it is necessary to investigate a broader range of topics in order to understand to what extent the regulatory environment constitutes conditions that are attractive to investors and thus likely to generate such development as explained in the ERG document. The basic challenge in many cases is to bring the regulatory environment in line with the requirements laid down by the EU framework.

A potential investor will typically ask questions such as:

- Is the country stable? Is the legal system transparent and predictable? Is there legal certainty and fair enforcement?
- Have telecommunications tariffs been rebalanced, or must the investor assume significant price changes ahead when making his business plans?
- What are the market access conditions? Are there high fees and complex procedures in order to be authorised to operate?
- What competitive safeguards are in place, such as reference interconnection offers, carrier selection and pre-selection, number portability, and reference unbundling offers?
- Does the incumbent operator provide wholesale offerings that enable fast roll-out of nationwide services without the need to make heavy up-front investments before a client base has been established?

These questions are relevant for investments in all types of telecommunications services, but they are particularly relevant for investments in broadband access networks. Because broadband access is increasingly justified on the basis of "triple play" solutions, where the customer is offered both telephony service and TV reception in addition to Internet access, such access networks are also dependent upon the regulations that apply to telephony networks and services. For example, where a broadband access provider offers telephony services over his network, he will have to be authorised as a provider of public telephone networks and services and all competitive safeguards that apply to telephony become relevant.

D. National regulatory authority

All countries and geographic units included in this report have now established regulatory authorities through legal provisions aimed at ensuring their independence.

In Serbia, the Telecommunication Agency (RATEL) was established on May 23, 2005 with the appointment of its Managing Board. The staffing of RATEL started in September 2005. By November 1, 2005 the Executive Director and several heads of department had been appointed, as well as the first 15 employees, most of them in the Frequency Spectrum Department.

In the former Yugoslav Republic of Macedonia, the Agency for Electronic Communications formally commenced operations on July 1, 2005, when the old Telecommunications Directorate ceased to exist. Prior to that, the Agency had existed as a temporary arrangement. In the second half of May 2005, the Assembly appointed the members of the Agency's Commission and the acting director of the Agency was appointed as a Director proper.

As in every country, true independence of a regulator is not something that can be fully ensured through legislation. National legal traditions and culture play important roles and independence is a quality that must be earned over time and proven in testing situations.

E. Market access

In theory, all forms of networks and services have been fully liberalised in all countries and geographic units included in this report, with only three exceptions:

- In Albania, there are telephony licences defined for national operations (Class I) and rural operations (Class II), but no there is no licensing category for urban areas.
- In Bosnia & Herzegovina, the international telephony service is planned to be open from January 1, 2006.
- In Kosovo, the incumbent will maintain exclusive control over access to international gateway facilities until December 31, 2007.

The EU framework requires that general authorisations without the need for prior approval shall be used in all cases that do not require use of limited resources. Furthermore, the fees associated with such authorisations shall not be higher than what is necessary to cover the administrative costs of the NRA.

Only Romania has fully implemented this framework so that it applies to all providers of public electronic communications networks and publicly available electronic communications services.

The former Yugoslav Republic of Macedonia adopted a new primary law on March 5, 2005 that also sets out this type of framework. However, the necessary secondary legislation to make the framework fully operational was not yet in place. By November 1, 2005 there were no active operators under the new rules. However, significant progress has been made in the development of secondary legislation and a number of notifications have been registered.

The rest of the countries and geographic units still require individual licences in order to operate public telephony networks and services.

Among these, Croatia has introduced low licensing fees (€2,700) that reflect administrative costs.

All the other countries and geographic units have significant one-time licensing fees, ranging from €31,700 for a national license in Bulgaria to €6 million in Montenegro. In Serbia, the licence fees have not yet been established.

With the exception of the former Yugoslav Republic of Macedonia, there have been no new developments in these market access conditions in the period from January 1 to November 1, 2005.

F. SMP regulations and reference interconnection offer

All countries and geographic units have designated their incumbent operators as having significant market power. In addition, mobile operators have been designated in Bulgaria, Croatia, Romania, and Serbia. In Montenegro, an ISP has also been designated. In Albania, however, there is no operator designated as having SMP following the expiry of the previous SMP designations in May 2005, and the process of market analysis and SMP designation is currently under way.

One of the first requirements from a fixed network SMP provider is to publish a reference interconnection offer, which is a key enabling factor for many types of competitive activities.

On November 1, such reference offers had been published in all countries and geographic units except Albania, Serbia, Kosovo and the former Yugoslav Republic of Macedonia.

In fact, the publication of reference offers was achieved on November 1, 2005 for the three operators in Bosnia & Herzegovina.

In the former Yugoslav Republic of Macedonia, the development of the RIO is well under way[13]. In Kosovo, the incumbent prepared the first daft RIO in October 2005, which is currently being reviewed by the NRA.

G. Carrier selection and pre-selection

In the period from January 1 to November 1, 2005 there has been some progress on carrier selection:

- Croatia has implemented carrier pre-selection for fixed networks and there are two active operators making use of this possibility. Carrier selection is a legal requirement, but not yet implemented.
- In July 2005 Romania took the decision to impose the availability of carrier pre-selection from June 2006.
- The former Yugoslav Republic of Macedonia has had a legal requirement for both carrier selection and pre-selection since September 1, 2005. The implementation suffers from delays relative to this date, but is in progress.
- Turkey has both carrier selection and pre-selection requirements for long distance and international calls, but has suffered from technical delays and the solutions are still not operational. Progress is expected in the first quarter of 2006.

[13] The technical and legal part of the RIO was approved by the NRA on December 1, 2005, shortly after the reference date of this report.

Otherwise, Bulgaria has had carrier selection for long distance and international calls since 2004 and pre-selection for the same services since the beginning of 2005. Romania introduced carrier selection (but not pre-selection) in 2003.

Bosnia & Herzegovina plans to implement carrier selection and pre-selection in 2006.

Serbia has defined a carrier selection and pre-selection requirement in its primary law, but has not yet started implementation or defined a target date for their introduction.

Some countries and geographic units have still not taken any decision to require carrier selection and pre-selection. This is the case in Albania, Montenegro and Kosovo

H. Number portability

There have been developments in two countries in the period from January 1 to November 1, 2005:

- In Croatia, number portability in the fixed network became operational in July 2005. It is expected that mobile number portability will become operational in April 2006.

Some countries and geographic units have established a legal requirement and defined a future implementation date:

- Romania, May-June, 2007 for both fixed and mobile numbers;
- The former Yugoslav Republic of Macedonia, March 5, 2007 for both fixed and mobile numbers;
- Bulgaria, January 1, 2009 for fixed numbers and January 1, 2007 for mobile numbers.

Serbia has defined a requirement in its primary law, but no implementation date has been set. Turkey has number portability under study and there are plans to adopt a regulation by the end of 2005. Kosovo is also considering number portability and may take a decision in 2006.

Albania, Bosnia & Herzegovina, and Montenegro have not yet decided on number portability or published any planning information.

I. Local loop unbundling and reference unbundling offer

There has been significant progress on local loop unbundling and the availability of a reference unbundling offer (RUO) in the period from January 1 to November 1, 2005:

- Bosnia & Herzegovina adopted a legal requirement prior to 2005 but has not made any firm plans for its introduction. It has now been decided to make this requirement valid during 2006.
- In Bulgaria, the RUO became obligatory from the beginning of 2005. However, there are not yet any unbundled local loops in practice. Moreover, the RUO does not include any requirement for bitstream access.

- In Croatia, the RUO became obligatory from October 20, 2005. Alternative operators have so far made use of the resale option.

- In Serbia, there is no requirement for a RUO, but the incumbent operator has nevertheless established a wholesale offering that enables ISPs to offer access solutions to its customers based on bitstream solutions.

- In Romania, the RUO has already been in place since July 2004. In the period from January 1 to December 31, 2005 the number of unbundled local loops grew from 4,161 to 8,373[14] lines. Although these numbers are still modest, the growth is encouraging.

- In the former Yugoslav Republic of Macedonia, the RUO was supposed to become compulsory from September 5, 2005. There have been some delays but the RUO was in the approval process on November 1.

- In Turkey, a draft RUO has been submitted to the NRA for approval and was in a public consultation procedure on November 1, 2005. A decision is expected in early 2006.

Only Albania, Montenegro and Serbia have not yet taken decisions on whether to require local loop unbundling. Serbia, although there are commercially based wholesale solutions available, has a need to introduce RUO regulations in order to be aligned with the EU framework.

[14] An observant reader may note that the number of unbundled local loops in Romania is higher than the number of broadband xDSL connections provided by alternative operators through local loop unbundling. The explanation is that there are some unbundled local loops that are used for xDSL at speeds that are under the threshold to be characterised as broadband.

IV. GENERAL OVERVIEW

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 variances between the individual countries in terms of relative size, per capita, penetration, pricing, regulatory regime and data availability.

A. Introduction and general background information

1. Currencies, exchange rates and value added tax

All prices and values that are shown in this report and relating to 2005 have been converted to euro using the average exchange rate for 2005 as presented in Table 4 below. The average exchange rate for 2004 is used in some tables that present information relating to 2004. Value added tax has been included in consumer related prices, such as residential tariffs. Value added tax has not been included in business tariffs.

Country	Currency	Average exchange rate for year 2004	Average exchange rate for year 2005	Exchange rate as of 31.12.2005	Value added tax
Albania	Albanian lek	127.6700	124.1800	122.5800	20 %
Bosnia & Herzegovina	Bosnian mark	1.9560	1.9560	1.9560	10 %
Bulgaria	Bulgarian lev	1.9558	1.9558	1.9558	20 %
Croatia	Croatian kuna	7.6712	7.4000	7.3900	22 %
Romania	New Romanian lei	4.0532	3.6234	3.6771	19 %
Serbia & Montenegro - *Montenegro*	euro	1.0000	1.0000	1.0000	17 %
Serbia & Montenegro - *Serbia*	Serbian dinar	72.5820	82.9074	85.5000	18 %
Serbia & Montenegro - · *Kosovo*	euro	1.0000	1.0000	1.0000	15 %
The former Yugoslav Republic of Macedonia	Macedonian denar	61.3377	61.2958	61.1779	18 %
Turkey	New Turkish lira	1.7673	1.6700	1.5900	18 %

Table 4 - Basic currency and exchange rate information

Notes:
Where currency conversions have been performed from USD to euro, the exchange rate of 1.3084 has been used to represent the rate on November 1, 2005.
The information has been provided by the NRAs, which have consulted their national banks, ministries of finance and or national statistical offices.
Serbia & Montenegro - Montenegro: Changes and amendments of the Law on value added tax, dated 6th December 2005, introduced a new low VAT rate (7%) for some products with no tax rate before that date (books, newspapers, water delivery, some types of food, medicines, etc.). High VAT rate is still 17%.
Serbia & Montenegro: Montenegro and Kosovo use the euro as their 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, we can construct price level indices (PLI) 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 that 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 five years to complete. Annual comparisons are made by "rolling" data collected in one year over to subsequent years.

The West Balkan Countries (WBC) are not part of the European Comparison Programme, but a pilot project is now underway to develop PPPs based on the same methodology. It is funded primarily by Eurostat and the regional CARDS programme and the task is managed by the Statistical Office of the Republic of Slovenia with technical guidance from the OECD.

The WBC programme published its first results in July 2005[15] when two partial indicators were presented for:

- food, beverages and tobacco (referred to in subsequent charts as partial PPP-1; and
- clothing and footwear (partial PPP-2).

The information for these indicators was collected in the autumn of 2003.

The WBC indicators were presented together with comparable information from selected EU and South East European countries. Thus, these indicators are available for all the countries covered by this report. The indicators for Serbia & Montenegro are further broken down into separate indices for Belgrade and Podgorica. These sub-indices are used in this report to represent Serbia and Montenegro respectively. There is no comparable information for Kosovo.

Eurostat warns that care should be taken when drawing conclusions from PPP comparisons. This warning is even more appropriate when making comparisons based on partial PPP indicators that are two years old. We believe that it is not appropriate to use the partial PPP indicators for GDP comparisons, since important segments such as equipment goods and construction projects are not included.

On the other hand, the available partial indicators represent important consumer related baskets and would therefore be meaningful when making comparisons with other consumer prices such as telecommunications tariffs. Therefore, in this report, we present tariff information expressed in PPP euros (in addition to nominal euros) when appropriate. We have not presented PPP comparisons for business tariffs.

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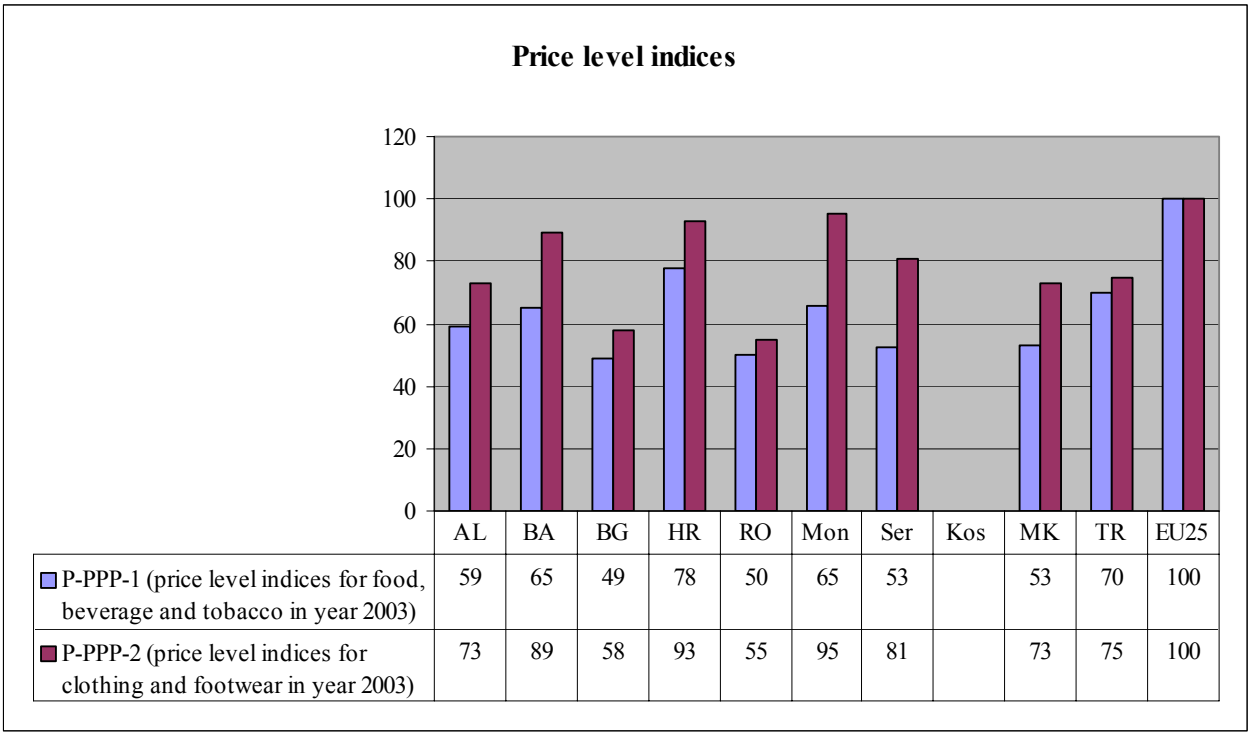
[15] Eurostat: Statistics in Focus, Economy and finance, 30/2005

Figure 2 below presents the PPP information in the form of price level indices for the countries and territories, except Kosovo.



	AL	BA	BG	HR	RO	Mon	Ser	Kos	MK	TR	EU25
P-PPP-1 (price level indices for food, beverage and tobacco in year 2003)	59	65	49	78	50	65	53		53	70	100
P-PPP-2 (price level indices for clothing and footwear in year 2003)	73	89	58	93	55	95	81		73	75	100

Figure 2 - Price level indices

2. Population and households

This table 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 for the status at the end of 2005. 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. In addition, population figures may be based on an old census with growth projections to provide an estimate for year-end 2005.

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

Country	Inhabitants year end 2004	Inhabitants year end 2005	Percentage of EU population as of year end 2005	Households year end 2005
Albania	3 127 263	3 149 147	0.68	745 890
Bosnia & Herzegovina	3 871 000	3 871 000	0.84	1 200 790
Bulgaria	7 761 049	7 718 750	1.68	2 921 887
Croatia	4 440 500	4 442 000	0.97	1 477 377
Romania	21 673 000	21 623 849	4.70	7 320 202
Serbia & Montenegro - *Montenegro*	620 145	625 000	0.14	191 047
Serbia & Montenegro - *Serbia*	7 498 001	7 498 001	1.63	2 521 190
Serbia & Montenegro - · *Kosovo*	1 999 000	1 999 000	0.43	311 100
The former Yugoslav Republic of Macedonia	2 035 000	2 035 000	0.44	567 785
Turkey	71 789 000	72 520 000	15.77	17 487 336
SEE	124 813 958	125 481 747	27.28	34 744 604
EU25	456 448 500	459 938 443		

Table 5 – Population

Notes:
The national information has been provided by the NRAs on the basis of information from the national statistical organisations.
Bosnia & Herzegovina: There has not been a census since 1991 and the population estimates vary from 3.8 to 4.1 million depending on the source.
Bulgaria: Number of households based on the most recent data available from 2001.
Croatia: The latest census was made in 2001. After that date, estimates have been developed of net natural growth and of immigration and emigration. The information in the table represents an estimate. The information on households is from 2001.
Romania: The latest census of population and dwellings was made in March, 2002. After that date, estimates have been developed. The information on households is from the census.
Serbia & Montenegro - Montenegro: The information is for 31.12.2003 and is the most recent – there are no official data on the number of inhabitants and number of households. Nevertheless, according to the natural increase for the previous two years (2,640 and 2,142), starting from the date of the census, an estimated (approximate) number of inhabitants at the end of 2005 is 625,000.
Serbia & Montenegro - Serbia: The number of inhabitants at year-end 2005 will be available in June 2006. The Republic Statistics Institution has provided the new number of inhabitants at year end 2004 as being 7,456,050. The number of households is given according to the last register (census) of 2002.
Serbia & Montenegro - Kosovo: The population figure is as projected in the "Monthly Statistics Bulletin" December 2005, Banking and Payment Authority of Kosovo (BPK).
The former Yugoslav Republic of Macedonia: The figures are an estimation of inhabitants in December 2004 and 2005. The estimation of households is according to the same ratio as in 2002.
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.

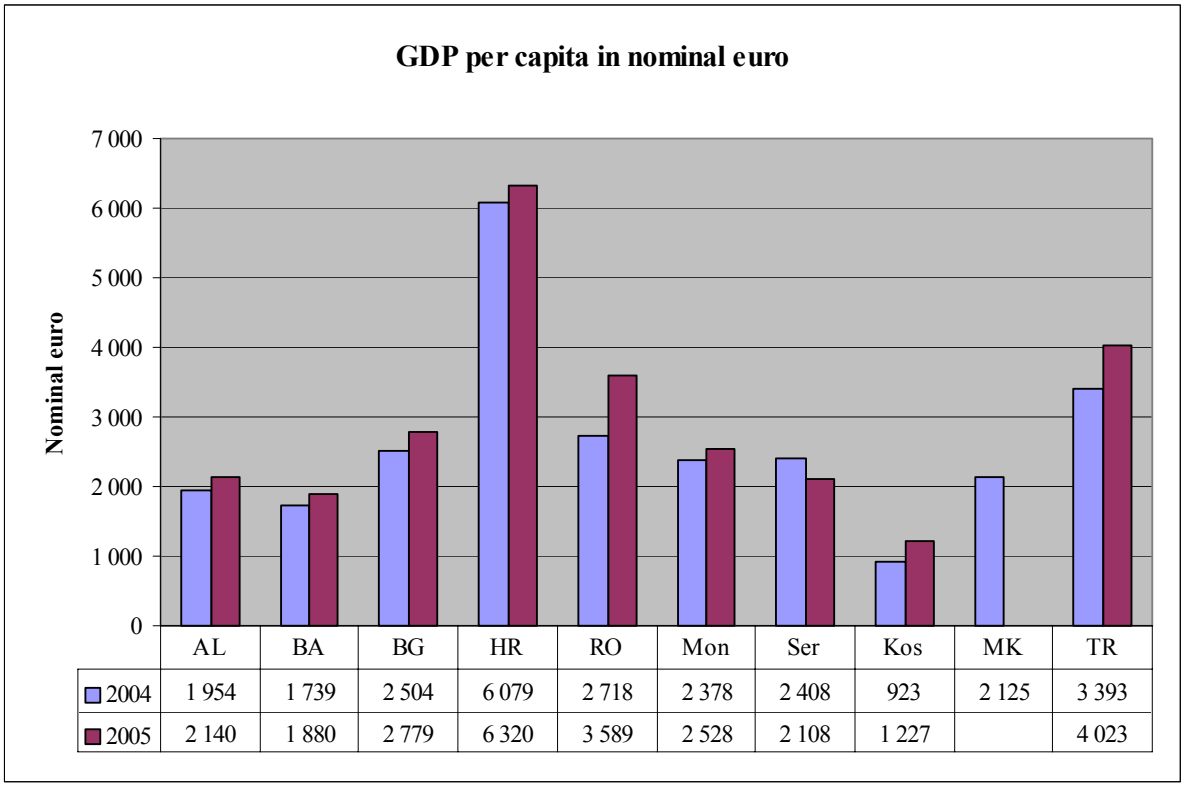
3. National economy

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 13% from 2003 to 2004, measured in nominal euros.

NB. Because the reference date for this report is November 1, 2005 information on GDP for 2005 is not fully available. Some estimates are provided and they are shown in Figure 3 below.

In terms of GDP per capita, Croatia is in a category by itself with an average that is almost twice that of Turkey, which is in second place on this list. Croatia's GDP per capita is above €6,000, while the other countries range between €900 and €3,400.

On the other hand, in absolute terms, the Turkish economy outweighs all the others by far. The Turkish GDP, with 291 billion euro in 2005 is more than twice all the other countries and geographic units combined. The information is expressed in nominal euro.



	AL	BA	BG	HR	RO	Mon	Ser	Kos	MK	TR
2004	1 954	1 739	2 504	6 079	2 718	2 378	2 408	923	2 125	3 393
2005	2 140	1 880	2 779	6 320	3 589	2 528	2 108	1 227		4 023

Figure 3 – GDP per capita in nominal euro for 2004 and 2005

Country	GDP Nominal euro (billion)		Per capita nominal euro	
	GDP 2004	GDP 2005	GDP 2004	GDP 2005
Albania	6.110	6.739	1954	2140
Bosnia & Herzegovina	6.732	7.277	1739	1880
Bulgaria	19.433	21.448	2504	2779
Croatia	26.995	28.074	6079	6320
Romania	58.914	77.607	2718	3589
Serbia & Montenegro - *Montenegro*	1.475	1.580	2378	2528
Serbia & Montenegro - *Serbia*	18.053	na	2408	na
Serbia & Montenegro - · *Kosovo*	1.845	2.453	923	1227
The former Yugoslav Republic of Macedonia	4.325	na	2125	na
Turkey	243.598	291.738	3393	4023
SEE	387.480		3104	
EU25	10 409.05	10 768.61	22 703	23 413

Table 6 - GDP in the territories and EU expressed in billion nominal euro

Notes:
The information has been provided by the NRAs in most cases. Specifically, the sources are:
Albania: Ministry of Finance of Albania (Government Fiscal Statistics).
Bosnia & Herzegovina: "*Staff Report", International Monetary Fund, 2005.*
Bulgaria: National Statistical Institute.
Croatia: Croatian National Bank.
Romania: National Institute of Statistics.
Serbia & Montenegro - Montenegro: There are still no data for 2005. The most recent Chief Economist's Report issued by the Central Bank of Montenegro is for the period January-November 2005. Nevertheless, the data for January-September 2005 indicates a nominal increase of 7.5% compared to the same period in the previous year (a real increase of 3.8% using GDP deflators). This is in line with the GDP for 2005 that was predicted in the Economic Policy for 2004 (issued by the Government of Montenegro, February 2005) – nominal increase of 7.1% (real increase 4.1%), or 1,580 million Euro.
Serbia & Montenegro - Serbia: Statistics Institution of the Republic of Serbia.
Serbia & Montenegro -Kosovo: GDP as projected in, "Monthly Statistics Bulletin" December 2005, p. 15, Banking and Payment Authority of Kosovo (BPK):
http://www.bpk-kos.org/Publications/Monthly%20Statistics%20Bulletin%20no.52.pdf
Turkey: State Statistics Institute (GDP measured for production).
The EU25 GDP value has been taken from Eurostat's database for national accounts represented in current prices.

4. Telecommunications market

The table below shows the estimated size of the telecommunications markets in 2004. 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.

Turkey has by far the largest telecommunications market and represents 2/3 of the total market presented in this report. Turkey's market, which is valued at €8.5 billion, represents more than 3% of the total EU market.

At the other end of the scale is Kosovo, with a market of about €180 million when including an estimate of revenues earned by non-licensed mobile operators.

The markets may be somewhat underestimated in Albania because information on data transmission and leased lines is not available.

Country	Market estimate 2004 Million euro	GDP 2004 Billion euro	Percent of GDP
Albania	369	6.11	6.04
Bosnia & Herzegovina	606	6.73	9.01
Bulgaria	1 280	19.43	6.59
Croatia	1 575	26.99	5.83
Romania	2 390	58.91	4.06
Serbia & Montenegro - *Montenegro*	170	1.48	11.56
Serbia & Montenegro - *Serbia*	637	18.05	3.53
Serbia & Montenegro - · *Kosovo*	180	1.85	9.76
The former Yugoslav Republic of Macedonia	331	4.32	7.66
Turkey	8 483	243.60	3.48
SEE	16 021	387.48	4.13
EU25	277 000	10 409.05	2.66

Table 7 - Market value overview

Notes:
Albania: The information is based on the present method of collecting statistical data from the Public Telecommunications Operators. The revenue from fixed Internet is included in the segment for fixed telephony for the incumbent operator. Other private ISPs use fixed lines for Internet services, but their revenues are not reported.
Bosnia & Herzegovina: Information provided by the incumbent operators.
Bulgaria: The revenue from fixed Internet is included in the segment for fixed telephony. Fixed Internet includes revenues from Internet access provided by the incumbent, including dial-up and "always on" access and also access via other telecommunications operators through the incumbent's network (numbers of the type 13AX, 13AXY, 13AXYZ).
Croatia: The information is based on reports from the operators. The figure for fixed telephony does not include net revenue from carrier services and miscellaneous net revenues.
Romania: The information is based on reports by the operators.
Serbia & Montenegro - Montenegro: Source: Annual report of the Agency for telecommunication of the Republic of Montenegro for 2004.
Serbia & Montenegro - Serbia: Source: Balance sheets of operators. Revenue includes all types of revenues including sales of handsets, roaming and interconnection. Internet connectivity is reported under fixed data services.
Serbia & Montenegro - Kosovo: The Internet revenue is based on an estimate prepared by Deloitte & Touche at the request of Kujtesa, the largest national ISP. Kujtesa has also provided the estimate of the market for leased lines and switched data services. The market estimate also includes revenue estimates for non-licensed operators.
Turkey: Dial-up Internet revenues have been reported as fixed data revenue.
The EU25 estimate of market value is taken from the 10th Implementation Report of the European Commission, which is the implementation report that provides market data for 2004.

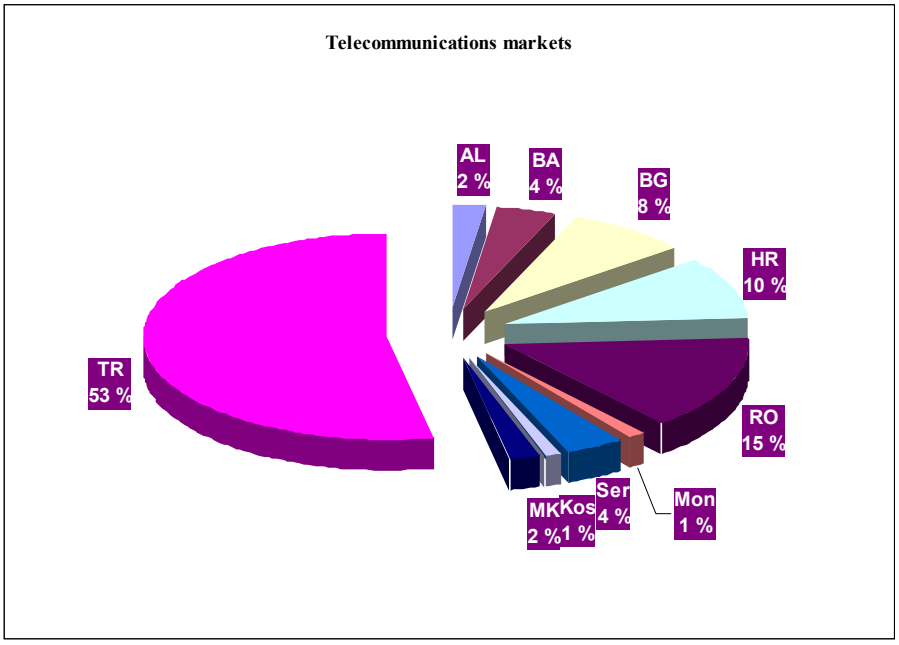


Figure 4 – Relative size of the telecommunications markets

In Figure 5 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.

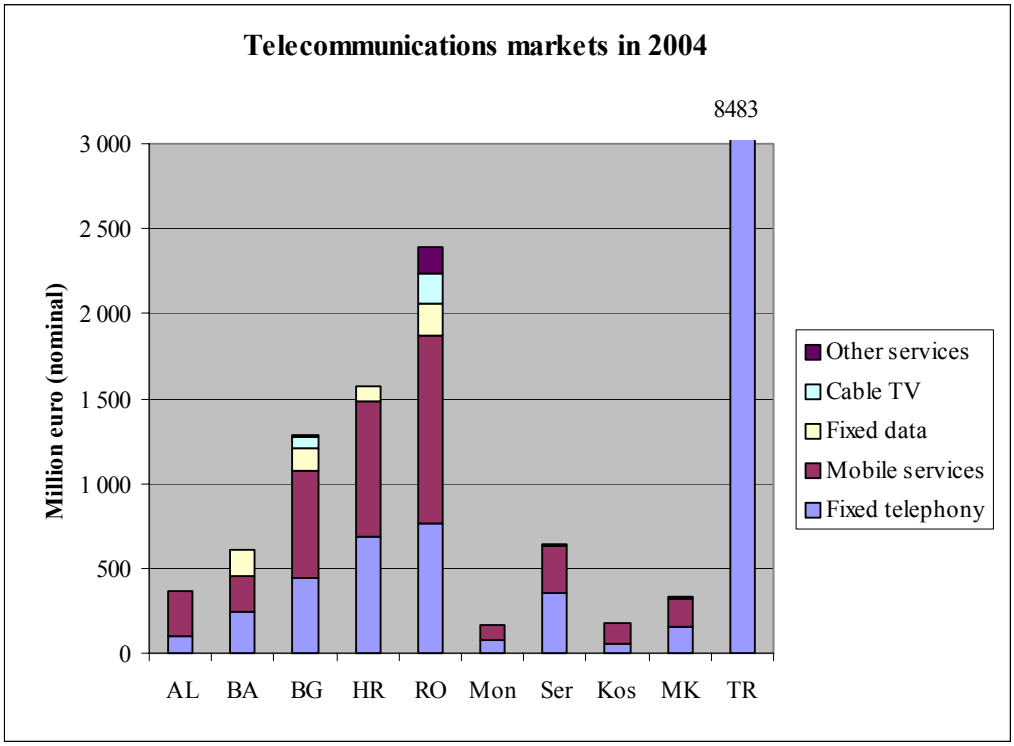


Figure 5 - Market value breakdown

Notes:
All countries: Please refer to the notes under Table 7.
The former Yugoslav Republic of Macedonia: As the Agency started its work on 1st of July 2005, according to the regulatory frame of Republic of Macedonia, the first reports about the revenues of the operators and service providers would be received in September, meaning that the Agency will not have clear picture about the market value before September 2006.
Turkey: Turkey's telecommunications market is about five times larger than that of Romania, which has the second largest market. In the graph, the total value for Turkey is outside the scale.

It is also useful to see the size of the telecommunications market in relation to the population. Figure 6 below shows that Croatia and Montenegro have the highest spending on telecommunications with around €300 per capita per year, clearly driven by their mobile telephony markets. Only in Serbia, which has an annual per capita spending on telecommunications slightly higher than €80 euro, is the fixed network market significantly larger than the market for mobile networks.

The corresponding spending per capita in the EU25 countries in 2004 was €604[16].

[16] 10th Implementation Report from the European Commission.

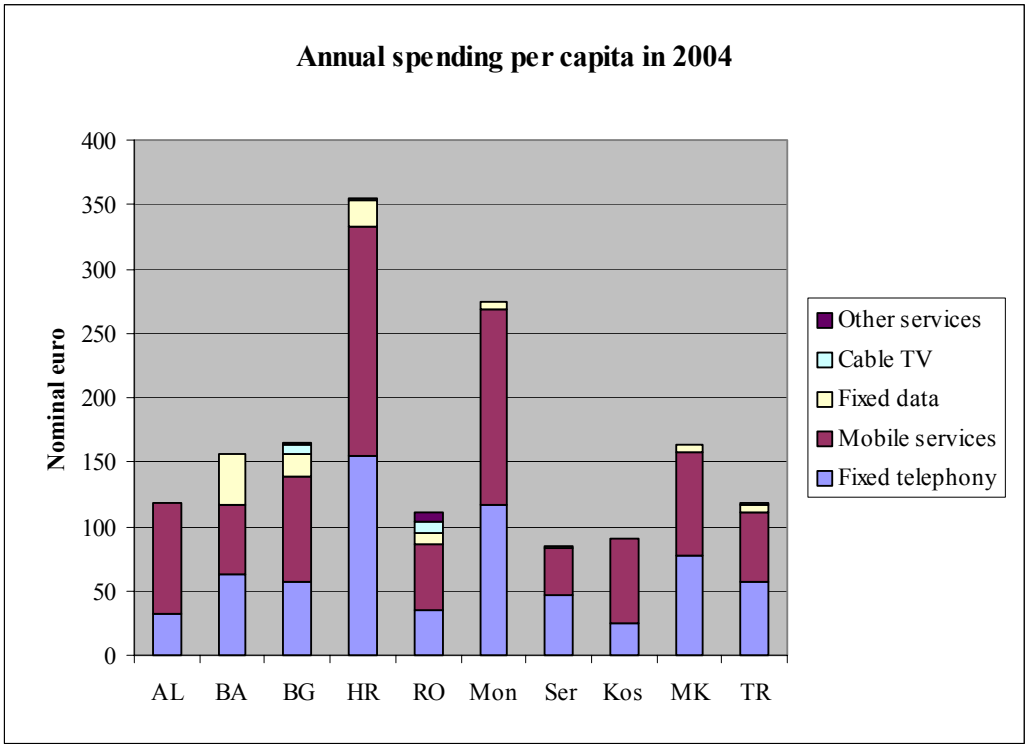


Figure 6 – Telecommunications markets per capita in nominal euro

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

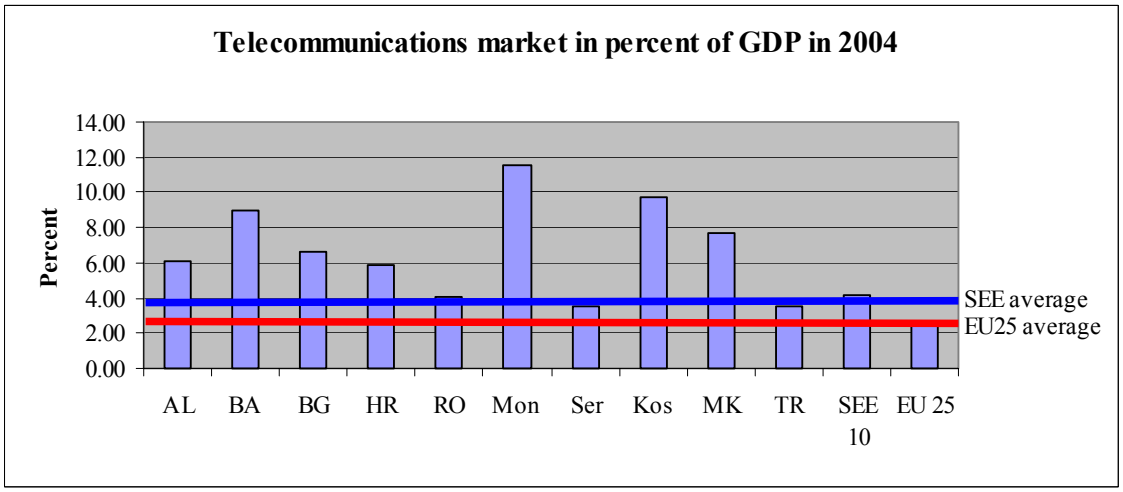


Figure 7 – Telecommunications market in percent of GDP in 2004

Notes:
The GDP value for the EU has been provided by Eurostat.
The market value for the EU25 in 2004 is from the 10th Implementation Report by the European Commission.

It will be seen that the average spending on telecommunications in the SEE countries of around 4% of GDP is significantly higher than in the EU, where the average is around 2.7% when cable TV revenues are included. This is of course 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 of the telecommunications sector in these countries, which should provide a platform for further growth of the national economies.

B. The National Regulatory Authority

The information in this chapter is intended to reflect the situation as it existed on November 1, 2005.

The establishment of an independent regulator is a cornerstone of the EU regulations for telecommunications. The basic requirement is set out in the Framework Directive[17], which requires certain regulatory tasks, such as the granting of individual authorisations, to be carried out by bodies that are legally distinct and functionally independent from activities that are associated with ownership or control of services and networks.

This requirement does not rule out that regulatory tasks may be shared among two or more regulatory bodies, as long as the sharing arrangement is clearly defined and published. Neither is there any direct provision against declaring a ministry as having certain regulatory powers. However, it is common practice across the EU to establish a regulatory authority that is also independent of the ministry. The reasons for this are:

- to create some distance between policy creation and policy execution. The ministry is responsible for policy and primary legislation. The NRA is responsible for the day-to-day functioning of the law. The ministry can provide guidance and set objectives, but normally, cannot instruct the NRA in any specific case. It is also normal that the ministry retains the powers to enter into agreements with international organisations that have the character of international treaties. However, that does not exclude participation by the NRA in international organisations, and there are special international organisations created for the NRAs;

- that such separation of powers reduces the likelihood of regulatory decisions being made on the basis of political favours;

- to increase confidence among market participants of a level playing field by insulating the regulatory body against political changes. Changes should be made through the legal system rather than by new political appointments;

- that the Ministry is often involved with the ownership of the incumbent operator. There is no requirement in the EU framework that Member States must privatise. Indeed, the requirement for the NRA to be legally distinct and functionally independent from activities associated with ownership is set out in recognition of the fact that such ownership is legitimate. On the other hand, where the State no longer has ownership of any operator, there is no need to investigate whether the necessary independence has been established.

[17] 2002/21/EC - Framework Directive Art. 3

This section first investigates the involvement of the states in ownership of telecommunications operators. It then presents information on the key factors that must be considered in the context of NRA independence.

1. State ownership

The next table presents information about the states' involvement in ownership of telecommunications operators. Further information about the structure of ownership of incumbent operators is presented below in Table 45.

The table shows that almost all countries and geographic units have some involvement in ownership. The only exception is Montenegro, 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 is the example of a country that has completed its privatisation process, but has retained a golden share that permits the government to veto decisions by the board of the incumbent operator.

In Croatia, Romania, the former Yugoslav Republic of Macedonia and Turkey the State only holds a minority share as the control has been taken over by a strategic partner. At the same time, the other countries and geographic units have retained a majority ownership of the incumbent operator.

Country	Ownership by State		
	Name of operator	Percentage ownership by the State	Which government unit is responsible for ownership functions
Albania	1. Albtelecom sh.a 2. AMC sh.a.	1. 100% 2. 12.6%	Ministry of Economy, Trade and Energy
Bosnia & Herzegovina	1. BH Telecom d.d. Sarajevo; 2. Telekom Srpske a.d. Banja Luka; 3. Hrvatske Telekomunikacije d.o.o. Mostar	1. 90%; 2. 65%; 3. 62.76%	Governments of entity Ministries (in Federation and in Republic of Srpska)
Bulgaria	Bulgarian Telecommunications Company	Golden share. In Jan. 2005, 34.78% of BTC share capital owned by the state was floated at the Bulgarian Stock Exchange	Ministry of Transport keeps a "golden share", which gives the right to block some decisions of the BTC Board.
Croatia	HT- Hrvatske Telekomunikacije d.d. (Croatian Telecom Inc.)	42%	Government unit responsible for ownership functions is not defined.

Country	Ownership by State		
	Name of operator	Percentage ownership by the State	Which government unit is responsible for ownership functions
Romania	1. S.C. ROMTELECOM S.A. 2. National Radiocommunications Co. (Radiocom)	1. 45.99% 2. 100%	Ministry of Communications and Information Technology (MCTI)
Serbia & Montenegro - *Montenegro*	Telecom Montenegro Inc.	0%	Ministry of Economy
Serbia & Montenegro - *Serbia*	1. Telekom Srbija 2. Mobtel	1. 80% (through the 100% state-owned Public Enterprise of PTT Serbia) 2. 49% (through the 100% state-owned Public Enterprise of PTT Serbia)	1. Ministry of Capital investment 2. Ministry of Capital investment
Serbia & Montenegro - · *Kosovo*	PTK (The Post and Telecommunications Enterprise of Kosovo)	100%	UNMIK (through Kosovo Trust Agency)
The former Yugoslav Republic of Macedonia	A.D. Makedonski Telekomunikacii	47.125% plus one golden share	Ministry of Finance
Turkey	1. Turk Telekom 2. Avea İletişim Hizmetleri A.Ş. (former TT&TIM, GSM Operator)	1. 45% plus one golden share 2. 18% through Turk Telekom	The Treasury, but the Ministry of Transportation is responsible for operational activities of Turk Telekom

Table 8– State ownership

Notes:
Albania: The privatisation process was completed in spring 2005 with the sale of Albtelecom to Turkish Telecom but after parliamentary elections in July 2005, the new parliament decided (Decision no .7 dated 13 October 2005) to disapprove the proposed law for the sale of Albtelecom and charged the Council of Ministers to obtain international expertise to evaluate the correctness of the contract and tendering processes.
Serbia & Montenegro - Montenegro: On April 1, 2005 the State sold its ownership (51.12%) in Telecom Montenegro to Magyar Telecom (former Matav), the Hungarian incumbent 59.49% owned by Deutsche Telekom.
Turkey: On July 1, 2005 the State auctioned the 55% share of Türk Telekom to a consortium lead by Oger Telecom, which also includes Telecom Italia and BT Consult. The transaction was formally approved by the Council of State, Turkey's highest administrative court, on October 27, 2005.

2. NRA independence

After having established a regulatory authority 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 9 below presents the NRAs own assessment of its independence and provides 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 considering its independence:

- Appointment of the NRA management - The appointments are normally made for a specific term of office with some protection against arbitrary dismissal. The appointments are typically made either by Parliament or by the Council of Ministers. The Parliament is normally seen to provide a higher level of independence, because there is better protection against political replacements. This was demonstrated in Albania, when the Chairman of the Albanian NRA was replaced after the general elections in July 2005 caused a change in the government.

- Dismissal - The rules of dismissal are also important. Normally, the appointed decision makers stay in office for a defined period of time, typically five or six years, and can only be dismissed in this period under a limited set of well defined circumstances. It is also normal that a dismissal must be performed by the same body that made the appointment. The rules for appointment and dismissal are found in Table 9.

- Resources – The NRA must be properly resourced so that it can carry out its tasks. This is addressed below in Table 10.

- Financing – It is important that the NRA does not depend on political favours for its financial integrity. This is addressed below in Table 11.

- Powers – Independence may be illusory unless the NRA has the necessary powers to carry out its tasks. This is addressed below in Table 12

- Appeals – Independence is also related to appeal procedures. If appeals go to a ministry that is also an owner of a telecommunications operator, the independence may be illusory. This is addressed below in Table 13.

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	**If yes, how is independence assured?**
Albania	Yes. Telecommunications Regulations Entity (TRE)	The independence of TRE is assured by the Law on Telecommunications, No. 8618 of June 14, 2000. • Status as an independent legal entity • Board proposed by Government and approved by Parliament for 5 years term of office. Board members cannot be nominated for more than two additional terms • Board members can only be dismissed by Parliament for reasons defined by law • Board members are not allowed to own telecommunications operators • Self-financed, budget approval by Council of Ministers • Excess revenue goes to state budget
Bosnia & Herzegovina	Yes. Communications Regulatory Agency (RAK)	RAK Council is nominated by government and approved by Parliament. Only Parliament can dismiss the Council. General Director is nominated by Council of RAK and approved by Council of Ministers, for a four-year period. Council of Ministers has exclusive right to dismiss General Director under defined conditions.
Bulgaria	Yes. Communications Regulation Commission (CRC)	The independence of CRC as NRA is ensured by the Telecommunications Act – Articles. 19, 20, 22, 23, 27-29, 31, 33,38 • Separate legal entity • CRC Council nominated by: National Assembly – 3 members President – 1 member plus Chairman • Chairman appointed and dismissed by Council of Minister • Deputy chairman and two members appointed and dismissed by National Assembly • One member appointed and dismissed by the President of Bulgaria

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	**If yes, how is independence assured?**
Croatia	Yes. Croatian Telecommunications Agency	Independence is assured by the Law on Telecommunications. According to Article 8, the Agency is autonomous, non-profit, and independent. The Council of the Agency: • Appointment by Parliament • Dismissal can only be decided by Parliament under certain pre-defined circumstances
Romania	Yes. ANRC	ANRC independence is assured by the Government Emergency Ordinance no.79/2002 on the general regulatory framework for communications, approved with amendments and completions by Law no.591/2002, with the subsequent amendments and completions, as follows: • The ANRC President and vice-president are appointed by the Prime Minister for a five year term • The president and the vice-president may be revoked by the Prime Minister for violation of the provisions of the Emergency Ordinance or for criminal conviction by a definitive court decision • ANRC is self-financed (does not rely on the State budget) • Transparency and impartiality obligations in the exercise of the ANRC powers • Staff not allowed to hold shares or board positions in telecom companies • Appeals against NRA decisions to the Court of Appeals
Serbia & Montenegro - *Montenegro*	Yes. Agency for Telecommunications of the Republic of Montenegro	Defined by the provisions of the Telecommunications Law • Appointment by Government (proposal by Council of Ministers, confirmation by National Assembly) • Dismissal by Government (proposal by Council of Ministers, confirmation by National Assembly) only under circumstances defined by the Law • Conflict of interest forbidden by law • Self-financed • Empowered to adopt regulations without government approval

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	**If yes, how is independence assured?**
Serbia & Montenegro - *Serbia*	Yes. Republic Telecommunications Agency (RATEL)	The independence of RATEL is assured by the Telecommunications Law, inter alia, through: • Status of independent legal entity • Members of Managing Board appointed by the Parliament • Self-financing • Conflict of interest forbidden by the Law
Serbia & Montenegro - · *Kosovo*	Yes. Telecommunications Regulatory Authority (TRA)	Defined by the provisions of the Telecommunications Law (UNMIK/REG 2003/16) • Appointment by the Assembly upon recommendation by the Minister of Transport and Telecommunications • A Board's member term shall be for a period of five years from the date of the Member's appointment. The number of terms a member may serve is limited to two times • 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 • Authorized to issue regulations and instruction for the implementation of the present Law
The former Yugoslav Republic of Macedonia	Yes. Agency for Electronic Communications	• NRA Commission to be approved by the Parliament for five-year terms. It can only be dismissed by Parliament on the basis of conditions defined by law • Director of the Agency is selected by the Commission on the basis of a public tender for a five-year term. The Director can be dismissed by the Commission on the basis of conditions defined by law

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	If yes, how is independence assured?
Turkey	Yes. Telecommunications Authority (TA)	• The TA is an independent legal entity • 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 • 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 • Self-financed

Table 9 - NRA separation from ownership of telecommunications operators

Notes:
Albania: Law 8618 article 84 defines the TRE as a "legal public non-budgetary" body. The same article requires that members of TRE board must not have family ties with members of the Council of Ministers, be a debtor or creditor of companies that are under the jurisdiction of TRE. Article 85 defines that decisions of the board are taken with simple ballot. Article 86 defines a number of cases when a member of the board may be dismissed or replaced: if he has physical or mental limitations to carry out the task, is punished by the court for penal acts, is appointed in state administration, or elected as a parliamentary deputy, or limitations of article 84 apply. Article 87 defines that TRE's income comes from license fees and other services. Not later than 3 months before each new fiscal year the board must present to the Council of Ministers the funds necessary for its own operational expenses, and the rest of its income goes to the state budget. Article 89 defines that filed documentation of TRE is available to the public following procedures compiled by the board (respecting also the principle of secrecy), and the main documents are published in the TRE's Bulletin.

3. NRA staffing

Table 10 below presents the number of employees in 2004 and 2005 as well as the status on November 1, 2005. Many of the NRAs are rather large organisations that require a certain amount of administrative overhead. Furthermore, the NRAs often have staff that work on equipment approvals or inspection duties. Therefore, the table also presents the number of employees that are engaged in key regulatory tasks as set out by the EU regulatory framework. These are professional employees, typically lawyers and economists, responsible for

- frequency licensing;
- number management;
- market analysis;
- reference interconnection offers;
- reference unbundling offers;
- competitive safeguards, including:

- significant market power obligations;
- carrier selection and pre-selection;
- number portability;
- cost accounting;

- price regulation;
- universal service;
- dispute resolution in commercial disputes;
- consumer complaints.

However, it is difficult to make a judgment of what is a reasonable or adequate level of staffing. There are many individual, as well as national, characteristics that enter into such an evaluation. Another important factor that affects staffing of the NRAs is to what extent the NRAs are using external consultants.

Country	**Employees of NRAs on:**			**Employees handling telecoms regulatory tasks on:**	
	1.1.2004	**1.1.2005**	**Status 1.11.2005**	**1.1.2005**	**1.11.2005**
Albania	31	36	39	14	17
Bosnia & Herzegovina	76	85	85	8	11
Bulgaria	214	217	219	80	83
Croatia	58	66	78	32	43
Romania	185	194	200	57	64
Serbia & Montenegro - *Montenegro*	26	29	37	17	22
Serbia & Montenegro - *Serbia*	NRA not yet established	NRA not yet established	Staffing ongoing	NRA not yet established	Staffing ongoing
Serbia & Montenegro - · *Kosovo*	5	20	31	5	7
The former Yugoslav Republic of Macedonia	95	94	95	11	11

Country	Employees of NRAs on:			Employees handling telecoms regulatory tasks on:	
	1.1.2004	1.1.2005	Status 1.11.2005	1.1.2005	1.11.2005
Turkey	455	454	451	75	82

Table 10 - Employees of NRAs and employees directly handling telecommunications regulatory tasks

Note:
Serbia & Montenegro - Serbia: The Republic Telecommunication Agency (RATEL) was founded at the end of May 2005 and became operational on December 19, 2005 (after the reporting period). Staffing of RATEL is currently under way.

Table 11 below presents information on the operational budgets of the NRAs for 2005 and 2006 in thousands of euro as well as the sources of revenue.

The EU regulatory framework assumes that the NRAs will be self-financing and that their fees only cover their administrative costs, except when allocating limited resources. The EU regulatory framework also requires that general authorisations be used for all activities except those that depend on limited resources. Because general authorisations represent a simple and inexpensive task, it follows that the corresponding authorisation fees (or notification fees) must be modest. Where authorisation fees represent a significant part of the revenues, it could be an indication of a situation where the fees are at a level that represents a barrier to market entry.

The term "authorisation fees" is used as to describe fees for all types of service authorisations, including individual licences. The countries that rely on authorisations fees for a significant part of their revenue are in particular Bosnia & Herzegovina and Bulgaria.

A financing approach more in line with the EU regulatory framework is to rely mainly on revenue related fees.

Country	Operational budget for 2005 in thousand euro	Source of financing of 2005 budget	Operational budget for 2006 in thousand euro
Albania	2,029	Revenues from the previous years: 44.4%. Revenues during the year 2005: 55.6%, of which: • Authorisation fees: 30.8% • Frequency fees: 68.8% • Numbering fees :0.2% • Others: 0.2%	1,934
Bosnia & Herzegovina	2,518	• Authorisation fees (63%) • Numbering fees (29%) • Frequency fees (8%)	2,556

Country	Operational budget for 2005 in thousand euro	Source of financing of 2005 budget	Operational budget for 2006 in thousand euro
Bulgaria	4,653	• One-time authorisation fees (78.9%) • Annual fixed authorisation fees (7.5%) • Annual fixed frequency fees (10.4%) • Number fees (2.7%) • Others (0.5%)	4,946
Croatia	9,075	• Revenue related fees (40.1%) • Numbering fees (41.7%) • Frequency fees (13.6%) • Other (4.6%)	8,656
Romania	9,524	• Revenue related fees (100%)	3,983
Serbia & Montenegro - *Montenegro*	1,800	• Revenue related fees (98%) • Frequency fees (2%)	N/A
Serbia & Montenegro - *Serbia*	566	The NRA's initial budget in its first six months of operation was foreseen as a loan from the State. The State loan was granted in October 2005 for an amount of CSD 48 million (566 thousand euro). The loan will be repaid from RATEL's future revenues generated from the fees payable by public telecommunications operators.	6,030
Serbia & Montenegro - *Kosovo*	600	Funds allocated from the Kosovo Consolidated Budget for the TRA establishment and its first year of operation (2004). Otherwise: • Authorisation fees • Numbering fees and • Frequency fees	794
The former Yugoslav Republic of Macedonia	3,891	• Frequency fees (52%) • Supervision fees (19%) • Numbering fees (18%) • Concession fees (11%)	4,114

Country	Operational budget for 2005 in thousand euro	Source of financing of 2005 budget	Operational budget for 2006 in thousand euro
Turkey	27,910	• Frequency fees (71%) • Certificate fees per radio device (17%) • Contribution share for NRA's expenses (9%) • Other (3%)	82,962

Table 11 - Operational budget of NRAs for 2005 and sources of financing

Notes:
Albania: The operational budget for 2006 has not yet been approved by the government.
Bosnia & Herzegovina: RAK's operational budget for 2006 has not yet been approved.
Romania: ANRC operational budget for 2006 was published on December 14, 2005.
Serbia & Montenegro - Montenegro: Operators have the obligation to pay 1% of total annual income (revenue-related fees) to the Agency. The exact amount of the Agency's budget is still not known, because the financial statements for the fiscal year 2005 are not ready yet. The operational budget for 2006 is projected at the same level as in 2005.
Serbia & Montenegro - Kosovo: The TRA has submitted a request to the Ministry of Economy and Finance (MEF) to allow the NRA to self-finance through fees and not through the Kosovo Consolidated Budget as it was until now. The NRA's request has been passed to the Assembly for discussion and is pending discussion there.
Turkey: The radio device certification fees include fees from mobile phone certification.

4. Dispute resolution

The Framework Directive, Article 20 sets out a requirement for the NRAs to issue binding decisions to resolve commercial disputes arising in connection with obligations under the regulatory framework.

The Universal Service Directive, Article 34 sets out a requirement for transparent, simple, and inexpensive out-of-court procedures for disputes that involve consumers, but does not specify that this is a responsibility of the NRA.

Table 12 below presents whether the NRAs are authorised to resolve commercial disputes and the sanctions that are at their disposal to ensure that its decisions are respected.

In Bulgaria, until now, the NRA was not authorised to resolve commercial disputes – the situation will, however, change with the recently proposed amendments to the Telecommunications Act. In Bosnia & Herzegovina, Montenegro, Serbia and Kosovo, the law does not explicitly define the type of disputes that can be resolved by the NRA and leaves the issue open to the regulator's discretion.

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
Albania	Failure to reach an interconnection agreement.	Law on Telecommunications, Article 43: • NRA involvement after 2 months of failed negotiations • NRA issues a written order to settle Interconnection Agreement within one month from the order, after a failure to reach agreement has been filed at TRE	Law on Telecommunications, Articles 94-96: • fines • penal code provisions
Bosnia & Herzegovina	NRA decides	No procedures defined for resolution of commercial conflicts.	• Oral and written warnings • Fines up to €75,000 or €150,000 if repeated violation • Interrupt broadcasting or the provision of telecommunications services for a period not exceeding 3 months • Revocation of a licence
Bulgaria	There is no legal ground in Bulgaria for the NRA to resolve conflicts: the Constitution prohibits this sort of activity for all authorities except the Court. However, the NRA can issue binding instructions if an operator fails to fulfil its obligations. According to an amendment of the Telecommunications Law, starting from 04.12.2005, the operators will be able to obtain assistance from the CRC in dispute resolution. The Law provides a procedure for obligatory instructions given by CRC upon request by an operator. The	On request from an operator CRC appoints a commission, which gives a hearing to the sides involved and explains them the unfavourable consequences in case agreement is not achieved. If agreement is not achieved within one month after the request by CRC, the operators involved in the dispute can request the CRC to give obligatory instructions. CRC can issue binding instructions where an operator fails to meet its obligations. To carry out the procedure, again, a specialized commission is appointed,	• Financial penalties • Order an operator to stop its activities.

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
	procedure, which will be applicable from that date, is described in the next column.	which after collecting all the comments and evidence makes a report on the case to CRC. It must take a decision within 3 months from receiving a complaint.	
Croatia	Disputes between operators and between operators and providers of services Disputes between providers and end-users, except those concerning payment of debts	Prior to passing the decision the Agency must enable each party in the procedure to give its statement about the facts important for the decision, and to submit all the necessary documentation or other evidence deemed as significant for passing the decision. NRAs decision must be implemented within 15 days from the day of its submitting to the party unless a different term is determined by decision. Resolution deadlines are determined by the Law and depend on the type of dispute (15-75 days).	Telecommunications Law Article 13: In case of not proceeding according to the decision by the Agency Council within the term from Paragraph 6 (execution of the decisions performed by another person or by coercion) of this Article, the Agency can issue a misdemeanour warrant in accordance with the provisions of the Law on Misdemeanour. Article 116/1 and 113/6: Misdemeanour fine in the amount of 1%-5% of the total annual gross income imposed by telecommunications supervisor Article 117: Fine from €650 to €133,000 Order an operator to stop activities Issue a misdemeanour warrant

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
Romania	Disputes arising between providers about the obligations imposed on them on the grounds of the legislation in the electronic communications sector and disputes arising between end-users and providers on the enforcement of the provisions of Law No. 304/2003	Written petition There are two procedures: 1. Dispute settlement by the mediation procedure, shall be completed within 30 days 2. Dispute settlement by the contentious procedure, can be used directly, or after failed mediation • Appointment of a commission to deal with the case • Preliminary solution with 15 days for parties to comment • NRA decision within 4 months from the start of the settlement procedure • Decision can be appealed within 15 days to the Court of Appeal without preliminary procedure	Administrative fines
Serbia & Montenegro - *Montenegro*	NRA decides.	Telecommunication Law Deadlines - Article 33, 37 and 60: • The parties may call in the NRA after 90 days of unsuccessful negotiations • The NRA should take a decision within 60 days	Telecommunication Law (Sanctions - Article 68, 69 and 70): • Fines • Order an operator to stop its activities
Serbia & Montenegro - *Serbia*	Telecommunications Law, Article 9, item 3), and Article 47 NRA decides.	Telecommunications Law, Article 9, item 4) and Article 47 NRA decides within 60 days	Fines from €4,133 (CSD 300,000) to €41,133 (CSD 3,000,000)

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
Serbia & Montenegro - · *Kosovo*	Section 11, paragraph 4 of the Law on Telecommunication UNMIK/REG 2003/16 NRA decides.	UNMIK/REG 2003/16 Section 11-4 and 56-7. • NRA has six weeks to accept or reject a request for dispute resolution • For interconnection disputes, if it accepts the case, the NRA shall establish procedures and deadlines • Service provider must comply within 30 days	UNMIK/REG 2003/16 and Administrative Instruction No. 2004/3 issued by the Ministry of Transport and Telecommunication • Fines
The former Yugoslav Republic of Macedonia	Disputes between operators of communications networks and providers of communications services The NRA can resolve conflicts on the request of the parties, or take action on its own	• Maximum time for NRA to reach a decision is 4 months • Mediation or arbitration • Mediator chosen by the parties or by the NRA within seven days • Arbitrators appointed by NRA Commission, the Minister and other interested parties for 5 years. • Result of arbitration is binding, final and enforceable	• Fines • Temporary or permanent ban on operations

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
Turkey	Access and interconnection	• Parties may call in the NRA after 3 months of disagreement • After calling in the NRA, the parties still have 6 weeks (extendable to 10) to reach an agreement • NRA decides within 4 months (extendable to 6)	• Administrative fine up to 3% of turnover
	Roaming Roaming Ordinance dated March 8, 2002	• NRA has 15 days to decide if a request is accepted or not • NRA expects parties to reach agreement in 4 weeks • If failing to agree, NRA will decide	• Administrative fine minimum 1% maximum 3% of turnover

Table 12 - NRAs powers in conflict resolution

Notes:
Albania: Article 43 of Law 8618 defines the NRA's involvement in cases of interconnection agreement failures. NRA is involved after 2 months of failed negotiations and "NRA, after analysing requests of parties, gives written order for realization of interconnection agreement within one month after this order is released". For other types of disputes, the law defines: article 12, disputes between operators and authorities or private owners for property disputes are resolved in law courts; article 14, disputes related to the protection of networks and eventual damages are resolved in law courts; article 42 defines requirements for operators with market power and specifies that if these requirements are not fulfilled, NRA may declare the interconnection agreement partially or fully invalid; article 45 defines that NRA may interfere if competition principles of telecommunication market are not fulfilled; article 52 (on licensing) point 11 gives the NRA the authority to resolve disputes on "giving data for operators" and numbering.
Bulgaria: According to an amendment of the Telecommunications Law on December 4, 2005 (adopted after the reporting period), the operators can obtain assistance from CRC in dispute resolution. The amendment to the Law provides a procedure for obligatory instructions given by CRC upon request by an operator and gives more powers to CRC in dispute resolution.

5. Appeal procedures

Article 4 of the Framework Directive, specifies that all decisions by the NRA shall be subject to appeal to a body which is independent of the parties involved. Therefore, this requirement 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 mechanism:

- The appeal body may be a court, but it can also be a non-judicial body. If so, there is a requirement for a second appeal instance by a court or a tribunal.

- The decision of the NRA 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.

The appeal mechanism must be available not only to the parties involved, but also to any user affected by the decision.

Table 13 explains how the national appeal arrangements meet these requirements.

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: **First instance**: Minister of Public Works, Transport and Telecommunications **Second instance:** First instance Albanian Courts Complaints on fines issued by inspectors: **First instance:** Board of TRE **Second instance:** First instance Albanian Courts	Yes	Yes	Yes
Bosnia & Herzegovina	First instance: Council of the Agency Second instance: Court of Bosnia & Herzegovina	Yes	Normally yes, but in a situation where the NRA decision is made upon strictly defined discretionary rights of the NRA to decide (given by Law), the appeal body cannot rule on merits.	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	Yes, if the NRA decides immediate entry into force. However, the Court may suspend the immediate entry into force.	No, the appeal body can only judge on the correct application of the law. However, the court's decision may contain reasons and instructions upon the merits of the case, which CRC should follow.	Only directly involved parties can appeal. If a General Administrative Act is issued, everyone who is affected can appeal.
Croatia	Administrative Court	Yes. According to the Telecommunications Law of 2003 (Art. 13, §§ 3-6), and the Law on general administrative procedure. The Agency may also decide to suspend the decision during the appeal under very 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.	Yes	Yes, if it can prove that it has a legal interest in the case.
Romania	First instance: Bucharest Court of Appeal Second instance: High Court of Cassation and Justice	Yes, if the NRA decides on immediate entry into force. The Court may decide to suspend the immediate entry into force if certain conditions are met.	Yes	Yes
Serbia & Montenegro - *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?
Serbia & Montenegro - *Serbia*	First instance: Managing Board of NRA Second instance: Court having jurisdictions over case	Yes	Yes	No
Serbia & Montenegro - · *Kosovo*	First instance: either the Regional Court (there are five regional courts in Kosovo) or the Supreme Court of Kosovo Final instance: the Supreme Court of Kosovo	Yes	Yes, the appeal body can rule both on the merits of the case and on the correct application of the law.	No, third parties not affected by the decision or, as it is stated in the law, "without legal interest in the case", do not have the right of appeal.
The former Yugoslav Republic of Macedonia	Commission of the Agency for electronic communications	Yes	No, the appeal body can only judge on the correct application of the law.	No, only a directly involved party can appeal.
Turkey	Administrative Court Council of State	Yes	Yes. The appeal body can judge both on the procedure and the merits of the NRA decision.	Yes. Anybody who is affected by an NRA decision has the right of appeal.

Table 13 - Appeal procedures against NRA decisions

Notes:
Albania: Law 8618 article 95 defines appeal procedures in case of TRE decisions that forbid or change conditions of licenses: within 10 days from declaration of the TRE decision, the interested party has to appeal to Minister of Transport and Telecommunications, the latter must decide within 30 days from the date of appeal. The decision of minister may be appealed in the Court following the Law for Civil Procedures. For fines, the procedure is: within 10 days from TRE's decision, the appeal must be presented to TRE's board, which has 30 days to take its decision, after that within 5 days the interested party may appeal to the district Law Court.
Serbia & Montenegro - 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 from receiving the request. The Public Prosecutor may also start an appeal on its own, 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, for example, was initiated in April 2005 in connection with the dispute over validity of the second GSM licence issued by the NRA.

6. Regulatory framework for broadcasting networks

The 2003 acquis in the EU has brought all forms of electronic communications under the same regulatory framework. This was driven by the convergence with new digital technologies so that all forms of networks will compete in the delivery of voice, data, Internet, radio, and television communications, including the broadcasting networks.

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, including broadcasting networks, under a common regulatory framework under a single regulator.

There are two considerations that make this particularly important for decisions on frequencies used for broadcasting:

1. 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.

2. Digital broadcasting transmission technologies increasingly permit the capacity available to broadcasting networks to be used for non-broadcasting applications. There is a possibility that frequency licence conditions currently granted for broadcasting networks may focus too narrowly on broadcasting objectives and thus restrict these networks from participation in other markets. This may pose a potential threat to efficient radio frequency utilisation.

Most EU Member States, with very few exceptions, have decided to have a single regulatory authority responsible for all types of frequencies available for civil purposes. The relative priorities of broadcasting, telecommunications, and other use of radio frequencies are normally determined at a relatively high political level through the adoption of the national frequency plan. Table 14 explains whether the broadcasting networks are covered by the same regulatory framework as other telecommunications and electronic communications activities and, in particular, if the frequency management is provided by the same bodies.

Country	Are broadcasting networks covered by the same regulatory framework as telecommunications?	Are frequency allocations and assignments carried out by the same authority for broadcasting as for telecommunications?
Albania	No National Council of Radio and Television is the regulatory authority responsible for broadcasting.	Yes for allocation - Council of Ministers decides the frequency plan No for assignment - National Council of Radio and Television
Bosnia & Herzegovina	Yes	Yes
Bulgaria	Yes	Yes
Croatia	Yes	Yes
Romania	Yes	Yes

Country	Are broadcasting networks covered by the same regulatory framework as telecommunications?	Are frequency allocations and assignments carried out by the same authority for broadcasting as for telecommunications?
Serbia & Montenegro - *Montenegro*	No Broadcasting sector is separated from telecommunications, which is defined by the provisions of the Broadcasting Law. Parliament has founded the Broadcasting Agency, which handles all regulatory activities in that sector.	Yes for allocation No for assignment - Broadcasting Agency
Serbia & Montenegro - *Serbia*	No There is also Broadcasting Law regulating broadcasting networks concerning the content matters and a separate Broadcasting Agency (RRA).	Yes, by Republic Telecom Agency-RATEL
Serbia & Montenegro - · *Kosovo*	No Broadcasting activities are regulated by the Law on Independent Media Commission (IMC) and Broadcasting, promulgated by the SRSG on July 8, 2005 and the newly established IMC is the regulatory authority responsible for broadcasting.	The Law on Independent Media Commission and Broadcasting foresees that the IMC shall coordinate the management of the Broadcast Frequency Spectrum with the TRA. The practical aspects of this coordination have not been defined yet.
The former Yugoslav Republic of Macedonia	Yes	Yes
Turkey	No - Radio and Television Supreme Council (RTSC)	Yes – for allocation No – for assignment (RTSC)

Table 14 - Regulatory treatment of broadcasting networks

Notes:
Albania: The Council of Ministers decides on the national frequency plan that is proposed by the Minister of Telecommunications (article 70 of law 8618 on telecommunications). During preparation of the plan, the work is coordinated by the General Directorate of Post-telecommunications; the latter collaborates with the NRA and other institutions responsible for national defence and public order. Article 72 defines that the NRA administers frequencies for civil public and private purposes, except broadcasting frequencies that are managed by the National Council for Radio-Television. Nevertheless, in article 71 it is defined that the NRA monitors the whole spectrum in order to avoid any misuse.

7. Frequency management

The following table provides specific information on which bodies are responsible for:

- Frequency allocation – which includes the decision on the national frequency plan.
- 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.

Country	Frequency allocation	Frequency assignment	Legal basis
Albania	Council of Ministers	Telecommunication Regulations Entity (TRE) National Council of Radio and Television	Law on Telecommunications No. 8618 of June 4, 2000, Art. 70 National radio frequency plan Approved by the Government of Albania, (Decision No. 379, date 31.05.2001)
Bosnia & Herzegovina	Communications Regulatory Agency (RAK) of Bosnia & Herzegovina	RAK	Law on Communications of 2002, Art. 30, 31, 32
Bulgaria	National Radio Frequency Spectrum Council (CNRFS) with the Council of Ministers	Communications Regulation Commission	Articles 9-11 and 28, Telecommunications Act, Published in the State Gazette, issue 88/ Oct. 7, 2003
Croatia	Ministry of the Sea, Tourism, Transport and Development	Croatian Telecommunications Agency	Articles 76 and 84, Law on Telecommunications
Romania	The Ministry of Communications and Information Technology	Inspectorate General for Communications and Information Technology	Government Emergency Ordinance No. 79/2002 on the general regulatory framework for communications, approved with the amendments and completions, by Law No. 591/2002, with the following amendments and completions: Art. 8 - (1), Art. 14 - (1) Law No. 510 /2004 on the reorganization of the Inspectorate General for Communications and Information Technology: Art. 12 – (2), Art. 12 – (4)

Country	Frequency allocation	Frequency assignment	Legal basis
Serbia & Montenegro - *Montenegro*	Government of Montenegro	Agency for telecommunications of the Republic of Montenegro. Broadcasting Agency	Telecommunications Law of 2000, Article 12, Paragraph 9
Serbia & Montenegro - *Serbia*	Ministry of Capital Investments decides on Frequency Allocation Plan and adopts Frequency Assignment Plan on the proposal of Republic Telecommunication Agency	Republic Telecommunications Agency	Telecommunication Law (Official Gazette of Republic of Serbia, No 44/03) and Frequency Allocation Plan (Official Gazette of Serbia, No 112/04)
Serbia & Montenegro - · *Kosovo*	UNMIK (FMO - Frequency Management Office)	TRA and FMO	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
Turkey	Telecommunications Authority	Telecommunications Authority	Wireless Law No 2813, Articles 9 and 11 Telegram and Telephone Law No. 406, Articles 2 and 3

Table 15 - Frequency allocation and assignment

8. Cooperation between NRA and competition authority

There is a considerable overlap between the regulatory framework for electronic communications in the EU (the 2003 acquis) and general competition law. The competition law obviously applies to mergers and concentration in the telecommunications sector. In addition, the general competition framework for dominance and its abuse apply in parallel with the *ex ante* provisions defined by the sector specific directives.

Furthermore, the 2003 acquis relies largely on competition law principles, in particular for market analysis and the designation of significant market power.

This means that the electronic communications sector is supervised by both a telecommunications authority and a competition authority, each with different responsibilities and perspectives. However, it is the responsibility of each authority to consider both legal frameworks whenever they take a decision. It shall not be possible for one authority to take a decision that can be contradicted by the other.

In practice, this requires a good co-operation between the two authorities with some agreement on which authority shall take the lead in different types of cases and procedures to make sure that the views of the other authority are taken into account when necessary. It is recommended that these principles be set out in a formal agreement between the two parties.

Table 16 examines whether or not such formal agreements have been established.

Country	Competition authority	Formal agreement between NRA and Competition Authority
Albania	The Competition Authority was created in February 2004, with 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 Competition Authority cooperate on specific topics. TRE and Competition Authority are currently negotiating a Memorandum of Understanding.
Bosnia & Herzegovina	Competition Council at the state level was established in 2003. In addition, the Offices of Competition and Consumers Protection were set up in the Federation of Bosnia & Herzegovina and the Republika Srpska.	No
Bulgaria	Competition Protection Commission (CPC) is the common competition authority that monitors all sectors including electronic communications, according to the provisions of the Competition Protection Act.	Yes 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.
Croatia	Croatian Competition Agency	There is no formal agreement. Cooperation is foreseen by the Law on Telecommunications.
Romania	Competition Council	On July 14, 2004 the ANRC signed a Collaboration Protocol with the Competition Council. The document establishes the terms under which the institutions coordinate their efforts with a view 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.
Serbia & Montenegro - *Montenegro*	No such authority exists. Agency for telecommunications of the Republic of Montenegro also has the responsibility to provide and encourage competition in electronic communication sector.	No

Country	Competition authority	Formal agreement between NRA and Competition Authority
Serbia & Montenegro - *Serbia*	According to the new Law on Protection of Competition, (Official Gazette of RS, No. 79/05), Competition authority is an independent regulatory authority called Competition Commission.	There is no formal agreement between NRA and Competition Authority.
Serbia & Montenegro - · *Kosovo*	No such authority exists. Its establishment is foreseen by the Law on Concessions.	No
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: • The Agency 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. • 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.
Turkey	Competition Authority	Relationship between the Competition Authority and the Telecommunications Authority continues on the basis of current laws (Wireless Law No 2813, Article 7/m) and legal base.

Table 16 - Cooperation between NRA and competition authority

C. Regulations – market access

The information in this chapter reflects the situation as it existed on November 1, 2005.

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

1. Market access

Table 17 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 25 and Table 26 below.

Liberalisation in Albania has been implemented gradually: starting with rural local networks in 1998, moving to domestic long distance networks in July 2003 and international networks in January 2005. However, there are no license category for local networks in urban areas.

Bosnia & Herzegovina liberalised local and domestic long distance services, as well as data services in 2002. International networks are expected to open 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.

In Serbia, the market liberalisation was formally introduced by the new Telecom Law of April 2003, but its actual implementation is delayed pending adoption of the enabling secondary legislation.

In Kosovo, liberalisation of fixed networks and services was formally introduced by the Law on Telecommunications of May 12, 2003. However, only recently the NRA has started to work on the secondary legislation on authorisations that would enable market entry for alternative providers. Furthermore, the incumbent will maintain 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 have also been liberalised from January 1, 2004, while liberalisation of local services took place in July 2005.

Country	Liberalisation status for fixed public telecommunications networks and services			
	Local	**Domestic long distance**	**International**	**Comments**
Albania	Rural local networks liberalised from 1998 Urban local networks are not explicitly defined in the law. Albtelecom was granted exclusive rights for urban telephone services until at least June 30, 2003 (Council of Ministers Decision No. 692, of Dec. 27, 2002).[18]	Liberalised from July 2003	Liberalised from Jan. 1, 2005	Law No. 8287 of Feb. 18, 1998, Article 4 liberalised rural local networks (This law is abrogated by the 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. 8618 of June 14, 2000 liberalised provision of public payphones from June 2000
Bosnia & Herzegovina	Liberalised from July 1, 2002	Liberalised from July 1, 2002	No Planned from Jan. 1, 2006 as determined by the Telecommunication Sector Policy	-
Bulgaria	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	Liberalisation introduced by §10 of the Final & Transitional Provisions of the Telecom Act of 1998
Croatia	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	-
Romania	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	-
Serbia & Montenegro - *Montenegro*	Liberalised from Jan. 1, 2004	Liberalised from Jan. 1, 2004	Liberalised from Jan. 1, 2004	Article 27, Telecommunications Law of 2000 (Official Gazette of the Republic of Montenegro, No. 59/2000)

[18] Full liberalisation in Albania has been linked to the privatisation of Albtelecom, which was supposed to have been completed in 2005. However, the result of the tendering procedure has been suspended by the new government, which came into power after elections in 2005. In October 2005, the Parliament decided that the Council of Ministers should obtain international expertise to ensure the correctness of the tendering and contract processes.

Country	Liberalisation status for fixed public telecommunications networks and services			
	Local	**Domestic long distance**	**International**	**Comments**
Serbia & Montenegro - *Serbia*	Liberalisation formally introduced by the Telecom Law of April 2003	Liberalisation formally introduced by the Telecom Law of April 2003	Liberalisation formally introduced by the Telecom Law of April 2003	Article 32, Telecommunication Law of April 2003, introduces liberalisation, but its implementation started in September 2005 with establishment of RATEL.
Serbia & Montenegro - *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.	The TRA has completed: • Ten types of licences for telecommunications services • Form of license application and award for individual license • Administrative regulation • Frequency regulation • Interim regulation
The former Yugoslav Republic of Macedonia	Yes Liberalisation introduced by the Electronic Communications Law of March 5, 2005	Yes Liberalisation introduced by the Electronic Communications Law of March 5, 2005	Yes Liberalisation introduced by the Electronic Communications Law of March 5, 2005	Secondary legislation enabling competitive market entry was adopted by end 2005.
Turkey	Yes Liberalised from July 1, 2005	Liberalised from Jan. 1, 2004	Liberalised from Jan. 1, 2004	Telecommunications Act (Law No. 4502, Official Gazette Jan 29, 2000)

Table 17 - Liberalisation of public fixed telecommunications networks and services

Note:
Kosovo: From January until August 2006 EBRD and TRA will be engaged in a joint project of reviewing and completing the secondary legislation and numbering plan.

Table 18 addresses the liberalisation status of data networks and services, which in all SEE countries are now open to competition. Furthermore, the liberalisation of data networks in most countries was introduced a few years earlier than fixed networks enabling 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 granted to a joint venture of BTC and Sprint International. Infrastructure was partly liberalised in 1993, removing restrictions on building new infrastructure, subject to refusal of the incumbent to provide required transport facilities. Later on, five or seven individual licences to provide data services were granted under the Telecom 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 to service providers were issued in March 2002 following 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 of the 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	Under the TA of 2003, there are two types of regimes for data networks and services, depending on the scarce resource use, respectively based on individual or class licences.
Croatia	Liberalised from 1999	Liberalised from 1999	-
Romania	Liberalised from 1992	Liberalised from 1992	-
Serbia & Montenegro - *Montenegro*	Liberalised from Jan. 1, 2004	Liberalised from Jan. 1, 2004	Article 27 in Telecommunications Law of 2000 (Official Gazette of the Republic of Montenegro, No. 59/2000)

Country	Liberalisation status for data networks and services		
	National	International	Comments
Serbia & Montenegro - *Serbia*	Liberalisation formally introduced by the Telecom Law of April 2003	Liberalisation formally introduced by the Telecom Law of April 2003 Requirement to use the incumbent's international lines until June 2005	Liberalisation introduced by Telecommunications Law of April 2003 Several ISPs were registered as service providers with the Ministry under the previous Telecom Law. In addition to the public fixed operator, data services are also offered by Cable TV providers via their own infrastructure.
Serbia & Montenegro - · *Kosovo*	Liberalised from May 2003	Liberalised from May 2003	The first ISP authorisations were issued to DardaNet (PTK subsidiary), IpkoNet, and Kujtesa on May 18, 2005.
The former Yugoslav Republic of Macedonia	Liberalised from February 1998	Liberalised from February 1998 Requirement to use the incumbent's lines for international traffic until April 2000.	Provision of VoIP was not allowed until Jan. 1, 2005
Turkey	Data services liberalised from June 10, 1994 Data networks – from Jan. 1, 2004	Data services liberalised from June 10, 1994 Data networks – from Jan. 1, 2004	Turk Telekom's monopoly over fixed telephone networks and voice telephony services expired on Jan. 1, 2004.

Table 18 - Liberalisation of data networks and services

Note:
Albania: There are 4 licences for the provision of national data networks and 2 licences for regional data networks.

2. Authorisation frameworks for terrestrial services

Under the EU 2003 regulatory framework, Article 3 of the Authorisation Directive (2002/20/EC) establishes a general authorisation regime for the provision of electronic communications networks and/or services. Undertakings may be required to notify the intention to commence the provision of electronic communication networks or services and to submit information required to allow the national regulatory authority (NRA) to keep a register or list of providers. However, there is no requirement to obtain an explicit decision by the NRA before the start of activities.

Only Romania and the former Yugoslav Republic of Macedonia currently have authorisation frameworks in place that are in line with the provisions of the Authorisation Directive. In all other countries, an individual or a class licence is required, with some variations depending on

whether the business activities involve the use of scarce resources, such as spectrum and numbers.

Bulgaria and Turkey are currently drafting new legislation intended to transpose the EU 2003 regulatory framework and, in particular, to introduce the general authorisation regime in line with the Authorisation Directive.

Table 19 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: • Category I - national fixed or mobile public telephony. The number of licences is decided by the government. • Category II - public telephony in rural areas, paging, global services of mobile individual communications (and other services that use frequencies). General licences are issued for Internet services, data transmission services, value added services, public services of paid telephones (coins or prepaid cards), and other services not classified in individual licenses (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	Individual license	Individual license
Croatia	Individual licence	Individual licence
Romania	General authorisation with notification	General authorisation with notification
Serbia & Montenegro - *Montenegro*	Individual licence	Individual licence
	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).	
Serbia & Montenegro - *Serbia*	Individual authorisation/licence	Individual authorisation/licence
	Secondary legislation on licensing and authorisations framework still has to be adopted. Individual licence is foreseen under Art. 33 of the Telecom Law if the business activities involve the use of scarce resources (e.g. radio frequencies or numbering).	

Country	Authorisation requirements for fixed telephony	
	Fixed networks	**Telephony services**
Serbia & Montenegro - · *Kosovo*	Individual authorisation/licence	Individual authorisation/licence
	Secondary legislation on licensing and authorisations framework is currently drafted by TRA. The Law on Telecommunications UNMIK/REG 2003/16 of May 12, 2003 states: • No person shall provide telecommunications services to the public in Kosovo without obtaining an authorisation from the TRA to provide such services (Section 21). • No person shall provide telecommunications services involving a limited resource, including the right to use number of frequency allocation, space on a utility pole, tower or in a conduit, without a license from the TRA to provide such services (Section 22). • Construction and maintenance of independent public telecommunications networks shall be performed by licensed service providers to meet needs of public and private legal entities (Section 53(3)).	
The former Yugoslav Republic of Macedonia	General authorisation with notification	General authorisation with notification
Turkey	Turk Telekom operates under the Concession Agreement	Type 1 Telecommunications Licence (for local telephony service providers), issued following an auction Type 2 Telecommunications Licence (for national and international long distance telephony service providers)

Table 19 - Licensing requirements for public fixed telecommunications networks and services

Table 20 summarises licensing requirements for wireless local loop (WLL). Fixed wireless access subscriber access applications such as WLL could represent 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 available.

Country	Licensing requirements for wireless local loop				
	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 Dec. 27, 2002	Public tender (international bid)	3.4-3.6 GHz 10.5 GHz 26 GHz	2 local licences for FWA in the 3.4-3.6 GHz

Country	Licensing requirements for wireless local loop				
	Licensing requirements	**Legal basis**	**Auction vs. beauty contest**	**Frequency bands**	**Status and number of awarded licences**
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	None
Bulgaria	Individual licensing for point-to-multipoint (PMP) FWA in the following bands: 3.4 – 3.6 GHz 3.6 – 3.8 GHz (for private networks only) 26 GHz WLL DECT	Art. 49(2)1 of TA, Art. 2 (1) of Regulation No. 13 of 2003 (on licensing requirements) Ordinance of August 12, 2004; Ordinance No. 7 of Oct. 4, 2004	Auction 3.6 – 3.8 GHz (for private networks only, no contest or auction)	WLL: 2400 – 2483.5 MHz 5150 – 5350 MHz 5470 – 5 725 MHz PMP FWA: 3.4 – 3.6 GHz 3.6 – 3.8 GHz (for private networks only) 26 GHz DECT 1880 – 1900 MHz	1 licence 3.6 – 3.8 GHz 1 DECT licence 4 individual licences (PMP FWA) in the 3.4 – 3.6 GHz
Croatia	Licence for provision of 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	Public tender on the basis of the beauty contest	3.4 – 3.6 GHz for FWA; 24.5 – 26.5 GHz for FWA	13 licences in the 3.4 – 3.6 GHz
Romania	General authorisation from ANRC and frequency licence granted by the Inspectorate General for Communications and Information Technology (IGCTI) is required	Art. 4 para. (2) and Art. 14 para. (1) from Government Emergency Ordinance No. 79/2002 on the general regulatory framework for communications	Auction	3.4 – 3.6 GHz 24.5 – 26.5 GHz	10 national licenses in the 3.5 GHz band to 7 operators 4 national licenses in 26 GHz band to 4 operators

Country	Licensing requirements for wireless local loop				
	Licensing requirements	**Legal basis**	**Auction vs. beauty contest**	**Frequency bands**	**Status and number of awarded licences**
Serbia & Montenegro - *Montenegro*	Frequency licence	Rulebook of issuing and register general and specific licences (Official Gazette No. 08/2002) Plan of Frequency Allocation of Montenegro (Official Gazette of the Republic of Montenegro, № 11/2005)	The contests are not yet organised (no demand for licences)	3.4 – 3.6 GHz 10.15 – 10.30 GHz 24.5–26.5 GHz 27.5–29.5 GHz	None
Serbia & Montenegro - *Serbia*	Frequency licence	Section 33 of the Law on Telecommunications of 2003	Not decided	3.4 – 3.6 GHz 10.15 – 10.30 GHz 24.50 – 26.50 GHz	None
Serbia & Montenegro - · *Kosovo*	No licences available	-	-	-	-
The former Yugoslav Republic of Macedonia	Notification and permission for using radio frequencies	Law on electronic communications of 2005	Public tender is planned in the beginning of 2006	3.4-3.6 GHz 5.150-5.350 GHz 5.470-5.725 GHz 24.5-26.5 GHz 27.5-29.5 GHz	None
Turkey	Individual licence	The Annex Ordinance about FWA of Authorization Ordinance	Frequency allocations are planned to be made by auction.	24.5-26.5 GHz	No operators have been authorised yet.

Table 20 - Licensing requirements for wireless local loop

Notes:
Bulgaria: In October 2005, two auctions were held, one for two class A licenses and the other for three class B licenses of the type "Point-to-Multi-Point" (P-MP). As a result, 4 companies received 10-year licenses in the range 3.5 GHz, for national coverage: Trans Telekom EAD, Cablenet EOOD, Nexcom Bulgaria AD, and Mobiltel EAD. Two of the class B licenses were not granted to the winning bidders BTC and Orbitel because the price they offered was not paid. Thus, CRC granted one of these licenses to the fourth bidder - Mobiltel EAD in line with the procedure for the auction. CRC will take a decision on the other class B license, which was not granted. According to the licensing conditions, the operators have to launch services one year after the issuance of the licenses and to cover respectively 20%/15% of the population (class A/B) in at least 10 cities.

Table 21 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 is 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 currently under discussion.
Bosnia & Herzegovina	General authorisation with notification	Yes	Call origination
Bulgaria	No license, general authorisation or notification. ISPs in Bulgaria are free to provide access to Internet and VAS. Individual licence is required to provide public services where using numbers from the National Numbering Plan or radio frequencies.	Yes Interconnection is permitted but under commercial agreement	Both models are applicable, subject to commercial agreement.
Croatia	General authorisation with notification	Yes	Call termination
Romania	General authorisation with notification	Yes Not applied in practice	Neither call termination nor call origination model is used, as there are no interconnection agreements between ISPs and the incumbent.
Serbia & Montenegro - *Montenegro*	General authorisation (internet providing only) Individual licence (VoIP or building a network)	Yes	Call origination
Serbia & Montenegro - *Serbia*	General authorisation	Yes	Call origination and termination

Country	Authorisation requirements for ISP	Interconnection	
		Right to interconnection	Call origination or termination
Serbia & Montenegro - · *Kosovo*	Individual authorisation	Yes	Call termination
The former Yugoslav Republic of Macedonia	General authorisation with notification	ISP has a right to interconnection with SMP operator and other operators	Call origination
Turkey	General authorisation with notification	Yes Not applied in practice	Neither call termination nor call origination model is used, as there are no interconnection agreements between ISPs and the incumbent. The 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.

Table 21 - Licensing requirements for Internet Service Providers

Notes:
Bulgaria: ISPs in Bulgaria are not subject to any licensing or authorization requirements. Public data transfer networks using numbers from the National Numbering Plan (NNP) are subject to individual licensing. Public data transfer networks that do not use numbers from the NNP are subject to general/class licensing.

Table 22 addresses the NRA's 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 has been 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 Romania and the former Yugoslav Republic of Macedonia currently have in place authorisation frameworks that are in line with the provisions of the Authorisation Directive.

In Bulgaria, VoIP telephony services had been offered freely 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 is a minimum requirement for an authorisation that gives the right to interconnect

(under RIO conditions of the incumbent). Therefore, VoIP service providers that seek a right to interconnect are required to apply for the fixed voice telephony licence.

In Croatia, under the Telecommunication Law of 1999, VoIP was considered a part of Internet service, so that no further authorisation was needed. Under the Law of 2003, VoIP has been defined as separate service requiring an 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 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.

Country	Voice over IP authorisation requirements		
	Official position on voice over IP	**Date of liberalisation**	**Licensing requirements**
Albania	No official position (currently under discussion)	None	-
Bosnia & Herzegovina	Commercial use of VoIP is prohibited for the time being.	-	-
Bulgaria	No official position If the VoIP services do not meet the QoS parameters: R factor – not less than 75; one-way delay > 150 millisecond, set out by Art. 3, all. 2 of Regulation No. 12 of May 5, 2004 for fixed voice telephony service, they are not allowed to apply for a voice license with rights to interconnect under RIO.	Not regulated.	No licensing/authorisation regime for VoIP as long as the minimum QoS requirements for voice telephony are not met, otherwise a fixed voice telephony licence is required.
Croatia	The right to provide VoIP telecommunications services is acquired by a legal or natural person by submitting a written notification to the Agency.	June 30, 1999	General authorisation with notification

Country	Voice over IP authorisation requirements		
	Official position on voice over IP	Date of liberalisation	Licensing requirements
Romania	Based on the principle of technological neutrality, VoIP services are considered telephony services if they fall within the scope of the definition of the publicly available telephony services, provided for by Article 2, par (1) (c) of Law No. 304/2003 on the universal service and users' rights relating to electronic communications networks and services. ANRC is currently reviewing its position on other types of VoIP services.	Jan. 1, 2003	General authorisation with notification
Serbia & Montenegro - *Montenegro*	VoIP has to be authorised as telephony services.	Jan. 1, 2004	Individual licence
Serbia & Montenegro - *Serbia*	No official position VoIP offered by some ISPs, however, considered illegal.	-	VoIP is not yet regulated. RATEL is entitled to determine the quality of service conditions
Serbia & Montenegro - *Kosovo*	No official position	-	Individual authorisation Secondary legislation on authorisation regime still to be adopted.
The former Yugoslav Republic of Macedonia	VoIP is treated as a public voice service. The Electronic Communications Act is technology neutral.	March 5, 2005 (with entry into force of the new Electronic communications Law)	General authorisation with notification
Turkey	No specific position on VoIP VoIP requires a long distance telephony service licence.	Jan. 1, 2004	Individual licence

Table 22 - Voice over IP licensing requirements

Notes:
Bulgaria: Many VoIP operators (including operators licensed for fixed networks and voice telephone services or CS and CPS services through them) were providing VoIP through ISDN ports of the incumbent operator. In August 2005, according to amendments in the General conditions for the end-users of the fixed telephone network, BTC terminated all contracts with OLOs providing voice services through ISDN. After August 2005 VoIP operators use OLOs in order to access incumbent's customers.

Serbia & Montenegro - Montenegro: An ISP needs individual licence instead of general authorisation in the case of providing the VoIP or in the case of building an own network, as defined in the Rulebook for providing the public internet services (Official Gazette of the Republic of Montenegro, № 65/2005). There are no licences issued for VoIP at this moment.

Table 23 below summarises the authorisation requirements for Cable TV networks.

In Albania, Romania and the former Yugoslav Republic of Macedonia, 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 telecommunications sector for the construction of cable infrastructure.

In Romania, the authorisation from the NRA for the telecommunications sector is covered under its general authorisation framework, but Cable TV networks nevertheless need authorisation for infrastructure construction works from local authorities.

In Turkey, the Telecommunications Authority issued a regulation on the licensing of cable platform services (Ordinance Amending the Ordinance on the Authorisation of Telecommunications Services and Infrastructure, Official Gazette No 25718, February 5, 2005). Under the regulation, the provision of cable platform services requires a type 2 telecommunications licence valid for 20 years. Cable platform services are defined as the one-way and two-way provision of all kinds of sound, data, image, and radio/TV signals over the cable platform network, including telephone services as well as radio, TV, Internet and data. The authorisation also covers the establishment of infrastructure.

Authorisation frameworks for cable TV still have to be defined in Serbia and Kosovo.

Country	Cable TV licensing			
	Availability of Cable TV licences	**Licensing requirement**	**Number of national licences**	**Number of local licences**
Albania	Available	Licence The National Council of Radio and Television-NCRT, is the authority responsible for the Cable TV licences. The TRE issues the authorisation for the construction of cable network. (Law No. 8410 on private and Public Radio and Television in the Republic of Albania of Sept. 30, 1998. Art. 123, 127)	-	26
Bosnia & Herzegovina	Available	Individual licence	-	40
Bulgaria	Available	Class licence (registration with CRC)	-	658
Croatia	Available	Individual licence	2	24
Romania	Cable TV licences are generally available to any organisation that wishes to operate nationally or locally.	General authorisation – ANRC Individual licences or notices from the National Audio-Visual Council (CNA) / Individual licences or authorisations from the IGCTI	-	The National Audio-Visual Council (CNA) granted 707 licences for Cable TV operators. Licenses were granted in 9314 localities.
Serbia & Montenegro - *Montenegro*	Available	Individual licence issued by the Broadcasting Agency of the Republic of Montenegro	-	1

Country	Cable TV licensing			
	Availability of Cable TV licences	**Licensing requirement**	**Number of national licences**	**Number of local licences**
Serbia & Montenegro - *Serbia*	Authorisation requirements for Cable TV still to be defined	Authorisation is required under specific conditions to be defined by secondary legislation	-	Authorisations for Cable TV operators are not yet issued, however there are more than 20 Cable TV operators in bigger cities with more than 400,000 subscribers.
Serbia & Montenegro - · *Kosovo*	Authorisation requirements for Cable TV still to be defined	-	-	-
The former Yugoslav Republic of Macedonia	General authorisation with notification	The Broadcasting Council is responsible for issuing broadcasting programme permission, according to the new Broadcasting Law (Official Gazette of Republic of Macedonia, No. 100/2005). Agency for electronic communications is responsible for notifications for provision of public communications networks and services.	-	In the past, 65 concessions were awarded by the Broadcasting council for covering local areas. Concession contracts are in the process of harmonization with the new Electronic communications Law
Turkey	Cable TV licences are generally available to any organisation that wishes to operate nationally or locally.	Individual licence – Type 2 telecommunications licence	1	0

Table 23 - Cable TV licensing requirements

3. Authorisation fees

General authorisations as well as individual licences 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 an objective to

protect the incumbent operator. Regardless of the purpose, high authorisation fees may constitute a barrier to entry into the market and, in addition, they send signals that the market is not fully liberalised.

The regulatory framework of the EU, both 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 sufficient 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 represent a limited resource under certain circumstances but normally, the availability of land and rights of way does not represent a limited resource.

Table 24 below provides an overview of one-off and annual fees 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.

Country	Fixed telephony networks and services		Voice over IP services	
	One-off fee	Annual fee	One-off fee	Annual fee
Albania	Determined by tender procedure	€56,370 (national PSTN). For rural network operators it is €160 per municipality.	Not defined	Not defined
Bosnia & Herzegovina	€511	Public fixed telephony networks and services: €255,624	Not defined (VoIP not allowed)	Not defined (VoIP not allowed)
		Public fixed telephony services: €35,787		
		Public fixed telephony networks: local - €2,556 regional - €5,112 national - €25,562		
Bulgaria	Public fixed telephony networks and services: €31,700	0.4% of annual revenue	No license and no fees	No license and no fees

Country	Fixed telephony networks and services		Voice over IP services	
	One-off fee	**Annual fee**	**One-off fee**	**Annual fee**
	Public fixed telephony services via CS (carrier licence): €17,895 plus €3,835 (CS code)	0.4% of annual revenue		
Croatia	€2,700	0.1% of annual revenue	€670	0.1% of annual revenue
Romania	0	Max. 0.5% of annual revenue	0	Max. 0.5% of annual revenue
Serbia & Montenegro - *Montenegro*	€6,000,000	1% of annual revenue plus €120,000 for international traffic	Determined by tender procedure	1% of annual revenue
Serbia & Montenegro - *Serbia*	Not defined	Not defined	Not defined	Not defined
Serbia & Montenegro - · *Kosovo*	*Draft proposal by TRA* National fixed 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	Not defined	Not defined
The former Yugoslav Republic of Macedonia	0	Not defined	0	Not defined

Country	Fixed telephony networks and services		Voice over IP services	
	One-off fee	Annual fee	One-off fee	Annual fee
Turkey	Public national fixed telephony networks and services: Type 1 (local telephony services) – determined by tender procedure Type 2 (long distance telephony services): A-type (CPS services) – €250,000 B-type (CS services)– €110,000 C-type (services provided through a 10-digit number provided by the TA) – €56,000	0.5% of net annual sales	Same as long distance telephony services	0.5% of net annual sales

Table 24 – Authorisation fees

Notes:
Bulgaria: VoIP operators are not covered by the Telecommunications Law and can operate legally without any rights and obligations stemming from this law. In particular, they do not have the right to interconnection and usually operate on the basis of retail-based ISDN origination and termination. If they meet certain minimum quality criteria, they can alternatively choose to operate as licensed telephony operators.
Serbia & Montenegro - Montenegro: The telephony fee is the one paid by the incumbent operator. This is currently the only national licence for fixed telephony network and services. VoIP operations require a specific telephony service licence subject to a one-off-fee to be set following a tender procedure and an annual revenue-related fee.
Serbia & Montenegro - Kosovo: Secondary legislation on licensing and authorisations is currently under preparation. The final licence fees will be approved by TRA following an industry consultation.
The former Yugoslav Republic of Macedonia: All services that do not require limited resources can be carried out on the basis of a notification.

4. Status of fixed network competition

Table 25 provides information about the number of 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 licenses:

- number of licences issued for 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, in practice the alternative operators are only offering services in rural areas: all 46 active local operators are licensed for rural telecommunications. No licences have been issued so far to alternative long distance carriers, and Albtelecom remains the only provider of national

long distance networks and services, although the market was formally liberalised in 2003. Similarly, in Montenegro, where the market was formally liberalised on January 1, 2004, the incumbent Telecom Montenegro remains the only licensed fixed telephony operator. In Kosovo, the incumbent PTK is also the only authorised provider of public fixed telephone networks and services. The TRA issued the licence to PTK on July 30, 2004 in accordance with Section 50 of the Telecommunications Law. Secondary legislation on the authorisation regime is still under preparation, and the issuing of first licences to alternative providers of public fixed telephony services is foreseen after the privatisation of PTK.

In Serbia, no licences have been issued so far and the authorisation framework still has to be addressed in secondary legislation. Telekom Serbia is de facto the only operator of public voice telephony and network services.

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

In the former Yugoslav Republic of Macedonia, liberalisation was introduced by the new Electronic Communications Law of March 5, 2005. However, the secondary legislation on the authorisation regime was adopted only recently, therefore most of the newly registered operators and service providers have not yet launched commercial services.

Country	**Number of licences 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	52	46	1	1	2	2	4	4
Bosnia & Herzegovina	3	3	3	3	64	64	3	3
Bulgaria	* **	* **	* **	* **	* **	* **	18* 12**	7* 2**
Croatia	-	-	15	3	2	2	7	7
Romania	277	75	277	75	2188	1802	2188	1802
Serbia & Montenegro - *Montenegro*	1	1	1	1	1	1	1	1
Serbia & Montenegro - *Serbia*	1	1	1	1	1	1	1	1
Serbia & Montenegro - · *Kosovo*	1	1	1	1	1	1	1	1

Country	Number of licences 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	6	1	27	1	1	1	9	1
Turkey	1	1	41	26	1	1	1	1

Table 25 - Number of licences for provision of fixed telecommunications services

Notes:
Albania: Some of the rural operators may be providing services via wireless technologies.
Bulgaria: There are two types of individual licences: for provision of public fixed telephony services through public fixed telephony networks:
(*) – covers local, national and international services (network licence); and for provision of public fixed telephony services through carrier selection ;
(**) – covers national and international services only (carrier licence).
Some operators hold both types of licenses, dependent on their commercial and investment policy and status of development of own infrastructure. (One possible explanation to this could be that some alternative operators had first applied for carrier licence to provide national and international services, and then because LLU was not available also applied for network licence to build alternative local access networks).
CRC has requested the licensed operators to provide information about their telecommunication activities, carried out in mid-2005. That's why the number of active providers represents the situation at June 30, 2005.
Romania: The number of licences for provision of public voice telephony services covers fixed telephony services only, while the number of licences for the provision of network services includes networks for provision of fixed telephony, Internet, leased lines and data transmission services, and Cable TV services. The data represents the situation as of December 31, 2005.
Serbia & Montenegro - Montenegro: Licence is issued to the fixed incumbent operator, Telecom Montenegro.

Table 26 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	84.30 %	15.70 %
Bosnia & Herzegovina	100.00 %	0.00 %
Bulgaria	97.00 %	3.00 %
Croatia	97.40 %	2.60 %
Romania	43.60 %	56.40 %
Serbia & Montenegro - Montenegro	100.00 %	0.00 %
Serbia & Montenegro - Serbia	100.00 %	0.00 %
Serbia & Montenegro - · Kosovo	100.00 %	0.00 %
The former Yugoslav Republic of Macedonia	100.00 %	0.00 %
Turkey	100.00 %	0.00 %

Table 26 - Proportion of fixed numbers allocated to the fixed incumbent and to fixed alternative operators

The proportions indicated in the first report and from the table above are shown graphically in the next figure.

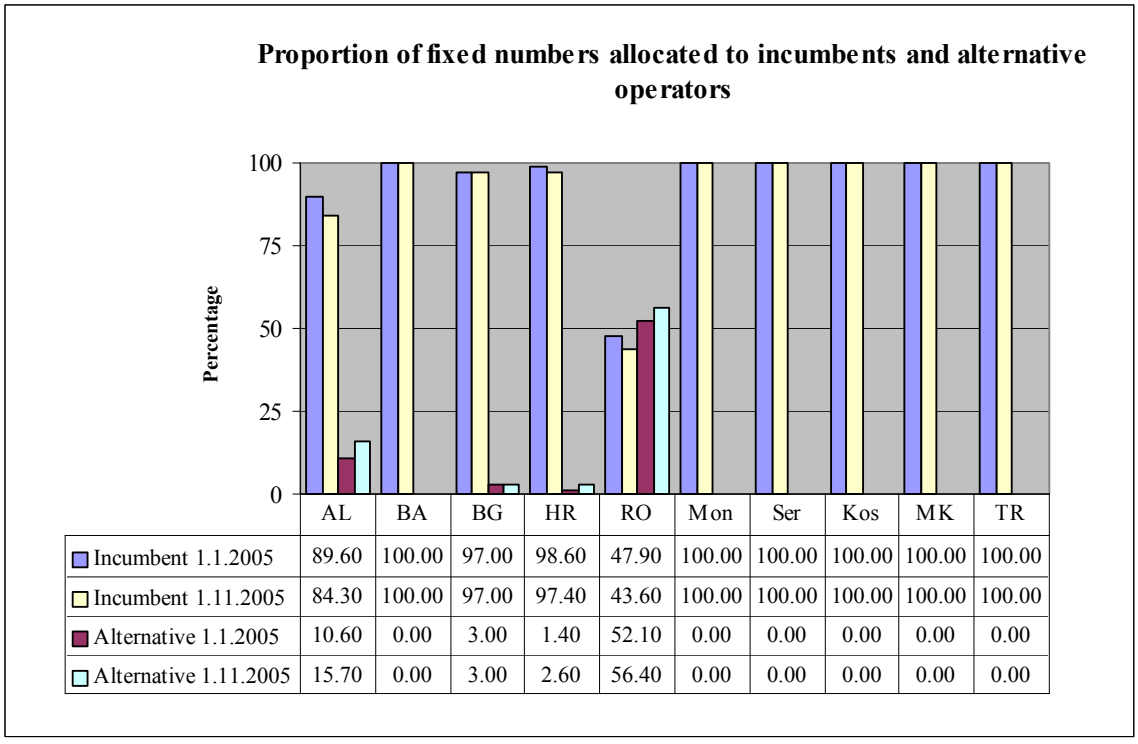


Figure 8 – Allocation of fixed numbers

The preceding figure shows that there have been slight increases in the proportion of fixed numbers allocated to alternate operators in Albania, Croatia and Romania. No changes have been reported from the other countries and territories.

5. Radio networks and services

Table 27 shows 2G mobile licences granted in the SEE countries

Country	Number of 2G operators and licences for the provision of digital mobile services		
	GSM 900 licences Operator names	DCS (GSM 1800) licences Operator names	Sum 2G operators
Albania	• Albanian Mobile Communications (GSM 900/1800) • Vodafone Albania (GSM 900/1800) • Eagle Mobile (GSM 900/1800) (not yet operational)		3
	Albanian Mobile Communication and Vodafone Albania are in operation. Eagle Mobile Eagle Mobile had not started building its GSM network at the time of this report.		
Bosnia & Herzegovina	• BH Telecom d.d. Sarajevo (GSM 900, 1800) • Telekom Srpske a.d. Banja Luka (GSM 900/1800) • Hrvatske Telekomunikacije d.o.o. Mostar (GSM 900/1800)		3
Bulgaria	• Mobiltel AD (MTel) – GSM 900/1800. • Cosmo Bulgaria Mobile EAD (GloBul) – GSM 900/1800 • BTC Mobile EOOD (Vivatel[19]) - GSM 900/1800		3
	There is one analogue operator (Radio Telecommunications Company) using the NMT 450i standard.		
Croatia	• T-Mobile Hrvatska (GSM-900) • VIPnet (GSM-900) • Tele2 (GSM 900/1800)	Tele2 (GSM 900/1800)	3
Romania	• Mobifon (CONNEX Vodafone) – GSM 900 • Orange Romania – GSM 900	• Mobifon (CONNEX Vodafone) - DCS 1800 • Cosmote Romanian Mobile Telecommunications – DCS 1800 • Orange Romania SA – DCS 1800	3
	In addition, Telemobil SA (ZAPP) has been issued a licence to operate a CDMA 2000 network in the 450 MHz spectrum band.		
Serbia & Montenegro - *Montenegro*	• Promonte (GSM 900/1800) • Monet (GSM 900/1800)		2

[19] In November 2005 BTC Mobile started operating under the brand name "Vivatel".

Country	Number of 2G operators and licences for the provision of digital mobile services		
	GSM 900 licences Operator names	DCS (GSM 1800) licences Operator names	Sum 2G operators
Serbia & Montenegro - *Serbia*	• Telekom Srbija a.d. (GSM 900/1800) • Mobile telecommunications "Srbija" BK-PTT (Mobtel) (GSM 900/1800 and analogue NMT 900)		2
Serbia & Montenegro - · *Kosovo*	• Vala 900 • Mobikos/Mobitel GSM 900/1800 (not operational)	Mobikos/Mobitel GSM 900/1800 (not operational)	2+1
	The second mobile operator de-facto operating in Kosovo is "Mobilne Telekomunikacije "Srbija" BK-PTT" (Mobtel), a GSM 900 MHz network operator that was present in Kosovo before the war; and although unlicensed after the war, it continues its operations. The TRA considers its operations unauthorised and Mobtel was requested by UNMIK to release GSM frequencies in Kosovo. The validity of the licence contract issued by the TRA to Mobikos/Mobitel in October 2004 was questioned by UNMIK, and the licence never became operational.		
The former Yugoslav Republic of Macedonia	• Mobimak AD, (GSM 900 MHz) • Cosmofon AD, (GSM 900 MHz)	-	2
Turkey	• Turkcell İletişim Hizmetleri A.Ş (GSM 900) • Telsim Mobil Telekomünikasyon Hizmetleri A.Ş. (GSM 900)	AVEA Telekomünikasyon Hizmetleri A.Ş, former TT-TIM (GSM 1800)	3
	The NMT 450 network is operated by Türk Telekom in the scope of its Authorization Agreement (415.5-420/425.5-430 MHz).		

Table 27- Number of 2G operators and licences for the provision of digital mobile services

Table 28 shows whether there is an obligation for the licensed mobile operators to provide access to virtual network operators and service providers.

In Croatia, under Article 53(3) of the Telecommunications Law, mobile operators with SMP are required to accept all reasonable requests for so-called special access, which covers any category of service providers and virtual operators. The costs incurred from such a request 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 Agency.

Similar legal obligations for mobile operators with SMP for the provision of access to service providers also exist in Serbia and in Bosnia & Herzegovina.

Country	Legal obligation for mobile operators to deal with			Commercial reality
	Service providers	Enhanced service providers	Mobile virtual network operators	
Albania	Yes	No	No	No
Bosnia & Herzegovina	Yes	Yes	Yes	No
Bulgaria	No	No	No	No
Croatia	Yes	Yes	Yes	No
Romania	No	No	No	No
Serbia & Montenegro - *Montenegro*	No	No	No	No
Serbia & Montenegro - *Serbia*	Yes	Yes	Yes	Mobtel, as a MNO is in cooperation with a ESP for value added services and with a SP for prepaid service.
Serbia & Montenegro - · *Kosovo*	No	No	No	No
The former Yugoslav Republic of Macedonia	No	No	No	No
Turkey	No	No	No	Yes, 1 airtime reseller is operating in the Turkish mobile market.

Table 28 - Service providers and mobile virtual network operators

Notes:
Albania: Due to the relatively high prices of mobile, it seems that different operators playing a role of ESP use services from Albtelecom (i.e. fixed PSTN). Such operators offer services such as prepaid telephone cards etc.; for this purpose they exploit some communication capacities received from Albtelecom. There is no information about any serious involvement of mobile operators in SP/ESP/MVNO activities. The structure of the telecommunication services in general remains too simple to consider mobile support as [technically] obligatory. Despite legal obligations, tariffs define the degree of relations between mobiles and other service providers.

Table 29 summarises information on 3G mobile licences granted in SEE countries.

Only three countries – Bulgaria, Croatia and Romania – have licences for 3G mobile networks based on the UMTS standard been granted so far. In Croatia and Romania, the licences were awarded following a beauty contest procedure, in Bulgaria – by an auction.

In addition, in Romania, Telemobil SA was issued a licence to operate a CDMA 2000 network in the 450 MHz spectrum band.

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

In Serbia, trial 3G licences have been temporarily issued to both 2G operators in the 2 GHz band, subject to a payment of some sort of tax. However, there has been no decision on issuing 3G licences for the provision of public services.

Country	Licensees	Administrative fees	Spectrum fees	Deadline for service launch	Coverage and roll-out obligations
Bulgaria	*May 11, 2005*: Mobiltel; GloBul; BTC Mobile	*Mobiltel*: 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	Class A licence: • 20% population by May 2007 • 55% population by May 2010 Class B licences: • 15% population by May 2007 • 50% population by May 2010
Croatia	*Oct. 2004*: T-HT Mobile; VIPnet *Dec. 2004*: Tele2	*T-HT Mobile and VIPnet*: KN 132m (€°17.6m) *Tele2:* KN 172m (€ 22.9m) for a combined 2G/3G concession *All licensees:* annual fee of 1% revenue from UMTS service	Annual fee of KN 5m (€ 670,000) for 5 MHz frequency block	*T-HT Mobile and VIPnet:* June 2005 *Tele2:* August 2005	• 25% of population within two years after the grant of concession • 50% of population within five years after the grant of concession Within a maximum of two years after the grant of concession, the third operator (Tele2) has the option to request additional time from the NRA to meet the above 3G obligations.

Country	Licensees	Administrative fees	Spectrum fees	Deadline for service launch	Coverage and roll-out obligations
Romania	*Nov. 12, 2004.* • Mobifon SA • Orange Romania SA	$35m payable in six instalments as follows: • $10.5m within 120 days after the notification announcing the winner of the auction; • the next five annual instalments, of $4.9m each, starting from 2006.	Each 3G licensee pays to IGCTI an annual tariff for the use of the spectrum: • €1.2m/paired block of 2x5 MHz/ year; • €600,000/ unpaired block of 5 MHz/year.	Individual commitments: • Jan. 1, 2005 for Mobifon (launched on April 22, 2005) • 1st quarter 2006 for Orange	The minimum coverage by Dec 31, 2011 shall comprise 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: • Dec. 31, 2005 • Dec. 31, 2008 • Dec. 31, 2011.

Table 29 - Information about assigned UMTS licences

Note:
Albania: Two mobile operators are currently extending their services "horizontally", including multimedia message, data transmission etc. based on their existing network technology (i.e. 2G).

Three frequency bands have been reserved for R-LAN systems by two 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 30 below shows whether:

- the full frequencies in the 2.4 GHz and 5 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 service by the incumbent operator
	2.4 GHz	5 GHz		
Albania	Yes	Yes	General authorisation	Yes
Bosnia & Herzegovina	Yes	Yes	General authorisation	No
Bulgaria	Yes	Yes	General (class) licence with prior notification to CRC	Yes
Croatia	Yes	Yes	General authorisation	Incumbent – No Others - Yes
Romania	Yes	No (5.8 GHz only)	General authorization with notification to ANRC	No
Serbia & Montenegro - *Montenegro*	Yes	No	Individual licence only for public telecommunication services, general authorisation for other	No
Serbia & Montenegro - *Serbia*	Yes	Yes	General authorisation is foreseen	No
Serbia & Montenegro - · *Kosovo*	Yes	No	General authorisation is foreseen	No
The former Yugoslav Republic of Macedonia	Yes	Yes	Notification and permission for using radio frequencies	No
Turkey	Yes	Yes	There are no authorisation requirements for indoor applications but outdoor applications require a General Authorisation.	Yes The incumbent operator - Türk Telekom - has the right to provide Public R-LAN services in the scope of its Concession Agreement.

Table 30 - Public Radio Local Area Networks (R-LAN)

Notes:
Albania: Some RLAN services are offered by mobile operators (AMC (www.amc.al) and Vodafone (www.vodafone.al)). The fixed incumbent operator has no RLAN services (www.atnet.al).

Croatia: New general licences for LAN equipment will be issued by the Agency under the Bylaw on radio frequency allocation that entered into force from December 1, 2005.

D. Regulations – Competitive safeguards

The information in this chapter is intended to reflect the situation as it existed on November 1, 2005.

1. Carrier selection and pre-selection

Carrier selection and pre-selection are the basic mechanisms for enabling competition while a national market is being liberalised. Carrier selection allows a subscriber, who is connected to the incumbent operator's network, to select a competitive operator to perform local calls, long-distance calls, and or international calls by dialling a carrier selection sequence.

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 call.

Article 19 of the Universal Service Directive requires carrier selection and pre-selection from all operators of fixed telephony with significant market power.

The next two tables present the status for carrier selection and pre-selection. The very early phases of liberalisation are demonstrated by the fact that very few of the geographic units have implemented these mechanisms by November 1, 2005.

Albania has made provisions for carrier selection in its numbering plan, but other aspects are still under consideration.

Bulgaria[20] has both carrier selection and pre-selection for long distance and international calls, but no type of carrier selection for other types of call. There are 12 licensed operators for CS and CPS services and two of them were actively operating on June 30, 2005.

In Croatia, the first two operators have started with carrier pre-selection activities.

Romania has carrier selection for all types of calls, but no carrier pre-selection. In July, 2005 ANRC decided to impose carrier pre-selection from June 2006.

Turkey has legal requirements for carrier selection, but on November 1, 2005 these requirements were not yet implemented in practice.

Serbia also has provisions for carrier selection in its Telecommunications Law of 2003, but its implementation requires further guidelines from the NRA, which is not yet established.

[20] In the beginning of 2006, CRC decided also to enforce also calls to mobile networks via carrier selection and carrier pre-selection.

The former Yugoslav Republic of Macedonia, in its new Telecommunications Act of February 2005, has a legal requirement to introduce carrier selection and pre-selection by September 1, 2005 but these were still in the implementation phase on November 1, 2005.

Country	Carrier 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	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006
Bulgaria	Not available	29.06.2004	29.06.2004	Not available	Not available
Croatia	1.1.2003 Not available yet	1.1.2003 Not available yet	1.1.2003 Not available yet	1.1.2003 Not available yet	Not decided
Romania	February 2003	February 2003	February 2003	February 2003	February 2003
Serbia & Montenegro - *Montenegro*	Not defined yet	Not defined yet	Not defined yet	Not defined yet	Not defined yet
Serbia & Montenegro - *Serbia*	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied
Serbia & Montenegro - · *Kosovo*	Not decided	Not decided	Not decided	Not decided	Not decided
The former Yugoslav Republic of Macedonia	Regulation adopted Implementation under way	Regulation adopted Implementation under way.	Regulation adopted Implementation under way	Regulation adopted Implementation under way	Regulation adopted Implementation under way
Turkey	Carrier selection not implemented for local calls	Carrier selection not operational yet December 2005 target date	Carrier selection not operational yet December 2005 target date	Carrier selection not operational yet December 2005 target date	Carrier selection not operational yet December 2005 target date

Table 31 - Availability of carrier selection

Note:
The former Yugoslav Republic of Macedonia: The Commission of the NRA adopted the Carrier Selection and Carrier Pre-selection rules on October 10, 2005[21].

[21] On December 1, 2005 the NRA approved the technical and legal part of the RIO, whereby carrier selection and carrier pre-selection is becoming operational.

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	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006
Bulgaria	Not available	1.1.2005	1.1.2005	Not available	Not available
Croatia	1.1.2005	1.1.2005	1.1.2005	1.1.2005	Not decided
Romania	Obligation imposed in July 2005, to be implemented by June 2006	Obligation imposed in July 2005, to be implemented by June 2006	Obligation imposed in July 2005, to be implemented by June 2006	Obligation imposed in July 2005, to be implemented by June 2006	Obligation imposed in July 2005, to be implemented by June 2006
Serbia & Montenegro - *Montenegro*	Not defined yet	Not defined yet	Not defined yet	Not defined yet	Not defined yet
Serbia & Montenegro - *Serbia*	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied
Serbia & Montenegro - · *Kosovo*	Not decided	Not decided	Not decided	Not decided	Not decided
The former Yugoslav Republic of Macedonia	Regulation adopted Implementation under way	Regulation adopted Implementation under way	Regulation adopted Implementation under way	Regulation adopted Implementation under way	Regulation adopted Implementation under way
Turkey	Carrier pre-selection is not implemented for local calls	March 2006 target date	March 2006 target date	March 2006 target date	March 2006 target date

Table 32 - Availability of carrier pre-selection

Notes:
Croatia: Became operational 02.04.2005.
The former Yugoslav Republic of Macedonia: The Commission of the NRA adopted the Carrier Selection and Carrier Pre-selection rules on October 10, 2005[22].

The number of operators with allocated access code provides 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.

[22] On December 1, 2005 the NRA approved the technical and legal part of the RIO, whereby carrier selection and carrier pre-selection is becoming operational.

Croatia has twelve operators with access codes. On November 1, 2005 the carrier selection procedures were not yet operational but 2 operators were using carrier pre-selection.

Romania has 58 operators with access codes and 27 of these could be reached through carrier selection by November 1, 2005.

Turkey has 25 alternative operators with access codes, but carrier selection procedures are not yet operational for technical reasons.

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	0	0	0
Bulgaria	12	2	0
Croatia	12	0	2
Romania	58	27	0
Serbia & Montenegro - *Montenegro*	0	0	0
Serbia & Montenegro - *Serbia*	2	0	0
Serbia & Montenegro - · *Kosovo*	0	0	0
The former Yugoslav Republic of Macedonia	0	0	0
Turkey	41	0	0

Table 33 - Operators with allocated access codes and use of CS and CPS for provision of voice telephony

Notes:
Bulgaria: By November 1, 2005 only 2 of the 12 Bulgarian operators were operating under the interconnection agreement. Their operating licences make no distinction between CS and CPS.
Romania: As of November 1, 2005 a total of 58 operators had been allocated CS access codes; 27 operators used CS codes for the provision of services in the first half of 2005.

2. Number portability

Another important competitive safeguard is number portability, which enables a subscriber to maintain his or her old telephone number when changing operator. This is particularly important for business users, for whom a change of telephone number is costly and represents a risk of loss of revenue.

Article 30 of the Universal Service Directive requires all operators of publicly available telephone services, mobile as well as fixed, to provide number portability.

Among the countries or geographic units being presented in this report, only Croatia has number portability in place.

Albania has taken some preliminary steps toward the introduction of a number portability requirement but has not yet decided on the details.

Bulgaria has set a date for its introduction from January 1, 2009 for fixed telephony. This date has been accepted by the European Commission because of Bulgaria's low degree of digitalisation (36.84% as of 30.06.2006). Number portability normally requires digital switches for its implementation. For mobile networks, this is normally not a problem and Bulgaria will implement number portability for mobile numbers from January 1, 2007. This date coincides with the expected date of accession for Bulgaria.

A legal requirement has been established in the former Yugoslav Republic of Macedonia (from March 2007). In Romania, it is foreseen from May-June, 2007. Serbia has a provision for number portability in its Telecommunications Law of 2003, but its implementation requires further guidelines from the NRA, which is not yet established. The other countries and geographic units have not yet taken a decision on number portability.

Kosovo does not have its own national prefix in the ITU's international numbering plan. Numbers in the fixed network use the +381 prefix of Serbia & Montenegro. A regime for number portability in the fixed network may be established during 2006. Only one of Kosovo's mobile operators, Mobtel (not authorised by TRA), is using numbers with the +381 prefix. The two others have made arrangements with Monaco and Slovenia for the use of numbers that belong to their numbering plans. It is not clear how number portability can be implemented under these circumstances.

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
Croatia	January 1, 2005 (implemented July 2005)	January 1, 2005 (implemented July 2005)	October 30, 2005 (not implemented, expected April 2006)
Romania	May-June, 2007	May-June, 2007	May-June, 2007
Serbia & Montenegro - *Montenegro*	Not decided	Not decided	Not decided
Serbia & Montenegro - *Serbia*	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied
Serbia & Montenegro - · *Kosovo*	Not decided	Not decided	Not decided
The former Yugoslav Republic of Macedonia	Legal requirement from March 5, 2007 Secondary legislation to be prepared first half of 2006	March 5, 2007	March 5, 2007
Turkey	Not yet Planned to issue regulation by the end of 2005	Not yet Planned to issue regulation by the end of 2005	Not yet Planned to issue regulation by the end of 2005

Table 34 - Availability of number portability

3. SMP regulations

The regulations for significant market power (SMP) set out the criteria for the designation of operators that subsequently will be subject to asymmetric ex-ante conditions. Such conditions, which apply only to SMP operators, typically set out requirements for competitive safeguards that are intended to protect alternative operators. Examples of such requirements, referred to in the EU regulatory jargon as "remedies", include non-discrimination, cost orientation and transparency. The transparency requirement is often further defined as a requirement for the establishment and publication of a reference interconnection offer.

Such regulations are normally implemented in primary and or secondary legislation. The actual designation of an SMP operator is normally a regulatory decision. The remedies that apply to an SMP operator can either be pre-determined in legislation, as they were in the 1998 acquis, or defined as part of the regulatory decision as provided in the 2003 acquis.

The adoption of SMP regulations is normally a fairly straightforward process. Depending upon the designation procedures, the actual analysis required to come to a regulatory decision may be more or less demanding on a regulator.

The real challenge of applying SMP regulations in the real world is demonstrated by conflicts that arise between an SMP operator and a new entrant. Often, the regulatory authority has to intervene and resolve such conflicts.

It is difficult to find an indicator that can provide a useful measurement of effectiveness of a national SMP regime. The following table provides information on the status of the legal arrangement and on the operators that have been designated as having SMP.

The table shows that all countries and geographic units have such a framework in place.

Only Romania has adopted the 2003 acquis and implemented a formal market analysis procedure. Since it is not an EU Member State, it does not have to notify the results of its market analyses to the European Commission and it has more freedom than an EU Member State to define its own markets relevant for ex ante regulation. The information in the table below shows that Romania, as a consequence of applying competition law principles in defining relevant markets, as required by the 2003 acquis, has a segmented definition of the relevant markets, and consequently of the scope of SMP designation, and an increased flexibility in the way the remedies can be applied.

Croatia's regulatory framework is a hybrid with elements from both the 1998 acquis and the 2003 acquis. A recent bylaw sets out procedures for market analysis according to the 2003 acquis. Until these market analyses are completed, the current SMP designations, which have been carried out according to the 1998 acquis, will apply.

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	Law No. 8618 of June 14, 2000 Definition of organisation with SMP (Art. 2, Para. 11*) Designation as organisation with SMP by TRE (Art. 17*) Interconnection obligations of organisation with SMP (Art. 42*) The Law establishes a 25% market share threshold for SMP designation. TRE regulation on "Definition of SMP organisations in the market" of September 16, 2005. Law No. 9121 of July 28, 2003 "On Competition Protection" contains provisions on the 'relevant market' definition.	None (as of November 1, 2005) TRE decision of May 2004 designated the following operators as having SMP: • Fixed telephony networks and services: AlbTelecom • Mobile telephone networks and services: Albanian Mobile Communications, Vodafone Albania The designations were valid until May 2005. As the mobile operators had appealed the SMP designations in the court, SMP obligations were never imposed on mobile operators in practice, as the court proceedings were not completed before the expiry of the SMP designations. Following the adoption of TRE regulations on SMP in September 2005, the process of market analysis and SMP designation is currently under way.	• Non-discrimination • Cost orientation • Transparency • Meet all reasonable requests for access and interconnection • Respect confidentiality • Tariff regulation • RIO
Bosnia & Herzegovina	Law on Communications 2003, Art. 14 contains general provisions on designation of operators with SMP in the relevant markets based on competition law principles. Art. 17 contains provisions on designation of operators with SMP in the leased lines market. The Law foresees that RAK shall review SMP designations annually.	Three incumbent operators: BH Telecom, Telekom Srpske, HT Mostar are designated as having SMP in the following markets: • Provision of voice telephony service via a fixed network • Provision of voice telephony service via a mobile network • Provision of leased lines SMP obligations were imposed when the licences were issued: on June 1, 2002 for public fixed telephony services and on October 12,	All SMP-operators are subject to obligations of: • Non-discrimination • Cost orientation (applies to fixed network operations only) • Transparency • Meet all reasonable request for access • Respect confidentiality

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
		2004 for GSM services.	
Bulgaria	Art. 45(2) of the Telecommunications Act of Oct. 7, 2003: *Determined as operators having SMP may be telecommunication operators […] carrying out telecommunications through:* • fixed telephone networks and providing fixed voice telephone services; • providing the leased lines service; • mobile telecommunications networks and providing voice telephone services through them. National combined market for interconnection is not defined in the act. A 25% market share threshold is set for SMP designation. 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. The last CRC market analyses[23] were carried out in 2005 and decisions were taken in September 2005 (fixed market).	• Fixed telephone networks and services: BTC • Leased lines: BTC • Mobile telephone networks and services: Mobiltel	1. BTC (fixed telephony network and services; leased lines) is imposed the full set of remedies defined in the TA: • Non-discrimination • Meet all reasonable request for access • RIO and RUO • Transparency and access to information • Cost orientation • Accounting separation • Respect confidentiality • Co-location for interconnection • Provision of leased lines, special access, LLU and co-location 2. Mobiltel (mobile networks and services) is only subject to obligations of: • Non-discrimination • Transparency • Confidentiality
Croatia	Telecommunication Law, (Art. 51) establishes a 25% market share threshold for SMP designation on a relevant market. On Oct. 20, 2005 the Agency Council adopted a Decision on SMP providers in four relevant product and geographic markets. These designations are valid	• Public voice services on national level: Croatian Telecom (T-Com) • Transmission of voice, sound, data, documents, pictures and other in fixed network on national level: T-Com • Public voice services in mobile network on national level: Croatian Telecom (T-Mobile),	All operators with SMP are subject to obligations of: • Transparency • Meet all reasonable request for access • Respect confidentiality • Accounting separation • Local loop

[23] The decision on mobile and leased lines markets was taken in December 2005.

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
	until the market analysis of the 18 relevant markets defined according to the EU 2003 framework is carried out. The Ordinance on conditions and procedures of relevant markets definition (Official Gazette 127/05) was adopted in Oct. 2005.	VIPnet • Interconnection on national level: T-Com, T-Mobile, VIPnet	unbundling • price control
Romania	**Art. 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. Decision of president of ANRC No. 136/2002, with subsequent completions, identifies the following relevant wholesale markets: • Access to the fixed public telephone networks for the purpose of call origination, termination and transit • Full or shared unbundled access to the twisted metallic pair local loop, for the purpose of providing broadband electronic communications services and publicly available telephone services at fixed locations • Bitstream access to the twisted metallic pair, optical fibre, or coaxial cable local loop and to the radio local loop, for the purpose of providing broadband electronic communication services • Terminating segments of leased lines • Trunk segments of leased lines • Access to the public mobile telephone networks operated by each mobile operator for the purpose of call termination	• Fixed retail and wholesale relevant markets: Romtelecom • Mobile call termination: Mobifon, Orange Romania, Telemobil, Cosmote România	**Wholesale markets**: • Transparency • Non-discrimination • Accounting separation • Access to and use of specific network elements • Cost orientation **Retail markets**: - for all SMP providers of electronic communications services: • The interdiction of excessive prices • The interdiction predatory prices • The interdiction of undue preference to specific end-users • Services unbundling - for SMP providers of access to a public telephony network at a fixed location: • Carrier selection • Carrier pre-selection - for SMP providers of leased lines services: • Provision of part or all of the minimum set of leased lines • Non-discrimination • Cost orientation • Transparency

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
	and the following relevant retail markets: • Access at a fixed location to a public telephone network for residential customers / for non-residential customers • Local calls at a fixed location for residential / non-residential customers • National calls at a fixed location for residential / non-residential customers • Calls at a fixed location to public mobile telephone networks for residential / non-residential customers • International calls at a fixed location for residential / non-residential customers		
Serbia & Montenegro - *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).	• Fixed telephone networks and services: Telecom Montenegro • Internet services: Internet Montenegro • Mobile telephone networks and services: Promonte, Monet	• Non-discrimination • Cost orientation • Transparency • Meet all reasonable requests for access • Respect confidentiality
Serbia & Montenegro - *Serbia*	Telecommunications Law, Art. 4 establishes a 20% market share threshold for SMP designation on a relevant market, which RATEL may modify to 25%.	• Fixed telephone networks and services: Telekom Srbija (100% market share) • Mobile telephone networks and services: Telekom Srbija (53%), Mobtel (47% market share based on the number of users)	Telecommunications Law, Art. 9, 10, 39, 40, 43, 48, 52 and 111): • Requirement to meet all reasonable requests for network access • Provision of leased lines • Non-discrimination • Cost orientation • Transparency • Prohibition of cross-subsidisation

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
Serbia & Montenegro - · *Kosovo*	Telecommunications Act (UNMIK Regulation 2003/16), Section 44 establishes a 25% market share threshold for SMP designation on a relevant service market.	• Fixed telephone networks and services: PTK • Mobile networks and services: Vala 900 (PTK mobile subsidiary)	• Non-discrimination • Cost orientation • Transparency • Meet all reasonable requests for access • Respect confidentiality
The former Yugoslav Republic of Macedonia	Law on electronic communications, Art. 146 designates the incumbent operator Makedonski Telekomunikacii as the operator having SMP until otherwise decided by the NRA.	Makedonski Telekomunikacii is designated as having SMP in the market for: • fixed voice telephone networks and services; • access to networks for data transmission and leased lines.	• Non-discrimination • Cost orientation • Transparency • Meet all reasonable request for access • Respect confidentiality • Interconnection obligation • Accounting separation • Minimum set of leased lines • Retail tariff regulation • Carrier selection and pre-selection

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
Turkey	• 'Communiqué on Principles and Procedures regarding the Determination of Operators Having Significant Market Power' of June 3, 2003 • Decision no. 2004/24 of the Telecommunications Authority, Official Gazette of Jan. 4, 2005 (SMP designations for GSM mobile telecom services market) • Decision of the Telecommunications Authority No 2004/696, official gazette dated 27/12/2004 (SMP designation for Mobile call termination market)	• Fixed telephone networks and services: Türk Telekom • GSM mobile communications services: Turkcell • Mobile call termination: Turkcell	All SMP-operators are subject to obligations of: • Non-discrimination • Cost orientation • Transparency • Meet all reasonable request for access • Respect confidentiality • Obligation to follow national and international QoS standards • Reference Interconnection / Access Offer • Accounting separation • Co-location

Table 35 - SMP regulations as a competitive safeguard

The designation of operators having SMP is done in a number of specific markets. Under the new regulatory framework in the EU (the 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 related to fixed network interconnection (fixed call origination, termination and transit and two – to mobile network interconnection (mobile call origination and call termination on individual mobile networks). The Access Directive (2002/19/EC) gives NRAs the flexibility to select 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, in such a way that they included both retail and wholesale aspects. These 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 (provided that the mobile operator passes the additional test of having more than 25% market share in the combined 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). Then 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.

The table below 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 type of cost orientation principle.

In Albania, following the expiry of SMP designations in May 2005, no specific regulatory obligations regarding interconnection are currently in force, awaiting the new TRE decision on operators with SMP.

In Bulgaria, the interconnection market is not defined as a relevant market in the Telecommunications Act and for this reason no specific cost orientation obligations can be imposed on public mobile operators with SMP. This may be based on 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.

In the case of Serbia, SMP designation is yet another task on the backlog of the newly established NRA.

Most of the geographic units have applied a cost orientation requirement for fixed network interconnection charges of operators with SMP. Croatia, Montenegro, Kosovo, Romania and Turkey also have regulations in place for cost orientation for the mobile operators with significant market power.

In the former Yugoslav Republic of Macedonia, the regulator is currently finalising its work on the cost accounting principles that will apply to interconnection.

Country	SMP operators		Cost orientation imposition on SMP operators			
	Fixed	Mobile	Fixed	Mobile	Cost base	Cost standard
Albania	No operator designated as having SMP at the moment, market analysis process is under way.		-	-	-	-
	The regulation of the retail tariffs of the incumbent fixed operator, Albtelecom, is based on FAC methodology and on historical cost. For the moment there is no any methodology for regulation of mobile tariffs, either retail or wholesale. The interconnection charges recommended by TRE in May 2004 were based on an EU benchmark (after the interconnection agreements between mobile and fixed operators were deemed by TRE to infringe the competition principles).					
Bosnia & Herzegovina	BH Telecom d.d. Sarajevo	None	Yes	-	Bench-marking/forward looking (see note below)	Bench-marking /LRIC
	Telekom Srpske a.d. Banja Luka	-	Yes	-	Bench-marking/forward looking (see note below)	Bench-marking /LRIC

Country	SMP operators		Cost orientation imposition on SMP operators			
	Fixed	Mobile	Fixed	Mobile	Cost base	Cost standard
	Hrvatske Telekomunikacije d.o.o. Mostar	-	Yes	-	Bench-marking/forward looking (see note below)	Bench-marking /LRIC
	The combination of Benchmarking/LRIC methodologies means that the Agency has recommended the LRIC method in "A guide to setting up an interconnection regime in B&H" and in the Rule on Interconnection No.16/02. All incumbents have not implemented LRIC or any other cost-oriented methodology and the Agency has applied the benchmarking based on the EU and SEE countries.					
Bulgaria	BTC	-	Yes	-	Current cost	Fully Distributed Cost
		MTel	-	No	-	-
Croatia	HT-Hrvatske Telekomunikacije d.d.		Yes		Benchmarking	Benchmarking
		T-Mobile Hrvatska d.o.o.	-	Yes	Benchmarking	Benchmarking
		VIPnet d.o.o	-	Yes	Benchmarking	Benchmarking
Romania	RomTelecom	-	Yes	-	Current cost	LRAIC
		Mobifon	-	Yes	Current cost	LRAIC
		Orange Romania	-	Yes	Current cost	LRAIC
		Telemobil	-	No	-	
		Cosmote România	-	No	-	
Serbia & Montenegro - *Montenegro*	Telecom Montenegro		Yes		Historic	Fully Distributed Cost
		Promonte		Yes	Historic	Fully Distributed Cost
		Monet		Yes	Historic	Fully Distributed Cost
	No specific cost orientation obligation has been defined by the NRA. Consultation on draft rulebook on regulatory cost orientation obligation is under way. The cost methodologies indicated above are the ones used in practice by operators.					
Serbia & Montenegro - *Serbia*	Telekom Srbija		Not decided			
		Telekom Srbija	Not decided			

Country	SMP operators		Cost orientation imposition on SMP operators			
	Fixed	Mobile	Fixed	Mobile	Cost base	Cost standard
		Mobtel	Not decided			
Serbia & Montenegro - · *Kosovo*	PTK		Yes		Benchmarking	Benchmarking
		PTK (Vala 900)		Yes	Benchmarking	Benchmarking
The former Yugoslav Republic of Macedonia	Makedonski Telekomunikacii A.D.	None	Yes	-	Current cost	Fully Distributed Cost
	The cost orientation methodology is proposed in the draft regulation prepared by the NRA. Implementation of LRIC cost accounting methodology is foreseen within 2 years.					
Turkey	Turk Telecom		Yes		Current costs	LRIC (combined with international benchmarking)
		Turkcell		Yes	Benchmarking	Benchmarking

Table 36 - Operators declared as having SMP on interconnection and imposition of cost orientation

Notes:
Albania: The TRE of Albania declared Operators as having SMP on Public Telephony Services and by the Law "On Telecommunications in the Republic of Albania" it has to declare Operators as having SMP on providing fixed public telephony networks and/or mobile public telephony services, and/or leased circuits.
Bulgaria: No interconnection market is defined according to the Bulgarian Telecommunications Act.
Cost orientation obligations were imposed on BTC as an SMP on the fixed and leased lines markets. The BTC's costing model is based on CCA, FDC.

4. Reference interconnection offer (RIO)

One of the key factors in enabling a competitive telecommunications market is the establishment of a reference interconnection offer from the operator with significant market power. This is an offer, which must be available to all alternative operators in a non-discriminatory manner. The table below shows that Bosnia & Herzegovina, Bulgaria, Croatia, Montenegro, Romania, and Turkey have established and published such offers. In addition, the former Yugoslav Republic of Macedonia has made significant progress as the RIO has been partially approved. In Kosovo, the incumbent prepared the first daft RIO in October 2005, which is currently being reviewed by the NRA.

An even better indicator of a competitive market is the number of interconnection agreements that have actually been concluded. Romania can demonstrate a rather impressive environment with 46 agreements concluded for fixed-to-fixed network interconnection.

Albania has not yet established a RIO but a draft interconnection agreement is available from TRE and is published on its website. In total, 46 interconnection agreements between fixed networks are in place. This is due to its very special situation with one incumbent operator and a large number of small operators, which operate only in rural areas.

In Bulgaria, six interconnection agreements have been concluded between fixed telephony operators. In addition, over 80 operators are active with international and national long distance calls using VoIP technologies. Such activities do not require authorisation or notification to the NRA. However, since they do not have interconnection rights they were originally interconnecting locally through ISDN retail subscriptions. Now they are increasingly interconnecting through other licensed operators (OLOs) and benefiting from their interconnection agreements.

There are cross-territory interconnection agreements in place between Mobtel in Serbia and mobile operators in Montenegro.

In Turkey, 26 agreements have been concluded for fixed-to-fixed network interconnection. These are mainly between Turk Telecom and long-distance carriers and between the long-distance carriers themselves.

Country	Status of RIO	Number of interconnection agreements		
		Fixed – Fixed	Fixed – Mobile	Mobile - Mobile
Albania	Not available	47	2	1
Bosnia & Herzegovina	Published Nov. 1, 2005	0	0	0
Bulgaria	Published	6	4	3
Croatia	Published June 23, 2005	5	7	3
Romania	Published Feb. 2003	46	52	6
Serbia & Montenegro - *Montenegro*	Published	0	2	1
Serbia & Montenegro - *Serbia*	Not available	No	One between Telekom Srbija and Mobtel	No
Serbia & Montenegro - · *Kosovo*	Not available	0	0	0
The former Yugoslav Republic of Macedonia	Dec. 1, 2005 NRA has approved the technical and legal part of RIO	0	2	1
Turkey	Published	26 (between the incumbent and long distance telephony operators)	3	3

Table 37 - Reference interconnection offer of fixed incumbent operator and number of interconnection agreements

Notes:
Bulgaria: The RIO was revoked by the Supreme Administrative Court because of procedural reasons: the court concluded that CRC had not strictly followed the procedure for public consultation set by law.
CRC has opened up a new procedure for public consultation of the RIO. After taking into consideration all the

opinions, the legislation in force and the telecommunications market development, CRC shall approve the RIO towards the end of 2005. The current lack of a RIO is not hindering interconnection on the Bulgarian telecommunications market. Interconnection between the operators is based on the agreements in force. New agreements are concluded according to the provisions of the Telecommunications Law: BTC is obliged to follow the principle of non-discrimination[24].
Croatia: T-Com's RIO does not cover the termination of calls from mobile networks. There is no standard bitstream offer yet – it is being processed by the Agency and expected to be approved in January 2006.
The former Yugoslav Republic of Macedonia: The interconnection agreements were concluded after direct negotiations between the two operators.

5. Reference unbundling offer (RUO)

The local loops of the telephony network that connect individual subscribers with the nearest switch have particular regulatory significance. They often represent half of the investment in the telephony networks and although competitive access technologies are emerging, they represent a facility that is particularly difficult to duplicate. For this reason, it is often considered an essential facility that must be capable of being shared by alternative operators in order to enable efficient competition.

In addition, new transmission technologies have enabled the local loop to carry digital data at broadband speeds and competitive access to this resource has been deemed as an indispensable instrument to accelerate the growth of broadband access.

In the EU, this topic was deemed sufficiently important to justify the adoption[25] of a "Regulation on unbundled access to the local loop"[26] in 2000, which also set out a requirement for the publication of a reference offer. The regulation has subsequently been replaced by a corresponding requirement in the Access Directive[27].

The existence of a reference unbundling offer is thus an indication that local loop unbundling has been introduced and that the local loop facilities of the incumbent operator is 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:

1. Full unbundling, whereby the alternative operator takes full control over the local loop.
2. Shared unbundling, 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 bitstream, whereby the incumbent operator hands over the digital traffic over the xDSL channel according to an agreed standard.

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24 The RIO was approved in April 2006.

25 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.

26 Regulation (EC) No 2887/2000 of the European Parliament and of the Council of 18 December 2000 on unbundled access to the local loop

27 Art. 9.4 of the Access Directive (2002/19/EC)

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.

Only Romania has local loop unbundling in place and can demonstrate that more than 8,300 loops have been unbundled. In Bulgaria, it has been a legal requirement since the beginning of 2005 but there are no practical results yet. Similarly, the legal requirement in Croatia went into force on October 20, 2005, so it is too early yet to report on practical results. In the former Yugoslav Republic of Macedonia the RUO is in the process of approval.

Other countries and geographic units have adopted legal requirements for local loop unbundling, but have not yet started practical implementation. This is the case for Bosnia & Herzegovina. Kosovo and Turkey have established planning dates for its introduction.

In the other countries and geographic units, local loop unbundling has not yet been decided.

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	Not decided	-	-	-
Bosnia & Herzegovina	Yes	2006	-	-	-
Bulgaria	Yes	Compulsory since Jan. 1, 2005	0	No	0
Croatia	Yes	Oct. 20, 2005	-	-	-
Romania	Yes	July 2004	8,373 xDSL lines	No	-
Serbia & Montenegro - *Montenegro*	No	Not defined yet	0	Not defined yet	0
Serbia & Montenegro - *Serbia*	No	Not decided yet	-	Yes, access via ADSL	Several alternative providers offer to the users bitstream access.
Serbia & Montenegro - *Kosovo*	No	2007			
The former Yugoslav Republic of Macedonia	Yes	Sept. 5, 2005 RUO is currently in the approval process.	-	-	-

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
Turkey	Draft RUO of the incumbent has been submitted to TA and the deadline for Public Consultation is January 13, 2006.	-	-	-	-

Table 38 - Reference unbundling offer (RUO) of fixed incumbent operator

Notes:
Croatia: The bitstream access offer is currently going through an approval process. It is expected to be approved in January 2006.
Romania: Number of xDSL lines on December 31, 2005.
Serbia & Montenegro - Montenegro: The development of a RUO framework during 2005 was foreseen in the business plan of the Agency for Telecommunications.
The former Yugoslav Republic of Macedonia: The Commission of the NRA adopted the Rules for unbundling the local loop on October 19, 2005.

6. National roaming

When a country decides to increase its number of mobile operators, it is not unusual to provide some regulatory assistance to the new entrant by requiring the already established operators to allow national roaming on their networks. Otherwise, it would be very 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.

The table 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 operate regionally, and the national roaming requirement is intended to ensure that the regional operators have national coverage. This is a requirement that has a political as well as a telecommunications regulatory dimension.

Similarly, special national roaming requirements exist in the country of Serbia & Montenegro to facilitate national communications.

Country	National roaming requirements	Practical implementation
Albania	National roaming not required	None 3G networks not yet licensed
Bosnia & Herzegovina	National 2G operators must have national roaming with each other to ensure national coverage.	3G networks not yet operational
Bulgaria	Licensed UMTS operators (having 2G networks with national coverage are obliged to provide national roaming for a new operator having reached network coverage by population of 20% and having granted data transfer speed 144 Kbit/s.	3G networks not yet operational
Croatia	2G operators are obliged to provide national roaming for new 2G operators for at least three years after the new operator has reached a coverage of at least 20% of the population.	National roaming 2G – 2G: VIPnet – Tele 2
Romania	Not regulated	-
Serbia & Montenegro - *Montenegro*	Not defined yet	3G networks not yet operational
Serbia & Montenegro - *Serbia*	No national roaming requirements for 2G existing mobile operators (Mobtel and Telekom Srbija)	National roaming on the State Union level is in place with both mobile operators in the Republic of Montenegro.
Serbia & Montenegro - · *Kosovo*	2G operators must provide roaming for new 3G operators for a period of 3 years after start of operation and/or regional operators must have national roaming agreement with each other to ensure national coverage.	2.5G and 3G networks not yet operational
The former Yugoslav Republic of Macedonia	No	3G networks not yet operational
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.	There is no roaming agreement between 2G operators.

Table 39 - National roaming requirements for 2G operators

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

7. Rights of way

Turkey is in the process of establishing a legal framework for rights of way. All the other geographic units have frameworks in place, which establish non-discriminatory rights of way for operators of public telecommunications networks.

However, few of the frameworks provide very convincing and operator friendly solutions for network builders. When compared with some of procedures available in countries in Western Europe, it appears that the solutions suffer from:

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

Romania has introduced new draft legislation on November 1, 2005, which would alleviate such shortcomings.

Country	Does legal framework provide for		
	Non-discriminatory rights of way?	**Easy procedures for access to public land**	**Procedures for access to private land**
Albania	Law no 8618 dated. 14.6.2000 Article 12: "The right to use public and private property"	Public land is used by public operators upon application to regional authorities	It is not a TRE responsibility.
Bosnia & Herzegovina	Yes, under condition to apply for construction permission from the Municipal Authority and that telecommunication infrastructure corridors are planned in Environment Plan for that Municipality.	If construction permission is obtained, the operator may use public land.	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 Telecommunications Act public operators have the right of way through public and private properties and access to private property. This provides a sound legal framework but it is not efficient because there is no adequate compliance with the Urban Development Act (UDA) and relevant secondary legislation.	According to the TA, the concrete parameters for execution of rights of way shall be determined by an order of the regional governor, respectively of the mayor of the municipality.	The Telecommunications Act does not provide for expropriation. The rights of way must be agreed between the operator and the landowner. If no agreement, the decision is with the mayor of the municipality in compliance with the provisions of the UDA. However, this law only provides rights for property owners, not for operators.

Country	Does legal framework provide for		
	Non-discriminatory rights of way?	**Easy procedures for access to public land**	**Procedures for access to private land**
Croatia	Yes	Yes, Law on telecommunications Article 21 provides for use of public land after obtaining a central approval from the state administration that manages public resources.	Yes Expropriation procedures are available.
Romania	Yes, for access to public property Art. 26 par. (2) of Government Emergency Ordinance No. 79/2002 includes a non-discrimination clause.	Yes Art. 23 par.(1) of Government Emergency Ordinance No. 79/2002 establishes that public property can be used when certain public interest conditions are met for installing private or public Electronic Communication Networks. Art. 27 of Government Emergency Ordinance No. 79/2002 sets a time limit of four months for negotiations after which the courts will decide.	Yes Art. 23 par.(2) of Government Emergency Ordinance No. 79/2002 establishes that private land can be used if: • there is insignificant impact on the private property; • there are already installations and an additional installation will have insignificant impact; • the work does not contravene town or county planning; • there is an agreement by the parties or through court decision. Art. 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.
Serbia & Montenegro: *Montenegro*	Yes All public network operators have non-discriminatory rights of way established by law (Chapter VI of Telecommunications Law of 2000).	Yes Public land may be used by public operators upon application to appropriate authorities.	No No expropriation procedure is defined by the Law.
Serbia & Montenegro: *Serbia*	The New TA specifies that all public network operators have non-discriminatory rights of way.	No	Yes Article 87 of the New Telecom Act provides legal support for access to private land.

Country	Does legal framework provide for		
	Non-discriminatory rights of way?	Easy procedures for access to public land	Procedures for access to private land
Serbia & Montenegro - · *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 appropriate authorities.	Yes 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.	Yes State land may be used by public operators upon application to appropriate authorities.	Yes Expropriation procedures may be used.
Turkey	No - there is no legal framework for rights of way. The subject was included in the Work Plan for 2005.	-	-

Table 40 - Rights of way

E. Regulations – Universal service

The information in this section has November 1, 2005 as its reference date except where a different date is mentioned.

1. Scope

All countries and geographic units have now defined a scope of universal service in their legislation that corresponds broadly with 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.

Country	Network access	Voice telephony service access	Emergency services	Payphones	Common subscriber directories	Directory enquiry service	Legal base for disabled users
Albania	NA	NA	Yes	Yes	Yes	NA	Yes
Bosnia & Herzegovina	Yes	Yes	Yes	Yes	Yes	Yes	See note
Bulgaria	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Croatia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Romania	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Country	Network access	Voice telephony service access	Emergency services	Payphones	Common subscriber directories	Directory enquiry service	Legal base for disabled users
Serbia & Montenegro - *Montenegro*	Yes Secondary legislation under preparation	Yes	Yes	Yes	Yes	Yes	See note
Serbia & Montenegro - *Serbia*	Defined in law, not yet applicable	Defined in law, not yet applicable	Defined in law, not yet applicable	Defined in law, not yet applicable	-	Defined in law, not yet applicable	Yes
Serbia & Montenegro - · *Kosovo*	Yes	Yes	Yes	Yes	Yes	Yes	See note
The former Yugoslav Republic of Macedonia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Turkey	No	Yes	Yes	Yes	Yes	No	Yes

Table 41 - Scope of USO

Notes:
Albania: There is no practical implementation of a universal service fund.
Bosnia & Herzegovina: Special conditions for disabled users have been included in a document on universal service, which is not yet approved.
The final column of this table identifies whether or not the national telecommunications act includes provisions that are intended to assist disabled users. The following regimes are in place:
Bosnia & Herzegovina: the current arrangement includes special economic and technical conditions for disabled users. The monthly subscription fee includes 100 pulses free of charge. There are also pay phones especially adapted for disabled users.
Bulgaria: According to Art. 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[28] 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.
Serbia & Montenegro - Montenegro: Secondary legislation is under preparation and is now in public consultation. Agency for telecommunication of Republic of Montenegro will compile the Draft Rulebook for Universal service before year-end 2006 and submit it to the Ministry of Economy of the Republic of Montenegro.
Serbia & Montenegro - 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.
The former Yugoslav Republic of Macedonia: Secondary legislation for Universal services will be prepared in the first quarter of 2006.
Turkey: The Provision of Universal Services was enacted on June 16, 2005, with Law No. 5369. This Law defines

[28] Art. 11 of the Telecommunications Act of 2003 as amended in 2005.

the new universal scope and the operators who are obliged to provide universal services. The Telecommunications Authority has no responsibility for this subject. The TA only has control over quality matters derived from the USO.

2. Financing

Few of the geographic units have implemented compensation schemes for universal service cost in practice. Romania has done so, while in Bulgaria the universal service compensation fund was established in May 2005, but the incumbent operator has so far not submitted any claim for compensation.

The universal service cost compensation scheme in Romania has some innovative characteristics that merit additional comments.

- The contributions from the operators are constrained so that small operators with revenue less than €3 million do not have to pay. Larger operators pay 0.8% of turnover[29] in 2004 and 0.5% from 2005 to 2010. However, given that the contributions must not exceed a threshold of €2 million in 2005 (and €3 million in 2006), the actual percentage applied to all contributors is calculated according to the formula: threshold/largest turnover[30].

- 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.

- Mobile operators are eligible to receive compensation for the provision of universal service undertakings. Moreover, the mobile operator Orange Romania, the winner of the first round of auctions, was designated as universal service provider for the provision of access to the public telephone network, at a fixed location, by means of telecentres.

Moving on to other countries and geographic units, Croatia, Montenegro, Kosovo and the former Yugoslav Republic of Macedonia have adopted legislation that will permit them to introduce compensation schemes in the future. Turkey adopted a new law on June 16, 2005 that includes universal service cost compensation a. through several funding mechanisms.

Only Croatia, Montenegro, Romania and the former Yugoslav Republic of Macedonia have implemented the universal service provisions in such a way that the law keeps the door open for participation in the provision of universal service by mobile operators.

NB. 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.

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[29] The turnover calculation is defined to exclude revenues obtained from the interconnection and roaming services provided on the wholesale market to the mobile telephony operators from outside Romania for their users while roaming in a Romanian network,

[30] If the percentage applied to the largest turnover surpasses the threshold of 2 million euros for 2005 and 3 million euros for 2006, then the percentage (the 0.5%) is reduced to an amount which is applied to the largest turnover would not surpass the threshold. Therefore, this new percentage is calculated by dividing the threshold to the largest turnover (the outcome will be less than 0.5%) and is applied to all the contributors to the Universal Service Fund, taking into account the principle of non-discrimination.

Albania and Bosnia & Herzegovina do not have legislation that enables cost compensation for universal service providers.

Table 42 below provides the status on whether cost compensation schemes are stipulated in the law and whether it is actually used in practice. It also provides an overview of the eligibility of mobile operators to provide universal service to a fixed location. In addition, the table also provides information on the existence of a legal provision on "play or pay". Where such a provision exists, there is an opportunity for an operator to invest in universal service provision instead of paying cost compensation to another operator.

Country	USO cost compensation scheme stipulated by law	Compensation scheme applied in practice	Eligibility of mobile operators	Legal provision for play or pay
Albania	No	No	No	No
Bosnia & Herzegovina	No	No	No	No
Bulgaria	Yes Art. 104 – 112 of the Telecommunications Act	BTC has provided USO without compensation until 31.12.2004. Recovery scheme may be implemented if BTC applies for its proven US net costs for 2005. The first application for recovery of the US net costs for 2005 has to be submitted by June 30, 2006 (Art. 111 of TA); no submission so far.	No	No
Croatia	Yes	No	Yes	No
Romania	Yes According to Art. 13 par. (2) of Law No. 304/2003, the details of the cost compensation scheme are decided by the NRA.	Yes Year 2004	Yes	No
Serbia & Montenegro - *Montenegro*	Yes (Draft version of rulebook)	No	Yes (Draft version of rulebook)	Yes (Draft version of rulebook)

Country	USO cost compensation scheme stipulated by law	Compensation scheme applied in practice	Eligibility of mobile operators	Legal provision for play or pay
Serbia & Montenegro - *Serbia*	Yes, USO cost compensation is foreseen by the Law (Art. 50).	No	Yes, NRA could designate any public telecommunications operator (Law, Art. 50).	NRA should adopt it by the secondary legislation.
Serbia & Montenegro - · *Kosovo*	Yes	No	Yes	Yes
The former Yugoslav Republic of Macedonia	Yes	No	Yes	No
Turkey	Yes	No	No	No

Table 42 - USO cost recovery scheme and application of the mechanism in practice

Notes:
Croatia: Based on relevant Telecommunications Act provisions, Art. 29 of the USO ordinance specifies that the Agency shall create the USO fund upon minister's proposal. However, the Agency cannot establish the Fund if there is only one designated USO provider, or if there is a designated provider with more than 80% market share. All public voice service providers with more than 5% market share are obliged to pay to the Fund, in proportion to their respective market shares. (Note that this means that all providers with obligation will pay the same percentage of annual revenues. The percentage is set once a year by the Agency.) However, designated USO provider with more than 80% market share has no right to restitution.
The former Yugoslav Republic of Macedonia: Secondary legislation for Universal services will be prepared in the first quarter of 2006.
Turkey: At present, there are plans to establish a tender process for the allocation of the obligation to different operators. The Law No. 5369 enables the establishment of a Fund for the financing of the USO.

3. Quality of service

Article 11 of the Universal Service Directive provides a requirement for NRAs to ensure that operators with SMP publish their quality of service (QoS) achievements according to standardised[31] QoS parameters, definitions, and measurement methods. The following Table 43 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. However, there is little evidence of these measurements being made available to consumers, as was the intention of the Universal Service Directive.

[31] 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 in the national Official Journal (or other)
Albania	Yes	ETR 138/1994 ITU-T E426 WTDR-1994	Yes, based on licence conditions	www.ert.gov.al/ERT_alb/statistic/QoS.html
Bosnia & Herzegovina	Yes	ETSI EG 201	No	No publication
Bulgaria	Yes	ETSI EG 201	No	Data as of end 2004 were published in the CRC annual report 2004.
Croatia	SMP and other operators	ETSI EG 201 769-1	No	No publication
Romania	Yes	Some minimal quality requirements are set out in ANRC President's Decision no. 138/2002.	No obligation to publish	-
Serbia & Montenegro - *Montenegro*	Yes (Draft version of rulebook)	ETSI EG 201 (Draft version of rulebook)	Yes (Draft version of rulebook)	No publication yet
Serbia & Montenegro - *Serbia*	NRA not yet operational	Community of YPTT technical requirements	No obligation to publish	"General Plan of Telephone Network", CYPTT, 1999 and 2005
Serbia & Montenegro - · *Kosovo*	Yes	ETSI EG 201	No obligation to publish	No publication
The former Yugoslav Republic of Macedonia	Yes	ETSI EG 201 769-1 (by-law document in preparation)	No obligation to publish	No publication

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 in the national Official Journal (or other)
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.	Ordinance on QoS went into force on March 3, 2005. It requires operators to publish the related information every six months. Therefore, fixed line operators and all mobile operators QoS parameters had been sent to TA and these parameters were examined by TA.

Table 43 - Application of Quality of service

Notes:
Albania: ETSI EG 201769 is in implementation phase.
Romania: According to ANRC President's Decision No. 138/2002 some minimal quality requirements were imposed for the provision of the following electronic communications services:
- Publicly available telephony service;
- Leased lines services;
- Electronic communications services provided on the ISDN network;
- Electronic communications services provided through networks using IP protocol.

The other table on QoS provides the actual results of the key measurements. These indicators provide 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 very wide range of performance characteristics.

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	0.025	1:10	0.98% for local calls 1.93% for national calls 2.21% for international calls	Not reported
Bosnia & Herzegovina	5 – 19 days It depends on technical possibilities	0.21 – 0.23	56 hours	0.5 – 0.84% for local calls 0.83 – 1.09% for long distance calls 3.92 – 6.85 for international calls	2 – 3 seconds 3 seconds
Bulgaria	3.8 months	0.026	3:05	0.55%	2.30
Croatia	17.8 calendar days	0.11	17:36	1.62% for national calls PSTN to PSTN T-HT 0.85% for national calls PSTN to GSM 2.73% for international calls	1.20
Romania	5 days for 95% of requests 5 days for 99% of requests	0.1363	13:44 for 80% of access line cases	1.06% for local calls 2.62% for national calls 7.79% for international calls	2.15 local calls (average) 2.55 national calls (average) 9.09 international calls (average)
Serbia & Montenegro - *Montenegro*	Normally 1-2 days Max 7 days, if technical conditions are fulfilled.	N/A	4	0% for local N/A for long distance	0.2 sec local calls
Serbia & Montenegro - *Serbia*	15 days (if technically possible)	0.300	61 50 (latest)	1.01% for local calls 5.7% for long distance calls	1.50
Serbia & Montenegro - · *Kosovo*	6.4 days	0.003	24	0.2%	0.50

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)
The former Yugoslav Republic of Macedonia	5 days for answering the subscriber request 98.82% 7 days for instalment after signing the contract 99.57%	0.0897	95.51% of submitted faults are repaired within 1 working day	0.23% for local calls 3.21% for long distance calls 0.00% for international calls	3810 msec fixed to mobile 3461 msec international traffic
Turkey	3 days	Urban area: 0.179 Rural area: 0.402	Urban area 16:58 Rural area 40:78	6% for international traffic 2% for national traffic	2

Table 44 - ETSI standardised QoS indicators (1-5) of fixed incumbent operator

Notes:
Albania: Fault rate per access line – is defined as in ETSI ETR 138 (July 1994) article 5.1). Unsuccessful call ratio – is defined as in ETSI ETR 138 (July 1994) article 5.2)
Bosnia & Herzegovina: The indicators are given as a range when they vary between the three incumbent operators.
Bulgaria: The information presented is the situation on June 30, 2005.
Romania: Reference dates:
- Supply time for initial connection – whole year 2005
- Fault rate per access line per year – 4th quarter 2005
- Fault repair time (hours: minutes) – 4th quarter 2005
- Unsuccessful call ratio – 4th quarter 2005
- Call set-up time (seconds) – 4th quarter 2005

F. Telephony market structure

The information presented in this section has November 1, 2005 as its reference date except for information that covers a complete year in which case the reference year is 2004.

1. Fixed network ownership

The breakdown of the ownership structure for the fixed incumbent operators is given in Table 45 below. The only countries that have completely privatised the incumbent operator are Bulgaria (although the State has retained a 'golden share') and Montenegro. 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 are in public ownership via the Bulgarian stock exchange.

In Albania, the incumbent operator, Albtelecom, is 100% state owned and the Ministry of the Economy, Trade and Energy performs the 'ownership function'.

In Croatia, Romania and the former Yugoslav Republic of Macedonia, the State has less than a 50% holding. Deutsche Telekom is the strategic partner in Croatia (51%) and the former Yugoslav Republic of Macedonia (via Magyar Telekom (51%)), and Hellenic Telecommunications Organisation (OTE Greece) is the strategic partner in Romania with 54.01%.

In Bosnia & Herzegovina, there are three incumbent operators. BH Telecom (Sarajevo), which is 90% State owned (the Federal Ministry of Transport and Communications performs the ownership function) and 10% has been floated on the national stock exchange. Telecom Srpske (Banja Luka), which is 65% state owned (the Ministry of Traffic and Communications of Republika Srpska performs the ownership function) and 20% has been floated on the national stock exchange, 10% is held by a pension fund and the remaining 5% is held by a restitution fund. Hrvatske Telekomunikacije (Mostar), which is 62.76% state owned and Hrvatske Telekomunikacije Zagreb and Hrvatska Posta Zagreb own 30.29% and 6.95% respectively.

In March 2005 the Government of Montenegro sold its total shareholding in Telecom Montenegro to Magyar Telekom. Magyar Telekom now has a 76.53% shareholding. Private investors hold 17.4% and 6.07% is quoted on the Stock Exchange.

In Serbia, the State owns 80% of Telecom Serbia and OTE owns the remaining 20%. JP PTT Serbia, the organisation that holds the shares in Telecom Serbia, also holds a significant stake in Mobtel, which competes with Telecom Serbia's mobile operations.

In Kosovo, UNMIK is responsible for the 100% state ownership of PTK through the Kosovo Trust Agency (KTA). The KTA is a provisional body established by UNMIK regulation 2002/12.

Country **Name of operator**	**State ownership** **Ownership share**	**Strategic partner** **Name of partner** **Ownership share**	**Investors** **Name (if known)** **Ownership share**	**Public** **Ownership share** **(Stock Exchange)**
Albania • Albtelecom sh.a	Ministry of Economy 100%	No	No	0%
Bosnia & Herzegovina: • BH Telecom d.d. Sarajevo	Federal Ministry of Transport and Communications 90%	No	No	10%
• Telekom Srpske a.d. Banja Luka	Ministry of Traffic and Communications of Republika Srpska 65%	No	Pension fund 10% Restitution fund 5%	20%
• Hrvatske Telekomunikacije d.o.o. Mostar	Federal Ministry of Transport and Communications 62.76%	HT- Hrvatske Telekomunikacije d.d. Zagreb 30.29%	Hrvatska Pošta d.d. Zagreb 6.95	-

Country Name of operator	State ownership Ownership share	Strategic partner Name of partner Ownership share	Investors Name (if known) Ownership share	Public Ownership share (Stock Exchange)
Bulgaria	Ministry of Transport - golden share	Viva Ventures 65%	-	34.78%
Croatia • HT- Hrvatske Telekomunikacije d.d. (Croatian Telecom Inc.)	Government 42% (since February 17, 2005)	Deutsche Telekom 51%	Fund for homeland war veterans 7%	-
Romania • S.C. ROMTELECOM S.A.	Ministry of Communications and Information Technology 45.99%	OTE Greece 54.01%	-	-
Serbia & Montenegro - *Montenegro* • Telecom Montenegro	Government of Montenegro 0.00%	Magyar Telecom 76.53%%	QVT Fund LP 13.60% Raffles Ltd 1.93% Falcon QP LP 1.87%	Stock Exchange 6.07%
Serbia & Montenegro - *Serbia* • Telecom Serbia a.d.	Public enterprise of PTT traffic "Serbia" owns 100% of JP PTT Srbija which owns 80% of the operator.	Hellenic telecommunications organization a.e. (OTE) 20%	-	-
Serbia & Montenegro - · *Kosovo*	UNMIK through Kosovo Trust Agency (KTA) 100%	None	None	None
The former Yugoslav Republic of Macedonia • A.D. Makedonski Telekomunikacii	Ministry of Transportation and Communication 47.125%	Deutsche Telekom through Magyar Telecom 51%	International Finance Corporation – IFC 1.875%	None
Turkey • Turk Telekom (Türk Telekomünikasyon A.Ş.)	State Owned Treasury 45%	Oger Telecom 55%	None	None

Table 45 - Ownership structure of fixed incumbent operators

Notes:
Albania: Government decision 416 date 2-7-2004 defines that 76% of Albtelecom shares will be sold, including the mobile branch "Eagle Mobile". Privatization procedures were not approved by the parliament (see comments in the section on State ownership).
Croatia: On February 17, 2005 the government transferred 7% of the T-HT shares without compensation to the

"Fund of homeland war veterans and their family members".
Serbia & Montenegro - Montenegro: Source Central Depositary Agency of the Republic of Montenegro. Date: 31.12.2005.

The ownership structure is also presented in the figure below.

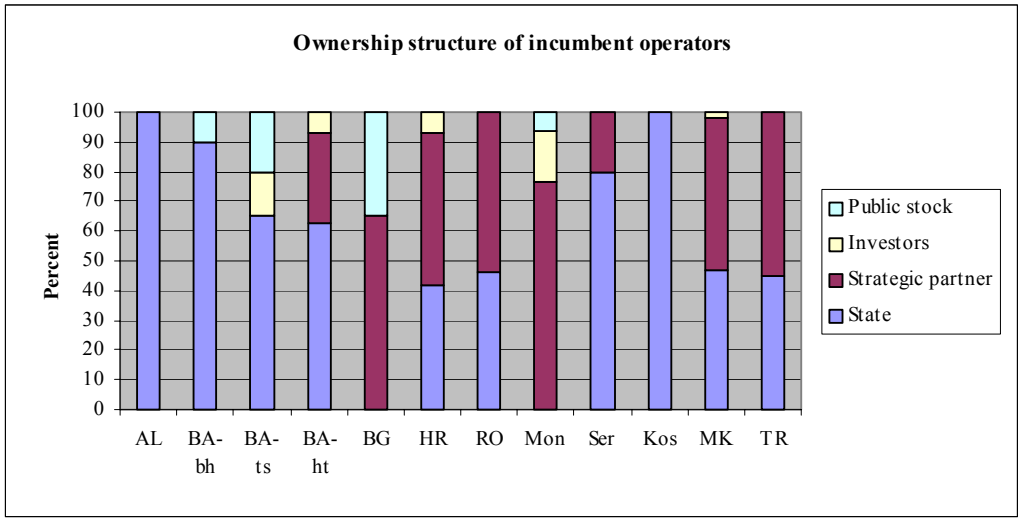
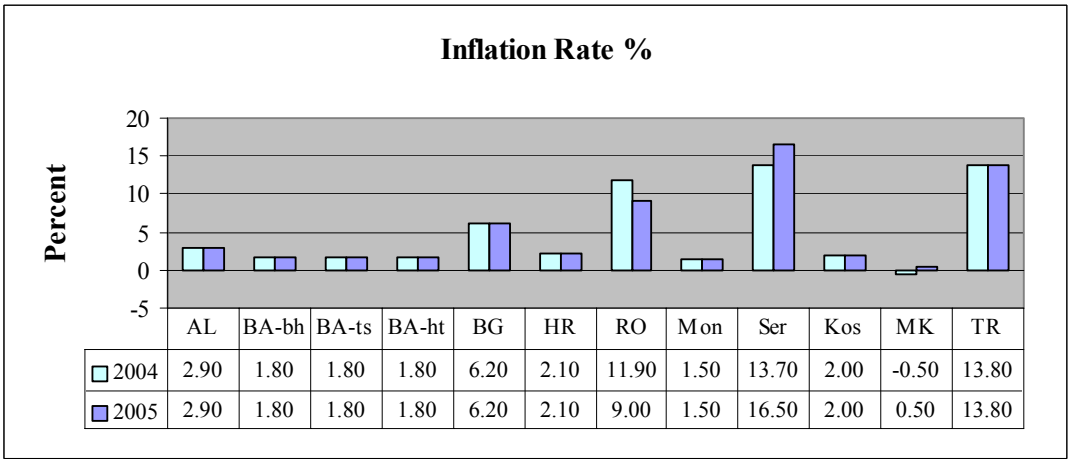


Figure 9 - Ownership structure of fixed incumbent operators

2. Financial ratios for incumbent operators

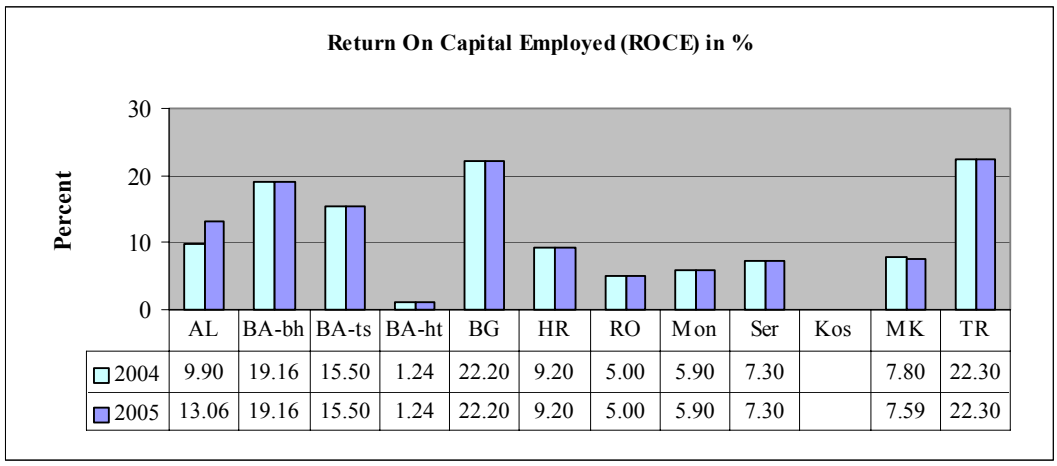
The most common financial ratios used when looking at the performance of telecommunications operators are: Return on Capital Employed (ROCE), which is the net profit before interest and taxes divided by the total capital employed; the Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) margin, which is the EBITDA divided by operating revenues; and the Earnings Before Interest and Taxes (EBIT) margin, which is the EBIT divided by operating revenues.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
2004	2.90	1.80	1.80	1.80	6.20	2.10	11.90	1.50	13.70	2.00	-0.50	13.80
2005	2.90	1.80	1.80	1.80	6.20	2.10	9.00	1.50	16.50	2.00	0.50	13.80

Figure 10 - Inflation Rate

Notes:
Bulgaria: The inflation rate for Bulgaria (6.20%) is the average for 2004.
Croatia: The inflation rate used in Croatia is the CPI.
Serbia & Montenegro - Montenegro: There are two inflation rates used in Montenegro: one is the CPI (1.5%) and the other is the RPI (4.3%).

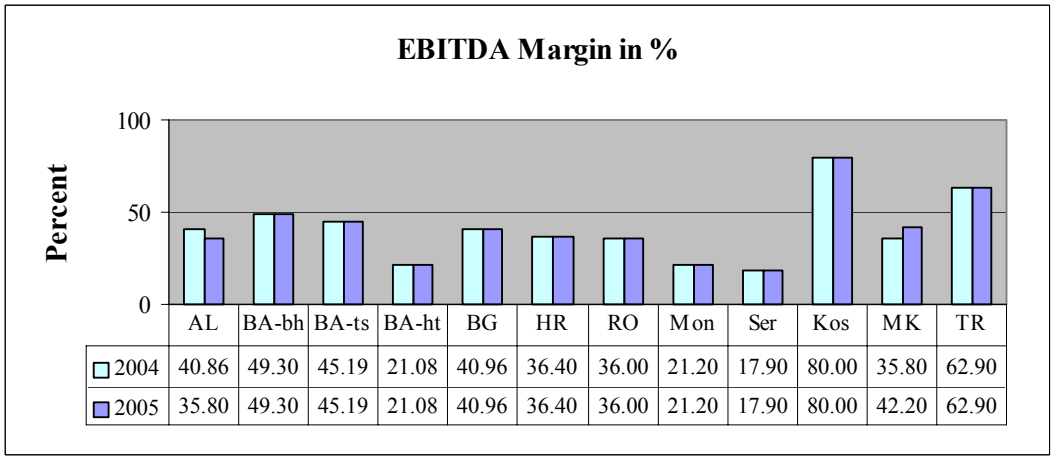


	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
2004	9.90	19.16	15.50	1.24	22.20	9.20	5.00	5.90	7.30		7.80	22.30
2005	13.06	19.16	15.50	1.24	22.20	9.20	5.00	5.90	7.30		7.59	22.30

Figure 11 – Return On Capital Employed

Notes:
Serbia & Montenegro - Serbia: The end of the financial year is December 31, but the publication date for the financial report is the end of February and the data for 2005 will be ready after that.
Serbia & Montenegro - Kosovo: The ROCE in Kosovo is currently unknown because of uncertainties about the cost of fixed assets, depreciation related to these and the allocation of costs to facilities. Although the ROCE figure was expected to be available during the 3rd quarter of 2005 it is still not available.

In all countries where the ROCE figure has been provided except Romania, Serbia & Montenegro - Serbia, and Turkey, it is higher than the inflation rate. It should be noted that the ROCE figures for the operators are not directly comparable.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
2004	40.86	49.30	45.19	21.08	40.96	36.40	36.00	21.20	17.90	80.00	35.80	62.90
2005	35.80	49.30	45.19	21.08	40.96	36.40	36.00	21.20	17.90	80.00	42.20	62.90

Figure 12 – Earnings Before Interest, Taxes, Depreciation and Amortization margin

Practically all of the EBITDA figures are in the 30-50% range, which can be considered normal for a telecommunications operator. Exceptions to this are Hrvatske Telekom, Mostar (21.08%) which has a correspondingly low EBIT margin of 4.69%; Telecom Serbia (17.90% and an EBIT margin of 14.60%, Telecom Montenegro (21.20%) and an EBIT margin of 10.80%. The exceptionally high EBITDA of 80% for Kosovo (EBIT 75.20%) is questionable.

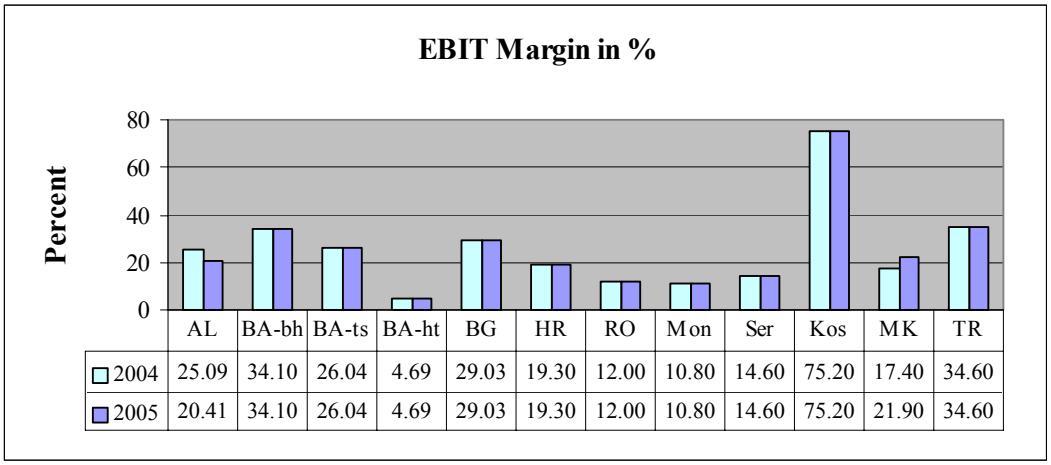


Figure 13 – Earnings Before Interest, and Taxes

Country	Code	Operator	Avg No of Employees	
			2004	2005
Albania	AL	Albtelecom	2 473	2 473
Bosnia & Herzegovina	BA-bh	BHT Sarajevo	3 056	3 056
Bosnia & Herzegovina	BA-ts	Telekom Srpske	2 721	2 721
Bosnia & Herzegovina	BA-ht	HT Mostar	1 221	1 221
Bulgaria	BG	BTC	17 251	17 251
Croatia	HR	Hravtske Telekom	7 299	7 299
Romania	RO	RomTelecom	18 382	15 316
Serbia & Montenegro - Montenegro	Mon	Telecom Montenegro	1 168	1 168
Serbia & Montenegro - Serbia	Ser	Telecom Serbia	12 340	12 340
Serbia & Montenegro - · Kosovo	Kos	PTK	570	570
The former Yugoslav Republic of Macedonia	MK	Makedonski Telecom	3 005	2 325
Turkey	TR	Turk Telekom	58 084	55 794

Table 46 – Average number of employees in the incumbent operators

Notes:
Bulgaria: The number of employees given is the number of employees on December 31, 2004.
Romania: The number of employees for Romtelecom as of January 1, 2005 was 18,382 while the average number of employees in 2004 was 19,048. For end of 2005 the number of employees for Romtelecom was 13,078.

The next figure shows the changes in the number of fixed lines per employee in the period January to November 2005. In most countries where a change in fixed line penetration has occurred there has been a reduction in the number of lines (i.e. fixed line penetration rates are declining). This has resulted in a decrease in the number of fixed lines per employee except in

the former Yugoslav Republic of Macedonia where there has been an increase from 198 to 226 (about 14% more lines per employee compared to a reduction of about 11% in Turkey).

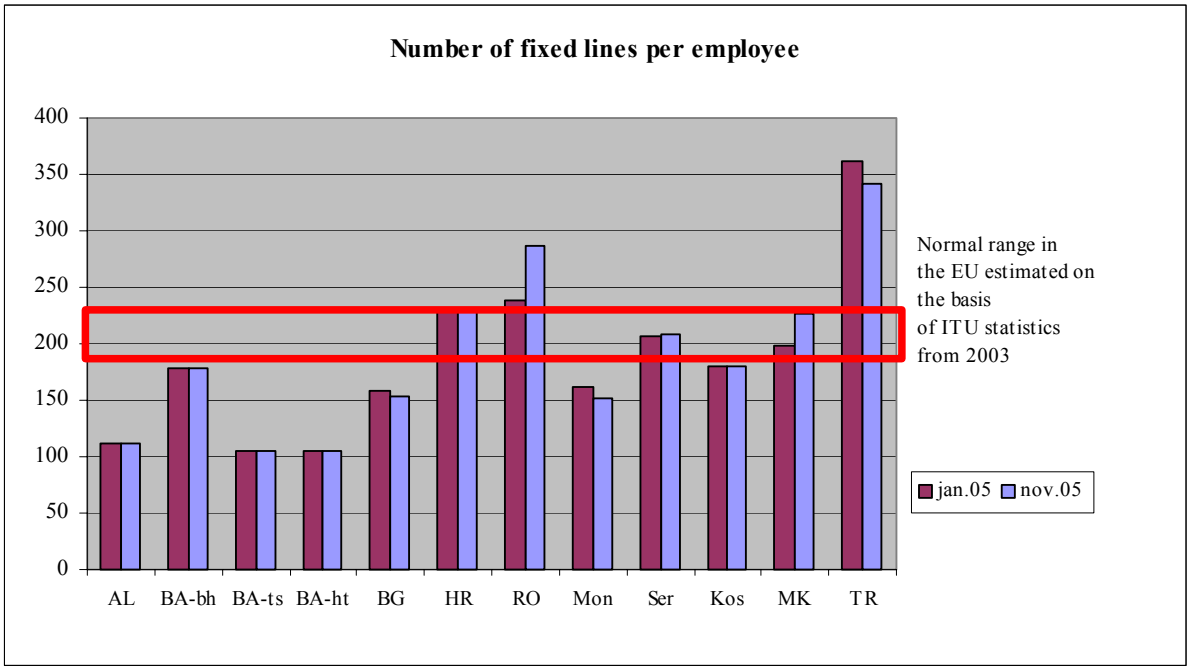


Figure 14 – Number of fixed lines per employee

Notes:
The 11th Implementation Report from the European Commission does not provide 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 provide a definitive value. Based on different assumptions, the ITU statistics from 2003 indicate that the average number of active lines per employee in the EU Member States is in the range from 189 to 223.
Bulgaria: The number of fixed lines per employee is based on the number of lines and employees on December 31, 2004. The number of fixed lines per employee is the number of active lines, as opposed to the installed capacity.

3. Fixed network penetration

The fixed line penetration rates per 100 population are given in the table below. The weighted average penetration in these countries is 26%. In general, the penetration rates are lower than the overall EU25 average of about 45%[32]. However, they compare more favourably with the new EU Member States as the weighted EU10 average is 31%.

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

32 Weighted average for EU25 from the Commission Staff Working Document Review of the Scope of Universal Service in Accordance with Article 15 of Directive 2002/22/EC. According to the same document, the weighted average penetration for EU15 was 48%.

Country	Analogue	Digital	ISDN	Total	Per 100 pop
Albania	5 258	253 002	105	258 365	8.20 %
Bosnia & Herzegovina	77 486	841 708	37 282	956 476	24.71 %
Bulgaria	1 555 974	676 602	1 399	2 233 975	28.94 %
Croatia	0	1 367 122	51 685	1 418 807	31.94 %
Romania	455 905	3 412 986	1 320	3 870 211	17.90 %
Serbia & Montenegro - *Montenegro*	233	154 094	4 279	158 606	25.38 %
Serbia & Montenegro - *Serbia*	549 312	1 717 154	25 706	2 292 172	30.57 %
Serbia & Montenegro - · *Kosovo*	53 721	48 170	308	102 199	5.20 %
The former Yugoslav Republic of Macedonia	0	467 559	3 800	471 359	23.16 %
Turkey	0	**14 416 328**	1 798	14 418 109	19.88 %

Table 47 - Fixed lines per 100 inhabitants year end 2005 (residential users)

Notes:
Bosnia & Herzegovina is not updated for year-end 2005. The number is the total number of resident and business users for year-end 2004. ISDN: BR = 23,182 and PR = 7,050
Bulgaria: The information presented for Bulgaria is the situation on June 30, 2005.

Country	Analogue	Digital	ISDN	Total	Per 100 pop
Albania	373	15 855	665	16 893	0.54 %
Bosnia & Herzegovina	0	0	0	0	0.00 %
Bulgaria	113 313	278 282	18 549	410 144	5.31 %
Croatia		187 569	88 944	276 513	6.22 %
Romania	21 972	480 994	20 026	522 992	2.42 %
Serbia & Montenegro - *Montenegro*	0	16 681	2 574	19 255	3.08 %
Serbia & Montenegro - *Serbia*	40 796	222 708	19 706	283 210	3.78 %
Serbia & Montenegro - · *Kosovo*	0	0	0	0	0.00 %
The former Yugoslav Republic of Macedonia	0	44 168	11 099	55 267	2.72 %
Turkey	0	**4 602 296**	19 063	4 621 359	6.37 %

Table 48 - Fixed lines per 100 inhabitants year end 2005 (business users)

Notes:
Albania: Population information has been taken from Instat's website
Bosnia & Herzegovina: Information on fixed lines to business users is not available for year-end 2005.
Bulgaria: The information presented for Bulgaria is the situation on June 30, 2005. BR = 17,780 and PR = 1084
Croatia: BR = 134,183 and PR = 3,223
Romania: BR 15,230 and PR = 1,807
Serbia & Montenegro - Montenegro: BR = 6,643 and PR = 105
Serbia & Montenegro - Serbia: BR = 31,892 and PR = 2,398
Serbia & Montenegro - Kosovo: Information on fixed lines to business users is not available for year-end 2005. BR = 218 and PR = 45
The former Yugoslav Republic of Macedonia: BR = 13,691 and PR = 449
Turkey: BR = 6,621 and PR = 6,261.

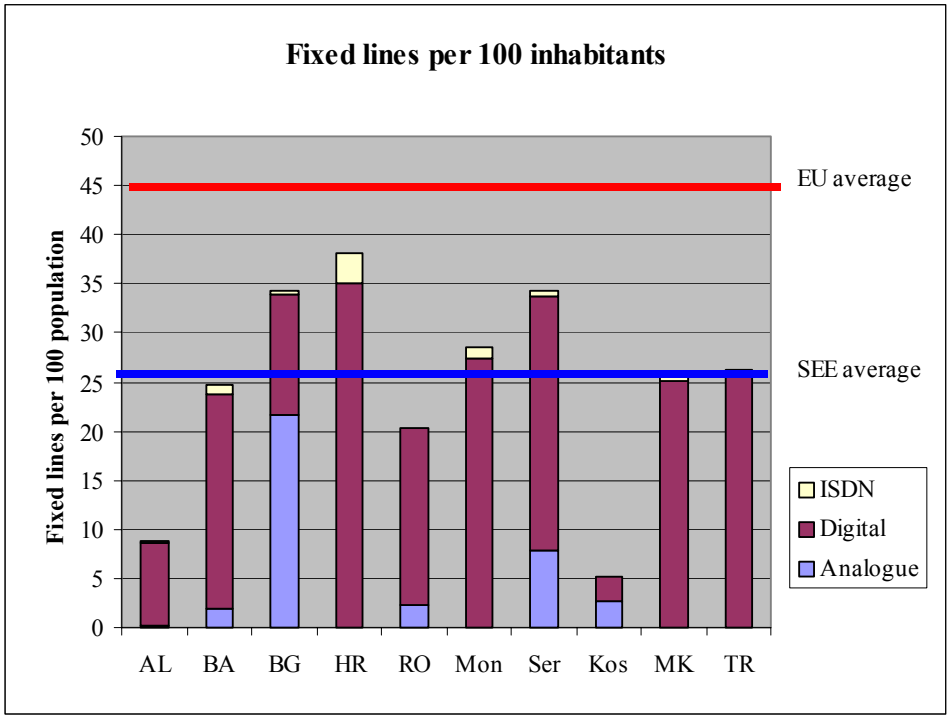


Figure 15 - Fixed lines per 100 inhabitants

Notes:
The EU 25 average is from the Commission Staff Working Document Review of the Scope of Universal Service in Accordance 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 47 and 48 above.

Figure 15 shows the percentage of fixed lines per 100 inhabitants broken down into ISDN, Digital and Analogue lines. Figure 16 below shows how the fixed line penetration rates have developed in the period January to November 2005.

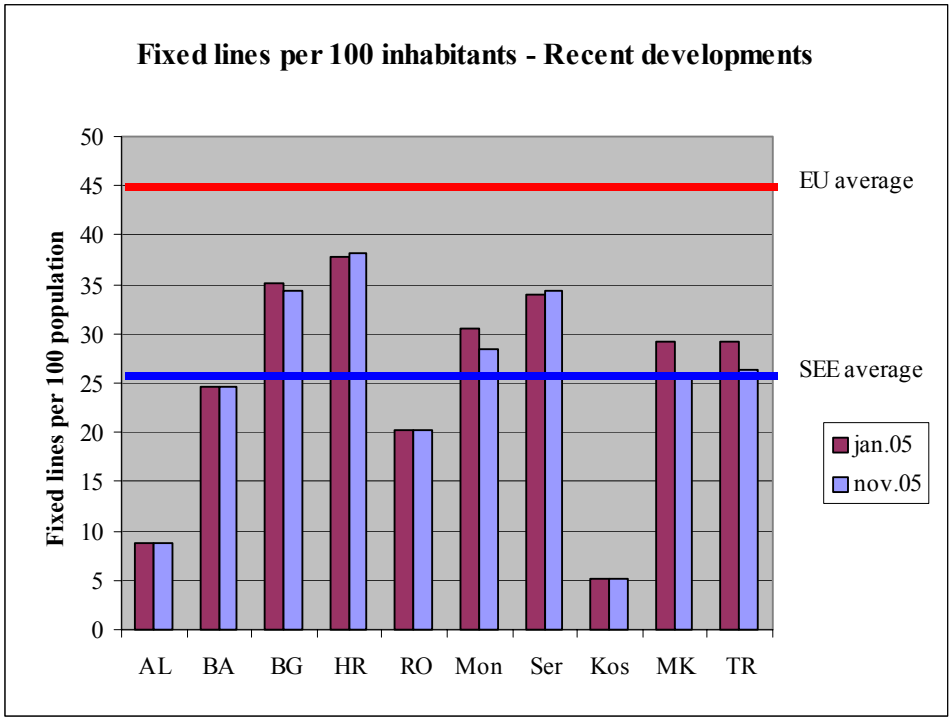


Figure 16 – Fixed lines per 100 population – January / November 2005

A consequence of low digitalisation rates is the inability to introduce xDSL services and other 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 49 below is calculated on the basis of the number of digital fixed lines[33] as a percentage of the total number of fixed lines.

All countries are making progress in the digitalisation of their networks. In Albania, the rural operators (12.4% of the total network) are 100% digital. Croatia and the former Yugoslav Republic of Macedonia are 100% digital since January 2003 and January 2004 respectively.

Bulgaria is digitalising the major cities before rural areas and its digitalization rate is expected to continue to grow significantly. It can be seen that Bulgaria is significantly analogue – although the percentage of analogue lines decreased by almost 3% in 2005. According to Bulgaria's pre-accession negotiation commitments and the terms of BTC's licence it should reach 50-55% by the end 2005 and 75–81% by the end 2007.

Significant progress was also made in Romania, where the digitalisation increased from 77% to 89% in 2005.

[33] Digital fixed lines are defined as active main subscriber lines attached to a digital switch. This includes ISDN lines, where Basic rate subscription counts for one because it occupies one subscriber line, and Primary rate subscriptions count for two, because they occupy two main subscriber lines.

Country	1.1.2003	1.1.2004	1.1.2005	1.11.2005
Albania	94.40	97.50	97.60	97.70
Bosnia & Herzegovina	78.80	85.27	89.93	92.45
Bulgaria	19.00	26.00	34.00	36.84
Croatia	100.00	100.00	100.00	100.00
Romania	72.00	74.00	77.15	89.12
Serbia & Montenegro - *Montenegro*	92.50	98.00	99.80	99.87
Serbia & Montenegro - *Serbia*	53.21	64.87	67.35	77.78
Serbia & Montenegro - · *Kosovo*	42.00	45.00	47.00	47.00
The former Yugoslav Republic of Macedonia	96.00	100.00	100.00	100.00
Turkey	90.02	90.77	97.12	97.78

Table 49 - Digitalisation rate of fixed networks in percent

Notes:
Bosnia & Herzegovina: The value of 92.45 is as at January 1, 2006.
Bulgaria: The status on November 1, 2005 is not available. The information shown is from June 30, 2005.
Serbia & Montenegro - Kosovo: The value given for November 1, 2005 is as at January 1, 2005.
The former Yugoslav Republic of Macedonia – the source is Maktel's annual reports.

Figure 17 shows the extent of network digitalisation and the considerable progress that has yet to be made in Bulgaria, Kosovo and Serbia. The figures for previous years in Bulgaria are calculated on the basis of data for the number of lines, provided by the incumbent (ratio of total number of digital lines (including ISDN subscriptions) to the total number of lines (number of analogue lines and number of digital lines, including ISDN subscriptions).

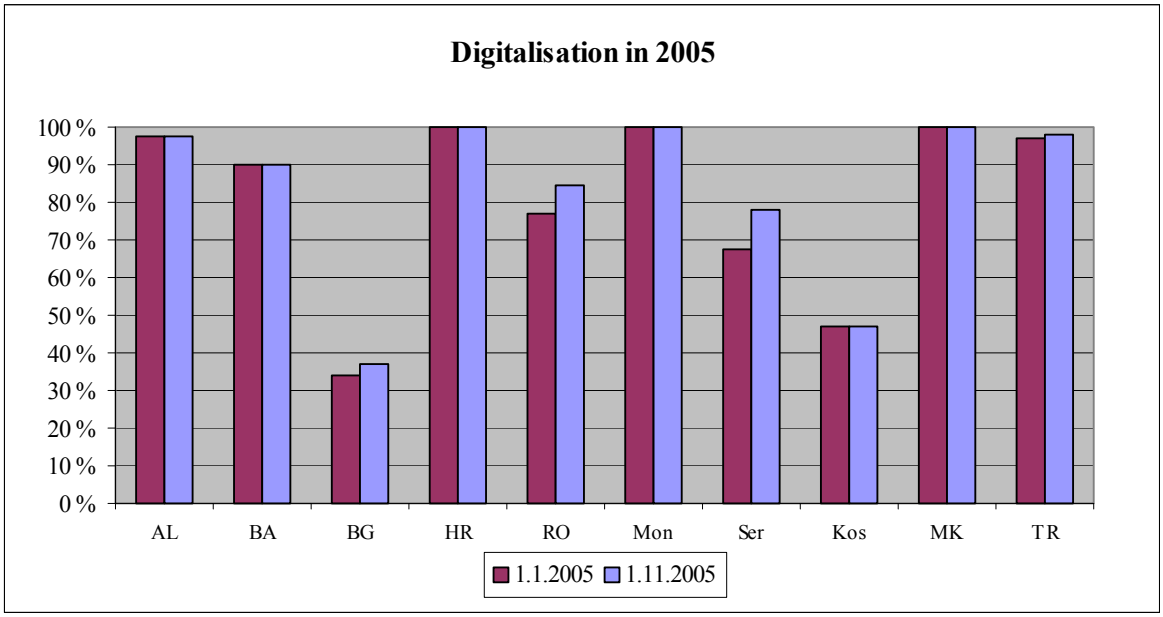


Figure 17- Digitalisation rate of fixed networks in percent

Notes:
The numbers for Bosnia & Herzegovina and Serbia & Montenegro - Kosovo are for the beginning of 2005. The other numbers are from November 1, 2005.
Serbia & Montenegro - Montenegro: The total number of fixed lines on 1st November 2005 was 179,654. There are still 233 analogue lines, connected to analogue switches (Ericsson ARK, Iskra SI-2000).

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.

Three countries have no party lines (Croatia, the former Yugoslav Republic of Macedonia, and Turkey). The percentage of party lines in Bulgaria has been steadily decreasing over the last few years (47.8% in June 2002 vs. 37% in January 2005 and slightly less than 36% in November 2005). These reductions could be a direct result of Bulgaria's network digitalisation. However, group and party lines still represent a significant proportion of the fixed lines in Bulgaria.

In Kosovo, it is a condition of PTK's licence that all party lines must be removed by December 31, 2006.

In Serbia, there are about 480,000 party lines and these are mainly in the larger cities.

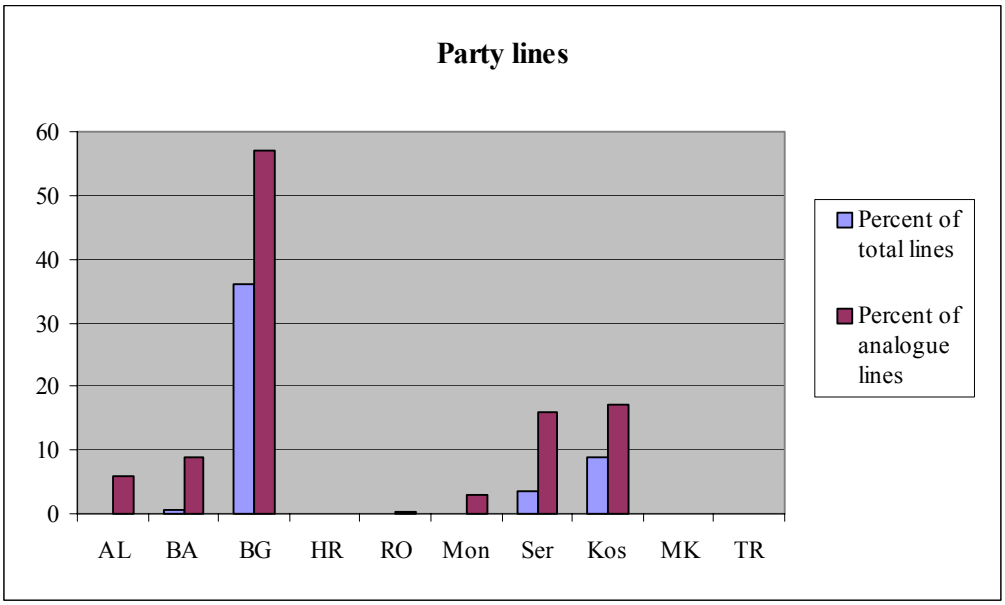


Figure 18 - Presence of party and group lines in fixed networks

Notes:
Bulgaria: The percentage of party lines is the situation on June 30, 2005.
Serbia & Montenegro – Montenegro: The total number of fixed lines on 1st November 2005 was 179,654. There are still 5,520 party lines, so the percentage is slightly over 3 %.

In general, alternative operators have a very low percentage of the total number of fixed lines except in Albania where 12.4% of all lines are operated by alternative operators that have invested in their own fixed network infrastructure. However, these are considered to be 'Rural Operators' and do not provide services at a national level in competition with other operators.

In Bulgaria, as of June 30, 2005 a total of seven alternative operators had started operating fixed networks using digital lines, but their total number of lines in service are not yet significant.

In Romania, alternative operators accounted for about 9.86% of the total lines. These operators have invested in their own fixed network infrastructure. In addition, there were 28,617 subscribers to alternative operators using carrier selection codes or ISDN lines acquired from other operators.

There are no alternative operators in Montenegro or the former Yugoslav Republic of Macedonia.

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	na	na	na	na	na	na	34 185	12.42 %
Bosnia & Herzegovina	-	-	-	-	-	-	-	-
Bulgaria	na	na	na	na	na	na	1 155	0.04 %
Croatia	-	13 700	409	-	957	2 983	14 109	0.83 %
Romania	0	373 378	337	1 166	57 861	530	432 935	9.85 %
Serbia & Montenegro - *Montenegro*	0	0	0	0	0	0	0	0.00 %
Serbia & Montenegro - *Serbia*	-	-	-	-	-	-	0	0.00 %
Serbia & Montenegro - · *Kosovo*	-	-	-	-	-	-	-	-
The former Yugoslav Republic of Macedonia	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-

Table 50 - Number of fixed lines of alternative operators and percentage of these lines compared to the total number of fixed lines

Notes:
Bulgaria: Number of subscriber lines for alternative operators on 30.6.2006. The majority of the alternative operators have declared providing "IP lines" (the type of lines provided are neither xDSL, nor WiFI). Further examination is required of the type of subscriber access they use. Most probably, it is cable TV network, leased lines or VPNs. At the moment, only the total number of residential/business subscriber lines of the alternative operators and the percentage in the total number of lines can be provided. The numbers of lines used by carriers are excluded: as they have already been included in the number of BTC lines.
Romania: The information provided is for 31.12.2005.

4. Mobile service penetration

In all countries, the penetration rate for mobile services exceeds that of the fixed line penetration rates. In Albania, Bulgaria, Montenegro, Serbia, Kosovo, Romania and the former Yugoslav Republic of Macedonia, the mobile penetration rates are more than double that of fixed lines.

Country	1.1.2003	1.1.2004	1.1.2005	1.11.2005	Fixed sub. lines per 100 pop in year 1.11.2005
Albania	26.00	34.00	38.61	46.18	7.79
Bosnia & Herzegovina	19.65	28.68	34.22	41.5	24.71
BH Telecom d.d. Sarajevo	9.87	14.57	16.88		
Telekom Srpske a.d. Banja Luka	7.39	10.56	13.07		
Hrvatske Telekomunikacije d.o.o. Mostar	2.39	3.55	4.27		
Bulgaria	33.00	45.00	61.00	67	34.06

Country	1.1.2003	1.1.2004	1.1.2005	1.11.2005	Fixed sub. lines per 100 pop in year 1.11.2005
Croatia	52.71	57.45	63.99	73.50	38.02
Romania	24.00	32.47	47.12	61.76 (31.12.2005)	21.62
Serbia & Montenegro - *Montenegro*	67.40	62.70	77.9	104.36	28.44
Serbia & Montenegro – *Serbia*	32.14	43.80	56.98	73.03	34.32
Telekom Srbija	18.14	23.80	30.98	40.03 (31.12.2005)	
Mobtel	14.00	20.00	26.00	33	
Serbia & Montenegro - · *Kosovo*	13.50	15.20	16.00	NA	5.20
The former Yugoslav Republic of Macedonia	18.00	29.88	49.02	66.49 (31.12.2005)	25.86
Mobimak	18.00	25.73	36.94	43.15	
Cosmofon	0.00	4.15	12.05	23.34	
Turkey	33.50	39.40	48.90	60	26.25

Table 51 - Mobile penetration

Notes:
Bosnia & Herzegovina: There are 3 mobile (GSM) incumbent operators in B&H: "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 ERONET.
Bulgaria: The mobile and fixed penetration is the situation on June 30, 2005.
Croatia: Pre-paid card subscribers are dropped after six inactive months.
Serbia & Montenegro - Montenegro: The total number of mobile subscribers was 647,183 on 1st November 2005. This increase can be explained by the following facts: 1. Pre-paid card subscribers are dropped after 12 inactive months, 2. The main tourist season (Jun-August) is the period when most pre-paid cards are sold.

In Albania, pre-paid cards are counted as subscribers if they are active within the last six months. In Bosnia & Herzegovina, there are 3 mobile (GSM) incumbent operators: BH Telecom – GSM-BH, Telekom Srpske – MOBI'S, HT Mostar – ERONET. 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 card subscribers not counted after nine inactive months. In Montenegro and Serbia, pre-paid card subscribers not counted after 12 inactive months.

In Serbia, the figures for Mobtel in Table 51 are calculated for the territory of Serbia excluding the Kosovo and Metohia regions. The reference for the population data is the population census report from 2002 issued by the Statistical office of the Republic of Serbia. However, if the Kosovo region is included then the penetration rate is 10%. Because of the census boycott in Kosovo, figures have been obtained by an estimation of the population data. Pre-paid subscribers are dropped after 420 inactive days (13 months).

In Serbia, the mobile penetration figures for Telekom Serbia in Table 51 include a relatively small number of subscribers in Kosovo and Metohia. 84% of the territory and 94% of population are covered with more then 600 BTS (in 2000 it was 112 BTS). Pre-paid card subscribers are dropped after 11 months. In the 12th month, only incoming calls are permitted and in the 13th month, a customer can reactivate a number by paying the applicable subscription fee at the time of renewal.

The penetration figure for Kosovo only applies to PTK/VALA900 the only licensed mobile operator in Kosovo. For the other 'illegal' mobile operator in Kosovo, Mobtel, there are no published subscriber figures.

A pre-paid subscriber in Romania has to be active within the last twelve months in order to be counted as one.

The next figure shows how mobile penetration rates have increased between January and November 2005. In the same period, fixed line penetration rates have declined in some countries.

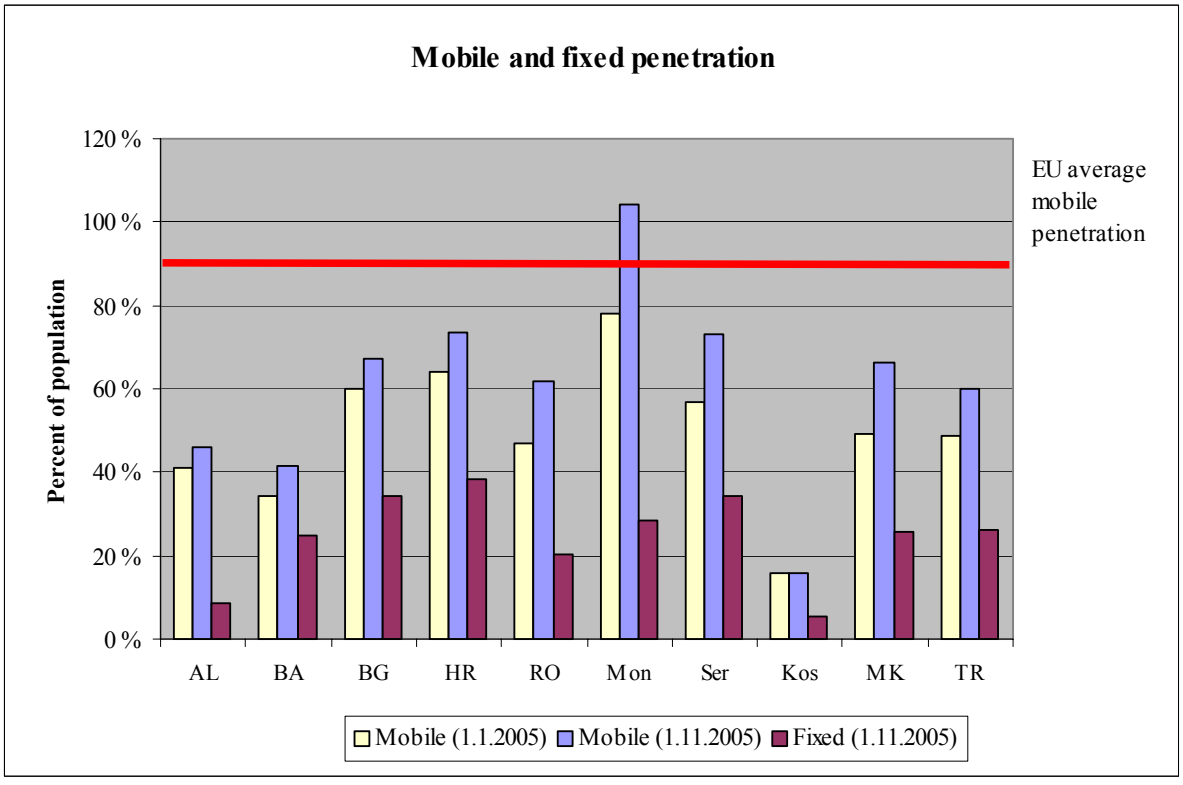


Figure 19 - Mobile and fixed penetration

Notes:
Bulgaria: The data is from June 30, 2005.
Romania: The mobile penetration is from January 1, 2006.
Kosovo: The mobile penetration is from January 1, 2005. Information from November 1, 2005 is not available.
The EU average is from the 11th Implementation report from the European Commission published in February 2006. The number represents the penetration measured by 2G subscriptions, but 3G subscribers from some EU countries are included as well.

5. Payphones

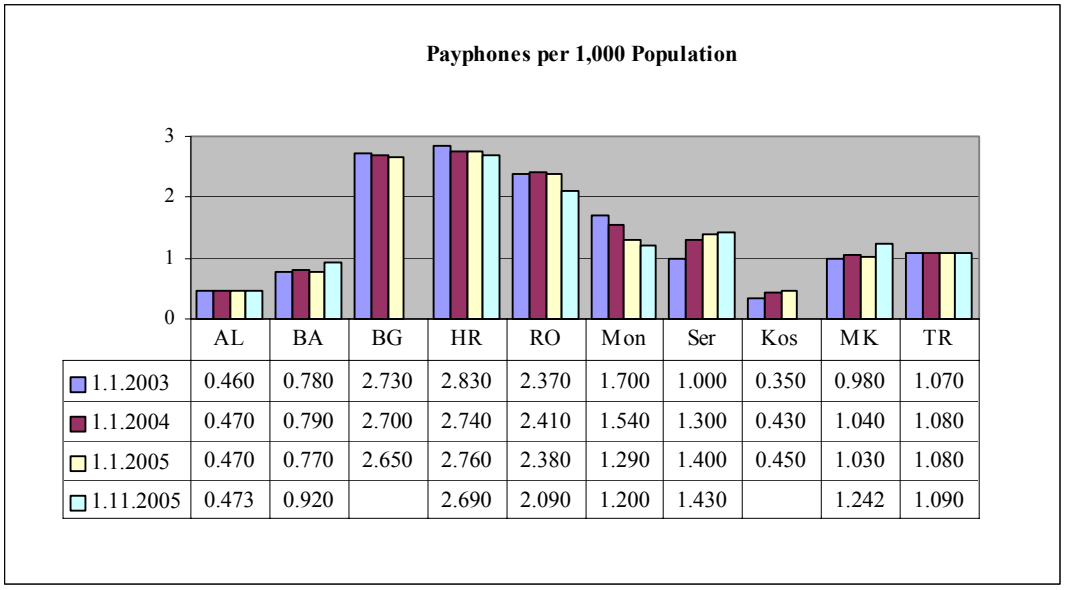
The number of payphones per 1,000 population is shown in the following table. There is quite a wide variation from 0.45 in Kosovo to 2.69 in Croatia, which represents one payphone per 371 inhabitants in Croatia and one payphone per 2,222 inhabitants in Kosovo.

In general, the figures have been essentially static over the last few years. However, small increases are noted in Albania, Bosnia & Herzegovina, Serbia & Montenegro - Serbia, the former Yugoslav Republic of Macedonia and Turkey. Small decreases are noted in Croatia, Romania, Bosnia & Herzegovina, and Serbia & Montenegro – Montenegro.

Country	1.1.2003	1.1.2004	1.1.2005	1.11.2005
Albania	0.46	0.47	0.47	0.47
Bosnia & Herzegovina	0.78	0.79	0.77	0.92
Bulgaria	2.73	2.70	2.65	0.00
Croatia	2.83	2.74	2.76	2.69
Romania	2.37	2.41	2.38	2.09
Serbia & Montenegro - Montenegro	1.70	1.54	1.29	1.20
Serbia & Montenegro - Serbia	1.00	1.30	1.40	1.43
Serbia & Montenegro - · Kosovo	0.35	0.43	0.45	0.00
The former Yugoslav Republic of Macedonia	0.98	1.04	1.03	1.24
Turkey	1.07	1.08	1.08	1.09

Table 52 - Number of payphones per 1,000 population

Notes:
Serbia & Montenegro - Montenegro: There are three payphone operators in Montenegro: Post of Montenegro, Montenegro card, and Bristol Ltd.
Serbia & Montenegro - Kosovo: The fixed incumbent operator has recently declared having “575 card pay phones” installed, which gives a lower figure (0.295) for the number of phones per 1,000 population than what is reported above. The difference to 0.45 may possibly be explained by the number of phone cabins inside the PTK sales point facilities.



	AL	BA	BG	HR	RO	Mon	Ser	Kos	MK	TR
1.1.2003	0.460	0.780	2.730	2.830	2.370	1.700	1.000	0.350	0.980	1.070
1.1.2004	0.470	0.790	2.700	2.740	2.410	1.540	1.300	0.430	1.040	1.080
1.1.2005	0.470	0.770	2.650	2.760	2.380	1.290	1.400	0.450	1.030	1.080
1.11.2005	0.473	0.920		2.690	2.090	1.200	1.430		1.242	1.090

Figure 20 – Payphones per 1,000 Population

G. Telephony tariffs – retail

The reference date for the information in this section is November 1, 2005.

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 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 thus evident. However, even if 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 pay less for their total communications bill and or consume more communications services.

However, some consumers, typically low-income families, may experience 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 thus 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 enable a reader to form an assessment of the tariff situation in each of the countries and geographic units.

1. Basic information about tariffs

Table 53 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 only Kosovo considers that tariff rebalancing has been completed. Bosnia & Herzegovina has started its tariff rebalancing plan with a first step on November 1, 2005. The plan will be executed in several steps.

The other countries and geographic units, except Serbia, are still in a rebalancing process. Serbia is a special case where there has been little rebalancing activity. Rebalancing requests from the incumbent operator have so far been refused on a political level in order to contain inflation.

Country	Status of tariff rebalancing (target date if established)	Type of tariff regulation	Public notice before tariff change
Albania	Ongoing	Cost based methodology	According to the law on Telecommunications, article 64, the operator should make them public through mass media at least 15 days before the new tariffs come into force.
Bosnia & Herzegovina	Ongoing	Principles established in regulation NRA approval of actual tariffs	1 month

Country	Status of tariff rebalancing (target date if established)	Type of tariff regulation	Public notice before tariff change
Bulgaria	Ongoing	Price cap model + cost orientation and NRA (CRC) approval for regulated prices of BTC, as SMP on the markets of fixed voice telephony networks and fixed voice telephony services and leased lines for the following services: • fixed voice telephony service • interconnection • the minimum set of leased lines • specific access • LLU • shared usage of premises and equipment.	7 days
Croatia	Ongoing	NRA approval + price cap	30 days
Romania	Ongoing No target date established	NRA approval	30 days
Serbia & Montenegro - *Montenegro*	Target date: 2010	NRA approval	8 days
Serbia & Montenegro - *Serbia*	No tariff rebalancing	NRA approval	8 days if nomenclature and general conditions are not changed. If nomenclature or general conditions are changed, 30 days after publishing in Official Gazette those changes.
Serbia & Montenegro - · *Kosovo*	Yes	NRA approval	Before the entry into force
The former Yugoslav Republic of Macedonia	No	Price cap	No
Turkey	No	Price cap	Before the entry into force

Table 53 - Basic information about tariffs

Notes:
Bosnia & Herzegovina: Implementation of Rule on tariff rebalancing of voice telephony services in B&H started on November 1, 2005.
Serbia & Montenegro - Serbia: In accordance with the provisions of the Telecom Act, RATEL is responsible for tariff regulation. However, this task is not on RATEL's agenda yet and has not been implemented in practice.

The next table 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 to collect 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 interest of the subscribers.

Albania, Serbia, Kosovo and Turkey 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.

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	Length of call unit applied in peak time is **120 seconds**, and **180 seconds** applied in off-peak time. These are the call units applied for local calls.	2.42 **eurocent** for calls toward 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)	Seconds	5.62 eurocent for local and national long distance calls
Croatia	Time based	National calls: 60 seconds Fixed to mobile and international calls: 15 seconds Per second billing was introduced and has been available since April 1, 2005 as an option	No charge
Romania	Time based	60 seconds	No charge
Serbia & Montenegro - *Montenegro*	Time based	Depends on the type of call (local, long distance, international) 30 seconds for local calls	No charge

Country	Charging system	Length of call unit	Setup-cost
Serbia & Montenegro – *Serbia*	Pulse based	Depends on the type of call (local, long distance, international)	No charge
Serbia & Montenegro - · *Kosovo*	Pulse based	Depends on type of call (international, national, local etc.)	€0.04
The former Yugoslav Republic of Macedonia	Time based	60 seconds (local, long-distance, fixed to mobile) 20 seconds (international calls)	No charge
Turkey	Pulse based	Depends on type of call (international, national, local etc.) Pulse length for local calls: 1 minute	No charge

Table 54 - Call charging system and initial charge application

Notes:
Albania: This is the call charging system of Albtelecom, which is the incumbent operator. The charging system is supposed to be time based, according to the operator's publications. However, the charging system is pulse based, for billing reasons.
Bulgaria: Time based charging system has been introduced for all digital switches and analogue switches with technical possibility for reporting time per call. According to information provided by BTC, the number of digital switches plus analogue switches with technical possibility for reporting time per call represent 66% of all switches (analogue switches without technical possibility for reporting time per call represent 34%).

All calls are charged per second, for international calls and calls to mobile network in the country first 30 seconds are charged like 30 seconds call, after the 31st second: charged per second.
Croatia: Incumbent – alternative charge: time based in seconds, call set up 0.08 HRK (1.04 eurocents). Alternative operator (Optima Telekom d.o.o.): time based in seconds, call set up 0.06 HRK (0.78 eurocents).
Romania: All tariffs for fixed telephony in Romania are quoted by the incumbent operator in euro. Similarly, the rates by the mobile operators are quoted in US dollars. In both cases, the values are recalculated to the local currency according to the exchange rate applicable on the day of the invoices are issued.
Serbia & Montenegro – Montenegro: New billing system of Telecom Montenegro started on March 1, 2005, and from that date Telecom's charging system is time based, instead of pulse based, which was previously used.
Serbia & Montenegro – Kosovo: PTK, the incumbent operator, intends to introduce a new charging system from February 1, 2006. Due to the technical limitations, local calls will be charged €0.04 starting each sequence of 139 seconds on Peak and 278 seconds on Off Peak

2. Monthly subscription fees

Table 55 provides information on the monthly rental price for 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. The total height of the column thus corresponds to the nominal monthly charge.

The graph, which also includes the level of the average EU monthly charge, clearly demonstrates the very low level of the monthly charges. Albania, Bosnia & Herzegovina, Montenegro and Serbia have particularly low charges. In Serbia, the value of the free call units exceeds the monthly subscription cost. Even when taking purchasing power parity into consideration, these countries and geographic units have monthly charges that are 1/3 or less than the EU average.

Croatia in particular, but also Bulgaria, Romania, the former Yugoslav Republic of Macedonia and Turkey have made more progress with tariff rebalancing, but these countries also have monthly charges at a level that is typically about half the average level in the EU. When taking purchasing power parity into account, their monthly charges are more in line with the EU average.

In addition, Table 55 provides information on special tariff schemes for low-income subscribers. The incumbent operators in Bulgaria, Croatia, Romania, the former Yugoslav Republic of Macedonia and Turkey operate such schemes. In addition, the incumbent operators in Bosnia & Herzegovina operate special low tariff schemes for families of soldiers that died in the war, disabled veterans, blind people, and other disabled people. Montenegro and Serbia have offerings with reduced tariffs for party lines (i.e. shared by two subscribers).

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	1.93	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*	3.06	Equivalent of 100 minutes of local calls in peak time - represents a value of 1.52	2.05* *special package	Equivalent of 100 minutes of local calls in peak time - represents a value of 1.52
• *Telekom Srpske a.d. Banja Luka*	3.06	Equivalent of 100 minutes of local calls in peak time - represents a value of 1.12	1.53* *special package	Equivalent of 150 minutes of local calls in peak time - represents a value of 1.69
• *Hrvatske Telekomunikacije d.o.o. Mostar*	3.06	Equivalent of 100 minutes of local calls in peak time - represents a value of 1.52	2.05* *special package	Equivalent of 100 minutes of local calls in peak time - represents a value of 1.52

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
Bulgaria	6.44 residential standard telephone line 6.14 residential party standard telephone line	40 minutes local calls (20 impulses) included represents a value of 0.37	Package "Economical usage of telephone services for residential subscribers": 3.99	Package "Economical usage of telephone services for residential subscribers": 30 minutes local calls (15 impulses) included represents a value of 0.28
			Package "Limited usage of telephone services for residential subscribers": 1.90	Package "Limited usage of telephone services for residential subscribers": 20 minutes local calls (10 impulses) included represents a value of 0.18
			Package "Usage of telephone services for residential subscribers – disabled people group, for one definite telephone line": 0.92	Package "Usage of telephone services for residential subscribers – disabled people I group, for one definite telephone line": 120 minutes local calls (60 impulses) included represents a value of 1.10

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
			Package "Usage of telephone services for social and health institutions*, for one fixed telephone line": 2.15 * *determined annually till 30th January by lists of the relevant ministries*	Package "Usage of telephone services for social and health institutions*, for one fixed telephone line": 600 minutes local calls (300 impulses) included represents a value of 5.52
			All packages are approved by CRC. Consumption above the units included in the plan is usually charged at tariffs that are much higher than the tariffs in the standard calling plan.	
Croatia	9.89	1.65	7.42	60 minutes of national traffic anytime and this represents a value of 2.28
Romania	7.62	50 local minutes in peak time and 10 on-net national minutes in off-peak time, on incumbent network – representing a value of 2.20	5.83	no minutes included
Serbia & Montenegro - *Montenegro*	3.00	No "free" call units included	2.25 For party lines	No "free" call units included
Serbia & Montenegro - *Serbia*	0.57	150 pulses - representing a value of 0.65	For a party line, the monthly line rental charge is 25% lower than standard 0.43	150 pulses - representing a value of 0.65
Serbia & Montenegro - · *Kosovo*	4.03	1.84	NA	NA
The former Yugoslav Republic of Macedonia	7.68	First 100 minutes of local - representing a value of 1.93 - and long-distance traffic	4.24 Local traffic above €1.30 per month is charged at double the standard tariff	no

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
Turkey	7.02	-	4.39	100 pulses - representing a value of 4.48

Table 55 - Standard and low-level monthly line rental charge of fixed incumbent operator for residential users in nominal euro including VAT

Note: The nominal values of call units included in the monthly rentals have been calculated as the cost that these call units (during peak hours, if that option was available) would have added to the bill.

The next figure provides a graphical representation of the standard monthly rental in Table 55 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 will be seen that for Serbia, the value of the free call units exceeds the monthly rental price.

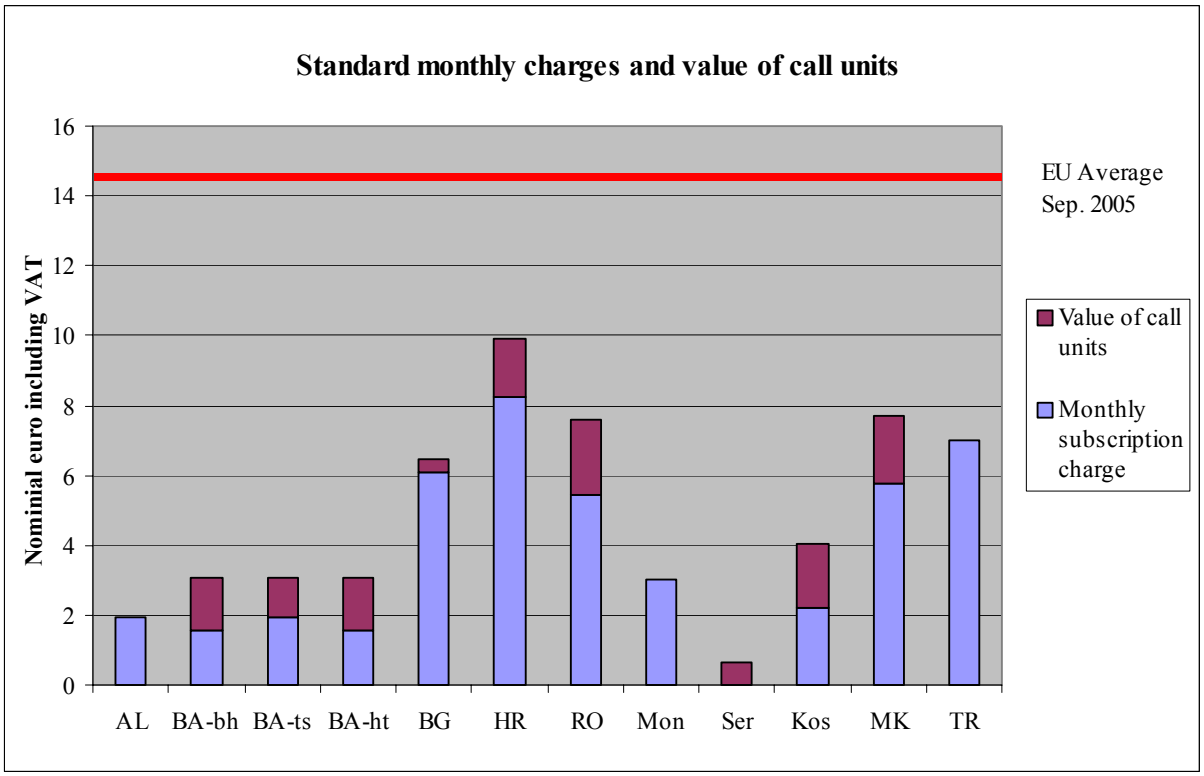


Figure 21 – Standard monthly rental and value of call units for residential users – nominal euro

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

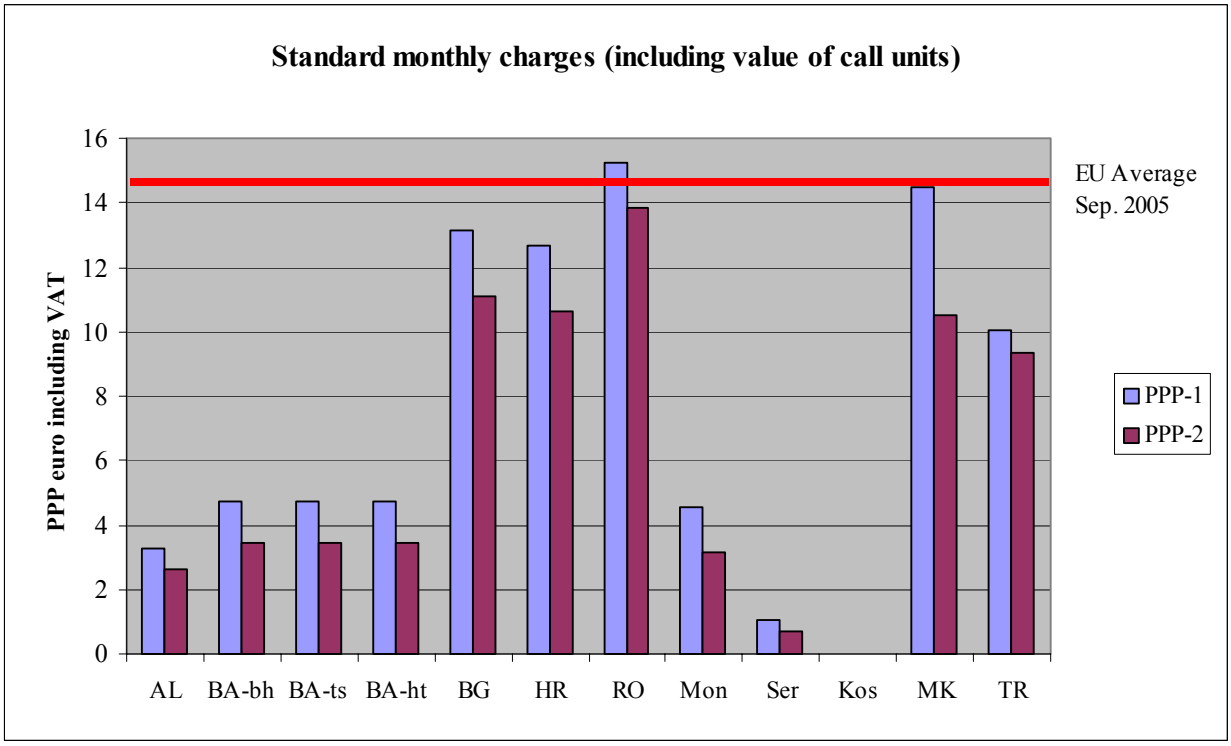


Figure 22 - Standard monthly rental (including value of call units) for residential users – PPP euro

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

Figure 23 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 (see Table 55) is not presented in the graph.

For Serbia and Turkey, the value of the free call units, when evaluated at the normal call charges, exceeds the nominal monthly rental.

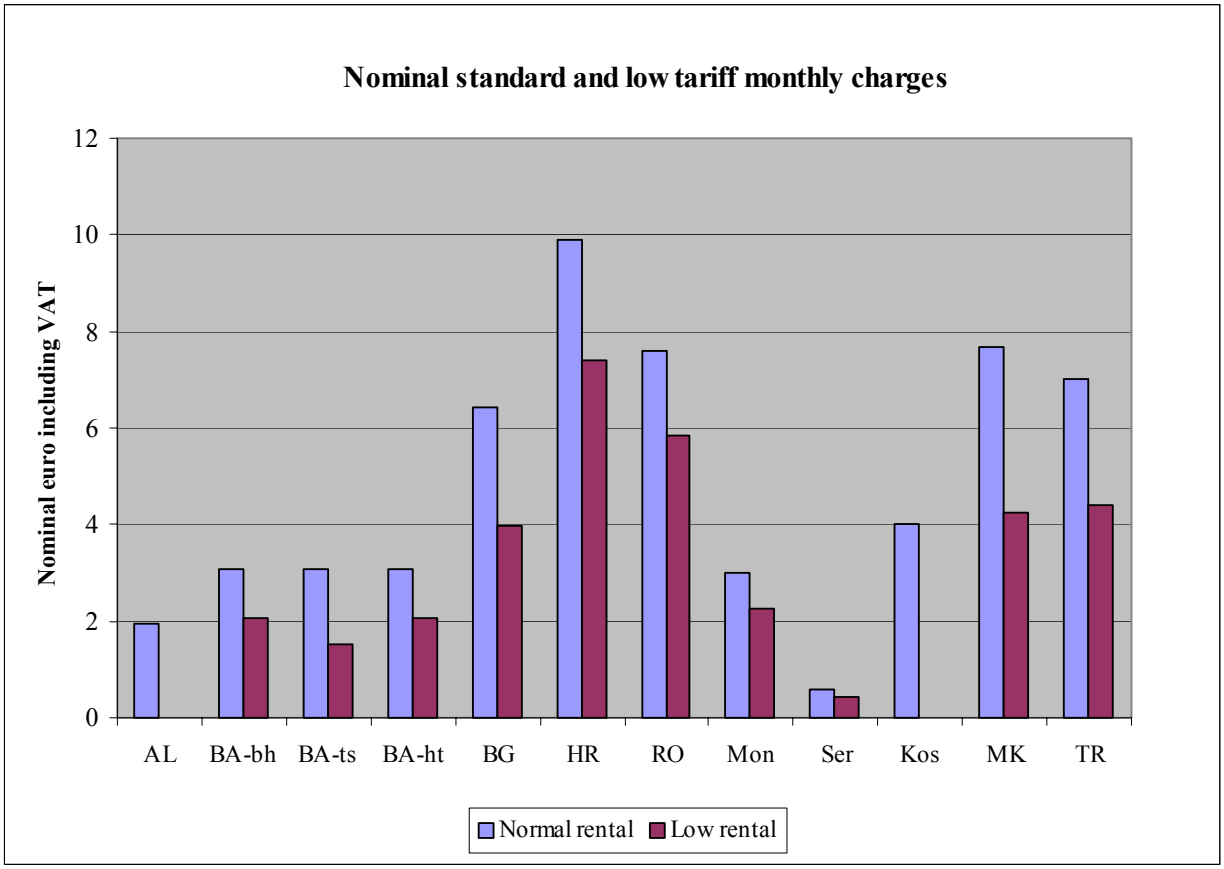


Figure 23- Standard and low-level monthly line rental charge of fixed incumbent operator for residential users in nominal euro

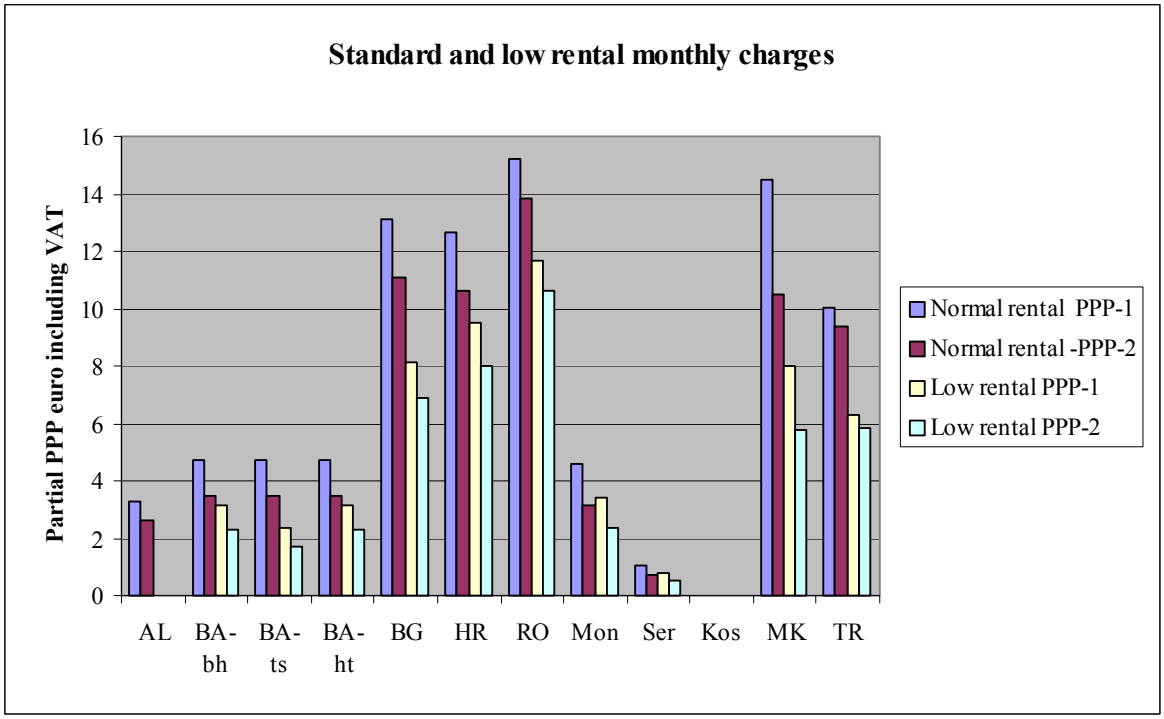


Figure 24- Standard and low-level monthly line rental charge of fixed incumbent operator for residential users in partial PPP euro

Table 56 provides similar information for business subscribers as Table 55 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 for party lines, there are no low tariff schemes.

The graph 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.

The graph demonstrates that the gap between the EU average and the charges in the geographic units being studied is considerably less for business subscriptions than for residential subscriptions. Nevertheless, the countries with the relatively highest rates, such as the three operators in Bosnia & Herzegovina, and the incumbent operators in Bulgaria, Croatia, Romania, and the former Yugoslav Republic of Macedonia have charges at the level of about two thirds of the EU average. The other geographic units, Albania, Montenegro, Serbia, Kosovo and Turkey, have charges that are less than half the EU average. Serbia's charges are particularly low and are less than 4% of the EU average.

Country	Monthly rental	Value of call units
Albania	6.44	0.00
Bosnia & Herzegovina		
BH Telecom d.d. Sarajevo	8.36	1.38
Telekom Srpske a.d. Banja Luka	7.67	1.02
Hrvatske Telekomunikacije d.o.o. Mostar	8.36	0.36
Bulgaria	8.44	0.00
Croatia	9.46	0.00
Romania	8.00	0.00
Serbia & Montenegro - *Montenegro*	4.09	0.00
Serbia & Montenegro - *Serbia*	0.46	0.00
Serbia & Montenegro - · *Kosovo*	3.50	1.60
The former Yugoslav Republic of Macedonia	11.42	0.00
Turkey	5.95	0.00

Table 56 - Standard line rental charge of fixed incumbent operator for business users in nominal euro

Note:
Bulgaria has higher monthly rentals for lines that are connected to a PABX.

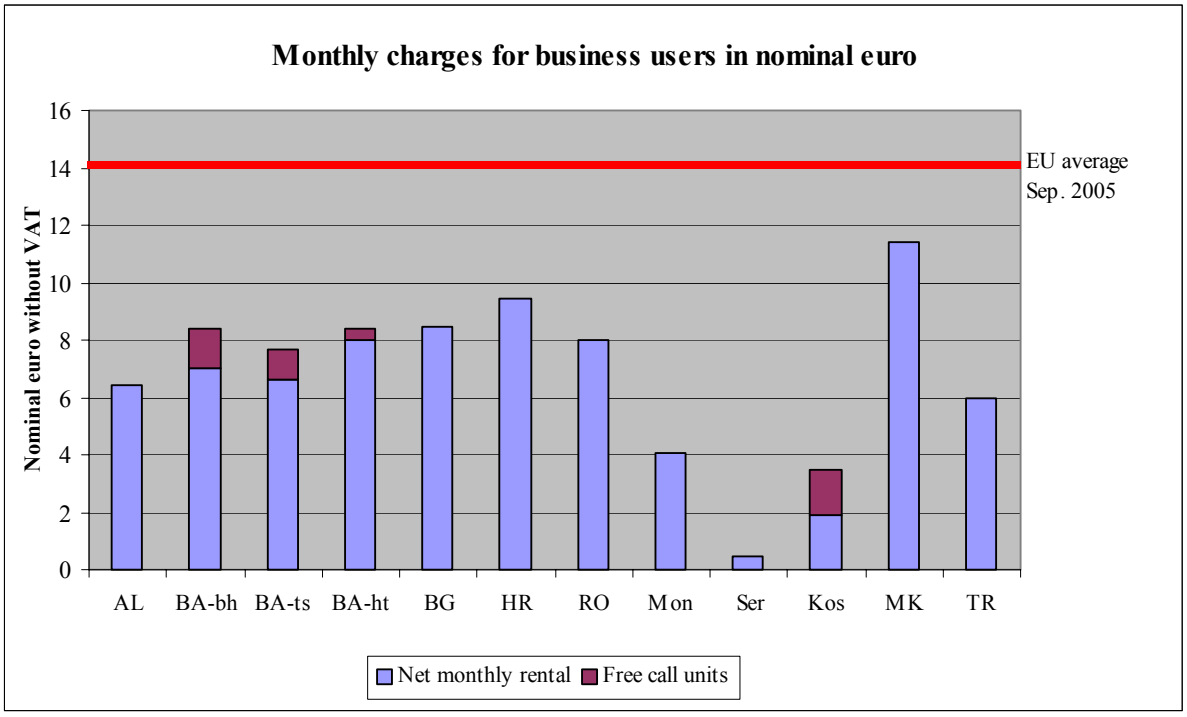


Figure 25 - Standard line rental charge of fixed incumbent operator for business users in nominal euro

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

3. One time installation costs

Figure 26 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 provide 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 Kosovo have installation prices above 100 euro. In the case of Serbia, this high rate is only paid by business users.

2. Bosnia & Herzegovina, Bulgaria, Croatia, Montenegro and residential subscribers in Serbia have installation costs between 35 and 100 euro.

3. Romania, the former Yugoslav Republic of Macedonia and Turkey have installation costs below 25 euro. Turkey's installation cost is particularly low at only €3.88 ex VAT.

In the figure below, both residential rates and business rates are provided without value added tax in order to enable a fair comparison. In most countries and geographic units, the one-time installation costs are nominally the same for residential and business subscribers.

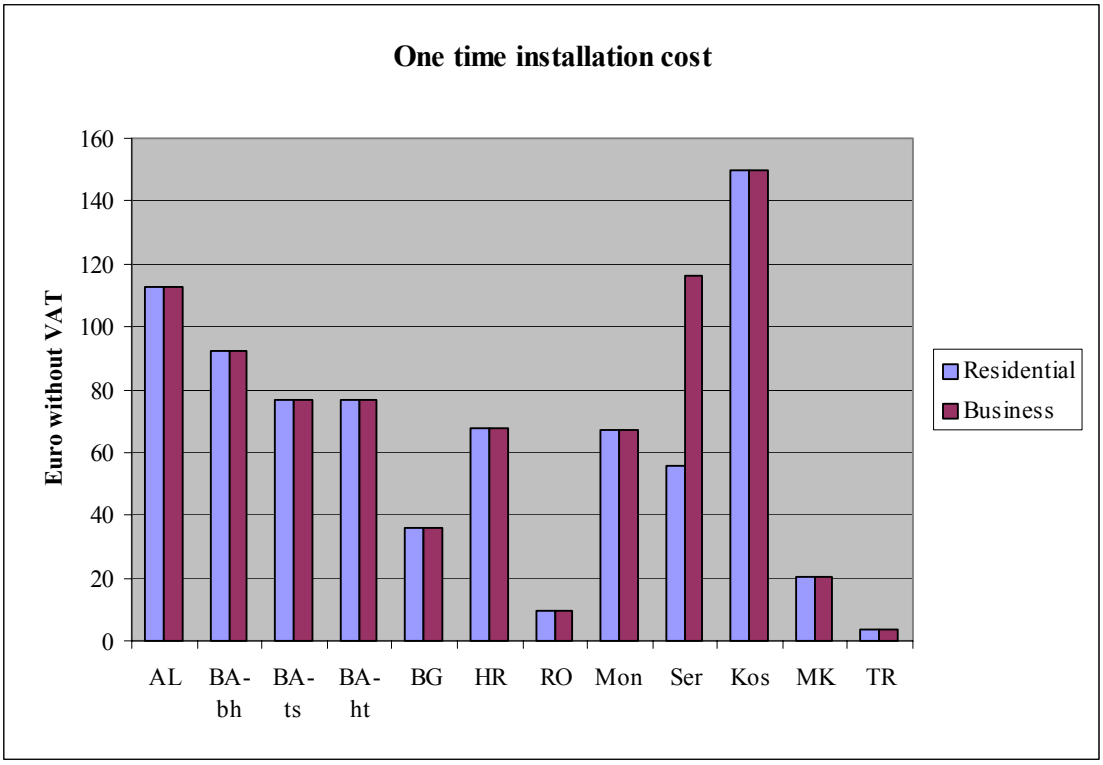


Figure 26 - One time installation cost for residential and business users without VAT

Notes:
Bosnia & Herzegovina: The installation fee includes a connection fee.
The former Yugoslav Republic of Macedonia: Normal installation fees assume that the new installation is within 250 metres of the existing network. For greater distances, the new subscriber is obliged to pay the additional cost.

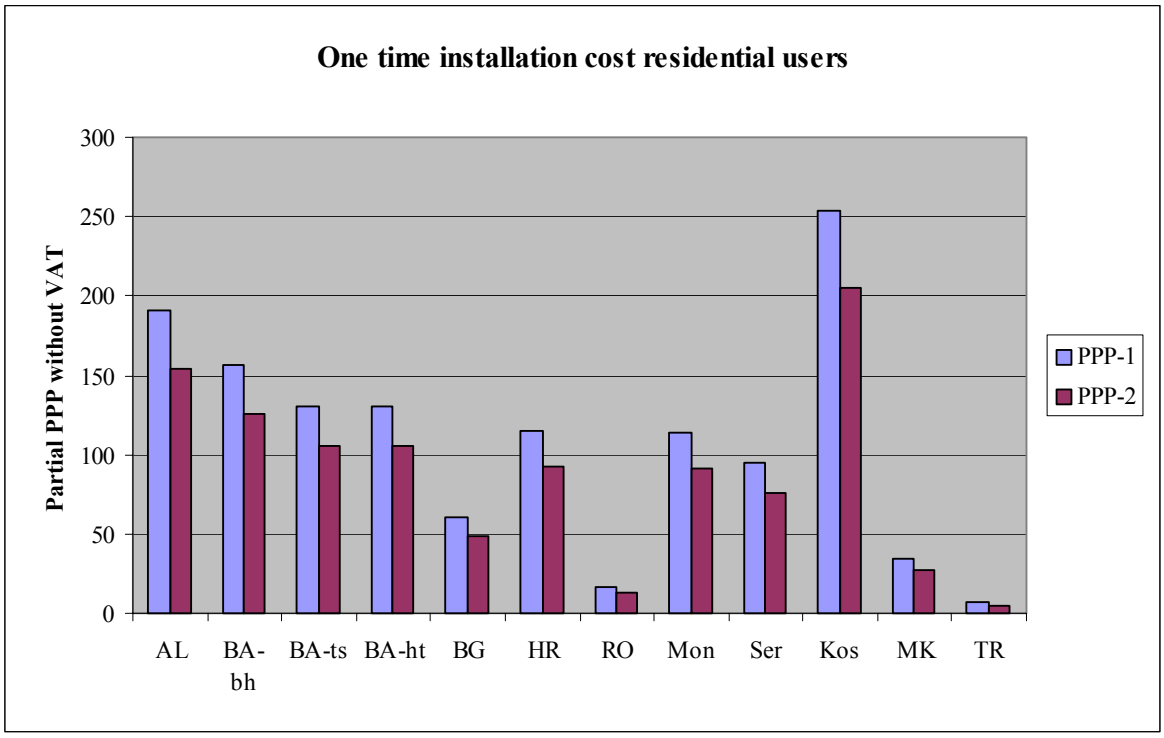


Figure 27 - One time installation cost for residential users without VAT in partial PPP euro

4. Access cost

Figure 28 below requires some special explanation. It is intended to demonstrate 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 includes 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 one-time cost is not available from the 11th Implementation Report from the European Commission.

The result shows that all geographic units are below the EU average. In particular, Serbia has extremely low values for both residential and business tariffs.

In Kosovo and Turkey, there is no difference between the prices paid by residential subscribers and business subscribers, except for VAT.

In Albania and Bosnia & Herzegovina, business subscribers pay more than double the price than residential subscribers do. In the other countries and geographic units, business subscribers pay 25% to 70% more.

The business subscriptions in most countries and geographic units pay monthly charges that are 50% to 80% of the EU average. Business subscribers in Kosovo pay only 25% of the EU average Serbia is an extreme case as business subscribers pay less than 4% of the EU average.

It is difficult to draw any firm conclusion on the existence of access deficits from these indicators. In the EU Member States, there are countries with monthly rentals at the EU average and above where there is still a debate over access deficits[34], but at the same time, there are new Member States with monthly rentals that are less than half the EU average and claim that the rebalancing has been completed[35].

[34] Ninth EU Implementation Report.

[35] 4th Report on monitoring of EU Candidate Countries (Telecommunication Services Sector) prepared by IBM for the EU.

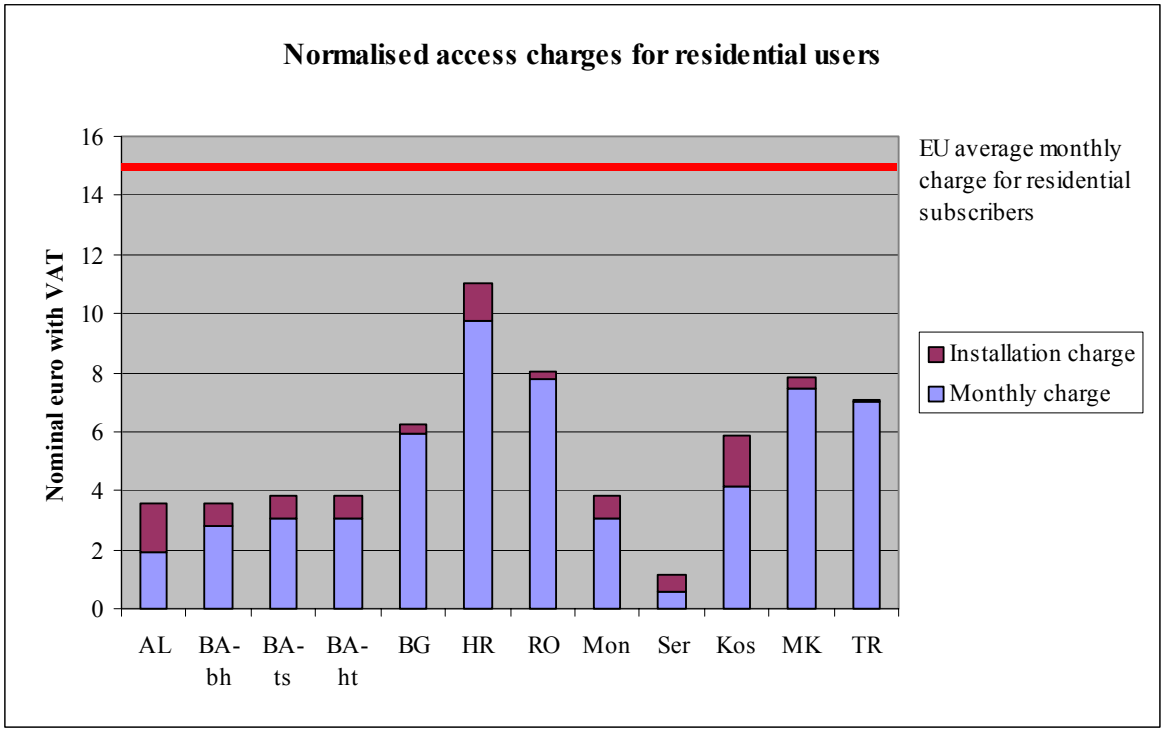


Figure 28 – Normalised access charges for residential users – nominal euro

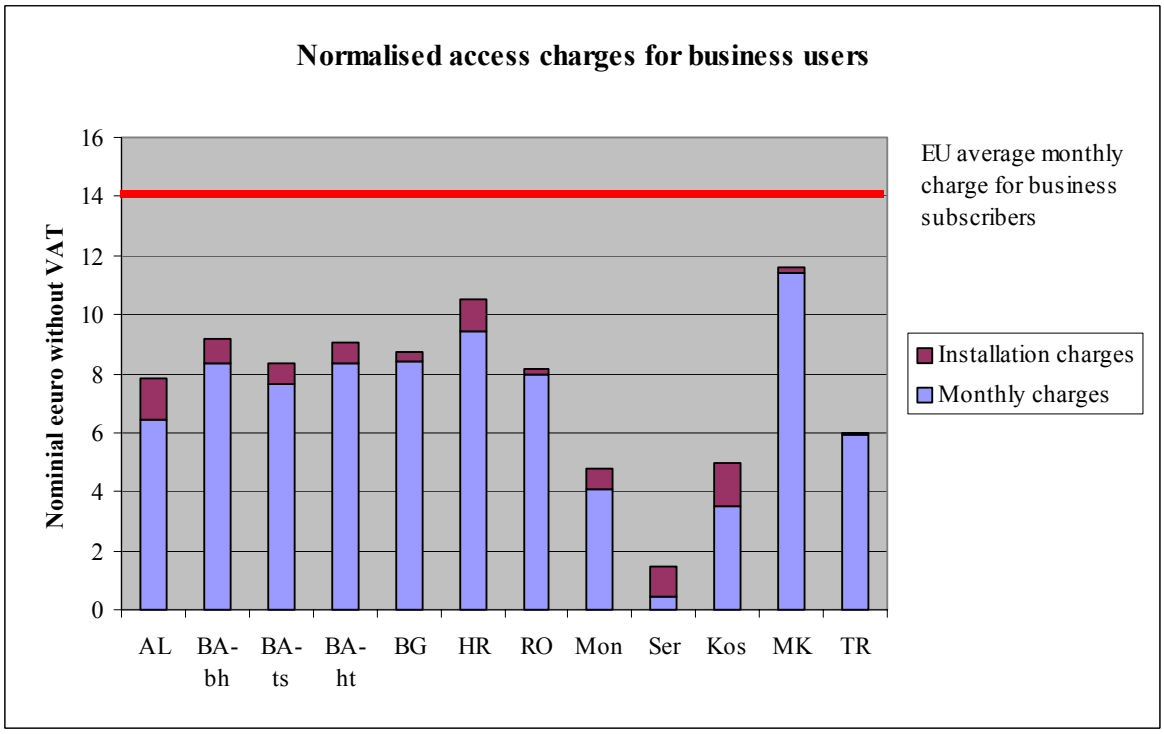


Figure 29- Normalised access charges for business users – nominal euro

5. Local fixed telephony tariffs

The next table 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 based 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 ¾ 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.

The information in the table and the corresponding graph show that short local calls in Bulgaria, Croatia, Romania and Turkey are at a level that is only slightly below the European average. Kosovo is also more or less in the same category.

Serbia, on the other hand, has an extremely low price for local calls at a level of about 5% of the European average. A three-minute local call in Serbia cost about 1/15 of the cost in neighbouring Croatia.

The other geographic units have tariffs that are significantly lower than the EU average.

Only Albania, Bulgaria, Croatia and Romania have provided tariff information from alternative operators.

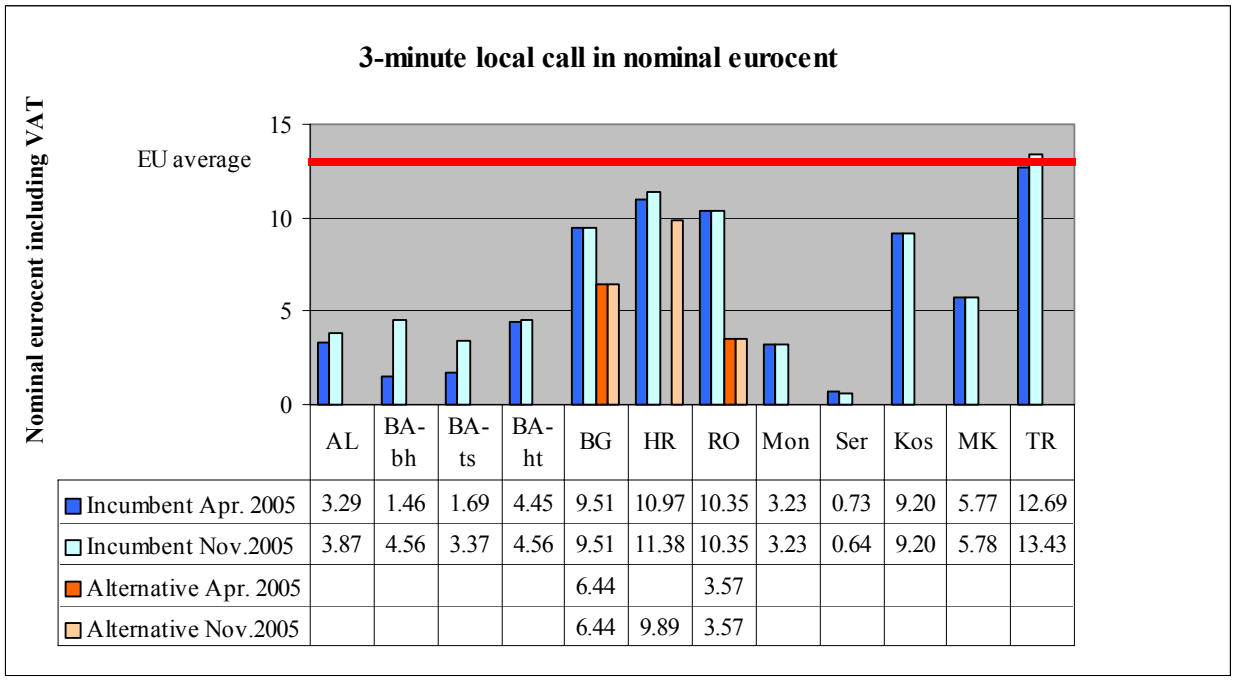
In Albania, however, the alternative operators only provide telephony in specific rural areas rather than as a national competitive alternative to the incumbent operator and so these tariffs are not shown in the figures that follow.

In Bulgaria and Romania, the incumbents as well as the alternative operators offer on-net calls at lower prices than off-net calls. Taking into account the difference in the market shares of the incumbents and those of the alternative operators, most of the fixed calls still are terminating in the incumbents' networks: i.e. most of the calls originating in the incumbents' networks are on-net calls and the calls originating in the alternative operators' networks are off-net calls. The figures that follow are therefore showing the tariffs for on-net calls of the incumbent operators and off-net calls of the alternative operators.

In Romania, the alternative operators' tariffs are in fact significantly lower than those of the incumbent operators, as expected in a competitive environment.

In the other geographic units, there is not yet a competitive alternative for local calls.

In some countries, the incumbent operator has different tariffs for residential and business users. The figure presents the tariffs for the residential users.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent Apr. 2005	3.29	1.46	1.69	4.45	9.51	10.97	10.35	3.23	0.73	9.20	5.77	12.69
Incumbent Nov.2005	3.87	4.56	3.37	4.56	9.51	11.38	10.35	3.23	0.64	9.20	5.78	13.43
Alternative Apr. 2005					6.44		3.57					
Alternative Nov.2005					6.44	9.89	3.57					

Figure 30 - Price of fixed incumbent and alternative fixed operator for a 3-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.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

When considering the levels of local tariffs in partial purchase power values, the local tariffs exceed the EU average in Bulgaria, Croatia, Romania and Turkey.

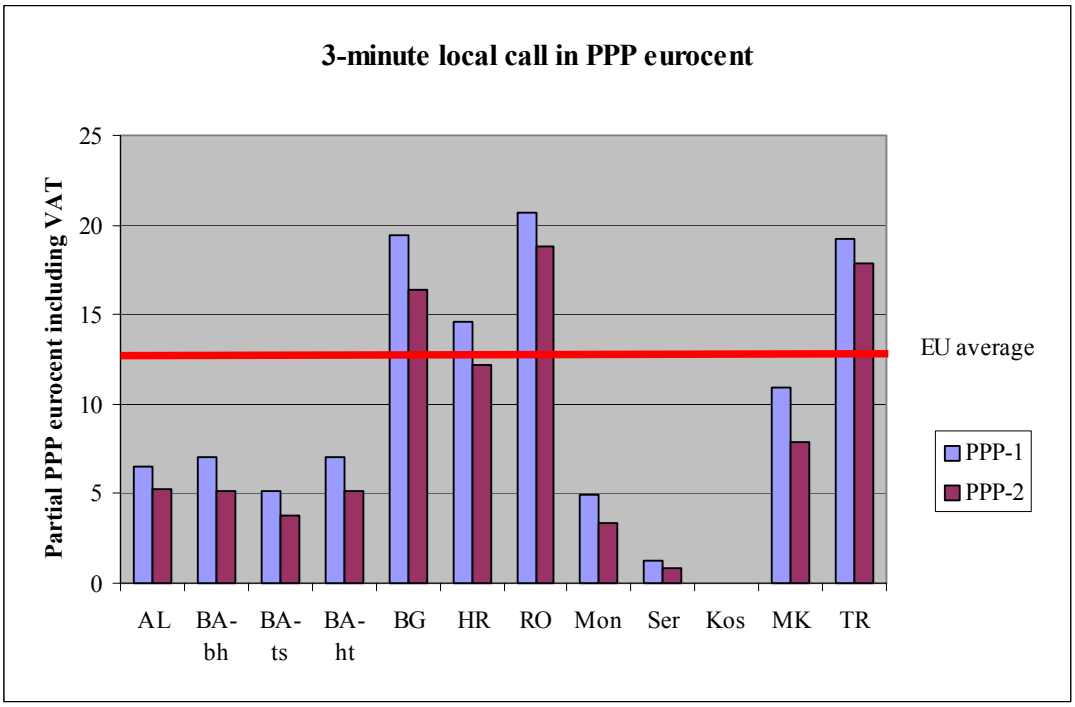


Figure 31 - Price of fixed incumbent operator for a 3-minute local call in partial PPP eurocents

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

The next table 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 to the extent that there are call set-up charges that become less significant in a longer call. Since only the incumbent operators in Bulgaria and Kosovo have tariff schemes with call set-up charges, these countries are presented with relatively lower prices for calls with 10-minute duration.

For both Bulgaria and Kosovo the call set-up cost is rather high relative to the cost per minute. In Bulgaria, the set-up cost corresponds to the per minute cost for over seven minutes and in Kosovo it corresponds to three minutes.

This means that for both these countries the cost for ten-minute local calls is considerable lower for a ten-minute call than for a three-minute call when compared against the EU average.

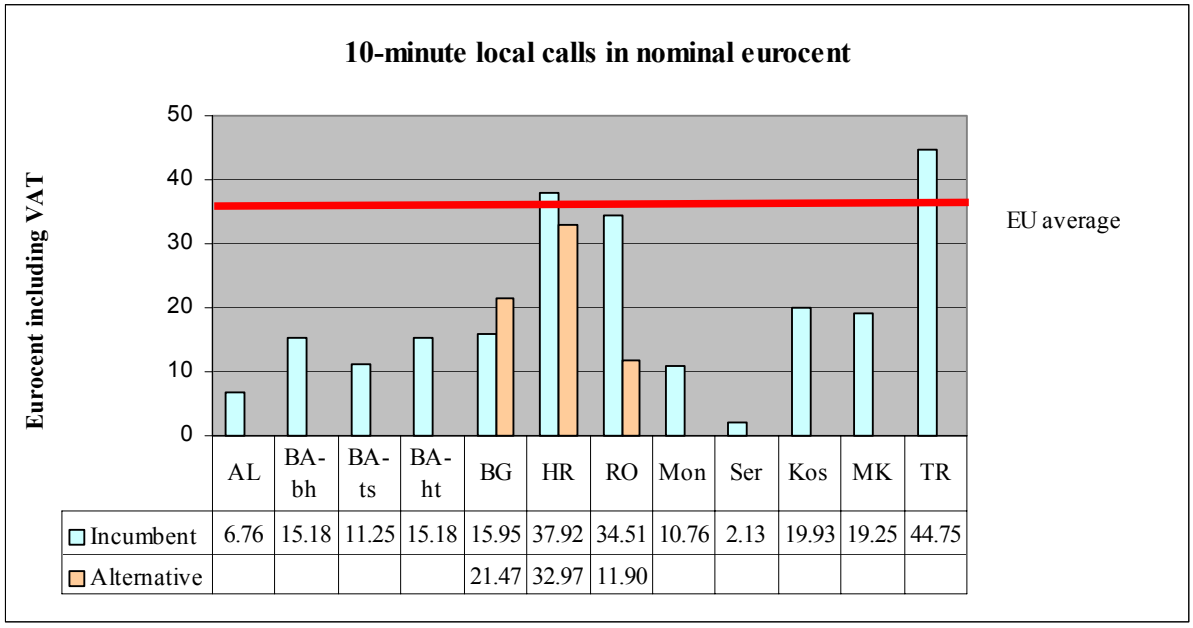


Figure 32 - Price of fixed incumbent and alternative fixed operator for a 10-minute local call in nominal Eurocents

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.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

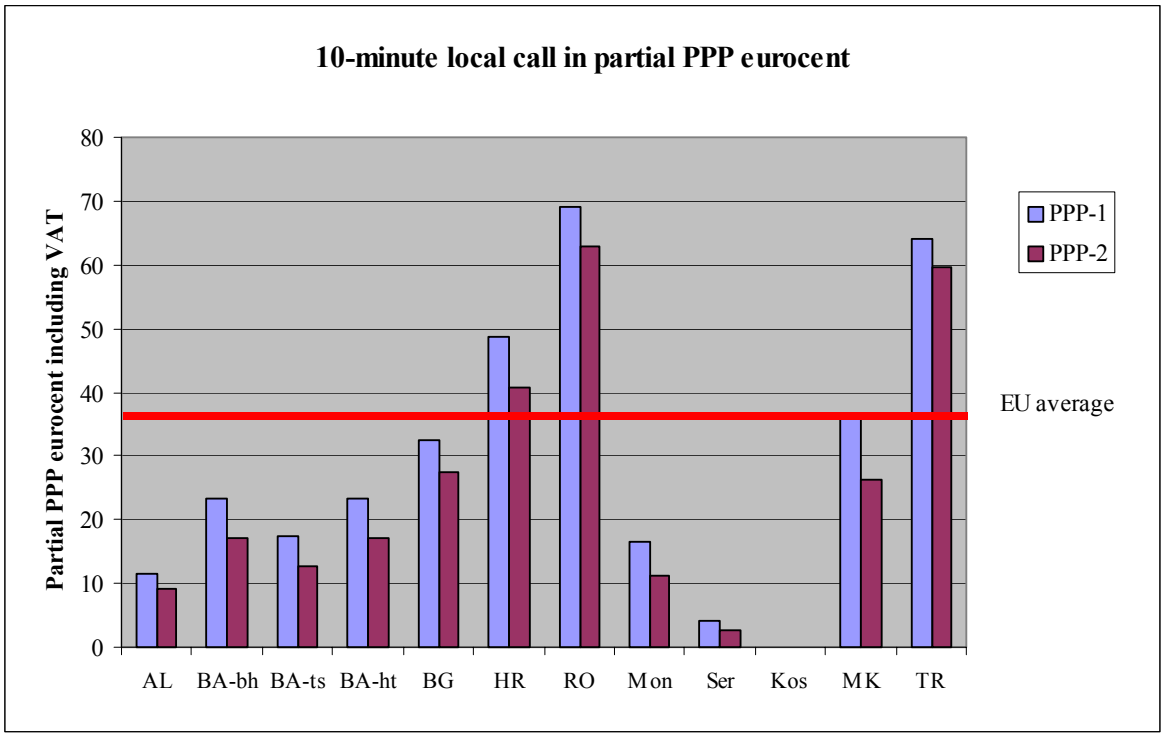


Figure 33 - Price of fixed incumbent fixed operator for a 10-minute local call in partial PPP Eurocents

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

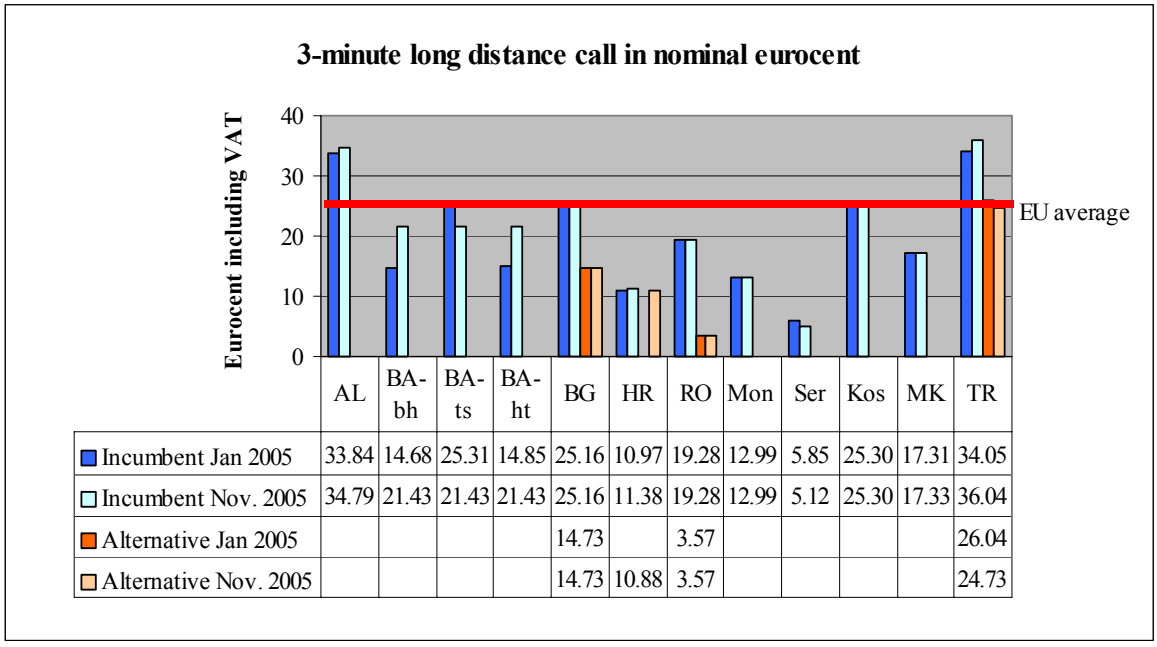
6. Long distance fixed telephony tariffs

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 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 three-minute long distance call is relatively low compared with the other geographic units and less than half of the European average.

Only Serbia 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 operator in Albania and Turkey costs more than the EU average. In Bosnia & Herzegovina, Bulgaria, Romania, Kosovo and the former Yugoslav Republic of Macedonia the tariffs are lower than the EU average.

The incumbent operator in Serbia has tariffs that are significantly lower than the EU average.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent Jan 2005	33.84	14.68	25.31	14.85	25.16	10.97	19.28	12.99	5.85	25.30	17.31	34.05
Incumbent Nov. 2005	34.79	21.43	21.43	21.43	25.16	11.38	19.28	12.99	5.12	25.30	17.33	36.04
Alternative Jan 2005					14.73		3.57					26.04
Alternative Nov. 2005					14.73	10.88	3.57					24.73

Figure 34 - Price of fixed incumbent and alternative fixed operator for a 3-minute long distance call in nominal Eurocents

Notes:
Bulgaria: The prices shown for the incumbent are for calls made on digital exchanges. Long distance calls made on analogue exchanges are priced differently (a 3 minute long distance call would cost 27.00 eurocents). The alternative operator, Orbitel, does not charge for on-net long distance calls.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

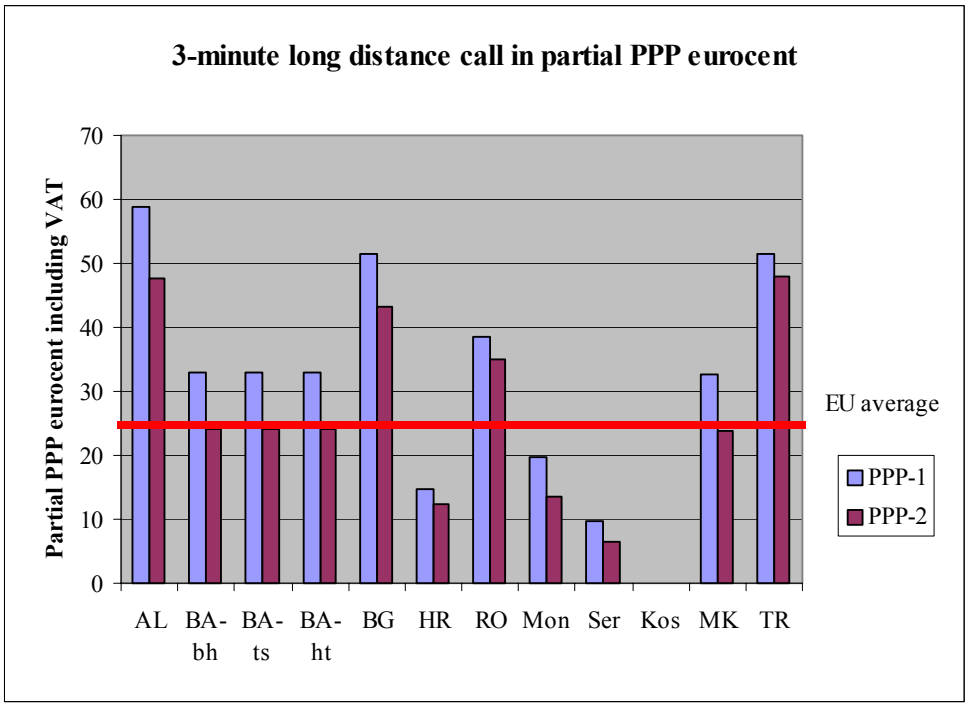
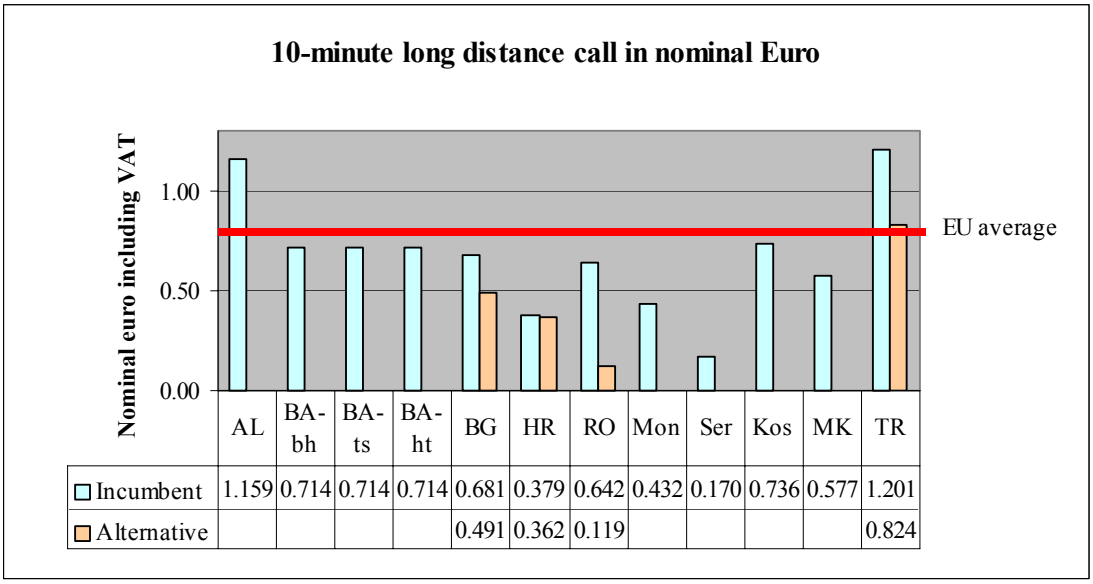


Figure 35 - Price of fixed incumbent operator for a 3-minute long distance call in partial PPP Eurocents

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

The next figure shows the prices for 10-minute long distance calls. It presents a picture that is quite 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 and Kosovo.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent	1.159	0.714	0.714	0.714	0.681	0.379	0.642	0.432	0.170	0.736	0.577	1.201
Alternative					0.491	0.362	0.119					0.824

Figure 36 - Price of fixed incumbent and alternative fixed operator for a 10-minute long distance call in nominal Eurocents

Notes:
Bulgaria: The prices shown for the incumbent are for calls made on digital exchanges. Long distance calls made on analogue exchanges are priced differently (a 10 minute long distance call would cost 0.675 euros). The alternative operator, Orbitel, does not charge for on-net long distance calls.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

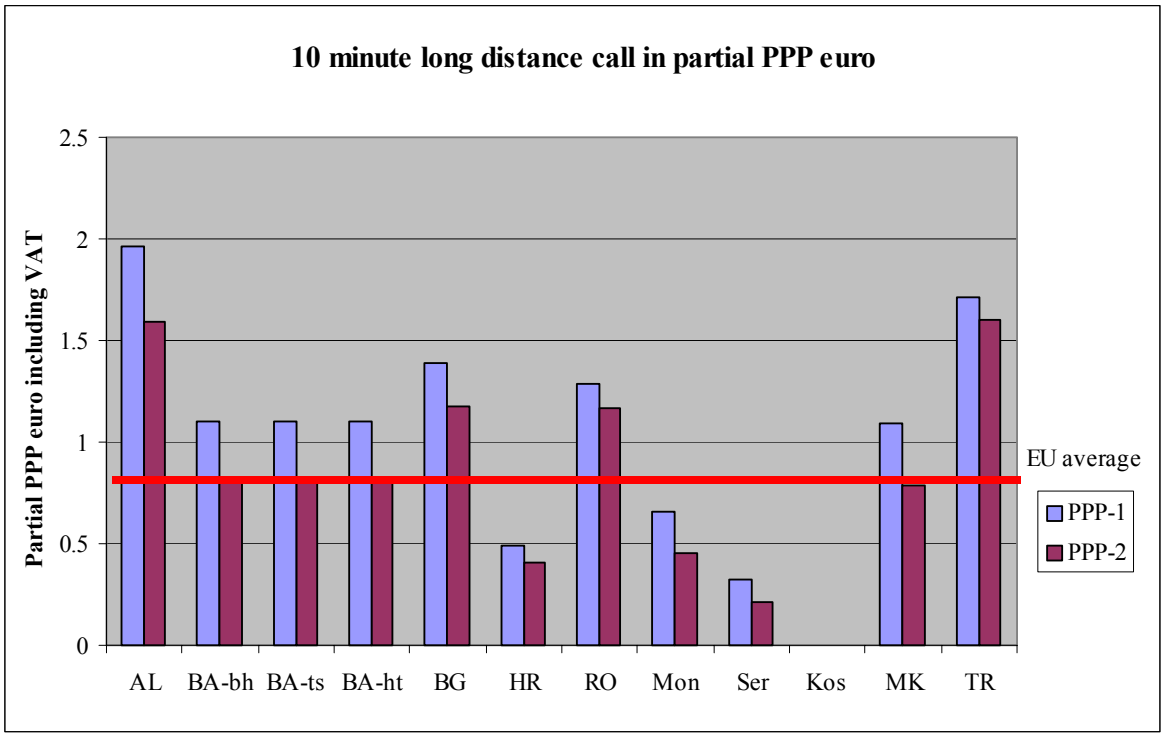


Figure 37 - Price of fixed incumbent operator for a 10-minute long distance call in partial PPP Eurocents

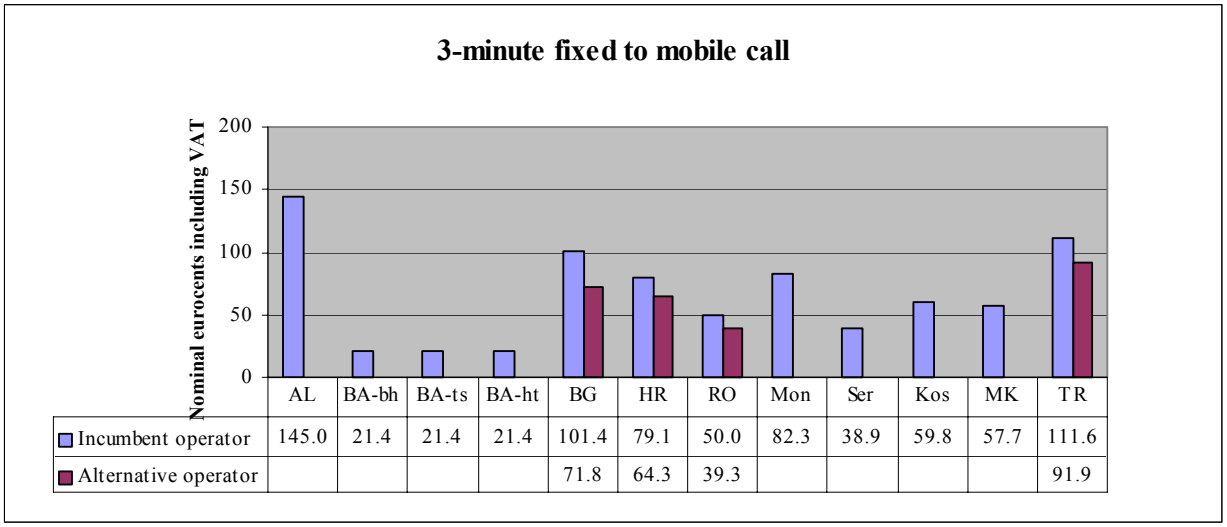
7. Fixed to mobile calls

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 38Figure 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. The other countries and geographic units have mid-range tariffs.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent operator	145.0	21.4	21.4	21.4	101.4	79.1	50.0	82.3	38.9	59.8	57.7	111.6
Alternative operator					71.8	64.3	39.3					91.9

Figure 38 - Price of fixed incumbent and alternative fixed operator for a 3-minute long fixed to mobile call in nominal Eurocents

Notes:
Bosnia & Herzegovina: All three incumbent operators have both fixed and mobile operations. The graph shows the tariffs from a fixed operator to a mobile operator that is not a subsidiary. Tariffs for calls to its mobile subsidiary are lower.
Bulgaria: The alternative operator is Orbitel.
Serbia & Montenegro - Serbia: The prices are for residential users. Business users pay 65% more.

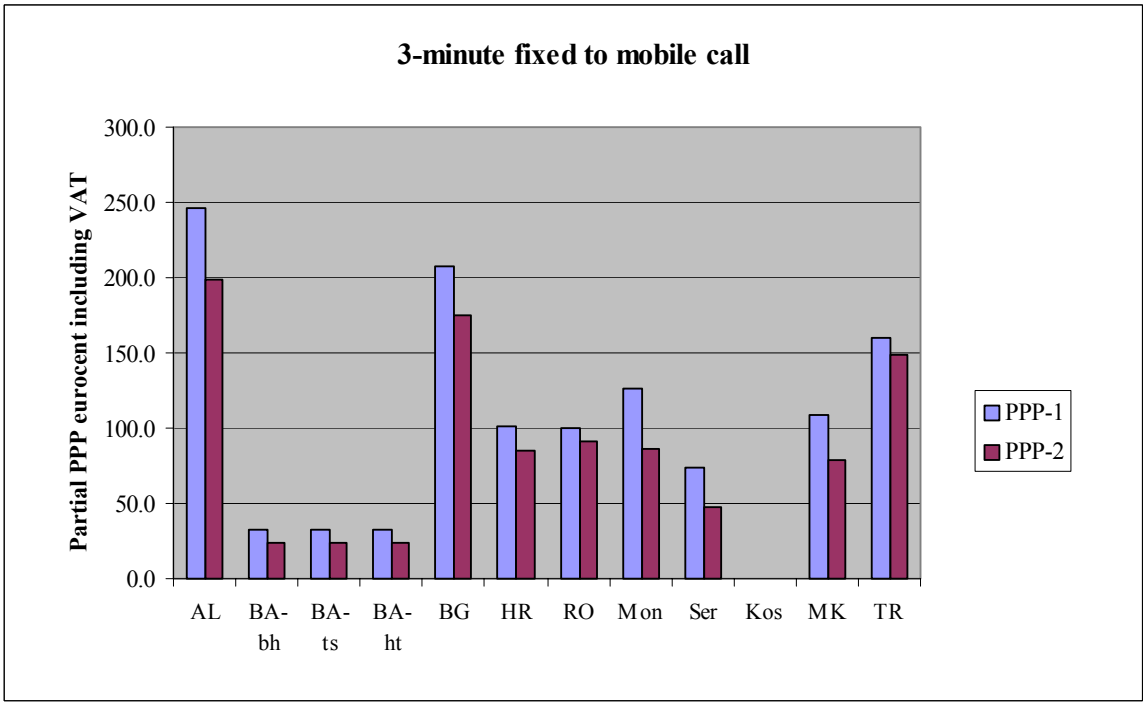


Figure 39 - Price of fixed incumbent operator for a 3-minute long fixed to mobile call in partial PPP Eurocents

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, the OECD has 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 figures below present the lowest cost alternative within each country and geographic unit for each usage basket taking into account both post-paid and pre-paid offerings. These values are compared against the corresponding yardstick values for the 25 EU Member States.

NB. The values from the 25 EU Member States are found in the 11th Implementation Report of the European Commission, which was published in February 2006. The data come from June or October 2005 and include only post-paid offerings.

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.

NB. The OECD country baskets are not available from all countries and geographic units.

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.

For the medium and high usage baskets the tariffs in South East Europe appear to be relatively higher when comparing with the EU. Albania has tariffs which are close to the highest found in the EU and also Turkey has tariffs above the EU median.

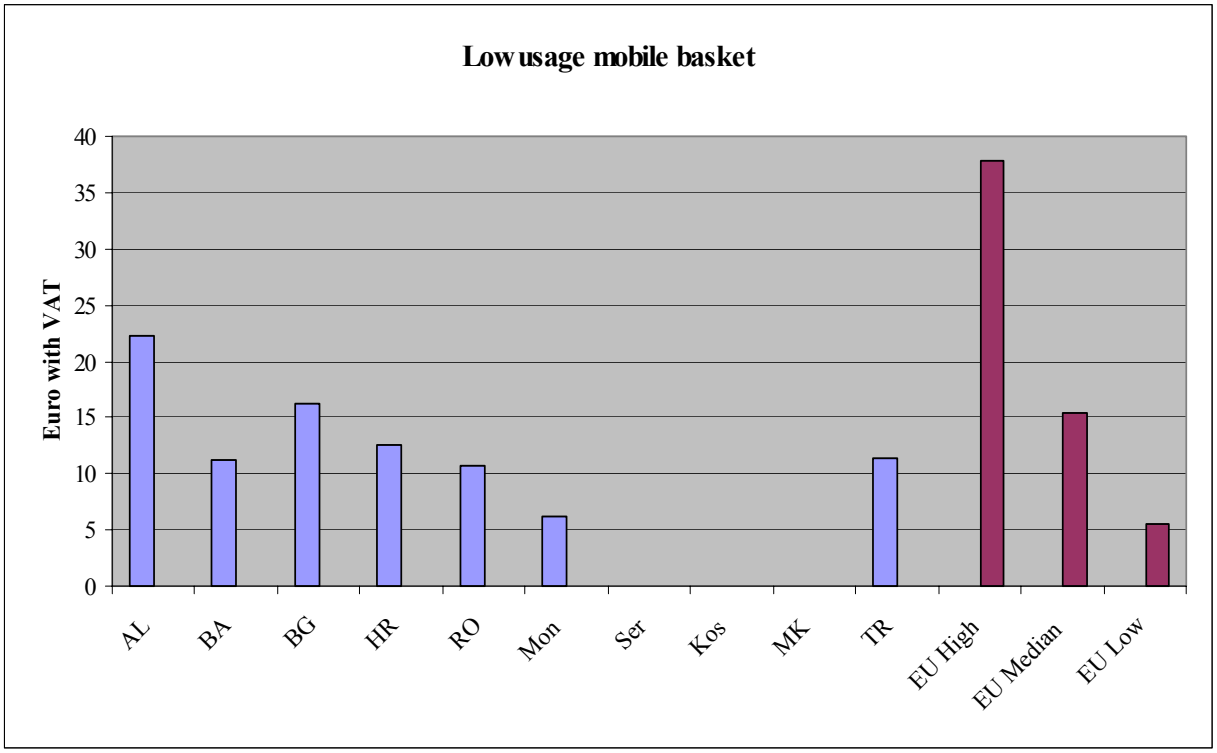


Figure 40– Low usage mobile basket

Note:
The EU indicators are taken from the 11th Implementation Report from the European Commission, February 2006.

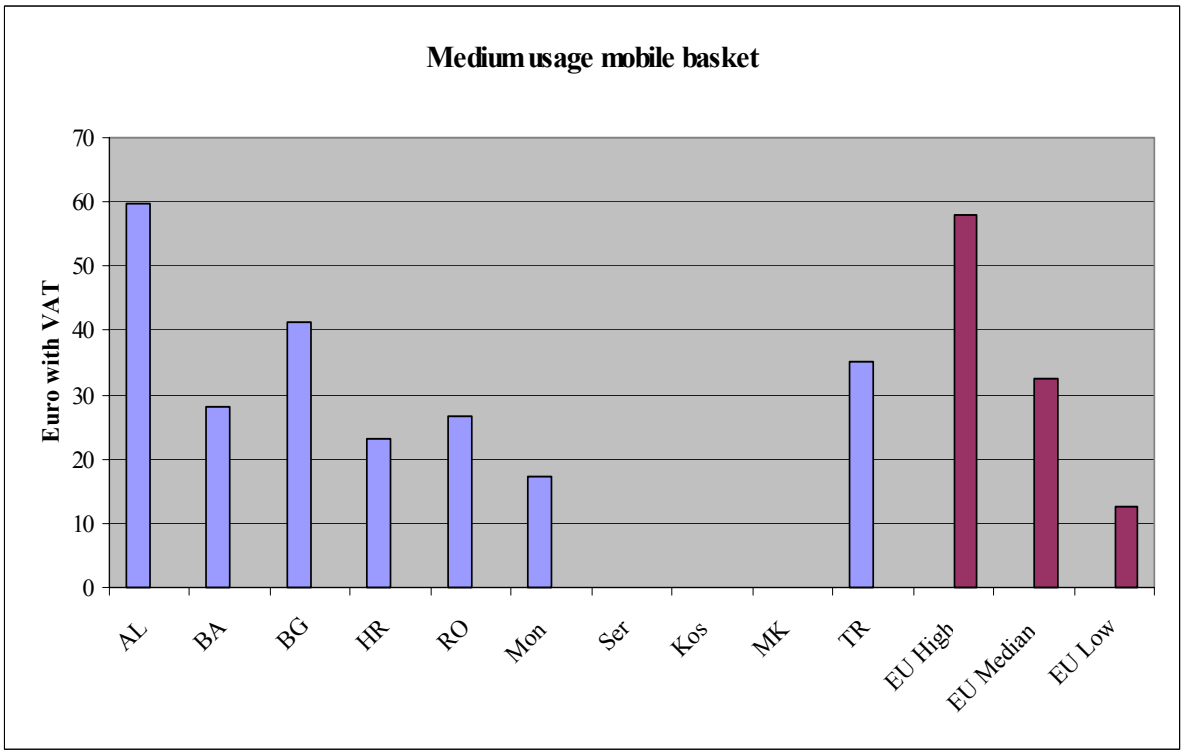


Figure 41 – Medium usage mobile basket

Note:
The EU indicators are taken from the 11th Implementation Report from the European Commission, February 2006.

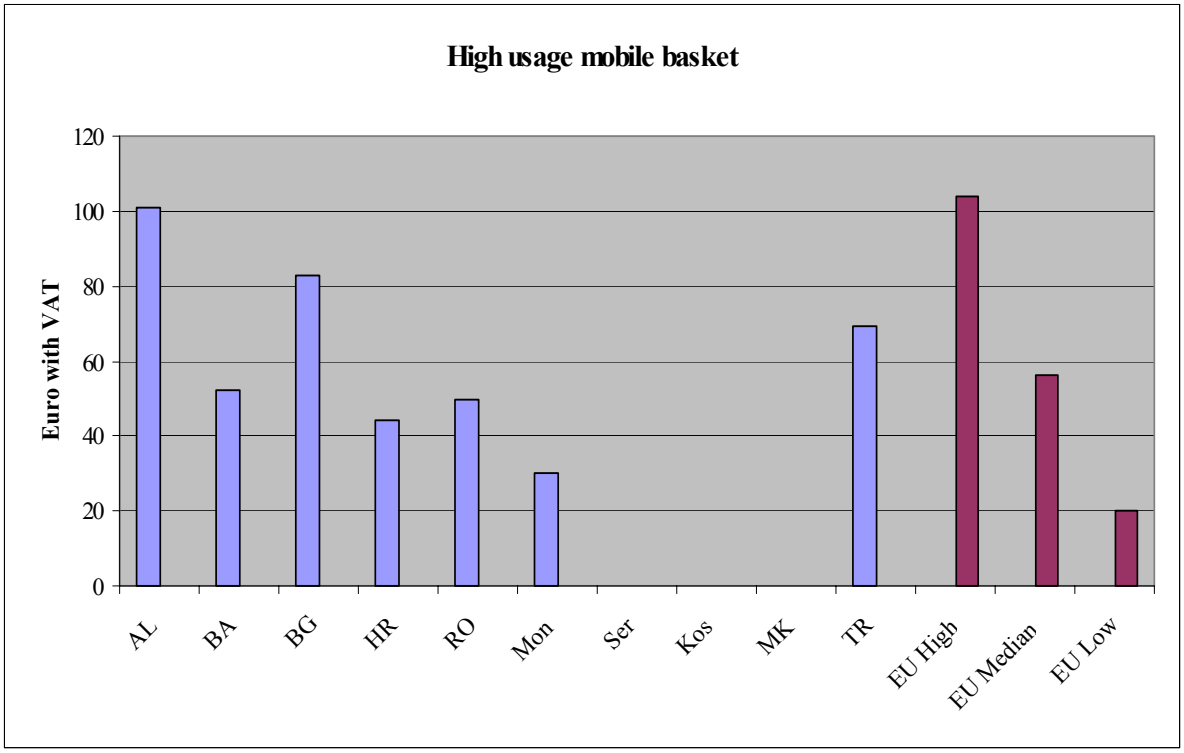


Figure 42 – High usage mobile basket

Note:
The EU indicators are taken from the 11th Implementation Report from the European Commission, February 2006.

9. 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 situation is also to some extent reflected in the telecommunications tariffs as explained below.

a) Bosnia & Herzegovina

Federation of Bosnia & Herzegovina

One of the incumbent operators in the Federation of Bosnia & Herzegovina, BH Telecom, has now introduced the same tariffs to both of its neighbouring countries: Croatia and Serbia & Montenegro. This price is about 43% 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 around 60% of calls to other neighbouring countries. A similar price advantage applies for calls to mobile users.

Republika Srpska

Users in Republika Srpska still have lower tariffs for calls to Serbia & Montenegro than for calls to other neighbouring countries. However, in this case also the price differential has been reduced so that such calls now cost about 40% of what a call to Croatia costs.

A similar price advantage applies for calls to mobile users.

Telekom Srpske a.d. Banja Luka also has a special subscription option whereby the user can pay an additional fixed monthly subscription fee of €1.53 and make calls to Serbia & Montenegro at half the normal rate. A similar option is available for calls to Croatia and Slovenia. In addition, in this case, the subscriber can pay an additional subscription fee of €1.53 and have a 37% discount on the normal rate.

b) Serbia & Montenegro

Montenegro

For a fixed telephone user, calls to Serbia and Kosovo have the status of being a special category of national long distance call. The tariff is about 2.7 times that of a national long distance call in Montenegro, but only 1/3 of the cost of an international call to a neighbouring country.

Before April 2004, calls from Montenegro to Republika Srpska in Bosnia & Herzegovina also benefited from this special tariff. After that date, all calls to Bosnia & Herzegovina have been priced as calls to other neighbouring countries.

For a mobile user, calls to Serbia and Kosovo have the same price as a call within Montenegro.

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 national long distance call and priced 2.6 times higher than other domestic long distance calls.

Republika Srpska in Bosnia & Herzegovina enjoys a special status. For residential users, the cost is 1/3 of the tariff for calls to other neighbouring countries. For business users, the tariff is twice that of residential users.

For a mobile user, the tariffs to Montenegro and Kosovo vary with the operator:

- Telekom Srbija applies the same tariff to all mobile networks in the country of Serbia & Montenegro.
- Mobtel has one rate for national mobile calls and a different price for calls to Montenegro. With its direct interconnection with the Promonte mobile network in Montenegro, it has priced cross-territory calls to this operator as well as to the fixed network in Montenegro at the same price as a national mobile-to-fixed call. These calls are more expensive than calls to Mobtel's own subscribers and subscribers of the other Serbian mobile operator.

Mobile operators have no special arrangements for calls to Republika Srpska.

Kosovo

A fixed telephone user in Kosovo pays a price for calls to Montenegro and Serbia, which is only twice as high as other long distance calls within Kosovo. Calls to other neighbouring countries cost about seven times more than long distance calls within Kosovo.

c) Romania

Romania has particularly low tariffs for traffic to Moldova, which are priced at 50% of the price to the next tariff zone.

d) The former Yugoslav Republic of Macedonia

The incumbent operator provides a "favourite country package", which is available for calls from residential subscribers to Albania, Bulgaria, Greece, Serbia & Montenegro, and Turkey. This package provides a 10% discounts on calls to fixed as well as mobile networks in these countries.

A similar arrangement is available to business subscribers and, in addition, the list of countries includes Bosnia & Herzegovina, Croatia, and Slovenia.

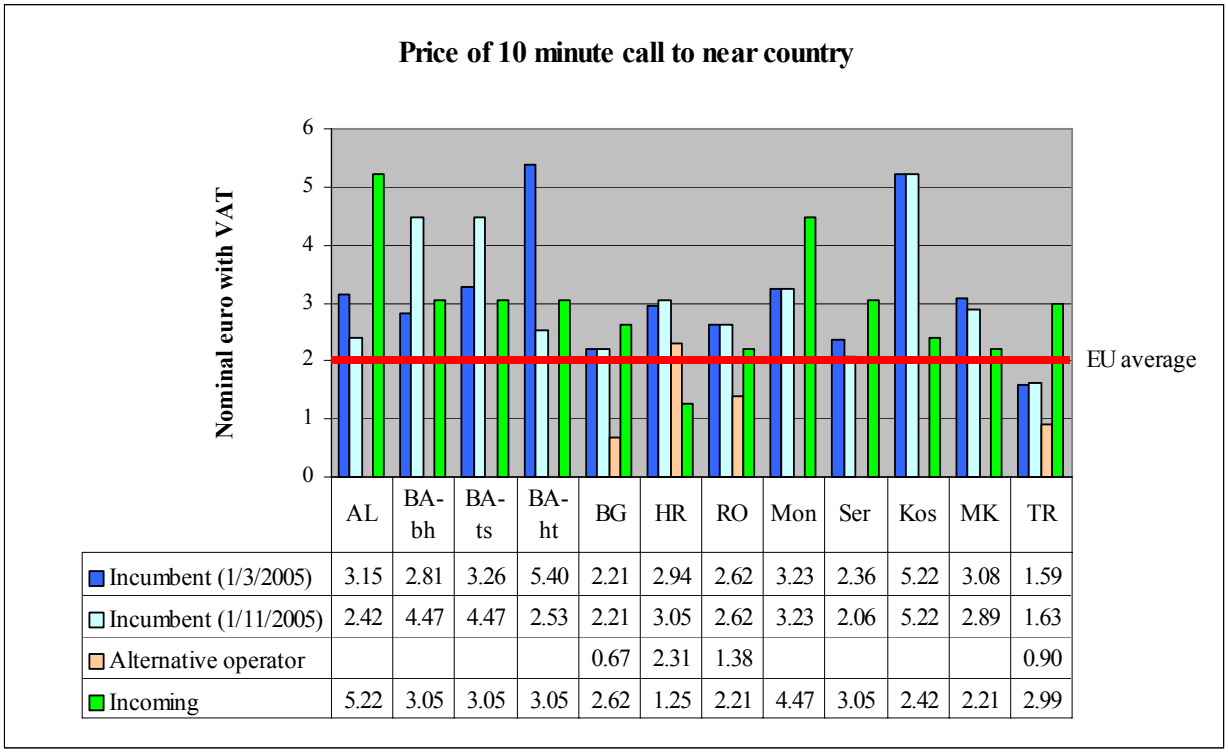
10. International tariffs

As explained above, there are some special near country relationships between Bosnia & Herzegovina, Croatia and Serbia & 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.

The charts on international tariffs in this section also include the cost of incoming calls. This cost is a reflection of the old problem with international accounting rates where many countries have maintained high international accounting rates as a means to generate "export revenues". In countries where this practice still exists, the cost of incoming calls will be relatively high. When calling from an EU Member State, the cost of a call to a country with high accounting rates will be significantly higher than calls to "normal" countries with a liberal telecommunications environment.

Figure 43 below shows that Albania, Bosnia & Herzegovina, and Kosovo have tariffs that are significantly higher than the EU average. Only Bulgaria and Turkey have tariffs below the EU average. The other countries and geographic units have tariffs that are moderately higher than the EU average.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent (1/3/2005)	3.15	2.81	3.26	5.40	2.21	2.94	2.62	3.23	2.36	5.22	3.08	1.59
Incumbent (1/11/2005)	2.42	4.47	4.47	2.53	2.21	3.05	2.62	3.23	2.06	5.22	2.89	1.63
Alternative operator					0.67	2.31	1.38					0.90
Incoming	5.22	3.05	3.05	3.05	2.62	1.25	2.21	4.47	3.05	2.42	2.21	2.99

Figure 43 – Price of 10-minute call to near country in nominal euro

Notes:
The tariffs in the table above are for calls to and from: AL<->Kos, BA-bh<->HR, BA-ts<->HR, BA-ht<->HR, BG<->RO, HR<->SI (Slovenia), RO<->BG, Mon<->BA, Ser<->HR, Kos<->AL, MK<->BG, and TR<->Greece.
Albania: The incumbent fixed operator's tariffs apply for calls to Greece, Italy, Kosovo, Croatia, Montenegro, and the former Yugoslav Republic of Macedonia.
Bosnia & Herzegovina: As explained above in IV.G.8 on cross-border tariffs, each operator has special tariffs to some countries. The tariffs to neighbouring countries that do not benefit from these special tariffs are higher by a factor of three or more. The tariff reflected in the figure represents an arithmetic average of the two near country tariffs.
Bulgaria: The prices in the table above apply to calls to Albania, Macedonia, Montenegro, Romania, Slovenia, Serbia, and Turkey.
Romania: The prices apply to calls to Hungary, Bulgaria, and Ukraine.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006

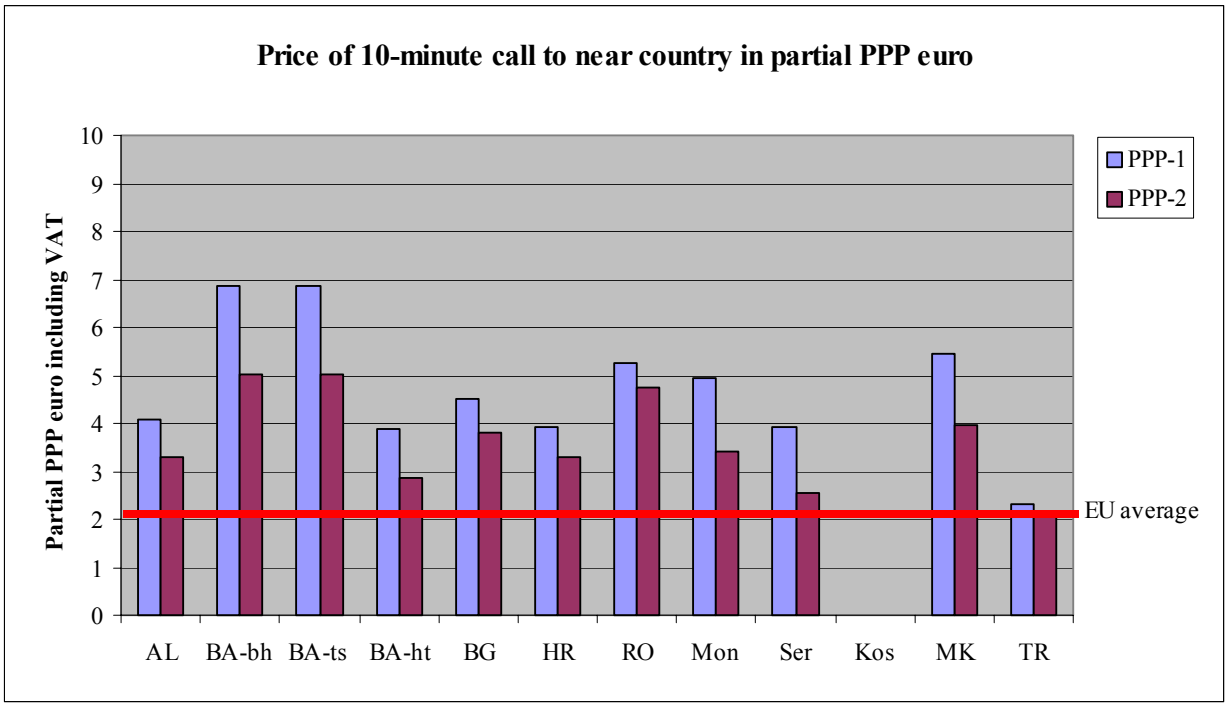


Figure 44 - Price of 10-minute call with incumbent operator to near country in partial PPP euro

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

Figure 45Figure presents the corresponding information for calls to a distant European country. In this case, the UK has been chosen to represent such a country. Again, the results indicate that the tariffs for Bosnia & Herzegovina, as well as Kosovo, are significantly above the EU average. For Bosnia & Herzegovina, the tariffs of one operator have increased, while the tariffs for the two other operators have decreased. Their prices are now more similar than they were in April 2005. The former Yugoslav Republic of Macedonia also has significantly higher tariffs, although they have tariffs that have been reduced since April 2005.

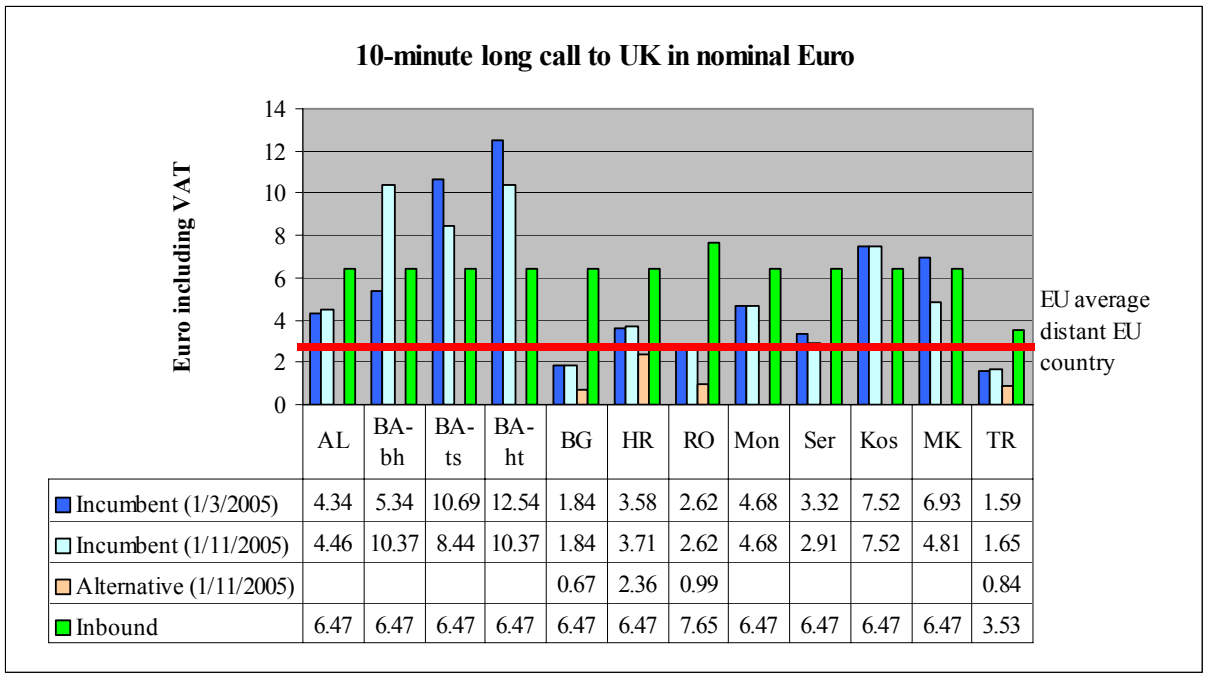
While Albania had very high tariffs to its neighbour countries, the price is more moderate for calls to the UK.

Bulgaria, Romania and Turkey have tariffs at or below the EU average. The other countries and geographic units have tariffs that are moderately above the EU average.

Prices for incoming calls are well above the EU average by more than 100% for all countries and geographic units except Turkey. For Bulgaria, Croatia, Romania, Montenegro and the former Yugoslav Republic of Macedonia, the price of incoming calls are also higher than the price of outgoing calls. This suggests that the accounting rates demanded by the incumbent operators of these countries have not yet been subject to competitive pressures or regulatory requirements for cost orientation.

Another consequence of the application of the international accounting rate to incoming calls is that their costs are the same for Montenegro, Serbia, and Kosovo because these are all geographic units in the same country of Serbia & Montenegro.

Figure 45Figure below presents the current tariffs in partial purchase power parities.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent (1/3/2005)	4.34	5.34	10.69	12.54	1.84	3.58	2.62	4.68	3.32	7.52	6.93	1.59
Incumbent (1/11/2005)	4.46	10.37	8.44	10.37	1.84	3.71	2.62	4.68	2.91	7.52	4.81	1.65
Alternative (1/11/2005)					0.67	2.36	0.99					0.84
Inbound	6.47	6.47	6.47	6.47	6.47	6.47	7.65	6.47	6.47	6.47	6.47	3.53

Figure 45 - Price of fixed incumbent and alternative fixed operator for a 10-minute long call to UK in nominal euro

Notes:
The prices shown for the outbound tariffs are to a fixed network in the UK and the inbound tariffs are those of the UK operator BT during peak time.
Albania: The prices shown are for residential users. Prices for business users are 50% higher.
Bulgaria: Calls from the incumbent's fixed network to mobiles in UK are twice as expensive as calls to fixed networks. For a typical alternative operator such as Orbitel, the price to a mobile user is almost four times the price of the call to a fixed network, but even so, it is 30% less than the corresponding price of the incumbent operator.
Serbia & Montenegro – Serbia: There are different tariffs for residential and business users. The price shown is for residential users.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

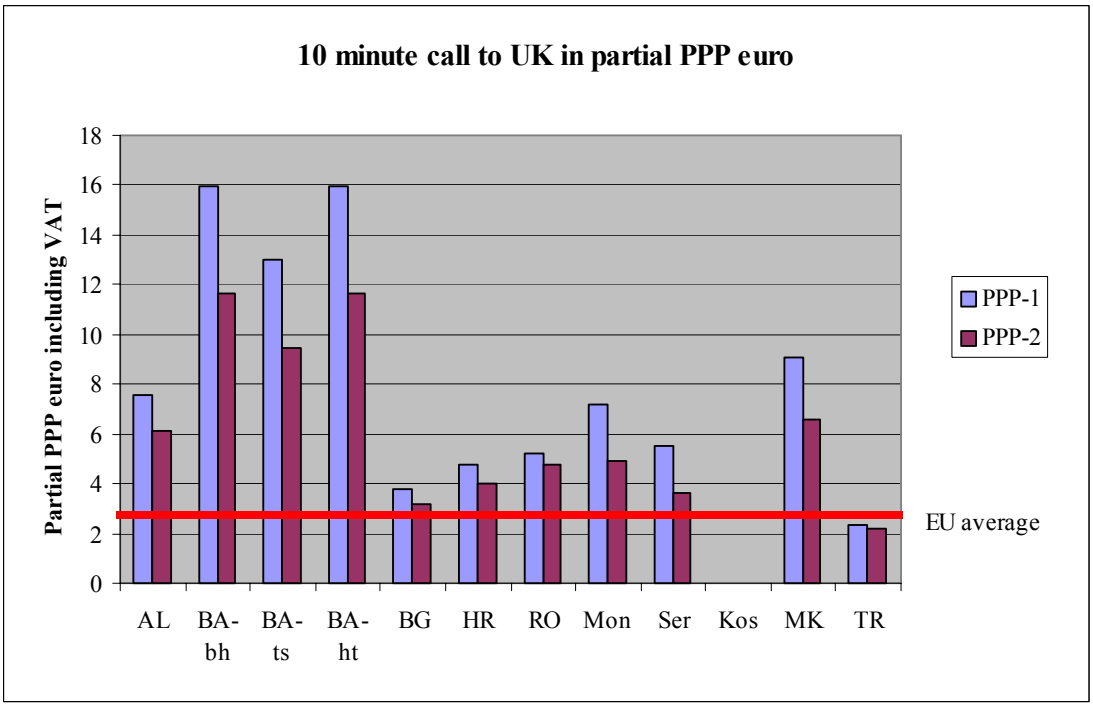


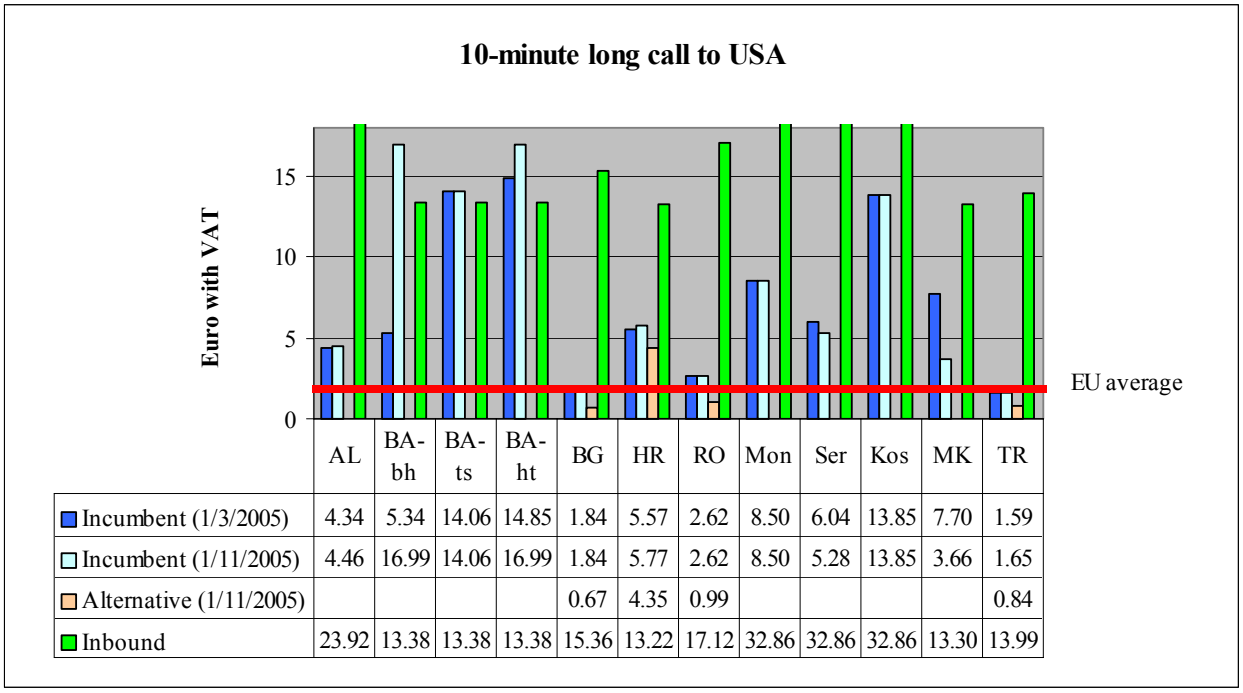
Figure 46 - Price of fixed incumbent operator for a 10-minute long call to UK in partial PPP euro

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

Figure 47Figure 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.

Bulgaria, Romania and Turkey have prices that reflect this development as they are at or below the EU average. All the other countries and geographic units have prices that are significantly higher than the EU average, ranging from twice the EU average in Albania to seven times the EU average for the incumbent operators in Bosnia & Herzegovina. The alternative operator in Albania, from one of the rural areas, has even higher tariffs.

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 more than double.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent (1/3/2005)	4.34	5.34	14.06	14.85	1.84	5.57	2.62	8.50	6.04	13.85	7.70	1.59
Incumbent (1/11/2005)	4.46	16.99	14.06	16.99	1.84	5.77	2.62	8.50	5.28	13.85	3.66	1.65
Alternative (1/11/2005)					0.67	4.35	0.99					0.84
Inbound	23.92	13.38	13.38	13.38	15.36	13.22	17.12	32.86	32.86	32.86	13.30	13.99

Figure 47 - Price of fixed incumbent and alternative fixed operator for a 10-minute long call to USA in nominal Euro

Notes:
Albania: The price shown is the residential tariff applied by Albtelecom. The business tariffs are 50% higher. The tariffs for calls to fixed and mobile networks (operators) are the same.
Serbia & Montenegro – Serbia: The price shown is the residential tariff. The business tariff is 65% higher.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

Figure 48Figure below presents the current tariffs in partial purchase power parities.

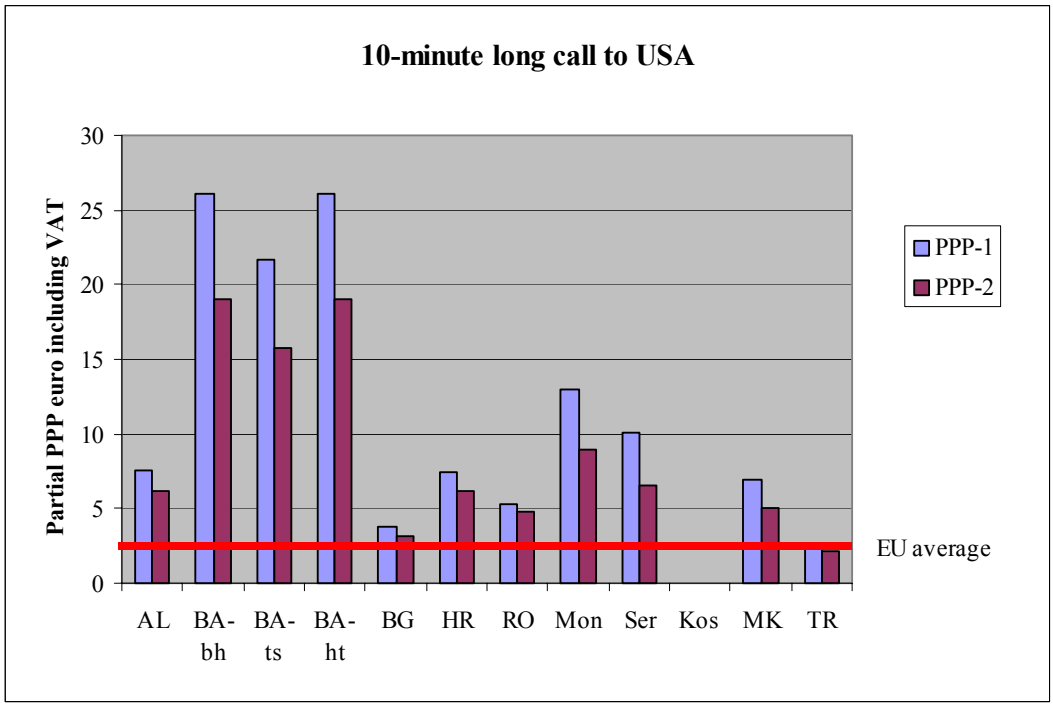


Figure 48 - Price of fixed incumbent operator for a 10-minute long call to USA in partial PPP Euro

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

11. 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 prior to 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 that provide 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. Some of the operators also provide wholesale alternatives. The prices are for simple unstructured lines. However, for the case of the former Yugoslav Republic of Macedonia only managed lines are available and it is the price for such lines that are shown.

Albtelecom in Albania offers two types of leased lines:

- a "digital leased circuit" used by small private and public operators;
- "LAN-to-LAN" connections used to interconnect user networks. These offerings are available in 64 Kbit/s and 2 Mbit/s.

The tariffs shown are from March 2003. Based on the Supervisory Council Decision No. 32, the actual monthly tariffs are supposed to be: 2 km 64 Kbit/s – 161 euro (20,000 Lek), 200 km 64 Kbit/s – 644 euro (80,000 Lek); 2 km 2 Mbit/s – 225 euro (28,000 Lek); and 200 km 2 Mbit/s – 966 euro (120,000 Lek). There are no offers for speeds over 2 Mbit/s. Offers for 34 Mbit/s are only for Internet connectivity.

The prices of "digital leased circuit" types of leased lines are shown in the figures below. The prices for "LAN-to-LAN" connections are quite different and depending on the choice, the price could be significantly above or significantly below the EU average. The other 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 with Montenegro and Serbia having particularly low rates, and the former Yugoslav Republic of Macedonia having particularly high rates.

The 34 Mbit/s lines are not offered in all the countries and geographic units. The former Yugoslav Republic of Macedonia has particularly high rates both for short and long lines.

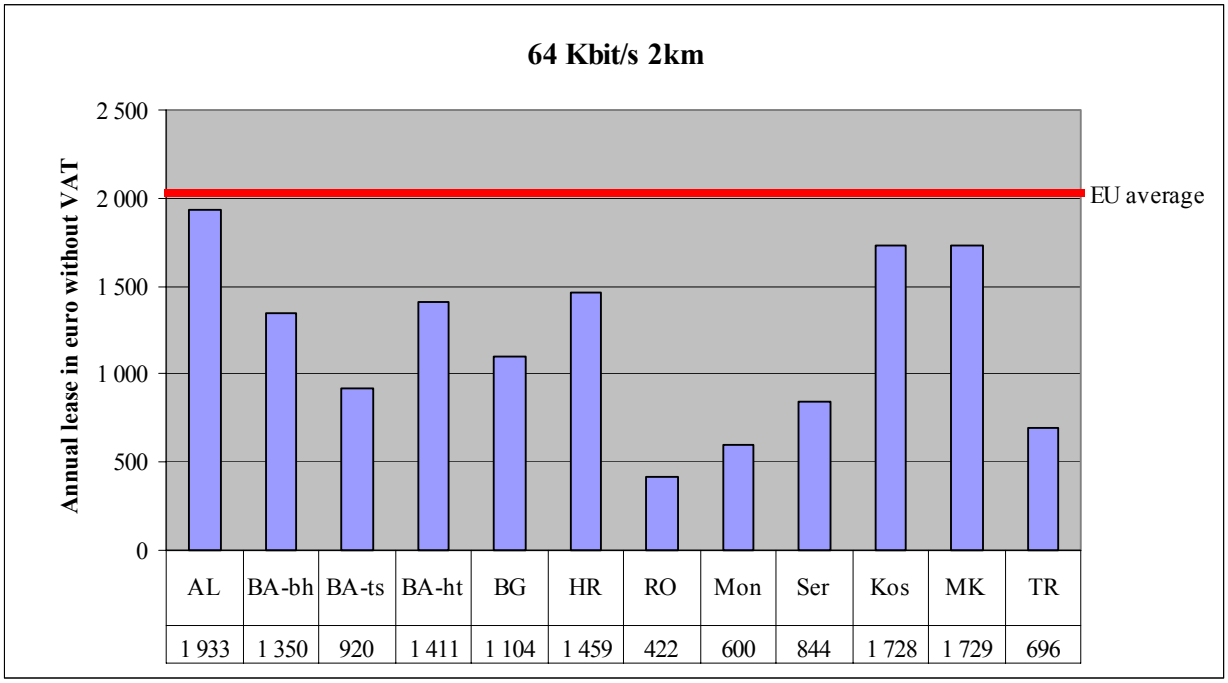


Figure 49 – Prices for national 64 Kbit/s 2 km leased lines in nominal euro without VAT

Notes:
Albania: The tariffs shown are for "digital leased circuits" used for user-to-central type links, i.e. used by small private or public operators. There is another category of leased lines called "LAN-to-LAN" with which two users may interconnect between themselves. Tariffs for the latter are 121 euro a month (15,000 Lek) for 64 Kbit/s (i.e. 1450 euro a year), and there is no differentiation due to distance (it is supposed to be national).
Romania: The methodology applied in this report for calculating the price of a full circuit is similar to that used in the **European Electronic Communications Regulation and Markets 2004**.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

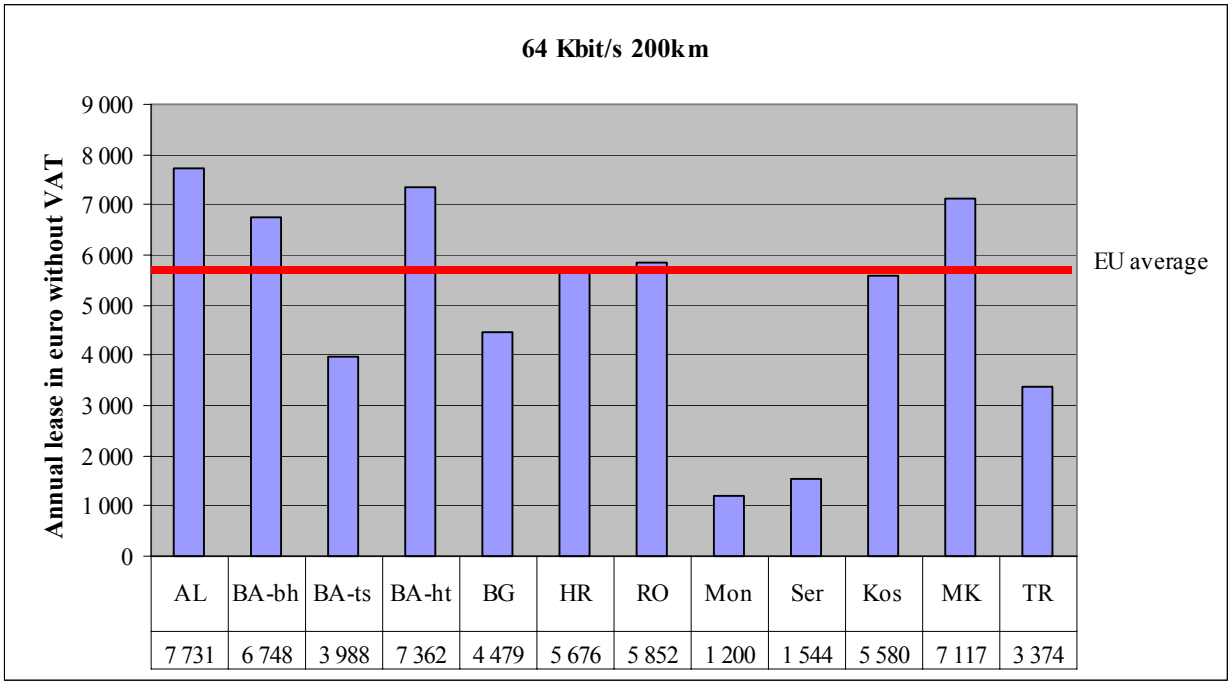


Figure 50 - Prices for national 64 Kbit/s 200 km leased lines in nominal euro without VAT

Notes:
Albania: The tariffs shown are for "digital leased circuits" used for user-to-central type links, i.e. used by small private or public operators. There is another category of leased lines called "LAN-to-LAN" with which two users may interconnect between themselves. Tariffs for the latter are 121 euro a month (15,000 Lek) for 64 Kbit/s (i.e. 1450 euro a year), and there is no differentiation due to distance (it is supposed to be national).
The former Yugoslav Republic of Macedonia: 64 Kbit/s 200 km long leased lines are not used because of its size.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

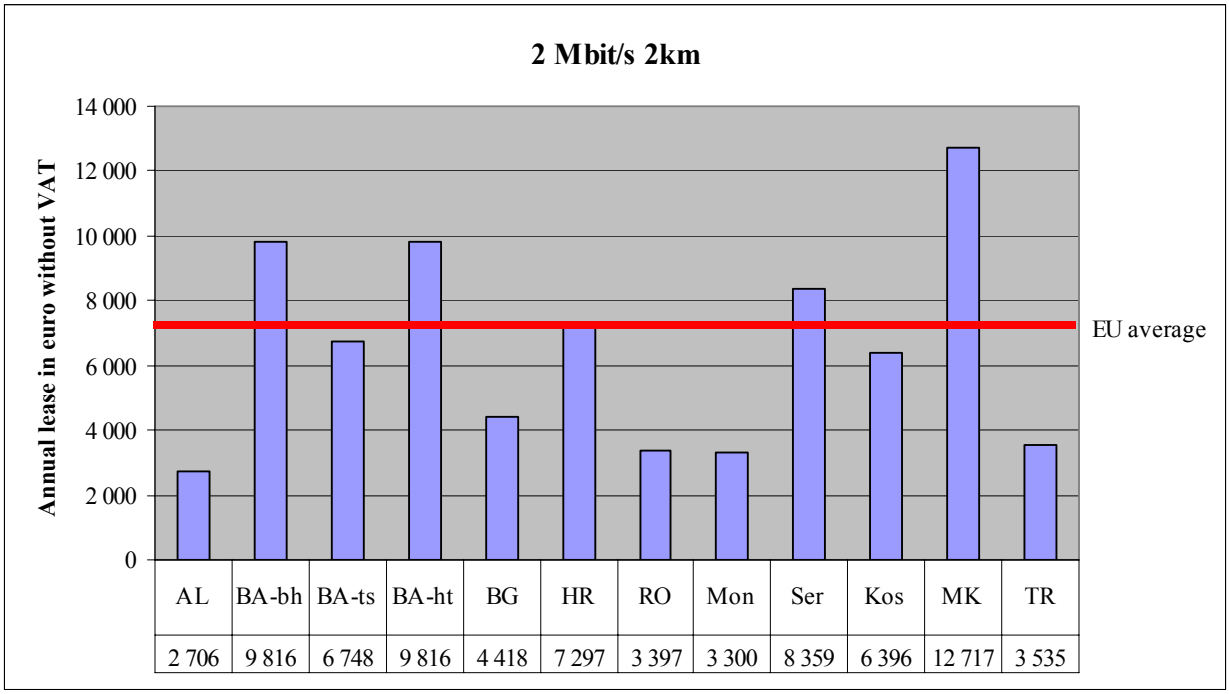


Figure 51 - Prices for national 2 Mbit/s 2 km leased lines in nominal euro without VAT

Notes:
Albania: The tariffs shown are for "digital leased circuits" used for user-to-central type links, i.e. used by small private or public operators. There is another category of leased lines called "LAN-to-LAN" with which two users may interconnect between themselves. Tariffs for the latter are 322 euro a month (40,000 Lek) for 2 Mbit/s (i.e. 3865 euro a year), and there is no differentiation due to distance (it is supposed to be national).
Serbia & Montenegro - Serbia: The incumbent operators offer 2 Mbit/s leased lines to ISPs at wholesale tariffs, which are 33% lower than normal leased lines at retail price.
The EU average is taken from the 11th Implementation Report, February 2006.

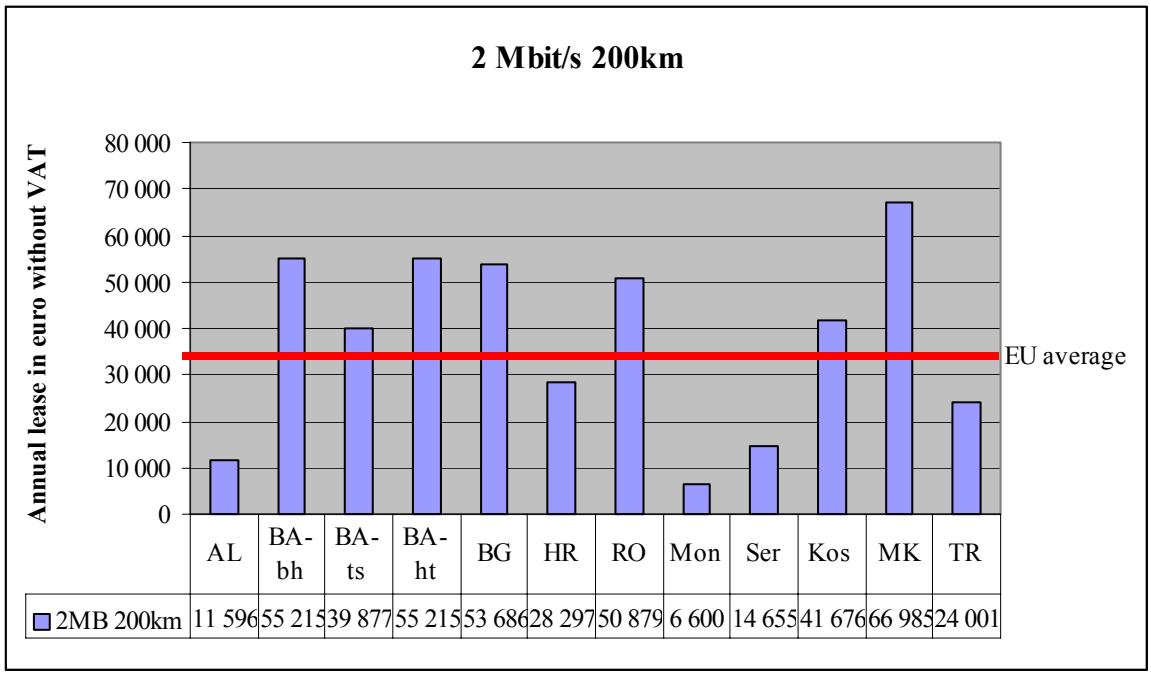


Figure 52 - Prices for national 2 Mbit/s 200 km leased lines in nominal euro without VAT

Notes:
Albania: The tariffs shown are for “digital leased circuits” used for user-to-central type links, i.e. used by small private or public operators. There is another category of leased lines called "LAN-to-LAN" with which two users may interconnect between themselves. Tariffs for the latter are 322 euro a month (40,000 Lek) for 2 Mbit/s (i.e. 3865 euro a year), and there is no differentiation due to distance (it is supposed to be national).
The former Yugoslav Republic of Macedonia: 2 Mb 200 km long leased lines are not used.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

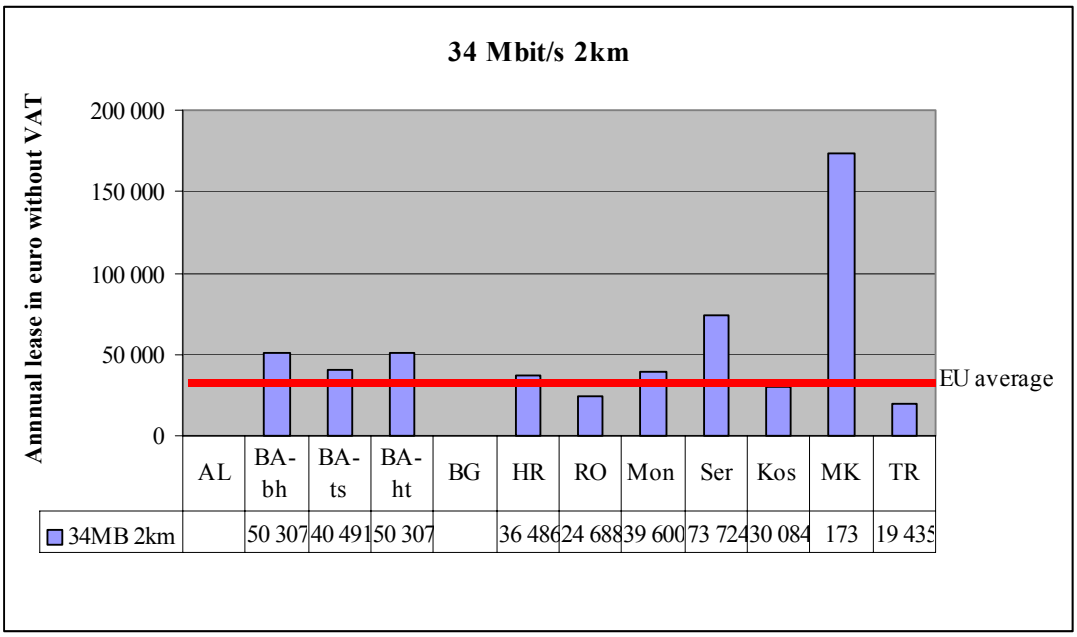


Figure 53 - Prices for national 34 Mbit/s 2 km leased lines in nominal euro without VAT

Notes:
The former Yugoslav Republic of Macedonia: 34 Mbit/s 2 km long leased lines are radio links only.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

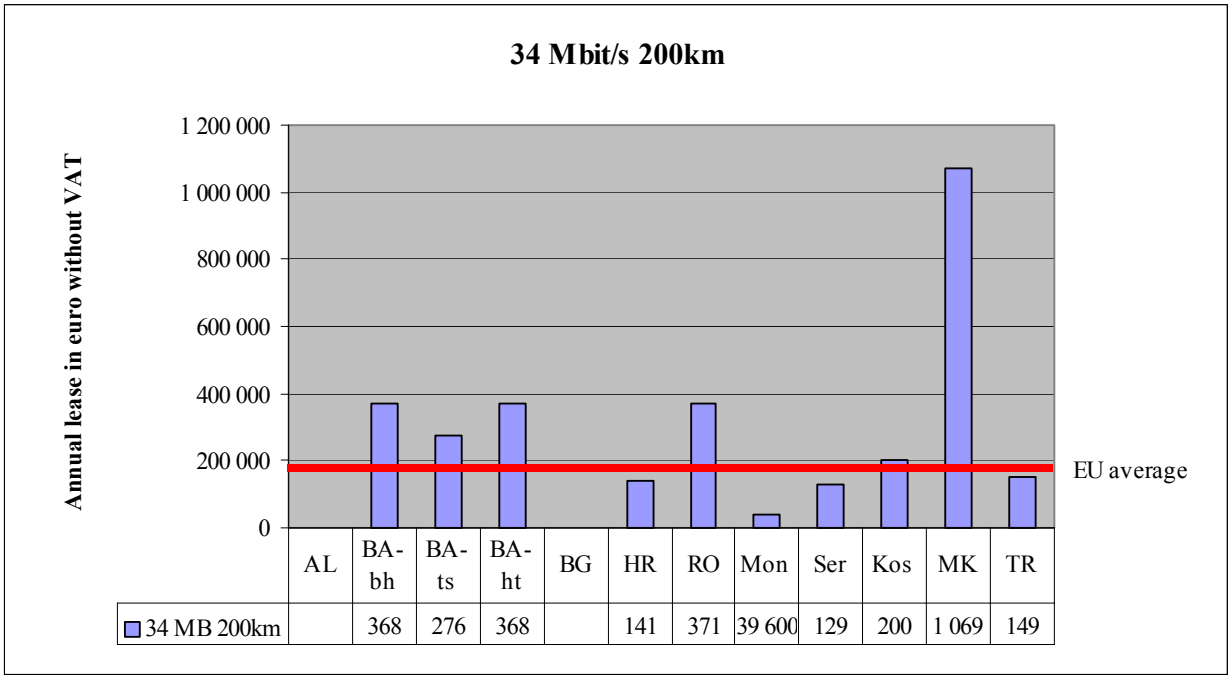


Figure 54 - Prices for national 34 Mbit/s 200 km leased lines in nominal euro without VAT

Notes:
The former Yugoslav Republic of Macedonia: 34 Mb 200 km long leased lines are radio links only.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

12. 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 the former Yugoslav Republic of Macedonia. The information provided in this section is therefore tariffs for double routing half-circuits for all the other countries and geographic units.

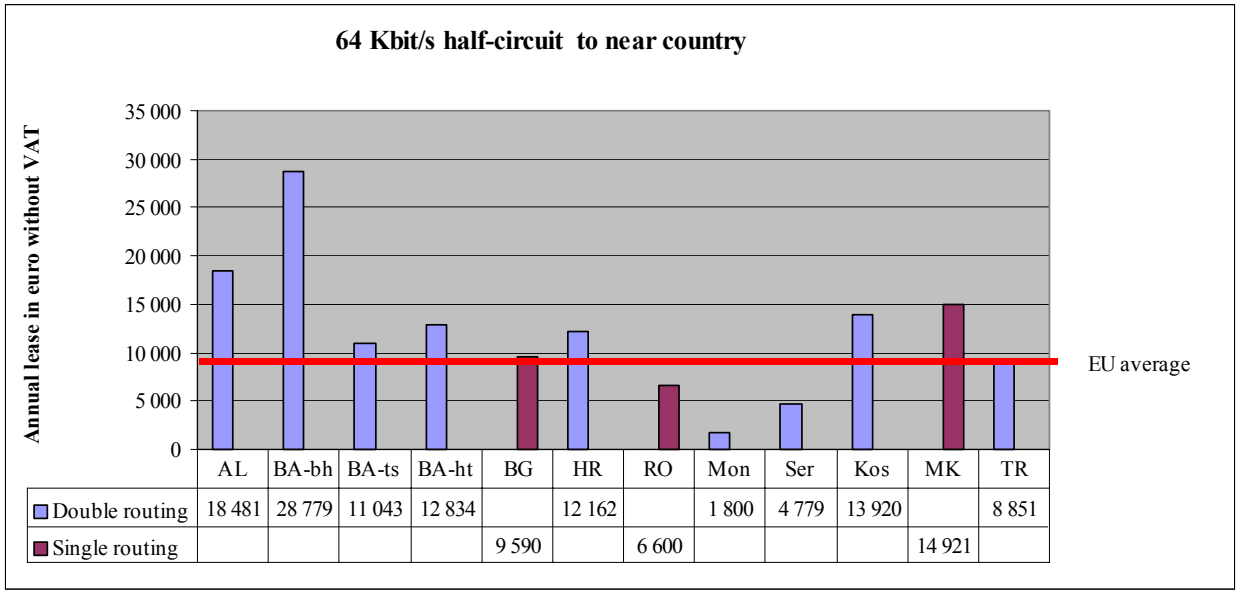
Below are four figures presenting information on monthly tariffs for international half circuits:

- 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.

Serbia also has generally low tariffs across all categories. Romania has particularly low tariffs compared to the other countries and geographic units and to the EU average for the high-speed alternatives.

At the other end of the scale, one of the incumbent operators in Bosnia & Herzegovina has consistently very high tariffs.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Double routing	18 481	28 779	11 043	12 834		12 162		1 800	4 779	13 920		8 851
Single routing					9 590		6 600				14 921	

Figure 55 – Prices for international 64 Kbit/s leased lines to near country in nominal euro without VAT

Notes:
Bulgaria provides prices for international leased lines in Special Drawing Rights (SDR). These values are converted to US dollars (USD) according to data in the International Monetary Funds (IMF) special bulletins. The USD value is converted to BGN according to the exchange rate announced by the Bulgarian National Bank on the starting date of the month when the service is provided.
Turkey quotes prices in SDR.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

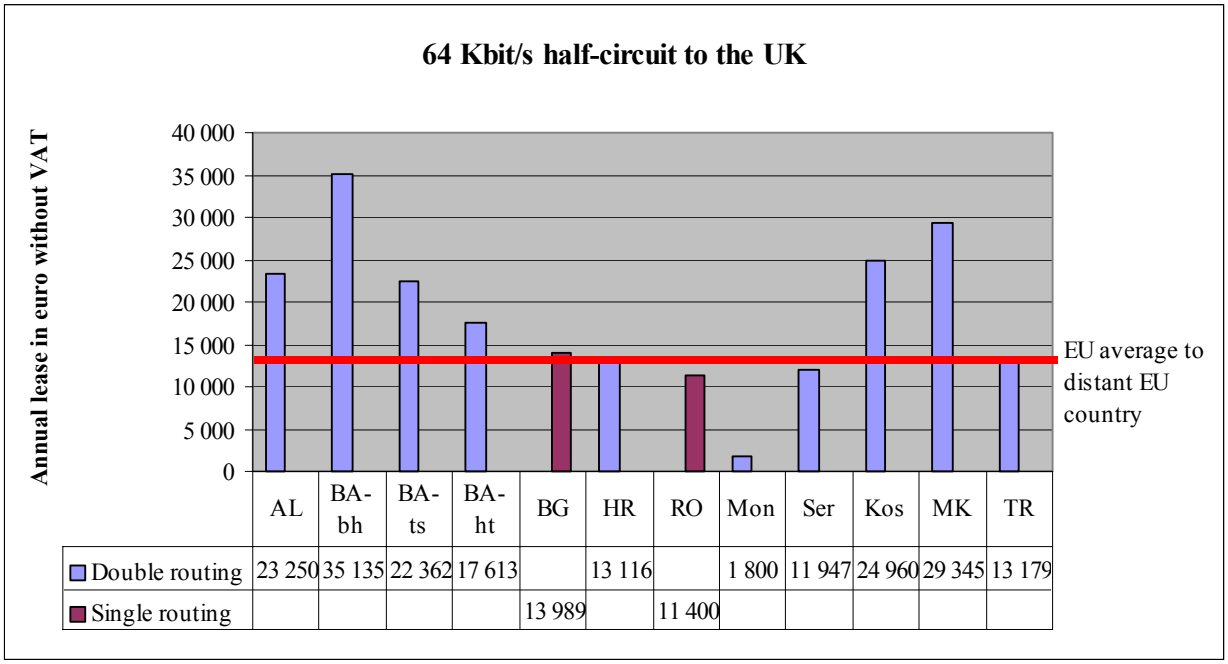


Figure 56 - Prices for international 64 Kbit/s leased lines to the UK in nominal euro without VAT

Notes:
Bulgaria provides prices for international leased lines in Special Drawing Rights (SDR). These values are converted to US dollars (USD) according to data in the International Monetary Funds (IMF) special bulletins. The USD value is converted to BGN according to the exchange rate announced by the Bulgarian National Bank on the starting date of the month when the service is provided.
Turkey quotes prices in SDR.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

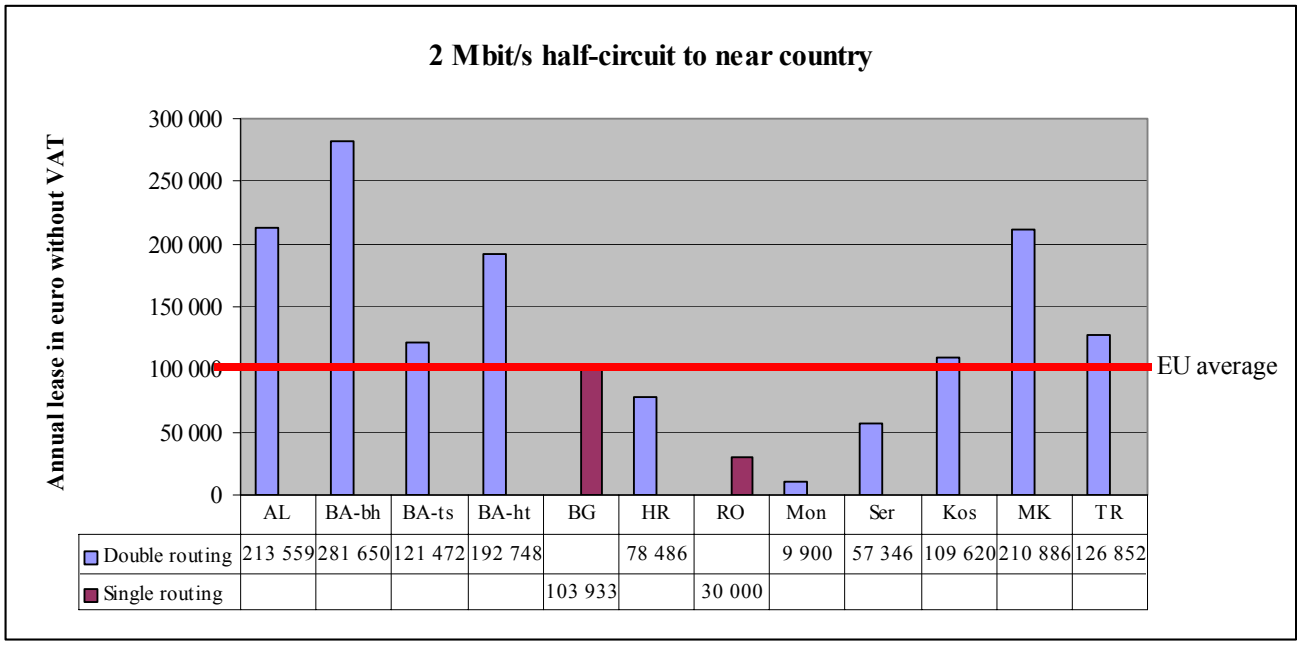


Figure 57 - Prices for international 2 Mbit/s leased lines to near country in nominal euro without VAT

Notes:
Bulgaria provides prices for international leased lines in Special Drawing Rights (SDR). These values are converted to euro according to data in the International Monetary Funds (IMF) special bulletins. The USD value is converted to BGN according to the exchange rate announced by the Bulgarian National Bank on the starting date of the month when the service is provided.
Croatia: The prices refer to the Croatian half of the line.
Turkey quotes prices in SDR.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

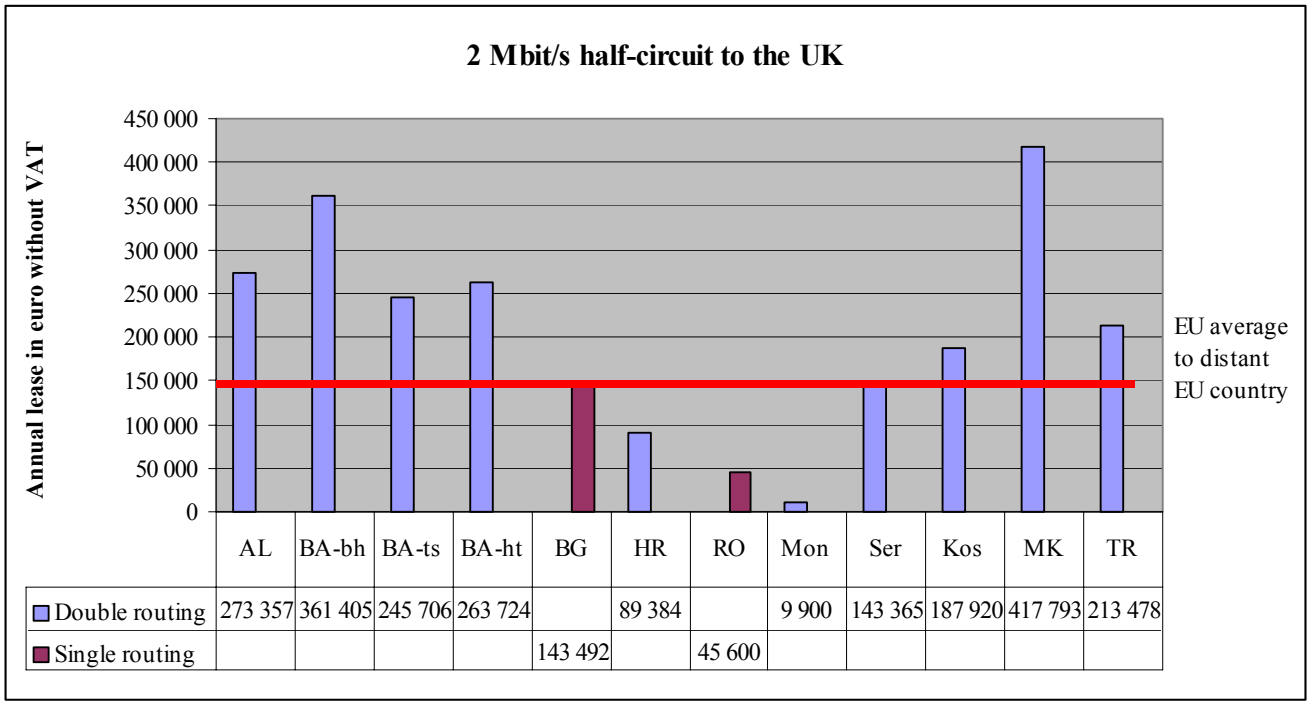


Figure 58 - Prices for international 2 Mbit/s leased lines to the UK in nominal euro without VAT

Notes:
Bulgaria provides prices for international leased lines in Special Drawing Rights (SDR). These values are converted to US dollars (USD) according to data in the International Monetary Funds (IMF) special bulletins. The USD value is converted to BGN according to the exchange rate announced by the Bulgarian National Bank on the starting date of the month when the service is provided.
Turkey quotes prices in SDR.
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006.

H. Telephony tariffs – wholesale

The information in this section has November 1, 2005 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 the EU are fairly

consistent with relatively small variations around the EU average. The exceptions are four of the new Member States, where the interconnection rates are twice or more than the EU average.

The EU average therefore presents a quite meaningful comparative indicator.

1. Call termination on fixed networks

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	1.21	0.00	1.21
Bosnia & Herzegovina				
BH Telecom d.d. Sarajevo	0.00	1.00	0.00	0.50
Telekom Srpske a.d. Banja Luka	0.00	1.00	0.00	0.70
Hrvatske Telekomunikacije d.o.o. Mostar	0.00	1.00	0.00	0.70
Bulgaria	0.00	0.92	0.00	0.87
Croatia	0.20	0.92	0.20	0.46
Romania	0.00	1.15	0.00	0.90
Serbia & Montenegro - *Montenegro*	0.00	7.50	0.00	7.50
Serbia & Montenegro - *Serbia*	na	na	na	na
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	na	na	na	na
Turkey	0.00	1.20	0.00	1.20

Table 57 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – local level

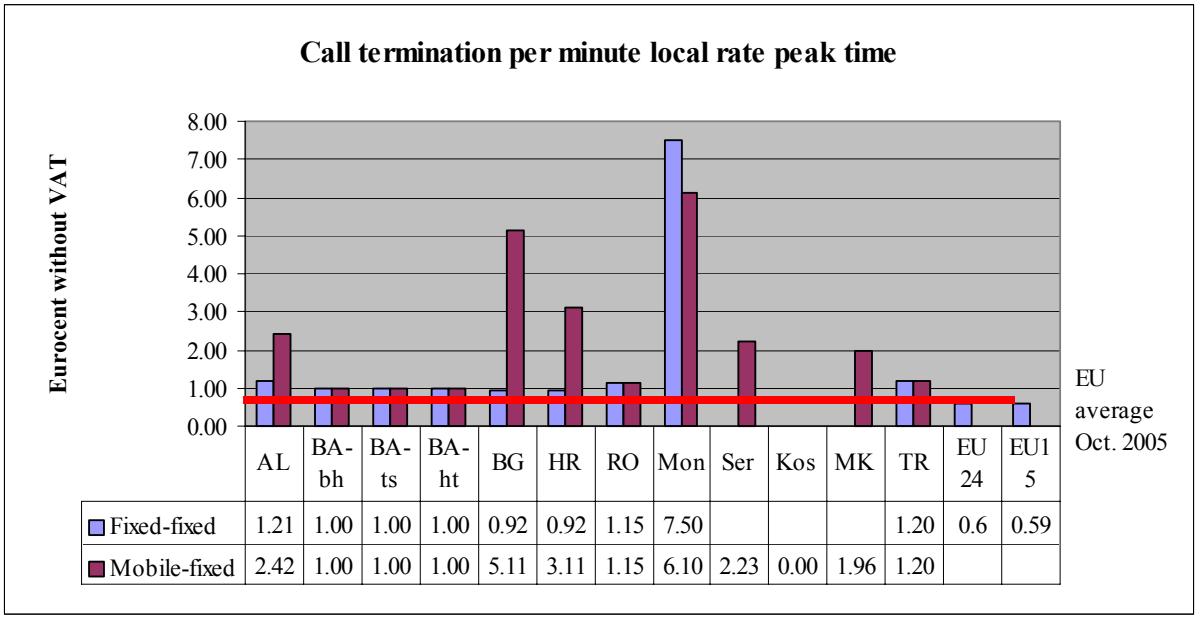
Notes:
Albania: There is no difference between peak and off-peak tariffs.
Bulgaria: The charges indicated in this table and the following are set on the basis of interconnection agreements concluded according to the RIO of the incumbent operator BTC, approved by CRC. The RIO has been recently revoked by the Supreme Administrative Court. Anyway, there is no change in the price conditions of the agreements so far (the charges are valid).
Romania: The maximum tariffs applicable from January 1st, 2006 are 1,14 in peak and 0,63 in off-peak. This decision was taken on October 27, 2005.
Serbia & Montenegro – Montenegro: There is no difference between peak and off-peak tariffs. Neither is there any difference between local, single transit and double transit tariffs.
Serbia & Montenegro – Serbia: There is no RIO yet.
Serbia & Montenegro – Kosovo: Interconnection charges have not been established.
The former Yugoslav Republic of Macedonia: Interconnection charges have not been established.
Turkey: Call termination service on the incumbent's network is charged at two levels, in-zone and out-zone. While out-zone corresponds to double tandem call termination, in-zone can be said to contain local and single transit call termination. This charge was determined by the Telecommunications Authority as the standard interconnection reference rate from 1/10/2005 onward. There is no set up charge applied and no peak / off peak differentiation.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	2.42	0.00	2.42
Bosnia & Herzegovina				
BH Telecom d.d. Sarajevo	0.00	1.00	0.00	0.50
Telekom Srpske a.d. Banja Luka	0.00	1.00	0.00	0.70
Hrvatske Telekomunikacije d.o.o. Mostar	0.00	1.00	0.00	0.80
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.11	0.00	1.62
Romania	0.00	1.15	0.00	0.90
Serbia & Montenegro - *Montenegro*	0.00	6.10	0.00	6.10
Serbia & Montenegro - *Serbia*	0.00	2.23	0.00	2.23
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	1.20	0.00	1.20

Table 58 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – local level

Notes:
Albania: Mobile-to-fixed call termination charges are the same for local, single transit and double transit termination.
Bulgaria: Mobile-to-fixed interconnection is only offered on the double transit level.
Croatia: There is no offering for mobile-to-fixed termination at the local level.
Romania: The maximum tariffs applicable from January 1, 2006 are 1,14 in peak and 0,63 in off-peak. This decision was taken on October 27, 2005.
Serbia & Montenegro – Montenegro: Mobile-to-fixed call termination charges are the same for local, single transit and double transit termination.
Serbia & Montenegro – Serbia: Mobile-to-fixed call termination charges are the same for local, single transit and double transit termination.
Serbia & Montenegro –Kosovo: There is no interconnection charge between the fixed incumbent and the mobile operators.
Turkey: Call termination service on the incumbent's network is charged at two levels, in-zone and out-zone. While out-zone corresponds to double tandem call termination, in-zone can be said to contain local and single transit call termination. This charge was determined by the Telecommunications Authority as the standard interconnection reference rate from October 1, 2005 onward. There is no set up charge applied and no peak / off peak differentiation.

The figure below illustrates the charge per minute for local fixed-to-fixed and mobile-to-fixed termination in peak time compared to the EU average.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR	EU 24	EU15
Fixed-fixed	1.21	1.00	1.00	1.00	0.92	0.92	1.15	7.50				1.20	0.6	0.59
Mobile-fixed	2.42	1.00	1.00	1.00	5.11	3.11	1.15	6.10	2.23	0.00	1.96	1.20		

Figure 59 - Interconnection charges for call termination on fixed network of incumbent operator – local level

Notes:
Bulgaria: the mobile-to-fixed call termination charge is the double transit rate, which is the only rate available.
Turkey: This charge was determined by the Telecommunications Authority as the standard interconnection reference rate from 01/10/2005 onward. There is no set up charge applied and peak / off peak differentiation.
The EU average is taken from the 11th Implementation Report, February 2006.

The local level interconnection tariffs 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, which has rates that are ten times higher than the EU average. This is partly explained by the fact that the incumbent operator in Montenegro has a single rate for all national termination services. Similarly, Turkey also has a relatively high local interconnection rate, because the corresponding in-zone tariff covers a larger geographic area than a normal local area.

The expectation is that fixed-to-fixed and mobile-to-fixed termination rates would be the same and indeed, this is the case for Bosnia & Herzegovina, Romania and Turkey. However, in Albania, Bulgaria, Montenegro and Serbia, there is only a single termination rate for all mobile calls to fixed networks (according to the conditions of the approved RIO of the Bulgarian incumbent, mobile-to-fixed interconnection is only realised at the double transit level).

This is the main reason why the mobile-to-fixed rates for local termination are considerably higher than the corresponding fixed-to-fixed tariff. However, in Montenegro, the mobile-to-fixed tariffs are lower. As explained above, Montenegro only has one rate for fixed-to-fixed termination.

The next two tables present the tariffs for single transit termination. These tariffs represent a similar situation to that of local termination. Montenegro is still higher than the EU average by a factor of 7.5. Romania and Turkey are at the same level, i.e. about twice the EU average.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	2.01	0.00	2.01
Bosnia & Herzegovina				
BH Telecom d.d. Sarajevo	0.00	1.50	0.00	0.75
Telekom Srpske a.d. Banja Luka	0.00	1.50	0.00	0.75
Hrvatske Telekomunikacije d.o.o. Mostar	0.00	1.50	0.00	1.20
Bulgaria	0.00	1.69	0.00	1.59
Croatia	0.20	1.28	0.20	0.64
Romania	0.00	2.14	0.00	1.97
Serbia & Montenegro - *Montenegro*	0.00	7.50	0.00	7.50
Serbia & Montenegro - *Serbia*	na	na	na	na
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	na	na	na	na
Turkey	0.00	1.20	0.00	1.20

Table 59 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – single transit

Notes:
Bulgaria: Single transit
Romania: The maximum tariffs applicable from January 1, 2006 is 1,94 in peak and 1,06 in off-peak. This decision was taken on October 27, 2005.
Turkey: This charge was determined by the Telecommunications Authority as the standard interconnection reference rate from 1/10/2005 onward. There is no set up charge applied and no peak / off peak differentiation.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	2.42	0.00	2.42
Bosnia & Herzegovina				
BH Telecom d.d. Sarajevo	0.00	1.50	0.00	0.75
Telekom Srpske a.d. Banja Luka	0.00	1.50	0.00	0.75
Hrvatske Telekomunikacije d.o.o. Mostar	0.00	1.50	0.00	1.20
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.11	0.00	1.62
Romania	0.00	2.14	0.00	1.97
Serbia & Montenegro - *Montenegro*	0.00	6.10	0.00	6.10
Serbia & Montenegro - *Serbia*	0.00	2.23	0.00	2.23
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	1.20	0.00	1.20

Table 60 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – single transit

Notes:
Bulgaria: Mobile-to-fixed interconnection is only offered on the double transit level.
Romania: The maximum tariffs applicable from January 1, 2006 is 1,94 in peak and 1,06 in off-peak. This decision was taken on October 27, 2005.

The figure below illustrates the charge per minute for single transit fixed-to-fixed and mobile-to-fixed termination in peak time. Both rates are the same in Bosnia & Herzegovina, Romania and Turkey. However, in Albania, Bulgaria and Croatia, the mobile-to-fixed rates are higher, and in Montenegro they are lower than the corresponding fixed-to-fixed rates.

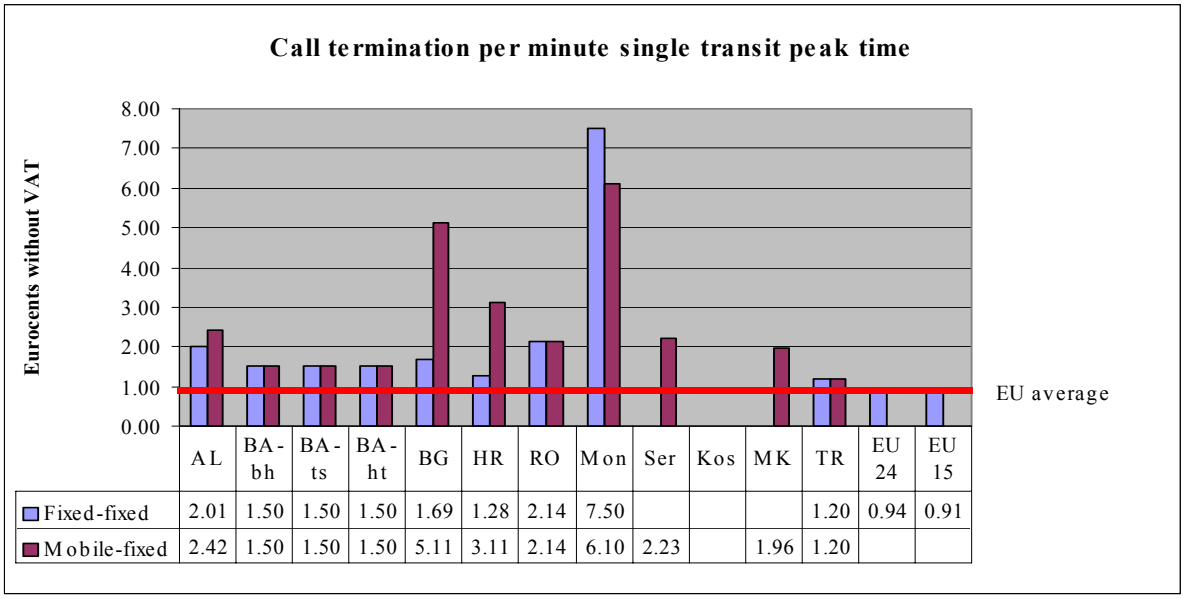


Figure 60 - Interconnection charges for call termination on fixed network of incumbent operator – single transit

Notes:
Bulgaria: the mobile-to-fixed call termination charge is the double transit rate, which is the only rate available.
Turkey: This charge was determined by the Telecommunications Authority as the standard interconnection reference rate from 1/10/2005 onward. There is no set up charge applied and no peak / off peak differentiation.
The EU average is taken from the 11th Implementation Report, February 2006.

The next two tables show the corresponding information for double transit interconnection.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	2.01	0.00	2.01
Bosnia & Herzegovina				
BH Telecom d.d. Sarajevo	0.00	2.04	0.00	1.02
Telekom Srpske a.d. Banja Luka	0.00	2.04	0.00	1.43
Hrvatske Telekomunikacije d.o.o. Mostar	0.00	2.04	0.00	1.64
Bulgaria	0.00	4.60	0.00	3.83
Croatia	0.20	1.68	0.20	0.84
Romania	0.00	2.55	0.00	2.35
Serbia & Montenegro - *Montenegro*	0.00	7.50	0.00	7.50
Serbia & Montenegro - *Serbia*	na	na	na	na
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	na	na	na	na
Turkey	0.00	2.22	0.00	2.22

Table 61 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

Notes:
Romania: The maximum tariffs applicable from January 1, 2006 are 2.27 eurocents/min peak and 1.25

eurocents/min off-peak. This decision was taken on October 27, 2005.
Turkey: This charge was determined by the Telecommunications Authority as the standard interconnection reference rate from 1/10/2005 onward. There is no set up charge applied and no peak / off peak differentiation.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	2.42	0.00	2.42
Bosnia & Herzegovina				
BH Telecom d.d. Sarajevo	0.00	2.04	0.00	1.02
Telekom Srpske a.d. Banja Luka	0.00	2.04	0.00	1.43
Hrvatske Telekomunikacije d.o.o. Mostar	0.00	2.04	0.00	1.64
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.11	0.00	1.62
Romania	0.00	2.55	0.00	2.35
Serbia & Montenegro - *Montenegro*	0.00	6.10	0.00	6.10
Serbia & Montenegro - *Serbia*	0.00	2.23	0.00	2.23
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	2.22	0.00	2.22

Table 62 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

Note:
Turkey: This charge was determined by the Telecommunications Authority as the standard interconnection reference rate from 1/10/2005 onward. There is no set up charge applied and no peak / off peak differentiation.

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.

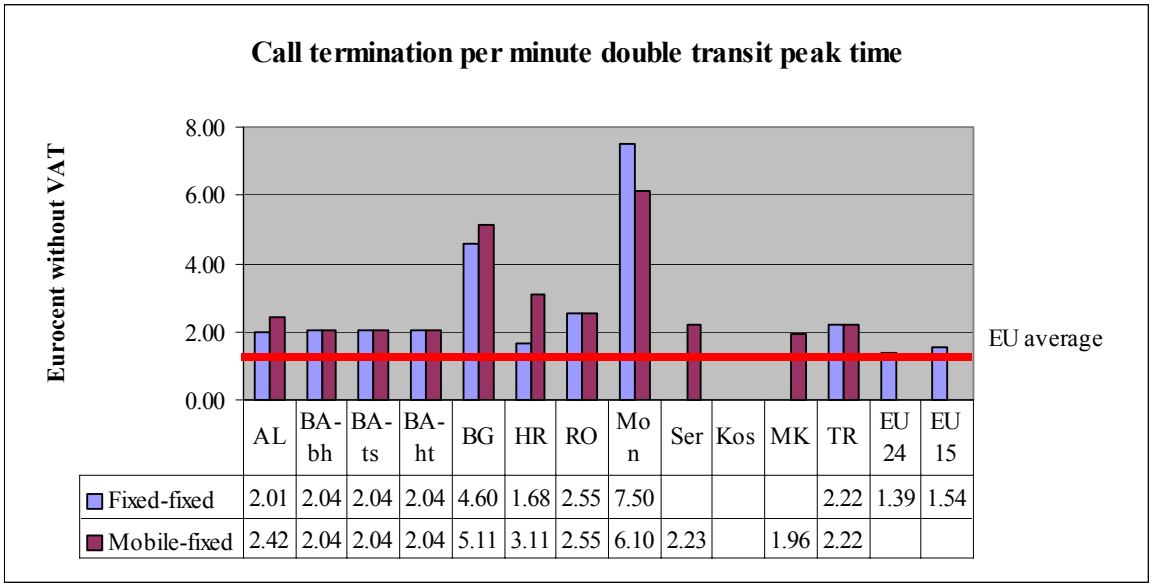


Figure 61 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

Note:
The EU average is taken from the 11th Implementation Report, February 2006.

Again, the tariffs in Montenegro are significantly higher than the EU average, this time by a factor of five. Also Bulgaria, and to a less extent Romania and Turkey, have tariffs that are quite high compared with the EU average. Albania, on the other hand, has a tariff slightly below the EU average.

As explained above, the expectation is that both tariffs should be the same, but this is only the case for Romania and Turkey. In Albania, Bulgaria and Croatia, the mobile–to-fixed tariffs are higher, while in Montenegro they are lower.

2. Call termination on mobile networks

Table 63 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. However, Romania and Turkey have rates that are about half the EU average and the Serbian rate is only about 1/8 of the EU average.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	22.55	0.00	22.55
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	19.48	0.00	18.71
Croatia	0.00	12.16	0.00	6.08
Romania	0.00	8.29	0.00	8.29
Serbia & Montenegro - *Montenegro*	0.00	16.50	0.00	16.50
Serbia & Montenegro - *Serbia*	0.00	2.23	0.00	2.23
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	12.30	0.00	4.91
Turkey	0.00	8.38	0.00	8.38

Table 63 - Fixed-to-mobile interconnection charges for call termination on mobile network

Notes:
Bosnia & Herzegovina: The price of national call transit toward mobile networks, including the price of call termination in mobile networks, represents the price applied to other networks and has to be at least 25% lower in comparison to the price stated in the valid pricelist of the incumbent operator.
Bulgaria: These are charges for termination on all mobile networks of traffic originating from the fixed networks of the incumbent and the alternative fixed operators (some of them have already interconnection agreements with the mobile operators). There are also new interconnection charges for calls originating from the network of the incumbent operator BTC and terminating onto the network of its subsidiary Vivatel.
Serbia & Montenegro – Kosovo: There is no interconnection charge between the incumbent fixed operator and mobile operators.
Turkey: This charge was determined by the Telecommunications Authority as the standard interconnection reference rate from 1/10/2005 onward. There is no set up charge applied and no peak / off peak differentiation.

Figure 62 below presents the per minute rates for fixed to mobile termination.

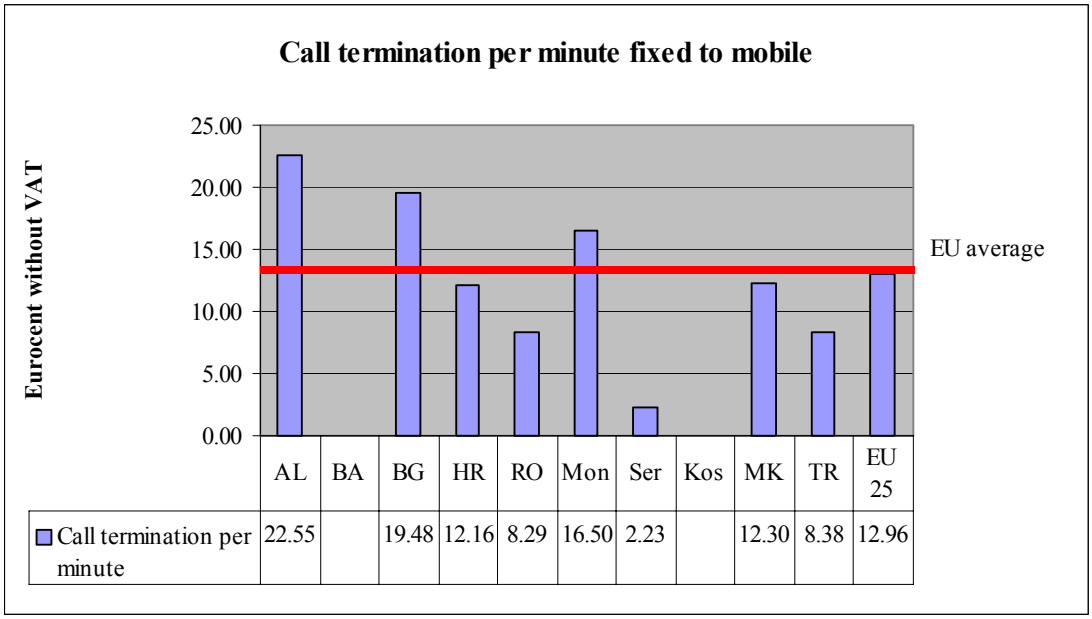


Figure 62 - Fixed-to-mobile interconnection charges for call termination on mobile network

Note:
The EU average is taken from the 11th Implementation Report from the European Commission, February 2006. It represents an average termination rate of operators with significant market power (SMP) and non-SMP operators.

I. Internet and broadband

1. Internet user penetration

The statistics provided for Internet user penetration are based on estimates or on sample surveys. As there are differences in the age ranges, the duration since a user last accessed the Internet and different sampling techniques, i.e. some figures represent 'users' whereas others represent 'subscribers', direct comparisons of the figures in Table 64 are not possible. Therefore, the penetration rates should be considered as indicative only.

A report published by the European Commission in September 2004[36], providing information on internet users in the CEE countries at the end of 2003 indicated that on average 21% of the population had accessed the internet at least once a week in the previous three months compared to an EU average of 38%. With these figures in mind, the usage of Internet in the SEE countries can be considered as being significantly lower than the EU average. As no distinction is made in these statistics between the frequency, or recency, of internet usage it can be assumed that the number of people that use the Internet on a regular basis, i.e. at least once a week in the previous three months, will be much lower than the figures given here.

[36] Central and Eastern Europe Information Society Benchmarks, September 2004

Country	Total number of Internet users	Internet users per 100 population	Internet users per 100 households
Albania	40 000	1.3%	5.4%
Bosnia & Herzegovina	805 185	20.8%	67.1%
Bulgaria	1 430 000	18.5%	48.9%
Croatia	1 490 663	33.6%	100.9%
Romania	n/a	n/a	n/a
Serbia & Montenegro - *Montenegro*	120 000	19.2%	62.8%
Serbia & Montenegro - *Serbia*	640 000	8.5%	25.4%
Serbia & Montenegro - · *Kosovo*	299 850	15.3%	96.4%
The former Yugoslav Republic of Macedonia	n/a	n/a	n/a
Turkey	11 204 340	15.5%	64.1%

Table 64 - Internet user penetration

Notes:
Albania: The figure is based on an estimate for the number of people (5,000) that use an Internet café a day, the number of people that use the Internet via leased lines (250 leased lines with 15-20 users per line, i.e. 5,000 users), the number of daily dial-up users to the ISP Albtelecom (10,000 to 15,000) and subscribers to other ISPs (15,000).
Bulgaria: The figure is an estimation, based on data for March 2005, according to the published results of a representative national study carried out by the independent agency Alpha Research, Bulgaria (http://www.aresearch.org/doc.php?en=0&id=44): 22% of the population above 18 years. The survey sampled 1,100 peopled selected on the criteria of age, gender, educational status and settlement.
Bosnia & Herzegovina: A recent statistical estimate (Living in BiH Wave 4 – Final Report) estimated the number of users to be 231,500. Another estimate carried out by RAK, based on the eEurope+ definition (someone aged between 16-74 that has used the Internet in the last 12 months) and calculating the total number of users based on the total number of subscribers suggests a much higher number: 585,000. This is calculated by taking the total number of subscribers (168,937, of which 22,000 are business subscribers) and estimating the number of residential users as being 2.5 times the number of subscribers (146,000 * 2.5 = 365,000 users) and the number of business users as being 10 times the number of business subscribers (22,000 * 10 = 220,000 users). The RAK estimate has been used in this report.
Croatia: The figure for Croatia is an assumption that there are two users for every dial-up Internet subscription. Dial up and post-paid broadband (933 700) x 1.5 + free of charge university users (90 000). The reference date is 30.6.2005.
Romania: The available information is referring to the:
- Number of **Internet access subscriptions**, which amounted to 1,829,484 on December 31, 2005.
- Number of **Internet users** in terms of "unique visitors"***** of the Romanian websites that reached about **4.3 millions** in December 2005, according to the data released by the **Trafic.ro** portal which currently measures the traffic of more than 18.000 Romanian websites.
***** "unique visitors" are measured according to their unique IP addresses, cookies, browsers or servers caches, which are like online fingerprints, and are counted only once no matter how many times they visit the websites in the monitored period (i.e. December 2005).
Serbia & Montenegro - Montenegro: Estimated number based on 61,872 registered subscribers.
Serbia & Montenegro - Serbia: The exact number of Internet users is not available because ISPs do not report on their user database. They are not licensed and they have no obligation to provide statistical data. They operate under the permission of the commercial court. There is no definition of Internet user in the Telecom Law. The only definition of a "user" is that it is a physical or legal entity that employs the services provided by a telecommunication system based on a subscription contract or other specified arrangement".
Serbia & Montenegro - Kosovo: Source: Index Kosova Media Research Company, February 2006, Media research survey (survey sample of 1100 respondents representative of 95% of the Kosovo population). The number of Internet users is calculated as being 15% of 1,999,000 population (data from the survey 10% + 5%). An Internet user is defined as being someone aged 15+ that uses the Internet daily or almost daily.
The former Yugoslav Republic of Macedonia: As the Agency started its work on July 1, 2005, according to the regulatory framework in the Republic of Macedonia, the first reports about the revenues of the operators and service

providers will be available at a later stage.
Turkey: The figures for Turkey come from the results of an ICT usage survey carried out by the State Institute of Statistics (SIS). The percentage of people in the 16-74 age group who used the Internet at least once in the last three months is 13.93, and in the last year is 13.93 + 1.52 = 15.45. The figure of 15.45 users per 100 population covers the whole population and not just those in the 16-74 age group. This survey was published on 16.11.2005 and carried out in June 2005. See the SIS website http://www.die.gov.tr/TURKISH/SONIST/HHBilisim/k_161105.xls). The survey covered 10,151 households and 27,013 respondents.

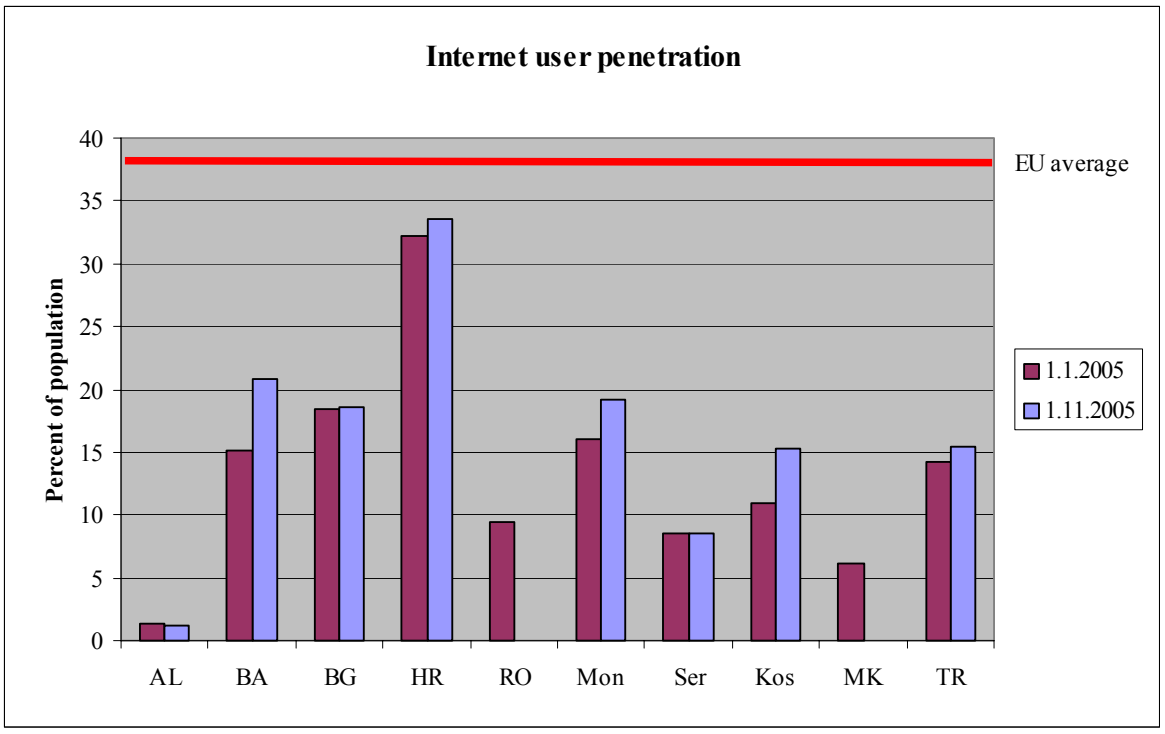


Figure 63 - Internet user penetration

Notes:
Romania: The Internet user penetration data given in the following figure (January 1, 2005) is based on a study conducted by the ANRC with the support of a research company during February 8 – 18, 2004. The target population of the research were people aged between 15 and 50 years old, from the urban area, Internet users (at home or outside the household) at least once a week in the past 4 weeks, which gives the result of 2.060.464 Internet users in urban areas. The data available at the national level refers to Internet penetration (and not Internet user penetration), which was about 5% on December 31, 2004. No new information was available for this report.
The EU average is taken from Eurostat's indicator on "Share of individuals regularly using the Internet for 2004. This indicator includes all individuals aged 16 to 74 who access the Internet, on average, at least once a week, in the last three months before the survey. Use includes all locations and methods of access.

2. 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 figure for 40 hours peak time access in France was 5.9 euro.

Country	Nominal euro with VAT	
	ISP	PSTN usage
Albania	11.72	23.19
Bosnia & Herzegovina		
BH Telecom d.d. Sarajevo	25.37	0.00
Telekom Srpske a.d. Banja Luka	18.56	26.99
Hrvatske Telekomunikacije d.o.o. Mostar	5.62	29.69
Bulgaria	0.00	44.24
Croatia	39.57	19.78
Romania	4.73	27.13
Serbia & Montenegro - *Montenegro*	13.00	5.17
Serbia & Montenegro - *Serbia*	12.52	5.12
Serbia & Montenegro - · *Kosovo*	27.60	27.60
The former Yugoslav Republic of Macedonia	73.92	0.00
Turkey	5.81	30.56

Table 65 - Dial-up Internet access cost – 40 hours at peak time

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 ISPs apply limited downloading, with extra tariffs for data downloaded over this limit). Albtelecom also offers web hosting as separate service. The ISPs charge shown is the one of the biggest ISP in the country, ABCom.

Mathematically, the cost for 40 hours of Internet connectivity for Albtelecom is 2400 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. The public prices of ABCom include:

- Several programmes for limited/unlimited personal and business differentiated for 4, 6, or 12-month contracts. Personal limited tariffs are for 30 hours/month for 15, 17, or 20 USD a month (depending on the duration 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 duration (4, 6, or 12 months).

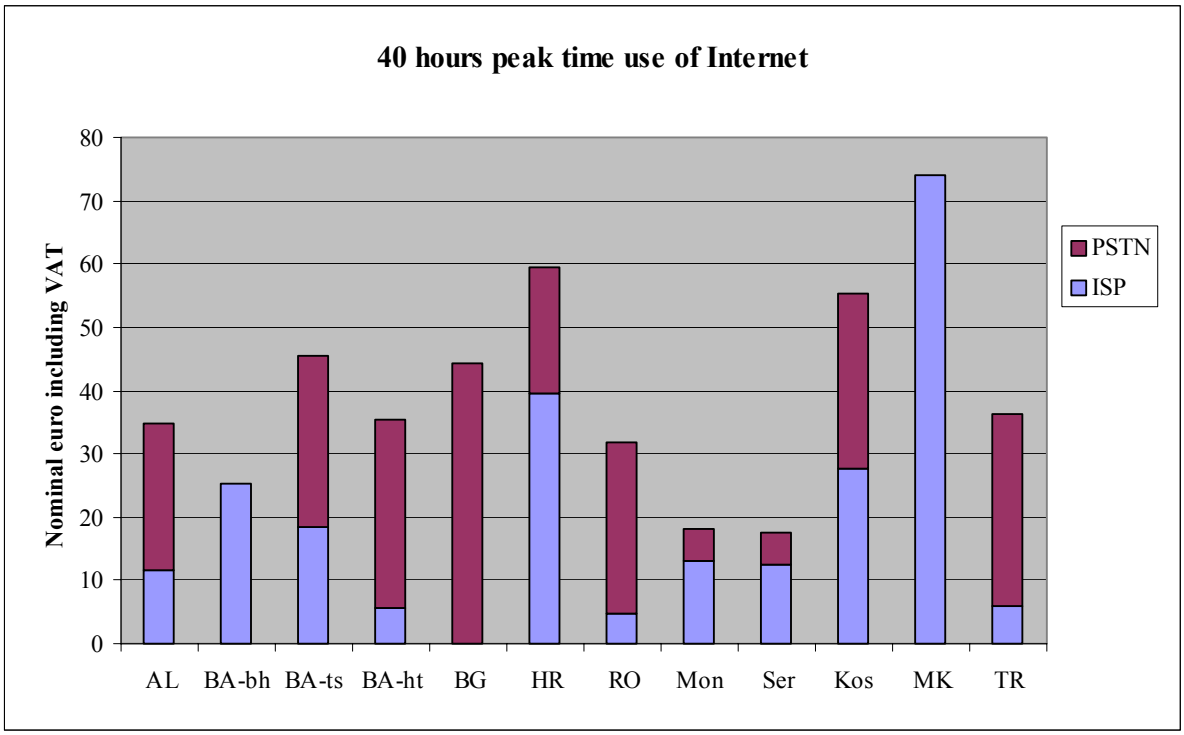


Figure 64 - Dial-up Internet access cost – 40 hours at peak time in nominal Euro

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.

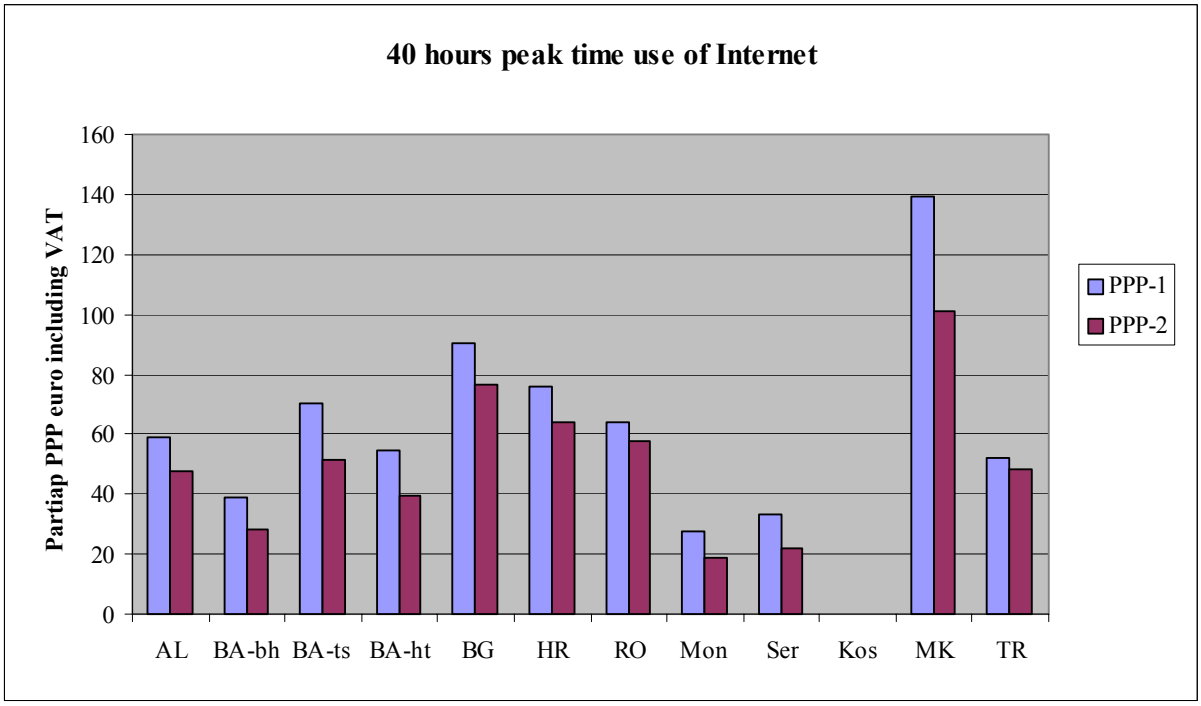


Figure 65 – Total dial-up Internet access cost – 40 hours at peak time in partial PPP euro

The ISP charge in Albania is the price per month for an ISP operator, which is one of the biggest in the country, ABCom. 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 another ISP operator other than Albtelecom. Albtelecom also operates in the market as an ISP. Albtelecom's tariffs (PSTN usage) are the same as shown above, if Albtelecom is used as an ISP. The difference between Albtelecom and other ISPs is that the user does not have to pay for the set up fee (installation) and the monthly payment. Albtelecom also applies peak and off-peak tariffs for dial-up internet access for users that use Albtelecom 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 27 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 Montenegro. Both 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 recently launched 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.

Dial-up Internet access costs during off-peak periods are those that residential users are most likely to incur. Although, as with the information concerning 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 represent an inhibiting factor to widespread Internet usage.

Country	Nominal euro	
	ISP	PSTN usage
Albania	11.72	11.60
Bosnia & Herzegovina		
BH Telecom d.d. Sarajevo	9.79	0.00
Telekom Srpske a.d. Banja Luka	5.06	10.12
Hrvatske Telekomunikacije d.o.o. Mostar	5.62	8.77
Bulgaria	0.00	19.95
Croatia	9.89	4.95
Romania	3.16	6.43
Serbia & Montenegro - *Montenegro*	7.00	1.29
Serbia & Montenegro - *Serbia*	3.13	1.30
Serbia & Montenegro - · *Kosovo*	6.90	6.90
The former Yugoslav Republic of Macedonia	18.48	
Off peak 2	8.09	
Turkey	5.81	7.64

Table 66 - Dial-up Internet access cost – 20 hours at off-peak time

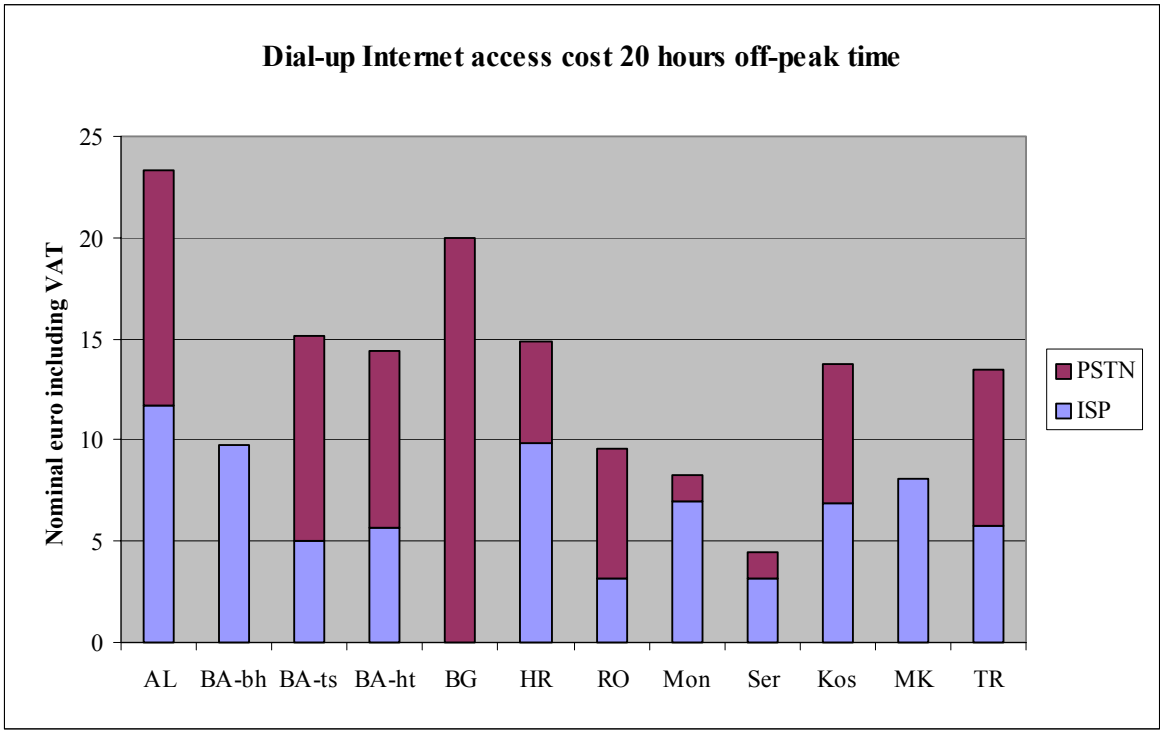


Figure 66 - Dial-up Internet access cost – 20 hours at off-peak time nominal euro

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 Albtelecom, which in this case is referred to as PSTN. Albtelecom has introduced its self in the market as an ISP operator. Albtelecom's tariffs (PSTN usage) are the same as shown above, if subscribers use Albtelecom as an ISP. The difference between Albtelecom and other ISPs is that the user does not have to pay for the set up fee (installation) and the monthly payment. Albtelecom also applies peak and off-peak tariffs for dial-up internet access for users that use Albtelecom 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).
Croatia: The PSTN part of the full price is 0.025 HRK/min. The rest goes to the ISP.

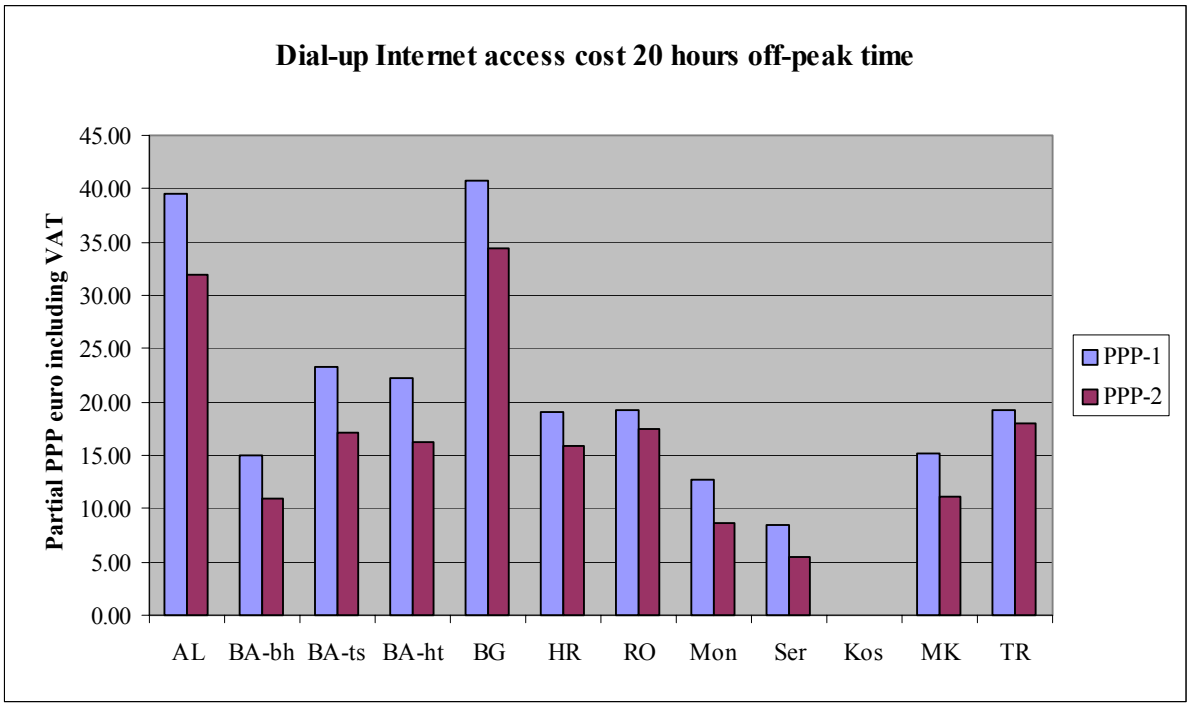


Figure 67 – Total dial-up Internet access cost – 20 hours at off-peak time partial PPP euro

3. Broadband access

The rollout of xDSL services to customers is at a very early stage. The number of xDSL lines actually in service are less than half a percent of the total network size in most countries (except Croatia and Turkey with 1.4% and 2.15% respectively). Given that provision of services is at a very early stage, there has been significant progress in the period from January 1, 2004 to November 1, 2005. Bulgaria has gone from zero to 20,343 lines, Bosnia & Herzegovina from 910 to 29,206, Croatia from 2,556 to 85,872, the former Yugoslav Republic of Macedonia from 2,447 lines to 8,294 lines and Turkey from 56,624 to 1,110,133. There is also a significant growth in Romania from 2,182 lines to 7,308 lines (as of December 31, 2005), although most of the broadband growth in Romania has taken place in other technologies.

Country	All xDSLlines		All xDSL lines - Nov. 1, 2005		
	01.01.2004	01.01.2005	Total	Incumbent	Alternative
Albania			272	272	0
Bosnia & Herzegovina	93	910	29206	21259	7947
Bulgaria		6651	20343	20343	0
Croatia	2556	23423	85872	79446	6426
Romania	3933	2182	7308	6305	1003
Serbia & Montenegro - Montenegro			1085	1085	0
Serbia & Montenegro - Serbia			166	166	0
Serbia & Montenegro - · Kosovo	135	135	n/a	n/a	n/a
The former Yugoslav Republic of Macedonia		2447	8294	8294	0
Turkey	52624	452398	1110133	1098133	12000

Table 67 - Number of xDSL lines

Notes:
Albania: xDSL services were not available at the reference date.
Bosnia & Herzegovina: The number of ADSL subscriptions is given as at 31/1/2005. The normal speed ranges are: 256/64 Kbit/s, 384/64 Kbit/s, 512/128 Kbit/s, 1024/128 Kbit/ (download/upload). The only operator providing xDSL services is BH Telecom.
Bulgaria: The total number of ADSL subscriptions with the incumbent at the end of 2004 is given but no data is available for the number of residential and business subscriptions.
Romania: Before the obligation to provide unbundled access to the local loop on the fixed incumbent was imposed, the alternative operators offered DSL lines by installing DSL equipment on analogue leased lines acquired from the fixed incumbent. In 2004, among the specific relevant wholesale markets, the ANRC identified the market for the provision of unbundled - full or shared - access to the local loop, in which RomTelecom was designated as an operator with significant market power. Thus, with a view to creating a balance between the incentives for the new providers' market entry and stimulating infrastructure investments, by building new access networks or developing the existing ones, the obligation to provide unbundled access to the local loop under transparent and non-discriminatory conditions, at cost-oriented tariffs, was imposed on RomTelecom. The number of unbundled access lines is shown in the next table
By regulating the local loop market with a view to ensuring the unbundled access to this loop, the ANRC expected to increase the development potential of the DSL broadband services in 2005. In addition, as of 2005, 17 operators have concluded local loop unbundling agreements with the incumbent.
Serbia & Montenegro - Montenegro: xDSL services were not available at the reference date.
Serbia & Montenegro - Serbia: xDSL Services were not available in Serbia at the reference date.
Serbia & Montenegro – Kosovo: The lines are HDSL with a speed of 2 Mbit/s.

The following table gives a breakdown of how the new entrant's xDSL lines are provided. The breakdown gives the number xDSL lines provided via full ULL, shared access, bitstream, and resale.

Country	Incumbent's DSL Lines	New Entrant			
		Full ULL	Shared access	Bitstream	Resale
Albania	272	0	0	0	0
Bosnia & Herzegovina	21 259	0	300	7 647	0
Bulgaria	20 343	0	0	0	0
Croatia	79 446	0	0	0	6 426
Romania	6 305	1 003	0	0	0
Serbia & Montenegro - Montenegro	1 085	0	0	0	0
Serbia & Montenegro - Serbia	166	0	0	0	0
Serbia & Montenegro - · Kosovo	n/a	0	0	0	0
The former Yugoslav Republic of Macedonia	8 294	0	0	0	0
Turkey	1 098 133	0	0	0	12 000

Table 68 - Breakdown of xDSL lines

Note:
Bulgaria: The number of lines reported for the incumbent is the situation on June 30, 2005.

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

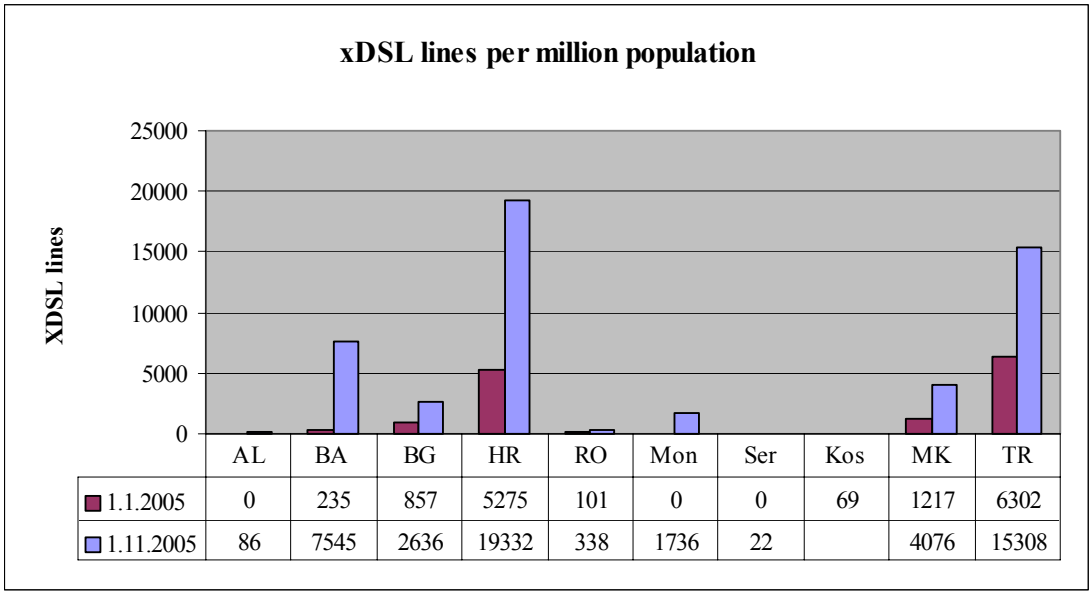
Country		New Entrants	FWA	Cable modem	Leased line	3G	Fibre to home	Satellite	PLC	Other	Total
Albania	Incumbent		0	0	0	0	0	0	0	0	0
	Alternative	0	0	0	0	0	0	0	0	0	0
Bosnia & Herzegovina	Incumbent		1	2 394	652	0	3	0	0	0	3 050
	Alternative	0	1 397	0	9	0	0	0	0	0	1 406
Bulgaria	Incumbent		0	n/a	0	0	0	0	0	0	0
	Alternative	0	0	0	0	0	0	0	0	0	0
Croatia	Incumbent		0	0	0	0	0	0	0	0	0
	Alternative	6	327	3 368	303	0	0	149	0	0	4 147
Romania	Incumbent		0	0	947	0	13	0	0	0	960
	Alternative	600	7 677	248 924	0	0	15 398	0	0	471 070	743 069
Serbia & Montenegro - Montenegro	Incumbent		0	0	0	0	0	0	0	0	0
	Alternative	0	0	0	0	0	0	0	0	0	0
Serbia & Montenegro - Serbia	Incumbent		0	2 000	0	0	0	0	0	0	2 000
	Alternative	0	0	0	0	0	0	0	0	0	0
Serbia & Montenegro - · Kosovo	Incumbent		0	4 000	0	0	0	0	0	0	4 000
	Alternative	0	1 800	2 100	0	0	0	0	0	0	3 900
The former Yugoslav Republic of Macedonia	Incumbent		0	0	155	0	0	38	0	0	193
	Alternative	0	853	3 026	70	0	0	0	0	0	3 949
Turkey	Incumbent		0	31 729	4 188	0	0	0	0	0	35 917
	Alternative	70	0	0	4 047	0	0	519	0	0	4 566

Table 69 Breakdown of other means of broadband access

Notes:
Albania: The Cable TV operators do not offer internet service. WiFi is a preferred access method for remote subscribers.
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 since not all licensed network operators (there are 65 of them in B&H) 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 provide data on subscriptions, it is difficult to estimate actual number of subscriptions. However, the actual number of subscriptions countrywide could be tenfold. WiFi subscriptions to the Internet are blooming throughout the country since they provide internet connectivity to remote areas and other areas where other types of broadband connectivity are not available. The normal speed ranges for WIFI subscriptions are: 64 Kbps-2048 Kbps download, 64 Kbps-1024 Kbps upload.
Bulgaria: Data has been requested from the Bulgarian ISPs, but a consistent estimation for the total number of subscriptions cannot be made because of the low response level.
Serbia & Montenegro - Montenegro: WiFi access is possible but there is no data about the number of users.
Serbia & Montenegro - Serbia: There are more than 20 Cable TV operators. All of them are operating without a valid license and data on the customer base is not available. Some Cable TV operators offer Internet subscriptions but no figure is available. The estimation is a couple of thousand. There are a few licensed WiFi operators but they are not officially offering Internet to the public. For the moment, they use WiFi for their Intranet.
Serbia & Montenegro - Kosovo: Alternative operators: Kujtesa reports having 1200 Cable modem subscribers. IPKOnet reports having about 900 Cable modem subscribers.
The former Yugoslav Republic of Macedonia: The broadband penetration in the former Yugoslav Republic of Macedonia is expected to grow significantly over next few months. In a project called Macedonia Connects, the US Agency for International Development invested $2.5 million to provide 461 schools throughout the country with Internet access, based on WiFi and wireless mesh technology. The Macedonian partner in the project, On.net, an alternative ISP was chosen through a public competitive bid process. The project foresees the coverage of 95% country's territory with wireless broadband Internet access.

The preceding table confirms that alternative broadband technologies are not widely used except in Romania where there on December 31, 2005 were 248,924 cable modem access lines and about 374,000 CDMA/EV-DO mobile dial-up connections, which are included in the 'Others' column.

The following figure shows the number of xDSL lines per capita. Since the xDSL penetration for most countries is below 1% of population, the available data are shown as xDSL lines per million population in order not to be confused with the more normal indicator of xDSL lines per 100 population.



	AL	BA	BG	HR	RO	Mon	Ser	Kos	MK	TR
1.1.2005	0	235	857	5275	101	0	0	69	1217	6302
1.11.2005	86	7545	2636	19332	338	1736	22		4076	15308

Figure 68 - xDSL lines per million population

The use of alternative technologies for broadband internet connections is still in the early stages just as the use of xDSL lines is. However, in Romania, the ratio of Cable TV to xDSL lines is about 34 to 1.

The following chart presents the number of broadband Internet connections per capita. This chart is presented in terms of connections per million population.

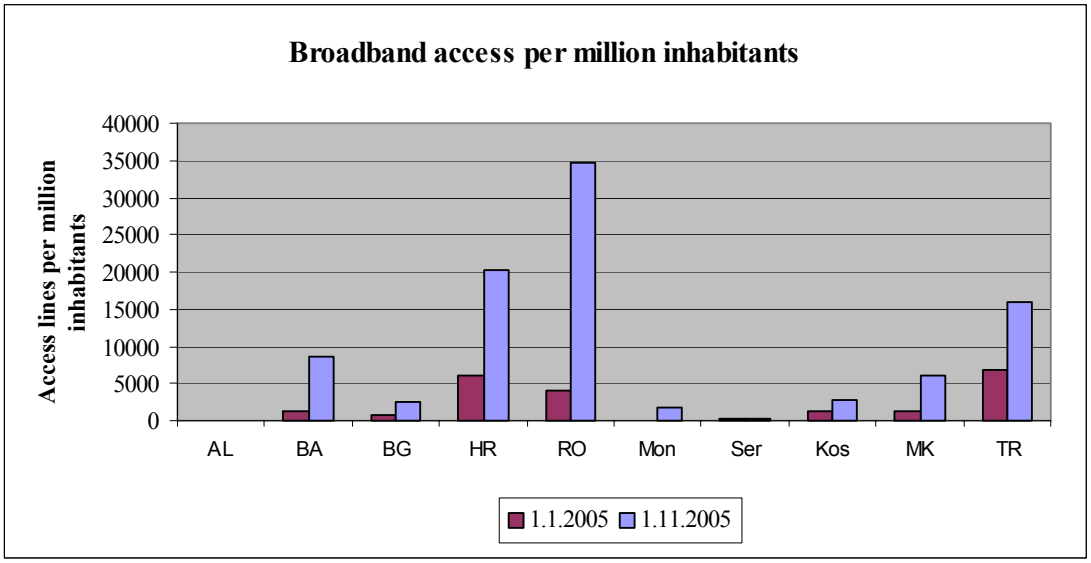


Figure 69 – Broadband access per million inhabitants

Notes:
Bulgaria: No reliable information or estimate on cable modems and LAN connection is available, although it is known that such connections are used. The broadband penetration for Bulgaria that is reported here is therefore known to be too low.
Croatia: The increase is the result of a tripling of the number of xDSL connections.
Romania: The increase is partly a result of Cable TV connections doubling and the inclusion of the CDMA mobile dial-up connections in the figures. The information from Romania represents the status on December 31, 2005.
Turkey: The increase is the result of the xDSL connections increasing by about 2.5 times.

4. Competitive alternatives

Out of eight countries where information is available, the ISP of the fixed incumbent only has a significant majority market share in three countries or geographic units (Croatia – 73%, Montenegro – 98% and Turkey – 67%). In Turkey, the incumbent's market share has increased from 52% to 67% between January and November 2005.

In general, it can be said that Internet subscribers do have a choice of ISP and that competition is in place. This is especially true in the larger countries (Bulgaria, Romania and Turkey).

Country	Number of ISPs		Estimate of market share of ISP of fixed incumbent operator
	National	Local	
Albania	17	9	na
Bosnia & Herzegovina	3	40	42.00 %
Bulgaria	13	192	18.00 %
Croatia	34	-	73.34 %
Romania	981 active Internet Providers		3.40 %
Serbia & Montenegro - *Montenegro*	2	3	98.00 %
Serbia & Montenegro - *Serbia*	10	30	0.00 %
Serbia & Montenegro - · *Kosovo*	3	40	9.00 %
The former Yugoslav Republic of Macedonia	5	-	na
Turkey	74	-	67.00 %

Table 70 - Number of ISPs and estimate of market share of ISP of fixed incumbent operator

Notes:
Albania: According to the law "On Telecommunication in the Republic of Albania", ISP's are classified in three groups: local, regional, and national. In the table above, national and regional ISPs are included in the same group so the number of national ISPs includes 11 national and 6 regional ISPs. The market share in terms of subscribers is not reported.
Bosnia & Herzegovina: The number of national ISPs should be taken with reserve since none of the "national" ISPs can offer connectivity countrywide due to the complex administrative structure of the country. However, three "national" ISPs cover large portions of B&H's territory. 42% of the total number of dial up subscribers are with the other ISPs (not the fixed incumbent operators). The market share of the incumbent ISPs is estimated as being a similar ratio. 58% of the total number of dial up subscribers are with the ISPs of fixed incumbent operators (BH Telecom - BIHNET, Telekom Srpske – TEOL, HT Mostar – HTNET). It is not possible to get official confirmation of market share for dialup subscriptions. Privately owned ISPs (43 of them) claim they have a much larger share of the market.
Bulgaria: The figure for local ISPs is a CRC estimation for 31.12.2004. No data is available for the exact number of local ISPs because ISPs in Bulgaria are free of licensing/registering. Public data transfer networks that use numbers from the National Numbering Plan (NNP) are subject to individual licensing. Public data transfer networks that do not use numbers from the NNP are subject to general licences. There are about 80 ISPs with registered or licensed data transfer networks. There are many LANs, which are quite popular with residential users in Bulgaria, but the total number of them is not available.
Croatia: The number of ISPs is as at November 1, 2005. The market share given is for 2004.
Romania: The information on number of ISPs is from December 31, 2005. The most recent data for market share is for 31.12.2004; the market share was calculated based on the cumulated sales revenues for fixed dial-up Internet (excluding revenues from dial-up calls), dedicated Internet, and data transmission services.
Serbia & Montenegro - Montenegro: There are two ISPs: Internet Montenegro and MontSky.
Serbia & Montenegro – Serbia: The data is from a report by an ICT expert (Giovanni Maruzzelli, Gallo ECF). The incumbent operator is not an ISP.
Serbia & Montenegro - Kosovo: The figure for the market share of the fixed incumbent operator's ISP is based on a breakdown report of Hotmail pages viewed by visitors from Kosovo.
Turkey: The ISP's market shares according to sales revenues cannot be calculated before the end of the fiscal year. Data about the sales revenues will be available in April, 2006. So the market share given is calculated according to the subscriber numbers.

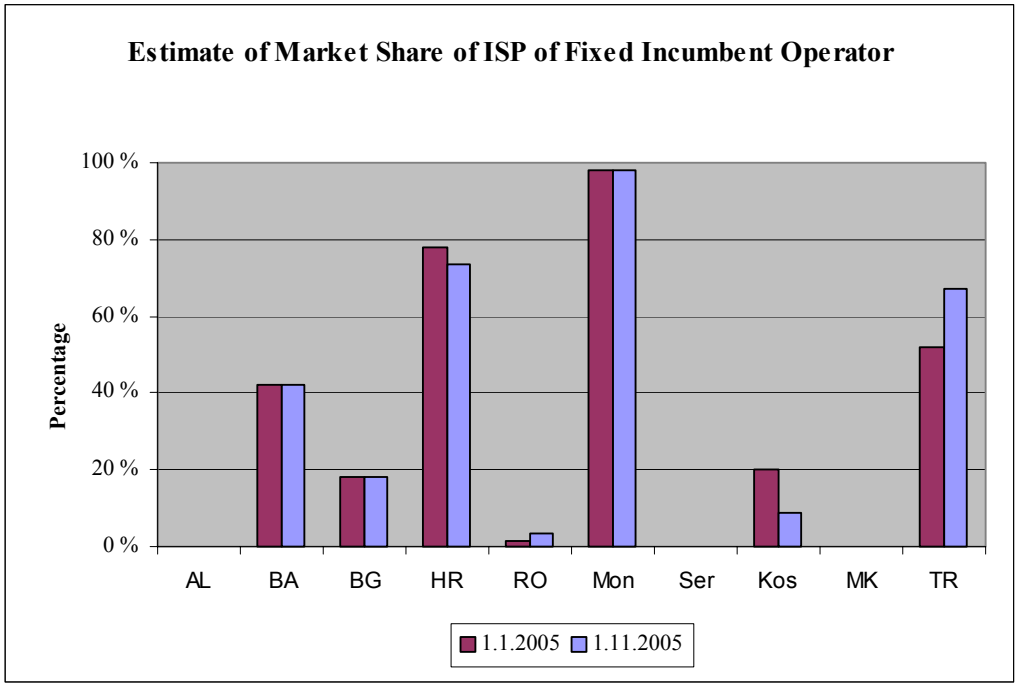


Figure 70 – Estimate of Market Share of ISP of Fixed Incumbent Operator

The previous figure shows how the market shares of the ISPs of the fixed incumbent operators have developed during the course of 2005.

The incumbent ISP's market share has fallen in Croatia and Kosovo, where the incumbent ISP has apparently lost 50% of its market share.

The incumbent ISP's market share has increased slightly in Romania but its market share is still insignificant. In Turkey, the incumbent ISP's market share has increased significantly and now accounts for 67% of the market.

Annex - New OECD Mobile Baskets

All baskets[37] will include:

- Registration or installation charges with 1/3 of the charges, i.e. distributed over 3 years.
- Monthly rental charges, and any option charges that may apply to the package, or package combination.

The three new baskets are:

- Low user basket. The usage level of this basket is low, with a call volume less than half of that in the Medium user basket.
- Medium user basket. This basket will have 75 outgoing calls per month.
- High user basket. The usage level is about twice the Medium user basket.

The usage profiles will also include a number of SMS messages per month.

Call and message volumes for each basket are:

Category	Outgoing calls per month	SMS per month
Low user	25	30
Medium user	75	35
High user	150	42

The information received showed that there is little difference between the average pre-paid usage and the low user post-paid usage. The low user basket can therefore be used for both pre- and post-paid tariffs, allowing a simple comparison also between the two types.

Only national calls are included in the profiles, with four different destinations:

- Local area fixed line calls. This is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of calls is included in the National.
- National fixed line calls. This covers all fixed line calls outside the local area, except in cases as noted above.
- Same network mobile calls (On-net). This includes all calls made to mobiles in the same mobile network as the caller.
- Other network mobile calls (Off-net). This includes calls to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to 3 other networks will be considered in each country.

Distributions per destination for each **basket** are:

[37] Source: Annex to the European Electronic Regulation and markets 2005 (11th report)

% of total number of calls	Fixed local area	Fixed national area	On-net mobile	Off-net mobile
Low user	28%	14%	40%	18%
Medium user	24%	12%	43%	21%
High user	26%	14%	42%	18%

As the information received produced little evidence on the split between local and national fixed line calls, the assumption has been used that the ratio would be 2:1 for local national, i.e. 67% local and 33% national. This assumption is taken from the averages in fixed baskets, and the scarce information received.

Instead of splitting time and day into distinct times and days the following approach will be used:

- Peak time calls at weekdays, most expensive time during daytime.
- Off-peak time calls at weekdays, cheapest time before midnight.
- Weekend time calls, at daytime Sundays.

Distributions over time and day for each **basket** are:

% of total number of calls	ToD Peak	ToD Off-peak	ToD Weekend
Low user	38%	35%	27%
Medium user	47%	30%	23%
High user	63%	22%	15%

There will be 3 separate call durations:

- Local and national fixed line calls.
- Same network mobile calls (On-net).
- Other network mobile calls (Off-net).

Call durations for each basket are:

Minutes per call	Dur Fixed National	Dur Mobile On-net	Dur Mobile Off-net
Low user	1.6	1.4	1.4
Medium user	2.1	1.9	1.9
High user	2.2	2.0	2.1

Any call allowance value included in the monthly rental will be deducted from the usage value once the basket is calculated. The deduction cannot be larger than the actual usage value, i.e. negative usage is not allowed. No transfer of unused value to next month is taken into account.

Any inclusive minutes will be deducted from the basket usage before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern that is described in the basket, i.e. the same peak/off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.

Any inclusive SMS-messages will be deducted from the basket before starting the calculation of the SMS message cost, up to the number of messages in the basket.

For each of the operators covered a set of packages shall be included so that the cheapest package offered by that operator can be calculated for each of the 3 baskets.

Multiple operators in each country shall be included, with at least the two operators with highest number of subscribers in each country. The operators included shall have a total market share of at least 50% based on subscriber numbers.

Basket results are calculated for a period of one year.